



4-27-1983

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WORKER OWNERSHIP AS A MEANS OF
REDUCING REGIONAL UNEMPLOYMENT
AND ITS APPLICATION TO STEEL PLANT SHUTDOWNS

Honors Research Paper
Illinois Wesleyan University

by

Peter Berg

April 27, 1983

INTRODUCTION

In the 1950s, the American steel industry dominated the world in steel production. It was a strong and thriving sector of our national economy. Throughout the 1970s, however, the steel industry has been in sharp decline. Foreign competition, high labor costs, periodic recessions, and lack of modernization are some of the factors that have contributed to the industry's inability to produce steel in a competitive market. These developments in the steel industry have affected not only our national economy but also the lives of one million steelworkers. The ugly economic and social effects of unemployment have caused hardship for many steelworkers, particularly in the Midwest and the Northeast.

Because most of the closing steel plants are concentrated in this particular area, a serious regional problem has developed. Towns heavily dependent on the steel industry for jobs have suffered and continue to suffer from high rates of unemployment, a situation that is exacerbated by our current recession. If workers are not receiving income, they cannot continue to support the other businesses in the community. Local enterprises that rely directly or indirectly on the area steel plants are likely to suffer losses and may have to lay off workers. Department stores, restaurants, and entertainment houses may also close down from lack of customers. Because small towns depend on each other for goods and services, this economic decay has spread geographically, particularly with more and more steel

plants shutting down in the same area. Like the simple Keynesian multiplier, these negative effects have multiplied throughout the Midwest and the Northeast, causing severe economic problems for a key part of the country.

The hardship caused by closing a steel plant, however, is not strictly economic. In a study done on the psychological and medical effects of unemployment, Sidney Cobb and Stanislaw Kasl found that job loss can lead to short- and long-term health effects, such as ulcers, diabetes, and hypertension.¹ Furthermore, a study done by Harvey Brenner concluded that the 1.4 percent rise in the unemployment during 1970 was directly responsible (nationally) for some 51,570 deaths, including 1,540 additional suicides.²

As one would expect, many steelworkers have attempted to better their situation by migrating to the South and Southwest, where jobs are more plentiful. Yet more workers seem unwilling to make such a move because they do not want to leave the towns they grew up in or that they have family, and established friends in. Thus, as resources are transferred from aging steel mills to higher growth industries, the loyal steelworker is left behind to bear the costs. Unemployment, psychological stress, and economic decay are the short-run effects of allocative efficiency on thousands of steelworkers throughout the Midwest and the Northeast. A solution needs to be found that would ease these costs by maintaining job stability.

The solution that I propose respects community ties, places a high priority on employment and allows workers to decide their

own economic future. If a steel mill closes down, the workers should be given the opportunity to purchase it and run it themselves. This would make workers directly responsible for the success of the plant and the maintenance of their jobs. No longer would they be at the mercy of some far away corporate headquarters. It is the position of this paper that given certain conditions worker ownership of steel plants can be effective in maintaining regional unemployment stability in the short-run.

For the purposes of this paper, the terms: "worker owned and employee owned firms," and "cooperatives" all describe situations in which workers own the enterprise, and control the enterprise's decisions. For further clarification, this paper is divided into six sections. Section one looks at the historical problems in the steel industry, tracing the origins of its oligopolistic market structure and its loss of market position. Section two analyzes the differences between an employee owned firm and a traditional firm. Section three deals with the problems faced in establishing a worker owned firm, particularly the problem of obtaining financial capital. Section four discusses two different cooperative structures and analyzes their effectiveness. Section five puts forth a model of worker ownership for a steel firm and evaluates this model's effect on productivity and investment. And finally, section six points out the short-run applicability of worker owned firms to steel shutdown situations.

Section I: A Historical Perspective on the Steel Industry and its Problems

The steel industry is an important part of our U.S. economy. Because of the number of workers the industry employs (close to one million), changes or problems within steel have serious implications. In 1950, America's steel industry was the strongest and most powerful in the world, accounting for 50 percent of the world's steel output. Today, however, the United States accounts for less than 15 percent of the world's steel output and is the fourth largest steel producer--behind the Soviet Union, the European Community, and Japan.³ As steel mills close down and workers lose their jobs, more and more people begin to wonder what has happened to this once booming industry.

This section looks at the steel industry's development over time and evaluates the factors that have pushed it into decline. First, the vertical integration in the steel industry has resulted in large firms and an oligopolistic market structure. Second, the industry's pricing policy is discussed. Then the effects of declining raw material prices, declining shipping costs, and the diffusion of new technology in the 1950's and 60's are evaluated. The section concludes with a discussion of the steel industry's response to its declining market position and the implications of that response.

In the early part of this century, many steel firms began to buy deposits of coal, iron ore and limestone. These firms also began to integrate the process of production by combining the preparation of materials, the smelting, the refining, the

rolling, and the finishing at one location. This type of integration was beneficial to the firm since the pig iron and steel could be kept at high temperatures as it moved from one stage to the next and the gasses and waste heat from the coke ovens and blast furnaces could be used elsewhere in the mill.⁴ This type of integration had the effect of increasing the size of the company and allowing the firm to realize desirable economies of scale. However, vertically integrating suppliers of raw materials, that is purchasing raw material deposits, does increase the size of a steel firm but does not help that firm realize economies of scale. Rather, the reason large steel companies bought up iron ore and coal deposits was to insure themselves a steady supply of those natural resources. This action did not save the firms' money, since they then had to invest in mines, transportation, and receiving centers. What did transpire, however, was that competition in the steel industry was ^{less} ~~greater~~ than it would have been if the firms had not integrated.⁵

With the number of potential entrants reduced, mergers among steel competitors formed large oligopolistic firms such as United States Steel. A group led by J.P. Morgan combined resources and bought up many big companies, the end product of previous mergers, creating United States Steel--the largest corporation ever, at that time. In 1901, USS controlled 44 percent of the country's reported steel-ingot capacity, and 66 percent of steel output.⁶ These events, occurring in the early part of this century, serve as the foundation for the steel

industry's market structure.

Not surprisingly, this oligopolistic structure facilitated collusion rather than aggressive competition. A pricing policy developed among the colluding firms, and because United States Steel was the prime mover behind this cooperative attitude, it assumed the role of price leader which it maintained for the first six decades of this century. Several pricing schemes were designed to assure that prices remained uniform throughout the industry. Perhaps the most famous were the basing-point pricing method and the multiple basing-point method. Up until 1924, the basing-point price method was used by the steel industry. This system allowed each seller to know exactly the price it was expected to charge for each product at any location in the country. Since Pittsburgh was the only basing point, the delivered price of any product was calculated as if the steel had been shipped from Pittsburgh, regardless of where it had actually been shipped.⁷ While this pricing scheme was effective in achieving complete price predictability in the industry, it artificially induced steel producers and consumers to locate in the Pittsburgh area and retarded the industrial development of the South and the West.⁸ In 1924, the basing-point pricing method was replaced by the multiple basing-point pricing method. The principle of price uniformity and predictability remained the same under this new system. The only difference was that there were more basing-points in addition to Pittsburgh. Prices were quoted in terms of the nearest basing point (Chicago or Birmingham) plus the transportation cost to the point of delivery.

After World War II, the FTC investigated the multiple basing-point system and forced steel producers to switch to a f.o.b. (ex-mill) pricing system. Even under this system, however, companies are still able to quote their prices based on the location of other mills and able to absorb the freight costs.⁹

Not only were prices very uniform in the steel industry, but remarkably rigid and unresponsive to competitive market forces. This price rigidity continued up to World War II.¹⁰ "From 1947 to the end of the 1950s, the pricing pattern in the steel market changed to one of greater flexibility but only in an upward direction."¹¹ "Stair-step" price increases occurred at regular intervals, even when demand and unit labor costs were declining.¹² Obviously, the steel industry felt the demand for steel was much more price inelastic than it actually was. Such an upward pricing policy also seems to ignore the existence of potential competitors who were in Europe and Japan modernizing their mills and improving the efficiency of their production.

Robert Crandall cites three occurrences as the main reasons for the U.S. decline in the world steel market: declining raw material prices, declining shipping costs, and the diffusion of new technology. Reacting to the fears of possible iron ore shortages, the industry raised ore prices in 1946. The resulting high prices encouraged other firms, both here and abroad, to seek out new iron ore deposits which were found in Canada, Venezuela, and Australia. Thus by raising the price of iron ore, the steel industry eliminated its own advantage over other countries of owning low-cost convenient supplies of iron ore.

The cost of iron ore was made worse with the exhaustion of the high-grade Mesabi Range ore. Since this range is depleted, the U.S. must depend on pellet plants that process lower-grade taconite ore from the Lake Superior region or on foreign ores. The costs incurred in processing lower-grade taconite ore are much greater than those incurred with high-grade ore from the Mesabi Range. "The result (therefore), is that inland American mills have gone from a position of having special access to low-cost ore to one of depending on higher-cost ore than many of its foreign competitors have, especially Japan."¹³ With these new discoveries the world price of iron ore dropped and U.S. imports of iron ore increased.

