

THE DISTRIBUTION OF EARNINGS AND CAPITAL IN THE
MONDRAGON CO-OPERATIVES

Henk THOMAS*

INTRODUCTION

In Mondragon a rapidly growing movement of co-operators has managed to survive economically, and to create and develop an impressive number of enterprises which are self-governing to a considerable degree. An overview of the Mondragon co-operatives in December 1978 is given in Diagram 1. Most of the co-operators are employed in the secondary sector — 14,676 in 66 factories — while there is some employment in agricultural co-operatives and in service organizations. There is also a consumers' co-operative with 35 retail outlets which has developed rapidly in recent years, and the new phenomenon of housing co-operatives which coordinate the financing of purchases of new apartments. A unique feature of the Mondragon group is its supporting structure, consisting of a credit co-operative, Caja Laboral Popular (CLP), with 300,000 account holders, a social security co-operative and a Research and Development organization, as well as numerous education co-operatives which cater for a wide range of educational and training activities. Economic growth records have been most impressive since the first industrial workshop was started in 1956 and the opening of a small office in 1959 marked the beginning of what would later develop into this impressive co-operative bank. We have elsewhere shown that the Mondragon group has been considerably more efficient than "non-co-operative" factories.² Could it be that the high degree of efficiency has been reached at "the price" of considerable inequalities in earnings? Or might it be true that efficiency and equity can go together?

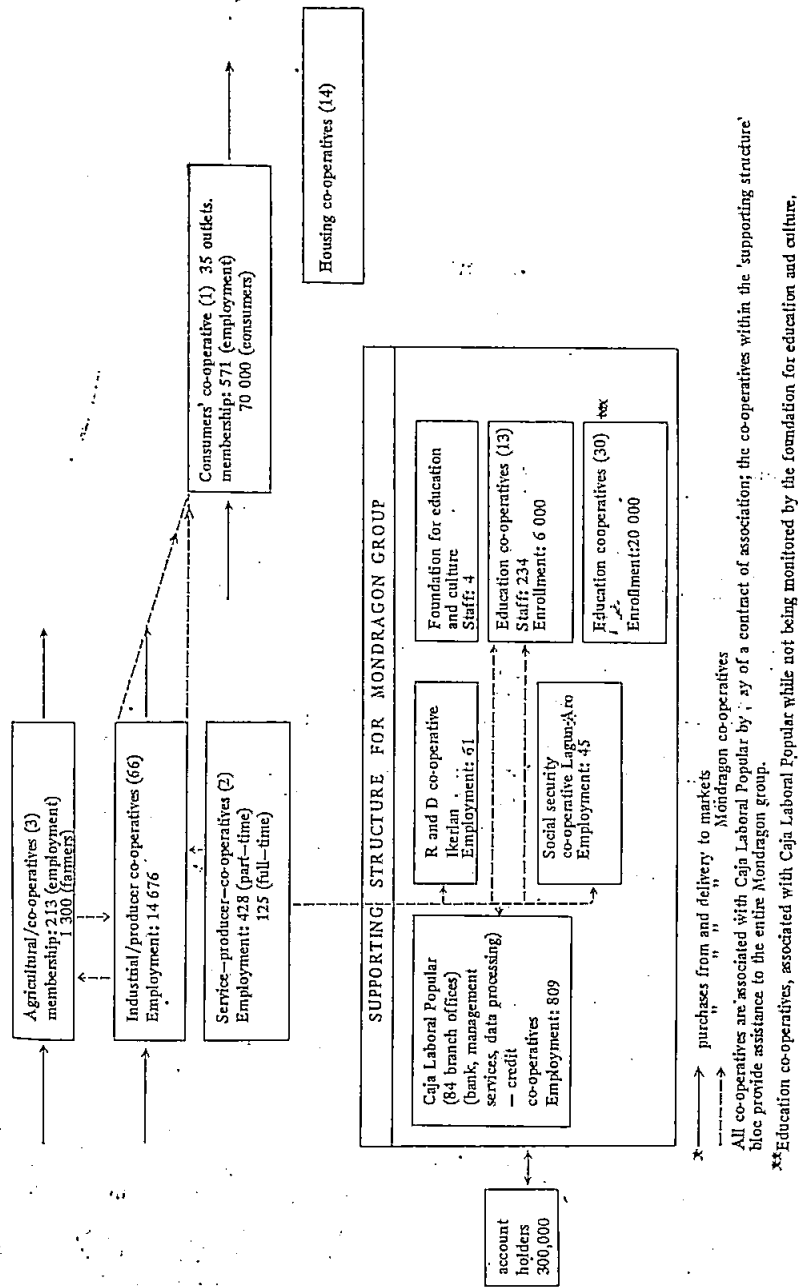
Rather than limiting the benefits of the co-operative venture to a small group, there has been an open door policy, by offering employ-

* Dr. Henk Thomas is Senior Lecturer in Economics at the Institute of Social Studies, The Hague, The Netherlands. This article is based on a chapter of *Mondragon: Producer Co-operatives* by Henk Thomas and Chris Logan (forthcoming). The author gratefully acknowledges editing of the paper by Jean Sanders.

¹ Mondragon is a small town located in the Basque Provinces of Spain.

² Thomas and Logan, *op. cit.*, Chapter 7, deals with the economic performance of the co-operatives.

Diagram 1. Mondragon group — an overview (December 1978)*



ment' to new members, and by associating enterprises which wish to join and thereby share in the benefits. It does not come as a major surprise, therefore, to find that the equity aspect, in the narrower sense of studying earnings differentials, takes a dominant place. This is the topic of this article. First, a brief survey of the key rules from the official documents — statutes, internal rules, and the so-called contract of association³ — is presented. Next follows a description of the issues raised in annual discussions concerning distribution of earnings and surpluses. The actual monthly payroll statement of Ulgor, the oldest and largest enterprise, where the greatest inequalities would arise if there were a tendency for them to develop, is then analyzed in detail.

Following this analysis of wage and salary differentials, some comparative observations are made before the co-operators' own social security system, *Lagun-Aro*, is discussed. Having studied the two components of annual earnings — the amounts paid out for consumption and deductions for social security — the incomes from the accumulated capital accounts will be discussed.⁴ The mechanism of allocating surplus funds is discussed in Section 5, followed by an analysis of individual capital accounts.

1. STATUTES AND INTERNAL RULES

A first methodological point concerns definitions. Gross value added (sales revenue minus all purchases from third parties) is allocated in terms of depreciation and interest on own capital, an advance on earnings for purpose of consumption, and the "pure surplus" correctly termed *Remanentes* in the accounts of the co-operatives.⁵ The last two items stand at the disposal of the members, and balanced decisions need to be taken on the parts that are to be earmarked for private consumption, for collective reserves, for social purposes, and for individually-held capital accounts. Here, one clearly sees the meaning of "true labour income" in which appropriation of surplus value by others than co-operators is no longer to be seen. The community of worker members is the risk bearer in self-governed enterprises.

³ Each co-operative is linked to the co-operative network by way of a contract with the credit co-operative bank, CLP.

⁴ The sources used for the study of problems of distribution consist of three categories. Firstly, there are the official documents such as the statutes, internal rules and the contract of association; these form the "mini-constitution" of the Mondragon group. Secondly, there are the "internal documents" which include the annual plans of management and the annual documents on work norms and studies, mainly by research departments of Caja Laboral Popular and Ularco, which is a *sub-group* of six large co-operatives. Thirdly, and of course most importantly, access was given to primary data whenever specific information was asked for. Because of the confidential character of most sources, reference can only therefore be made to "internal documents" or "data made available".

⁵ It is interesting to note that in Yugoslavia also worker-managed enterprises pay out "advances" which are consolidated as earnings every three months.

Interest payments for own capital have priority over earnings and thus considerable risks are borne by the workers themselves. In practice, of course, most members will consider the advances as their monthly earnings; amounts credited to their capital accounts at the end of the year will be seen as additions to their pension for the years of retirement.

Distribution of incomes for consumption purposes takes the form of gross earnings (*anticipos totales*) from which provisions for social security (*anticipos de provision*) are deducted before arriving at the *anticipos de consumo* or *anticipos laborales*, net earnings before tax deduction.

The level of earnings is an instrument by which "solidarity with the world of labour, and certainly the immediate socio-economic environment",⁶ in the words of Arizmendi, is achieved. This solidarity takes on three dimensions. Solidarity with the non-co-operative socio-economic environment; solidarity between members of the different co-operative factories; and finally, solidarity within each of the co-operatives.

Solidarity with the environment takes the form of linking the average earning level to the wage level in leading capitalist firms in the immediate surrounding area, Union Cerrajería and Elma, both in the engineering sector.

The labour salary and wage advances will correspond to the unavoidable demands made upon a normal [person's] budget and will be in harmony with the average salary level of the region in solidarity with consumption in the respective social community. (Article V of Ulgor's statutes.)

Article VI of Ulgor's Internal Rules puts it as follows:

The level of earnings will be in harmony with the average level of earnings in the region, taking the most representative enterprises as a base for comparison.

Thus, solidarity is an operational concept not only at the level of consumption but also in terms of total payroll costs.

This is an important formula, since otherwise one could still manoeuvre with bonuses leading to wage drift. Later, this tension between solidarity at the level of consumption (take-home pay) and at the level of gross wages and salaries comes back again and again, as will be seen in the annual discussion on the earnings pattern.

