

to hundreds of millions of dollars while the economy was seriously in need. They did not encourage investments by the workers employed abroad<sup>9)</sup> and the workers preferred saving their money in foreign banks.<sup>10)</sup>

Ecevit's government has the chance to benefit from workers' saving as this constitutes an important feature of the party's and the government's programmes. Also, Ecevit will be able to benefit from loans offered by friendly governments of Europe which are run by social democrats who maintained good relationships before Ecevit came to power. This will ease the problem of deficit and minimize the effect of the policies suggested by the IMF.

The reactions of the right youth organizations supported by rightist politicians who have lost their hopes for democracy are getting more violent. They want to prove that the new government cannot stop violence or anarchy and that the "authoritative government" (probably of Latin America type) should come.

These are the problems on the Ecevit government's agenda, but none of them are insurmountable. Time and patience are needed on every account.

The problems that are related to the long-run are more serious. Among the very important economic policy measures would be capital management once the available resources start to be channelled to the people's sector.

This is where the secrets of development with high employment and better income distribution hide. Again, an anti-inflationary policy would be very hard to conduct within the existing set-up. An extensive educational campaign, together with very active and viable economic programme must also take place to evaluate the "values" of the old system and raise awareness among the people for a new and more humane order.

<sup>9)</sup> Milliyet, March 29, 1977, an interview made by Furuzan with the workers in Germany emphasizes their willingness to invest their money at home, under a leadership of a trustworthy and worker-oriented government.

<sup>10)</sup> The amount of savings that is deposited in foreign banks is debated to be 6 to 20 billion U.S. dollars, which is incredibly enough for any developmental effort to take place in Turkey (Milliyet, Furuzan and Cumhuriyet, S. A. Yüksel).

## THE ECONOMICS OF WORKERS' MANAGEMENT: THE CHILEAN EXPERIENCE

Andrew ZIMBALIST\* and Juan ESPINOSA\*\*

### I. INTRODUCTION

This paper summarizes some major findings of our book on worker management of Chilean socialized industry.<sup>1)</sup> During 1973 the authors conducted an extensive survey of 35 randomly-selected manufacturing enterprises, covering the ten industrial divisions of the UN classification scheme and ranging in size from 90 to 1800 employees. The analysis is based on the construction of a relative index of worker participation in management and, through factor analysis and multiple regression analysis with linear functional form, it attempts to examine the structure, antecedents, and performance results of worker self-management in Chile during the Allende years.

