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THE ECONOMICS OF LABOR UNION MERGERS

A Dissertation

Presented for the

Doctor of Philosophy

Degree

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John L. Conant

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based microeconomic analysis to a wide variety of organizations and issues.

I dedicate this study to my parents whose continual encouragement and support has meant so much to me, and to P. David Qualls whose influence and friendship will continue to assist me throughout my career.

ABSTRACT

The purpose of this thesis is to advance the economic analysis of labor unions by applying microeconomic theory to the union merger process. Unions' incentives to merge are examined, and a model is built to predict the influence of merger on the relative levels of earnings and employment. Through the merger process, unions can internalize the costs and benefits their activities have on workers in related firms and industries. This internalization changes the "optimal" behavior of unions regarding their desired wages and strike activity, according to the economic relationship between the memberships of the merging unions.

Data were collected on the levels of earnings and employment in industries which experienced major union mergers in the 1960's and 1970's, and classified as complementary or substitute mergers. Multiple regression techniques were employed to test the prediction of the model, that merger between workers who are net substitutes lead to higher desired wages, and greater strike activity, and that mergers between workers who are net complements lead to lower desired wages, and less strike acticity. The results lead to the conclusions that union mergers do have the predicted impact on earnings and employment.

Data were collected on the financial expenditures of merging unions to test the theories that merger leads to economies of scale, and that the separation of "ownership and control" allow union officers to use union mergers to advance their own interests. Multiple

regression techniques were used to test these hypotheses with the expected results.

The United States Postal Service and the members of the postal unions are used as a case study of the incentives and implications of union mergers. The environment of the USPS, with a single employer, several rival unions, rapid technological change, and significant organizational changes provided an excellent opportunity to observe union behavior, and the impact of union consolidation, on the economic relationship between union and employer.

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CHAPTER I

INTRODUCTION

The fields of economics and industrial relations have failed to develop a general theory of union mergers comparable to the accepted theories of corporate integration. Economists have developed theories of price, output and profit that depend partially on market structure and hence merger activity. It is just as important to recognize that the power equilibra between organized labor and management is affected by shifts in the structure of the bargaining environment which can be influenced by mergers between unions.

Surprisingly little has been written about the incentives leading to union mergers, or the implications of merger activity on the collective bargaining environment. For present purposes, a union merger can be defined as the integration of two or more independent unions to form a single organization. In this process one or more of the merging unions must cease to exist. The term is not used to describe the affiliation process of an independent union with a national federation (for example the rejoining of the UAW and the AFL-CIO in 1981).

This shortcoming may be due in part to the difficulty in subjecting the complexity of union organizations and objectives to general economic analysis. Labor economists have not been able to gain a firm grasp on anything other than the most general forms of objective or production functions for unions.

The purpose of this thesis is to begin to construct a framework for analysis of the economic causes and effects of mergers on the labor side of the collective bargaining process.

Merger Incentives

Growth

There are several reasons that unions, and union managers, may desire organizational growth. Many of the benefits to firms and to corporate managers of increasing size can also be attributed to unions and union managers.

Membership growth can be pursued in three basic ways by union leadership: (1) through new organizational drives, (2) by raiding the membership of other unions, or (3) by the combination of two or more independent unions.

The desire of unions to expand their size or jurisdiction by means of merger can be explained by general economic objectives. Larger size may be essential for providing the services demanded by the membership, for administrative efficiency, or for other economies of scale. It will be argued that there is a relationship between a union's size and its effectiveness in the collective bargaining process as well as its administrative efficiency. Increasing membership generally implies increasing financial resources, increasing manpower and the broadening of the membership base which is essential to effectiveness in collective bargaining.

Pure size is important to unions for non-bargaining purposes as well. The political influence of the union and its leaders may be

directly related to membership size. The union's effectiveness in lobbying for legislation important to it (such as protective tariffs, minimum wages, immigration policy, and the regulation of the work environment) will be enhanced by a larger membership base.

Size may be important to union officials as a means for pursuing their personal objectives. Remuneration, political power and prestige of national officers are often directly related to the size of the membership. Officials have an incentive to encourage mergers as the fastest way to increase their own pecuniary and nonpecuniary benefits through increased membership and financial resources.

Merger may also serve as a mechanism for reducing the risk associated with the survival of the union as an institution. Generally, the larger and broader the membership base, the greater the institutional viability of the union.

Competition

An objective of most unions is to achieve representation of employees of competing firms as well as competing unions. In many cases there are two or more unions competing in the same industry, in competing industries, or in the same occupational group. There are basically two ways to "take labor out of competition" in these markets. One is for the unions to attempt to dominate by raiding and attempting to win the members of a rival union through NLRB elections. The other is for the two unions to negotiate a merger agreement. In this respect, union mergers play a role similar to the risk reduction role of corporate mergers. Merger eliminates expenditures of time, money and energy

on useless jurisdictional conflicts. This elimination of "destructive competition" may, however, also reduce efforts to organize non-unionized workers by satisfying the union leader's desire for growth. Competition between unions for the right to represent unorganized workers may lead to greater organizational efforts than either of the competitors would expend if it controlled the market in its perceived jurisdiction. Inter-union competition and the threat of raiding may lead already certified unions to a higher level of service to its members than they would provide without the threat of competition.

Thus merger may reduce the responsiveness of a union to its members by eliminating competition between unions. Merger will reduce expenditures on destructive competition by reducing raiding, but it is unclear whether these resources would be used to increase the efforts of organizing unrepresented workers, or to increase either the quantity or quality of services to members.

Union officials have the same incentives for reducing competition in their product market (services to union members) as corporate officials do. A competitive union environment puts increased pressure on union managers to improve service to members, and by putting "labor in competition" makes it more difficult to raise wages.

Industrial Structure

The merger wave of the 1960's resulted in increased corporate conglomeration which has strongly affected the relationship between labor and management. Industrial structure is one determinant of the balance of power between organized labor and management.

Conglomerate firms, active in several markets have a stronger bargaining position when they are dealing with separate unions in their different markets. One determinant of bargaining power is the firm's ability or willingness to withstand a strike of a particular length. A strike in one operating division of a conglomerate firm may not significantly affect other divisions. Thus a conglomerate may have revenues during a strike from its other product lines which will enable it to survive a longer strike than a firm which is operating in only one market. This is a form of the "deep pocket" theory of an organization's ability to survive "crisis" situations.

Unions have responded to the upsurge of corporate merger activity with increasing centralization of union power, both by merger and by other means. Conglomerate tendencies and concentration among employers is an underlying cause of a variety of union strategies, including coalition and coordinated bargaining and the formation of councils, as well as union mergers.[1]

In situations where a multiplant or diversified employer is matched in labor relations with a number of separate unions representing separate plants or markets, the conglomerate structure shifts collective bargaining power in favor of the firm. As Alexander puts it:

> In dealing with the many national unions it typically faces, management can cross-subsidize between industries and plants,

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[1]See Lucretia M. Dewey, "Union Merger Pace Quickens," (1971), Monthly Labor Review 63; and Davey, Harold W. Contemporary Collective Bargaining 3rd edition (Englewood Cliffs, NJ, 1972).

> and whipsaw different unions at its varied facilities--supported by substantially enhanced staying power.[2]

Another impact of concentration has been a widening gap between ownership and control in modern corporations. The result is a large central management bureaucracy staffed by specialists. These specialized units, which are backed by significant financial resources, bring larger amounts of education, research and tactical expertise in labor relations to the battleground of the collective bargaining process. Better preparation and information along with more experience give these specialized management teams a distinct advantage at the bargaining table. Union officials can counterbalance this specialization through the increased resources which are concentrated by merger.

Technological Change

The impact of technological change from the labor relations viewpoint is its effect in rendering specialized skills or entire job classifications obsolete. Thus the impact of technological change on unions has been particularly heavy in industries such as coal, printing, and rail transportation.

The threat to the worker, and hence to his union in such technologically dynamic industries, is the loss of job security or livelihood which may result from technological change. There is a risk that

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[2]Kenneth O. Alexander, "Conglomerate Mergers and Collective Bargaining," Industrial and Labor Relations Review 25 (1971), p. 362.

changing production methods will "convert once productive employees into economic discards."[3]

Union integration may be an appropriate response to risks associated with technological change, for the union's institutional survival, and increasing the opportunity for job security provisions for union members. At the extreme, layoffs due to the changing technology in an industry may lead to declining membership, depleted financial resources, deteriorating services and bargaining power, and ultimately, dissolution of the union itself.

The union's vulnerability to technological advancement eliminating the need for the specialized skills of its members depends upon the degree to which those skills are mobile. If the skills can be easily transferred to another industry, the union can remain viable by expanding its jurisdiction and organizing in the more static industry to which its members are moving. The Boilermakers', Pressmen's and Machinists' unions responded to shrinking memberships by diversifying and vertical integration when their members carried their skills into new but related industries.[4]

In some cases, skills are strongly industry specific and/or related industries are already organized so that diversification is not possible. Under this environment, the only avenue open for the union's survival is institutional integration with another union in a similar or healthier environment.

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[3]John L. Young, "Adjusting to Technological Change" Industrial Relations Centre, Queen's University Reprint Series No. 4 (1963), p. 7.

[4]Margaret K. Chandler, "Craft Bargaining" in Frontiers of Collective Bargaining, Dunlop & Chamberlain (eds.) (New York, 1967).

While the immediate prospects of the members of the declining union are not necessarily enhanced by the merger, they at least have the benefit of a stronger, broader based institution attempting to provide help in relocation or retraining. The union leaders (decision-makers) may be able to insure their own careers through new although lower positions in a more secure merged union.

Economies of Scale

Another condition which could lead to increasing concentration of union membership is the existence of substantial scale economies, which permit larger national unions to provide a given level of service to their members at a lower average cost than smaller unions. The principal basis for scale economies in unions is identical to that in firms, specialization or the division of labor and an ability to combine certain departments. Larger unions make possible a fuller division of labor and integration allows combinations of facilities and staff at the local and national levels and hence should provide cost advantages.

The modern labor union is expected to perform a wide variety of services for its membership. The union is responsible for extending collective bargaining by organizing any non-union workers that "compete" with the current membership. Once it has won certification, it must negotiate a contract which meets the expectations of a majority of the workers. If the resulting agreement is not acceptable to the officers or the members, it must be able to maintain a strike of sufficient magnitude to encourage the employer to offer more acceptable terms.

Once an agreement is ratified, the union must provide the personnel and expertise necessary to implement and police the terms of the contract effectively.

The union is also expected to furnish services not directly related to the contract, including research, education, lobbying, strike and pension fund administration and union news publications. All of these services require administrative expenditures by the union. Thus increasing costs may force a union to increase revenues through dues and fees, or reduce services to its membership.

Many unions both large and small have chosen merger in an attempt to reduce administrative inefficiency and duplication and to increase their strength and effectiveness in dealing with employers.

Merger may allow unions to economize on management services by sharing a common pool of researchers, lawyers, pension and welfare fund managers, and bargaining specialists. The result may not only be lower average costs, but greater ability in the specialized skills needed by the union. Merged unions may have advantages in preparation for negotiation and in the negotiation process due to the division of labor, and in economic sanctions due to the increased financial resources. Many issues of collective bargaining are so technical and complex as to require expertise and extensive research. Health, welfare and pension plans, among other issues, require specialized information and knowledge to be dealt with effectively. Bargaining effectiveness continually requires an increasing degree of knowledge about the economic circumstances of the industry in general and the firm specifically. To be effective, negotiators must be skilled in the strategy of

collective bargaining and understand the background and technicalities of the issues being dealt with.[5]

Economies of scale may be significant at the local level, by allowing the combination of facilities and staff positions. Integrating at the local level should increase the ratio of members to locals, and hence reduce total administrative expenses, as well as local expenses per member. This cost advantage will free funds for use in providing additional benefits to members, or to the union officers.

In addressing the costs of the duplication of effort before the merger of the paper workers' unions, the president of the Pulpworkers was quoted:

> They send Representatives to the scene. We send Representatives to the scene. They send a Vice President. We send a Vice President. . . . We must have eight or nine people at the conference table. The UPP must have an equal amount of members. . . . Is this any way to operate an efficient organization? How silly it is . . . if companies were to run their business the way we run our Unions, they would be bankrupt.[6]

Managerial Discretion

Most national unionism is characterized by high concentration and large organizational barriers to entry. These factors effectively insulate the organization from the pressures of strict competition and open up a wide range of discretionary choice for management. As long

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[5]Harold W. Davey, Contemporary Collective Bargaining, note 1, pp. 119-120.

[6]Proceedings of the Twenty-Ninth Convention, International Brotherhood of Pulp, Sulphite and Paper Mill Workers, August 30 to September 3, 1971, p. 25.

as the organizations provide an acceptable level of service at an acceptable price (dues, fees, etc.), the option of pursuing any of a number of non-member objectives is available to them.

The theory of managerial discretion, and separation of "ownership and control" does not assert that members are ignored or entirely neglected, but that their objectives are only one of a number of competing influences that management balances.[7] These theories lead us to expect that organizations which are operating in more competitive environments will more closely attempt to meet owner's objectives.

A basic agreement exists among organization theorists on what constitutes the immediate determinants of managerial behavior. These include salary, security, status, power, prestige and professional excellence.[8] Some analysts include expansion as an objective, but it is proposed that expansion is a means to attain the other objectives rather than an objective itself.

It is generally assumed by those economists who study organizational behavior that management has a positive preference for staff. The selective expansion of operations may be perceived by management as having benefits that can be distributed throughout the hierarchy. The expansion of staff serves to advance the "dominance" objectives of status, power and prestige for many of the top officials.

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[7] C. Kaysen, "The Corporation--How Much Power? What Scope?" in The Corporation in Modern Society (E. S. Mason, ed.) (Cambridge: Harvard University Press, 1960).

[8] Oliver Williamson, The Economics of Discretionary Behavior--Managerial Objectives in a Theory of the Firm (Englewood Cliffs, NJ, 1964), pp. 29-30.

A "professional" inducement to expand staff may arise from the belief that a larger staff will be able to provide more and better services.

Merger may also be a mechanism through which managers can increase the organization's discretionary profits, which is that amount by which earnings exceed a minimum performance constraint. With respect to union managers, the concept may be adjusted to revenues which are not required to meet minimum membership services. These revenues provide the funds for pursuing managerial objectives rather than membership objectives.

Managerial discretion models propose that where discretion in the decision-making unit exists, due to a general lack of competition, this discretion will be exercised in a fashion which reflects the self interest of the decision maker rather than the interests of the organization's owners. It is my proposal that the economic environment of national unionism is one of very weak competition, and that the one-party system of government within unions enhances the lack of union competition by reducing potential management rivalry. In most national unions, there has been an increasing centralization of power and control of both the convention and the administrative machinery by a small group of officers. Thus effective opposition (competition by potential rival administrations) is relatively rare, and a self-perpetuating bureaucracy is the general rule.

The literature on the property rights theory of the firm indicates that the attenuation of the property rights of owners effectively

reduces the price of non-pecuniary benefits to the decision-makers which lead to lower firm wealth and reduced managerial efficiency.[9]

However, more recently this literature has moved toward the recognition that effective capital markets and markets for managerial talent (human capital) will provide the effective conditions for organizational efficiency.[10]

Fama argues that managers face both discipline and opportunity from both an internal and external market for their services.[11] Managers "rent" their human capital to their firms, the "price" for which is dependent at least partially on the efficiency of the firm. The value of a manager's services are revealed in the internal and external labor markets by the success of the firm. Thus these markets give the managers an effective stake in the efficient operation of their firms.

Classical property rights theory has also implied that the diversity of ownership in modern corporations has provided for a "rational ignorance" among stockholders. Fama argues that stockholders rely on the existence of an efficiently operating capital market to price firm's securities and that the value of this ownership is important for the managerial labor market's valuation of the firm's management. The basic conclusions of this recent theory of the firm are that these

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[9]Eric Furubotn and Svetozar Pjovich, "Property Rights and Economic Theory--A Survey of Recent Literature" Journal of Economic Literature, 2 (December 1972):137-162.

[10]H. E. Frech III, "Property Rights, The Theory of the Firm, and Competitive Markets for Top Decision-Makers" Research in Law and Economics, 2 (1980):49-63.

[11]Eugene Fama, "Agency Problems and the Theory of the Firm" Journal of Political Economy, 88 (April 1980) 2:288-307.

"market mechanisms" effectively substitute for the loss of control by owners in disciplining managers and giving them the proper incentives to "maximize profits."

Although it's not been explicitly stated that I am aware of, Fama hints that a competitive securities industry performs the functions of the speculator and the retailer in specializing in gathering (and acting upon) information and "certifying" quality for "non-informed" consumers (security holders).

These arguments in the theory of the firm rely on several factors which do not exist in unions. Because each manager is concerned with the performance of all other managers (so that a good signal will be given to the managerial labor markets), there is a significant amount of internal monitoring of managers by managers.

Because there is no external market for union managers, and the internal market is a one-party political one, this mechanism does not exist within a union. The theory of the firm also relies on an efficiently operating securities market. Certification of value and other information provided by securities specialists, and the low transactions cost of exchanging ownership in an inefficiently run firm for ownership in an efficiently run firm contributes significantly to the "necessary" incentives for managers.

Union members do not have this mechanism to "discipline" their managers. Union members must either decertify an inefficiently run union and elect a better one or elect a totally new administration. This process is at least as difficult and expensive as overturning a

corporate board of directors, as owners would have to do in the absence of an efficient capital market.

Thus the mechanisms used by the "new" property rights theory of the firm which greatly reduce the incentives for managers to partake in inefficient managerial discretion do not exist in union organizations.

These two factors, the lack of union rivalry and the lack of leadership rivalry, provide the opportunity for a significant amount of managerial discretion. Merger can definitely reduce what little union rivalry may have existed, and thus increase managerial discretion. However, it is not so clear that merger won't increase leadership rivalry within the union. At least when merger occurs between unions of similar size, there may be more pressure on the new president from the president of the other organization. I believe that this is a barrier to union merger rather than a factor which would increase pressure on union management to pursue membership objectives. It is fighting over union leadership, and the makeup of the bureaucracy which makes merger between unions of similar size so difficult. Merger will not occur until these issues are resolved. By the time merger is consummated, the rivalry between the two administrations must be settled to the degree that each feels the merger will advance their self-interest. Thus merger of national unions not only will enable the administration to advance its self-interest through membership expansion which is a means of increasing salary, prestige, power, status and security, but also by reducing the competitive environment the union operates in, it will increase the ability of the administration to pursue its personal goals rather than its membership's goals.

The private interests of a union president may lead him to pursue growth by merger even when it will not enhance the bargaining power of the union. However, the political power that comes with union size may be beneficial to the members as well. Political influence may not only be important for legislative ends, but also during strikes with national impact. During these long and sometimes bitter struggles, government leaders can play an important role. The relative political influence of the parties may play a role in the ultimate outcome of the struggle. Thus while the empire building urges of business leaders may harm shareholders, to the extent that union members benefit from the political influence and prestige of their leaders, such an urge may not be harmful to union membership in general.

This theory predicts that union mergers will result in increasing managerial discretion which can be observed through an increase in compensation for the top officers, increases in compensation or expenses for staff, and increases in other expenses which can be linked to the officer's self-interest.

Implications

Organizational and Administrative

Merger may result in an increased quality of service to a union's membership. The increase in financial and human resources resulting from the combining of two or more organizations may allow better educational and training programs for union members. The ability of the union to disseminate information that is important to the members is enhanced through merger. Information on legislative issues important

to labor in general or the members of the specific union, as well as information on OSHA rulings, the economic environment of the industry, the present state of the pension and welfare funds, and the voting records of specific politicians, is published in regular union papers. Information of this type can be important to the union and its members. Combining of locals can eliminate much duplication of effort freeing these resources for the improvement of service quality.

One possible effect of merger is the centralization of power in the decision-making process. Local or regional officials may thus lose some of their authority. The elimination of duplication may lead to reduced employment opportunities for some local union staffs. There may be short run excess supply of land, buildings and equipment, as well as staff members, which may present political problems for union officials. The combining of two or more independent organizations is never without administrative problems. However, merger does generally provide the new organization with the ability to streamline its administration and to improve the quality of its services to its membership. It also increases the absolute size of the staff which increases the utility of the new union managers.

Organizing efforts by unions depend both on the ability to allocate human and non-human resources to organizing, and its willingness to do so. Mergers may have an effect on both the ability and the incentives of an organization to pursue new union members. As previously discussed, merger may reduce the "wasteful" competition between unions attempting to win certification for the same workers. By combining financial resources and staffs, there is little reason to doubt that

merger will increase the ability of a union to undertake organizational activity. It is also necessary to address the incentives facing union leaders to allocate more of their resources to organizing drives.

The merger itself may satisfy the desires of the union leaders for growth, and thus reduce their need for new members through organizing previously non-union workers. Just as a corporate merger allows a firm to grow without creating new production capacity, union merger allows growth of a particular union without growth in the ranks of organized workers. To the extent that the merger increases the relative bargaining power of the new union, it may increase its ability to win certification elections. Thus merger may decrease the cost of winning certification elections and increase the ability of meeting the cost without changing the relative benefits.

Confrontation

There are three major areas of confrontation between unions and management in labor relations, contract negotiation, work stoppage and the application and interpretation of contractual provisions. Mergers that affect the quantity and quality of resources a union can allocate to the negotiation and arbitration processes will increase a union's effectiveness in these areas.

A union's bargaining success depends on several factors including management's willingness to resist the union's demands, the union's financial position and the intensity of the membership's desire to press confrontation, the structure of the product and labor markets and the characteristics of the output being produced. Merger may have

significant impact by extending the period of time the union is able to maintain a work stoppage through a broadening of the scope of the dispute where the employer operates from several locations, or in several product markets. If merger can reduce the perceived cost of agreement for management, or increase the anticipated cost of disagreement, the union's bargaining position will be enhanced.

For a given level of employer concentration, merger may serve as a mechanism for reducing the perceived cost of management's agreement to the conditions of the union. This results from the impact of price competition in the industry on the costs of agreement/disagreement in the collective bargaining process. The number of unions operating in the industry influences the risk or the cost of agreeing to a particular contract.

In concentrated industries there is a tendency for the firms to attempt to match wage settlements in order to keep labor cost from being a form of price competition. Concentrated industries favor non-price competition, and taking price out of competition may be frustrated if the firms are negotiating with different and competing trade unions. The result of separate unions may be a greater degree of price competition, which increases the cost to management of agreeing to a contract which could put him at a competitive disadvantage. To the extent that union mergers would result in declining wage differentials, the merger process would reduce management's resistance to a given contract. Merger is a way to help take labor out of competition.

Given a labor dispute, a union's prospects are limited by its ability to reduce the cost of nonsettlement to its members through the

provision of strike benefits. The greater a union's strike fund, the lower its cost of disagreement with management's terms. The potential impact of merger on the size of the strike fund is considerable. Merger will broaden a union's base, and increase in absolute terms its strike fund. A union with a large strike fund, and a perceived willingness to use it will have greater bargaining power. The threat of a potentially long strike backed up by a large strike fund may be a stronger bargaining weapon than the threat of shorter strikes even if they occur more often. Having a larger strike fund may be effective, even if it is not necessary to use it very often. Simply by combining strike funds, the merged union gains the ability to withstand long strikes, and thus increase its relative bargaining power and allows it to gain a better contract with a given strike length or threat.

Edward Chamberlain makes the point that a union formed by combining two previously independent unions may have an advantage in that it is capable of creating a larger central strike fund.

> The power that goes with size . . . in addition to control over a wider range of market situations, both competing and connecting, brings correspondingly larger financial revenues and resources, which may now be concentrated at any particular point, and so constitute an actual threat of economic destruction to the individual employer.[12]

Merger may be particularly significant for unions engaged in labor relations with conglomerate firms. A conglomerate that is confronted with a number of unions has certain advantages. Such a firm

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[12]Chamberlain, Reilly, Bradley and Found (eds.), "The Economic Analysis of Labor Union Power" in Labor Unions and Public Policy, p. 39.

may be able to transfer work from a struck facility to an operating facility. Even where this is not possible, a conglomerate will have some product lines at some sites in operation, creating continued revenue, while the union is depleting a fixed stock of strike funds.

The only effective union response to this is to broaden the scope of the strike to include as many of the employer's operations as possible, or to broaden the membership base so that working members are adding benefits to the fund even as others are drawing funds out.

The strategy of organized labor may be to take the strike decision out of the hands of the independent unions and consolidate it in such a way that all employees of the firm can legally strike simultaneously. Merger may be the first step necessary toward a unified strike front in relations with conglomerates or multi-plant employers. After merger it is still necessary, but perhaps easier to consolidate collective bargaining, as the Steelworkers have done.

Membership

By reducing the risk of unemployment, and changing the relative bargaining power of the union, merger may have a significant effect on the development of wage policy, and the wage/employment tradeoff. The expanded financial and manpower resources which result from merger allow a more extensive and effective organizing campaign which may have a long-term effect on the level of unionization in an industry, and thus on the comparative desirability of employment for the union's members.

Large strong unions can attempt to protect their members from the threat of unemployment that may result from an aggressive wage policy. Such a policy may shift labor demand to lower wage-paying firms in the industry, or to firms in substitute industries. Larger stronger unions can gain by "absorbing" smaller weaker unions in the same industry through reduced labor competition. An aggressive wage policy followed by the strong union may shift labor demand to the lower wage firms in the industry, or substitute industries whose workers are represented by a smaller weaker union. Merger benefits members of both unions through the new opportunity to decrease the wage differential. This reduces the threat of unemployment to members of the larger union, and increases relative wages to members of the smaller union.

There are several implications of merger which may result in better services for the union's membership. Merger may provide the organization with a better base for institutional survival. Merger may eliminate long-standing jurisdictional disputes, reduce the employment risks associated with technological change, and enable the provision of a broader and more sophisticated range of services from education and training to welfare benefits and on-the-job consumption. Increased financial and human resources which come with merger may allow the union to allocate more resources to the contract administration process and thus to provide increased grievance arbitration success, and other benefits to its membership.