Solidarity among co-operatives

The mechanism which has applied until 1978 has been as follows. First, Ularco, a conglomerate of six large co-operative enterprises, annually conducts a comparative study of wage bills in Union Cerrajería and Elma to establish the equivalent levels of earnings for the associated co-operatives. Next, Caja Laboral Popular for its own members adopts the same wage determination formula, and finally, all as-

⁶ Whenever quotations are included which are not footnoted, these refer to confidential documents. Arizmendi was the brilliant founder of the Mondragon co-operatives.

sociated enterprises follow the same system with a permitted deviation of ten per cent upwards or downwards. In theory, but so far not in practice, lower hourly wage rates are required to compensate for forecast major losses; it is reported that only once has there been a major conflict involving an enterprise that wished to increase wages beyond the permitted 10 per cent.

Solidarity within each of the co-operative enterprises is established through the famous "one to three" wage and salary differentials of the Mondragon co-operatives. It should be noted, however, that the contract of association stipulates that a 50 per cent increase is permitted under special conditions over above this 1 to 3 rate, although the incidence of the privileged status is low. Such differentials relate to gross and not to net amounts.

Earnings provide for the progressive satisfaction of human aspirations and must reflect cooperation with other members of the community for the common good. So that it should be given freely, in a worthwhile and useful manner as a joint effort, the members will organize themselves according to their particular profession, its division of responsibility and remuneration, which will be given unitary rates for each job as evaluated by workplace at a maximum differential of one to three, (Article IV of Ulgor's statutes.)

These rates (indices) are the base for earnings differentials.⁷

2. DEBATES ON EARNINGS⁸

Each year, general rules and principles need to be worked out in terms of the total number of working hours per year, holiday periods, travel allowances, and, of course, the tables giving wages and salary levels corresponding to all the indices from one to three. Rather than presenting only an analysis of series of statistics, which represent the development of gross and net earnings, or the development over time of real purchasing power, it is worthwhile following the annual debates on earnings differentials and conditions of work. The available data permit an analysis of debates which have taken place from 1968 onwards.

In 1968 it was decided to set the working week at 48 hours, making the total number of hours to be worked 2,376 a year (down from 2,769 in 1960); and to set Index 1 earnings at such an hourly rate that the annual wage would be 84,600 pesetas, with 135 hours paid as holiday time (compared to 105 hours in 1960).

⁷ The internal organization of jobs according to indices allocated to each work place has a major impact on the distribution of earnings. A formal system of organization gives opportunities to individual persons to "get more or less" out of the system in terms of individual monetary rewards, and the analysis of earnings focuses on the final outcomes.

⁸ The main source used for this section is the Work Norms, a document which is produced each year after details of work conditions and remuneration have been agreed upon. From 1968 onwards, twelve such documents were available for analysis. In 1979 the rate of exchange of peseta to U.S. dollar was about sixty to one.

In 1969 the norm for the workweek remained at 48 hours and Index 1, following considerable increases in wages paid by the two competing capitalist firms, was increased to 90,170 pesetas per year. Much time was spent on determining the exact working hours which were set from Monday till Friday at 09.00 to 13.00 and from 15.00 to 19.00, leaving Saturday as half-a-working day. It was furthermore agreed that in case of overtime, no social security deductions would be made and that the pay for such hours would at most be 10 per cent higher than the normal rates, thus permitting a considerable increase in net earnings for overtime.

In 1969 a remarkable decision was made with respect to social security deductions. For all members, irrespective of rank, the amount to be deducted would be the same flat rate, set at 2,130 pesetas. This immediately contributed to a widening of differentials in consumption, of course, as it affected the net amounts received. Differentials actually increased from one to three in gross terms to almost one in four in terms of take-home pay. People of higher rank were encouraged to increase their deductions, particularly the premium for temporary incapacity of work, in order to secure higher pay-outs during such absences; higher, namely, than the monthly amount of 6,630 pesetas which minimally would be paid out irrespective of the index assigned in the one to three range.

An interesting study was made in that year on the need to introduce criteria which would permit a more "balanced" comparison of the enterprises of the Mondragon movement. Since 1956 Ulgor's situation had changed dramatically and some of the other co-operatives had become giants in their market while others were in the initial stage of establishing themselves. A proposal was made to distinguish all enterprises by a weighted point system of four criteria: number of jobs offered; size of sales; amount of fixed assets; and the degree of technological advance. The result would have been to establish three major categories of enterprises, in each of which differentials would be different: one to five in the highest category (only Ulgor would qualify for this class); one to four in the next category (six co-operatives would have qualified); and all other enterprises were to fall in the usual one to three range of permitted differentials. This proposal was not adopted for implementation, but is of interest as it reflects tensions transmitted from the "labour market".

In 1970 a proposal by the supervisory board of CLP to reduce the working week to 45 hours was rejected by its workers' council.² Heavy emphasis was placed on the solidarity aspect with other non-co-operative workers who would still continue to work 48 hours. Another objection was that adopting this proposal would imply forfeiting income and growth potential. The policy document in that year also confirmed that a 13th-month's pay would be part of the "income contract", and

² A general assembly and a supervisory board exercise control and ultimate authority with respect to the management of the co-operatives; the workers' council serves as a platform to discuss day-to-day problems and has an important advisory role with respect to issues of distribution and work conditions.

that in special circumstances a 1 to 4.5 differential rule might apply. Under a system whereby flat rate social security deductions are made, this could result in a one to six net earnings (take-home pay) differential. Take, for example, gross amounts of 96,000 to 293,000 in 1970; the latter then may increase maximally to 439,500, leaving, after a fixed deduction of about 25,000, a difference of 71,000 to 412,500 pesetas. A one to six range is almost reached.

In 1971 the working week was kept at 48 hours, and the annual number of paid hours thus stayed at 2,376. Important discussions began to take place about the considerable increases in payroll costs, leading ultimately to a discussion in the general assembly of Ularco on whether the basis of comparison with the two local capitalist enterprises was sound according to economic principles. This assembly ended with the formal adoption of a specific set of formulae to be used from that time onwards. A discussion took place on whether, as a general guideline, the average level of earnings should be linked very closely to Union Cerrajera and Elma, adding also a small percentage to anticipate dynamic developments during the current year, or whether earnings should be linked to the cost of living index, to which one per cent would be added by way of standard practice. Preference was expressed for the first alternative.

In 1972 the annual number of hours to be worked was reduced from 2,376 to 2,218 hours, while it was also decided to add another 1/3 months; this made a 15 per cent increase over the previous year in annual wages and salaries. This increase was more than would have resulted from the application of the second principle — cost of living plus one per cent — which would have resulted in a 8.3 per cent addition to the total payroll.

In 1973 discussions were held at Caja Laboral Popular, the co-operative bank, on whether the example of Ularco — the core of the movement — could be imposed on the entire group. For several reasons, it was decided that the practice should continue for the time being. Firstly, there was a lot to be said for one standard and universal method of calculating wages per hour and social security contributions. In short, all the details of distribution which were discussed each year. Secondly, Ularco already covered 50 per cent of all the co-operators. Thirdly, Ularco's performance was the best of the associated co-operatives and thus should set a standard for the entire movement. Finally, no better system could be devised which incorporated the various principles of the movement.

In 1973 annual wage increase was set at 15.4 per cent, just in excess of the cost of living during that year. Social security deductions amounted to a flat rate of 3,238 pesetas monthly. Voluntary additional deductions were encouraged, however, in order to guarantee that on temporary absence everyone would be paid 80 per cent of the usual wage.

In 1974, after much trial and error particularly with the social security deductions, it was agreed that a stable system should be worked out to provide a standard system for determining deductions from gross income and the full range of differentials. This included the pos-

sibility of a 50 per cent increase above the 1:3 rule for individual earnings in exceptional cases, and a 10 per cent rule for overtime. In this year, also, a new procedure for social security deduction was decided upon which did away with the system of flat rate deductions which had been in force since 1968. A fixed amount was set for part of the social security coverage and a percentage to cover temporary absence from work, disablement and retirement pensions.¹⁰ Its effect was to reduce by one decision the net earnings ratio to 1 in 3.5 (see Table 3).

In 1974, also, a study was made of labour market conditions for higher positions. The top salaries, including social security, in the Mondragon movement reached an annual amount of about 550,000 compared to levels in Spain which were at least 100 per cent higher. For instance, a managing director of a small company would elsewhere earn over one million pesetas, and his equivalent in a company with sales in the neighbourhood of Ulgor's 5,000 million pesetas per annum would earn in excess of 1^{1/2} million pesetas annually. This tendency to lower rewards for leading positions has been well accepted, thus defying the working of expected labour market mechanisms.

By 1975 considerable concern was being expressed about the fact that insufficient new workplaces had been created. Furthermore, there were some misgivings about whether sufficient amounts were being set aside for technological innovation. "We live in a market economy and that situation dictates what needs to be done". Apparently, the pace at which innovation was taking place was slower than in earlier years. The increase in consumption levels was tending to become excessive and appeared to be the result of a *mini-inflationary spiral*: good future prospects in the co-operatives and the higher level of consumption possibilities, due to high internal mobility for reasons of training and education, exercised upward pressure in the local labour market. The two major capitalist enterprises were being forced to increase their salary levels to attract workers in competition with the co-operatives, thus resulting in a vicious circle. The co-operative movement's payroll, in turn, followed that of the enterprises because of the solidarity principle. "The fish eats its tail", said an economist. It was noted that the confidence which the account-holders had shown in OLP by making their savings available was at stake, and that such a mini-inflationary spiral should not be allowed to endanger the movement.