The second factor contributing to the steel industry's drop in the world market was the decline in world shipping costs. The cost of shipping iron ore from Brazil to Japan fell by 60 percent from 1957 to 1968.¹⁴ Furthermore, while shipping costs were declining, U.S. surface transportation costs were rising. This had significant cost consequences for the majority of U.S. steel plants, given their inland locations throughout the Midwest and Northeast.¹⁵ Also, reduced shipping costs, when combined with declining raw material prices, promoted exports to distant markets that may have been previously unreachable--a fact that had an entirely different effect for Japan than for the U.S. In 1956, iron ore prices were \$9.63 per ton for the U.S. and \$16.69 per ton for Japan; however, in 1967 iron ore prices rose to \$11.91 for the U.S. while declining to \$11.49 for Japan.¹⁶ These cost reductions were an obvious boost to an emerging steel

exporter like Japan.

Not only were declining raw material prices helpful to Japan, but also the application of new technology helped their exports compete with more established U.S. firms. Because its industrial base was destroyed during World War II, Japan was able to totally rebuild its steel industry utilizing the most advanced technology. This situational factor, combined with Japan's foresight, helped it surpass the aging American steel plants in output and efficiency. Crandall points out specifically the foresight of the Japanese:

As the Japanese adopted the newest steelmaking technology (the basic oxygen furnace), pioneered in large blast furnaces, and forged ahead rapidly with continuous casting, their labor productivity increased dramatically. Moreover, the Japanese led the way in applying sophisticated computer control to the pouring, forming and rolling of steel products.¹⁷

This new technology is directly responsible for the 30 percent decline, from 1958 to 1968, in Japanese unit labor costs which occurred as Japanese wages increased by 244 percent (in U.S. dollars). During this same period, U.S. wages rose by only 39 percent, and unit labor costs remained constant.¹⁸ To summarize, for most of the 1960s Japanese material costs, unit labor costs, and shipping costs declined while U.S. surface transportation costs increased, and material and unit labor costs remained practically constant.

This world situation placed serious import pressure on the American steel industry and forced it to make a key policy decision. The industry could fight the import competition by becoming technically more efficient, modernizing its plants,

and reducing its costs; or it could run to the government for protection. Choosing the protectionist course, the steel industry pressured the Johnson administration in 1968 to reach an agreement limiting imports from Europe and Japan. The "Voluntary Restraint Agreement" (VRA) was subsequently agreed upon and successfully reduced imports by 22 percent in 1969 and by an additional 5 percent in 1970.

Those quotas were in effect from 1969 to 1974 and were intended to provide temporary relief to the steel industry while it invested in new equipment to make itself more competitive.¹⁹ This reinvestment, however, did not occur; in fact, the steel industry had less capital expenditures in 1974 than in 1968.²⁰ What did occur was investment diversification among steel firms in the industry. Many firms acquired other firms outside the steel industry and thus became conglomerates. In 1968, National Steel became joint owner of the fifth largest primary aluminum producer. In 1969 Armco Steel acquired HITCO, one of the largest producers of nonmetallic composites. In 1970, Inland Steel acquired Scholz Hanes.²¹ The philosophy behind conglomeration is to spread out the investments of the firm, that is purchase companies in other sectors of the economy, so when one area of the economy declines the firm can still be supported by one of its companies in another sector. The investment decision of a conglomerate is to strengthen those companies or plants that earn the highest rate of return; therefore if a steel plant has a lower rate of return than a non-steel company that the con-

glomerate owns, the steel plant will not receive reinvestment funds. This type of disinvestment is exactly what happened and continues to happen in the steel industry. "Ironically, these moves of major steel companies into non-steel activities coincided with loud protestations by these producers about inadequate resources to undertake the modernization of the antiquated plants in order to become cost-competitive by international standards. ²²

The steel industry not only failed to significantly reinvest in its mills during this time, but it also allowed wages to rise dramatically. In 1967, average compensation in steel was about 38 percent above the average manufacturing industry. In 1974, steel wages were 60 percent above the manufacturing average wage, and in 1976 this differential rose to 71 percent. These high wages can also be attributed to the powerful United Steel Workers Union, whose demands have not been known for fighting inflation. In 1973, the negotiated contract provided a wage increase of 3 percent per year for 3 years plus an escalator clause that reimbursed workers for two-thirds to three-quarters of the recorded rate of inflation. With no productivity growth occurring after 1973, this was a very expensive agreement. ²³

These high labor costs, combined with renewed import pressures, caused severe hardship for the steel industry in the late 1970s. Several plants were closed in 1977, and workers were left unemployed. Seeking protection, industry and union officials once again pressured the administration to take action. The Carter administration responded by implementing the so-called

"Trigger Price Mechanism" (TPM). Trigger Prices were based on constructed Japanese production and transportation costs for steel shipped to the United States. Imports that came in from any country, not just Japan, at prices less than these trigger prices would result in increased duties. Essentially these trigger prices set a floor on the prices of imported steel.²⁴ Furthermore, the TPM allowed domestic producers to raise their prices to at least the list price thus eliminating all competitive discounts which might have taken place in the absence of trigger pricing.

In conclusion, the difficulties in today's steel industry are a product of a long history of non-competition. Its oligopolistic market structure fostered collusion and cooperation among firms, causing the industry to be unresponsive to changing market conditions. The American steel industry failed to modernize its equipment in the 1950s and continued to raise its prices. As its market position deteriorated and import pressure from the Japanese and Europeans increased, many steel firms invested in non-steel and the industry sought protection from the government. Despite the temporary help it received from the government, many steel plants, particularly in the Midwest and the Northeast, have closed down and thousands of workers have lost their jobs. This widespread unemployment is perhaps the most disturbing aspect of the steel industry's decline. Yet what should be done, if anything, to alter the course of the steel industry and aid its unemployed? Confronted with high input prices, especially in the areas of iron ore and labor, the American steel industry is at a

cost disadvantage with its world competitors. Unfortunately, most American steel mills have no choice but to face a high price for iron ore, because of the depletion of convenient deposits in the U.S. and because of their inland location. High labor costs, however, are something that can be changed. If this input cost disadvantage cannot be overcome, retraining should be implemented for workers as the industry is phased out. However, if a way can be found to lower labor costs and improve productivity enough to offset the cost disadvantage of iron ore, the steel industry's oligopolistic market structure should be broken and greater competition among firms encouraged. The next section evaluates the applicability of employee ownership to the problems of high labor costs, low productivity, and employment stability.

Section II: Employee Owned Firms and Traditional Firms

When comparing employee owned single plant firms and traditional capitalist firms, it is important to point out their different internal structures. Traditional firms are characterized by three distinct bodies operating within the firm--the stockholders, a group of managers, scientists and highly skilled individuals that John Kenneth Galbraith refers to as the technostucture, and the production workers. Under this system the stockholders own the firm but do not control its production or investment decisions. In addition, the workers are employed by the firm, but they do not control the decisions. Rather, it is the technostucture that runs the firm and makes its decisions. According to Galbraith, as long as an acceptable profit is being maintained, the stockholders will, in most cases, support the desires of the technostucture. Employee owned single plant firms, however, integrate these three bodies. Since the technostucture and the production workers own this type of firm, they are the stockholders. Furthermore, the technostucture is no longer the sole decision-maker, rather the production workers together with the technostucture make the investment, production, and hiring decisions. This shift in ownership and structure will cause employee owned single plant firms to behave differently and have different priorities than traditional firms.

The problems that beset the steel industry have all occurred within a traditional capitalistic economic environment. High production costs and low rates of return have forced profit maximizing conglomerate firms to close down steel plants throughout the Midwest and the Northeast. The hardship of unemployment suffered by this regional segment of the population from such action shows a disturbing side to profit maximizing capitalism. In an effort to most efficiently use capital, the profit maximizing firm fails to account for the "social" costs and the spillover effects of closing a plant. The resulting unemployment affects individuals and communities in many ugly ways. Psychologically one's self worth is decreased. The loss of revenue from a closed plant can severely affect a community's ability to provide services. Furthermore, individual income loss has a negative effect on other businesses in the community.

Unlike a capitalist firm, a cooperative form of organization tends to give a greater weight to stable employment. Because ownership is spread among local workers these social costs are taken into account when decisions are made. This section will point out the different objective functions for the capitalist and the cooperative firm, and discuss the implications of these differences. Also, it will show how a cooperative can improve the rate of productivity by increasing worker incentives. Finally, it will discuss the consequences of the trade-off between regional employment stability and efficient resource allocation.

Since capitalist firms and cooperatives are organized differently, they have different objective functions. In symbolic

notation, Branko Horvat expresses the following target function for cooperatives:

$$(1) \quad \pi = pq - [(d + \Delta d)x + k]$$

This is opposed to the following target function for a capitalist firm:

$$(2) \quad \pi = pq - [(VMP)x + k]$$

These two functions are given under the assumption that we are dealing with only two resources--capital and labor. In both equations (π) represents net revenue, (pq) equals gross revenue, (x) the number of workers, and (k) depreciation. In the first equation, Horvat maintains that cooperatives set some aspired personal income for the firm or the worker-owners at the beginning of each year. Therefore, (d) represents some standard aspired income based on the previous year, and (Δd) equals the addition to this aspired income to be achieved in the current year. In the second equation, the ($d + \Delta d$) term is replaced by the value marginal product of labor (VMP) which is essentially the wage rate.

In both equations 1 and 2, labor's and capital's contribution is accounted for out of the gross revenue. Depreciation or (k) represents the marginal factor cost of capital^{used up} and is

essentially the payment to capital for its contribution. $(d + \Delta d)$ and (VMP) are the payment to labor or its wage. Thus, before the profits are distributed, the contributions of both labor and capital are paid out.

