APR 11 '75
JAN 15 1977

ABSTRACT

ORGANIZATION SIZE AND ADMINISTRATION
IN NATIONAL LABOR UNIONS:
A COMPARATIVE ANALYSIS

By

Joe Alan Miller

In a descriptive study, the relationship between organization size and relative size of the administrative component was investigated, using 1964 data on 96 national labor unions in the United States. These were unions having (1) more than 5,000 members, (2) with two exceptions, a majority of members working for private employers, and (3) a structural similarity in being parent organizations of independently chartered local affiliates.

Data for the study were obtained from (1) public records available from the U. S. Department of Labor, (2) union publications and reports, and (3) other published materials on particular unions and industries.

A full dues-paying membership figure was used as the indicator of organization size. Other independent variables included (1) an industry type classification, based on the predominant product market characteristics of the industry(ies) in which a union holds jurisdiction, (2) a physical density index, based on the average size of local memberships, and (3) resource capacity, as indicated by a per capita receipts figure based on contributions by

members to the national organization. Relative size of the administrative component was determined by three measures: (1) the ratio of full-time officers and staff in the national organization to total membership--the total administrative component; (2) a similar ratio based on those officers and staff directly monitoring and servicing subnational units--the direct administrative component; and (3) a third ratio, similarly calculated, based on the number of full-time national staff engaged in administrative tasks of an indirect nature--the supportive administrative component.

The findings showed that the relative size of each aspect of the administrative component is much smaller among unions in local product market industries, as compared with their counterparts in industries where this market is national or broad in geographic scope. These findings concur with the suggested relationship in the literature on union organization to the effect that national unions in predominantly local market industries are more administratively decentralized than are their counterparts in national market industries.

As for the organization size-administration relationship, the results vary according to industry type. Only in the case of the interrelationship between organization size and resource capacity were the results clear-cut. The findings generally indicated that, while resource capacity had a strong positive relationship with each

aspect of the administrative component, differences in resource capacity had very little effect on the organization size-administration relationship.

A moderately strong negative correlation was found between organization size and relative size of the direct administrative component among local market unions, but virtually no relationship existed between these variables among national market unions. However, among the national market unions, the physical density index was negatively correlated at a moderately high level with the relative size of the direct administrative component; among the local market unions, this correlation was also negative but very weak.

These findings were interpreted as indicating that, for national market unions, the geographical extensiveness of the industrial environment makes the complexity in the administered system resulting from the way the membership is distributed among local unions a more important determinant of the size of the direct administrative component than organization size. Among local market unions, operating in an environment allowing considerable decentralization of administrative responsibilities to subnational levels, complexity is less of an administrative issue. The data also showed that local market unions are apparently able to utilize independently chartered and financed intermediate bodies to coordinate the activities of locals

operating in competing, though regionally limited, product market industries.

The findings regarding the organization size-supportive component relationship were very similar in both the local market and national market unions. In each case there was very little correlation between organization size and relative size of the supportive administrative component, but scatter diagrams for these relationships suggested that organization size and the absolute size of the supportive component tend to increase at approximately similar rates. It was suggested that many supportive activities, in comparison to those of a direct administrative nature, are not easily decentralized or otherwise delegated to sub-national levels, regardless of differences in the industrial setting.

The results of this study generally suggested that organization size and complexity have variable effects on the administrative component, according to (1) the way in which features of the environmental setting facilitate or constrain an organization's handling of the organization size-complexity issue, and (2) variations in the types of imperatives associated with different administrative functions.

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By

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A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Sociology

1969

160815
3-19-10

ACKNOWLEDGMENTS

The author is indebted to many individuals for assistance in developing and conducting this study. Special thanks go to Professor Philip Marcus, doctoral committee chairman, and to other members of this committee--Professors William Form, John Howell, Donald Olmsted, and Christopher Sower.