However, the very changes which yield these advantages may affect the degree of control which members exercise over the policies

and activities of their union. The institutional changes brought forth by merger may limit the scope and quality of membership participation in the larger, more diverse union. The ultimate result may be increased opportunity for union officers to engage in managerial discretion or for corruption and misuse of union funds. A large union bureaucracy, insulated from its membership is a good environment for discretionary behavior and abuse by union officials.

Merger may lead to a reduction in the responsiveness of union government by reducing competition of rival unions. Members often compare the performance of their government with the performance of similar unions. With fewer alternatives available to the workers, the leaders have the ability to be less diligent in responding to the needs of the membership without risking the loss of their office, or the certification of the union itself. The greatest advantage of market power for union leaders as well as corporate leaders may be the ability to relax. Leibenstein's concept of "X-inefficiency" which comes with market power may be a significant cost of lessened union competition as well as lessened product competition.[13]

Officers

In many instances merger results in increased benefits to national officials, local officials and to the general membership. However, there are instances when the interests of at least a subset of union decision-makers differ from the interests of the membership.

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[13]See Harvey Leibenstein, "Allocative Efficiency vs. 'Efficiency'" American Economic Review 6/66, pp. 392-415.

Merger may represent a threat to the position of some national leaders, especially when the merger is more of an acquisition by a large union of a smaller one. The leaders of the smaller union may lose some power and prestige by losing their important positions in the union and gaining a new position in a large bureaucracy. If a merged union is to reap the benefits of administrative economies of scale, it will be unable to maintain the full complement of officers and staff. Thus many of the union leaders and staff may be opposed to a merger even though it has significant benefits to the rank and file.

Merger usually means either displacement or demotion for some officials and this has historically been a significant obstacle to merger. Ouster resulting from merger may mean having to return to the lower-paying, lower status of rank and file for some of the union staff.

On the other hand, merger may serve the personal interests of either young or older union officials of smaller unions. A top union leader of a small union may be served in retirement much better under the programs of a larger more powerful union than his own. He may thus seek a merger in order to increase his own retirement benefits. A young aggressive union leader may seek merger with a larger union in order to increase his long-term position. He may feel he has a better future in a more powerful union, even if he must start at a lower level than his present position in the smaller union. There is no market for union executives, like the market for corporate managers. The only way for a union leader to affiliate himself with a stronger more prestigious organization may be through merger.

For local union officials however, merger usually means centralization of decision-making power within specialized branches of a bureaucracy. Local leaders will lose some decision-making authority and thus if not loss of position, at least loss of some prestige and power.

Mergers Between Large and Small Unions

The Larger Union

A review of the Steelworkers' mergers demonstrates that the factors and motives of large unions to merge differ from those of smaller unions. The Steelworkers (USWA) merged with the Aluminum Workers of America (AWA) in 1944, with the Mine, Mill and Smelter Workers (MMS) in 1967, the Stone Workers (SW) in 1971, and District 50 in 1972.

Chitayat lists the motivations for the Steelworkers to merge as: (1) desire to grow as a labor organization; (2) desire to achieve economies of large-scale and multi-unit operations in organizing activities; (3) financial advantage of large size; (4) possibility of achieving better services for bargaining negotiations; (5) structural adjustments to changes in organizational structure of industry; (6) desire to limit competition within the labor movement; (7) personal motives of the leaders to build an empire.[14]

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[14]Gideon Chitayat, Mergers of Trade Unions, 1975 dissertation, University of Pennsylvania, p. 20.

A decline in employment in the Steelworkers' jurisdictions reduced its potential growth in organizing new members, and in 1966, the top executive officers of the union recognized that this could significantly weaken the union. In order to achieve their growth goals they developed a strategy for growth in related industries to broaden their membership base and reduce risks associated with declining membership.[15]

Unions receive most of their income from dues and initiation fees. The financial resources of a union are essential in providing preparation, negotiation and administration of contracts, strike benefits, organizing campaigns and political activities. This income is derived from the dues and fees charged its members, and most labor leaders realize that union growth both through organizing new members and the combining of independent unions is necessary to increase the income of a labor organization.

The Steelworkers' staff analyzed the expected costs and income as a result of a proposed merger with District 50, UMW. The 1972 analysis showed that the net worth of the union would increase if the merger went through.[16] Additionally, the income and cost records of the former District 50 union for the years 1973-1974 were evaluated by the USWA Secretary-Treasurer and it was shown that the merger brought a substantial increase in the union's net worth.[17]

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[15]Interview of USWA Secretary-Treasurer, Walter Burke, and Lawrence Spitz on May 14-15, 1975 by Chitayat, p. 22.

[16]District 50 Financial Analysis, USWA 4/20/71.

[17]Burke Interview, 5/14/75.

The USWA leaders recognized the rapid growth of employment in the chemical industry as a potential means of both increasing and broadening its membership base. Indeed, the merger with District 50 made the Steelworkers the dominant union in the chemical industry. The 44,118 members of the former District 50 union in 1975 are covered by 378 contracts. The USWA's announced goals were to achieve industry-wide bargaining as they had done in the basic steel industry and to organize the many non-union chemical workers.

The leadership was concerned about the corporate diversification taking place within their bargaining environment, and at their 1968 convention the president, I. W. Abel, pointed out that:

> Last year, the sharpest increase in corporate merger activity in modern industrial history took place. . . . Thus, corporate power is crossing industrial lines and establishing itself in totally unrelated production fields through new giant corporations. . . . We will, at this convention, attempt to cope with this problem.[18]

He suggested several ways to increase the relative bargaining power of the union saying:

> One other measure in the fight against conglomeration is the merging of unions into more effective combinations of economic and human power. We must continue to study possible mergers with other unions and enter into such arrangements where appropriate.[19]

USWA Vice-President Molony believed that conglomerate unions would be the future structure of labor organizations, saying:

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[18] Proceedings of the 14th Constitutional Convention, 1968, USWA, p. 24.

[19] Ibid, pp. 102-103.

"I happen to believe that diversification in labor unions is the answer to conglomeration in industry, and we will be diversified. . . . "[20] The 1974 USWA convention resolved that "because of the continued concentration of capital and corporate power, it is clear that we must continue to maintain this course if we are to maintain and enhance our economic strength for collective bargaining purposes."[21]

Unlike corporate executives who obtain personal monetary gains by successful mergers (salaries, bonuses, dividends, stock options, etc.), union leaders' salaries are usually determined by delegates at national union conventions. These conventions attempt to measure the leaders' performance through collective bargaining achievements, and reward the managers correspondingly. Chitayat states that in the case of the USWA leaders' (implying for large union leaders in general) salary increases are not a significant factor in motivating the executive officers to merge. He cites the fact that the delegates of the 1970 and 1974 conventions did not raise the merger activities as arguments for supporting or rejecting salary increases.

However, these leaders cite increases in bargaining power as the incentive to merge and the delegates judge officers' performance on the basis of their collective bargaining achievements. Thus to the extent that mergers contribute to success in negotiations, the leaders realize that mergers can be a contributing factor in their salary increases. Statistics also show a positive correlation between salaries

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[20] Executive Board Meeting, District 50 4/24/71, p. 112.

[21] Proceedings of the 17th Constitutional Convention, 1974 USWA, p. 414.

and union size and/or net worth. Sandver and Heneman have shown that the total compensation of the top three union officers in the 100 largest unions is positively related with the level of national dues, total assets, total dollar expenditures and the number of local unions.[22] Mergers that increase size or net worth are significant in increasing the compensation of top union management.

The USWA leaders also gained political power within the labor movement, and increased influence with political leaders as a result of its growing into the largest industrial union in the United States and second only to the International Brotherhood of Teamsters in total membership. Non-pecuniary benefits to union leadership are provided from the size and diversification of influence resulting from merger.

Chitayat, in his chapter on the USWA, concluded that the mergers substantially increased the union's net worth, particularly the strike fund. The increased financial resources added to the union's relative bargaining power and to its ability to achieve further growth through merger.[23]

The Smaller Union

When two unions merge, only one of the presidents can head the new union, and only one person can be elected to hold each of the other national executive offices. Presidents of small unions who are considering merger with a larger union are very conscious that they are

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[22]Marcus Sandver and Herbert Heneman, "Analysis and Prediction of Top National Union Officers' Total Compensation," Academy of Management Journal 28 (1980):534-543.

[23]Chitayat, p. 63.

relinquishing control. They may agree to merge when they realize that they will not achieve their goals by running their unions independently. There are several reasons why a union president may wish to "sell out" and join forces with a larger union. These include:

1. The inability of the union to provide service to its membership. Presidents may find their ships sinking from under them and thus seek rescue from a larger union with better resources. The behavior and motivation for a union leader under these conditions may be similar to the management of a corporation facing financial difficulties.

2. There is a significant probability that the president will not win reelection at the next convention. Merger may provide the assurance of a permanent position within the bureaucracy of the larger union.

3. The president has a promise of a job or retirement for himself and possibly for the more important members of his staff at an equal or higher level of compensation.

4. Aging leaders of small unions who do not have a capable successor may turn to merger as the only way to assure the continuation of what they have started.

Northrup has pointed out that "Scores of union chiefs are in their late 60's and 70's and a lot of these guys are willing to get out. Some unions buy them out. They give the president a good deal and the merger goes through."[24]

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[24]An interview with Herbert Northrup in "Bigger Unions Will Pack A Bigger Wallop," Nations Business 5/73, p. 51.

One of the determinants of the bargaining power of a union is its ability to survive a lengthy strike. The union seeks to maximize management's cost and to minimize its own strike costs. A major economic constraint in utilizing the strike weapon is the limited resources available to provide financial assistance to its members.

Merger with a large union can provide a small, financially troubled union with resources to conduct a long strike. Shortly after the merger of the Mine, Mill and Smelter Workers and the Steelworkers in 1967, negotiations began in the nonferrous mining industry. The result was a 8½ month strike of more than 50,000 workers, mainly members of the former Mine, Mill and Smelters union. The Steelworkers paid out more than 15 million dollars in strike benefits during this period.[25]

The use of advanced information technology in large-scale unions can be utilized more effectively than in smaller unions. In small unions, payroll, financial accounting and information about its contracts are the major types of information needed. In large unions, not only is this information needed in larger quantities, but there are other informational needs such as comprehensive analysis of a given industry which require a greater investment in information technology and manpower. Thus the need for information supports the hypothesis that large unions are more efficient than smaller unions and provide smaller unions with an additional incentive to merge.

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[25]Spitz interview 5/15/75, by Chitayat.

One of the major fears of small union officials is the possibility of having their membership raided by other unions. District 50 attained one of its major goals by the merger with the Steelworkers in protecting its membership from raids. District 50 president Moffatt stated that:

> . . . what is just as important is the fact that District 50, through a merger with the USWA, is taking a giant step forward toward the eventual elimination of any raid by any other labor organization in the country.[26]

The leaders of the Mine, Mill and Smelter workers and the USWA declared that the fundamental purposes for their merger were, "to eliminate the rivalry between the two organizations in the nonferrous industry and to unite and strengthen the employees for more effective bargaining with the employers."[27] The members of the small union achieved, in the long run, a considerable increase in bargaining power due to backing of the larger union and, in the short run, a substantial benefit payment during their strike period. They also obtained a stronger voice in the field of labor legislation.

Chitayat summarizes the motivations for the Mine, Mill and Smelter Workers to merge with the Steelworkers as: (1) A desire to end the isolation from the labor movement and to become connected with a large union, (2) Ending rivalry which caused a loss of more than two-thirds of its membership during the preceeding two decades in spite of

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[26] Executive Board Meeting, District 50, 4/24/71, p. 72.

[27] Agreement of Merger, between the USWA and the International Union of the Mine, Mill and Smelter Workers, 7/1/67, Article II.

employment growth, (3) Financial problems which weakened the union in its bargaining negotiations and problems with providing services, (4) Increasing political power.[28]

The merger on January 1, 1971 of the United Stone and Allied Products Workers of North America and the Steelworkers illustrates the major factors which motivate a very small national union (11,900 members) to merge with a larger union. Both unions declared the purpose of the merger was "to strengthen the members of the two organizations for more effective bargaining with employers who are merging and forming conglomerates."[29]

One problem of a small union is lack of financial resources, and this affects the union's activities and services, particularly organizing campaigns. The executive officers of the Stone Workers informed their staff that:

> . . . you only organize if the plant does not require your staying away from home overnight, so there will be no per diem involved. That is the only organizing you are permitted to do because we cannot, under our financial situation, do anything else.[30]

The local unions faced similar constraints, and in many cases, the executive refused to approve a request for a strike by the locals because of the union's inability to provide strike benefits. The

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[28]Chitayat, p. 86.

[29]Merger Agreement, between USWA and the Union of Stone and Allied Products Workers of America, October 20, 1970, Article II.

[30]Proceedings of the 13th Constitutional Convention of the Union of Stone and Allied Products Workers of America, October 19-21, 1970, p. 62.

Secretary-Treasurer stated that, " . . . It would be absolutely unfair to approve a strike to have the members on a picket line and within a very short period of time have to inform them that the union can no longer supply benefits."[31]

Unions of Near Equal Size

The merger on December 4, 1969 between the American Bakery and Confectionery Workers and the Bakery and Confectionery Workers International Union of America provides an illustration of a merger between two unions having about the same size and competing in the same markets. The existence of these two unions created a situation in which two unrelated labor organizations were actively competing for control of workers in the bakery and confectionery industries. Rivalry between these two unions became the major issue of their respective survival.

The major goal of these unions was to put forth every effort to bring about the " . . . complete organization of all workers within the jurisdiction of the International Union."[32] The key problem in the negotiation of this merger was determining the size and makeup of the Executive Board of the new organization. This issue was especially sensitive because the two unions were about the same size. After years of negotiation, the leaders of the two unions agreed that:

> There shall be four Executive Vice Presidents . . . Two shall be present members of the American Bakery and Confectionery

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[31] Ibid, p. 63.

[32] ABC Constitution, Article II, Section A.

> Workers and two shall be present members of the Bakery and Confectionery Workers of America . . . There shall be 14 Regional Vice Presidents and 14 Regional Executive Board members . . . Seven of the Regional Vice Presidents shall be present members of the American Bakery and Confectionery Workers and seven of the Bakery and Confectionery Workers of America. Initially seven of the Regional General Executive Board members shall be present members of the American Bakery and Confectionery Workers and seven of the Bakery and Confectionery Workers of America.[33]

Thirty-four members were on the board of the new organization, a very large board for a union of that size. This was done in order to avoid personal conflicts, except for the Secretary-Treasurer of the American Bakery and Confectionery Workers and the President of the Bakery and Confectionery Workers of America, no one lost his job as a result of the merger. Thus any economies of scale had to come from the combining of locals, and savings related to support staffs.

Many presidents of small unions reject the idea of merger because they feel they may be losing some of their responsibility, some personal opportunities to achieve a respectable position, and some of the prestige they may have enjoyed as top leaders, regardless of how small the union may be.

The stated objective of the merger between the two unions in the bakery and confectionery industries was:

> Being convinced that the welfare of workers engaged in the bakery, confection and allied products can be better served by a cessation of the division that now separates the two major labor organizations functioning in that area of worker representation and by combining and pooling of organizations. . . . They agreed to create a single labor organization to

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[33] Merger Agreement between ABC and B and C, 9/12/69, Articles 5-6.

extend the benefits of union organization and collective bargaining to the workers in these industries.[34]

According to the Executive Officers of the merged union, the major achievement was the improvement in services. The research department became an effective unit for providing essential information for negotiations. A new automated bookkeeping system was established by utilizing a computer. The union is publishing a monthly journal, "B&C News," instead of two journals before the merger.[35]

During the negotiation of the merger agreement between the two unions, the major issue was not the welfare of the workers or the ideological desire of the organization, but the distribution of the jobs of top executive posts and the part of each union in the Executive Board. It was realized long before the merger that the workers would be better served by a combining of the two organizations. It was not concern for the welfare of the membership which caused problems in the negotiations. From 1964 to 1969, the conflict between the two unions was the number of Vice Presidents and Board members to have in the new organization. Once this was resolved, the merger agreement was reached.

A brief look at the 1972 merger between the United Papermakers and Paperworkers, and the International Brotherhood of Pulp, Sulphite and Paper Mill Workers, two unions of equal size and power, shows that the goals and motivation factors were basically the same as those with the bakery and confectionery unions. Again, as noted with these unions, the committee met several times in 1965 but could not reach an agreement

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[34]Ibid., Article I.

[35]Chitayat, p. 183.

on one issue, namely the number of the Executive Officers and Executive Board members of each union in the new organization. A joint committee discussed a proposed agreement without reaching its approval because:

> . . . All that separated us was as to who would head the region in the Midwest, you won't believe this, as to whether our Vice President would head it, or whether the United Papermakers and Paperworkers' Vice President would head it.[36]

In January 1972, the two unions resumed their discussion for a merger. At that time, both sides agreed on two principles that paved the way to the merger agreement: job security for all Executive Board members in the new organization, and the highest and best compensation and fringe benefits of the two unions' employees be adopted for the employees of the new merged union.

Major Difficulties in the Road to Merger

Edwin L. Miller has studied the personality traits that national union officials consider important to their job success.[37] Miller grouped ten personality traits into two clusters of five traits each. The first group he labeled the inner-directed group and it included the following traits: forceful, imaginative, independent, self-confident and decisive. The other group, the other-directed cluster

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[36] Proceedings of the 29th Convention, International Brotherhood of Pulp, Sulphite and Papermill Workers, August 30 to September 3, 1971, p. 25.

[37] Edwin L. Miller, "Job Articles of National Union Officials--Perceptions of the Importance of Certain Personality Traits as a Function of Job Level and Union Organizational Structure," Personnel Psychology 19:395-410.

included the traits of cooperative, adaptable, cautious, agreeable and tactful. Basically, Miller found that the highest level of national union leadership considered the inner-directed cluster of personality traits as more important to their success. This study supports the hypothesis that the union leader's personal objectives can be a major difficulty in union merger negotiations.

When two or more unions merge and create a new organization, only one of the presidents can maintain control of the new organization. The President of a smaller union must be willing to relinquish leadership control as well as economic resources if a merger is to be successful.

There are several examples where the leadership considerations caused failure or significant delay in reaching merger agreements:

1. In 1975 negotiations were broken off between the Paperworkers and the Pressmen's Union when the President of the Pressmen suggested that he would serve as the President of the merged union and the President of the Paperworkers would serve as "General President."

2. Leaders of several unions in the stone, glass and clay industry have met since early 1970 to discuss merger, but have been unsuccessful due to conflicts over union leadership.

3. In late 1974, despite being in near agreement, negotiations between the Paperworkers' Union and the Chemical Workers broke off because the Chemical Workers thought that their Board members should be on the Executive Board. The Paperworkers rejected the proposal because any change in the membership of its Executive Board requires the approval of the union convention.

As a result of the political structure of labor unions, most executive officers have reached their positions through promotion from the rank and file. Unlike the managers of companies, union leaders have very limited opportunities for executive posts in other unions. This may partly explain the deep concern of these leaders in negotiating possible mergers.

In addition to the personal objectives of union leaders, there are several other major blocks to union mergers. Differences in union structure between the merging unions can be a problem, primarily in the degree of local or district autonomy. A union's membership that has enjoyed a large amount of local autonomy may strongly resist giving it up in order to join a new centralized union. The level of monthly dues and per diem taxes may cause merger problems. The membership that is faced with an increase in payments may resist the proposed merger, as could pride and loyalty to a particular union. This is especially true if the proposed merger follows a long period of bitter rivalry. A union composed of one or more specialized crafts may fear inadequate representation if swallowed up by a large industrial union. Differences in governing procedures such as methods of electing officials and contract ratification procedures can pose roadblocks to merger. Finally, union leaders may fear that merger negotiations will provide ammunition to internal opponents.

CHAPTER II

INTERNALIZATION OF INFORMATIONAL AND BARGAINING EXTERNALITIES

This chapter attempts to show how a single union can derive greater benefits from having the collective bargaining rights to two firms operating in either vertically or horizontally related markets, than could separate unions. As in the case of firms, if there were perfectly operating markets, there would be no need for integration. Since such markets don't exist, and bargaining between unions is of questionable legality, integration may provide the only means of internalizing external informational and bargaining costs.

The bargaining decisions made by employees of one firm can have direct consequences on the welfare of workers of other firms. When one union negotiates a specific contract, its provisions affect the price and quantity combination for the output of its firm. If these firms operate in the same markets, or are on different levels of a production process (ore mining and steel, for example) the union's contract will have a direct impact on the demand for labor in the related firm. If the union with collective bargaining rights for one firm sets wages high, wanting to increase rents for its employed members, and implying less importance on employment for its junior members, the firm will react according to its self-interest. It may increase the price of its product, and/or decrease the quantity of labor demanded

through a substitution process. Both of these actions will result in reduced production.

If the two firms have a vertical relationship, and the price of the upstream output (input for the downstream firm) has risen and/or its output has fallen, the downstream firm will ultimately respond by reducing its own level of production. This lower level of production in the downstream firm reduces the level of its relative wage and/or employment. This is an external diseconomy to the members of the union operating in the downstream firm.

If the firms are operating in the same market, and the price of one firm's product rises and/or its output falls, consumers will react by increasing demand for the output of substitute firms and decreasing demand for complementary products. However, if a new contract for the workers of the first firm calls for lower relative wages, the price of their product will fall and/or its output will increase relative to the related firm. Consumers will react by demanding less of substitute firms' output and more from complementary firms.

Again, the actions of one union are an externality to the other. It is clear that contract provisions of the workers of one firm can have a significant impact on the economic welfare of workers in other firms.

These externalities provide the two unions with an incentive to negotiate contracts which are optimal with respect to their combined utility. There are two ways this can be done. The first is an external bargaining process between two separate parties, which may be of questionable legality. The second is to internalize the bargaining

process by integration of the two unions. There will be cases when the second approach is the least expensive method of reaching labor service contracts which are optimal for all workers combined.

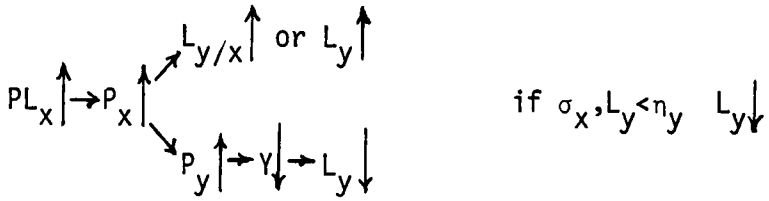
Vertical Relationships

Complement Factors

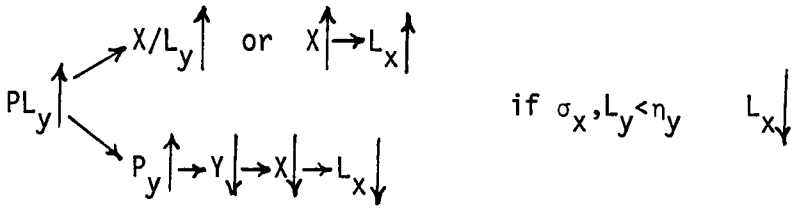
Incentives. In this section the case of vertically related firms with gross complementarity between the workers is investigated. Good X is produced with labor (L_x) and capital (K_x), and Y is produced with X and labor (L_y). The elasticity of substitution between the output of the upstream firm X, and the workers in the downstream firm Y, is σ_{X,L_y}. The elasticity of substitution between employees of X and employees of Y is σ_{L_x,L_y}.

Assuming constant returns to scale, then factors are gross complements when η_y, the output elasticity of Y, is greater than σ_{X,L_y}, the elasticity of substitution for the factors of production. Using these assumptions it is possible to trace the effects of an increase in wages for L_x,(PL_x) through the production process. As PL_x increases, ceteris paribus, the price of X, P_x also tends to increase. As P_x increases, the firms producing Y find it profitable to substitute labor, L_y for X until the marginal benefits are again equal to marginal expenditures. The price increase of X also causes the price of Y to increase, as the new combination of L_y and X must be more expensive than the old combination. The price increase of Y reduces quantity demanded and hence the derived demand for labor to decrease. Given

the assumptions above, $\sigma_x, L_y < \eta_y$ the increase in the quantity demanded of L_y due to the firm's substitution of labor for X is less than the decrease due to the decreased production of Y. These reactions are summarized below. The result of the increase in wages for L_x is an external diseconomy to the workers in industry Y, causing their employment opportunities to decrease.



The same method can be used to follow the effects of an increase in PL_y through the production process. The wage increase causes the ratio of X to L_y used in the production of Y to increase. The wage increase also causes P_y to increase. This rise in P_y causes production to fall and hence the Y industries' demand for X to fall. Given the assumptions above, $\sigma_x, L_y < \eta_y$ the decrease in the demand for X due to the price increase of Y is greater than the increase in the demand for X due to the substitution of X for L_y in the production of Y, and hence a decrease in L_x. These reactions are summarized below. The increase in wages for L_y is an external diseconomy to workers in X, causing their employment opportunities to decrease.



These external diseconomies, the decrease in employment at one level of production, can be internalized through vertical integration. If the unions representing the workers of firms X and Y integrate, there will be an internal bargaining mechanism to set the desired wage rate at both levels to that which is desired for the membership of the combined union.

Implications. In this subsection the implications of vertical integration by labor unions at successive production levels are discussed. Under the assumptions of this section, each union acting separately in the interests of its own membership has an incentive to bargain for a desired wage rate which is higher than the desired wage rate for the integrated union, because it does not bear the cost of the decreased employment at the other level. This external diseconomy provides an incentive for integration which results in a decrease in desired relative wage rates. No conclusion about actual wage rates can be reached without knowledge of the union's bargaining power before and after the integration.

The conclusion reached is that where the incentives of the previous section are in force and integration of the unions takes place, desired relative wages will have a tendency to fall as a result of the merger.

Employment for production workers is highly correlated with wage rates. To the extent that vertical integration by labor unions results in decreased relative wage rates for the union membership, there will be a tendency for relative employment to rise. The

external diseconomy of a wage increase at one level on employment at the other level is internalized through integration. Once the merger has taken place, the union will bargain for a wage increase at one level only if the officers determine that the benefits to the union are larger than the costs of the resulting decreased employment at both levels. Hence the integration of the unions provides for wage demands that result in wage-employment combinations that are optimal for the two levels of production. The benefits to the members of the merging unions will mostly take the form of increased relative employment opportunities.