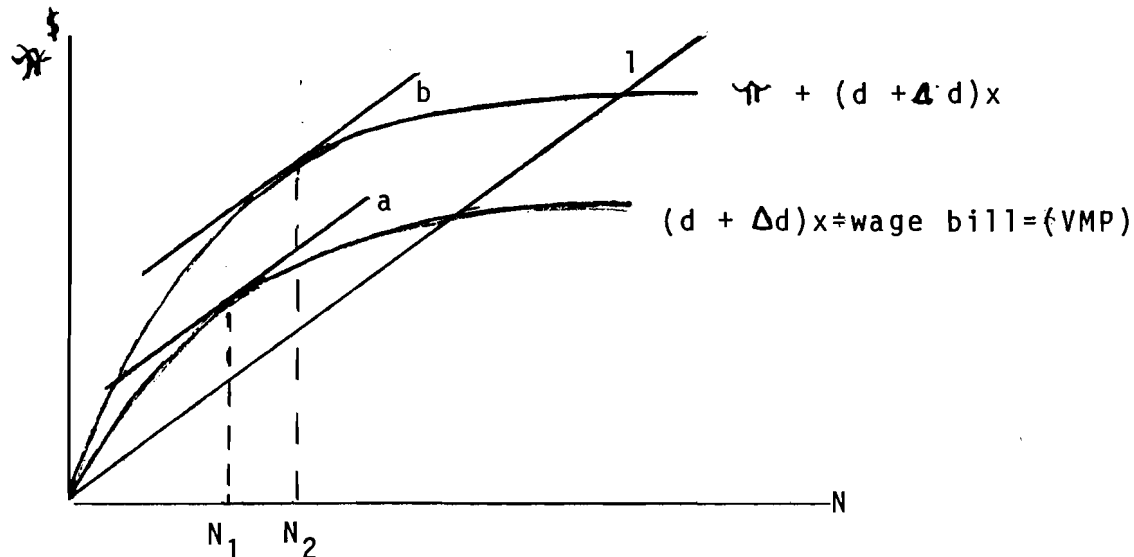
This distinction, $(d + \Delta d)$ and (VMP) , between the two target functions has an effect on the number of workers employed by each enterprise. In the cooperative, $(d + \Delta d)$ can be seen as the wage rate just as (VMP) is the wage rate in a conventional firm. The total compensation per worker, however, to cooperative worker-owners is:

$$\frac{\pi + (d + \Delta d)x}{x}$$

Unlike a capitalist firm, the net revenue in a cooperative accrues not to the owners of capital but to the workers themselves. One can see how this affects employment in figure II-1, which is taken from A. A. Brewer's and M. J. Browning's analysis on employment decisions.²⁵ On the graph line (1) which is the total labor cost has a slope that represents the marginal factor cost of labor, assuming that wages are determined in a competitive market. For a cooperative, this represents the wage one could earn outside the cooperative. By drawing lines (a) and (b), having the same slope as line (1), tangent to curves $(d + \Delta d)x$ and $\pi + (d + \Delta d)x$ respectively, we can see a relationship between the number employed and the level of compensation.

At line (a)'s point of tangency with curve $(d + \Delta d)x$, the marginal revenue of labor equals the marginal factor cost of labor, and the result is an employment level of N_1 . The same is true at line (b)'s point of tangency with a curve $\pi + (d + \Delta d)x$ which results in an employment level of N_2 . Therefore, because their workers receive a portion of net revenues, a cooperative is able to employ greater numbers of workers.

Figure II-1



Furthermore, there exists a distinction in maintaining employment between the cooperative and the conventional firm. When wages are negotiated with a union, they are often done so for a period of years at a time. This wage rigidity, combined with management's reluctance to alter its own salaries, forces traditional firms to use layoffs as a way of cutting costs during hard economic times. These wage constraints, however, are not placed

upon a cooperative. Wages can change as soon as workers allow them to change. Since stable employment is a high priority of cooperatives, there is a great reluctance to lay off fellow worker-owners. If faced with declining demand, the cooperative, instead of reducing the number of workers, will reduce its aspired level of income, (d).²⁶

In addition to maintaining employment, evidence suggests that cooperatives can increase technical efficiency through higher rates of productivity. Often antagonism between labor and management occurs in a capitalist firm. The relationship between workers and managers tends to be authoritative, with workers having little, if any, input into how the firm is run. The democratic structure of a cooperative however breaks down this labor-management antagonism. Workers make the operating decisions and those selected to manage or serve as administrators are simply viewed as fellow partners who perform different functions. As a worker at the Meriden cooperative plant in Britain put it, "The comradeship was fantastic. We all felt we were fighting for an ideal of showing that we could make bikes and make a profit. Nowadays, if we have a problem, it is a common enemy for us all to solve."²⁷ Increased harmony among the workers undoubtedly has spillover effects on productivity. When workers are pleased with their jobs, they are likely to work more efficiently.

Reducing the wage differential is another way cooperatives break the tension between labor and management. This shift in wages creates a more democratic environment which is conducive to

higher rates of productivity. Examples of greater wage equalization exist both here and abroad; the Meriden cooperative in Britain, the Mondragon cooperative in Spain, the plywood cooperatives of our Northeast, and the Vermont Asbestos Group have all had low salary ratios between the highest and lowest-paid workers or managers when compared with capitalist-owned firms.²⁸ Furthermore, because greater wage equality reduces the competition for promotion, workers are more likely to teach other skills. However, if wages are made equal for all workers, negative effects are likely to result. The U.S. plywood cooperatives are the prime example of equal wages for all workers regardless of the task they perform. This action has caused jealousy and ill-feelings among some workers, especially the highly skilled, who resent the fact that workers with much less experience and expertise earn as much as they do.²⁹ In addition to nurturing jealousy, total wage equalization removes from the enterprise any monetary incentive system for allocating human resources. Maintaining a wage differential encourages people to utilize their best abilities, which, in turn, benefits the enterprise and society as a whole. Therefore, it would appear that a cooperative could be most effective when the wage differential is narrowed but not totally equalled.

Aside from reducing the antagonism between labor and management, and the wage differential, the cooperative's key to higher rates of productivity is simply allowing workers to have direct control over the decisions of the firm. Even in capitalist firms, improved job satisfaction through small increases in worker-

participation has increased productivity. The worker-participation programs in Japan and Germany have undoubtedly contributed to their high rates of productivity. One can understand how workers might work harder when they know they have input into the decision-making process of the firm and are receiving a portion of its net revenues. Worker ownership and control actually give the workers responsibility for the firm's success or failure and this responsibility provides a strong incentive for workers to produce a quality product and produce it efficiently. In a study done comparing the efficiency of garment workers who were allowed to discuss and decide upon production with those allowed to discuss only, L. C. Lawrence and P. C. Smith found that "the discussion-and-decision group increased its productivity to statistically significant levels over its own pre-experimental level and over that of the discussion-only group."³⁰

An additional difference between a traditional firm and a cooperative is that the cooperative trades off some allocative efficiency for greater employment stability. Although the investment decisions of traditional conglomerates are consistent with profit maximizing behavior, they literally hasten the death of steel plants with a low rate of return. Taking a portion of the profits from one plant with a low rate of return and reinvesting those funds into a plant with a high rate of return places a tremendous cost, both economic and social, on the workers of that low return plant and the community surrounding it. Often it is assumed that movement among jobs and geographic locations will

compensate for labor market changes. This assumption, however, tends to be false in the short-run. While the younger, skilled, and geographically less committed workers may be able to move; the older, less skilled workers are less likely to relocate especially when they have stakes in the community such as money tied up in their homes, relatives, or long-term social relationships.³¹ Under a cooperative, capital would be tied much more to groups of people in certain geographic locations. It is a form of ownership and a structure that meets the needs of a regional population rather than a structure that forces that population to adjust to it.

Essentially, cooperatives involve a re-ordering of priorities. In a traditional firm profit-maximization is the key objective, but in a cooperative, this is not the case. Maintaining employment stability while providing a decent standard of living to its workers is the goal of a cooperative. This goal, however, does result in a cost--the loss of some allocative efficiency in the short-term. More stable regional employment is achieved at the expense of greater capital availability in higher growth areas. Yet something should be done to ease the burden placed on low rate of return communities. Worker ownership has its strength in maintaining employment and keeping workers productive. As former vice-president Walter Mondale states,

It's time to focus on an element missing in the American economy--the right of workers, their families and the communities in which they live to some sort of decent treatment and concern when a company is planning or considering the possibility of closing.³²

Section III: Problems Faced in Establishing an Employee Owned Firm

Employee ownership is a viable option to a community concerned about the unemployment created by a closing plant. In fact, employee ownership is often the last hope for communities to maintain economic activity. Although workers may have the incentive to purchase the closing plant, actually achieving this goal is a task that requires a great deal of coordination and is not without difficulties. This section discusses some of the problems that are often found in the process of establishing an employee owned enterprise. The first problem is the inadequate advance warning corporations give to their workers when they have decided to shut down a plant. Second, corporations are often reluctant to sell the plant to the employees for various reasons. The third and most important problem is obtaining enough financial capital to purchase the plant. This problem will require leaders and feasibility studies. Furthermore, it may mean issuing common stock and soliciting government loans. The final problem discussed is the proper role for the union in an employee owned firm.