In 1976 the "bankes" were applied. Strong emphasis was laid on increased productivity, more efficient purchasing, increasing the prices of final products "even at the risk of damaging the competitive position somewhat and adding to new inflationary pressures". The co-operations

¹⁰ The formula adopted was the following:

$$Ac = \frac{A_i - k}{1 + c}$$

in which A_c is advance for consumption

A_i is total advance

k is the flat rate for social security

c is the percentage deducted for social security.

tives had by now gained absolute dominance in a wide area, and new tensions had arisen in the co-operative group due to the economic demands of the time. Discussions even took place at CLP on whether to let Ularco go its own way. Through independent studies, an earnings pattern for CLP and the new associated enterprises, and for those with heavy financial obligations to CLP, might be determined. Owing to the significance of this discussion and to the unique information which is available on the actual pattern of wage setting in a cooperative system operating within a capitalist environment, we shall report in some detail on the situation in 1976.

In Table 1 the first column gives the occupational structure in terms of indices that are equivalent to job descriptions used in the two enterprises, Union Cerrajera and Elma. The second and fourth columns indicate the percentages of the total number (5,128) of members who make up Ularco,¹¹ and of employees (1,963) in the other two firms. In the third column, the gross earnings of Ularco are reported. The gross earnings of each of the five categories in the two competing enterprises are given in Column 5, and in Column 6 it can be seen how, on average, gross earnings in Ularco are about 8 per cent below those of the competing enterprises. The difference is small for less skilled workers, skilled workers and supervisors, but from then on the gap widens to 39 per cent for managing directors! The structure of the labour force in the two competitive enterprises is also given, showing that in Ularco more people have had an opportunity to "move upward", although at salaries far below the equivalent gross rates paid by the competing enterprises.

The picture changes when we move to the right side of the Table, which shows net earnings — after deducting provisions for state social security in the two competing enterprises and for co-operative social security in Ularco. Average earnings elsewhere are just below the average salary bill in Ularco, but there are still considerable differences per job category. The great majority of Ularco members enjoy higher take-home pay than workers in Union Cerrajera and Elma, whereas the top managerial levels earn considerably less, namely, 39.5 per cent.¹² Deductions for social security are reported in Columns 7 and 9. It is immediately clear — assuming that social security services are the same, though actually there is evidence that Lagun Aro provides a better service — that on average the "own provisions" are more efficient than the state system in that they cost less but also that the burden

¹¹ Ularco, as mentioned before, is a sub-group of co-operatives which pool some of their resources in order to gain economies of scale without jeopardizing the independence of the factories concerned.

¹² From Table 1 we cannot draw any conclusions about the ratio of extreme earnings in Union Cerrajera and Elma since the five categories report average earnings of the classes concerned. Gutierrez-Johnson, "Compensation, Equity and Industrial Democracy in the Mondragon Cooperatives", *Economic Analysis and Workers' Management*, Vol. XII (1978), pp. 274, 275, has interesting figures for 1973, 1974 and 1975 which indicate that the difference at the management levels has become less, while also at the lower levels a relative rise has been noticed with respect to similar ranks in the two capitalist enterprises.

TABLE 1.
EARNINGS IN SELF-MANAGED AND CAPITALIST ENTERPRISES (1976)

Index*	Ularco		Union Carrajera and Elima		Ularco		Union Carrajera and Elima		Ularco with respect to capitalist firms**	
	Percentage of co-operative members	Annual gross earnings (000 pesetas)	Percentage of employment	Annual gross earnings (000 pesetas)	Percentages deducted for social security	Annual net earnings (000 pesetas)	Percentages deducted for social security	Annual net earnings (000 pesetas)		
1	2	3	4	5	6	7	8	9	10	11
1.53	65	444	73	476	-6.7	22.5	344	30.0	333	+3.3
1.79	20	520	21	522	-0.4	20.5	413	29.1	370	+11.6
2.05	9	596	4.5	677	-12.0	19.3	481	26.0	501	-4.0
2.49	5	722	1.4	897	-19.5	17.6	595	22.3	697	-14.6
2.98	1	866	0.1	1 425	-39.3	16.4	724	16.0	1 197	-39.5
	100%		100%							
	(5,128 members)		(1,963 employees)							

* Average index of Ularco equivalent to job categories of Union Carrajera and Elima

** Average amount of gross earnings in Ularco 8% below competitors

*** Average amount of net earnings in Ularco 3% above competitors

1.53 workmen and assistants
1.79 professional and supervisory jobs
2.05 technical positions at intermediate level
2.49 senior executive and technical positions
2.98 most senior executive and technical positions

Source: Normas Laborales 1976 and internal document of C. L. P. 1976.

is distributed more equally. In the capitalist enterprises, 94 per cent of the workers pay at least 29 per cent of gross earnings on social security; in the Mondragon movement nobody pays over 23 per cent, while at the top levels the percentages are equal, namely about 16 per cent.

Ularco's decision to adhere to this method of wage determination, i. e., of taking the equivalent amounts of net earnings, has important implications. By keeping some approximate parity with levels of take-home pay existing in local engineering firms for the majority of workers, "wage drift" has been avoided and more of the pure surplus could be allocated to other purposes. The prospects for increasing employment through investment and expansion, a primary aim of the founders, were thus guaranteed.

During 1976 it was reported that 95 per cent of the co-operatives followed the Ularco proposals in determining the average level of gross earnings as well as of differentials. Less than one-half per cent set a slightly higher average scale, and 4.5 per cent operated at slightly below average.

In 1977 the issue of rapidly increasing levels of earnings was again taken very seriously by the bank's economic department. It was felt that the specific nature of banking as an occupation could be considered as being very different from that of the engineering sector. An alternative productivity norm could be considered for bank employment against which the trend in earnings over the past years was to be compared. Consideration was given to the trend in the number of bank creditors (net deposits), which increase the bank's lending power, together with the increase in the pure surplus ("net profit") over sales of the entire co-operative movement. Table 2 sets out this alternative approach to settling wage levels.

Many outcomes are possible but the important point is that the productivity supplement (Column D. in Table 2), to be added to the cost-of-living index, should reflect an underlying trend in bank productivity. This formula therefore indicates the imputed productivity of bank workers for the two principal facets of their activity as a supporting co-operative: the channelling of savings to associated producer co-operatives and the provision of management and auditing services to these co-operatives in the interest of increasing their productivity. Hence, the use of a value reflecting profits as a ratio of the co-operative sales revenue for which the bank and its workers could claim to have made a contribution. The exercise ended with the suggestion that on this postulated productivity basis the ideal wage trend would lead to a base hourly wage (Index 1) in the bank of 114.86 pesetas in 1977, whereas the real trend had led to 23.8 per cent in excess of this rate.

Turning from CLP's major wage determination problem to the movement as a whole, Graph 1 indicates the trend in real earnings measured as take-home pay. This graph shows that during what might be called the period of expansion (1965—71) of the Mondragon group, real wages (take-home pay) of workers rose only slowly; purchasing power rose by 1.5 per cent over this period. During the same period there was rapid growth in both the net deposits of savings with CLP and in the

TABLE 2.

POSTULATED ALTERNATIVE BASIS FOR COMPUTING THE
CO-OPERATIVE SAVINGS BANK'S WAGE LEVELS
(PER HOUR, INCL. HOLIDAY. PAYMENT)

Year	A. Cost of living increase (%)	B. C. L. P.'s productivity*	C. 50% of pure surplus/sales of all industrial co-operative enterprises	D. Supplement in earnings (%) over cost of living	E. Index 1 "ideal" trend in earnings (E) (pesetas per hour)**	F. Index 1 real trend in earnings (E) (pesetas per hour)
1970	—	—	3.5	—	—	—
1971	9.7	5.0	2.0	—	42.60	42.60
1972	7.3	5.0	4.0	4.25	48.54	51.00
1973	14.2	5.0	5.0	3.50	53.78	59.10
1974	17.9	5.0	4.0	4.50	63.73	72.92
1975	14.1	4.7	3.0	5.00	78.33	92.80
1976	19.8	5.0	—	4.35	92.78	110.20
1977	—	—	—	4.00	114.86	142.20

* The method of calculating a value for the productivity of C. L. P. (Column B) is to divide the increment in net deposits by 6, with a cutoff or maximum value of 5, i.e., $\frac{\Delta \text{net deposits}}{6} \ll 5$. D. can be calculated,

in various ways, depending on the lags introduced. e. g., $\Delta D_t = \frac{B_{(t-1)} + C_{(t-2)}}{2}$

to fall in between specific narrow limits, e. g., in between 2 and 5. Here t is the current year, $t-1$ the previous year and so on; B, C and D refer to the columns of this table.