Strike actions have an impact on union members working on downstream and upstream levels of a production process. A striking union, by shutting down production, has direct effects on the employment situation at the upstream level by reducing demand for the product of the upstream firms. There is also an employment effect on the workers at the downstream level by reducing the supply of inputs used by these workers.

Accordingly, the cost of a strike by L_y is not borne entirely by L_y, but also by the workers in upstream and downstream firms. Vertical integration by the unions representing the workers on the three levels can internalize these costs. After integration has taken place, the decision to strike at firm Y is no longer an exogenous event to the other workers. There can then be maximization of the group's welfare through the national union government. The total costs to the integrated union of a strike at any level must be less than or equal to the costs to the three unions acting independently.

However, since the costs at the other two levels have been internalized, the private costs of the strike increase, which reduces the propensity to strike in two ways. The first is that it reduces the ability of union members to survive long strikes. If the cost of striking goes up, the union members will be unable to withhold their services as long. The second way is that it reduces the benefits of a strike of any given length since workers at the other level are gross complements.

Hence integration results in increased private costs to the union of a strike with a corresponding reduction in strike incidence and strike length.

Merger has other implications when firms operating on successive levels of a production process are only partially unionized at one level. A union always has the incentive to obtain control over the work force in any industry by organizing the workers of every firm in the industry. It is assumed in this section that there exist firms on at least one of the levels which have successfully resisted unionization. It is a reasonable assumption that a firm that has been successful at repelling unionization has some type of advantage, through market power, or a cost advantage obtained through lower employment costs. In periods of excess supply or demand, these non-unionized firms will have an advantage in procuring scarce inputs or surviving price cuts. For example, consider the case where there is partial unionization at the downstream level, Y. If output at the upstream level, X declines in response to some exogenous shock, and there are fixed proportions in Y, output of Y will necessarily decline. This

decline in output at Y will have an adverse effect on L_y. Since the industry is only partially unionized, it is in the union's interest to see that the layoffs occur at the non-unionized firms.

There are at least two ways in which unions can attempt to achieve this. The union could work with the unionized workers upstream to try to get them to induce their employers to commit their output to the unionized downstream firms. The alternative would be to vertically integrate the unions. Then the combined union could bargain to obtain reciprocal dealing agreements between the unionized firms. Although technically illegal under hot cargo rules, implicit agreements of this type can provide increased employment stability for union members. Such agreements may be a relatively inexpensive way to improve labor-management relations for unionized firms.

Substitute Factors

Incentives. In this section the case of gross substitutability between the workers of the firms is investigated. The elasticity of substitution between X and L_y is $\sigma x,L_y$ and the output elasticity for the downstream product is η_y. The elasticity of substitution between the workers in the two industries is $\sigma L_x,L_y$.

Assuming constant returns to scale, the factors are gross substitutes when η_y is less than $\sigma X,L_y$. Using these assumptions, it is possible to trace the effects of an increase in wages for one set of workers, say PL_x.

As PL_x increases, the price of X, P_x has a tendency to increase as well. An increase in P_x causes the downstream firms to

increase their usage of L_y and decrease their usage of X until the marginal benefits from the last dollar spent on X and L_y are once again equal. In addition, the price of the finished product, P_y, will rise. This rise in P_y causes relative production to fall and hence the derived demand for X and L_y to fall. This decreases employment opportunities for both L_x and L_y. Under the assumptions of this section, $\eta_y<\sigma X,L_y$ the decrease in employment in Y due to the increased P_y is less than the increase in employment due to the increased price of X.

The result of the increased relative wage for L_x is increased relative employment for L_y.

A parallel argument can be made for an increase in PL_y. The increase in relative wage for L_y is an external economy to the production workers of the other factor, X. These external economies can be internalized by integration. If the unions representing the workers at X and Y integrate, the national union government will have the incentive to set the desired wage rate for all workers to that which is desired for the membership of the combined union.

Implications. The effects of integration by unions representing workers in vertically related firms whose workers are gross substitutes is analyzed in this subsection. Under the assumptions of this section, $\eta_y<\sigma X,L_y$ the external economies in existence provide each union with an incentive to bargin for a desired wage rate lower than the wage which would be desired by the integrated union. The external economy

provided by one union on the other provides an incentive for integration which results in an increase in desired wage rates.

Prior to integration, when L_x bargained for a wage increase, they bore all of the costs of lowered employment opportunities, but none of the gains to L_y of higher employment opportunities. Integration of the two unions internalize the gain to L_y, and therefore the gains to the integrated union are greater for any wage increase.

The combination of the unions provides the workers with a single bargaining unit. This unit has control over all of the labor supply and can attempt to increase relative wage rates.

Integration of substitute factors will reduce total employment by increasing relative wages for both L_x and L_y. The higher wages will cause the price of both X and Y to rise. The net employment effect comes from the decreased demand for the finished products which causes production in X and Y to fall, which reduces the employment opportunities for union members.

A strike by L_x prior to integration would be costly to both the workers and to the firms. The producers of Y would substitute L_y for X to the extent possible. If Y comes to expect that X is a poor supplier, it may attempt to permanently reduce its reliance on X, which could permanently cost jobs in X. Thus a strike by L_x produces benefits to L_y.

Integration of the two unions would internalize the benefits the strike has on L_y, the private costs of the strike decrease, which ceteris paribus should increase strike activity. Merger increases the

ability of union members to survive longer strikes, because a greater portion of L_y (part of the new combined union) is still working. Some of the work L_x is not doing during the strike is being done by L_y, as X is substituted for L_y, and is merely a transfer of work within the union.

Horizontal Relationships

This section analyzes the case of firms operating in horizontally related markets. The products of the firms may be either complements or substitutes depending on the cross-substitution term of the Slutsky equation for the two goods. It appears reasonable to assume that factors of production, such as labor, in such horizontally related markets would be substitutes or complements depending on whether the goods they produce are substitutes or complements.

Given this assumption, it is possible to trace the effects of an increase in relative wages for one of the sets of workers on the other. If the goods are net substitutes, an increase in PL_x will cause output price, P_x to increase. This increase in P_x increases the demand for Y, which will cause L_y and/or PL_y to increase. The increase in L_y and/or PL_y is an external economy which could be internalized through a horizontal merger of the unions representing the workers at X and Y.

If the goods are net complements, an increase in PL_x will cause output price, P_x to increase and hence the quantity demanded of X to decrease. This causes a decrease in L_y and/or PL_y. This is an external diseconomy which could be internalized through a horizontal merger by these unions.

Implications. Given that X and Y are net substitutes, each union acting separately in the interests of its own members has the incentive to bargain for a desired wage rate that is lower than the desired wage rate for the integrated union. The external economy of one union on the other provides an incentive to merge which results in an increase in the desired relative wage rate. Given that X and Y are net complements, the unions acting separately will bargain for a desired relative wage which is higher than the desired wage for a combined union. The external diseconomy provides an incentive to merge which results in a decrease in desired relative wage rates.

Since employment is highly correlated with relative wage rates, merger which results in increased relative wages should cause a decrease in relative employment, and integration which results in decreased relatives wages will cause an increase in relative employment.

Unions that engage in strike activity have effects on union members in horizontally related industries. Work stoppages which have a significant effect on production, will cause an increase in demand for substitute products, and a decrease in demand for complement products.

Therefore, strike costs are not borne entirely by the striking union, but also by workers in complementary unions. A merger would cause these costs to be internalized, and result in decreased strike activity. A significant work stoppage by one side of a substitute relationship will cause external benefits on the other side. Merger will

decrease internal strike costs, and hence increase relative strike activity.

CHAPTER III

A MODEL OF LABOR UNION MERGER

A large literature exists on the objectives of labor unions. The extremes of the literature are that unions are essentially political organizations on one side, and that they are purely economic organizations on the other. Many models have been introduced which assume that unions have a single maximand similar to the profit maximand of corporations. Some of these include maximization of the union's net revenue, or the wage bill of the union's membership. Others attempt to maximize wage rates with a certain employment constraint, and to incorporate both political and economic objectives.

Although both political and economic objectives are included in the body of this paper, it will be assumed for the purpose of building the model, that the only components of the union's objective function are earnings per worker and employment of union members. The union government will, through the process of collective bargaining, choose a wage that results in a wage-employment combination where the derived demand schedule for the union's labor is tangent to the union's indifference curve. As Cartter points out, this general form of union preference permits analysis of several models of union behavior including maximization of economic rent by the union or its officers, maximizing wage rates, the wage bill or union membership.[1]

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[1]Allan M. Cartter, Theory of Wages and Employment (Homewood, IL: Richard D. Irwin, 1959), pp. 80-90. For a good discussion of the use

Four regressions were run on this data set, which includes one observation per year for each industry, one for total earnings in the industries, one for earnings per production worker, one on production workers in the industries, and one for production workers relative to production workers in all manufacturing industries. A list of the industries used is given in Figure 3.

Crushed, broken, and dimension stone; sand and gravel
Meat products
Grain mill products
Bakery products
Confectionery products
Textile mill products
Apparel
Paper and allied products
Printing and publishing
  Books and miscellaneous publishing
  Commercial printing
Railroad transportation
Personal services (laundry and dry cleaning)

Figure 3. Minor Industry Groups.

The results of these regressions are shown in Table 2. The model presented earlier suggests that desired earnings will increase after merger for complements. However, arguments were presented that merger increases bargaining power of all unions, which modifies the expectations of the model. Thus it is expected that the regression coefficient on TR for individual earnings will be positive, and the coefficient on T will be determined by whether the increased bargaining power due to the merger more than offsets the internalized cost

two unions with monopoly power in the supply of their specific type of labor service can be thought of as an application of the simple joint monopoly problem. After this simple general problem is shown, I develop a model assuming Cobb-Douglas production functions with constant returns to scale for the firms who employ the members of the merging unions. These two models allow a comparison of the wages resulting from separate unions and a combined union bargaining for wages that maximize net rent.

Simple Joint Monopoly

Assume that a monopolistic union (having organized all relevant workers) represents two types of labor services, L_1 and L_2. L_1 is the labor input which contributes to the production of Q_1 and L_2 produces Q_2. Assume a fixed relationship between the labor inputs and outputs, and that prices are a function of wages.

$$Q_1 = f_1(L_1) \quad \text{and} \quad Q_2 = f_2(L_2)$$
$$P_1 = g_1(W_1) \quad \text{and} \quad P_2 = g_2(W_2)$$

Assume further that the two goods are related in consumption and the demands of the market for the goods are:

$$Q_1 = h_1(P_1,P_2) \quad \text{and} \quad Q_2 = h_2(P_1,P_2)$$

or

$$Q_1 = h_1(g_1(W_1),g_2(W_2)) \qquad Q_2 = h_2(g_1(W_1),g_2(W_2))$$

Net rent for the union is assumed to be the difference between union negotiated wages and competitive wages in the absence of the union, multiplied by the number of union members employed.

$$R = W_1*L_1 + W_2*L_2 - W_c*L_1 - W_c*L_2$$

where W_c is the competitive wage rate. Using the demand relations, rent is a function of the two prices, P_1 and P_2 (or the wages W_1 and W_2). It is asserted that the union attempts to set wages to maximize net rent subject to the demand relations. The necessary condition for this is:

$$\partial R/\partial W_1 = \partial R/\partial W_2 = 0, \quad \text{i.e.,}$$
$$L_1 + (W_1 - \partial C/\partial L_1)\partial L_1/\partial W_1 + (W_2 - \partial C/\partial L_2)\partial L_2/\partial W_1 = 0 \quad \text{and}$$
$$L_2 + (W_2 - \partial C/\partial L_2)\partial L_2/\partial W_2 + (W_1 - \partial C/\partial L_1)\partial L_1/\partial W_2 = 0$$

where $C = W_c*L_1 + W_c*L_2$. To illustrate, a simple case can be considered in which the cost and demand functions are linear. Using Allen's notation, the demand for labor is:

$$L_1 = a_1 - a_{11}*W_1 - a_{12}*W_2 \quad \text{and} \quad L_2 = a_2 - a_{12}*W_1 - a_{22}*W_2$$

The demand for labor when wage rates are competitive is thus:

$$L_{10} = a_1 - a_{11}*W_c - a_{12}*W_c \quad \text{and} \quad L_{20} = a_2 - a_{12}*W_c - a_{22}*W_c$$

Then, the demand for labor when the union gains a non-competitive wage in terms of the labor demanded when wages are competitive is:

$$L_1 = L_{10} - a_{11}(W_1 - W_c) - a_{12}(W_2 - W_c)$$

$$L_2 = L_{20} - a_{12}(W_1 - W_c) - a_{22}(W_1 - W_c)$$

The unions' net rent is:

$$R = W_1 * L_1 + W_2 * L_2 - C$$
$$R = L_1(W_1 - W_c) + L_2(W_2 - W_c)$$

To find the rent maximizing wages for the union, differentiate with respect to the wage rates and set equal to zero.

$$\partial R/\partial W_1 = L_1 + (W_1 - W_2)\partial L_1/\partial W_1 + (W_2 - W_c)\partial L_2/\partial W_2$$
$$= L_{10} - 2*a_{11}(W_1 - W_c) - 2*a_{12}(W_2 - W_c)$$

$$\partial R/\partial W_2 = L_{20} - 2*a_{12}(W_1 - W_c) - 2*a_{22}(W_2 - W_c)$$

Setting these expressions equal to zero for maximum net rent and solving, we find that for a single union desired wages are:

$$W_1 = W_c + \frac{a_{22}*L_{10} - a_{12}*L_{20}}{2(a_{11}*a_{22} - a_{12}^2)} \qquad W_2 = W_c + \frac{a_{11}*L_{20} - a_{12}*L_{10}}{2(a_{11}*a_{22} - a_{12}^2)}$$

If a_{11} and a_{22} are >0 and such that $a_{12}^2 < a_{11}*a_{22}$ then the prices give a maximum value of rent. These limitations on the values are assumed below.

Suppose now that two independent unions represent the labor services used in the production of Q_1 and Q_2. Each union acts independently, assuming that the other will not change their wage and will act to maximize rent.

The net rent of the first union is the difference between its bargained wage and the competitive wage multiplied by the number of employed union members.

$$R_1 = L_1 * W_1 - L_1 * W_c$$

With the same demand function as before, for a given value of W_2, the maximum rent is obtained when $\partial R_1/\partial W_1 = 0$ or when,

$$L_{10} - 2*a_{11}(W_1 - W_c) - a_{12}(W_2 - W_c) = 0$$

Similarly, for the second union,

$$L_{20} - a_{12}(W_1 - W_c) - 2*a_{22}(W_2 - W_c) = 0$$

Solving these two equations, the wage charged by the separate unions acting independently are found to be:

$$W_1 = W_c + \frac{a_{22}*L_{10} - a_{12}*L_{20}}{2(a_{11}*a_{22} - \frac{1}{4}a_{12}^2)} \qquad W_2 = W_c + \frac{a_{11}*L_{20} - a_{12}*L_{10}}{2(a_{11}*a_{22} - \frac{1}{4}a_{12}^2)}$$

Since $d^2R_1/dW_1^2 = -2*a_{11} < 0$ and similarly for d^2R_2/dW_2^2 the wages correspond to positions of maximum net rents.

If $a_{12} < 0$, so that the goods are in a broad sense substitutes it is seen that the joint union's wages are greater than the separate union's wages. The effect of merger is to raise the unions' optimal wage.

If $a_{12} > 0$ the goods are complementary, there are two cases:

(1) $a_{12} < a_{11}(L_{20}/L_{10})$ and $a_{12} < a_{22}(L_{10}/L_{20})$

It may or may not be that both wages are above those of separate unions. It is above the separate union wage when the relation between the goods (shown by a_{12}) is weak compared with the direct price effects on demand (shown by a_{11} and a_{22}).

(2) $a_{12} < a_{11}(L_{20}/L_{10})$ and $a_{12} > a_{22}(L_{10}/L_{20})$

Here, the joint union offers L_1 at $W_1 < W_c$ and certainly less than separate unions. It pays to promote sale of Q_1 and hence the demand for L_1 in order to promote the sale of Q_2 and hence the demand for L_2. This is a case where the goods are strongly complementary (a_{12} is large) and that the demand for Q_1 is sensitive to a change in its price, and hence W_1 (a_{11} is large). Demand for Q_1, and hence L_1 is elastic, and the demand for Q_2, and hence L_2 much less elastic. Q_1 and Q_2 are strongly complementary.

Cobb-Douglas Production Functions

This section uses Cobb-Douglas production functions and the elasticity of derived demand for labor to find the union's optimal wage given the firm's expansion path. The optimal wages for two independent unions are compared to the optimal wages for a single combined union to determine the impact of union mergers on the unionized optimal wage rate. The first part of this model is of two firms operating in horizontally related markets. Each firm is assumed to use two inputs in a Cobb-Douglas production function with constant returns to scale.

(1) $X = A\, L_x^{\alpha}\, K_x^{1-\alpha} \qquad Y = B\, L_y^{\gamma}\, K_y^{1-\gamma}$

Where X and Y are the firm's outputs, L_x and L_y are unionized workers at these firms, K is capital or other inputs, A and B are the efficiency parameters and $0 < \alpha, \gamma < 1$. The demand for the product of each firm is assumed to be a constant elasticity, differentiable function of its own price and the price of the related good.

$$(2) \qquad X = Z\, P_x^a\, P_y^b \qquad\qquad Y = V\, P_x^c\, P_y^d$$

The demand for capital is a simple function of the price of capital, which is assumed to be fixed and equal for the two firms.

$$(3) \qquad K = H \cdot \overline{PK} \qquad\qquad K = G \cdot \overline{PK}$$

The cost equations for the firms can then be defined as:

$$(4) \qquad C_x \equiv PL_x L_x + PK \cdot K_x \qquad\qquad C_y \equiv PL_y L_y - PK \cdot K_y$$

It is possible from these four sets of equations to derive the expansion path function for each firm. The expansion path function for each firm is:

$$(5) \qquad (1 - \alpha) PL_x L_x - PK \cdot K = 0 \qquad\qquad (1 - \gamma) PL_y L_y - PK \cdot K_y = 0$$

Solving equations (4) and (5) for L and K yields:

$$L_x = \alpha C_x / PL_x \qquad\qquad L_y = \gamma\, C_y / PL_y$$

$$K_x = (1 - \alpha) C_x / PK \qquad\qquad K_y = (1 - \gamma) C_y / PK$$

Substituting these expressions for L and K into the production functions, solving for C_x, C_y and then setting price equal to marginal cost yield expressions of optimal output prices:

$$(6) \qquad P_x = \frac{PL_x^{\alpha}\, PK^{1-\alpha}}{A_{\alpha}^{\alpha}\,(1-\alpha)^{1-\alpha}} \qquad P_y = \frac{PL_y^{\gamma}\, PK^{1-\gamma}}{B_{\gamma}^{\gamma}\,(1-\gamma)^{1-\gamma}}$$

These price functions can be substituted into the demand functions and set equal to the production functions to find the firms' optimal input levels. Then substituting for K from (5) and combining terms:

$$K_x = \frac{(1-\alpha)PL_xL_x}{\alpha PK}$$

$$L_x = ZP_y^b\, A^{-(1+a)} \left(\frac{\alpha}{PL}\right)^{(1-\alpha)-\alpha a} \left(\frac{PK}{1-\alpha}\right)^{(1-\alpha)(1+a)}$$

Therefore, the elasticity of derived demand for labor in firm X, E(x) is given by $E(x) = (1-\alpha)-\alpha a$. Substituting from (6) for P_y and combining terms:

$$(7) \qquad L_x = \frac{D\, PL_y^{\gamma b}\, PK^{(1-\alpha)(1+a)+(1-\gamma)b}}{PL_x^{E_x}}$$

Where

$$D = \frac{ZA^{-(1+a)}{}_{\alpha}(1-\alpha)-\alpha a}{(1-\alpha)^{(1-\alpha)(1+a)}\; B^{b}{}_{\gamma}{}^{\gamma b}\; (1-\gamma)^{(1-\gamma)b}}$$

Similarly for L_y, $E_{(y)} = (1-\gamma)-\gamma b$

$$L_y = \frac{F\, PL_x^{\alpha c}\, PK^{(1-\gamma)(1+d)+(1-\alpha)c}}{PL_y^{E_y}}$$

Where $$F = \frac{VB^{-(1+d)_\gamma(1-\gamma)-\gamma b}}{(1-\gamma)^{(1-\gamma)(1+d)}\ A^{c}\alpha^{\alpha c}\ (1-\alpha)^{(1-\alpha)c}}$$

Expressing the derived demand functions for labor by the wages gives:

$$(8) \qquad PL_x = \left[\frac{DPL_y^{\gamma b}\ PK^{(1-d)(1+a)+(1-\gamma)b}}{L_x}\right]^{1/E_x}$$

$$PL_y = \left[\frac{FPL_x^{\alpha c}\ PK^{(1-\gamma)(1+\alpha)+(1-\alpha)c}}{L_y}\right]^{1/E_y}$$

The union's problem is to "set wages" as constrained by these derived demand functions in such a way as to meet its objectives. It is assumed that each union's objective is to maximize rent, which is assumed to be the differential between the wage the union is able to secure, PL and the competitive wage, the wage without the presence of the union, W.

$$(9) \qquad \text{Maximize} \quad R_x = L_x\ (PL_x - W_x)$$
$$R_y = L_y\ (PL_y - W_y)$$

Substituting for PL from (8), rents are:

$$(10) \qquad R_x = L_x\left\{\left[\frac{DPL_y^{\gamma b}\ PK^{(1-\alpha)(1+a)+(1-\gamma)b}}{L_x}\right]^{1/E_x} - W_x\right\}$$

$$R_y = L_y \left\{ \left[\frac{FPL_x^{\alpha c}\ PK^{(1-\gamma)(1+d)+(1-\alpha)c}}{L_y} \right]^{1/E_y} - W_y \right\}$$

To find the maximum rent, differentiate with respect to labor demand:

$$\partial R_x/\partial L_x = (1-1/E_x)PL_x - W_x = 0$$

$$\partial R_y/\partial L_y = (1-1/E_y)PL_y - W_y = 0$$

Hence (1-1/E)PL is an expression for marginal revenue.

(11) $(1-1/E_x)PL_x = W_x$ $\qquad$ $(1-1/E_y)PL_y = W_y$

(12) $PL_x = W_x/(1-1/E_x)$ $\qquad$ $PL_y = W_y/(1-1/E_y)$

Equations (12) give expressions for rent maximizing wages expressed in terms of the competitive wages and the elasticity of the firms' demand for labor. If the unions were to merge, the objective of the combined union would be to maximize the total rent obtainable through representation of L_x and L_y.

(13) Maximize $R_{x+y} = (PL_x-W_x)L_x + (PL_y-W_y)L_y$

Substituting for PL_x and PL_y from (8), taking $\partial R_{x+y}/\partial L_x$ and $\partial R_{x+y}/\partial L_y$, setting to zero and solving for PL_x and PL_y gives expressions for rent maximizing wages for the merged union:

$$(14) \quad PL_x = \frac{W_x}{1-1/E_x} - \frac{\alpha_c}{E_y(1-1/E_x)} \frac{PL_yL_y}{PL_x(1-1/E_x)}$$

$$PL_y = \frac{W_y}{1-1/E_y} - \frac{\gamma_b}{E_x(1-1/E_y)} \frac{PL_xL_x}{PL_y(1-1/E_y)}$$

The purpose of this model is to compare rent maximizing wages, before and after combination of the unions. Optimal wages for the two independent unions are given by equations (12). The optimal wage rates for the workers in firms X and Y after a merger of their unions are given by equations (14). Therefore the optimal wages for L_x and L_y in the combined union will be greater than their optimal wages as independent unions if:

$$\frac{\alpha_c}{E_y} \frac{PL_y}{PL_x} L_y < 0 \quad \text{and} \quad \frac{\gamma_b}{E_x} \frac{PL_x}{PL_y} L_x < 0$$

Wages and employment must be positive, so that:

$$\frac{PL_yL_y}{PL_x} > 0 \quad \text{and} \quad \frac{PL_xL_x}{PL_y} > 0$$

Therefore optimal wages in a combined union will be higher if:

$$\frac{\alpha_c}{(1-\gamma)-\gamma d} < 0 \quad \text{and} \quad \frac{\gamma_b}{(1-\alpha)-\alpha a} < 0$$

From the production functions $0<\alpha,\gamma<1$, and the assumption that X and Y are normal goods requires a and d to be less than zero. Therefore:

$$W_x - \frac{\alpha_c}{(1-\gamma)-\gamma d} \frac{PL_y L_y}{PL_x} \begin{cases} > W_x & \text{if } c < 0 \\ < W_x & \text{if } c > 0 \end{cases}$$

$$W_y - \frac{\gamma_b}{(1-\alpha)-\alpha a} \frac{PL_x L_x}{PL_y} \begin{cases} > W_y & \text{if } b < 0 \\ < W_y & \text{if } b > 0 \end{cases}$$

Thus the rent maximizing wage levels are higher for the merged union than independently if b and c are negative. Rent maximizing wage levels are lower for the merged union than independently if b and c are positive. Variables b and c are the exponentials on the related price factor in the product demand functions. Thus b and c are negative when X and Y are net substitutes and b and c are positive when X and Y are net complements.

This model supports the conclusion reached in Chapter II that internalizing external costs and benefits through union merger will result in higher desired wages when the unions represent workers that produce products which are net substitutes. Internalization through merger provides the incentive for unions to lower relative wages when the workers are net complements.

The same model can be used to analyze the case of two firms operating in vertically related markets. Again, each firm is assumed to use two inputs in a Cobb-Douglas production function, with constant returns to scale.