Gratitude is also expressed to several persons in the Institute of Labor and Industrial Relations, The University of Michigan-Wayne State University. Charles Rehmus and Ronald Haughton, co-directors of the Institute, were helpful in providing certain supportive expenses for travel and computer-processing of data. Louis Ferman, Institute research director, helped to clarify many ideas, though the final expression of these in the thesis is solely the author's responsibility. Claire Ben-Eliezer and Charles Betsey, members of the Institute staff, helped considerably in the collection of data, and William Murphy, also of the Institute, assisted in the preparation and submission of data for analysis by computer.

The typing by Sharon Curtis is much appreciated, particularly since this task often involved the careful translation of marginal notes.

Finally, to my wife, Nancy, goes my deepest gratitude, for her understanding, encouragement, and unending patience.

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CHAPTER I

SUBJECT OF INVESTIGATION

> It is widely assumed that large organizations tend to be overbureaucratized, that is, that an increase in organizational size is accompanied by a disproportionate increase in administrative overhead; but the evidence does not support this assumption.[1]

> Although everyone agrees that administrative personnel are essential for a bureaucratic organization, the proportion of personnel who perform administrative tasks is in doubt. From a variety of organizational settings, positive, negative, and nonexistent relationships between organizational size and relative size of the administrative component have been reported, leaving the question for organizations in general unanswered.[2]

These opening statements, both relatively recent, point up the uncertain condition of our knowledge in an important area of organizational study, namely, the relationship between organization size and relative size of the administrative component in formal organizations.

The popular belief alluded to in the statement by Blau and Scott stems largely from the work of C. N. Parkinson, who set forth "Parkinson's law" stipulating

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[1]Peter M. Blau and W. Richard Scott, Formal Organizations (San Francisco: Chandler Publishing Company, 1962), p. 226.

[2]William A. Rushing, "Two Patterns of Industrial Administration," Human Organization, 26 (Spring/Summer, 1967), 32.

that increases in the size of an organization result in relatively greater increases in the size of its administrative component.[3] Research evidence in support of the Parkinsonian thesis is, however, quite scarce. The cumulative evidence of research studies dealing with the organization size-administration relationship[4] has cast doubt on its validity as a general proposition.

This negative comment on the general applicability of Parkinson's "law" does not imply that there has been a corresponding development of alternative propositions broadly applicable to organizations of varying type. This has not been the case, as both opening statements indicate. Summarily stated, our present knowledge concerning the effects of increasing organization size on the relative size of the administrative component is best described as generally nascent in character. It is possible to state some broad generalizations on the basis of previous studies, but these must be cast in a tentative mold; none can be regarded as definitive.

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[3]C. Northcote Parkinson, Parkinson's Law and Other Studies in Administration (New York: Ballantine Books, 1964 edition), pp. 15-27.

[4]The phrase "organization size-administration relationship" is used here and at later points to refer to the relationship between organization size and relative size of the administrative component. This short designation, which has some currency in recent literature, affords considerable convenience in expression as well as relief from needless redundancy in textual presentation.

The rather rudimentary state of development in this area of study is probably attributable in part to the relative recency of much of the research dealing centrally with the organization size-administration relationship and the fairly narrow range of organization types studied. The major portion of the research literature has resulted from studies conducted in the last decade and a half, mostly since 1960. The research literature is not voluminous, and the accumulation of empirical data from a broad range of organizational settings, a necessity for elaborate theoretical development, has been relatively slow-paced. As a result, continuity in empirical and conceptual interests has only slowly emerged.

In the study of organization size and administration, an evident need exists for additional research which expands the boundaries of organization types studied while retaining a conceptual and empirical relatedness to previous studies. The present study proceeds within the framework of such an objective.

General Objectives of the Study

In order to place the general objectives of the current study into perspective, it is necessary first to take note of two major trends in research on the organization size-administration relationship. (1) Although the pace of development has been relatively slow, research is

being conducted in an expanding variety of organizational settings in an apparent attempt to identify hypotheses and theoretical principles having broad application. (2) More attention is being paid to the possible analytical significance of other organizational characteristics which may both condition the effects of increasing organizational size and act as independent influences on quantitative aspects of the administrative component. Generally speaking, there is a tendency to expand the number of empirical issues being investigated under the general rubric of research interest in organization size and administration.