** $E_t = E_{t-1}(1 + A_{t-1} + D_t)$

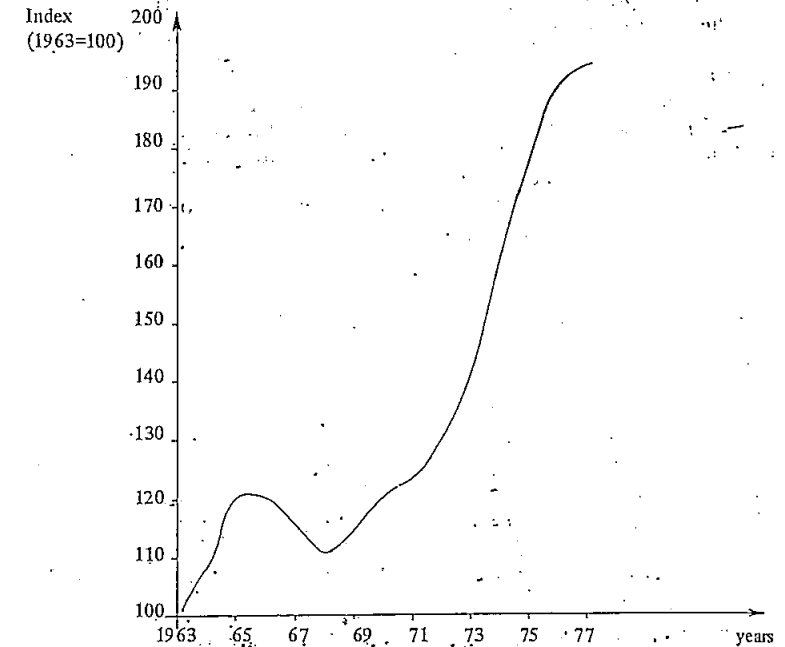
Source: Internal document of C. L. P. 1977.

number of jobs created. Wages were therefore not being paid out at a rate which would create difficulties for the movement's aim of accelerating investment to create new jobs. The net asset value of each capital account held by a worker naturally rose during the period, and the monetary threshold of entry rose for newcomers to the movement.¹⁵ The overall rate of inflation which had been high in Spain since 1973 did not erode the real purchasing power of the wages. On the contrary, the real wage rose by 50 per cent in six years, a far greater increase than had been the case in earlier years.

The attention being paid to the level of earnings by the bank's economic and management services departments can be characterized as

¹⁵ Each new co-operators has to pay a large "entry fee" as a contribution to collective capital and for the opening of the own individual capital account; further details are given in Sections 5 and 6.

Graph 1. Net annual earnings in real terms (1963 = 100)



a search for an internal "incomes policy" and is better understood when viewed from this perspective. Such a policy could be a means to ensure that new co-operatives are created and that the savings of the community are used productively:

At the same time, the issue of a national earnings policy demanded much attention in an attempt by the national government to reduce inflation, to restore the balance of payments position, and to prevent the employment situation from worsening. The so-called Pact of Moncloa, dated November 1977, contained details of a wage settlement for the public sector and for those private enterprises which wished to benefit from available subsidies and supporting policies such as tax concessions and credit facilities. The work norms of 1978 stated explicitly that the Mondragon co-operatives would adhere to such guidelines on grounds of "our principles of solidarity with other workers".

Table 3 gives a comprehensive picture from 1964 to 1979 of annual amounts of gross and net earnings for Index 1 and 3. It can be seen how the differential of one to three is maintained with mathematical precision for gross earnings but fluctuates for net earnings, dependent upon the system of paying premiums for social security. It can clearly be seen how the period 1964-69 reveals a disequalizing trend which narrows again in later years.

Finally, in Table 4, the pay structure for each level within Ularco in 1979 is shown as representative of the broad picture within the as-

sociated co-operatives. The first column in Table 4 gives the index at five job description levels, from which, of course, all intermediate index values can easily be calculated. The second column gives earnings per hour: the base of the entire earnings system. In Column 3, monthly gross earnings at each of the five levels are given and show that the rule "one to three" strictly applies. Next we have two Columns, 4a and 4b, for social security deductions, the first for the flat rate applying to all, the other for a fixed percentage yielding different absolute amounts needed to meet the requirements of the variable elements in the social security system: widows' and orphans' pensions and 80 per cent of salary during temporary absence from work.

TABLE 3.

Annual gross and net earnings for index levels 1 and 3* (1964-1979)

Year	Index 1		Index 3		(4)/(2)
	1	2	3	4	
1964	Gross earnings 54.8	Net earnings 42.9	Gross earnings 164.5	Net earnings 128.8	3.0
1969	90.2	64.6	274.8	249.2	3.86
1974	182.7	137.3	558.0	481.9	3.51
1979**	584.5	430.5	1 753.5	1 460.9	3.39

* The figures in Columns 1, 2, 3 and 4 are in 000 pesetas

** The figures of Columns 2 and 4 amount to 400.4 and 1 257.2 after tax deduction; this reduces the ratio of inequality to 3.14

Source: Internal document C. L. P. 1979.

Table 4.

The structure of earnings in the Mondragon co-operatives (1979).

Index	Gross earnings per hour	Gross earnings per month	Flat rate social security	Variable amount Social security	Net earnings per month before tax deduction	Net earnings per month after tax deduction	Annual net earnings after tax deduction (pesetas)
1	2	3	4 (a)	4 (b)	5	6	7 (= (5) x 14)
1	225.50	41 750	7 000	4 000	30 750	28 600	400 400
1.5	338.25	62 650	7 000	6 500	49 150	43 750	612 500
2	451.00	83 500	7 000	9 000	67 500	59 500	833 000
2.5	563.75	104 400	7 000	11 500	85 900	74 800	1047 200
3	676.50	125 250	7 000	13 900	104 350	89 800	1257 200

* In previous years the deduction for tax is not included in the work norms document. In 1979, for the first time a — moderately progressive —

The next column gives net earnings (take home pay), implying a ratio of 1 to 3.4. From 1979 onwards, the deduction for tax is included in the work norms document and the monthly take-home pay after tax deduction is given in Column 6. The last column, 7, giving annual take-home pay after tax deduction further reduces the inequality ratio to 1 in 3.14. The change in the tax system was introduced by decree on 1 September 1978, and on 1 December of the same year: the result had been a personal income tax of a moderately progressive nature.

The work norms document for the year 1979 has taken both the fiscal changes and the national guidelines on earnings into account, rather than the earnings levels of Union Cerrajera and Elma, which are no longer judged to be representative of the "environment". It would be going too far to show all the details of calculation of earnings per hour, gross and net, as well as the social security provisions. The inclusion of these new policy variables signals a new phase in the annual debates on earnings, which will concentrate less on equivalence in take-home pay with local enterprises than on the regional and even national scene.

It is worthwhile noting that there are all indications that, while the average earnings level compares well with regional and national development, in the case of internal income differentials the ranges are not only kept very narrow, but even after twenty years there is considerable concern to keep the net-earnings ratio very close to one in three. Little is known about wages and salary differentials in Spain. In 1969, J. Jané Solé studied this topic in some 20 enterprises and found that, at that level of development in Spain, maximum individual differentials of one to fifteen were apparently the normal pattern.¹⁴ In this perspective, the findings in the Mondragon co-operatives are impressive, accounting for the fact that some of the enterprises can compare with the most modern, including their large scale.

3. PAY DIFFERENTIALS IN REALITY

One likes to know how official norms work out in actual practice. For that purpose, we shall present a picture of the largest and oldest enterprise, Ulgor, so that we have a chance to investigate a situation in which the largest differences and greatest inequalities would be found. We refer here, for example, to the study made in 1969, in which it was concluded that, because of its huge size, Ulgor could make a case for differences of one to five.¹⁵

Table 4: Contd.

income tax has been officially introduced and thus it is to be expected that from 1979 onwards the tables of earnings will have the format as shown in Table V. C.L.P. follows exactly the Ularco tables.

Source: Internal Document of C. L. P.; Work Norms 1979.

¹⁴ J. Jané Solá, *El Problema de los Salarios en España Oikos-tau* (S. A. ediciones, Barcelona, 1969), 124-125.

¹⁵ The analysis in Section 3 is based on the study of the payroll statement of 2,500 co-operativists during May 1977. This firm, including all "internal" co-operativists, has been selected for detailed analysis; a large number of "external" members, etc. — have not been included.

Inspection of a normal monthly earnings statement in which earnings of all ranks, including the managing director, are recorded, showed that of about 2,500 members only 25 per cent worked the official number of hours, 181.33, agreed upon for that month. Due to absence for various reasons — illness, training, military services, etc. — many workers work less hours while others work more than the official number.

To obtain a good idea of the earning differentials, therefore, a subset of members who had worked exactly 181.33 hours during the month selected (May 1977) was chosen for investigation. The earnings of the entire workforce are shown in Graph 2 and in Table 5.

Graph 2 shows that there is a very heavy concentration of net monthly earnings between 22,000 and 29,000 pesetas. Actually, all earnings below 17,700 pesetas are compensated for by social security payments. It is an interesting fact that, in general, opportunities for promotion are highly praised. Still, it is worth noting that differences are modest by any standards, as indicated by a high concentration of earnings. There is little point in making exact calculations for comparison with the earnings differences in other companies because the required data are not available elsewhere. Thus, the only type of comparison possible is that between extreme categories, as was shown, for instance (see Table 1), in the study of earnings in Ularco and two capitalist enterprises.

The picture differs slightly for all members. The earnings profile is shown in Graph 2 and spreads off markedly to the right; obviously a result of the considerable overtime that is being worked. Now 37 per cent of the workers earn between 22,000 and 29,000 pesetas monthly, 39 per cent between 29,000 and 39,000, whereas among the smaller subset 27 per cent were found in the higher bracket and 58 per cent between 22,000 and 29,000.