(15) $X = AL_x^{\alpha} K_x^{1-\alpha}$ $\qquad Y = BL_y^{\gamma} X^{1-\alpha}$ $\qquad 0 < \alpha, \gamma < 1$

(16) $X = ZP_x^{a} P_y^{b}$ $\qquad Y = VP^{d}$

(17) $K_x = \overline{H}\, PK$

(18) $C_x \equiv PL_x L_x + PK\, K_x$ $\qquad C_y \equiv PL_y L_y + P_x X$

(19) $P_x = \dfrac{PL_x^{\alpha}\, PK^{(1-\alpha)}}{A\alpha^{\alpha}(1-\alpha)^{(1-\alpha)}}$ $\qquad P_y = \dfrac{PL_y^{\gamma}\, P_x^{(1-\gamma)}}{B\gamma^{\gamma}(1-\gamma)^{(1-\gamma)}}$

Following the same process as in the previous section, the elasticity of derived demand for labor in firm X, E_x is given by

$E_x = \alpha(1-\gamma)b + (1-\alpha) - \alpha a$

(20) $$PL_y = \left[\frac{MPL_x^{[\alpha(1-\gamma)d]/\gamma}\, PK^{[(1-\alpha)(1-\gamma)d]/\gamma}\, X^{(\gamma-1)/\gamma}}{L_y} \right]^{-1/d}$$

$$PL_x = \left[\frac{JPL_y^{\gamma b}\, PK^{(1-\alpha)(1+a)+(1-\gamma)(1-\alpha)b}}{L_x} \right]^{1/(1-\alpha)-\alpha a+\alpha(1-\gamma)b}$$

If each union's objective is to maximize rent, R:

$$R_x = L_x(PL_x - W_x)$$

$$R_y = L_y(PL_y - W_y)$$

To find the maximum, the derivative of R with respect to labor demand is set to zero.

$$(21) \quad \partial R_x/\partial L_x = (1-1/E_x)PL_x - W_x = 0$$

$$(22) \quad \partial R_y/\partial L_y = (1-1/E_y)PL_y - W_y = 0$$

$$(22) \quad PL_x = W_x/(1-1/E_x) \qquad PL_y = W_y/(1-1/E_y)$$

If the unions were to merge, the objective would be to maximize the sum of the total rents from X and Y.

$$R_{x+y} = (PL_x - W_x)L_x + (PL_y - W_y)L_y$$

Taking the partial derivative with respect to quantity of labor and setting to zero to find the wage which maximized rent:

$$(23) \quad \partial R_{x+y}/\partial L_x = (1-1/E_x)PL_x - W_x + [\alpha(1-\gamma)d/\gamma E_y]\ (PL_y/PL_x)L_y = 0$$

$$\partial R_{x+y}/\partial L_y = (1-1/E_y)PL_y - W_y + (\gamma b/E_x)\ (PL_x/PL_y)L_x = 0$$

$$(24) \quad (1-1/E_x)PL_x = W_x - (\alpha[(1-\gamma)d]/\gamma E_y)\ (PL_y L_y/PL_x)$$

$$(1-1/E_y)PL_y = W_y - [(\gamma_b/E_x)]\ (PL_x L_x/PL_y)$$

The optimal wages for L_x and L_y in the combined union will be greater than their optimal wages in independent unions if, $((\alpha(1-\gamma)d)/\gamma E_y) < 0$ and $(\gamma b/E_x) < 0$ respectively.

From the production function, $0<\gamma,\alpha<1$, and assuming X and Y are normal goods, a and d are less than zero. Therefore, $(\alpha(1-\gamma)d/\gamma E_y) < 0$ and hence,

$$W_x - (\alpha(1-\gamma)d/\gamma Ey)\ (PL_yL_y/PL_x) > W_x$$

Optimal wages are higher at the upstream production level for a merged union.

In the normal case, where $b<0$: $(\gamma b/Ex)<0$ if $(1-\alpha) -\alpha a > (1-\gamma)b$ and hence:

$$W_y - \frac{\gamma_b}{(1-\alpha)-\alpha a + \alpha(1-\gamma)b} > W_y \quad \text{if} \quad (1-\alpha)-\alpha a > (1-\gamma)b$$

Wages will be greater at the downstream level for a merged union. In the case where $b>0$:

$$W_y - \frac{\gamma_b}{(1-\alpha)-\alpha a + \alpha(1-\gamma)b} < W_y \quad \text{if} \quad (1-\alpha)-\alpha a > (1-\gamma)b$$

Wages will be greater at the downstream level for a merged union if $(1-\alpha)-\alpha a < \alpha(1-\gamma)b$ and lower if $(1-\alpha)-\alpha a > \alpha(1-\gamma)b$.

The model is sufficient to derive the effects of a change in the wage rate of one union of the optimal demands of the other union. To find the effects of a change in PL_y on PL_x and L_x, for horizontally related markets, substitute the capital demand function into the production function for X, and substitute for L_x from (7), set equal to the demand function and solve for PL_x.

The sign of $\partial PL_x/\partial PL_y$ depends only on the sign of $\gamma b(1-\alpha)/\alpha(-E_x-a)$. To find $\partial L_x/\partial PL_y$, substitute the expression obtained above for PL_x into the expression for L_x. The sign of $\partial L_x/\partial PL_y$ depends

on the sign of $\gamma b - \left\{(\gamma b(1-\alpha)E_x\right\} / (\alpha(-E_x-a))$. The same analysis can be used to derive $\partial PL_y/\partial PL_x$ and $\partial L_y/\partial PL_x$.

To find the effects of changes in PL_x on PL_y and L_y, for vertically related markets, set the production function equal to the demand function. Substitute the expressions for L_y, and for P_y. The sign of $\partial PL_y/\partial PL_x$, depends on the sign of $(\alpha(1-\gamma)(a-d))/\gamma^d$.

Substitute this expression for PL_y into L_y, and substitute for X to derive $\partial L_y/\partial PL_x$. Similar analysis will yield expressions for $\partial PL_x/\partial PL_y$ and $\partial L_x/\partial PL_y$.

CHAPTER IV

EMPLOYMENT AND EARNINGS

The implications of the model depend on the cross-elasticities of the memberships of the merging unions, and hence it is necessary to attempt to classify each merger. Unfortunately the abandonment of the concept of exclusive jurisdiction makes this difficult. It will be assumed that a significant portion of the memberships of merging unions can be classified in this way, realizing that these classifications do not apply to all of the members of each union. The significance of the results will likely be diminished because of this non-homogeneity of memberships.

The classification of union mergers is based on the methodology found in Freeman and Brittain. They used the operational definition of a symbiotic merger as:

> . . . the unions jurisdictional descriptions and the industries in which their members were employed, must be such that they did not claim jurisdiction over the same workers but worked with a technology such that the output from one group of workers served as inputs for the work of the other. . . . A commensalistic merger is defined as one which occurred between two unions which appeared to organize the same workers and thus were in competition with each other.[1]

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[1]John Freeman and Jack Brittain, "Union Merger Process and Industrial Environment," Industrial Relations 16(2) (May, 1977):173-185.

Freeman and Brittain classified most of the mergers included in this study. Mergers between unions whose members produced goods which are joint inputs into the production of goods which satisfy a single general "demand" were combined with those classified as symbiotic and termed complementary. Freeman and Brittain's commensalistic mergers are termed substitutes in this study.

The proportion of the memberships of major unions and employee associations by industry group is found in the Directory of National Labor Unions (BLS) and was used to determine the appropriate industry groups, and SIC classifications for each of the mergers used in the regression analysis.

Industries included in this study and in which mergers occurred between unions whose memberships are predominantly net complements are: (1) meat products, (2) bakery products, (3) confectionery products, (4) paper and (5) textiles.

Table 1 lists the union mergers included in the study and the year they occurred.

Methodology and Data

Discussions in earlier sections provide several reasons to believe relative earnings for unionized workers will be affected by merger between unions with economically related memberships. As union earnings are a function of both market and institutional forces, this impact will be difficult to isolate with the macroeconomic nature of the industry earnings data available. Where market power of firms and unions is an important factor (imperfect labor markets), merger is one

Table 1. Union Mergers Used in the Study.

Year	Unions
	International Brotherhood of Teamsters
1962	Laundry, Dry Cleaning and Dye House Workers
1966	American Communication Association
1973	International Union of United Brewery, Flour, Cereal . . . Workers
	Graphic Arts International Union (formed 1972)
1964	International Photo-Engravers Union of North America
	Amalgamated Lithographers of America
1972	Lithographers and Photoengravers International Union
	International Brotherhood of Bookbinders
	United Textile Workers of America
1965	American Federation of Hosiery Workers
	United Steelworkers of America
1967	International Union of Mine, Mill and Smelter Workers
1971	United Stone and Allied Products Workers
1972	District 50, United Mine Workers
	Amalgamated Meat Cutters and Butcher Workmen of North America
1968	United Packinghouse, Food and Allied Workers
	Bakery, Confectionery and Tobacco Workers International Union
1969	Bakery and Confectionery Workers of America
	American Bakery and Confectionery Workers International Union
	United Paperworkers International Union
1972	United Papermakers and Paperworkers
	International Brotherhood of Pulp, Sulphite and Papermill
	International Printing and Graphic Communications Union
1973	International Printing Pressmen and Assistants
	International Stereotypers, Electrotypers and Platemakers
	Amalgamated Clothing Workers of America
1962	International Glove Workers Union of America
	United Transportation Union
1969	Switchmen's Union of North America
	Order of Railway, Conductors and Brakemen
	Brotherhood of Locomotive Firemen and Enginemen
	Brotherhood of Railroad Trainmen
	Brotherhood of Railway, Airline, . . . , Clerks
1969	Railway Patrolmen's International Union
	Transportation-Communication Employees Union
	Railroad Yardmasters of North America
1969	Railroad Yardmasters of America

way a union may be able to increase its bargaining power relative to that of its negotiation partner, regardless of the nature of the relationship between the merging unions.

The model presented in Chapters II and III predict union mergers will cause an increase in desired invidivual wages when workers who are net substitutes combine, and a decrease in desired wages when the workers who are combining into a single union are net complements. The discussion in Chapter One argues that merger between unions representing workers with any economic relationship will increase the workers' relative bargaining power. This increased bargaining power will, ceteris paribus allow any post-merger union to achieve wages which are closer to their desired wage.

This implies higher individual wages for substitute workers and complementary workers relative to what these workers could obtain without the increased bargaining power the merger allows. However, the internalization of the externality caused by a complementary relationship should reduce desired wages after integration. Thus, merger between substitute workers should have a positive effect on individual wages, and a merger between complementary unions may either put downward pressure on wages, or cause them to rise less rapidly than merger between substitutes.

Firms react to changing relative prices of inputs by varying the relative amounts of the inputs they employ. Thus if union mergers have an impact on negotiated wages, they should have an inverse impact on the employment of union members. The hypotheses for the employment of production workers predict increased relative employment after merger

of complementary unions and decreased relative employment after merger of substitute (rival) unions.

The hypotheses for wages and employment do not allow a strict a priori prediction for the effects of union merger on the industry's wage bill. Wages and employment move in opposite directions, so the industry wage bill will depend on the relative impact of merger on earnings and employment. However, the discussion in Chapter I implies union merger increases the bargaining power of the union relative to its bargaining partner. Since the union's utility and rent functions contain both earnings and employment, it is reasonable to expect that the increased relative bargaining power of the union after merger would lead to an increased wage bill.

The regressions in this study fail to capture many of the determinants of wage and employment levels, such as the general economic environment. Thus, using indexes of earnings relative to earnings in all manufacturing industries, and employment of production workers relative to employment of production workers in all manufacturing industries may provide better results. The hypotheses concerning relative earnings and employment are the same as individual earnings and number of production workers involved. Merger of substitute workers are predicted to increase relative earnings and decrease relative employment. Merger of unions representing complementary workers are predicted to decrease relative earnings (or increase less than mergers of substitute workers), and hence to increase relative employment of production workers.

The model predicts that merger between unions with memberships that are net substitutes internalizes an external benefit which would increase desired wages and through this impact should reduce relative employment, ceteris paribus. Internalization of external costs by merger of memberships that are net complements should result in a higher relative employment than existed prior to the merger.

Regressions were run with two separate data sets. One data set was taken from the Internal Revenue Service's publication Active Corporation Returns. The second data set with a slightly different classification, the Standard Industrial Classification, was taken from the Bureau of Labor Statistic's Productivity Measures for Selected Industries and the Census of Manufactures.

Corporation Data

The data used for employment and earnings came from the Handbook of Labor Statistics in minor industry classifications similar to the classifications in Active Corporation Returns. Yearly data were taken from the Active Corporation Returns on the number of firms in the industry, total business receipts, total assets, net income and net worth for the years 1961 through 1979.

The level of earnings and employment in these industries depends partially on the union mergers and on the length of time that has elapsed since the merger has taken place.

Several functional forms were tested, with the best results being obtained using the following forms:

Earnings = a+bT+cTR=dF1+ . . . +nFN+e

Employment = a+bT+cTR+dF1+ . . . +nFN+e

Where T is a dummy for post merger years:

T = 0 for years prior to the merger, and

T = (Year - Year of Merger)**1.5 for years after the merger.

TR is the dummy T multiplied by another dummy, R, for the relationship between the members of the merging unions.

R = 0 for complement relationships, and

R = 1 for substitute relationships.

Thus TR = 0 for all mergers for years before merger takes place, and for years after merger between unions with memberships that are net complements.

TR is positive for years after merger involving unions with members who are substitutes.

The inclusion of the variable TR allows the regressions to distinguish the results of mergers between unions with substitute and complement relations.

F1 to FN represent the financial variables from the Internal Revenue Service data set which appear in the regressions. These variables are total assets of the firms in the industries, the total number of firms in the industries, the total net worth of the firms, total net income of the firms in the industries, and receipts per firm which was computed by taking the data on total business receipts and dividing by the number of firms in the industry.

These variables are included in the study in an attempt to take out as much of the impact of non-merger factors on earnings and

employment as possible. The relationships between these variables and earnings or employment are not important to the arguments presented in this thesis. However, the empirical evidence presented here will not be accurate if factors not important to this theory but significantly affecting the level of earnings and employment are ignored.

The discussions above predict that unionized earnings will show a greater increase after merger of unions representing workers that are net substitutes than for workers that are net complements. Given the form of the two dummy variables T and R, and the dummy interaction variable TR, the effect of merger by complement unions on earnings or any other dependent variable in the study will be captured by the variable T. The effect of merger by substitute unions on a regression's dependent variable will be captured by both T and TR, thus the coefficients on T and TR should be summed to reflect the total impact of the merger.

The nature of the power relationship between firms and unions would lead us to expect that the improved relative bargaining power of the union will take time to be realized. There are several reasons for this: multiyear contracts, the time necessary to coordinate contract expiration dates and for the officers to learn to use the increased relative power of their new organization effectively.

The functional form of the merger dummy T is exponential to capture this time affect. The impact of the merger takes time to be realized and hence grows at an increasing rate for some period of time. It is quite reasonable to expect that this exponentially increasing impact (power of 1.5) will not continue indefinitely, but will at some

point level off. Unfortunately the time span of this study is not long enough to test this expected leveling out.

Figure 2 illustrates this exponential impact of T and TR on a general "dependent variable." Here the coefficient on T, labeled b in the figure is negative, that is a merger between complementary unions reduces the dependent variable at an increasing rate between the merger and year Y_2. After year Y_2 the impact of the merger is expected to level off as shown by the dotted line. The figure shows the coefficient of TR, c as positive and absolutely greater than b. Thus the relevant coefficient for merger between substitute unions, (b+c) is positive and the impact of the merger on the dependent variable increases at an increasing rate between the time of the merger and year Y_2. The dotted line after year Y_2 illustrates the expected leveling off of the merger's impact.

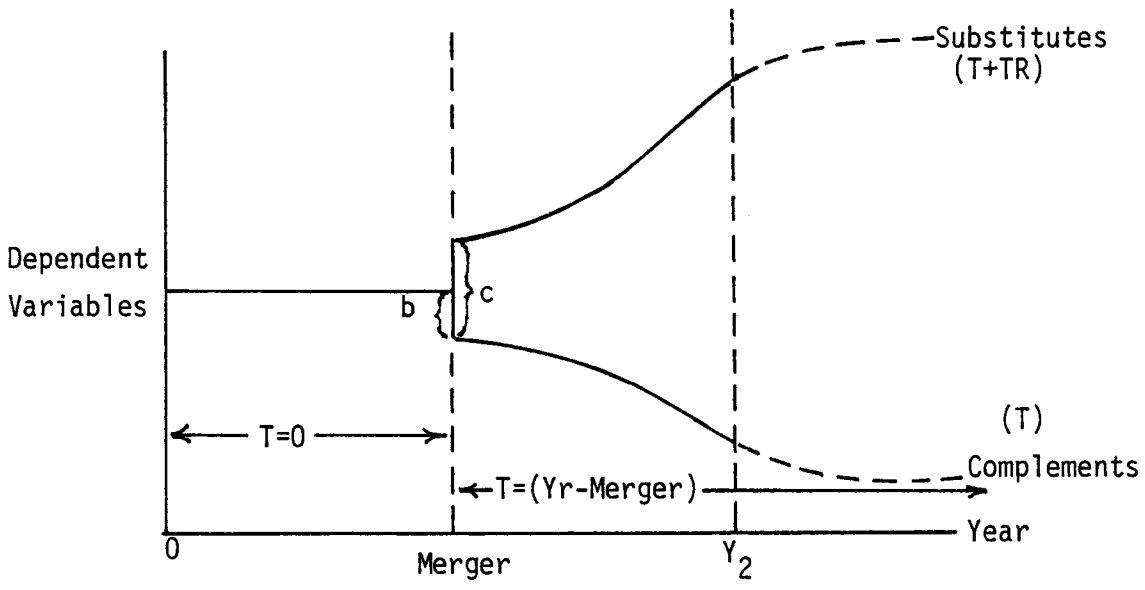


Figure 2. Merger's Impact on Dependent Variables.

Four regressions were run on this data set, which includes one observation per year for each industry, one for total earnings in the industries, one for earnings per production worker, one on production workers in the industries, and one for production workers relative to production workers in all manufacturing industries. A list of the industries used is given in Figure 3.

Crushed, broken, and dimension stone; sand and gravel.
Meat products
Grain mill products
Bakery products
Confectionery products
Textile mill products
Apparel
Paper and allied products
Printing and publishing
  Books and miscellaneous publishing
  Commercial printing
Railroad transportation
Personal services (laundry and dry cleaning)

Figure 3. Minor Industry Groups.

The results of these regressions are shown in Table 2. The model presented earlier suggests that desired earnings will increase after merger for complements. However, arguments were presented that merger increases bargaining power of all unions, which modifies the expectations of the model. Thus it is expected that the regression coefficient on TR for individual earnings will be positive, and the coefficient on T will be determined by whether the increased bargaining power due to the merger more than offsets the internalized cost

Table 2. Earnings and Employment Regressions: Internal Revenue Data.

	WAGE	EARNMAN	PROD	PRODINX
R^2	.75557	.34592	.49187	.48530
N	154	143	143	143
Constant	.129239+9 (1.06)	3568.4032 (11.62)	1610007.2 (6.45)	87.327979 (6.60)
T	19059852. (3.40)	-22.744090 (2.11)	20027.301 (3.34)	.94894164 (2.98)
TR	2023494.3 (.219)	26.851082 (1.65)	-18398.268 (1.94)	-.93268688 (1.86)
FIRM	53525.271 (7.00)	.108596-2 (.707)	19.222443 (2.52)	.104091-2 (2.58)
RNETY	418.91099 (2.30)	.69549-3 (2.67)	-.10462855 (.610)	-.652712-5 (.718)
ASSET	127448.18 (9.63)	xxxxx	38.171643 (4.10)	.205519-2 (4.16)
ASSETP	xxxxx	47469.709 (6.11)	xxxxx	xxxxx
RECFIR	-22922945. (2.22)	-10.939479 (.706)	xxxxx	xxxxx
EARNINX	xxxxx	xxxxx	-4.6945939 (7.17)	xxxxx

T-statistics are in parentheses.

Data used include observations for the years 1961, 1962, 1963, 1965, 1967, 1969, 1971, 1973, 1975, 1977, and 1979. The regression on WAGE includes data for alcoholic beverages except malt for the merger of the International Union of United Brewery, Flour, Cereal . . . Workers with the Teamsters.

T is a dummy for year of merger.
TR is the merger dummy times the dummy for substitutes.
WAGE is total industry wages in 1967 dollars.
EARNMAN is WAGE / number of production workers in the industry.
PROD is number of production workers in the industry.
PRODINX is PROD / hundreds of production workers in manufacturing industries.
ASSET is total assets in the industry in millions of 1967 dollars.
ASSETP is ASSET / PROD.
FIRM is number of firms in the infustry.
RNETY is net income in the industry in thousands of 1967 dollars.
EARNINX is WAGE / average hourly earnings in manufacturing.
RECFIR is industry business receipts in millions of 1967 dollars / FIRM.

Correlation coefficients and mean value tables for all regressions are included in the Appendix.

associated with the earnings of complementary workers. A similar argument applied to employment predicts a positive coefficient on T with both arguments leading to higher employment expectations. Increased bargaining power leading to greater employment security and lower desired wages leading to higher employment. The sign on TR should be negative, reflecting at least a smaller increase in employment than among complements, and the coefficient may be greater than T if the wage impact is greater than that of employment security.

Results. Earnings per production worker were calculated by taking average hourly earnings and multiplying by 2000 hours. The financial variables which were statistically significant in the regression on earnings per production worker are total net income of the industry and assets per production worker.

The sign on net income is positive as expected. The higher the industry's net income holding assets per worker constant, the greater the compensation of production workers in the industry. Assets per production worker is a measure of the industry's capital intensity. The greater the capital available to each worker, the more productive the worker will be, ceteris paribus. The greater the capital intensity of an industry, the higher the compensation per employee. These two variables support the hypothesis that higher levels of capital available to the workforce and the greater the net income of an industry, the higher the wage unions will be able to win for their members.

The analysis controls for the level of automation by including a variable for the firm's assets. The causal relationship between

capital and earnings is not crucial to the analysis of union mergers. Regardless of whether unions react to increasing automation and its downward pressure on employment by merging with a related union, or automation is the firm's response to greater union power which follows a union merger, greater labor productivity through automation leads, or allows firms to pay higher labor compensation.

Holding net income and capital intensity in the industry constant, earnings per employee increased slightly after merger for substitute unions and declined after merger for complement unions. Much of the impact of the merger may be contained in the asset variable, if it is the firm reacting to increased power of the union by substituting capital for labor. These results support the hypotheses derived in Chapters II and III.

Figure 4 shows the impact of union merger on earnings per production worker holding assets per worker in the industry and the industry's net income constant. Earnings for union members increase slightly after merger of unions representing workers that are substitutes, and decline when the merger is between complementary unions.

The non-merger variables which were statistically significant in the regressions on the number of production workers and an index of relative industry employment are total industry assets, number of firms, industry net income and an index of relative industry earnings. Holding other determinants in the regression constant, the higher the relative earnings in the industry, the lower the level of employment of production workers. Holding industry assets constant, a larger

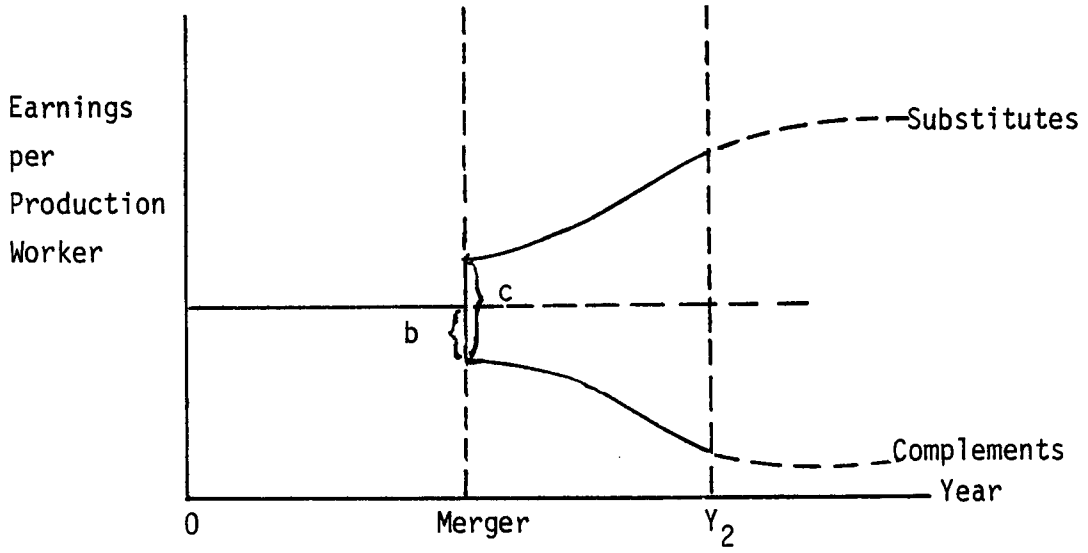


Figure 4. Earnings per Production Worker.

number of firms implies a higher labor, capital ratio and hence greater employment levels. Industry assets as a crude measure of industry size implies greater employment, other things constant.

Holding these factors constant, the regression for production workers shows merger increasing employment for complements, and to a lesser degree decreasing employment for substitutes. The coefficient for T is positive and significant at the 5% level, and for TR is negative and significant at the 10% level. The substitute coefficient is slightly less than the coefficient for complements. This suggests that the increased bargaining power provides employment security which allows an increase in wages without much if any cost of reduced employment. The regression for the production workers index, production workers in the industry divided by production workers in all manufacturing industries, also supports this hypothesis. There is an increase in relative employment for complement industries, which is not quite offset by the negative coefficient on TR, thus there is not a lower level of relative employment after merger of substitutes.

Figure 5 shows the impact on absolute and relative levels of employment for production workers of mergers between unions representing workers who are net substitutes and mergers between unions representing workers who are net complements.