When a company decides to close a plant, it tends to give very little warning to the workers. The Lykes corporation gave no advance warning when it shut down the Campbell Works portion of its Youngstown Sheet and Tube facilities.³³ The Sperry Rand corporation, however, announced its intention to close the Library Bureau, a maker of library furniture, with the nebulous phrase, "within twelve months."³⁴ The implications of such short

notice, usually a matter of months, is that workers are put under pressure and must work very fast to find leaders, organize themselves, and obtain financial capital. It should be noted that the workers at the Weirton steel plant, who in March of this year reached an agreement to purchase the plant, were not subjected to this late warning problem. National Steel, the conglomerate owner, announced a full year in advance its intention to stop investing in the Weirton plant.³⁵ This twelve month period gave workers and community leaders time to devise a purchase plan that seems to have worked. Thus, the severity of this "warning" problem seems to depend on the attitude of the owning corporation toward the possibility of worker ownership.

Another problem frequently encountered is the current owner's unwillingness to sell the plant. Management may feel that they can make more money selling the equipment and writing off the buildings. In these cases, workers have often secured local congresspersons to apply pressure on company officials, in order to get them to negotiate. In other cases, management may be reluctant to sell because of the possibility of competition from its former plant.³⁶ Occasionally a company will initially refuse to negotiate a sale only to change its mind when it sees that the workers are serious about buying the plant and are raising the necessary funds. This was the case with the Library Bureau. Sperry Rand refused to negotiate, but then later, reacting to public pressure and community mobilization, changed its mind and negotiated.

The third problem is perhaps the most difficult problem in

establishing an employee owned enterprise: financing the purchase of the plant. This problem can be made less severe, however, if three roles are filled.

- 1) A chief executive officer (CEO) capable of providing managerial leadership in production and marketing.
- 2) A financial expert capable of analyzing financial needs and dealing with sources of funds.
- 3) An organizer able to link together workers, management people, community leaders, politicians, government officials, and the press in an at least temporary coalition to launch the project. 37

The prime task of these three individuals will be to raise enough capital to buy the plant. The prospective managerial leader must have the confidence of bankers and community members in order for the employee enterprise to secure loans and issue stock. Often this person emerges as one of the key managers in the closing plant. While this person would have intimate knowledge of the plant, s/he must also be willing to adjust to the new form of ownership and must be trusted by the workers themselves. If an executive does not step forth from the closing plant, a more complicated problem can develop. "(Any) prospective CEO is unlikely to consider the position seriously unless he sees that the problems of financing the purchase and providing operating capital have been solved. At the same time, those individuals and organizations counted on for equity or loan capital are not inclined to commit their money until they are persuaded that a competent CEO has accepted the challenge offered him." 38 Unfortunately, such a dilemma can only be worked out through the circumstances of each individual case.

The organizer role should be filled by someone who knows the community and can take charge of a money-raising campaign. This person must find creative ways to get community financial support, i.e. telethons, door-to-door soliciting, or community club fund drives. More importantly, however, the organizer must bring together competing factions within the plant, and must work with the financial expert in obtaining the interest and cooperation of public agencies and banks.³⁹ The financial expert, in turn, must know where money is available and how to get it. This person must also know how to work within the local, state, and federal governments. Together with the organizer, the financial expert needs to discover the best way to approach the issue of issuing bonds to the community and acquiring donations. Generally, people will contribute to a plant's purchase once they see how the economic viability of the community is related to the economic viability of the closing plant. The organizers of the Library Bureau purchase, for example, raised over 2.6 million from the surrounding community.⁴⁰

Aside from soliciting bonds and donations, obtaining loans from banks and government agencies will be another financing difficulty. First, a feasibility study needs to be commissioned in order to purchase the plant and gauge its profit potential. In 1977 at Youngstown, Ohio, a Philadelphia engineering firm and the Western Reserve Economic Development Agency (WREDA) conducted a study to determine the feasibility of acquiring and operating the closed portion of the Campbell Works steel facility.⁴¹ The study concluded that "the purchase and modernization of the

Campbell Works would require a capital investment of about \$500 million." 42 Writing on Youngstown's steel mill closings, Staughton Lynd goes on to state, "We could not reopen any of these monster mills (in the Mahoning Valley of Ohio) without amounts of capital that only the government could provide..." 43 These large sums of money, however, are difficult to raise with no advance warning of the shutdowns, as was previously discussed. The leaders at Youngstown were only able to secure \$100 million in federal loan guarantees from the EDA and \$10 million in state assistance. 44

It is not clear, however, whether government loans are necessary for all employee purchase initiatives. The employees who are purchasing the Weirton steel plant have not received any government grant or loans. "A price of \$66 million was set for the mill and the equipment by bargainers on a Joint Study Committee, including representatives of the employee's union, the independent steelworkers, and the Weirton Division and the National Steel Corporation." 45 This price represents 22 percent (sic) of the \$322 million book value that National Steel has placed on the plant. Many steel assets, however, have been selling for far less than book value, given the depressed state of the industry. The new employee owned company is also scheduled to purchase, for \$300 million, raw materials and other inventory from National Steel. 46

Under the Weirton purchase plan, only a \$100-\$150 million in immediate financial backing is being required; furthermore, the \$66 million would be paid out over 15 years. The first payment on the principal would be due in 1989. No interest would be

paid until the new company had a net worth of \$100 million. The interest rate after that would be 10 percent." ⁴⁷ As for the \$300 million that would be paid for inventory, \$75 million of that \$300 million would be paid in cash immediately and the rest over as much as 28 years. The terms of this deal are excellent; National Steel also agreed to assume all pension costs and other shutdown costs if the new company failed in the first five years. ⁴⁸ The Weirton Works is relatively modern and has a good reputation for producing a quality product; therefore, its chances of obtaining sufficient financial capital may be better than for a more antiquated plant. Yet the experience at Weirton indicates that massive amounts of support from the government may not always be required when employees purchase a closing steel mill.

A final problem in establishing an employee owned firm is deciding how the union will fit into the new enterprise. Union leaders traditionally have been hostile to the idea of employee ownership, no doubt out of fear for their own survival. Yet as union officials have seen employee ownership effectively save jobs and still retain local union representation, their hostility has subsided. Speaking about employee stock ownership plans (ESOP) in 1981, James Smith, Assistant to the President of the United Steelworkers of America, states their concerns:

....I certainly wouldn't fear for the future of U.S.W.A. if every employer in the United States became an ESOP company. However, there are some minimal conditions of ESOPs that unions will demand, I believe. They include the following:

- 1) That employee stock ownership only occur in addition to an adequate (sic) funded pension plan. In other words, if employees buy stock they should do so out of current earnings while they are active workers, rather than as a substitute for insured retirement income.
- 2) That full pass-through of voting rights be made to every employee on an equitable basis, with no subterfuge or managerial manipulation such as occurred at South Bend Lathe (a company which will be discussed in the next section) or most other small ESOPs.
- 3) That the stock issued to employees also be marketed publicly, so that there can be some outside judgement of its worth as an investment. In cases where this is impossible there should be a periodic outside appraisal by a firm jointly picked by representatives of workers and manager. 49

These statements by Smith are interesting because they indicate a willingness on the part of the U.S.W.A. to work with such employee ownership plans. Yet, unions are still very apprehensive about total worker ownership and control. In point number three, Smith advocates marketing stock publicly. While this may indeed be a way of judging the worthiness of the investments, it also takes some control of the enterprise away from the workers. If a union is to successfully work within an employee owned firm, it must recognize that its role is different under employee ownership. The union must discard its past role of antagonist and instead encourage mutual cooperation, realizing that everyone, including management, is a worker-owner. This shift in attitude, however, does not seem likely to occur in a union such as the U.S.W.A. While the U.S.W.A. may understand

employee stock ownership plans and may be less hostile to their application, it has given no indication that it is willing to adjust its role under employee ownership. The union's long history as the adversary of management is difficult to alter simply by converting a plant to employee ownership. Therefore, the inclusion of a union in a worker owned firm is still unclear. If a union is included it must fully understand its new role and practice it diligently. Yet the likelihood of a large union such as the U.S.W.A. making such a change remains doubtful at this time.

In conclusion, the greatest problem workers will face in saving a plant through a plan of worker ownership will be raising financial capital. This task is made more difficult by the lack of advance warning corporations give when closing a plant or by the reluctance some corporations have to sell the plant to the employees once the decision to shut it down has been made. This financing problem, however, can be made easier if a community organizer, a financial expert, and a trusted managerial leader can be found and utilized. These individuals will probably obtain funds by issuing bonds, or through loans from banks and government agencies, depending on the terms of the purchase agreement. And finally, the problem of a union in an employee owned firm will most likely be decided by the union's willingness to alter its role to fit the new enterprise.

Section IV: Different Cooperative Structures

Up to this point, we have traced the problems of the steel industry, examining the origins of its oligopolistic market structure, its high labor costs, and its lack of investment. We have looked at the differences between worker owned enterprises and conventional capitalist firms. Also, we have discussed some of the problems in establishing a worker owned enterprise, such as financing the purchase and the union's position in the new firm. This section examines the organizational structure of a cooperative firm and sets down some necessary guidelines for democratically managing a worker owned firm. Two different examples--the U.S. Plywood cooperatives, and the South Bend Lathe Company--are evaluated. After reviewing the advantages and disadvantages of each structure, a clearer picture emerges of just what is and what is not desirable in a worker owned firm.