At present, much of the research along these different lines must be regarded as largely exploratory. This study seeks to contribute both to our knowledge concerning the basic relationship between organization size and relative size of the administrative component and to the expanding research base associated with the above-noted points.

It was stated earlier that the study of organization size and administration has not yet emerged as a well-developed area of analysis, from the standpoint of either conceptual usages or the statement of research hypotheses. The general principle underlying the conceptualization and statement of research questions has been that, as the size of an organization increases through the addition of new members, its administrative structure must be adjusted

to accommodate correlative increases in demand for coordination, control, and communication in order to maintain internal stability and acceptable levels of goal-achievement. As a result, there is a corresponding increase in the size of the administrative component, which is the key coordinative unit for the total organization.[5]

From the standpoint of research interest in the organization size-administration relationship, a major issue has been whether this "corresponding increase" in the size of the administrative component is proportionately greater, generally the same, or less, in comparison to the rate of increase in organization size. In effect, these alternative possibilities have provided implicit hypotheses for research, but while the number of studies dealing centrally with the organization size-administration relationship has been increasing, this central issue remains clouded, as the opening quotation from Rushing has indicated.

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[5]The assumption that the primary function of administrative personnel is that of coordination is one commonly made in research studies on organization size and administration. It does not mean, however, that each unit in the administrative component is directly involved in supervisory tasks; to the contrary, coordination is typically achieved through specialization of functions, so that administrative positions move through a range of functions, involving the exercise of executive control, technical expertise, and clerical routines, the last of which facilitate coordination in the sense of information processing.

In this study the organization size-administration relationship is examined with respect to a particular class of organizations--national and international labor unions in the United States.[6] Interest is centered primarily on national labor unions whose members work in the private sector of the economy. In designing the study, it was decided that this narrowing of focus would provide a certain functional homogeneity, though at a general level, within the class of organizations studied.

In general terms the analysis concentrates on administrative characteristics of the national organization[7] in each union studied, in relation to differences in membership size and other selected organizational attributes. The national organization of each union is treated as the key administrative unit for the total union--a position which corresponds to information derivable from general commentaries on American unionism and union literature

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[6]The descriptive terms "national" and "international" are, for all practical purposes, synonymous. The distinction depends on whether the parent union has local unions in Canada as well as in the United States. As a matter of convenience, the single term "national labor union" is used hereinafter.

[7]The term "national organization" is used here and afterwards in a restrictive sense. To avoid confusion, it is best to clarify its intended meaning at an early point. In this study it refers to the national officers and appointed staff who participate in the day-to-day administrative operations of the national labor union, rather than to the national union as represented by its total membership or assembled convention body.

itself.[8] Units below the national level of organization are viewed as subsystems toward which the administrative functions of the national organization are primarily directed.

Thus, the national labor union is conceptualized as a complex social system consisting not only of individual members but also of distinguishable subsystems toward which and through which administrative functions are performed on behalf of the membership. This conceptualization follows that offered by Ramsoy, who uses the concept of complex social system "to refer to the problematic relationship between an inclusive system and its subsystems."[9] The usefulness of this approach rests primarily in the

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[8]A consistent theme in works dealing with union government and administration is the importance of the national organization as the key governmental and administrative unit. Extensive documentation of this hardly seems necessary, but three generally representative works are particularly illustrative. For an early treatment of this theme, see Theodore W. Glocker, The Government of Trade Unions (Baltimore: Johns Hopkins Press, 1913). Two more recent works are: Philip Taft, The Structure and Government of Labor Unions (Cambridge: Harvard University Press, 1954); and William H. Leiserson, Trade Union Democracy (New York: Columbia University Press, 1959). In union literature, it is not uncommon to find references to the national organization as the administrative center of the total union; for example, the national office as the "nerve center" of the national union. The primary importance of the national level of organization is also attested to in the opening sections of most national union constitutions.