The financial variables used in the regression on total industry earnings are industry assets, number of firms in the industry, total business receipts per firm and net income. Industry assets and number of firms are measures of size and are strongly positively related to

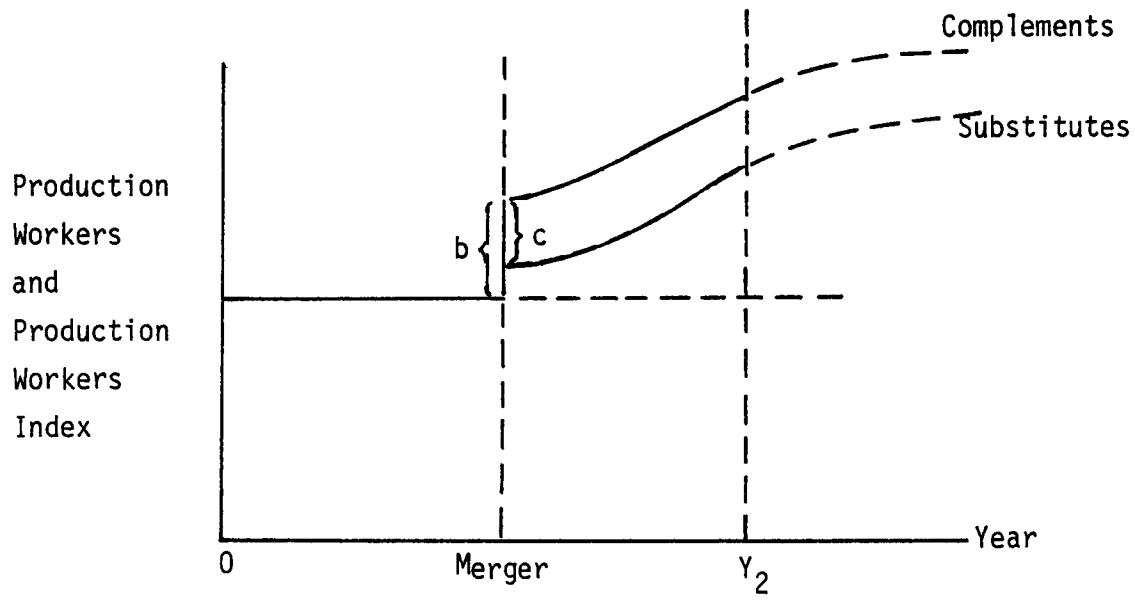


Figure 5. Absolute and Relative Levels of Employment.

total industry earnings. Holding industry size constant, the greater the net income of firms, the more is available for labor compensation.

Holding the above non-merger factors constant, total labor earnings in the firms increased after merger, but there was no significant difference between complement and substitute mergers. T is positive and significant at the 1% level, TR is insignificant. Complement mergers increased both earnings per man and number of production workers thus, the wage bill for these industries increased. Substitute mergers increased earnings per worker, but there wasn't the increase in the number of workers shown by the complementary mergers and thus there was no statistically significant difference in the change in wage bill between the firms. This regression supports the hypothesis that union mergers increase the bargaining power of workers relative to that of firms. This increased bargaining power results in higher industry payments to workers, measured as wage multiplied by the level of employment, the two major factors in the union's utility function.

Figure 6 shows the impact of union mergers on total industry wage bill. Union mergers tend to increase an industry's total wage-bill, but the relationship between the workers in the merging unions do not affect this impact.

Census of Manufactures Data

The data used for these regressions are from the Census of Manufactures, and include yearly totals for concentration, value added, total assets, number of production workers and industry wage bill. Data were collected for the years 1963 through 1977.

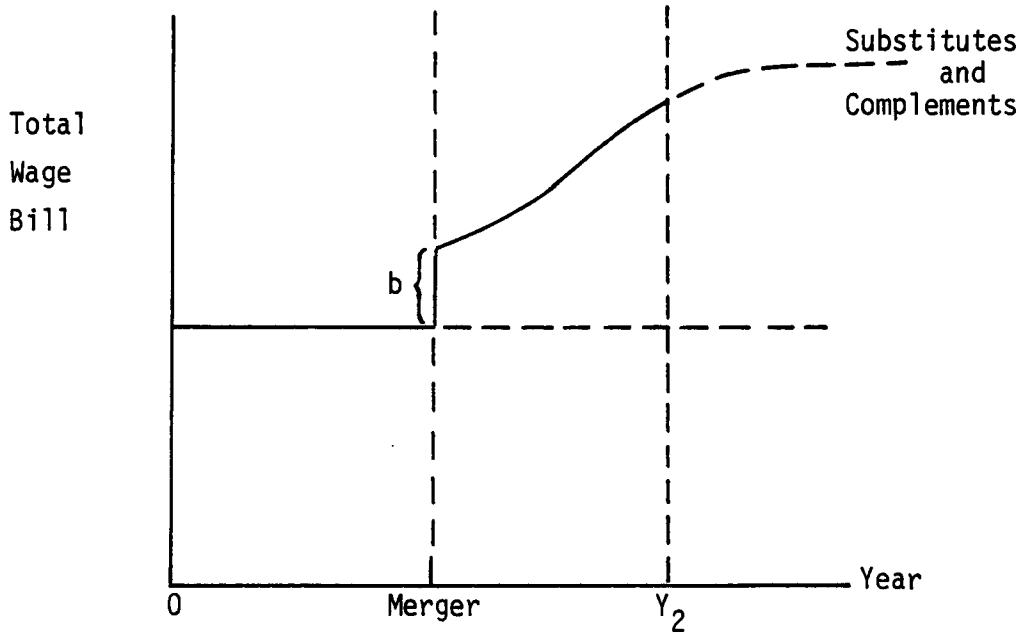


Figure 6. Total Wage Bill.

The Standard Industrial Classifications used in the regressions below are shown in Table 3 along with descriptions of these classifications.

Table 3. SIC Industries Included in the Analysis.

SIC	Description
2011	Meat packing plants
2013	Sausages and other prepared meat products
2041	Flour and other grain mill products
2051	Bread and other bakery products
2052	Biscuits, crackers and pretzels
2611	Pulp mills
2621	Paper mills
2631	Paperboard mills
2643	Bags, except textile bags
2653	Corrugated and solid fiber boxes
2752	Commercial printing, lithographic
2753	Engraving and plate printing
2782	Blankbooks, loose leaf binders and devices
2789	Bookbinding and miscellaneous related work
2791	Typesetting

Four regressions were also run on this data set to check the results received previously. Regressions were run on total wage bill for the SIC industries, wages per production worker, wages in these industries relative to wages in all manufacturing industries and production workers in these industries relative to production employees in all manufacturing. The results of these regressions are shown in Table 4.

Table 4. Earnings and Employment Regressions: Bureau of Labor Statistics Data.

	Wage	WAGEMAN	WAGEINX	PRODINX
R^2	.50920	.50361	.49932	.90215
N	225	225	225	225
Constant	3337.2544 (5.72)	4.3688315 (1.84)	-.92449976 (.449)	.5149658-2 (4.61)
T	-109.68213 (1.46)	-.6749187-1 (2.39)	-.71900543 (2.78)	.1794631-9 (.054)
TR	160.88873 (2.09)	.5833540-1 (2.02)	.84939970 (3.21)	-.7055051-3 (2.04)
CR	24.446823 (1.87)	-.27224590 (7.06)	-.11324713 (3.96)	xxxxx
Valast	xxxxx	.15324758 (2.44)	5.9965228 (9.53)	xxxxx
Value/W	-339.55284 (1.37)	xxxxx	xxxxx	xxxxx
Asset/W	-690.78372 (9.33)	xxxxx	xxxxx	xxxxx
Value	xxxxx	xxxxx	xxxxx	.357850-5 (40.66)
Valman	xxxxx	.14301034 (14.31)	xxxxx	xxxxx
Asset	.27946935 (13.26)	xxxxx	.818084-3 (3.96)	-.454409-6 (5.37)

T-statistics are in parentheses.
T is a dummy for year of merger.
TR is the merger dummy times dummy for substitutes.
WAGE is total industry wages in millions of 1967 dollars.
WAGEMAN is WAGE / number of production workers in hundreds.
WAGEINX is WAGE / average hourly wage in all manufacturing.
PRODINX is number of production workers (hundreds) / all manufacturing production workers (thousands).
Asset is total assets of the industry (000,000 of 1967 dollars).
Value is industry value added in millions of 1967 dollars.
CR is the eight firm concentration ratio.
Valast is Value / Asset.
Valman is Value / hundreds of production workers.
Value/W is Value / WAGE.
Asset/W is Asset / WAGE.

The same functional form gave the best results with this data set as in the previous section.

Earnings (Employment) = a+bT+cTR+dS1+ . . . +nSN+e

T is the dummy for post merger years and TR is T multiplied by a dummy for the merging unions' relationship. T and TR have the same values as in the previous section.

The data in this set cover fewer industries, but breaks these industries into more narrowly defined sub-categories.

Results. The variables used to capture the non-merger impact on the wage per production employee regression are the industry eight firm concentration ratio, value added by the industry divided by its total assets, an output, capital ratio, and value added divided by the number of employees, an output, labor ratio. The output, labor ratio, a measure of labor's productivity is the most significant variable, and positive as expected. The more productive workers in the industry are, the greater their wage, other things equal. The output, capital ratio is also positive, holding capital (assets) constant, the greater the output, capital ratio the more the industry can provide as payments to labor inputs. Holding labor productivity and capital intensity constant, concentration within the confines of this limited study reduces the wage level somewhat. Perhaps holding other factors constant, concentration of firms coexisting with labor concentration (through the union merger process) results in situations of "countervailing power" which has a slight modifying pressure on wages.

Holding these factors constant, wage per production employee in this data set was not statistically different after mergers between members of unions that were net complements. The sign of the coefficient on T is negative as expected, but is not significant.

Internalizing the external cost of combining net complements is statistically offset by the increased bargaining power of the new union. The sign on TR is positive as predicted by the model and significant at the 5% level.

Figure 7 illustrates the impact of union mergers on wage per production worker holding other factors constant. Mergers between unions representing workers who are net complements have no impact on wage rates. The coefficient on TR, c is positive, thus merger between unions representing workers who are net substitutes increases wage rates at an increasing rate for a number of years. Again, it is expected that this increasing impact will not continue indefinitely. Beyond some point in time the impact of the merger should level off as shown by the dotted line after year Y_2.

The significant variables in determining the industry's wage bill are total industry assets, assets per wage dollar and the eight firm concentration ratio. The most significant variable is total assets, a measure of the industries' size or capital intensiveness. The greater the industry's assets the greater its wage bill as expected. Assets per wage dollar, a measure of the capital, labor ratio has a negative influence. Holding assets (size) constant, the more the industry relies on capital compared to labor, the smaller the wage bill

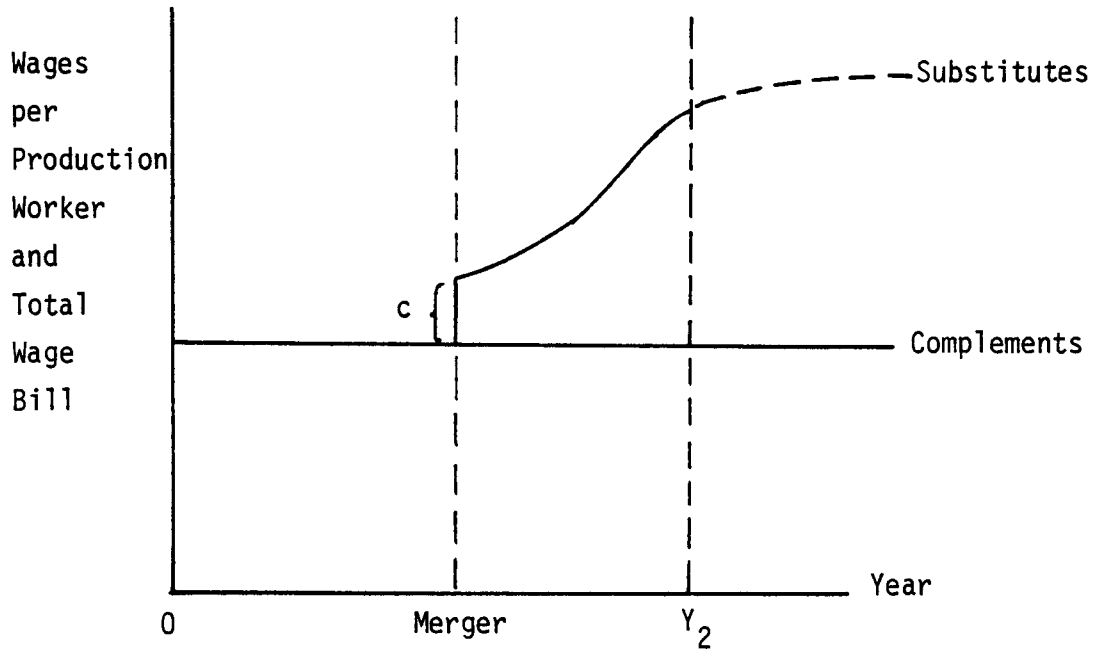


Figure 7. Wages per Production Worker and Total Wage Bill.

will be. Holding size and the capital, labor ratio constant, the higher the concentration ratio is, the greater the industry wage bill.

Holding these non-merger factors constant, the regressions on total wage bill in these industries give the expected sign on both the T and TR variables. The wage bill in industries where mergers between substitute unions occurred rose, and although the sign on the complement dummy is negative it is not statistically significant.

Figure 7 illustrates the impact of union mergers on an industry's total wage bill as well as wages per production worker.

The non-merger variables used in the regression on relative industry earnings are total industry assets, value added divided by industry assets and industry concentration ratio. Again, one of the most significant variables is total industry assets. As expected, the higher an industry's assets, the higher its relative labor earnings. Value added divided by assets, the output, capital ratio is also significantly positive as expected. For a given level of capital, the greater the value added by the industry, the more the industry can provide payments to labor. As with earnings per worker, holding capital and the output, capital ratio constant, the concentration ratio has a very small negative influence on relative industry earnings.

The regression for wages in these industries relative to those in all manufacturing provides the expected results on the merger dummies. The coefficients on both T and TR are the predicted sign and significant at the 5% level. The wage bill in industries having mergers between unions that are net complements falls relative to all

manufacturing industries after the merger, and goes up after the merger of unions which are net substitutes.

Figure 8 illustrates that the impact of union mergers on relative industry earnings is as hypothesized. Merger between substitute workers increases relative earnings at an increasing rate for at least a period of time, and lowers relative earnings for complement mergers.

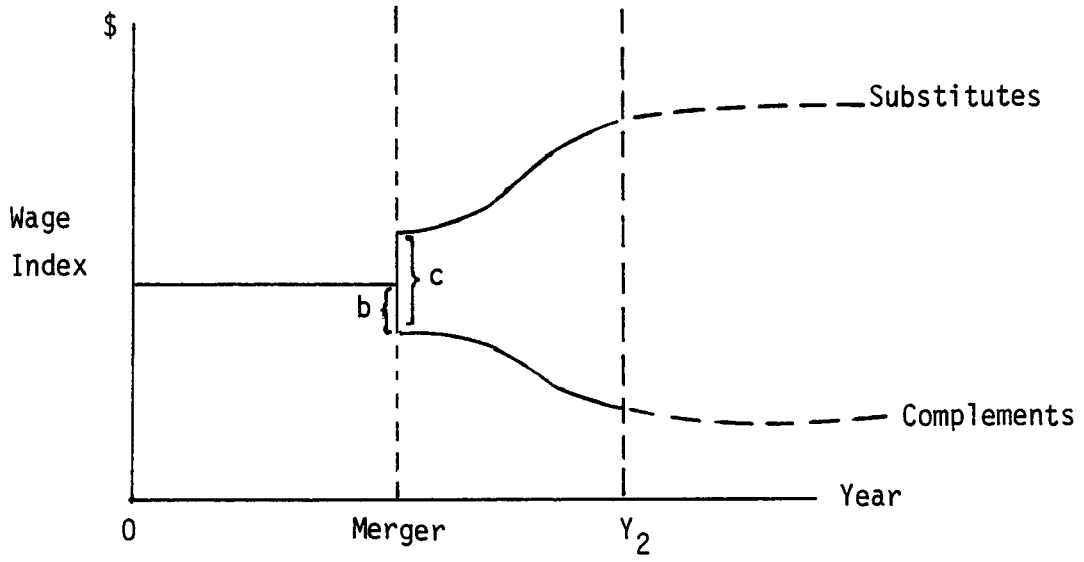


Figure 8. Wage Index.

The two variables used with the merger dummies to estimate relative industry employment are total industry assets and value added by the industry. The most significant variable is value added. The greater the output produced by the industry, the more production workers needed. Holding output constant, there is a negative

relationship between capital and production employees. The more capital was used to produce a given output, the less labor needs to be used.

The regression for production employees in these industries relative to all manufacturing industries shows no statistically significant change in response to merger between unions that are net complements. The sign on TR is negative as predicted and significant at the 5% level. Firms respond to increased earnings of these workers by adjusting employment.

Figure 9 illustrates the negative impact on relative employment of mergers between unions representing workers that are net substitutes.

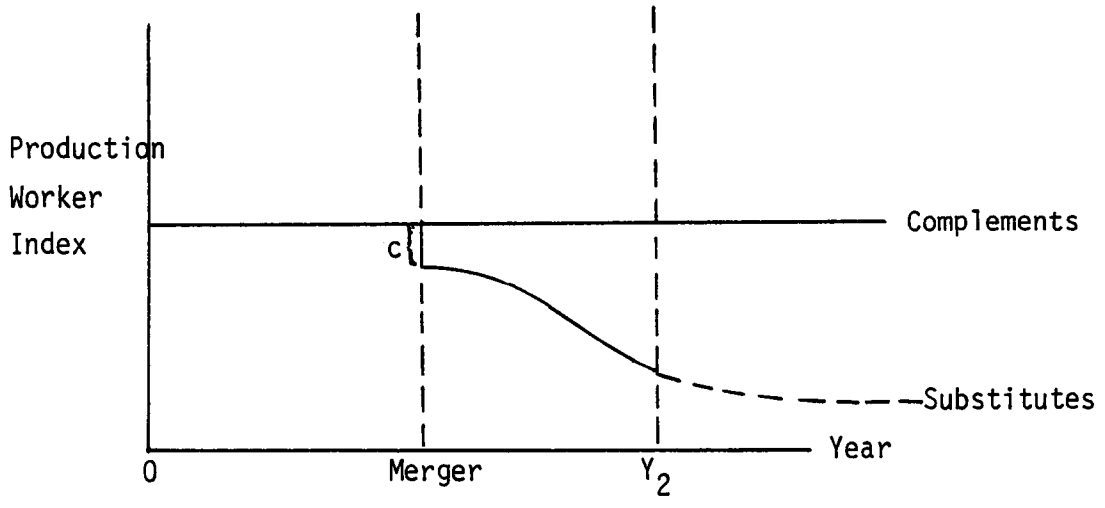


Figure 9. Production Workers Index.

In analyzing the results of these regressions it must be remembered that fairly aggregate data with a high degree of "noise" is being used. Employment, earnings and all the other data used includes union and nonunion workers, with the union workers belonging to several unions, not only the unions which have experienced merger within the test period. Given the limitations of this data set, the results are quite encouraging.

Strike Activity

Internalizing the externalities associated with maintaining separate decision-making authority in groups of related unionized workers should affect the amount of strike activity. This section uses data on work stoppages (days idle as a percentage of estimated working time) for relevant industries. A three-year moving average is calculated to take out the effects of multi-year contracts, and only four industries were chosen. The results are shown in Table 5. The merging unions were not a great enough portion of the broadly defined industry groups to allow data of the other industries to be relevant. An index was calculated to reduce the influence of other factors, the percent of lost time in the industry was divided by the percent of lost time in all manufacturing. This index provides for a measure of strike activity relative to strike activity in manufacturing as a whole.

A one-tailed T-test was performed to test whether the relative percentage of idle time in an industry changed in the direction predicted after merger of unions in the industry. The results of this

Table 5. Work Stoppages by Industry Group.

Three-year moving average of ratio of percent manhours idle in the industry relative to all manufacturing industries.

Industry	Years	Mean	Std Dev	T Stat	1-Tail
Stone	10	1.1598	.237	1.61	.064
	7	1.0140	.133		
Meat	7	.5532	.176	2.78	.008
	10	.9014	.336		
Paper	11	.8493	.205	.90	.197
	6	.9694	.289		
Print	11	.8085	.488	2.98	.006
	6	.3532	.104		

In this table, the first group of years represents observations prior to union merger in the industry, and the second group of years represents observations after merger.

T-test are shown in Table 5. The model predicts that strike activity will increase in industries where there is a merger between unions which have memberships that are net substitutes, and decline in industries where the merger occurs between memberships that are net complements. Only one of the four mergers represents memberships that are net substitutes, the merger in the meat industry. As predicted by the model, strike activity relative to manufacturing as a whole increased, with the T statistic of 2.78 which is significant at the .008 level. The three other industry groups, stone, paper and printing had mergers between unions with memberships that are net complements. The model predicts that strike activity relative to manufacturing as

a whole should fall. The T-test for the paper industry is insignificant, showing no difference in relative strike activity after the merger. The T-test in the stone industry is 1.61, with a significance level of .064. The T-statistic for the printing industry is 2.98, which is significant at a level of .006. Given the nature of the data, there being workers in these industries represented by unions other than those involved in the mergers, these results are quite encouraging.

In a later section, evidence of strike activity derived from strike benefits paid by the national unions will be considered.

Summary

Two separate data sets were used in this chapter to test the hypothesis that relative earnings, employment and strike activity for unionized workers will be significantly affected by mergers between unions with economically related memberships. The model presented in Chapters Two and Three predict that union mergers will cause an increase in desired wages, and hence a decrease in relative employment when workers who are net substitutes combine, and a decrease in optimal wages and hence an increase in relative employment when the workers who are integrating are net complements.

Regressions run on data from the Department of Labor and data from the Internal Revenue Service on individual earnings, relative earnings, industry earnings, total industry employment and relative employment all provide at least weak support for this hypothesis.

The need for more research in this area is evident. Many of the hurdles encountered in this study are caused by poor data. There

is at present a lack of good microeconomic data available which would allow a "cleaner" testing of this model. As better data are made available, or as others test this hypothesis on currently held micro-economic data sets, better conclusions can be drawn.

CHAPTER V

UNION FINANCIAL STATISTICS

Incentives for union mergers based on economies of scale and "managerial discretion" can be tested empirically with financial data on national union expenditures. Economies of scale permit larger national unions to provide a given level of service to their members at a lower average cost than smaller unions. The basis for the hypothesis that union merger will lead to economies of scale is the opportunity for increased specialization by union officers and staff. Larger unions make possible a fuller division of labor, and integration creates the opporutnity for the combination of union locals. Such combinations should allow a reduction in local union physical facilities and possibly to a lesser extent, staff.

In addition to the local economies, at the national level merger should lead to lower per member expenditures (average cost) of providing certain services. The journals of merging unions often report merger objectives which include the reduction of administrative inefficiency and duplication.

The available data on union finances allow for the testing of the hypothesis that union mergers will lead to lower per member expenditures on education and publicity, disbursements to officers and employees, certain union benefits and office and administration expenses.

National unionism is generally characterized by high concentration and large organizational barriers to entry. These factors tend to insulate the union organization from the pressures of competition and open up a wide range of discretionary behavior by officers. The personal objectives of managers (both corporate and union) generally include salary, security, status, power and prestige. Many organization theorists argue that a major mechanism to advance these objectives is organizational expansion. One method of membership expansion available to union managers is merger, which may also lead to staff expansion, salary increases and higher prestige.

Union financial data allow the testing of the managerial discretion hypothesis that union officers pursue merger as a means of advancing their own objectives. The hypothesis predicts that merger will lead to increased total expenditures on union officers and staff.

Data on union expenditures were obtained from the Department of Labor. Unions must file financial reports with the Labor-Management Services Administration, reporting their yearly expenditures in a fairly detailed manner, and copies of these reports were acquired for the years 1960 through 1978.

Regressions were run on this data set for total and per member disbursements by the national union on payments to its officers, payments to union employees, disbursements for professional fees, education and publicity, office and administration expense, total benefits paid to members, strike benefits paid, disbursements to the president, and a regression on net assets.

Regressions were run with several functional forms, with the following general forms giving the best results:

Per Member Expenditures = a + bT + cYR + dRreceptm +
fRnasstm + gDRnasstm + hMember + kDMember + e

Aggregate Expenditures = a + bT + cYR + dRnasst +
gMember + hDMember + e

where:

T is a time dummy for which T = 0 prior to merger and
T = (year - year of merger)**1.5 after the merger
YR is year of observation
Rnasst is net assets
DRnasst is net assets multiplied by the dummy for post merger years
Rnasstm is net assets per member
DRnasstm is merger dummy multiplied by Rnasstm
Member is number of dues paying members in the national
DMember is membership multiplied by the merger dummy
Rrecptm is total receipts per dues paying member
All financial variables are 1967 dollars

In addition to union merger, the main determinants of a union's expenditures are its net assets, a measure of wealth, its receipts, a measure of income, and the size of its membership, a measure of the quantity of services it must provide. The union's members are its "customers," and it must supply services to these members in return for their dues and fees. It is hypothesized here that union mergers may not only have an independent impact on union expenditures, but may also change the relationships between a union's wealth and membership

and its expenditures. To test this hypothesis the regressions contain merger dummy interaction variables for net assets and membership.

The results of these regressions are shown in Tables 6 and 7. The unions included in these regressions are:

1. International Printing and Graphic Communications Union formed by 1973 merger of International Printing Pressmen and Assistant and International Stereotypers, Electrotypers and Platemakers.

2. International Brotherhood of Teamsters which combined with the Laundry, Dry Cleaning and Dye House Workers in 1962, the American Communications Association in 1966, and the International Union of United Brewery, Flour, Cereal . . . Workers in 1973.

3. United Steelworkers of America which combined with the International Union of Mine, Mill and Smelter Workers in 1967, the United Stone and Allied Products Workers in 1971 and District 50, UMW in 1972.

4. United Textile Workers of America which merged with the American Federation of Hosiery Workers in 1965.

5. Amalgamated Meat Cutters and Butcher Workmen of North America which merged with the United Packinghouse, Food and Allied Workers in 1968.

6. Brotherhood of Railway, Airline . . . , Clerks which combined with the Transportation-Communication Employees Union in 1969 and the United Transport Service Employees in 1972.

7. Graphic Arts International Union which was formed by 1972 merger between Lithographers and Photoengravers International Union and the International Brotherhood of Bookbinders.

Table 6. Per Member Expenditures.