For an exact insight into the differences between the top incomes and the one at the bottom in Graph 1, we present in Table 5 *precise* values of the highest and lowest paid members. Usually in earnings studies, such values are "estimated" from regression analysis, in which the highest salaries are put together in the top one or top five per cent, or in an open-ended category, leaving the reader to guess the precise degree of inequality.

In Table 5a values are presented for the subset; and in Table 5b for all members. Four members with monthly earnings of only 17,725 pesetas are the most junior workers who are learning the trade and who relate to the very highest co-operators with 89,229 per month at one do five. When the next two are included, the differential falls to one in four-and-a-half and becomes less as we continue. For instance, if we compare the bottom one per cent with the top one per cent, we obtain a difference of net annual earnings of one to 4.1; the bottom five per cent to the top five per cent relates as one to 2.8 only; and for the lowest and highest decile, the ratio is 2.2.

When considering the entire workforce, it is striking that no difference is found with respect to top incomes. In other words, their salaries already compensate for extra hours worked and no further compensation is granted. This reinforces the impression gained from the subset.

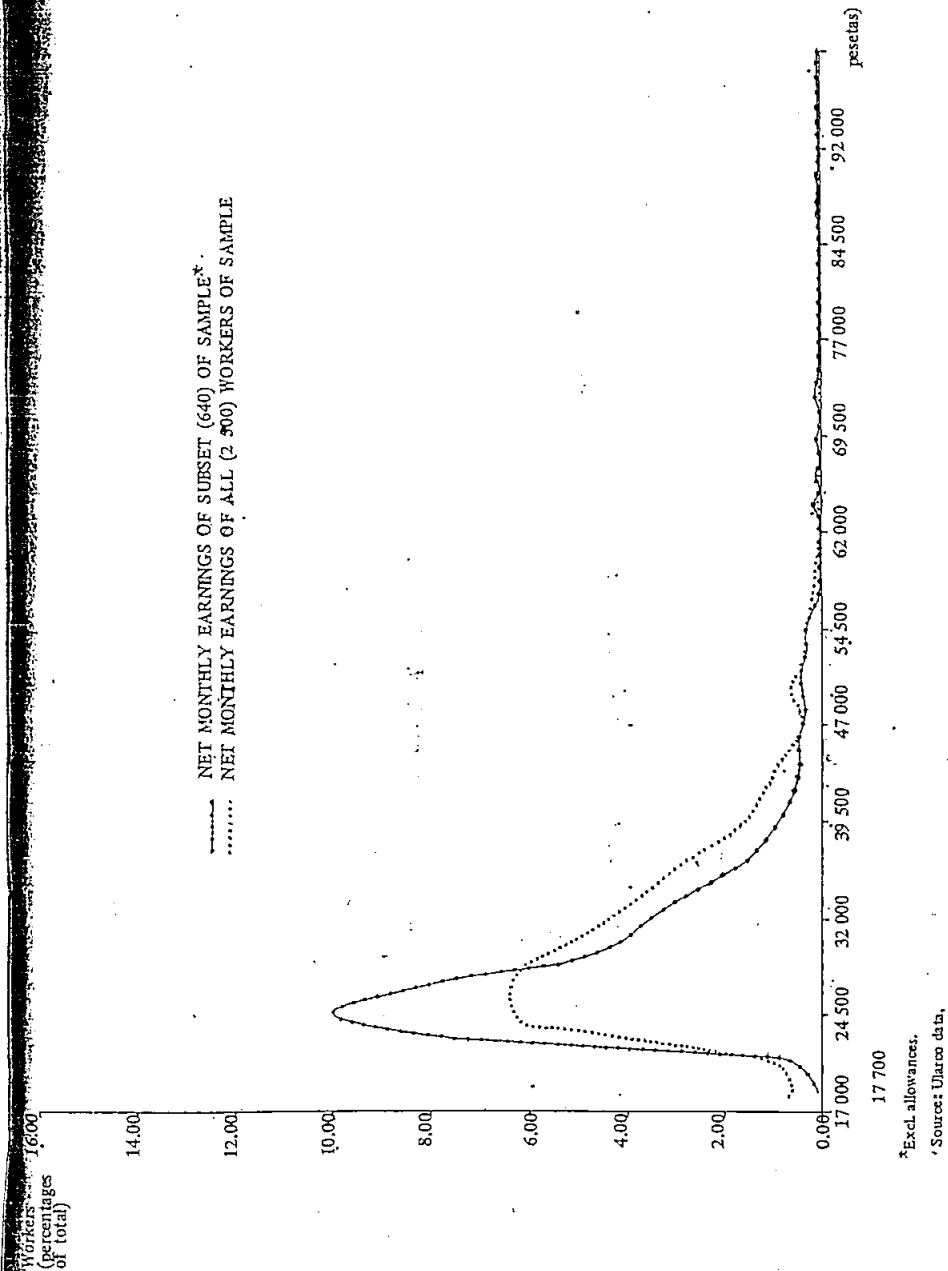


TABLE 5. Earnings differentials (May 1977)

a. Net annual earnings of 640 members (excl. allowances) in (000 pesetas)		Highest 10%	Highest 5%	Highest 1%	Lowest 1%	Lowest 5%	Lowest 10%
A	Maximum individual earnings	48.3	55.5	73.5	18.0	20.0	22.0
B	Minimum individual earnings				4.1	2.8	2.2
A/B							
b. Net annual earnings of 2 500 members (excl. allowances) in (000 pesetas)		Highest 10%	Highest 5%	Highest 1%	Lowest 1%	Lowest 5%	Lowest 10%
A	Maximum individual earnings	48.6	54.1	63.6	18.0	21.0	22.5
B	Minimum individual earnings				3.5	2.6	2.2
A/B							
c. Net annual earnings before taxes of 640 members (incl. allowances)		Highest 10%	Highest 5%	Highest 1%	Lowest 1%	Lowest 5%	Lowest 10%
A	Maximum individual earnings	49.0	52.9	73.4	18.0	20.0	22.0
B	Minimum individual earnings				4.1	2.6	2.2
A/B							

Source: Own calculations

Lowest earnings are far below 17,725 pesetas in cases of absence, illness, training etc., and thus 17,725 is taken as lower limit of individual earnings.

Next we wish to study whether the incomes earned are modified due to various kinds of allowances, by way of extra payments, from social security services, and so on. To that purpose, Table 5c again presents the incomes of the smaller subset, and shows that the differences are slightly affected.

The empirical findings show that actual practice yields no surprises in the sense of violation of the norms set. Actual outcomes are largely in accordance with the analysis of the earnings system outlined in earlier sections of this chapter. In particular, earnings differentials in absolute terms prove to be small, and only in a few exceptional cases is the ratio of one to four for net monthly earnings surpassed. It goes without saying that differentials are much smaller when comparisons are made for the same age categories: in the above, we have compared the most senior positions with those of young newcomers.

A final comment concerns the inequalities in "Mondragon" as compared to "participatory situations" elsewhere. It is well known that earnings differentials in Yugoslavia compare favourably — in the sense of being smaller — to differentials found in "capitalist countries". In 1969, for example, it was found that the top one, five and ten per cent of Yugoslav earnings relate to the median value as 2.9, 2.5 and 2.3.¹⁶ The situation in Mondragon in this perspective shows clearly that its principles of solidarity have been successfully translated into real practice: Here, the ratios of the top one, five and ten per cent relate to the median values as 2.7, 2.1 and 1.8 in the subset of 640 members and as 2.1, 1.8, and 1.6 in the sample of 2,500 members.¹⁷

4. THE SOCIAL SECURITY SYSTEM¹⁸

A necessary element in the study of distributional aspects is the social security system. The study of work norms showed that much attention is given to social security payments, a necessity in view of the fact that members are "self-employed" and thus do not fall under the state social security system. Lagun-Aro hived-off from Caja Laboral Popular in 1968 as an independent social security co-operative. Prior to 1968 a percentage had been deducted; from 1969 until 1973 a flat amo-

¹⁶ See Harold Lydall, *The Structure of Earnings* (Clarendon Press, Oxford, 1968), for a comparative study on earning differentials. Thomas's study on *Personal Income Distribution in Yugoslavia* (Ph.D. thesis, Cornell University, 1973) gives comprehensive information on the distribution of earnings in a "self-managed economy".

¹⁷ Such comparisons only indicate the distributive performance; the cases compared are so different that no exact conclusions can be drawn. The differentials would be still less if lifetime earnings were to be measured by way of net present value of the discounted earnings stream.

¹⁸ The sources used are the annual reports of Lagun-Aro for the years 1975, 1976 and 1978, as well as the internal rules of Lagun-Aro which were approved in September 1977.

unt was charged for all ranks, thereby contributing to larger inequalities in amounts available for consumption. In 1974 a variable deduction depending on the level of earnings was again introduced. Percentages of provisions for social security have changed gradually, with a modest drop for the lowest index and a considerable increase for the higher ranks.¹⁹

Increases in the annual premium are of great importance as the co-operative movement has to finance its own social security provisions; in 1979 the fixed premium amounted to 7,000 pesetas plus a variable 14.75 per cent of earnings per month. Although the aggregate percentage is still lower than in firms enjoying state social security, the trend is likely to continue its upward direction and over some years will reach the costs of the state social security system. At the end of 1978, the social security provisions covered 17,075 co-operators belonging to 84 co-operatives.