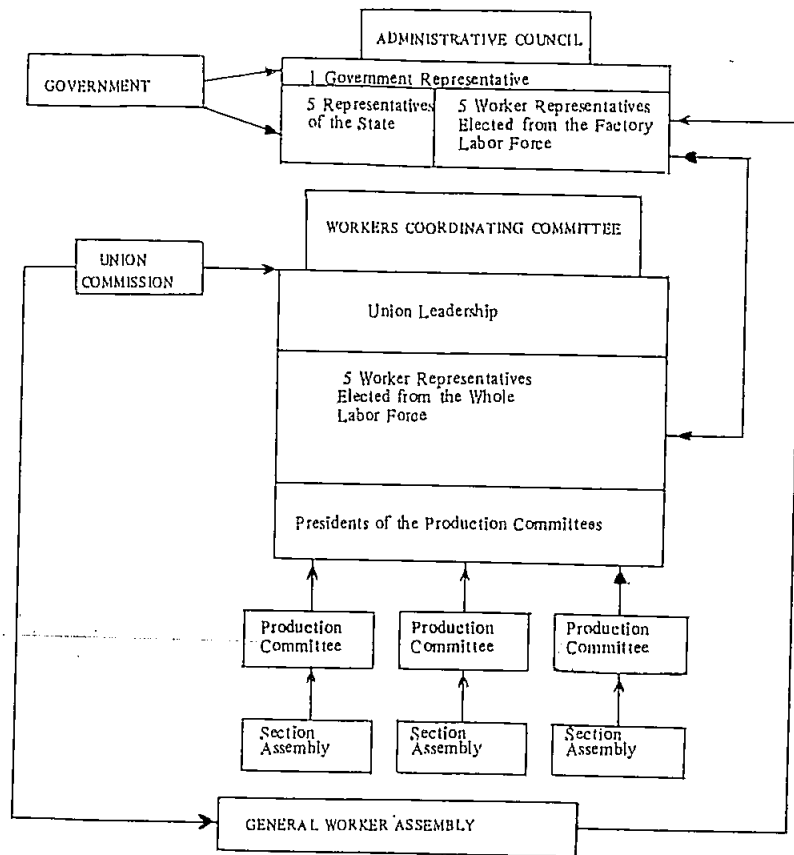
### II. THE MODEL OF PARTICIPATION

In August 1973, the socialized sector of Chile's economy comprised approximately 420 enterprises, accounting for upwards of 40 per cent of total industrial output and over 30 per cent of the industrial labour force. According to the *Normas Básicas* of participation, promulgated in June 1971, these socialized enterprises were managed by an administrative council which, in theory, was to be composed of five elected worker representatives, five state-appointed representatives, and one state-appointed administrator. In practice, only a handful of the largest enterprises actually followed this scheme. In the great majority of these enterprises, worker representatives held more than 50 per cent of the seats on the administrative council. Where there was not such outright control, several state representatives were chosen from among the workers of the factory in question. Indeed, in many instances the workers themselves chose their own administrator. Decisions of the council were reviewed and subjected to modification at monthly general assemblies of all workers in the factory.

\*) Smith College, U. S. A.

\*\*) Organization of American States.

1) *Economic Democracy: Workers' Participation in Chilean Industry, 1970-1973*, Academic Press, New York, 1978.



At the shop-floor level, sectional assemblies met on a monthly basis, and production committees were elected to conduct the organization of production on a week-to-week basis. Suggestions and information flowed from the shop-floor to the administrative council through the coordinating committee. The latter was presided over by the president of the largest union in the enterprise. (Typically, the Chilean firm had at least two unions, one white-collar and one blue-collar. During Allende's period there was a tendency for these two groups to merge and to form a single class-unified union.) Aside from the task of heading the coordinating committee, union leaders were not allowed to serve as worker representatives on the production committees or administrative councils. This separation of functions at times created problems as the more bureaucratic unions (usually those controlled by either the Communist Party or the Cristian Democratic Party) generally opposed the formation of parallel institutions to represent the workers. The meetings of the coordinating committee were also attended

by the heads of the production committees and by the worker representatives on the administrative council. Schematically, the formal structure of the participatory bodies is depicted below.

### III. THE FUNCTIONING OF THE MODEL<sup>2</sup>

In the following paragraphs, we can do no more than briefly outline our principal findings. The discussion will consider three dimensions of our study: first, the structure of participation; second, the factors influencing the level of participation attained and, third, the effect of participation on the performance of the enterprise.

#### A. The Structure of Participation

A basic methodological assumption of our study is that worker participation in enterprise management is a measurable process, at least in comparative terms. A cumulative index was constructed which allowed an interfirm comparison of the extent of worker participation in decision-making, execution of policies, and control and evaluation of these policies. The index was formed by separately measuring the functioning of the structure of participation (existence of participatory bodies, frequency of meetings, attendance at meetings, etc.) and the content of participation (range of issues covered at meetings, workers' influence in forming decisions, etc.) at three different levels within each enterprise. This information was obtained by worker representatives, union leaders, state representatives and administrative and technical personnel within each enterprise. Five separate questionnaires were used. Two principal results of our analysis of the behaviour of the components of our index are summarized below.

1. Participation at higher levels within the enterprise (i.e., the administrative council) was always accompanied by active participation at the base or lower levels (i.e., production committees and worker assemblies at the level of the shop floor and general assemblies of the whole enterprise). This finding is consistent with other studies which find that the participatory process only sustains itself and evolves into fuller democracy when it develops from the base. The experience with democratic procedures in a worker's local environment conditions and educates the worker for active participation at higher levels. The mere presence of worker representatives on management boards does not constitute a sufficient condition for rank-and-file interest and involvement in enterprise decision-making, as the Western European experience with minority representation and codetermination has amply demonstrated. Indeed, it appears that higher-level worker representation is only effective when accompanied by mobilized and organized support and pressure from below.