Variable	R^2	Constant	T	YR	Rrecptm	Member	DMember	RNasstm	DRNasstm
Redpubm	.14420	.80286359 (.845)	-.408235-1 (3.08)	-.212092-2 (.150)	.44754-2 (2.93)	.787856-7 (.779)	-.150411-6 (.924)	.267433-2 (1.87)	.553157-2 (1.88)
Roffrm	.58514	-2.5234273 (1.19)	-.803783-1 (2.71)	.597639-1 (1.89)	.221446-2 (.648)	-.124598-5 (5.51)	-.100592-5 (2.76)	.315726-1 (9.89)	.156631-1 (2.37)
Rttldism	.27545	-62.017121 (1.43)	-1.3296376 (2.20)	1.1292158 (1.76)	.48367621 (6.94)	.114644-4 (2.49)	.345396-5 (.465)	.17849841 (2.73)	.45214919 (3.36)
Rpresm	.69317	-.51344511 (4.11)	-.614500-2 (3.52)	.999537-2 (5.39)	-.155026-3 (.573)	-.118796-6 (8.93)	-.371670-7 (1.74)	.243999-2 (12.95)	-.708584-3 (1.83)
Rofadmm	.32987	-11.020144 (5.79)	-.12600071 (4.74)	.18779260 (6.65)	.109047-1 (3.56)	-.157137-6 (.776)	-.89458-6 (2.75)	.814580-2 (2.84)	-.933391-3 (.158)
Rcostm	.58132	10.353709 (1.34)	.15200717 (1.41)	-.10587662 (.921)	.198832-1 (1.60)	-.107387-5 (1.30)	.306889-6 (.231)	.16110504 (13.79)	-.538826-1 (2.24)
Rrecptm	.02705	-82.377543 (1.98)	-1.3309458 (1.95)	1.6086174 (2.61)		-.542520-6 (.118)		.978983-1 (1.33)	

Description of Variables:
T-statistics are in parenthesis.
T is dummy variable for post merger years.
Member is the number of dues paying members.
DMember is the merger dummy multiplied by MEMBER.
Rrecptm is total union receipts / Member.
Rnasst is the union's net assets per member.
DRnasst is the merger dummy multiplied by Rnasst.
Redpubm is per member disbursements on education and publicity.
Roffrm is per member disbursements on officers.
Rttldism is total disbursements per member.
Rpresm is per member payments to the president.
Rofadmm is per member disbursements for office and administration expenses.
Rcostm is disbursements per member on officers and employees.
Rrecptm is per member total receipts.
All financial statistics are measures in 1967 dollars.

Table 7. Total Expenditures.

Variable	R^2	Constant	T	YR	Member	DMember	Rnasst	DRnasst
Redpub	.82934	-511219.99 (1.33)	11009.479 (2.13)	7245.1378 (1.27)	1.0042828 (15.82)	-1.2088616 (6.23)	-.105647-3 (.073)	.293906-1 (6.60)
Roffr	.51365	1385247.4 (3.34)	5706.4175 (1.02)	-13745.152 (2.23)	-.25471333 (3.71)	.276309-1 (.131)	.170663-1 (10.85)	-.735358-2 (1.52)
Rprof	.67088	-535123.65 (1.46)	-8262.0852 (1.67)	9045.7731 (1.67)	.63459836 (10.50)	-53275062 (2.88)	-.268212-2 (1.94)	.177667-1 (4.19)
Rttldis	.77755	-.107058+9 (3.11)	-1416269.6 (3.05)	1561144.2 (3.06)	43.914955 (7.71)	-169.98767 (9.76)	.11501998 (.882)	4.9358425 (12.35)
Rnasst	.61190	10523310 (.477)	-37209.804 (.126)	-105295.82 (.322)	31.733502 (12.62)	-8.0225128 (2.04)		
Rpres	.74735	54148.187 (1.85)	198.3443 (.501)	-323.14894 (.744)	-.419995-1 (8.67)	.936201-1 (6.32)	.219548-2 (19.78)	-.280693-2 (8.25)
Rofadm	.65881	-2789570.2 (2.70)	-34317.307 (2.46)	43224.571 (2.82)	1.7400557 (10.19)	-1.7639989 (3.38)	-.447868-2 (1.15)	.483514-1 (4.03)
Rcost	.43969	9249581.3 (1.40)	27824.465 (.314)	-117153.16 (1.20)	.66547913 (.612)	-11.767427 (3.54)	.14355884 (5.77)	.25953952 (3.40)
Rrecpt	.27309	-366189065 (.707)	-878413.09 (1.27)	572790.74 (.754)	20.287416 (2.40)	-99.533654 (3.84)	-.206001-1 (.106)	2.9378479 (4.94)

Description of Variables.
T-statistics are in parentheses.
T is dummy variable for post merger years.
Member is the number of dues paying members.
DMember is the merger dummy multiplied by MEMBER.
Rnasst is the union's net assets per member.
DRnasst is the merger dummy multiplied by Rnasst.
Redpub is total disbursements on education and publicity.
Roffr is total disbursements on officers.
Rttldis is total disbursements.
Rpres is total payments to the president.
Rofadm is total disbursements for office and administration expenses.
Rcost is disbursements on officers and employees.
Rrecpt is total receipts.
All financial statistics are measures in 1967 dollars.

8. Bakery and Confectionery Workers International Union formed by 1969 merger of American Bakery and Confectionery Workers International Union and the International Union of Bakery and Confectionery Workers of America.

9. United Paperworkers International Union formed by 1972 merger of United Papermakers and Paperworkers with International Brotherhood of Pulp, Sulphite and Papermill Workers.

Figure 10 illustrates the exponential nature of the merger dummy variable, T. The form of T which gave the best results is a measure of time since merger occurred in years with an exponent of 1.5. This specification suggests that merger has an impact on expenditures which increases for a certain period of time. It is reasonable to expect that this growing impact will not continue for long periods of time.

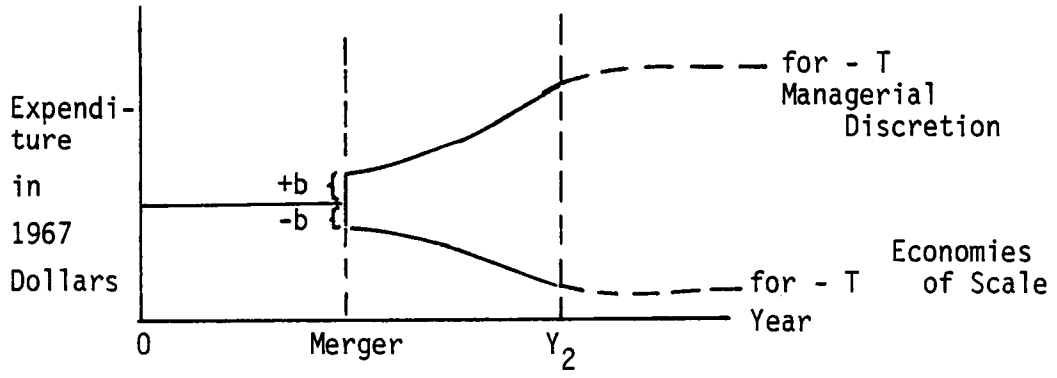


Figure 10. National Union Expenditures.

The dotted line after year Y_2 shows the expected leveling off of the impact of the merger. It should be remembered that not all of the merger's impact is captured by T; the dummy interaction variables also capture some of this impact.

The illustration includes a representation for both a positive and a negative T. Economies of scale should result in a negative T on the per member regressions, and managerial discretion should result in a positive T on the total expenditure regressions.

Expenditures Per Member--Economies of Scale

Officers and Employees

The regression on per member disbursements to the national president gives the expected results. The variables on trend (YR) and wealth (Nasstm) are positive and highly significant. The greater per member wealth, the greater per member expenditures to the president holding the other variables, receipts per member (income) and union size (membership) constant. The merger dummy is negative as are the membership and merger, membership interaction variables. The merger reduces the average cost of the president, and the negative coefficients on membership and the membership interaction variables provide further support for the economies of scale hypothesis. Larger unions show lower per member expenditures, and merger reduces these expenditures farther than internal membership growth.

The regression on per member disbursements to all national union officers provide the same results. The coefficients on per member wealth and the dummy, wealth interaction variables are positive

as expected. The greater the unions' per member wealth, ceteris paribus, the greater the per member expenditures to officers.

The negative coefficients on T, Member, and DMember also are as the economies of scale incentive to merger predict. The negative T supports the hypothesis that union merger reduces per member disbursements to officers, holding membership constant. The membership variable supports the hypothesis that larger unions have lower per member expenditures on officers, the interaction variable supports the conclusion that merger further enhances this relationship between membership size and average cost of the union's officers.

The regression on per member expenditures on all employees (officers and staff) is generally not significant. The wealth variable is positive and significant as expected, the membership variable is negative as expected, but its significance is only at the 11% level.

Other Disbursements

Disbursements on education and publicity, for office and administration, and total disbursements per member further support the hypothesis that mergers allow economies of scale.

The regression on education and publicity expenditures per member provide the expected signs on the coefficients for T, Recptm, Nasstm and DNasstm. The membership variables are insignificant, the sign on DMember is negative as expected, the sign on Member is positive. The higher per member income and wealth, the greater the unions' expenditures per member on education and publicity, ceteris paribus.

The dummy variable T supports the hypothesis that union mergers reduce per member expenditures holding membership constant.

Expenditures for office and administration also show economies of scale from union merger. The coefficient on T is negative and significant as expected, merger reduces per member office and administration expenditures, holding income, wealth, and membership constant. The coefficients on income and wealth are positive and significant as expected, the merger, wealth interaction variable is insignificant, merger does not affect the relationship between per member wealth and office and administration expenses. Member is negative as expected, but insignificant, the merger, membership interaction variable is significantly negative, supporting the hypothesis that after merger larger memberships provide economies of scale in office and administrative expenses.

Total disbursements per member also show economies of scale from union mergers. The merger dummy is negative and significant, merger reduces total disbursements per member. The regressions show a direct relationship between total disbursements and receipts and net assets. Higher receipts per member and higher wealth per member lead to larger disbursements per member. The relationship between net assets and expenditures is enhanced by merger. The negative membership variable further supports the hypothesis that larger membership size reduces the average cost of providing membership services.

Total Expenditures--Managerial Discretion

Net Assets

The theory of managerial discretion, and property rights predicts that a union president derives utility from the stock of money over which he has discretionary power. The union president then has reason to attempt to consolidate two unions under his power if the merger increases the stock of funds over which he has discretion. One measure of these funds is the union's net assets.

Assuming that a union president's discretionary fund pool is related to the firm's net assets, merger increases the discretionary power of the major decision-maker if it leads to higher net assets.

The regression provides information about the relationship between union wealth and membership. The dummy variable is insignificant, implying that any impact of merger on net assets is felt through the impact on membership. The membership variable and the merger, membership interaction variable support this motive to merge by providing support for the argument that new members add to net assets. Larger membership leads to greater net assets, and merger enhances this positive relationship, (DMember is positive and significant). Perhaps this is due to the economies of scale merger provides in union organizational drives by combining organizational staffs, and reducing union rivalry.

Total Disbursements

Merger may affect a union's total disbursements in several ways. Although most economies of scale should come at the local level through the combination of union locals, there may also be some which will exist at the national level. The need for agreement of all major national officials in order for a merger proposal to succeed, would restrict any economies in this area, due to the general need to keep disbursements to all union officials and major employees at least as great as pre-merger levels in order to get their support. There are a few areas in which economies of scale may result from merger of two national unions, including educational expenses, publicity expenses, (including the union publications), professional fees (accounting and legal consultants), and political committees (lobbying, etc.) with the major economy probably coming from the combination of the organizing staff, and the reduction in organizational rivalry. Local union economies which would result from mergers must be looked for in the trend of the number of locals in the national union after merger takes place.

In order for union memberships to support merger, the individual members must expect that they will be made better off by a combined union. Arguments given to members may include expectations of greater relative bargaining power, but also better services from the national union. Many of these services require greater disbursements from the national union. Managerial property rights would also

predict that many of the benefits management might receive by union merger require payments to union employees and members.

The regression on total disbursements by the combined unions suggests that total disbursements holding membership and net assets constant decline after merger. The functional form of the time variable suggests that the decline accelerates for at least several years as the merger process gets implemented. Again it is reasonable to expect that this decline would slow after awhile and eventually level off.

The merger interaction variables, DMember, and DNasst also provides interesting information concerning the effect of union merger on total disbursements. Holding net assets (wealth) constant, additional members reduced total disbursements (DMember is negative and significant at the 1% level). The relationship between net assets and total disbursements also changed in the years after the merger. Prior to merger there was no relationship between net assets and total disbursements; after merger union wealth becomes an important determinant of disbursements.

Officers and Employees

Regressions were run on disbursements to officers, disbursements to officers and staff, and disbursements to the national president. Using a property rights or managerial discretion argument, an institution which is as strongly controlled by the president and the board as unions are, will enter into a merger agreement only if the president and other board members feel they will personally be better

off, thus the sign on the merger dummy should be positive for these disbursements.

As predicted, the T variable in all three regressions are positive, but not significant. The size and wealth variables provide information on the impact of mergers on a union's payments to its president, officers and staff. Prior to merger, there is a negative relation between size and disbursements to the president holding wealth constant, and a positive relationship between wealth and payments to the president holding membership constant. As expected, the wealthier a union, the greater pay for the president. Merger completely offsets the impact of wealth, but causes membership to be a positive determinant of payments to the president. This suggests that rational presidents should use more of the increased resources a merger provides to increase his utility through on-the-job consumption by increasing staff payments and new organizational activity rather than building union savings.

Merger does not change the relationship between disbursements to union officers and membership size or wealth. Like payments to the president, the wealthier a union of a given size, the greater the payments to union officers. This suggests that although all officers must be taken care of in order to ensure a successful merger, additions to membership won't increase payments to officers after the merger has occurred. The union may become overstaffed with the merger so that further growth does not require growth in the union bureaucracy.

The regression on expenditures for officers and staff leads to similar conclusions. Greater wealth for a given union size leads to higher staff payments, greater membership for a given wealth leads to higher staff payments, greater membership for a given wealth leads to lower payments. The membership interaction and wealth interaction variables suggest that merger enhances these relationships. Merger itself does not significantly change these payments; asset growth allows the union to expand its staff, membership growth does not.

Other Expenditures

A regression was also run on total expenditures on education and publicity. Managerial discretion theory predicts that merger will lead to increased union expenditures on "education and publicity." The prestige and power motives of managers make them better off the greater the expenditures on lobbying, union publications and other educational materials and programs. As predicted, the merger dummy is positive and significant. These expenditures grow with membership before the merger, but membership growth is less important in the union's ability to make expenditures in this area after merger occurs. After merger (and the impact of the dummy is considered), further increases in these expenditures require increases in union wealth.

Locals and Strike Payments

Locals

One indication of the success of national union merger in creating economies of scale at the local level is the ability of the

new union to combine locals. The regression on locals supports the contention that merger can lead to significant economies of scale at the local level. The time variable, T, is negative as predicted, but not significant (significance = .135), however the two membership variables provide important information. The significant negative sign on membership suggests that prior to the merger new members tended to come from expanding employment at previously organized plants. The merger changes this relationship between locals and membership from -.242-E3 new locals per new member to +.110-E3 new locals per new member. This suggests that after the merger, unions are either more successful at organizing, or more determined to organize; I believe it is the former. After the merger occurs new members mean new locals. Regression results on affiliated locals are shown in Table 8.

Strike Payments

The model developed in earlier chapters predicts that merger will affect the optimal strike activity of unions depending on the relationship between the merging unions. Mergers occurring between unions whose memberships are net substitutes will internalize an external economy in strike activity, and hence strike activity should increase. Mergers occurring between unions whose memberships are net complements will internalize an external diseconomy, and hence strike activity should decrease.

The results of these regressions are less promising; the regressions fail to measure many significant determinants of strike activity. However, for the regression on total strike payments by the

Table 8. Merger Impacts on Strike Payments and Locals

	Locals	Strikes	Strike/Member
R^2	.23629	.74602	.69317
Constant	1417.7871 (4.31)	-2230461.2 (.836)	-14.198012 (2.45)
Year	-12.113750 (2.48)	30043.132 (.749)	.16191005 (1.87)
Member	-.241478-3 (6.45)	-2.2448531 (5.40)	.513425-6 (.837)
DMember	.351652-3 (6.00)	-.23055327 (.178)	-.105052-7 (.980)
Rnasst	xxxxx	.15137391 (15.97)	.15921011 (18.38)
DRnasst	xxxxx	.228545-1 (.763)	-.286870-1 (1.48)
DC	xxxxx	-53206.129 (.082)	2.1770170 (1.48)
DS	xxxxx	380991.50 (.675)	2.1147730 (1.79)

Locals is the number of affiliated locals in the national union.
Strikes is total strike payments paid.
Strike/Member is total strike payments per member.
Year is the year of the observation.
Member is the number of dues paying members in the union.
DMember is the merger dummy multiplied by Member.
Rnasst is the net assets of the union.
DRnasst is the merger dummy multiplied by Rnasst.
DC is the merger dummy multiplied by a dummy for complement mergers.
DS is the merger dummy multiplied by a dummy for substitute mergers.
All financial statistics are in 1967 dollars.

unions, the signs on the post merger dummy variables show the expected signs, but are not significant. The dummy variable for complements for years after the merger, (DC) is negative and the dummy variable for substitutes for years after the merger (DS) is positive. The only significant variables are membership and net assets, both positive as expected.

The results of the regression on strike payments per member are better. Although the variable for complementary mergers is positive, it is not significant, whereas the variable for substitute mergers is positive as expected and significant. Thus this supports the hypothesis that mergers between substitute unions will result in relative increases in per member strike activity. Regression results on strike payments are shown in Table 8.

Conclusion

The empirical testing in this chapter lends strong support to the general theory of union mergers developed in earlier chapters. There is strong evidence that union mergers are successful in creating economies of scale in national union services, and in the ability to combine affilitated locals. Evidence has also been presented which supports the managerial discretion incentive of national union officials to seek mergers in pursuit of their self-interest. Weaker evidence has been presented, and the need for more detailed work shown on the question of whether union mergers have an impact on strike activity as predicted by the internalization argument.

CHAPTER VI

CASE STUDY: THE UNITED STATES POSTAL SERVICE

Introduction

The United States Postal Service (USPS) and the members of the postal unions provide a good case study of the concepts presented in this thesis. The USPS provides a good source of data for studying a labor environment of several unions with some interunion rivalry dealing with a single employer. The drastic changes in the postal industry during the period of the study provide an excellent opportunity to observe union behavior as it relates to the predictions made in the first three chapters of this thesis.

The postal reorganization of the early 1970's should have an impact on postal management's costs and benefits of resisting union demands similar to the impact of structural changes in the private sector which increase the market power of firms. The postal unions' consolidation through coordinated bargaining and mergers is in large part a response to the structural change in the postal marketplace.

The swift technological change in the industry through the advances in electronic communication requires a response by the postal unions to protect their economic viability. Mergers within the broadly defined communications industry provide an opportunity for the

postal unions to take advantage of these technological changes rather than being hurt by them.

This chapter takes a closer look at the history of the post office and its unions, the changes in the industry and the unions' responses to these changes in the framework of the merger incentives discussed earlier. The discussion includes analysis of legislative changes in the collective bargaining for postal workers, structural changes in postal management, jurisdictional disputes and technological change.

Prior to Reorganization

Until recently, the federal government's monopoly over the delivery of mail, which was periodically reinforced by legislation[1] was seldom questioned. Given this monopoly power the Postal Department grew into one of the most politically administered departments in the federal bureaucracy. Political appointees were placed into all levels of the organization without regard to ability or experience in postal operations.[2]

By the 1960's it had become evident that continuing the practice of management by politics was becoming unacceptally expensive. Annual operating deficits were in excess of a billion dollars.[3] The financial

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[1]Stuart R. Wolk, "Postal Reform--Fact or Fiction?" Labor Law Journal 22 (June, 1971):366.

[2]Milden H. Fox and Donald Heinz, "Postal Reorganization Act--Postal Service Collective Bargaining Enters a New Era," Journal of Collective Negotiations in the Public Sector 2(4) (Fall, 1973):372.

[3]Stuart Wolk, p. 366.

difficulties faced by the Post Office Department were caused by personnel, management and technological inadequacies in the traditional postal operations.

Mail was being handled with the same basic equipment that had been used for decades, even though the volume of mail flowing through the department was increasing by roughly 2 billion pieces annually. Volume increased from 28 billion pieces in 1940 to 78 billion is 1967.[4] In October 1966, Chicago's massive main post office broke down. A 10 million piece backlog of mail froze the facility for three weeks. This visable breakdown brought the system's inadequacy to light, and stimulated changes in managerial procedures. In addition to these problems, the patronage attractions of the system had slowly lost their appeal to urban legislators, who realized that the appointment of a local postmaster turned into a political liability as the disappointed office seekers outnumbered the one recipient.[5]

Postmaster General Lawrence F. O'Brien became frustrated by his limited discretionary power to manage the agency. As he told a congressional subcommittee in 1967, he had no control over revenues, wages or benefits to employees, the level or type of service provided or the system's physical facilities.[6] O'Brien faced the same basic problem

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[4]President's Commission on Postal Organization, Report to the Committee, Towards Postal Excellence (Washington, DC: US Government Printing Office, 1968) 4(part 7):44.

[5]John T. Tierney, Postal Reorganization--Managing the Public's Business (Auburn House Publishing Co., 1981), p. 10.

[6]U.S. Congress, House, Committee on Appropriations, Postal Appropriations, Hearings before a Subcommittee of the House Committee on Appropriations, 90th Congress, 2d Session, 1967, pp. 27-28.

many political executive face, control over his agency's activities was spread over several political institutions. He believed that postal service was basically a business operation, and could be run more effectively if its managers had discretionary control over revenues, personnel policies, and services. To seek changes in this direction, he created a confidential task force to develop a plan that would give postal management greater autonomy in its policy-making.[7]

President Johnson selected Frederick R. Kappel, a retired board chairman of American Telephone and Telegraph, to head the President's committee on Postal Organization to study O'Brien's task force proposal. The Commission was made up of the business elite, and included George Meany, President of the AFL-CIO as a nod to the postal unions. In June 1968, the President's Commission on Postal Organization issued its report, identifying what it saw as the postal system's fundamental problem.

> The organization of the Post Office as an ordinary Cabinet department guarantees that the nominal managers of the postal service do not have the authority to run the postal service. The important management decisions of the Post Office are beyond their control and therefore cannot be made on the basis of business judgement.[8]

Under President Nixon and Postmaster General Winton M. Blount, the Post Office Department launched a campaign for the agency's overhaul. As with most proposals advocating significant change, the

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[7]Harold E. Dolenga, "An Analytical Case Study of the Policy Formation Process--Postal Reform and Reorganization" (Ph.D. dissertation, Northwestern University, 1973), pp. 238-240.

[8]Toward Postal Excellence, p. 33.

postal reorganization proposal found both strong support and opposition. The strongest opposition came from the postal employee unions. The unions opposed any significant change because they feared a reduction in their influence would occur if the role of Congress in postal policy-making was reduced. These unions had a great amount of influence in Congress, and had been quite successful in their lobbying activities. Because the reorganization proposal maintained the prohibition of strikes, the postal unions believed that direct collective bargaining with the Post Office instead of the lobbying efforts with Congress would significantly reduce the political and economic power of the postal workers as a group.

The unions argued that under a corporate postal system, there would be no effective way of ensuring that the actions of management would respond sufficiently to the needs and interests of the public.[9] Hidden in these arguments was, of course, the fear that the postal management would act less "paternalistic" and be less influenced by the great political power of the unions than Congress had been.

The unions did recognize that reforms were necessary, and could be in their own interests, but insisted that such drastic changes in policy might prove to be a remedy worse than the problem. As reported by Tierney, the opposition of these unions made passage difficult. These unions "were well financed and unusually skillful at the art of

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[9]U.S. Congress, House, Committee on Post Office and Civil Service, Post Office Reorganization, Hearings before the Committee on Post Office and Civil Service, 91st Congress, 1st Session, 1969, pp. 343-345, 378, 733-735, 837.

lobbying, commanded respect and attention on Capitol Hill."[10] In addition, the policy-making process of the government, which encourages input from any interested group, provided the unions many opportunities to block action on the measure.

While the Post Office Department was preparing its first draft of the reorganization bill, the postal unions were beginning to push for a wage increase. These two actions became linked, as the pay issue became the leverage for gaining union support of the reorganization bill. In February 1969, President Nixon proposed increasing postal pay by less than 3%. The unions argued for a more substantial increase, and the Administration offered to raise the increase to just over 4%.[11] The unions then took the matter to the arena of their strength, Congress. Throughout 1969, the postal pay issue overshadowed the reorganization proposal in Congress. In October the House approved an 11% pay increase for postal workers, which prompted an increased effort to reach a settlement on a combination pay package and reorganization plan by the Post Office Department, the President and the unions.[12]

The Nixon Administration withheld action on the pay issue until it was able to win some support from the unions for the reorganization proposal. The unions had the political power to veto any reorganization proposal that did not meet their pay demands. This political

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[10]Tierney, p. 15.

[11]Rita L. Moroney, "Postal Reorganization--An Outline" (Typewritten files of the postmasters general, U.S. Postal Service as reported in Tierney), p. 20.

[12]Dolenga, pp. 529-540.

stalemate led to talk of a postal strike by the union members by February 1970. One March 18, 1970, postal workers in New York City went on an illegal strike that spread to Buffalo, Cleveland, Detroit, Chicago, Milwaukee, St. Paul and other cities. The strike lasted eight days and involved about a quarter of a million postal employees.[13]

A plan emerged on April 1, 1970 which offered the union a two-step pay increase, an immediate 6% raise retroactive to December 29, 1969 and an 8% increase contingent on union support for reorganization.[14] On April 16 an agreement was reached on the terms of a postal reorganization proposal, which included most of what the Post Office had wanted, with one change to secure the support of the unions, third-party binding arbitration.