In Workplace Democratization, Paul Bernstein indicates six components necessary for the maintenance of democratization within a firm:

- 1) Participation in decision-making, whether direct or elected representation.
- 2) Frequent feedback of economic results to all employees (in the form of money, not just information).
- 3) Full sharing with employees of management-level information and, to an increasing extent, management-level expertise.
- 4) Guaranteed individual rights (corresponding to the basic political liberties).
- 5) An independent board of appeal in case of disputes (composed of peers as far as possible).

- 6) A particular set of attitudes and values (type of consciousness). 50

These six components are vital factors of any organizational form that could be referred to as "cooperative" in nature. As was mentioned earlier, the terms "cooperative, "worker owned firm," or "employee owned firm" all describe an enterprise in which the workers own the stock and control the decision-making process. Stock ownership, however, can be distributed in different ways. It may be spread among the workers by giving each worker one share or an equal number of shares. It may be that the stock shares are allocated to workers based on their salary or their years of service. Under a different structure, a trust fund may be established through which workers are given stock shares; this is commonly known as an employee stock ownership trust (ESOT).

Regardless of how the stock shares are distributed, the distance between labor and management is reduced in a cooperative. Decisions are no longer made by the owners of capital but by the owner-workers. Thus, a cooperative takes Bernstein's first component to its extreme. Workers do not just participate in decisions, rather they control the decision-making process. The third component is also very important in a cooperative. Since those selected to manage are directly responsible to the workers, financial and other information must be shared regularly with them. A "cooperative" attitude, component six, is also vital to a worker owned firm since it often inspires workers to participate in decision making. Equally important are components two, four

and five, all of which make good common sense in any business organization.

The first example to be evaluated is taken from the U.S. plywood industry which has a rich tradition of cooperatives. Since the founding of the first one in 1921, the number of cooperatives in this industry has risen to twenty-six; today, however, only eighteen firms continue to operate.⁵¹ The decision-making structure varies from co-op to co-op but the basic principles are the same. Each worker owns one share and casts one vote in company-wide elections. All the employee shareholders meet annually to elect from their membership a board of directors, usually seven to nine people. This board makes the policy decisions for the firm, but has its power checked by the whole body of workers in a number of ways. Expenditures over \$25,000 as well as any major investment or expansion decision must be approved by the entire membership. Furthermore, in some companies, the workers can challenge a decision of the directors by obtaining the signatures of 10 to 20 percent of the membership on a petition and calling for a special meeting. In addition to making policy decisions, the board of directors appoints a general manager, usually someone from outside the firm, who is responsible for the day-to-day operations of the business.⁵² This position of general manager is vital to the cooperative, and the person selected must have an astute business sense as well as the political skills to deal with a large number of worker-owners. Although the general manager directs the workers on a day-to-day basis, this person

must ultimately answer to the workers, since they set his salary and control his employment.

The members of the board of directors are also directly accountable to their fellow workers. Those elected to serve on the board of directors receive no special pay and continue to work in the plant while serving on the board. The fact that directors still work in the plant conveniently allows other workers to make complaints directly to them during working hours. Furthermore, if the workers do not like what a particular board member is doing or how that person is acting, they can simply not reelect that person.

This internal structure of the plywood cooperatives has some advantages. First of all, workers do in fact own the firm and control its decisions. A general manager is appointed, but because of the size of the firm, s/he cannot ignore or dismiss the desires of the workers. Second, because those members on the board of directors tend to come from different areas of operations within the plant and because the plant is very small, making it possible for them to work alongside other workers, they receive a fairly accurate picture of the company and the concerns of the workers. Furthermore, the informal discussions workers and directors have on the job truly influence the board's decisions.

The result of this type of ownership and internal organizational structure has meant high rates of productivity in these plywood firms. When workers realize that they are responsible for the

company's success and that they have a direct influence on policy decisions and that they are receiving a share of the firm's profit, they tend, not surprisingly, to be more productive. "A study in the 1960s, according to researcher Katrina Berman, showed the worker-owned firms produce 30 percent more per worker than traditional firms. Even the U.S. Internal Revenue Service, in a tax case against the plywood cooperatives, essentially confirmed cooperative data showing the co-ops are 25-60 percent more productive than conventional mills." ⁵³ This high productivity level allows these cooperatives to pay their members considerably more than the average conventional unionized plants. Often this is 20 percent more per hour, which is added on to the workers' share of the income the cooperative expects to have earned by the end of the year. ⁵⁴

Aside from these advantages, the plywood cooperatives are still plagued with problems. Often many workers fail to see the necessity to invest for the long-term; they seem far more concerned with taking home as much money as possible. ⁵⁵ This short-sighted attitude places difficult constraints on the general manager who is often fighting for greater investment. Another problem arising is that the manager's responsibility to act on the desires of the membership tends to make him more conservative and less likely to take calculated risks. This managerial position in turn, could severely hinder the firm's technological innovation. ⁵⁶ Still another problem occurs with expanding the membership. The workers each own one share of stock which has increased in value over time as the cooperative has grown and

matured. As the enterprise expands, the membership could be expanded by issuing new shares, but workers are reluctant to do this for fear that the value of their own shares would decline. The value of the shares, however, does not necessarily decrease because more are issued. Only if the number of new shares issued is increasing more than the market value of the firm will the value of the shares decline.

Restricting membership out of the fear of declining stock value is referred to by self-management researchers as "collective selfishness."⁵⁷ A result of this "selfish" behavior is an old and closed membership and/or the introduction of non-owner workers. Unfortunately, including these non-owner hourly workers in the cooperative brings in worker attitudes much too similar to those in a conventional firm. These workers earn about 50 cents per hour less than the co-op members, receive no share of the profits, cast no votes, and usually get assigned to the worst jobs.⁵⁸ The very presence of these workers acts counter to fostering a cooperative spirit among workers and is likely to present a serious drag on the cooperatives level of productivity. A final problem with the plywood cooperatives is that of continuity. As the cooperative members practice collective selfishness and continue to raise their level of productivity, the value of their shares increase. Thus, the old members have a strong incentive to sell their shares at a handsome profit to conventionally owned firms that are capable of paying the market value of their shares. The result of this action is that the workers leave with a good sum of money but the cooperative dies out.

This is exactly what happened to half of the eight plywood co-operatives that went out of business between 1921 and the present.⁵⁹ Because these cooperatives were so successful, their shares increased tremendously in value. The high price per share made it impossible for other workers to buy into the co-operative; hence, large corporations seeing a potential profit-making opportunity and possessing the financial resources to purchase the shares, bought out the cooperatives and returned them to conventional ownership.

A second example of worker ownership is exhibited by the South Bend Lathe company. After Amsted Industries announced it was going to close the plant, the president of the plant, and plant managers, met with local union officials, city bankers, and government officials to piece together an Employee Stock Ownership Plan that would enable the workers and salaried managers to buy the plant.⁶⁰ The plan worked as follows:

- The Economic Development Agency gave \$5 million grant to the city of South Bend which immediately lent the money to a newly created employee trust fund.
- The employee trust also borrowed another \$5 million from three commercial financial institutions.
- Meanwhile, the managers and employees created a new corporate entity, which issued 10,000 shares of stock; with the \$10 million in cash, the employee trust bought the stock; in turn, the new corporate entity paid the \$10 million to Amstead Industries and bought South Bend Lathe.⁶¹

Under this new plan, the company will put a portion of the annual profits into the employee trust which will be used to pay off the company's long-term loans. Furthermore, the profits deposited in the trust are tax-deductable-a major reason why ESOPs

are implemented. As the company's loans are paid off, employees receive a certain number of stock shares based on how long they have worked in the company and how much money they earn. ⁶²

After the workers took over ownership, the company's financial picture improved. The University of Michigan Institute for Social Research reported the pre-tax profits for the first year of worker ownership were 20 percent on invested capital. "The researchers also reported--based on data collected 18 months after the workers had bought the factory--that productivity appears also to have increased since the change in ownership, while quality has also improved." ⁶³ As time went by, however, workers realized that ownership is not the same as control. They began to complain about not being consulted on major investment decisions, or about being treated poorly by managers. One worker sums it up by saying, "When you get down to the real meat of it, there really isn't much difference (than how it was in the past.)" ⁶⁴ There is also the problem of equality in compensation. Because profit bonuses are distributed according to salary, managers, with higher salaries, get much larger bonuses. South Bend Lathe is a prime example of ownership without control. "When the ESOP is designed exclusively by management (as in this case), it is possible to structure the trust agreement in such ways as to keep legal control in the hands of management indefinitely, in which case opportunities for workers' participation will depend upon what management concedes voluntarily or under union pressure," ⁶⁵

After examining the plywood cooperatives and South Bend Lathe's

structure, the attributes and deficiencies of both programs become clear. In terms of Bernstein's democratic guidelines, the plywood cooperatives have done pretty well. Workers have control over the decisions of the firm. They are receiving monetary feedback in the form of equal wages and stock ownership. Also, management-level information is being regularly shared with the workers. The equal wage structure and the willingness of workers to serve on the board of directors without extra pay indicates a devotion to the cooperative and its principles. This experience is quite different from the one at South Bend Lathe company. There, workers are not controlling the decision-making process or even participating in it. Workers, however, are receiving feedback in the form of money, but these bonuses are not distributed equally. In addition, information is not shared with the employees, and the attitude of the workers is one of distrust and dismay.