2. A related result is the high correlation we found between the structure and the content of participation. The existence of formal participation bodies (structure) does not guarantee that workers will exert effective in-

<sup>2</sup> The presentation here borrows heavily from Chapter 8, "Commentaries and General Conclusions," of *Economic Democracy*.

fluence (content) in decision-making. In fact, experience elsewhere suggests that without the opportunity to have a real impact on enterprise policies, workers lose interest in the formal structure, e. g., they cease to attend meetings, cease to vote for or watch over their representatives, and cease to follow enterprise performance. The content of the participation, then, must not only provide for effective worker input in general, but it must provide for this input in substantive matters. When worker influence is limited to consultation or inconsequential issues, participation will not be dynamic and self-sustaining. When the influence is real and far-ranging, however, workers will exert pressure to sustain and deepen the formal structure of participation.

### B. Factors Influencing the Level of Participation

In the following stage of the study, it was hypothesized that the relative level of participation obtained in each firm was a function of the presence in differing degrees of characteristics peculiar to each factory. We considered 29 quantifiable independent variables suggested by previous studies for which information was uniformly available in all sampled enterprises. These variables were grouped into three main categories: technology of the enterprise (technology, organizational and bureaucratic structure); labour force characteristics of the enterprise (level and nature of education, political organization, and ideology); and intermediate factors (disposition of the administration toward participation, the nature and extent of informational flows). Our principal findings regarding the factors influencing the level of participation can be summarized as follows:

1. One set of variables examined pertained to those characteristics traditionally employed to describe the social and bureaucratic organization of the firm (size, span of control, vertical and horizontal differentiation). None of these variables, alone or together, were found to be significant predictors of the level of participation. Yet other literature on the subject has consistently found one variable in particular, horizontal differentiation, to be positively associated with decentralization of decision-making in the firm. However, this literature refers solely to decentralization on the level of middle management. Since we are measuring participation in decision-making by workers and not by management, it is not surprising that we found this variable insignificantly correlated with participation. In fact, it might be argued that as horizontal differentiation increases and the power of middle management grows, middle management becomes increasingly possessive of its new power. This could make it more and more difficult to decentralize decision-making beyond the level of middle management to the production workers and might explain the negative coefficient of horizontal differentiation in relation to participation, although this coefficient does not become significant until the 25 per cent level.

The relevance of this observation to the Yugoslav experience should not escape the reader. Lawrence and Lorsch (1967) have demonstrated a positive association between rapidly-changing market conditions and horizontal differentiation for successful American firms. In his comparison of two Yugoslav textile firms, Adizes (1971) noted that the 1967 economic reforms, which served to strengthen the market mechanism in the Yugoslav

economy, created pressures for firms to expand their middle-management staffs. In one firm there was an immediate adaptation to the new market conditions. A new manager was hired and the size of the marketing department expanded from less than a dozen to 39 people within a year. The need to make rapid responses to the unstable market and the attempt to influence actual market conditions meant that decision-making was centered more and more in the hands of middle management. Workers had less and less of an influence on decision-making and attendance at worker council meetings fell off. In the second firm, the management style, at least through 1966, did not change. Worker attendance and participation at council meetings were maintained and by typical criteria of economic efficiency (productivity of capital and labour) this second firm was more efficient.<sup>3)</sup> Nevertheless, the first firm, due to its further integration into the market, closer contact with the local bank, and greater willingness to take risks, experienced faster growth than the second firm. Adizes adds that on the basis of interviews with managers from several other enterprises there was a general trend toward managerialism in Yugoslav firms after the 1965 economic reform. To be sure the Yugoslavs themselves have recognized these symptoms and various piecemeal remedies have been applied in recent years.

2. We considered three distinct measurements of technology: complexity (percentage of maintenance workers in the firm's labour force), typology of mechanization (craft, machine tending, assembly, assembly line and continuous process), and intensity (capital-labour ratio). Higher capital-labour ratios and greater mechanization were negatively correlated with participation, while complexity was positively correlated. Although these relationships were statistically significant, they were rather weak, and consequently the relationship between technology and participation was superseded by the stronger relationship between participation and our labour force variables.