[9]Odd Ramsoy, Social Groups as System and Subsystem (New York: The Free Press of Glencoe, 1963), p. 11.

attention it directs toward the nature of subsystem differentiation in formal organizations, since, from the standpoint of the administrative function of coordination, differentiated subsystems into which individual members are aggregated for purposes of integrated activity are key organizational units.

Within the framework of this basic analytical orientation, three general research objectives are pursued in this study.

1. Major emphasis is placed on analyzing the basic form of the organization size-administration relationship in the national labor unions studied. This particular phase of the investigation has two distinguishable facets: On the one hand, attention is focused on the relative size of the officer and staff component in the national organization in relation to differences in membership size. On the other hand, an examination is made of the relative rates of increase or decrease in the sizes of functionally differentiated parts of this total administrative component in relation to changing membership size. With respect to this latter analytical emphasis, the total administrative component is regarded as divisible into two different aspects: (a) a direct administrative component--consisting of national officers and appointed staff whose tasks variously involve the design of programs to carry out policies agreed upon in national conventions, formulation

of policy, and provision of direct service functions to, and on behalf of, affiliated local unions; and (b) a supportive administrative component--consisting of national staff members whose positions involve primarily indirect, or supportive, administrative functions.

2. Emphasis is also placed on analyzing the effects of other organizational attributes on the organization size-administration relationship and on the relative size of the total administrative component and its functionally differentiated parts. It should be stated that at present there is no overall consensus as to what other organizational variables might profitably be incorporated into such an analysis. With the possible exception of organizational complexity, it cannot be said that any additional variable has received intensive or systematic attention. In the present case, the selection of additional independent variables for analysis was influenced both by practical considerations concerning the availability of reliable information on a particular organizational characteristic and the presumed analytical importance of the characteristic from the standpoint of its conceptual relatedness to the organization size-administration issue.

Additional independent variables included in the analysis relate to the following organizational attributes of the unions studied: (a) The number and relative size (i.e., physical density characteristics) of affiliated local unions, as an indication of the degree of structural

complexity resulting from the differentiation of the union's membership into administered subsystems; (b) the financial resource capacity of the union, as an indication of its ability to develop the administrative apparatus in the national organization; and (c) industry type, as an indication of environmental sources of influence on administrative strategies.

In addition to the above-mentioned four independent variables, two others are included in the analysis, and though formulated as independent variables, are not considered as major analytical characteristics. They serve primarily to clarify and elaborate interpretations of relationships between the major independent and dependent variables. They are: (a) union-sponsored membership benefit programs, other than the commonly found strike or unemployment benefits programs, which are presumably implicated in the comparative rates of growth in the supportive administrative component; and (b) the presence or absence of intermediate bodies standing midway between the national and local levels of organization, but financed and administered separately from each, which perform important administrative functions in the national union. With respect to the latter, interest is expressed only in those intermediate bodies which have delegated functions in the national union for the coordination of affiliated locals' activities in the key areas of collective bargaining,

contract enforcement, grievance settlement and/or strike control.

A more complete exposition of these variables and the importance of each in the analytical design of the study will be offered at a later point.

3. The analytical design of the study is largely a descriptive one, including a number of exploratory interests within this purview, in that the empirical investigation is confined to comparisons of relationships within a single class of organizations. It can be noted, though, that the conceptual bases for the statement of variables and specification of relationships to be examined are derived from previous research and commentary in the selected area of study. In general, then, rather than test refined hypotheses regarding organization size and relative size of the administrative component, the study seeks to contribute to the developing fund of knowledge in this area of analysis. Reflections on the current state of theoretical development relative to organization size and administration suggested the profitability of designing the study in this manner.[10]

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[10]In a recent essay on the comparative study of organizations, Udy asserts that in view of the current state of development in organization theory, exploratory analysis probably offers, on balance, greater benefits than hypothesis testing in comparative organizational analysis. He cautions, however, against an "anything goes" exploratory method, in that such an approach contributes little in methodological or conceptual continuity to the comparative study of organizations. See Stanley H. Udy, "The Comparative Analysis of Organizations," Handbook of

It can also be noted that the study is not intended to be a complete exposition of administration in national labor unions. Rather, it proceeds by selecting a set of relatively few--though presumably important--variables and analyzing their relationships within the particular setting of labor union organization.