Yet cooperatives cannot be judged strictly on their adherence to principles of democratization. The plywood cooperatives pay all workers the same wage regardless of the task being performed. This action, however, causes strife between the higher skilled and the lower-skilled workers and removes the monetary incentive for workers to develop their skills and make the best use of their abilities. The wages at South Bend Lathe, on the other hand, were not equal and compensation from the ESOP trust fund was partially based on how much one earned. The problem here is that the wage differential between management and shop floor workers did not change when the company changed to

employee ownership; in fact, the differential was increased because of the earnings distribution from the ESOP trust fund.

In section II, I asserted that cooperatives would operate more effectively when the wage differential is less than a comparable conventional firm but not totally equaled. In light of the experiences of the plywood cooperatives and the South Bend Lathe company, a reduced wage differential would seem most desirable.

The continuity problem of the plywood cooperatives brings up a final point that could be detrimental to the long-run applicability of worker owned firms. If the very success of a cooperative means that it will attract financially rich conventional firms which will want to purchase the enterprise, what will stop the shareholder-workers from selling their shares at a profit? In terms of economics, nothing, but non-economically, the pleasure they get from owning the cooperative or working in an environment which they control are factors that would weigh against the decision to sell. Yet because these non-economic factors are difficult to measure, it is not clear how much of an effect they will have in sustaining the cooperative. Since eighteen plywood cooperatives have survived over time, these non-economic factors have made an impact on the decision to change ownership. Given our current economic environment, however, it is likely that financial gain will weigh more heavily in the decision to sell. Thus, cooperatives seem to be most relevant and effective in the short-term.

The next section, using the experiences from the two examples

in this section, applies worker ownership to a steel plant. It presents a possible cooperative model that can be used as a short-term solution for reducing the costs to workers of our economy transferring resources from steel to more high growth industries. When worker ownership is applied to a steel plant, a new set of problems arise and demand attention.

Section V: An Internal Organizational Model for a Steel Plant

The two examples of employee ownership presented in the last section were taken from labor-intensive enterprises. Applying worker ownership to a capital-intensive steel plant, however, makes the ownership issue more complicated and less clear. Because so few, if any, examples exist of capital-intensive cooperatives in the United States, there is not solid organizational structure to serve as the basis for a worker owned steel plant model. In this section, I put forth such a model to point out the benefits as well as the unanswered questions of applying employee ownership to a steel plant. My intent is to provide a worker ownership model that adheres to the principles of workplace democratization while being as economically efficient as possible. Furthermore, the model is to be viewed as a short-run proposal designed to ease the costs placed on the workers from resource allocation out of the steel industry. More specifically, the section begins by discussing worker ownership's effect on the high labor cost and the productivity problem confronting steel plants. Next, the model's highly worker controlled organizational structure is presented in detail, and this is followed by a discussion of worker ownership's effect on steel plant reinvestment.

Two important factors contributing to the American steel industry's lack of ability to compete in the world market are low productivity and high labor costs. The severity of these prob-

lems can be clearly seen when we compare the experience of the United States to that of Japan. "In 1958 we used 18.06 man hours per metric ton of steel and they were using 61.70. By 1976 we were using 11.82 man-hours and they were using 10.04. (Furthermore), our unit labor cost was \$98.65 against \$122.18 in Japan in 1958, but in 1976 ours was \$294.65 and theirs was \$161.93." ⁶⁶ These statistics will be very difficult to overcome, yet for the well-being of thousands of steelworkers, something should be done. Since an industry is made up of individual firms, it is at this plant level that higher rates of productivity and lower wage costs must begin to appear. Reporting on the Weirton issue, Newsweek sheds some light on the issue of wage cuts: "Although the workers were unwilling to accept pay reductions to enrich National's shareholders, there was a chance that they would make concessions to a company they themselves owned." ⁶⁷ Once the employees agreed to purchase the plant, they accepted a 32 percent cut in pay. This action at Weirton confirms what seems logically clear: workers are more likely to accept lower wages when they own and control the firm.

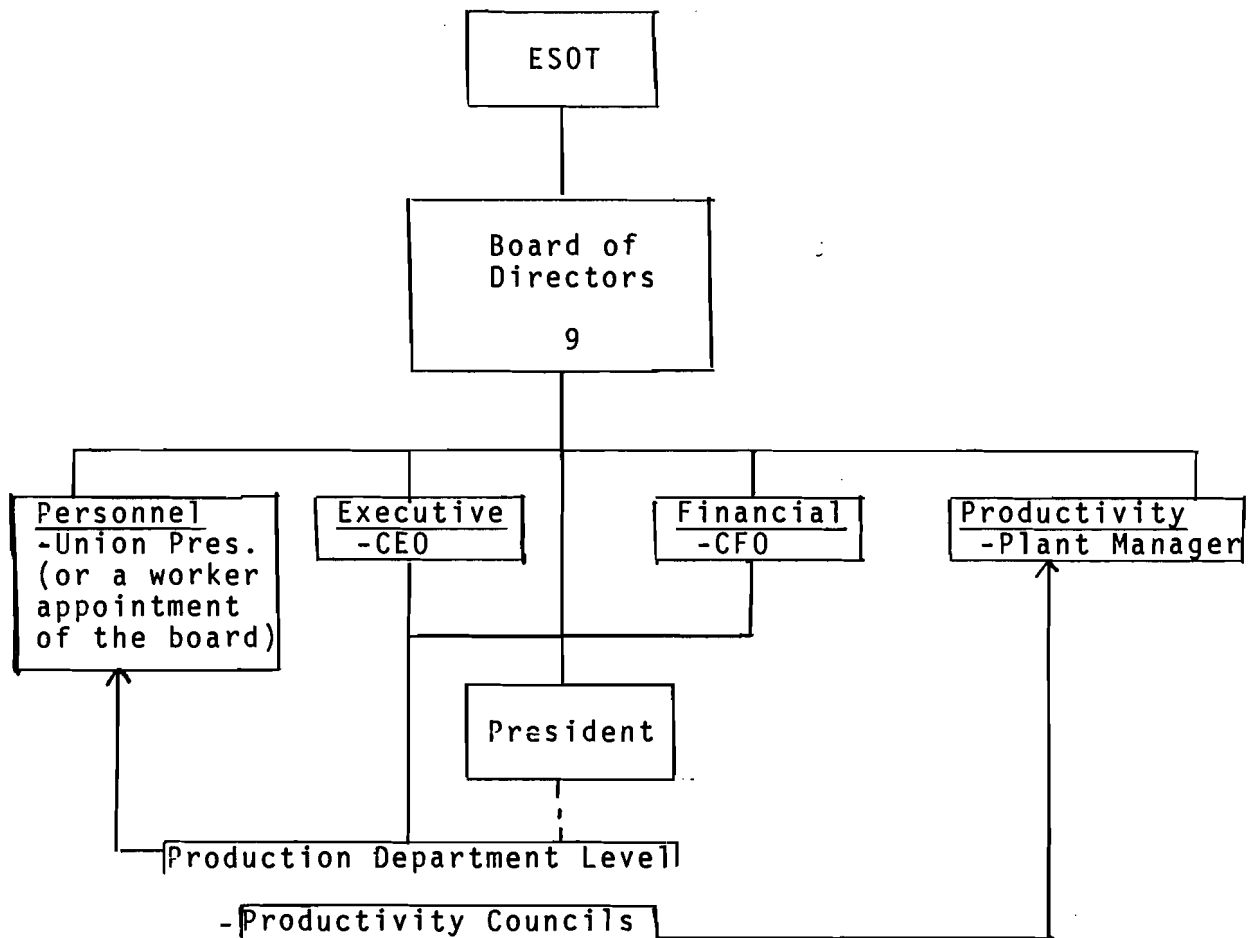
Combating low rates of productivity is also something worker owned firms have done quite well in the past. Feelings of unity and open communication in a relatively small labor-intensive company, however are much more easily achieved than in a huge capital-intensive steel plant. In order to achieve higher rates of productivity and gains in overall plant efficiency, an employee owned steel plant must emphasize worker representation at all levels throughout the plant and must practice and encourage intra-firm communications. These concerns were

paramount when designing the following steel plant organizational model. Using figure V-1 as a guide, we are able to trace the components of this proposed structure.

One of the key points to the model is the establishment of an employee stock ownership trust (ESOT). This trust fund borrows money from banks and government agencies, such as the Economic Development Administration, and then loans the borrowed money to the newly created corporate entity for a block of its common stock. The company pays back the loan by distributing a portion of its profits to the employee trust. These profits paid into the trust are tax deductible and thus provide the company with a healthy tax break. As the loan is paid off, the stock held by the trust is equally allocated back to the accounts of individual employees. Thus, over time employees build up shares and equity in the firm which will not be taxed as income until they cash in their shares upon leaving the company. Furthermore, as profits accumulate, dividends are paid out to workers on these company securities.

Financing the company through an ESOT fund has several advantages. The tax break on the profits contributed to the employee trust is the prime reason for an ESOT, but beyond that the trust provides a mechanism for distributing ownership among the workers. By allocating shares equally, the problems that occurred at South Bend Lathe can be avoided. There the shares were distributed according to years of service and how much money one earned. This distribution merely fostered strife between the production workers and the higher paid managers, a

Figure V-Ia



^a The committee level of this organizational chart and the functions of those committees are based on an organizational chart from Timothy Jochim's Employee Stock Ownership and Related Plans, Westport, Connecticut: Quorum Books, 1982.

situation which can lower the productivity of a cooperative enterprise. Through the issuance of stock shares, the workers now have a vested interest in the success of the entire firm, and they are receiving monetary feedback in the form of dividends. Furthermore, this equal distribution of shares is more in line with the principles of workplace democratization and allows for a better working environment. Employee stock ownership plans, however, are not without criticism. A common complaint of ESOTs is that they replace worker pension plans, since the company cannot afford both plans. Thus, the worker's retirement becomes totally dependent on the success of the firm, which makes the worker's future very uncertain. Some companies have been able to maintain a low funded pension plan along with an ESOT, but this depends on the financial resources the new enterprise possesses.