3. Our proxies for the level of formal schooling were not significantly correlated with participation. It has been pointed out by several authors that schooling affects not only an individual's cognitive and skill traits but also his or her affective and ideological traits. These two influences may be offsetting with respect to their impact on participation. It is also likely, however, that our proxies were distorted and inadequate measures of educational level. We also considered a variable representing a broader conception of an individual's education suggested by Freire, namely, the degree of labour mobilization and consciousness. The motivating notion here is that labour mobilization and consciousness constitute an active form of education, where the individual learns from mutual interaction with peers based on her or his own life experience. Our measurement of labour mobilization was based on the frequency and intensity of strikes prior to the enterprise's socialization and the nature and extent of worker involvement in the enterprise's passage to the socialized sector of the economy (for

<sup>3)</sup> Although Adizes does not make this argument directly, his evidence on page 74 supports this conclusion. The first firm has 31.3% more productive capital per worker, yet its value of net product per worker is 22.7% below that of the second firm. The efficiency of working capital is also greater in the second firm. The ratio of "total sales" to "cost of production" (excludes wages) fell in the first firm from 203 in 1964 to 190 in 1966 and it increased in the second firm from 216 in 1964 to 221 in 1966.

instance, was socialization top-down through government decree, or was it inspired by worker take-over). Labour mobilization was found to be strongly and positively correlated with worker participation.

4. Our two explicitly political variables, (a) ideology and attitude toward participation of union and sectional leaders; and (b) the composition of political party support in each factory, were very significant and complementary explainers of the level of participation. That is, the more progressive the ideology of worker representatives and the lower the voting support for the Christian Democratic and Communist parties in a factory, the greater was the level of participation observed. Worker participation entails a redistribution of power within the enterprise toward the workers and thus involves a political struggle. The parties and ideological position that stressed the importance of gaining power for the working class over the state apparatus also were able to generate more effective systems of worker power over the enterprise.

5. The disposition of the enterprise administration toward participation and the nature and extent of informational flows within the enterprise were very powerful explainers of participation. These two variables were classified as intermediate because their own variance was in turn strongly explained by variables of the central labour force characteristics already discussed. That is, the attitude of the factory's administration toward worker involvement in decision-making and the extent and accessibility of information provided within the firm appeared to be a direct function of the level of organization, interest, and pressure from the workers. It is almost axiomatic that an effective and dynamic system of participation requires both cooperation from administrators and extensive information dissemination regarding the operation of the enterprise.

6. Finally, it is important to emphasize that our results from multiple regression and factor analysis indicated that the labour force and political variables were of overriding importance. The only technostructure variables significant in explaining the level of worker participation were those describing the firms' technology. However, when the technology variables were considered together with (a) labour mobilization and consciousness, (b) political ideology and attitude toward participation of worker leaders, and (c) political party composition, the former lost all significance. The latter three variables together, on the other hand, explained 65 per cent of the variance of our dependent variable, participation. Finally, when labour mobilization and consciousness, attitude and ideology of union leaders, disposition of the administration toward participation, and the system of internal information were considered together, we explained 83.5 per cent (corrected  $R^2$ ) of the variance in participation. These results are impressive and suggest that we were able to isolate the most relevant factors which affected the development of worker participation.

#### *C. The Effect of Participation on Enterprise Performance*

In the final part of our study, we analyze the relationship between our index of participation and various indicators of the social and economic performance of the enterprise. We found both the social and economic

performance of the enterprise tended to be positively associated with the level of worker participation.

After the changeover of many firms to the social area, the elimination of supervisors, the absence of former bosses, the dissolution, in effect, of the old system of control and disciplinary pressure created an atmosphere of social freedom that occasionally allowed the workers to take advantage of this new situation. However, with the establishment of the new participatory system in the enterprise, these abuses were quickly brought under control, and in most cases improvements beyond previous levels in work discipline and organization were forthcoming. In the following lines, we summarize the major changes observed in enterprise performance.

1. In those firms where a relatively higher level of participation existed, progress and advances in worker discipline were significant, appreciably surpassing former standards. However, in a reduced number of firms where the level of participation was low, discipline deteriorated, weakening internal organization and team spirit. Changes in worker discipline were paralleled by changes in absenteeism, strike activity, and innovative behavior, all which improved with higher levels of participation.

2. An increase in worker education and training courses was strongly associated with higher levels of participation. The opportunity for participation created a demand for more training, and the greater training in turn reinforced the workers' sense of efficacy and interest in participation. Increases in training courses were also clearly correlated with improvements in discipline and decreases in absenteeism. In general, participation put in motion a dynamic which changed the individual's relationship to his or her work by creating an environment of cooperation and contribution.