The Postal Reorganization Act made several important changes in the institutional arrangements for postal management, including the establishment of an independent personnel system, with provisions for direct collective bargaining between postal management and the unions.

Postal Unions

The history of labor-management relations in the Postal Service is long and rich, since postal workers were the first federal employees to join unions in significant numbers. Passage of the Civil Service Act in 1883, which was intended to protect workers from the worst of the political abuses of postal employment, changed the incentives of

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[13]Robert F. Repas, Collective Bargaining in Federal Employment (Honolulu: Industrial Relations Center, University of Hawaii, 1970), p. 98.

[14]Dolenga, pp. 540-545.

the workers from attempting to improve their lot through individual political pull at the local level to concerted action. The Act, which gave the workers more job security, deepened their interest in the postal service and its working conditions.[15]

The letter carriers in the larger cities were the first postal employees to organize, forming the National Association of Letter Carriers in 1889. Among the city letter carriers' earliest grievances were lack of civil service protection except in the largest of cities, poor working conditions and arbitrary management behavior. A successful law suit filed by the union in 1893 forced the Post Office to observe the overtime provisions in the legislation of the time.[16]

The postal clerks established the National Association of Post Office Clerks in 1890 which evolved through several splits and mergers into the United Federation of Postal Clerks. It was from this union that the National Postal Union split in 1958. The National Postal Union became an industrial union by accepting non-clerical workers, although most of its membership which is concentrated in northeastern cities, are clerks.

The National Rural Letter Carriers Association formed in 1903 historically held considerable influence despite a relatively small membership. The rural carrier's influence among customers and hence his political pull was always greater than that of his urban

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[15]Sterling D. Spero, The Labor Movement in a Government Industry (New York: George H. Doran Co., 1924), p. 61.

[16]Alan L. Sorkin, The Economics of the Postal System--Alternatives and Reform (Washington, DC: Heath and Co., 1980), p. 69.

counterpart. The postmasters and postal supervisors also organized associations by 1908.

As most labor organizations of the time, the postal employee organizations faced many attempts by officials to restrict their activities. In 1895 Postmaster General William L. Wilson issued an order prohibiting postal employees from visiting Washington. When the House Commission on Post Office and Post Roads had bills before it affecting clerks and letter carriers in 1901, the associations lobbied vigorously on Capitol Hill, deluging President Roosevelt with letters, telegrams and petitions. Roosevelt reacted by issuing the first of his "gag orders." He issued a second in 1906, and President Taft issued a similar one in 1909. These "gag orders" limited the legislative activities of all federal employees, but primarily affected the postal employees because they had the only effective organizations.[17] Postal employees were forbidden to attempt to influence legislation in their own behalf. These "gag orders" were in effect until the Lloyd-LaFollette Act invalidated them in 1912. This act gave federal employees three rights: the right to join a union, the right to petition Congress for redress of grievances or to testify before Congressional committees without fear of reprisal, and the right to receive in writing reasons for all proposed demotions and dismissals.

The right to lobby and petition Congress proved to be especially important to the postal labor organizations, who were sometimes confronted by hostile postmasters general. These organizations developed

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[17]Repas, p. 3.

close and mutually beneficial ties with congressmen.[18] The postal unions were established to give postal workers an organized political voice in representing their interests. Thus, special interest was always placed on developing and maintaining good relations with congressmen, especially those sitting on post office committees. Prior to the reorganization act (1970), all major postal labor matters were determined by Congress through tripartite bargaining with the post office department and the postal unions. The postal unions developed expert lobbying skills and came to Congress with significant political strength.

The unions enjoyed large size and wide geographic distribution, with about 90% of postal employees belonging to a union at the time of reorganization. This large membership provided the leaders with substantial financial resources and credibility. The large number of unionized postal workers in every congressional district made for a formidable political force. The postal unions were the oldest and strongest of federal employee organizations, and were able to construct strong organizations in Washington with relatively large staffs to express positions, gather information, and keep track of Congressional voting records. There was no real organized opposition. Prior to reorganization, postal costs and revenues were not directly linked as funding came through appropriations, not derived from revenues. An increase in wages did not necessarily result in an increase in rates. Thus the mailing industry organizations and the unions generally did

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[18]Sterling D. Spero, Government as Employer (Carbondale, IL: Southern Illinois Press, 1948), chap. 8.

not automatically assume antagonistic positions. The Executive Branch which generally proposed small increases was the only real adversary of the unions.[19] The unions became skilled at what one union official called "the gentle art of lobbying," placing their organizations' strength and financial resources at the use of congressional allies and using them to the detriment of those who dared to be nonsupportive.[20] Because the Hatch Act prohibits postal workers from involvement in political campaigning, highly influential auxiliary organizations developed.[21]

This combination of resources and lobbying talent forced post office committee members to absorb intense direct pressure from the unions and led to numerous victories for postal employees, especially in the 50's and 60's. A post office department executive in describing the unions' ability to lead a successful drive to override an Eisenhower veto in 1960 said, "The pressure from the postal employee groups is terrific--just terrific. They are the best organized union in the world. When they want to turn on the heat they are almost unbearable."[22] The success of this "heat" can be seen in the fact that only one postal pay bill was defeated on any kind of vote in the

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[19]Tierney, pp. 82-85.

[20]William C. Doherty, Mailman U.S.A. (David McKay and Co., 1960), pp. 21-22.

[21]For a description of postal union lobbying activity see Richard F. Fenno, Congressmen in Committees (Little, Brown, 1973), pp. 41-42 and 242-255.

[22]Quoted in Fenno, p. 247.

House during the 12 years from 1955 to 1967.[23] In view of this record it is not surprising that the postal unions resisted giving up their relations with Congress for a new relationship with a corporate postal organization.

Labor Relations Environment

With the passage of the Wagner Act in 1935, unions and collective bargaining began to develop rapidly in the private sector. It wasn't until 1949 that the Post Office clerks and the carriers with the cooperation of other governmental workers unions' and the AFL-CIO sponsored Congressional legislation providing public employees with rights for collecgive bargaining, mediation by the Federal Mediation and Conciliation Service, binding arbitration and a grievance procedure.[24] The Administration opposed these measures, citing statutory authority of government agencies, and the wisdom of regulating union-public management relations by the executive branch.

Nothing much happened in labor-relations for public employees until President Kennedy appointed a Task Force on Employee-Management Relations in the Federal Service in 1961. The Task Force proposed three types of union recognition, exclusive if the union represented a majority of the employees in the unit, formal if union representation was between 10 and 50 percent of the workers in the unit, or informal if the union represented less than 10% of the employees. Employee

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[23]Fenno, p. 246.

[24]For a discussion of these bills see Willem B. Vosloo, Collective Bargaining in the United States Federal Civil Service (Chicago: Public Personnel Associates, 1966), pp. 45-59.

units could be set up along craft, plant, departmental or functional lines. Since wages, hours of work and most fringes were set by law, these issues were not bargainable, and unions could not negotiate with regard to an agency's mission, its budget, its assignment of personnel, or the technology in use. Negotiations were restricted to such areas as work environment, work shifts, tours of duty, grievance procedures, safety, transfers, and promotion-demotion standards.[25] The Task Force's recommendations were supported by President Kennedy and were placed in Executive Order 10988 in January 1962.

By 1968, a total of 1,416,073 federal employees were represented in exclusive bargaining units, of whom 618,562 were in the postal service.[26] Table 9 lists the unions and the number of employees represented by each in 1968.

The post office in following the structure of the labor organizations established craft unions on a national, regional and local basis. Thus it was possible that a single individual was represented by three different labor organizations. National exclusive representation was partially determined by organizational structure. Three craft unions with less than 10,000 members each (the Motor Vehicle Employees, the Maintenance Employees, and the Special Delivery Messengers) received national recognition, while the industrially organized National Postal Union (62,000 members) and racially-based National

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[25]Joel Seidman, "Collective Bargaining in the Postal Service," Industrial Relations 9(1) (October, 1969):17-18.

[26]Seidman, p. 19.

Table 9. Unions Representing Postal Employees.

Union	Estimated 1968 Membership
National Association of Letter Carriers	90,000
United Federation of Postal Clerks	143,000
National Rural Letter Carriers Association	40,000
National Post Office Mail Handlers, Watchmen, Messengers and Group Leaders	35,000
National Association of Special Delivery Messengers	2,500
National Alliance of Postal and Federal Employees	32,000
National Federation of Post Office Motor Vehicle Employees	8,000
National Association of Post Office and General Services Maintenance Employees	21,500
National Postal Union	70,000
National Association of Postal Supervisors	32,000
National League of Postmasters	18,000
National Association of Postmasters of the U.S.	29,000

Source: Kappel Commission, Towards Postal Excellence, Report of the President's Commission on Postal Organization 5:19.

Alliance (40,000 members) could win exclusive rights only at the local level.

The Department and the seven unions with national exclusive recognition negotiated jointly on issues common to all employees, while supplemental agreements were negotiated with individual unions on problems limited to that craft. Once a general, national agreement was reached negotiation with local exclusive bargaining representatives began. These local negotiations were designed to implement and apply the national agreement, without raising new issues. The national agreement was in general terms and the local provisions were detailed and specific.

The Postal Reorganization Act passed in 1970 drastically changed postal labor-management relations. The act provided that the new USPS be governed by the National Labor Relations Act unless this act was inconsistent with other provisions of the Postal Reorganization Act. It provided that the USPS negotiate over wages, benefits and working conditions with the labor organizations that held national exclusive recognition on the date of the acts enactment. The National Labor Relations Board was authorized to determine the appropriate bargaining units and to administer representation elections. The law retained the prohibition against strikes, but provides for fact-finders and binding third-party arbitration for disputes the parties could not resolve themselves. There is one significant exception the Act has with the NLRA other than the strike prohibition--the union shop is not allowed within the USPS.

Since the reorganization, postal workers have come to realize that they enjoy the "best of both worlds," the private and public sectors.[27] Postal workers have the right to bargain with their employer over wages and benefits (a right not all federal employees hold). They also have shown that they can enforce their demands with a realistic and effective strike threat. Additionally, they have not lost their old lobbying skill, their organizational or financial strength, and they regularly go before and show influence with, congressional committees.

The Mergers

The postal workers' struggles in 1969 and 1970 (climaxed by the 1970 strike), to shape the reorganization bill to their liking and to win a satisfactory pay increase showed them that their power was not limited to lobbying. The fight surrounding the postal pay and reorganization legislation forced the unions into a more aggressive position than they had been in before. The strike showed the workers what strength they had and helped them to view themselves as real unions rather than political lobbying associations. This attitude was reflected in a desire for unity through merger of the postal unions.

Delegates to the August 1970 United Federation of Postal Clerks (UFPC) convention unanimously passed a resolution instructing the national officers to continue to pursue the merger of all postal unions. The delegates' desire was for more effective action through eliminating the division between postal employees. Looking into the

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[27]Tierney, pp. 97-98.

future the delegates also endorsed a single union of all communication workers.[28]

The first part of the merger came in December 1970, only four months after President Nixon signed the act. The United Federation of Postal Clerks, with about 175,000 members, initiated a merger with the much smaller National Association of Post Office and General Services Maintenance Employees, and the National Federation of Post Office Motor Vehicle Operators. In January 1971, the National Association of Special Delivery Messengers signed the merger agreement, bringing the total membership to over 200,000. All four of these unions were AFL-CIO affiliates prior to the merger. In March 1971, the independent and industrially organized National Postal Union with about 70,000 members agreed to merge with the new organization.[29] The NPU brought to the new organization the nation's largest and most militant local, the Manhattan-Bronx Postal Union, with 27,000 members. After writing a new constitution, the American Postal Workers Union became one of the largest unions in the AFL-CIO.

At the August 1970 convention of the National Association of Letter Carriers (NALC), the delegates repealed a prohibition placed on the officers at the 1968 convention, and resolved to explore the possibility of establishing a Council of Postal Unions with the other postal unions. The resolution also reiterated a longstanding NALC desire for eventual merger of all postal unions. Although the NALC

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[28]Union Postal Clerk, April 1971, pp. 2-4.

[29]Union Postal Clerk, June 1971, pp. 2-3.

considered joining the merger, its president, James H. Rademacher, wanted to be sure that his membership would benefit from turning over their substantial assets to the new organization.[30] He never got that assurance and both the NALC and the National Rural Letter Carriers Association stayed out of the new APWU.

The Mail Handlers changed from a small autonomous public employee organization to part of a large union experienced in private sector collective bargaining when it merged into the Laborer's International Union of North America (LIUNA, AFL-CIO) and became the center of that union's plan to organize in the public sector. In an effort to ward off raiding by the NPU prior to the foundation of the APWU, the Mail Handlers signed "mutual assistance pacts" with the other two small postal unions, the Motor Vehicle Employees and the Maintenance Employees.

Because all postal unions recognized the existence of common goals and interests, as well as the importance of unity in negotiations, the unions established a single bargaining committee. This committee was originally called the Council of American Postal Employees (CAPE).[31]

Merger Incentives

Administrative

The bargaining structure in postal labor-management relations was very complex and inefficient in the late 1960's. Collective

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[30] The Postal Record, April 1971, pp. 4-5.

[31] Government Employee Relations Report (Washington, DC: Bureau of National Affairs) 386 (September 28, 1970):A8.

bargaining started with the negotiation of a national agreement with the seven unions holding national recognition after Executive Order 10988. This national agreement served as a master for local negotiations. The local agreements were to deal with particulars in each unit under the direction of the national agreement. However, there were approximately 35,000 post offices in the U. S. in 1968, and it was theoretically possible for each of the post offices to have seven agreements. Although some unions were not represented in many local post offices, and some local workers were represented by unions not having exclusive recognition at the national level, there were about 9000 local agreements.[32] This is an extremely large number of agreements for the unions to administer effectively. Merger of the unions provided for better utilization of resources and the need for fewer local agreements, thus increasing the efficiency of contract policing.

Further administrative problems arose because different unions held exclusive bargaining rights for the same craft at different organizational levels. Thus a single worker, a member of one union, could be represented by that union on the local level, a different union at the regional level, and a third union at the national level. Thus as a grievance impasse advanced upwards through the representational hierarchy, a worker found himself being represented by different organizations. Local unions represented at a higher level by a rival organization charged that the representatives of an exclusive regional or national bargaining agency did not afford them the same

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[32]Donald A. Woolf, "Labor Problems in the Post Office," Industrial Relations 9(1) (October, 1969):30.

conscientious service that they gave their own locals. As Fox and Heinz put it, " . . . the worker needed a scorecard to tell who was at bat for him!"[33] This confusion resulting from the three levels of exclusive recognition led Tod Seidman to suggest that, " . . . a single union of postal employees, such as exists in many other countries would simplify problems for both parties."[34]

Economies of Scale

During the period of Executive Order 10988, the unions borrowed some of the management problems of the Post Office Department, mostly an unworkable chain of command and vast spans of control. According to a study by Woolf, the unions had too few full-time officers, all of whom had insufficient staff. The lack of union personnel came from a low dues structure, a typical private sector union member paid 2 to 3 times the monthly dues that a typical postal union member paid. The underfinancing was due to the desire of union officers to maintain their positions. Raising dues was extremely unpopular, and the income of the union officers was significantly larger than that of the general membership. Merger and the administrative economies of scale that result could alleviate the underfinancing without requiring a significant dues increase.

Because of the large number of local post offices, most of which had members of several unions, merger could result in significant consolidation of local union structures. For example, the Mail Handlers

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[33]Fox and Heinz, p. 376.

[34]Seidman, p. 22.

were concentrated in approximately 250 cities throughout the U.S. With the merger with the Laborers (also concentrated in cities), the existing 250 locals were reduced to 31.[35]

Collective Bargaining

During the period in which Executive Order 10988 was in effect, the Post Office negotiated four national agreements which were signed by all of the labor organizations with national exclusive recognition. Negotiations were conducted with increasing intensity, and the 1968 national negotiations appeared to mark a turning point. Management adopted a firmer stance than in the previous three rounds, and mediation was necessary for the first time. The Executive Order system proved frustrating for the unions. The limited scope of bargaining, local management refusal to bargain, and the lack of binding arbitration of grievances curbed the unions' ability to meet management on an equal basis.

During the first negotiations, after the reorganization (1971) postal unions did not present a united front. The big city, urban unions were in conflict with the others over what should be the initial issues for negotiations.

The focal point of the union versus union conflict was in the New York City area, where the strike originated. The Manhattan-Bronx local of the National Postal Union wanted the proposed national agreement to include provisions for area wages and local-unit bargaining.

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[35]Gerald C. Somers (ed.), Collective Bargaining--Contemporary American Experience (Industrial Relations Research Association, 1980), p. 446.

The National Postal Union was largely a big city union where the cost-of-living was much higher. These issues had little chance of being a major item in the negotiations because the National Postal Union did not hold any national exclusive recognition and thus were not a part of the negotiations, and James H. Rademacker, labor's top negotiator and president of the National Letter Carriers Union did not consider their issues as important as the urban and rural locals did.

The National Postal Union and the National Alliance of Postal and Federal Employees began a court suit in October of 1970 seeking admission to the negotiations, but were unsuccessful. The suit alleged that their exclusion from the talks which affected their members' pay and benefits was discriminatory.[36]

The five unions merged after having seen the impact that union to union friction could have upon bargaining at the national level. "Further it is apparent they were practicing the strength in numbers philosophy. The merger was approved by 90% of the votes cast."[37]

Rivalry

Traditional rivalries existed between several of the crafts. The rivalry between the clerks and carriers was increased by a reclassifying of tasks from the carriers to the clerks. In 1971 an impartial

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[36]Bruce E. Thorp, "Postal Report--Mail Unions and Government Enter Era of Collective Bargaining," CPR National Journal 12/5/70, pp. 2655-2656.

[37]Constitution and By-Laws of the American Postal Workers Union, Government Employee Relations Report, Reference File 20, p. 101.

umpire appointed under the AFL-CIO to enforce no-raiding provisions found that the carriers had attempted to organize and represent special delivery messengers.[38] The skill and task differences have become blurred, complicating work assignment according to craft. The Mail Handlers and Clerks often work side by side, and the aggressiveness of the Mail Handlers has been directed at the Clerk craft as well as the Postal Service. Although the National Rural Letter Carriers Association is regarded as the most conservative and least militant of the postal unions, it also has been involved in jurisdictional disputes.

Clerks vs. Mail Handlers: Jurisdictional Disputes.[39] The duties of clerks and mail handlers has always overlapped, and their craft assignment has been a significant labor relations problem in the U.S. Postal Service. The question involves the distinction between "distribution by sorting," a clerk's job, and "distribution by bulk movement," a mail handler's job. This distinction has become increasingly blurred since the 1960's.

The increasing conflict between the skilled clerks and the relatively unskilled mail handlers in the 1960's led to an organizational opportunity for the Laborers International Union (LIUNA) which had previously "acquired" the mail handlers. The factors leading to this opportunity were the reaffirmation of craft alliance after the 1971 postal union mergers, the decline in demand for common laborers

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[38]Somers, p. 445.

[39]Harriet Berger and Edward Blomstedt, "Clerk vs. Mail Handler--Jurisdictional Disputes in the Postal Service," Labor Law Journal 27(10) (October, 1976):641-647.

(LIUNA traditional membership base), and the modernization program of the United States Postal Service which changed the composition of skill requirements for the inside postal crafts.

In 1968, foreseeing increasing difficulty in servicing its scattered 35,000 members and increasing its membership base, the National Association of Post Office Mail Handlers (NAPOMH), arranged a merger with Laborers' International Union of North America.

LIUNA's traditional membership was in the private sector, composed of unskilled common laborers. In an effort to halt the decline in its membership from the technologically induced decline in the demand for common labor, LIUNA looked to the largely unchartered land of the public sector. In the postal service, technology was increasing the unskilled mail handler's jobs at the expense of the more skilled clerk jobs.

In 1970, after the Postal Reorganization Act reaffirmed the postal craft as the appropriate representational unit, the National Postal Union (NPU) dropped its commitment to industrial unionism and merged with the four other craft unions into the American Postal Workers Union, which was known as a "craft conglomerate."[40] The NPU was formed in 1958 after it broke away from the National Federation of Post Office Clerks over lack of representation at conventions of the urban and industrially oriented minority. The NPU established an industrial union in the postal service and was thus in competition and conflict with all of the other postal unions. The formation of the

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[40]See Stuart R. Wolk, "Postal Reform--Fact or Fiction," Labor Law Journal 22 (June, 1971).

APWU in 1971 reduced the conflict among the inside craft organizations that were participants in the merger.

Under the reorganization act, the American Postal Workers Union was recognized as national exclusive representative for maintenance employees, special delivery messengers, motor vehicle employees and postal clerks. The National Association of Letter Carriers and the National Rural Letter Carriers Association were recognized as exclusive representatives of letter carriers and rural letter carriers and the Mail Handlers division of Laborers' International Union of North America was reorganized as exclusive representative of mail handlers.

In the larger postal centers, the mail volume requires differentiation of skills and jobs with an employment of hundreds of clerks and mail handlers. The modernization of mail processing machinery has changed the composition of skills, increasing mail handler tasks at the expense of clerk work. This has sharpened the ever-present jurisdictional conflict between clerks (APWU) and mail handlers (LIUNA).

The introduction of the ZIP code reduced the skill requirements of many clerks, so that with only limited training, mail handlers can sort mail. Where such simple separation is all that is required for mail processing, handlers can perform the work at a lower job level and wage.

The introduction of ZIP codes and mechanized sorting has reduced the distinction between the functions of clerks (sorting) and handlers (bulk movements). The distinction turns on the question of whether the job of keypunching the ZIP code is sorting or handling, and thus should a clerk or a mail handler perform the task.

In November, 1971, the post office and LIUNA reached an understanding on mail handler craft assignments: "Where it is found that employees have duty assignments on a regular basis which are comprised of all mail handler duties those duty assignments will be delegated to the mail handler craft. . . . "[41] Armed with this agreement, LIUNA was able to dislodge clerk operators from sorting machines in three major cities. Appeals by the APWU brought a reversal from the Postal Service Headquarters in May, 1974.

The Postal Service, the APWU and the LIUNA agreed to submit three machine operator assignment disputes to impartial arbitration, and all of the positions were awarded to the clerks. This award intensified the jurisdictional dispute between LIUNA and APWU.

The twenty-one mechanized plants of the National Bulk Mailing System created thousands of mechanized operator positions at stake between the clerks and handlers. The sack sort keyer positions were assigned by management to the handlers, and the parcel sorting to the clerks, both at the PS-5 level. These assignments were consistent with traditional craft jurisdictions, and represented a rough compromise in total job assignments to both crafts.

However, the APWU is still concerned with the problem of craft assignment, and must defend its jobs and members from attack by LIUNA. The clerks fear that technological change will further reduce clerk skill requirements, replacing clerk skills with mail handler physical labor.

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[41] The American Postal Worker, July, 1975, p. 21.

The 1971 merger forming the American Postal Workers Union reduced the jurisdictional disputes between the five member groups, but has intensified the disputes with the mail handlers who joined LIUNA, which became a rival force in postal management.

Technological Change

Technological change has an impact on unions much the same as its impact on business firms, by rendering certain products, and thus the skills used in making them, obsolete. Business firms can reduce the risk of technological change in two manners: adaptability of the production process to new techniques, and diversification into lines not threatened by technological change. Technology can either reduce the production costs of an old product, or create new products. The threat to an individual worker is the same in either case--the loss of job opportunity. The changing of production methods can reduce the demand for certain skills, as well as technologically induced changes in the type of product demanded in the marketplace.

Changing job skill requirements within an industry are not as critical to an industrially organized union as a reduction in demand for an industry's product which has been made technologically obsolete.

Merger may be an appropriate response to the risks associated with technological change, especially for the survival of the union. The union's vulnerability to technological change depends to some extent on the mobility of its membership. If skills are easily transferable to the new, advanced industry, the union can remain viable by expanding its jurisdiction. If the relevant, related industries are

already heavily unionized by another labor organization, union institutional viability requires merger.

Electronic Mail. An extensive electronic mail system is becoming increasingly feasible economically due to the availability and declining cost of electronic communication channels, falling cost of high speed information control and storage systems, and the availability of technology to translate information ordinarily handled on paper.[42]

A study, summarized in Table 10, indicates that facsimile and data communications growth is expected to be quite rapid.

The Postal Service has not participated significantly in the developments occurring in the telecommunications industry and, thus, is at a competitive disadvantage with other communication organizations. Electronic communications tend to start in high value markets which are densely populated, and spread out from these centers, such as private parcel delivery has. A major factor in the substitution of electronic mail for conventional service is the development of techniques termed electronic funds transfer. Electronic funds transfer is likely to cause significant losses to United States Postal Service volume, especially in first class business mail. The 1985 estimated total diversion of 17.5 billion pieces of mail will reduce USPS volume from 73.5 to 56 billion pieces.[43] If this happens, and there is some continued labor

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[42]Robert Potter, "Electronic Mail," Science 4283(15) (3/18/77), p. 37.

[43]Commission on Postal Service, Report of the Committee on Postal Service (Washington, DC: U.S. Government Printing Office, 1977), p. 574.

Table 10. Telecommunications Terminal Use.

Terminal Type	Number in Business Use (Thousands of Units)			Projected Total Use (Millions of Units)	
	1975	1980e	1985e	1980e	1985e
Telephone	42,000	50,000	60,000	225,000	375,000
Telex/TWX	106	125	145	165	181
Facsimile					
Dial-up	110	220	445	880	2900
Dedicated	11	20	40	800	2600
Data Communication					
Teletype	860	1300	170	2300	3000
Display	95	150	240	375	900
Videophone	0	500	1000	10	30
Commun. Type	15	50	100	190	625

Source: Commission of Postal Service, Report of the Commission on Postal Service (Washington, DC: U.S. Government Printing Office, 1977), p. 516.

productivity increase, labor requirements within the post office, and thus membership in the postal unions should fall.