While the ESOT is the workers' mechanism of ownership, the workers exercise their influence on the company by electing representatives to the board of directors. This board consists of four worker representatives (one being the Personnel Committee chairperson), the chief executive officer, the chief financial officer, one of the plant managers and the president who serves as the chairperson. Other organizational structures have included community stockholder representatives on the board of directors. This, however, depending on the ratio of representatives on the board, tends to remove a significant degree of control from the workers. The cooperative, however, can indirectly include the immediate community's interest in the enterprise by issuing bonds

to them. These bonds should be targeted at those people who have a similar vested interest in the success of the plant as the workers themselves, such as local business persons whose economic stability is tied up with the economic stability of the mill. Although local community members do not have ownership in the plant, they are able to indirectly influence it with their money. This represents one option of involving the affected community in the future of the plant without taking away some ownership or control from the workers.

In terms of decision-making the general population workers have special control over certain decisions, since they are directly affected by and dependent on the firm. Decisions of fundamental change, such as shutdown, layoffs, of plant expansion, must be approved by 80 percent of the entire body of workers before any action can take place.⁶⁸ This procedure guards against a major action occurring against the majority of the worker-owners' wishes, and reinforces the workers' control of the enterprise. Aside from those major decisions, the board is in charge of making general company policy. One of its most important tasks is to establish the working wage and a scale of wage differentials among the employees. This pay scale is a delicate subject because one does not want to destroy the feelings of cooperation between the managers and the production workers by setting a large pay differential, yet greater compensation should be awarded to workers with greater responsibility and more skills. The desired wage differential, therefore, is one that would not create strife between workers and

would still monetarily encourage workers to best utilize their skills and abilities. This is essentially a political decision and should be decided by a vote of all the workers.

Another task of the board of directors, moving down the organizational chart, is to hire the management team, consisting of the plant manager, a chief financial officer, a chief executive officer, and a president. It is important that these individuals understand the intent of employee ownership and how it varies from a traditional firm. Furthermore, they must be open and responsive to the concerns and suggestions of the workers. In addition, it is vital that these managers develop the trust of the production workers, since smooth relationships between these groups fosters better productivity and a better working environment. While the board does hire the management team and set the wage differentials, the workers still retain the right to appeal any of the board's decisions. Similar to the plywood cooperatives, the workers get 10 to 20 percent of the membership to sign a petition before any decision can be stopped or re-evaluated.⁶⁹ This "right to appeal" clause helps the worker representatives to be more sensitive to their constituency's needs and concerns. Also, the 10 to 20 percent requirement insures that a sizable portion of the membership responds strongly against that particular decision, not just a few individuals, before any action is taken.

Up to this point, the role of a union in this model has not been addressed. As mentioned in Section III, the inclusion of a union in a worker owned firm requires the union to change

from its traditional role to one that is conducive with a worker owned enterprise. Union officials must remember that while they may be worker representatives, they are expected to work with fellow owner-manager representatives in an attitude of cooperation, not confrontation. This attitude is important because wages are no longer arrived at by hostile owners and laborers fighting over a bargaining table for their own separate group. Workers and owners are now one group and decide upon the wage that will best serve the interest of the total membership. Currently, however, such a change in national or local union policy does not appear likely, especially from the U.S.W.A. Thus, it seems that only a company union or a separate local union would be able to adapt to the cooperative role. These unions are sole representatives for the employees of one firm; therefore, they are capable of changing with the desires of their membership. Interestingly, the union involved with the employee purchase of the Weirton steel plant is a company union.

If a company union or a separate local union represents all the non-managerial workers, then the union president is given a specific position within this employee ownership model. Directly under the board of directors (see Figure V-1a) are four committees: the personnel, the executive, the financial, and the productivity committee. The union president is chairperson of the personnel committee, which is composed of one employee from each department. This committee's function is to be another voice for the workers and foster good industrial relations within the plant. Also, it serves as a board of appeal or

grievance committee where workers can have their disputes aired and resolved. If no union exists within the plant, then the chairperson of this committee is appointed by the board of directors.

As for the other committees, the executive committee is chaired by the chief executive officer, and the finance committee is chaired by the chief financial officer. These two committees are generally filled with highly skilled management people who are responsible for running the company. The president serves on both committees, as do the plant managers, the directors of marketing, and the director of the legal and research sections.⁷⁰ The fourth committee is the productivity committee which is chaired by one of the plant managers. Along with this committee, each department has its own productivity council whose membership is determined by the department employees. From the members, the president of the company picks an employee coordinator for the council who also serves as the department supervisor and as a member of the productivity committee.⁷¹ These department productivity councils are also in charge of administering productivity bonus plans. These productivity plans will monetarily reward workers on a regular basis for being more productive, thus encouraging workers to find ways of doing their jobs better, which results in a bright future for the firm. Although these productivity bonus plans alter the workers' compensation, they do not subvert the benefits of a reduced wage differential. Everyone starts with an equal wage, but those that take more initiative and are more productive are justly rewarded. If this system is explained to workers from the outset and productivity information

is openly shared among departments the chances of problems developing will be reduced.

In addition to productivity bonus plans, other methods are used to make worker-owners more concerned about their jobs and their firm. Educating workers on the meaning and responsibilities of employee ownership is very important. Workers must realize that they are expected to make decisions, challenge decisions, and give input into decisions. As in a political democracy, the workers must also be aware of how the system operates in order for that system to be successful. Thus, when the new firm opens, groups, similar to Japan's quality control circles, or Germany's works councils could be established to orient workers to their new roles as worker-entrepreneurs in a democratically managed firm. These groups would also provide a forum for continued monthly discussions on employee ownership, the wage differential, or structural problems within the firm. Another incentive program compensates workers for their loyalty and willingness to take risks. Through a stock bonus plan workers are given extra shares of stock after five years of service; therefore, workers have the incentive to stay with the company through good times and bad. An additional program is designed to shorten the distance between top level managers and production workers. This program requires the president and the chief executive officer to spend one day per month working at the production level, talking with workers, and learning about their jobs. An action such as this helps remind all the employees--the workers, the managers, and the clerical people--that everyone is on the same

team. A united spirit among the worker-owners can only result in a better working and a more productive environment.

This proposed model, therefore, gives ownerships directly to the workers. Under this system, those most affected by the decisions of the firm do in fact have control over those decisions. Workers are represented at the department level, the committee level, and on the board of directors. This network of representation along with stock ownership gives workers a vested interest in the success of the firm. Yet even with this extensive network of worker representation and monthly small group educational meetings, it is not clear whether a sense of unity and ownership can be felt among the workers enough to improve their rates of productivity significantly. Because examples of massive worker owned, integrated steel mills do not exist, one can only speculate. It is possible that workers could feel an affinity through the programs and components in the model; however, whether this feeling is likely to occur is difficult to say.

If the model is indeed hampered by the large expanse of an integrated steel mill, its effectiveness may lie in minimills. If a large integrated mill closes down, the workers could buy it and convert it to several minimills. The differences between a minimill and an integrated steel mill lie in its size and its cost. "The efficient size of a steel mill based on blast furnaces is four to five million tons of output a year, that of a minimill using an electric-furnace ranges from 100,000 to 500,000 tons depending on the variety of its product lines."⁷² Furthermore,

the total construction costs for minimills may be less than \$50 million. The total construction cost for a new integrated steel mill is about 4.5 billion.⁷³ Because the plant size is much smaller, minimills might be more effective in involving workers in ownership.

Like low productivity and high labor costs, lack of investment has hurt steel plants and the workers connected with them. The majority of steel mills that have shut down in the last several years have done so because their rate of return was not high enough for the owning conglomerate to continue to reinvest in the plant. This occurred in Youngstown, Ohio where the Lykes Corporation chose to stop investing in the Campbell Works of the Youngstown Sheet and Tube Company rather than modernize its facilities. This decision caused 4,100 workers to lose their jobs permanently.⁷⁴ A similar situation occurred in Weirton, West Virginia where National Steel decided to stop investing in its Weirton Steel Mill, threatening the jobs of some 7,000 workers.⁷⁵ The workers offered to purchase the plants in both these cases. They were successful in the latter case but not in the former.

These experiences seem to indicate that the workers, and the surrounding community have a different objective function than the conventional corporate owner. A large corporation is not likely to reinvest in a steel plant if that plant is not achieving a rate of return deemed "acceptable" to the corporation. The plant may in fact be profitable, but just not profitable enough. If the workers, however, do indeed strongly value employment stability, geographic location, and a sense of community heritage,

then they are more likely to accept a lower rate of return than the traditional corporation. The minimum rate of return workers would be willing to accept would probably be that needed to maintain an "adequate" standard of living. This could mean that the workers' Δd (the addition to their aspired income for the current year) is keeping up with the rate of inflation. Thus because workers have different priorities and are willing to accept a lower rate of return, they will invest beyond the point of a traditional firm which has its own objective function and more attractive investment opportunities elsewhere.