Annual allocations have risen to a huge amount, namely, 1,705 million pesetas, of which 990 million fall into three major programmes: family assistance, health programmes and compensation for temporary absence.

Interesting is the implementation of the solidarity aspect, on which we shall elaborate in some detail. The quota are uniform for the entire movement. All the cooperative enterprises, including the bank and other co-operatives of second degree, are divided into 13 communities of co-operatives, the largest of which is the Ularco group; the second largest consists of Caja Laboral Popular, Alecoop, and a few others. At the end of 1978 there were only a few retired people with pensions who also form a separate category.

For each of the 13 communities a record is held of total receipts and payments for all members registered in that group of companies, specified with respect to the main headings: medical assistance, family assistance, earnings compensation. Each community must balance its receipts and payments! If there is a favourable difference for any of the headings, then 50 per cent of that difference is refunded to the members.

In 1978, for example, 11 communities received a bonus for medical assistance while two exactly matched payments and receipts. Quite different is the picture with respect to compensatory earnings: five communities received a refund, and six were fined in terms of extra payments to be made.²⁰

¹⁹ Social security provisions (in percentage of gross earnings):

year:	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Index 1	28.3	28.3	26.9	28.4	27.4	27.3	24.8	24.5	25.1	26.9	28.8	26.3
Index 3	9.5	9.3	7.9	9.3	9.3	8.9	13.6	12.9	14.9	16.3	18.0	16.7

²⁰ The precise formula is:

In case of a bonus: $.50 (A - B)$;
 In case of a fine: $(B - 1.10 A)$,

in which A is total payments for social security and B is total receipts from the social security system.

The solidarity aspect thus influences the structure of the social security system in the following manner. Firstly, payments and receipts are shared with members of other enterprises in one of the thirteen "communities". Next, each community receives a refund or has to pay further amounts, which only partly compensate either for the total excess payments made to Lagun-Aro or the excess amounts received from the collective social security system.

A final aspect to be included here refers to the amounts of pension to which members are entitled. A very important change, namely, a worsening of services rendered, took place in 1976. Until that year a member with 30 years service was entitled at the age of 65 to a pension equal to the full amount of average earnings enjoyed during the last ten years of work. For the first ten years one would be entitled to 60 per cent of that amount with each additional year of service adding two per cent. Thus, a member who had been associated with a co-operative enterprise for thirty years would receive the full equivalent of the average of the last ten years as pension.

The new regulations stipulate that one will receive maximally only 60 per cent of the average of the last ten years of work. Ten years of work entitle a worker to only 36 per cent, with each additional year of work adding another 1.2 per cent, thus making the said 60 per cent following 30 years of work in a co-operative enterprise.

Lagun-Aro slowly has widened the scope of its activities beyond immediate responsibility for the social welfare problems of associated co-operators. It has been involved in studies on absenteeism and on environmental and health hazards. Discussions have been started to establish a local hospital with better facilities than exist at present, and Lagun-Aro also has co-operated with regional health authorities in a new Plan-Mondragon for cardiovascular research and programmes of preventive care for schools.

5. ALLOCATION OF THE ANNUAL SURPLUS TO COLLECTIVE AND INDIVIDUAL ACCOUNTS

Self-financing is particularly worthy of examination. It is being achieved without the workers' motivation being unduly affected. Each member of a producer-co-operative contributes to an account for collective reserves and to community consumption. By this means, solidarity with the community at large is put into practice: the social fund for community objectives takes care of general social needs as perceived by the workers, and the reserve fund is used for creating new work-places.

A special formula is employed for the allocation and control of the pure surplus, determining what is to be allocated to members' individual capital accounts and what is to be destined for collective purpose. Thus, after deduction of payroll costs, interest and depreciation, the pure surplus — "net profit" — must be distributed between a social fund, collective reserves, and the members. To determine the relative shares of pure surplus to be apportioned between the collective reser-

ves, social fund, and the capital accounts of individual members of a cooperative, the following formula is used:²¹

$$\alpha = \frac{S}{S + C} \times 100$$

where α = the percentage of pure surplus to be allocated to collective reserves and social fund (called "the alpha-coefficient") —

S = pure surplus or net profits.

C = the sum total of payroll costs, and interest payments on own resources (called the "computable base")

In practice, the distribution of the pure surplus is subject to further constraints. Firstly, more than 60 per cent of the sum total of the computable base (C) can never be paid out to individual members' accounts; secondly, at least 30 per cent must be made available for allocation to the social fund and collective reserves.²² The social fund is always allotted a flat 10 per cent of the pure surplus. As pure surplus increases in absolute terms, the proportion allocated to reserves thus rises from a minimum of 20 per cent to a high proportion of the total available. This happens when S is a multiple of C; in other words, when the pure surplus is very high, the claims of the collective reserve for a share in the surplus take precedence over individual interests.²³

To obtain a realistic appreciation of how the mechanism works, we show in Table 6 the resultant allocation for a wide range of theoretical values of pure surplus.

The formula is seen to apply to a range of values where pure surplus is high in relationship to payroll costs. In the majority of producer co-operatives, the pure surplus has been less than 43 per cent of payroll costs from 1975 onwards, and the allocation has therefore been

²¹ The so-called alpha coefficient is derived from the following equation:
 $S = \alpha \cdot S + \alpha \cdot C$.

The idea is that α is chosen in such a manner as to exhaust the pure surplus when a percentage — α — allocated of surplus to *collective* reserves and social fund is equal to that percentage of C — the computable base — which is allocated to *individual* accounts. Gutierrez-Johnson, in "Compensation, Equity and Industrial Democracy in the Mondragon Cooperatives", *Economic Analysis and Workers' Management*, Volume 3-4, (1978), (267-279, erroneously argues that first there is a 30-70 allocation of surplus between collective and co-operative returns, after which the α — coefficient needs to be calculated. The innovative element of the Mondragon coefficient, however, is that given a certain computable base — wage payroll and interest — different levels of profit lead to different percentages of allocation to the collective reserves, of which 30-70 is only one specific outcome.

²² The text of this section, including the graphs, diagram and hypothetical example, provides our interpretation of the official rules.

²³ While it is generally true that 30 per cent of pure surplus has been allocated to social and collective objectives, the distribution has been 10-20, during certain years a ratio 15-15 has been adopted and sometimes even 8-22. Another complicating factor is the possibility of experiencing losses that are temporarily compensated by other co-operatives. If, after some years have passed, the situation improves, then the rules of distribution change somewhat in order to undo the negative balance in the Fund for losses of the community of co-operatives.

10 per cent to the social fund, 20 per cent to the reserves for job creation and contingencies, and 70 per cent for distribution to members' capital accounts. For instance, in 1976, 70 per cent of the aggregate pure surplus — the result of adding the positive and negative net profits of 63 co-operatives, excluding ULGOR — was allocated to individual capital accounts, 10 per cent to social funds, and 20 per cent to reserves for various purposes. Individual differences were considerable, however. Some enterprises had experienced losses that were debited to individual capital accounts and also received a refund from the fund for losses. As for co-operatives that made profits, many allocated 70 per cent to individual accounts, but those that made high profits in relation to the computable base (C) were able to allocate higher absolute amounts — but smaller percentages — to individual members. In 1976, for example, seven co-operatives allocated less than 55 per cent to individual accounts. Diagram 2 and Graph 3 indicate the overall distribution between the three claimants on the pure surplus and the effect of the different hypothetical levels of pure surplus (S) on the accounts of members, given a specific level of C.

TABLE 6
 Distribution of pure surplus according to Mondragon formula: an hypothetical example*

Payroll costs and interest payments C	Pure surplus S	Social and reserve fund allocation*	$\alpha = \frac{S}{S + C}$	Distributed to members* (1 - α)	Unconstrained distribution	Constrained distribution
(1)	(2)	(3) (3a)	(4) (4a)	(5)	(6)	
Pesetas	Pesetas	Percentages	Percentages	Pesetas	Pesetas	
100	0	0	0	9	7	
100	10	9 (30)	91 (70)	17	14	
100	20	17 (30)	83 (70)	23	21	
100	30	23 (30)	77 (70)	30	30	
100	43	30 (30)	70 (70)	33.3	33.3	
100	50	33 (33)	67 (67)	42.9	42.9	
100	75	43 (43)	57 (57)	60	60	
100	150	60 (60)	40 (40)	67.9	60	
100	200	67 (70)	33 (30)	75	60	
100	300	75 (80)	25 (20)			

* Within parentheses the "constrained" percentages are given (column 3a and 4a)

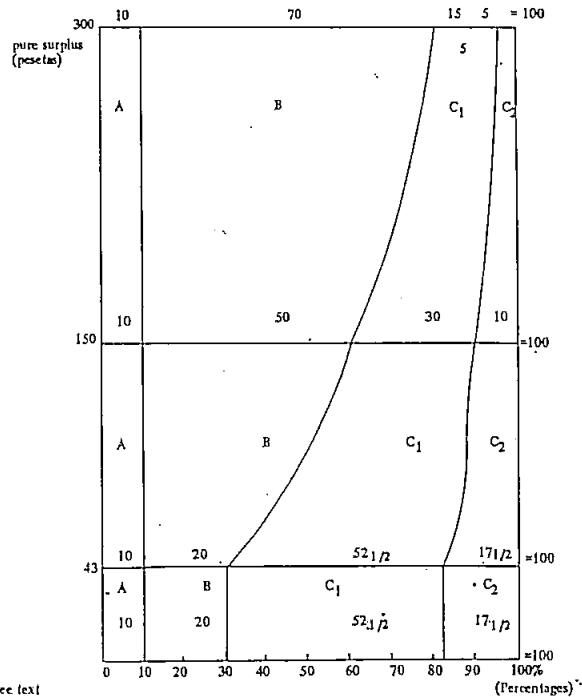
Source: Own calculations.