3. Correspondingly, higher participation levels were associated with a change toward more egalitarian and collective structures of remuneration. Disparities between high and low wages were reduced. The number of wage grades was sharply diminished, and the incentive system was put progressively on more collective basis, as opposed to individual piece rates. These changes in wage structure connoted a sense of solidarity, team work, high morale, and work spirit which had salutary effects on enterprise performance. Independent from and complementary to the influence of higher levels of participation, the move toward more egalitarian and collective forms of remuneration significantly promoted decreases in thefts and defective products and increases in innovative behavior, investment, and productivity. The magnitude of these results was superior to that observed in firms in the United States and elsewhere, where attempts have been made to improve worker motivation through controlled stimuli and new styles of management.

4. Whereas the annual increase in capital stock in Chilean industry was 3.9 per cent during 1959—1964 and 4.6 per cent during 1965—1970 (Stallings 1975, p. 427), the average annual rate of investment in fixed productive assets in our 35 sample firms was 15.47 per cent. Within our sample, firms with higher levels of participation also tended to have higher investment ratios. These results challenge the assertions of many to the effect that worker-run enterprises will opt for current income rather than future and

therefore will invest less than typical capitalist firms. Nor does the rapid growth rate and high investment ratio in Yugoslav industry or in the large worker cooperative in Mondragon, Spain support such assertions. Although workers might resist innovation and investment in a capitalist firm because they are perceived as a threat to their employment, in a worker-run firm job stability is assured and this impediment to innovation and investment is removed.

5. Perhaps the single variable of greatest interest is changes in productivity. In 29 of the 35 sample firms, productivity either increased or stayed the same, and in 14 firms it increased at a rate superior to 6 per cent per year. Given the generalized economic problems of the period and the marked tendency for social area firms to expand employment, these results are impressive. In addition, although it was not the variable important in explaining increases in productivity, higher levels of participation were clearly correlated with greater increases in productivity.

As indicated previously, collective incentives and narrower earnings differentials were both significantly and positively correlated with productivity, both separately and when the level of participation was controlled for. Also, the positive relationship between productivity and participation remained when we controlled for other variables of the production function and proxies for changes in product demand. It was also found that higher capital-labour ratios strengthened the positive relationship between productivity gains and participation. The positive association between productivity and participation has been found by many authors under widely varying conditions, and no major study has found there to be a negative association between the two.

6. Finally, in the area of social results, without diverting resources from productive uses, socialized factories rapidly expanded the social services available to the worker: plant medical facilities, day-care centers, cafeterias and consumer cooperatives, athletic fields, libraries, and so on. In several factories, cultural departments were created and sponsored theater troupes and folk song groups which performed at other workplaces, fairs and rallies.

Perhaps the most significant aspect of the Chilean and other experiences with worker management is also the most intangible, i. e., its effects on social relations and on the workers themselves. It is therefore appropriate to conclude our review with a few brief comments along these lines.

Although attitudinal changes were beyond the scope of our survey, it was clear from informal conversation and everpresent gratuitous comments that the workers were more comfortable and that they far preferred the new system. *Ahora uno se siente mas libre* ('one feels more free now') or *Ahora los obreros se pueden realizar* ('now the workers can realize themselves') were virtually unanimous sentiments. There was a strong sense of liberation, of new-found dignity and pride. Even the worker who was not making decisions felt that he or she mattered now. The clear change in power relations and attitudes is reflected in the following retrospective comments by a foundry production worker (this particular foundry ranked nineteenth out of 35 in our index of participation):

We tried to break down the barriers which had been erected to divide us. We dissolved the three trade unions and formed a single one. Any executive or foreman could be submitted to the Discipline Committee. A collective bonus system was set up. In general, there was a qualitative change in human relationships. The executives and technicians attended the worker assemblies with everyone else — and their vote was't worth more than that of a worker. We were all "workers" with different functions — but the difference in function didn't define social privilege. It as the birth of a new sort of society — the reflections of our hopes and aspirations. Great perspectives opened — and for this we were ready to sacrifice ourselves — and so we did, simply because we were convinced that this would mean a better world for ourselves and our children.

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