In order for workers to provide adequate funds for investment, however, they must see the connection between investment and their current compensation. For example, income earned under the model proposed in this section can be divided into three areas. It can be paid out as dividends on the stock shares (π_D) ; it can be paid out in the form of wages (d) , or it can be put into retained earnings π_R . The link that needs to be pointed out and understood by all the worker-owners is that the current Δd and d are the result of contributions made to retained earnings in an earlier time period. Thus, if workers want to insure themselves an adequate wage in the future, they must free up funds for investment now. Likewise, if workers are concerned about employment stability and community roots, they must not take all the earnings home in the form of compensation but rather maintain an adequate savings pool. Workers, however, will have to be educated in this type of concern for savings since they have traditionally not entered into investment decisions within con-

ventional firms. Under the proposed model, workers will be educated on their role as entrepreneur and on the virtues of investment through the small groups established to discuss and acquaint workers with the structure of employee ownership. Since these groups meet once a month, lack of understanding can be cleared up on a continual basis.

In summation, the advantages of employee ownership in general and this model in particular stem from the fact that they allow workers to control their own economic futures. With such control, workers are more likely to take a reduction in pay than would be the case in a conventional firm. Also, with control over the decision-making process of their plant, the workers are likely to work with the knowledge that they run the enterprise and that they directly receive the monetary benefits of higher productivity. Furthermore, because a worker owned plant has different objective functions and priorities than a conventionally owned firm, the worker owned plant would maintain a more stable workforce and continue to reinvest in their plant beyond that of a conventional owner.

However, when these advantages of employee ownership are assessed through the context of a large integrated steel mill, their outcomes are less clear and less positive. The sheer size of the plant may hinder workers from feeling that they have any control over the plant's decisions or the bureaucracy of representation may grow so large that workers would once again feel like workers not owners. These situations could severely cripple the cooperative's ability to significantly increase productivity.

In addition, employee owned firms require the union to play a difficult role, given its current attitude and behavior. Although company unions or separate local unions have the potential to work within an employee owned plant, it remains to be seen whether they can significantly alter their traditional union attitude. The internal organizational model presented in this section highlights the benefits worker ownership can offer a capital-intensive steel plant, but at the same time, the model raises some questions which need to be, but have not been, fully answered.

Section VI: Conclusion

Many factors have contributed to the steel industry's decline over the last two decades. The depletion of local low-cost iron ore deposits caused the price of iron ore to increase dramatically for U.S. firms, permanently removing a key advantage over foreign steel producers. Furthermore, the lack of modern capital equipment and high labor costs have damaged the American steel industry's ability to compete with other countries. As the industry has continued to lose its share of the world market, many steel firms have diversified their investments and bought up firms in other sectors of the economy. As conglomerates, these firms efficiently allocate resources and investment funds to the area providing the highest rate of return. This has meant that funds have been transferred from steel plants and put into higher growth subsidiaries.

The result of this disinvestment has been and continues to be widespread unemployment among steelworkers in the Midwest and the Northeast, where most of the old, large integrated steel mills are concentrated. Thousands of workers have lost their jobs because corporations are closing plants that don't make enough profit. In addition, many communities are decaying economically because their major employer--the steel mill--has shut down operations.

Worker ownership provides a way to alleviate the regional unemployment problems of steelworkers. Employee ownership recog-

nizes the difference in the values of steelworkers and conglomerate owners. The worker's desire for employment stability often clashes with the conglomerate's desire for a high rate of return. Worker ownership switches the existing order around. It gives workers the power to decide what rate of return is acceptable for them and allows them to maintain employment and economic vitality in their communities. Instead of having some far away corporate headquarters decide the economic fate of thousands of workers and their respective communities, worker ownership gives the power of decision to those who are most affected by those decisions.

In the context of a steel plant, however, worker ownership does result in an explicit trade-off with allocative efficiency. Because an employee owned steel plant operates with a different priority or objective function, it prohibits the maximum transference of resources into higher growth firms. Thus, in order to maintain employment in these geographic regions, some degree of allocative efficiency will have to be sacrificed.

Yet, it appears that this sacrifice will only take place in the short-run. It is quite likely that if a worker owned plant became profitable, a large conventionally owned firm with greater financial resources would offer to buy out its stock shares at a profit for the worker. The success of such a purchase depends on how tempting the offer is and the age and attitude composition of the plant worker-owners. If the purchase is successful, the workers make a handsome profit but the cooperative dies. In terms of a steel plant, it is not likely that a worker ownership or tra-

ditional ownership could revive the big, old steel mills to compete in today's market in the long-run. Therefore, the most effective application of worker ownership to steel plants is as a short-term means of maintaining regional employment and easing the transition our economy is making out of steel.

ENDNOTES

¹Terry F. Buss and F. Stevens Redburn, Shutdown at Youngstown (Albany: State University of New York Press, 1983), p. 44.

²Ibid.

³Walter Adams and Hans Mueller, "The Steel Industry," The Structure of American Industry, ed. Walter Adams (New York: Macmillan, 1982), p. 73.

⁴Leonard W. Weiss, Case Studies in American Industry (Toronto: John Wiley and Sons, 1980), p. 160.

⁵Ibid., p. 165.

⁶Ibid., p. 170

⁷Adams, p. 91.

⁸Ibid., p. 92

⁹Ibid.

¹⁰Ibid., p. 93

¹¹Ibid.

¹²Ibid., p. 94

¹³Weiss, p. 164.

¹⁴Robert W. Crandall, The U.S. Steel Industry in Recurrent Crisis (Washington D.C.: The Brookings Institution, 1981), pp. 23.

¹⁵Ibid., p. 27.

¹⁶Ibid., p. 23.

¹⁷Ibid., pp. 23, 27.

¹⁸Ibid., p. 27

¹⁹Weiss. op. cit., p. 208.

²⁰Ibid., p. 210

²¹Adams, op. cit., p. 81.

²²Ibid.

²³Crandall, op. cit., p. 35

²⁴Weiss, op. cit., p. 211.

²⁵A. A. Brewer and M. J. Browning., "On the Employment Decision of a Labor-managed Firm," Economica (May 1982), p. 142.

²⁶Branko Horvat, Mihailo Markovic, and Rudi Supek, eds. Self-Governing Socialism (White Plains: International Arts and Sciences Press, 1975), p. 235.

²⁷Martin Carnoy and Derek Shearer, Economic Democracy (Armonk: M.E. Sharpe, 1980) p, 170.

²⁸Ibid., p. 175.

²⁹Daniel Zwerdling, Workplace Democracy (New York: Harper and Row, 1980) p. 100.

³⁰Paul Blumberg, Industrial Democracy (London: Donstable, 1982) p.124.

³¹Tove H. Hammer, et. al, Worker Participation and Ownership: Cooperative Strategies for Strengthening Local Economies, (Ithica: Cornell University, 1982) Chapter III.

³²Ibid., p. 27.

³³Buss and Redburn, op. cit., p. 22.

³⁴Hammer et. al. op. cit., p. 31.

³⁵William Serrin, "Employees to Buy Huge Steel Works in \$66 Million Pact," New York Times, (March 14, 1983), p. 7.

³⁶Tove H. Hammer, Robert N. Stern, and K. Kaydn Wood, Employee Ownership in Plant Shutdowns (Kalamazoo: W.E. Upjohn Institute for Employment Research, 1979) p. 9.

³⁷Ibid., p. 12.

³⁸Ibid., p. 13.

³⁹Ibid., pp. 13, 14.

⁴⁰Hammer, et. al. op cit., p. 68.

⁴¹Buss and Redburn, loc. cit.

⁴²Staughton, Lynd, The Fight Against Shutdowns (San Pedro: Single-jack Books, 1982), p.43.

⁴³Ibid., p. 42

⁴⁴Buss and Redburn, loc cit.

⁴⁵Serrin, op. cit., p. 1.

⁴⁶Ibid.

⁴⁷Ibid., p. 7.

⁴⁸Ibid.

⁴⁹Tove H. Hammer, et. al, Worker Participation and Ownership: Cooperative Strategies for Strengthening Local Economies. (Ithica: Cornell University, 1982) Chapter IV, pp. 22-23.

⁵⁰Paul Bernstein, Workplace Democratization: Its Internal Dynamics (Kent: Kent State University Press, 1976), p. 9.

⁵¹Ibid., p. 23.

⁵²Ibid., p. 15

⁵³Zwerdling, p. 100.

⁵⁴Ibid.

⁵⁵Ibid.

⁵⁶Ibid.

⁵⁷Ibid., p. 103.

⁵⁸Ibid., p. 102.

⁵⁹Bernstein, op. cit., p. 23.

⁶⁰Zwerdling, op. cit., p. 66.

⁶¹Ibid.

⁶²ibid.

⁶³Ibid., p. 68.

⁶⁴Ibid.

⁶⁵Hammer, et. al., op. cit., Chapter IV., p. 16.

⁶⁶Leonard W. Weiss, Case Studies in American Industry (Toronto: John Wiley and Sons, 1980), p. 212.

⁶⁷"A Steel Town's Fight for Life." Newsweek, (14, March 1983), p. 49.

⁶⁸Lynd, loc cit.

⁶⁹Bernstein, op. cit. p. 15.

⁷⁰Timothy Jochim, Employee Stock Ownership and Related Plans, (Westport: Quorum Books, 1982), p. 71.

⁷¹Ibid., p. 73.

⁷²Adams, p. 84.

⁷³Ibid., p. 85.

⁷⁴Buss and Redburn, p. 13.

⁷⁵Serrin, op. cit., p. 1.

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