In the diagram, the y-axis gives the pure surplus in pesetas, while the x-axis indicates the percentages of the hypothetical example of Table 6. At each level of pure surplus the allocative decisions can be read off: A for the social fund, B for the reserve fund, and C1 and C2 for individual capital accounts. Here a distinction is made between C1, the amount that under no circumstances can be monetized, and C2, the amount which under certain conditions can be monetized. The effect of this system of distribution of the surplus in terms of amounts allocated to the collective of worker members is shown in Graph 3. In Zone I the members receive up to 30 pesetas of the pure surplus of each additional 100 pesetas. In Zone II this amount rises more slowly from 30 pesetas to 60 pesetas, and in Zone III no further additions are given (Assuming a "computable base" of 100 pesetas) The distance between 00' and 00" (the 45 degrees line) indicates the amounts which are not distributed to individually-held accounts.

The co-operatives associated with OLP thus view the distribution of surpluses in the context of the self-financing of their enterprises and the creation of more jobs. The individual co-operative capital holdings cannot be bought and sold but used only as collateral for borrowing from OLP.

DIAGRAM 2.

Distribution of pure surplus (net profit), given a computable base of 100 (pesetas)

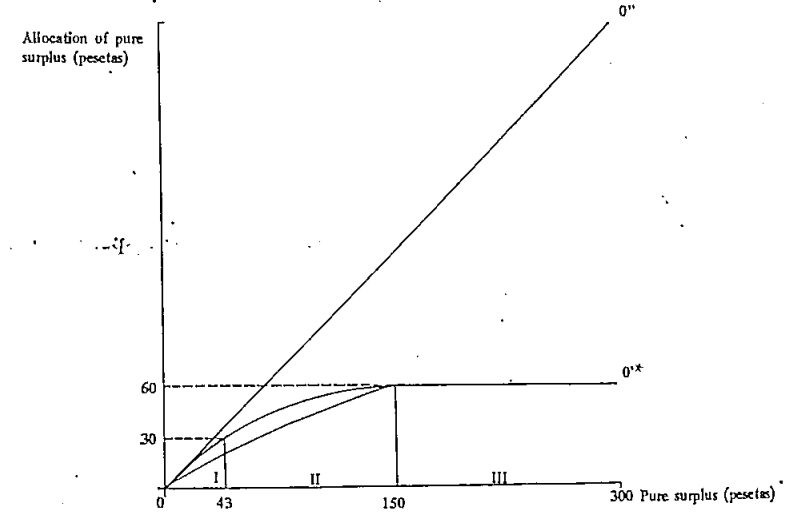


Source: see text

The operation of the distributive formula normally has meant that the greater part of the pure surplus — with the exception of that 10

GRAPH 3

Pure surplus capitalized in individual accounts, given a computable base of 100



00' = pure surplus allocated to individual accounts
Source: see text

per cent which is allocated to the social fund — is retained within the co-operative. Rigorous adherence to this practice of capital accumulation, through what can be termed "forced savings", ensures the co-operativists' job security, the financial viability of their enterprises, and long-run growth and profitability. Should losses occur, the formula's constraints are reversed and not more than 30 per cent of the losses can be written off from the collective reserves. The capital accounts of the members are then used to make up the differences.

Preventing "leakages" from the system is, of course, a very important precondition for the steady creation of new jobs.

6. INDIVIDUAL CAPITAL HOLDINGS AND THE DISTRIBUTION OF WEALTH

Spanish general law on co-operatives permits the revaluation of a co-operative's fixed assets and, as a counterpart, a similar revaluation of the member's capital share in the co-operative in order to take inflation into account. This adjustment upwards of the face value of assets and of individual capital contributions is intended to compensate for the loss of value caused by inflation. By adjusting the value of capital holdings, co-operative workers not only maintain the value of their money, deposited within their enterprise throughout their working life, but any new member who enters the movement has to make

a greater sacrifice as the capital threshold also rises. In a co-operative movement based on principles of equity, this is an obvious requirement; otherwise, the newest entrant would benefit disproportionately from past efforts and risks taken by his workmates.

The "entry fee" to be paid by new members in Ulgor, for instance, has increased from a monthly payment of 3,350 pesetas in 1974 to 4,750 pesetas in 1975, on to 5,450 pesetas in 1976 and 6,900 pesetas in 1977. In 1977, a new member who did not need to put up all initial capital in cash on the day of joining the movement faced a financial obligation of 174,000 pesetas, of which 29,000 (16.6 per cent) goes to reserves and the remainder is debited to the individual member's capital account. The minimum down payment amounts to 8,400 pesetas and the rest is then payable in 24 monthly instalments of 6,900 pesetas if a loan is granted for the entire amount (except the down payment). This is normal practice in solvent co-operatives.

Adjustments in "threshold payments" which take place each year are made according to the following formula:

$$C_n = C_{n-1} \times \frac{Res_n / Cap_n}{Res_{n-1} / Cap_{n-1}} \times \frac{Price_n}{Price_{n-1}}$$

in which C_n is the new capital contribution; C_{n-1} is the contribution of the previous year; Res_n and Res_{n-1} stand for the collectively-owned reserves of a co-operative in the current and the past year; Cap_n and Cap_{n-1} stand for the total amount of individually held capital accounts; and the last term indicates the percentages of inflation or deflation in the current year as compared to the past one.

The adjustment thus consists of two parts:

- (a) a factor which reflects changes in the weight of collectively-owned reserves versus individually-owned capital accounts;
- (b) a factor which reflects changes in price levels during the current year.

The first factor has been explained by one of the founders as follows:

If the relationship reserves: share capital (that is to say, community property versus individually-owned property) increases ... [therefore] the new member will have to pay more. If, on the other hand, the relative position of the community property compared to individually-owned holdings declines, he will have to pay an amount which is also less than the year before. This basis of small individual sacrifices, in a spirit of mutual solidarity, is the means by which the "open door" concept is turned into a reality in this co-operative.²⁴

²⁴ Jose Maria Ríaza Ballesteros, *Cooperativas de Producción* (2nd edition, Ediciones Deusto, Bilbao, 1967), pp. 174-175.

As we said earlier, updating the value of the capital accounts of all members to account for inflation is a permanent characteristic of the rules of the co-operative movement.

Each individual account is annually re-valued but is also credited with the amount which is allocated from the "net profit" in that year. "Net profits" are distributed according to the total earnings of each member and the interest received, a remarkable characteristic of the Mondragon movement. Rather than distributing pure surplus according to the capital stakes of each member, as would be the case under capitalist "rules", the co-operators allocate the pure surplus mainly in accordance with the labour contribution of each member. If, for example, profits of 100 pesetas would be distributed *equally* among two members, of which one is on Index 1 and the other on Index 3, then each would receive 50 pesetas; if a *weighted* system were to be applied according to index, the first would receive 25, the second 75 pesetas. Assuming, *furthermore*, that the first has received a salary of 150 and 20 interest, whereas the latter receives 450 and 150 interest, then the distribution would be 22 against 78 pesetas.

In algebraic terms:

$$(1 - \alpha) \cdot S = \alpha \cdot C = \frac{\sum_j (E_j + I_j)}{E + I} \cdot \alpha \cdot C$$

in which

- α = alpha-coefficient
- S = pure surplus
- C = computable base
- E = Total payroll costs
- I = Total interest paid out
- j = 1, ..., k number of co-operativists.

Wealth is generally distributed more unevenly than earnings, but in the Mondragon co-operatives, due to this system, wealth is distributed very evenly. The outstanding feature is not the fact that a highly mobile worker has accumulated a considerable amount of capital, but that huge amounts are accumulated through forced savings by the "typical average" co-operativist.

The co-operative members' earnings and wealth position is far more favourable than that of employees in capitalist enterprises. Their earning position is more secure because of the high priority which employment creation has in the co-operative movement. Their receipt of interest on capital — six per cent on considerable amounts of capital accumulated — are influenced positively by the very favourable percentages by which the accounts accumulate; while the accumulated "forced savings" themselves, which add to pension rights under the social security arrangements of the co-operative Lagun-Aro, after 40 years of co-operative membership form a huge fund at the disposal of the person concerned.

7. CONCLUDING COMMENTS

In this study of the manner in which problems of distribution have been solved by the co-operativists, we have attempted to follow the actual record of events as closely as possible. The objective has been to gain insight into those aspects of distribution which have been of major concern to the co-operative movement while yet not losing the perspective on the general issues involved. Earnings data which include precise details for all ranks, including senior executives, are generally not available for research; it has thus been a challenge to do justice to the excellent data which were made available for research in such a co-operative manner.

We have found that the distribution of earnings is remarkably narrow, as measured by the various percentile ratios and distances with respect to median earnings. Even more impressive has been the fact that amounts of capital accumulated by individual co-operativists over a long period of time fall into a very narrow range of values.