Rationale for the Selection of National Labor Unions for Study

The choice of national labor unions for study was not fortuitous, although the availability of data on a considerable number of such organizations, thus permitting the use of a comparative framework, was not the least of all reasons. Blau has recently commented on the general value of the comparative approach, noting that while it becomes necessary to ignore many individual organizational peculiarities by sacrificing detail for breadth of coverage, the theoretical benefits usually outweigh this loss.[11]

There are, however, more strategic reasons for accounting this selection a valuable one from the standpoint of interest in organization size and the administrative component in formal organizations. In the following discussion, these are presented by grouping the several

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Organizations, ed. James G. March (Chicago: Rand-McNally Book Co., 1965), pp. 678-709.

[11]Peter M. Blau, "The Comparative Study of Organizations," Industrial and Labor Relations Review, 18 (April 1965), 333 et passim.

illustrative points into two categories--one dealing with the general contributory value of the study design itself and the other with specific features of national labor unions as formal organizations.

General Characteristics of the Study

There are essentially two features of the present study which enhance its potential in contributing to empirical and theoretical interests in the organization size-administration relationship.

1. The national labor unions included in the study sample extend across a broad range of membership sizes, from unions having only a few thousand members to several having more than one-half million members. This feature of the study enables an analysis of relationships under widely varying conditions of organization size.

2. The degree to which it is possible to arrive at generalizations regarding the organization size-administration relationship that are applicable to a range of organization types poses a major question in this area of study. The national labor union represents a different class of organizations than studied thus far. It is true that some studies of organization size and administration have included local unions in their study samples, but to date none has focused on the national level of organization. Thus, the present study offers an opportunity to generate

research findings for comparison with those from studies conducted in other organizational settings.

Specific Features of Union Organization and Administration

The distinctiveness of the national labor union as an organization type, as alluded to in the second point above, is not attributable simply to differences associated with a nominal class identity--for example, the labor union as opposed to the business organization--although, presumably, such identities do imply some homogeneity of function within the nominal class. More theoretically meaningful distinctions establishing the national labor union as a promising unit for study are derivable from careful consideration of a number of its essential characteristics as an organizational form. These are treated generally in the following points; more specific elaborations of their analytical significance will emerge at later points in the detailed analyses of data.

1. In labor unions the formal flow of authority is from the membership to the elected leaders. In principle, the controlling units in a national union are the constituent locals, which send delegates to the national convention--held, usually, every two to four years, depending on the particular union. In the formal structure of the national union, the convention is the lawmaking body, passing on policies and directives which elected officials

are expected to carry out between conventions. However, it is generally true, as Miller and Form note, that "most unionists recognize that considerable discretion must be given to the officers if they are to have a permanent and effective organization."[12]

At a minimum, the formal principle of having an upward flow of authority and an official hierarchy built from the bottom up by popular election is an organizational characteristic distinguishing the labor union from other organizational types more closely approximating the imperatively-controlled organizational form envisioned in the traditional bureaucratic model. More important, however, are the potential implications of this feature of union organization for administrative operations.

In labor unions administrative processes are influenced not only by impersonal criteria of operating efficiency--although these cannot be ignored in any formal organization--but by the internal political necessities of mobilizing and maintaining members' support for union programs and activities.[13] Lester notes, for example, that

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[12]Delbert C. Miller and William H. Form, Industrial Sociology: The Sociology of Work Organizations (New York: Harper and Row, 1964), pp. 338-339.