Unless the Postal Service begins development of its own electronic mail system, its future as well as the future of the postal unions looks bleak. The diversion of an estimated 23% of first class volume combined with continued growth of delivery points implies real rate increases (or subsidies) for the system to remain viable. Such increases at a time when electronic rates are falling will further erode the Postal Service's competitive position, and cause further diversions. Such a circular occurrence of events would prove disasterous to the postal unions. James LaPenta, of the Mail Handlers Union, believes that electronic mail could eliminate more than 300,000 postal jobs if private firms obtain the bulk of the new business.[44]

The Postal Service entry into the electronic communications field has received strong opposition from the private communications industry, and the Communications Workers of America. The unions representing the 650,000 employees of the United States Postal Service have argued strongly in favor of such entry. The postal unions could significantly reduce the risks involved in failure of the post office to compete in electronics by merger with the Communications Workers of America. Such a merger would provide a broader base to ensure long-run organizational viability.

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[44]Mike Causey, "Looking at the Future of Postal Service," The Washington Post, 3/17/79, p. C-2.

Organizational Structure

The main purpose of the Post Office reorganization in 1971 was to increase managerial autonomy. The commission believed that mail delivery was essentially a business operation which could be managed more efficiently if it were converted into a governmental corporation. "The department's old organizational arrangements appeared to restrict managerial flexibility, stifle innovation, discourage cost-consciousness, and cater to the demands of special interest."[45] Management in a government agency generally lacks the discretionary authority necessary to alter significantly its factors of production such as personnel and capital equipment. The rigidities of the civil service system meant that post office management had significantly less discretion than private managers in hiring and firing employees, and could not deviate from the wage schedules set by Congress.

The supporters of postal reorganization saw the movement as an opportunity to take politics out of postal management, making postal services more efficient. A more business-like management would stress increasing productivity, and controlling costs. In a business as labor intensive as the post office had been, controlling costs meant controlling labor costs. The most direct method of holding back costs was to hold back the rate of increase in wage rates and the level of employee fringes. The main alternative to controlling wages, was to hold the line on, or reduce the number of, man-hours. Both of these goals were against the objectives of the unions and their members. As the

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[45]Tierney, p. 1.

structure of the post office changed from one of political decision-making to one of corporate decision-making, the union's skills in lobbying and manupulating the political process diminished. To successfully fight the post office's attempts to reduce man-hours and compensation levels, the unions had to adjust to the changing structure of the decision-making process. Congress no longer had direct responsibility for setting compensation levels, thus the political skills the unions developed over the years were less important in maintaining real wage increases. Collective bargaining required a greater emphasis on economic skills and power than political. One important way for the workers to increase their economic bargaining power under the environment of the new "game" was to combine their power through institutional merger. Structural changes in a market often require structural changes in the economic organizations operating in that market if success is to be maintained.

Regression Results

Regressions were run on a postal data set separately from those in Chapter Four due to the different nature of the data. The Annual Report of the Postmaster General provides data which is confined to the postal service. The data is broken down by job description, not just minor industry classification, and includes several measures of employment including worker years, total full-time employees and total other employees. This allows a much better analysis on the impact of the structural changes in the postal service on the different unions. The compensation data includes benefits, and has no non-postal service

employees in the data set. All postal employees including supervisors and postmasters are "represented" by a union or an association.

Regressions were run on data obtained from the Annual Report of the Postmaster General. Yearly data were obtained on total salary and benefits paid, worker years, total full-time employees, total other employees, regional employees, clerks and handlers, city and rural delivery employees, building and equipment maintenance employees, and postal inspectors.

Several functional forms were tested, with the best results obtained using the following general functional form:

Employment (Earnings) = a + b*Yr + c*D + e

where Yr is the year, and D is a dummy variable for postal reorganization and union mergers. D = 0 for years 1970 and earlier, and D = (year-1970)**1.5 for years after 1970.

The exponential form of the dummy variable which provided the best fit to the data can be explained by the time necessary for the effects of postal reorganization and union merger to be realized. For several years after the changes (reorganization and merger) the impact increased at an increasing rate. The short period for which data are available, does not allow the study to account for the period after which the changes are fully felt. It is reasonable to expect that the exponential nature of the dummy variable, D, would not continue for long periods of time. This impact should slow, and eventually level off (Figure 11).

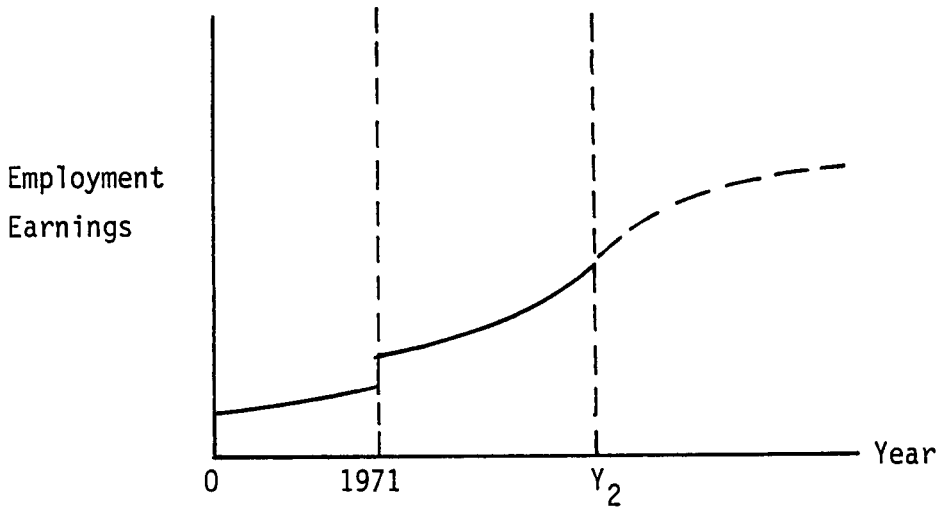


Figure 11. Impact of Union Mergers in USPS.

The main objective of the supporters of postal reorganization was to increase the efficiency of the postal monopoly. The supporters of the United States Postal Service's managers rather than Congress would result in managerial incentives and power more closely resembling private ownership. Given the labor intensive nature of the production process, reducing average costs required a reduction in either the rate of increase in compensation (salary plus benefits) or a reduction in man-hours per unit of mail processed.

From management's perspective, success in this objective can be viewed from the regressions on total compensation paid. In order to overcome the barriers to reorganization it was necessary to gain the support of the employees and their unions. This required making them feel better off, basically by purchasing their support with a pay increase. This purchase would benefit management if the discounted cost of the increase for the time compensation is above what it would be in the absence of reorganization is less than the discounted benefits accruing from future lower labor costs resulting from management's increased power under the reorganized postal service.

The results from the regressions on the data from the annual postmaster general's report shown in Table 11, supports this expectation. Measured in 1972 dollars, total compensation was growing at a rate of about $272 million a year. This growth was slowed significantly after reorganization and merger, the coefficient on the dummy variable is negative and significant at the 1% level.

This slowing in the growth rate of total compensation came through a reduction in the trend of labor inputs, which can be seen in

Table 11. United States Postal Service Regressions.

Dependent	R^2	Constant	Year	D
RComp	.95956	-7698.0869 (5.11)	+226.82319 (10.01)	+31.127354 (2.00)
RSalBen	.97203	-.13203+11 (13.74)	+.272473+9 (18.92)	-51646615. (6.49)
TtlFul	.92315	-426466.68 (6.64)	+13816.657 (14.35)	-4702.9000 (8.83)
TtlOthr	.41440	+78407.414 (.865)	+1355.1312 (.997)	-2164.5902 (2.88)
WkYrs	.84761	-252531.31 (2.92)	+13581.303 (10.49)	-5397.7187 (7.54)
Reg	.29803	+11198.467 (6.22)	-80.402130 (2.98)	+27.458997 (1.84)
ClkHndr	.86036	-23354.12 (5.61)	+6727.9779 (10.79)	-2527.8709 (7.33)
CyDel	.93361	-199549.01 (9.06)	+5181.9808 (15.71)	-1809.5048 (9.92)
RuDel	.63257	+36427.615 (19.70)	-83.540343 (3.01)	+81.719878 (5.33)
BldgEq	.98363	-30433.539 (12.16)	+746.53320 (19.91)	-45.709682 (2.21)
Inspec	.80060	-14515.312 (4.07)	+252.92647 (4.74)	-.70936486 (.024)

T-statistics in parentheses
D is a dummy variable for reorganization and merger in 1970
D = 0 for 1970 and earlier, D = (Year - 70)**1.5 after 1971
RComp is salary and benefits per worker year (1972 dollars)
RSalBen is total salary and benefits paid (1972 dollars)
TtlFul is number of full time employees
TtlOthr is number of other employees
Reg is number of regional employees
ClkHndr is number of clerks and handlers employed
CyDel is number of city delivery employees
RuDel is number of rural delivery employees
BldgEq is number of building and equipment maintenance employees
Inspec is number of postal inspectors
Number of cases equal 22

the regressions on worker years and total full-time employees. The regression on compensation per worker year measured in 1972 dollars, shows that payments per worker year increased faster after reorganization and merger than before. The coefficients on both the year variable and the dummy variable are positive and significant.

The unions, viewing increasing communications competition, and an undeniable need for increasing postal efficiency, saw some type of reorganization within the postal service as inevitable, and structural changes in the unions as an appropriate response. Given the trends in the industry, the unions needed to find some mechanism to defend its membership. Increased coordination in bargaining was rapidly followed by consolidation of union organization. The unions used their power for a present increase in compensation, and looked to the increased economic power of a larger more consolidated merged union to hold on to, or to increase these gains.

Postal management was able to reduce the growth rate in total labor costs (dummy on total compensation regression is negative), while the unions were able to increase the growth rate in compensation per member (dummy on compensation per worker year is positive).

This increase in real compensation per worker years bears noting. The postal unions were unusual in that they were able to make continuing gains in real compensation per worker during the latter part of the 1970's.

The regressions on employment show reorganization and union mergers having a negative impact on total full-time employees, worker years, and reducing total other employment. The postmaster general's

report breaks employment into several categories, including regional employees, postal inspectors, maintenance employees, clerks and mail handlers, rural and city delivery personnel.

Reorganization and union merger had no significant impact on postal inspectors, which had a time trend of about +253 per year both before and after reorganization. The time trend in regional employees increased after the 1970 changes in the postal system (D = +27.5).

The data on unionized employees is broken into four categories. Postal reorganization and the resulting union mergers show a negative impact on maintenance employees, clerks and handlers and city delivery employees. The 1970 changes had a positive impact on rural delivery employment. Prior to 1970 the time trend was negative, after 1970 the trend is positive.

Compensation gains by the consolidated unions have been strong. The unions' mergers have more than counteracted the reorganized postal service's increased managerial autonomy in compensation for individual union members. There has been some loss of employment opportunities, due partially to the increasing reliance on automation and electronic transportation, and partially to the increased managerial incentive to hold labor costs down. The data suggest that the union's strategy of consolidation has been successful in gaining real compensation for its membership despite the higher economic incentives and control of management to hold costs down, the high inflation of the 1970's, the technological changes in the industry, and the increased competition from electronic message transfers.

Figure 12 illustrates the impact of reorganization and the resulting union mergers on compensation and employment levels on postal workers. The exponential form of the dummy variable has the same interpretation as in the other regressions. Changes such as postal management reorganization and postal union reorganization will take time before its impact is really felt. The form for the dummy variable which gave the best result implies that the impact of the merger increases over time. It is reasonable to assume that this increasing impact will not continue forever. At some point in time the merger's impact will level off. This is illustrated in Figure 12 by the dotted lines after year Y_2. The curve D_1 in Figure 12 illustrates the impact of the 1971 changes in the postal service on real compensation per worker year and the employment of rural delivery personnel. The curve D_2 illustrates the impact of these changes on total compensation paid by the USPS, worker years, total full-time employees, clerk handlers, city delivery personnel and building and equipment maintenance employees.

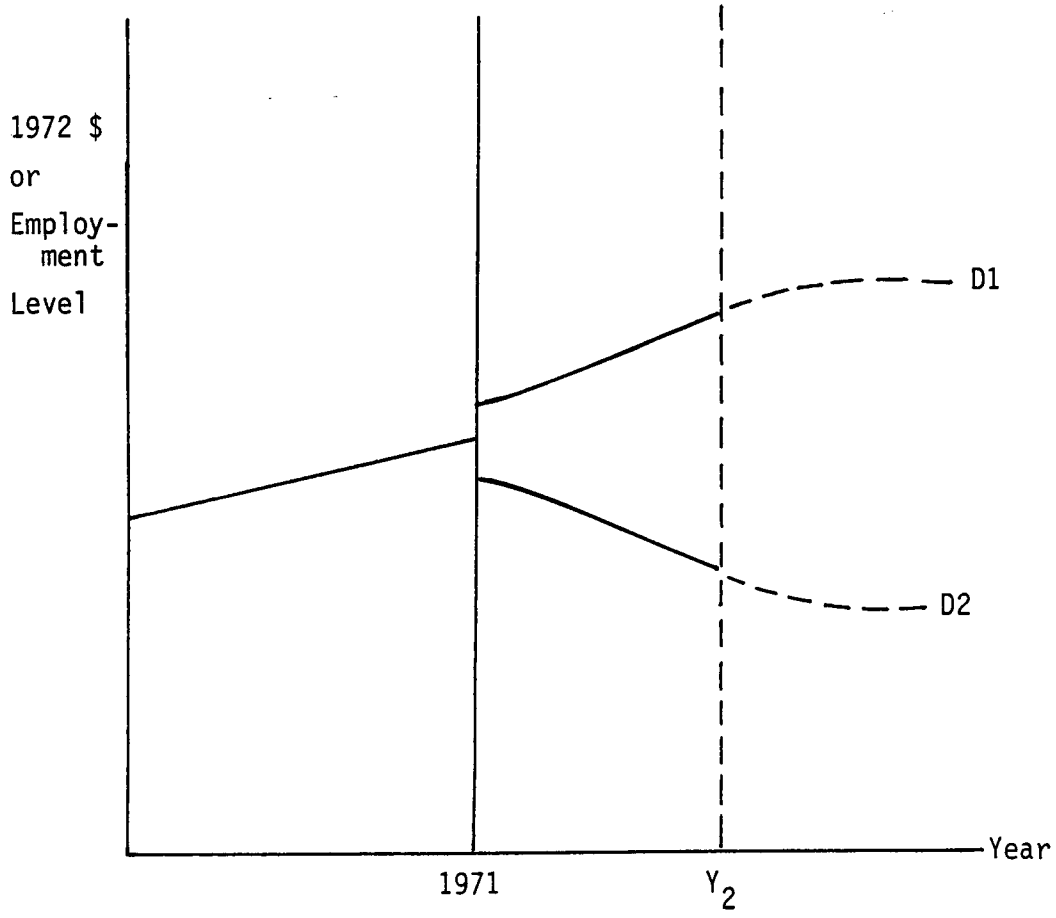


Figure 12. Impact of Mergers on Earnings and Employment.

BIBLIOGRAPHY

BIBLIOGRAPHY

Alexander, Kenneth O. "Conglomerate Mergers and Collective Bargaining." Industrial and Labor Relations Review 25 (1971).

Allen, R. G. D. Mathematical Analysis for Economists. New York: St. Martins Press, 1938.

Berger, Harriet and Edward Blomstedt. "Clerk vs Mail Handler--Jurisdictional Disputes in the Postal Service." Labor Law Journal 27(10) (October 1976):641-647.

"Bigger Unions Will Pack a Bigger Wallop." Nations Business, 5/73. p. 51.

Cartter, Allan M. Theory of Wages and Employment. Homewood, IL: Richard D. Irwin, 1959.

Causey, Mike. "Looking at the Future of Postal Service." The Washington Post 3/17/79, p. C-2

Chamberlain, Reilly, Bradley and Found (Eds.). "The Economic Analysis of Labor Union Power." In Labor Unions and Public Policy.

Chandler, Margaret K. "Craft Bargaining." In Frontiers of Collective Bargaining, Dunlop and Chamberlain (Eds.). New York, 1967.

Chitayat, Gideon. "Mergers of Trade Unions." Dissertation, University of Pennsylvania, 1975.

Davey, Harold W. Contemporary Collective Bargaining, 11th ed. Englewood Cliffs, NJ, 1972.

Dewey, Lucretia M. "Union Merger Pace Quickens." Monthly Labor Review 44 (June 1971):6.

Dolenga, Harold E. "An Analytical Case Study of the Policy Formation Process: Postal Reform and Reorganization." Ph.D. dissertation, Northwestern University, 1973.

Doherty, William C. Mailman U.S.A. David McKay and Co., 1960.

Fama, Eugene. "Agency Problems and the Theory of the Firm." Journal of Political Economy 88(2) (April 1980):288-307.

Fenno, Richard F. Congressmen in Committees. Little, Brown, 1973.

Fox, Milden J. and Donald Heinz. "Postal Reorganization Act: Postal Service Collective Bargaining Enters a New Era." Journal of Collective Negotiations in the Public Sector 2(4) (Fall 1973).

Frech III, H. E. "Property Rights, The Theory of the Firm, and Competitive Markets for Top Decision Makers." Research in Law and Economics 2 (1980):49-63.

Freeman, John and Jack Brittain. "Union Merger Process and Industrial Environment." Industrial Relations 16(2) (May 1977):173-185.

Furubotn, Eric and Svetozar Pjovich. "Property Rights and Economic Theory: A Survey of Recent Literature." Journal of Economic Literature 10 (December 1972):137-162.

Kaysen, C. "The Corporation: How Much Power? What Scope?" In The Corporation in Modern Society (E. S. Mason, Ed.). Cambridge: Harvard University Press, 1960.

Leibenstein, Harvey. "Allocative Efficiency vs X-Efficiency." American Economic Review 6/66, pp. 392-415.

Miller, Edwin L. "Job Articles of National Union Officials--Perceptions of the Importance of Certain Personality Traits as a Function of Job Level and Union Organizational Structure." Personnel Psychology 19:395-410.

Potter, Robert. "Electronic Mail." Science 4283(15) (3/18/77).

Repas, Robert. Collective Bargaining in Federal Employment, Industrial Relations Center, University of Hawaii, Honolulu, 1970.

Sandver, Marcus and Herbert Heneman. "Analysis and Prediction of Top National Union Officers' Total Compensation." Academy of Management Journal 28 (1980):534-543.

Seidman, Joel. "Collective Bargaining in the Postal Service." Industrial Relations 9(1) (October 1969).

Somers, Gerald C. (Ed.). Collective Bargaining: Contemporary American Experience. Industrial Relations Research Association, 1980.

Sorkin, Alan L. The Economics of the Postal System: Alternatives and Reform. D. C. Heath and Co., 1980.

Spero, Sterling D. The Labor Movement in a Government Industry. New York: George H. Doran Co., 1924.

Spero, Sterling D. Government as Employer. Carbondale: Southern Illinois Press, 1948.

Thorp, Bruce E. "Postal Report: Mail Unions and Government Enter Era of Collective Bargaining." CPR National Journal 12/5/70, pp. 2655-2656.

Tierney, John T. Postal Reorganization: Managing the Public's Business. Auburn House Publishing Co., 1981.

U. S. Congress, House, Committee on Appropriations, Postal Appropriations, Hearings before a Subcommittee of the House Committee on Appropriations, 90th Congress, 2d Session, 1967, pp. 27-28.

U. S. Congress, House, Committee on Post Office and Civil Service, Post Office Reorganization, Hearings before the Committee on Post Office and Civil Service, 91st Congress, 1st Session, 1969, pp. 343-345, 378, 733-735.

President's Commission on Postal Organization, Report of the Committee. Towards Postal Excellence . Washington: U.S. Government Printing Office, 1977, p. 574.

Vosloo, Willem B. Collective Bargaining in the United States Federal Civil Service. Chicago: Public Personnel Associates, 1966.

Warren-Boulton, Frederick R. Vertical Control of Markets: Business and Labor Practices. Cambridge, MA: Ballinger Publishing Co., 1978.

Williamson, Oliver. The Economics of Discretionary Behavior: Managerial Objectives in a Theory of the Firm. Englewood Cliffs, NJ: Prentice-Hall, 1964.

Wolk, Stuart R. "Postal Reform: Fact or Fiction?" Labor Law Journal 22 (June 1971).

Woolf, Donald A. "Labor Problems in the Post Office." Industrial Relations 9(1) (October 1969).

Young, John L. "Adjusting to Technological Change." Industrial Relations Centre, Queen's University Reprint Series No. 4 (1963).

Trade Union Resources

American Bakery and Confectionery Workers' International Union. Constitution, 1969.

_____. Merger Agreement, between the American Bakery and Confectionery Workers' International Union and the Bakery and Confectionery Workers' International Union of North America, 9/12/69.

District 50 Allied and Technical Workers of the United States and Canada, International Union. Constitution, 4/10/70.

_____. Executive Board Meeting, 4/24/71.

International Brotherhood of Pulp, Sulphite and Paper Mill Workers. Proceedings of the Twenty-Ninth Convention, August 30 to September 3, 1971.

American Postal Workers Union. Constitution and By-Laws of the American Postal Workers Union, Government Employee Relations Report, Reference File 20.

_____. Union Postal Clerk. April 1971.

_____. Union Postal Clerk. June 1971.

_____. The Postal Record. April 1971.

_____. The American Postal Worker. July 1975.

United Steelworkers of America. Proceedings of the Constitutional Conventions, 14th to 17th.

_____. District 50 Financial Analysis, USWA 4/20/71.

_____. Agreement of Merger, between the USWA and the International Union of the Mine, Mill and Smelter Workers, 7/1/67.

_____. Merger Agreement, between USWA and the Union of Stone and Allied Products Workers of America, October 20, 1970.

Stone and Allied Products Workers of America. Proceedings of the 13th Constitutional Convention, October 19-21, 1970.

APPENDIX

CORRELATION COEFFICIENTS FOR TABLES AND MEAN VALUE TABLES

Table A1. Correlation Coefficients: Table 2.

	Wage	Wageman	Wageinx	Prodinx	CR	Valast	Value W	Asset W	Value	ValueMan	T
CR	-.22629	.13307	-.24214	-.25760							
Valast	-	-.11942	.22555	-	-.27015						
Value W	-.08059	-	-	-	.71101						
Asset W	-.19538	-	-	-	.60108	-	.53463				
Value	-	-	-	.93793	-.11073	-	-				
ValueMan	-	.61930	-	-	.62886	-.36480	-				
T	.34582	.11853	.10366	.11647	.07117	.11597	.21149	-.07691	.22229	.21506	
TR	.37143	.17237	.16149	.16873	.12194	.05517	.24424	-.02507	.28900	.26214	.93290

Table A2. Correlation Coefficients: Table 4.

	Wage	Earnman	Prod	Prodinx	Asset	Assetp	Firm	Rnety	Recfir	Earninx	T
Asset	.66094	-	.18264	.18388							
Assetp	-	.55067	-	-							
Firm	.49715	-	.35920	.35529	-.03472						
Rnety	.64170	.25306	.05650	.05017	.50939	.09571	.29876				
Redfir	.08310	-	-	-	.58894	-	-.41413	-.09916			
Earninx	-	-	-.58178	-	.14701	.51930	-.22789	.21546			
T	.28443	-.25258	.40253	.38277	-.01755	-.26867	.28330	.04977	-.06564	-.35112	
TR	.04294	.02759	-.04469	-.05220	-.00620	-.04684	-.14964	.05317	-.04011	-.04131	.46092

Table A3. Correlation Coefficients: Table 6

	T	YR	Rrecptm	Member	DMember	RNasstm	DRnasstm
YR	.62467						
Member	-.14336	.01099	.00318				
DMember	.24609	.48135	.18325	.43567			
Rnasstm	-.06416	-.10785	.09208	-.17566	-.05988		
DRnasstm	.53269	.66260	.17345	-.09285	.45087	.12774	
Redpubm	-.25740	-.10324	.26533	.02818	-.02227	.20652	.03968
Roffrm	-.02981	.00477	.10475	-.50813	-.26072	.62564	.19973
Rttldism	.04061	.30675	.52955	.16570	.35280	.20797	.40739
Rofadmm	-.07242	.30094	.31409	.13369	.02269	.19393	.17522
Rcostm	-.07616	-.18995	.11390	-.20409	-.13723	.74983	.04335
Rrecptm	-.03925	.12823	xxxxx	.00318	.18325	.09208	.17345
Rprof	-.04716	.31923	.28385	-.17863	.03173	.03591	.20058
Rpres	-.03458	.03922	.04367	-.58265	-.27941	.64705	.08547

Table A4. Correlation Coefficients: Table 7.

	T	YR	Member	DMember	Rnasst	DRnasst
YR	.64617					
Member	-.19278	-.02782				
DMember	.17826	.44428	.43997			
RNasst	-.13947	.00869	.78133	.43470		
DRnasst	.20383	.43954	.41334	.95709	.46777	
Redpub	-.19404	-.00840	.88477	.40290	.73669	.44216
Roffr	-.17272	-.23383	.32442	-.04202	.60287	-.01069
Rttldis	-.04170	.20168	.64404	.56322	.66595	.67598
Rofadm	-.13411	.11330	.77938	.44860	.62447	.47302
Rcost	-.12104	-.10036	.47996	.17664	.63479	.25937
Rprof	-.10916	.11256	.78054	.50510	.61064	.52560
Rpres	-.15636	-.11627	.36664	.08209	.71618	.05239

Table A5. Correlation Coefficients: Table 8.

	YR	D	DC	DS	Member	DMember	Rnasst	DRnasst	Rnasstm	DRnasstm
D	.64617									
DC	.55469	xxx								
DS	.42168	xxx	-.19971							
Member	-.02782	-.19278	.12878	-.18090						
DMember	.44428	.17826	.58133	.11562	.43997					
Rnasst	.00869	xxx	.18340	-.19752	.78133	.43470				
DRnasst	.43954	xxx	.61822	.04962	.41334	.95709	.46777			
Rnasstm	-.10785	xxx	.08419	-.22416	-.17566	.05988	xxx			
DRnasstm	.66260	xxx	.68417	.17124	-.09285	.45087	xxx	xxx	.12774	
Locals	-.08789	-.10445	xxx	xxx	-.25099	.16727	xxx	xxx	xxx	
Strike	.11793	xxx	.21928	-.08569	.50684	.41451	.83064	.46310	xxx	
Strikem	.05287	xxx	.14722	-.08876	-.12459	.00766	xxx	xxx	.82238	.16297

VITA

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