The conclusion can be quickly drawn that this co-operative movement has successfully practiced its principle of solidarity in a manner which in no way has jeopardized its overall economic performance. On the contrary, both in terms of economic performance and in terms of equity, the co-operative movement seems to have done far "better" than the "capitalist environment", either in its own area, in Basque country, or in Spain at large.

This impressive record, however, is not so much the result of the specific "Mondragon formulae". We have seen that it would have been very easy, in agreement with approved rules and work norms, to increase earnings differentials sixfold instead of adhering strictly to a three to one maximum differential. It has also become clear that practicing solidarity with the two "capitalist" enterprises becomes very difficult once the "socialist solution" has a position of strength which begins to compete for resources, e. g., for workers who are invited to join the movement.

A mini-inflationary spiral resulted and temporary solutions only could be found. Even then solidarity has only a restricted meaning, since the co-operators are in a more favourable position than their colleagues in "capitalist enterprises". Firstly, co-operative workers have greater job security. Secondly, their take-home pay is slightly higher, their social services are better, and their opportunities for promotion are greater. It is impressive how successful the movement has been in subordinating "today to tomorrow", and in practicing solidarity, as has been indicated by the very low salaries paid to the top ranks, defying the workings of traditional labour market mechanisms.

It is not sure, however, whether it will be possible to find pragmatic solutions to increasing problems, for instance, when the movement spreads into major urban concentrations. Analysis of distribution problems shows that time and again new solutions have to be found to make solidarity a realistic concept. We can be confident that in the future such solutions will also be found, were it not that increasing size as well as the age composition may cause major barriers. We refer here to

the "capital issue". The movement has been praised for its introduction of a "threshold capital payment" for new members. In this way the phenomenon of "second-class citizens" would not occur since all workers have an equal stake in their enterprise. What will happen, however, on the day that huge numbers of co-operators will retire, a moment that has been postponed for at least some 20 years due to rapid expansion? In 1977 the average age of 15,000 co-operativists was about 33 years, but the expansion will slow down and eventually come to an halt, e.g., in the extreme situation when the whole of the Guipuzcoan economy, or Basque country, has turned "co-operative".

If, upon retiring, co-operators were to claim the total accumulated capital in their individual accounts, a process of de-capitalization would begin. Under Spanish co-operative law there is a legal obligation to monetize this amount within five years of retirement. It seems, therefore, that the Mondragon formulae have been successful in postponing for at least one generation the day at which, all through the 19th and 20th centuries, co-operatives have been forced to face problems that threatened their survival.²⁵ The critical question will be the extent to which the co-operators will adopt changes to the formula of distribution of pure surplus between collective reserves and individual capital accounts. In one education co-operative, for instance, the co-operators have always maintained a ratio of two-thirds towards collective reserves as against only one-third to individual accounts; and in one of the co-operative factories the general assembly decided that all the pure surplus would be added to the collective reserves. The reasoning here was that they owed employment and economic strength to other co-operatives, in particular to CLP, and that therefore it could be proper to leave the accumulated pure surplus as a collective reserve. It seems clear that whether or not the Mondragon co-operatives will one day be faced with the problem of de-capitalization will be determined by the degree of conscientization among the co-operators.

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RASPODELA ZARADA I KAPITALA U MONDRAGONSKIM
KOOPERATIVAMA

Henk THOMAS

Re z i m e

Mondragon, gradić u španskoj pokrajini Baskiji, predstavlja centar impresivne mreže kooperativa. Ovaj sistem sastoji se danas od preko 130 kooperativa od kojih su polovina zadružne tvornice, dok ostatak pokazuje veliku raznovrsnost, pri čemu dominiraju obrazovne i finansijske

²⁵ In 1979, a series of in-depth studies began to project flows of capital until the year 2000. In addition, major changes in fiscal law and the co-operative legal rules need to be taken into account.

ske (kreditne) institucije. Početak seže u 1943. godinu kada je osnovana mala tehnička škola i u 1956. godinu kada je prva radionica počela da proizvodi peći i grejalice. Otada, rast mondragonskih kooperativa bio je zaista upečatljiv, a i njihova efikasnost pokazala je izuzetno visok stepen u poređenju sa kapitalističkim preduzećima.

U ovom članku, autor podrobno analizira raspodelu zarada i kapitala u mondragonskim zadrugama. Najpre se razmatraju osnovna pravila koja regulišu nivo i razlike u zaradama. Zatim sledi istorijska analiza koja pruža uvid u mnoge probleme raspodele kao i različite opcije o kojima treba odlučivati tokom vremena. Što se pokret više širio to se javljala veća potreba za politikom zarada i dohodaka, tako da je ova politika na kraju poprimila regionalni ako ne čak i nacionalni karakter. Pokazalo se da politika dohotka ima ključni značaj budući da se njome odlučuje koliko će od čistog viška biti raspoloživo za nove investicije. Prihvaćena politika dohotka dosad je bila primenjena na sve kooperativne bez obzira da li su one angažovane u industrijskim aktivnostima, ili se bave kreditiranjem, istraživanjem i razvojem, obradovanjem, itd. Ovo pokazuje jasno odstupanje od obrasca razlika u zaradama koji vlada na tržištu rada posmatranom u celini. Jednako važi i za uže raspone između ekstrema — najviših i najnižih zarada: u kooperativima se održava raspon od jedan prema tri, dok je u nekooperativnim organizacijama raspon znatno veći. Na taj način, glavne razlike koje postoje u zaradama za slična radna mesta (poslove) u istom regionu zavise od toga da li neko radi u kooperativi ili kapitalističkoj tvornici.

Podaci ubedljivo pokazuju da je jednakost u Mondragonu čak mnogo veća nego u nekim drugim samoupravnim slučajevima, npr., u jugoslovenskim tvornicama. Razlog za ovo između ostalog leži, i u potrebi kooperativa da razvijaju sopstveni sistem socijalnog osiguranja. U Mondragonu se ovom pitanju daje prioritet; osnovana je posebna kooperativa sa ciljem pružanja usluga socijalnog osiguranja zadrugarima i njihovim rođacima.

Autor na kraju istražuje raspodelu svojine, tj. strukturu kapitala. Mondragon u tom pogledu karakteriše kombinacija individualne i kolektivne svojine: svaki zadrugar ima sopstveni račun na kome se postepeno akumuliraju kapitalna potraživanja, ali postoji i kolektivni sistem rezervi, koje se ni u kom slučaju (izuzev ako tvornica ne istupi iz združene grupe) ne mogu monetizovati. Posle penzionisanja, zadrugar može zahtevati svoje vremenom kumulirano učešće (akcije), koje se tada pridaje penzionim pravima. Ovo, na dugi rok, predstavlja jedan od najslabijih aspekata mondragonske ekonomske "formule" s obzirom da može da vodi, u izvesnoj meri, do dekapitalizacije. Opstajući već više od četvrt veka kao sistem proizvođačkih kooperativa, zadrugari su bili u stanju da reše probleme sa kojima su bili suočeni i da veoma brzo ekspandiraju. Vremenom oni će se morati suočiti sa značajnijim ekonomskim problemima, tako da će u narednoj dekadi biti veoma zanimljivo i korisno pratiti kako se rešavaju pitanja politike dohotka i svojine nad kapitalom.

PLYWOOD CO-OPERATIVES OF THE PACIFIC NORTHWEST: LESSONS FOR WORKERS' SELF-MANAGEMENT IN THE UNITED STATES

Christopher E. GUNN*

The plywood co-operatives of the Pacific Northwest are the largest group of workers' co-ops in the U. S. Their role in producing a significant portion of the nation's softwood plywood and their continued existence in varying numbers for almost 60 years make them an important source of information on this form of production. This case study will investigate their very real contribution to our present-day understanding of workers' co-ops, and it will also seek to clarify why they should not be considered a complete model for other co-ops to follow.

Sizeable literature exists on the plywood co-ops.¹ This case study will briefly summarize their history and overall performance in order to concentrate on critical aspects of their organizational, decision-making, and financial structures. It will then evaluate these co-ops in light of fundamental conditions for workers' self-management adapted from Vanek (1975) and Bernstein (1976).

The plywood co-ops are distinguished from the conventional, outside investor-owned counterparts in their industry by the fact that their owners also work in them. Co-op owner-members adhere to cooperative principles such as equality of vote in decision-making and equality of pay based on hours of work.

Co-op owner-members own a share, or a block of shares, in their firm. Members are generally required to work in the co-op, and their remuneration is based on work; their business done with the co-op.² Dividends are rarely paid so that there is little incentive for ownership by non-working owners, even when co-op by-laws allow it.

* Assistant Professor of Economics, Hobart and William Smith Colleges, Geneva, NY, U.S.A. The author wishes to thank Jaroslav Vanek and Hazel Dayton Gunn for their helpful comments and support in this research.

¹ See Bellas, 1972; Berman, 1967, 1975, 1979; Bernstein, 1974, 1976; Greenberg, 1978, 1979; Rhodes, 1978; Zwerdling, 1978.

² In legal terms, the owners of a co-operative must be its patrons in the U.S. Co-operative ownership is defined in terms of participation in the business, which in workers' (producers') co-ops means participation in the work (production). A workers' co-op is jointly owned by a group of workers who patronize the business and who are classified as its members (Alvarado-Greenwood et al., 1978, pp. 78-79).