[13]It should be noted that the necessity for dealing with such political undertows is an administrative problem in all membership-service organizations that are classifiable under the general label of voluntary association. For a good case analysis of this phenomenon in one religious denomination, the American Baptist Convention, see Paul M. Harrison, Authority and Power in the Free Church Tradition (Princeton, N.J.: Princeton University Press,

while there are many influences operating on national labor unions today which promote greater preoccupation with rational and efficient administration, labor unions are still effectively viewed as political organizations pursuing economic goals.[14]

In a recent statement Barbash has commented on the slowness with which bureaucratization, in its classical guise, has penetrated the labor movement:

> The political strain so permeates the fabric of union government that it has undoubtedly stunted the growth of the kind of classical bureaucracy which derives its strategic position from 'specialization, a hierarchy of authority, a system of rules, and impersonality.' Its closest approximations to bureaucracy are the two categories

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1959). Whether or not the labor union is appropriately classified as a voluntary association is a matter of some debate. Yet, it seems correct to assert that its organizational form most closely approximates that typically classified under this label. It may be, though, that the various constraints placed on union administration in the United States by labor legislation have limited the degree to which internal political processes can freely influence administrative structures and strategies.

[14]Richard A. Lester, As Unions Mature: An Analysis of the Evolution of American Unionism (Princeton, N.J.: Princeton University Press, 1958), p. 23. Lester's comments are generally representative of many which view the political aspects of union organization as a basic distinguishing characteristic in comparison to business organizations. For example, Ross notes the following: "The union is not a business enterprise selling labor. It is a political institution representing the sellers of labor, and there is no necessary reason to assume that it will automatically or mechanically behave in the same fashion as a profit-maximizing business enterprise." Arthur M. Ross, "The Trade Union as a Wage-Fixing Institution," American Economic Review, 38 (September, 1947), 568.

> of union staff--the 'servicing' type of union representative, and the professional or technical staff.
>
> This failure of a classical bureaucracy to develop is due, in the main, to the failure of an objective science of union administration to gain acceptance. (In striking contrast is the evolution of scientific management, which has been a major force for bureaucracy on the enterprise side.) Every issue in collective bargaining and in internal union government cuts across vital interests, and is therefore infused with a political essence which defies the objectivity of bureaucracy.[15]

Barbash's statement, of course, plays heavily on Weber's assertion that bureaucratic organization, in its purest sense, cannot develop fully when the governing officials are elected rather than appointed.[16] It should be noted, however, that elected officials in formal organizations--especially, perhaps, if elected to full-time positions--do have several sources of power; for example, the specialized knowledge growing out of experience and control over communications channels. It can be safely assumed that these are at least partly translatable into administrative control. Such an assumption is a key element in Michels' exposition of oligarchy[17] and,

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[15]Jack Barbash, American Unions: Structure, Government, and Politics (New York: Random House, 1967), p. 141.

[16]Max Weber, From Max Weber: Essays in Sociology ed. H. H. Gerth and C. Wright Mills (New York: Oxford University Press, 1958), pp. 200-201.

[17]Robert Michels, Political Parties (Glencoe, Ill.: The Free Press, 1949 edition).

incidentally, in Weber's conceptualization of "bureaucratic control."[18]

It should also be noted that Barbash's statement assumes that the most compelling influences for administrative formalization are contained within the internal structure of the organization, an assumption that is only partially correct. The primary function of administration involves not only the maintenance of internal stability and cohesion, but also the promotion of effective relations between the organization and its relevant environments.

Although the foregoing advises caution against presuming a thoroughgoing bureaucratic tone in union organization, it should not be taken as implying that the totality of administration in labor unions is necessarily a product either of whim or continuous political compromise. The debilitating effects of such administrative foundations would be such as to jeopardize the union's survival--or, for that matter, the survival of any formal organization--much less its effectiveness in relation to employers and other unions. It does indicate, however, that there are influences operating in unionism generally which may temper bureaucratic tendencies. From the standpoint of operating administration, which is the central interest of this study, it suggests that decisions of union leaders involving the allocation of resources for administrative

[18]Max Weber, The Theory of Social and Economic Organization, trans. and ed., Talcott Parsons (New York: The Free Press of Glencoe, 1964 edition), pp. 338-339.

purposes and the deployment of administrative staff are influenced both by internal political considerations and by criteria of rational efficiency.

2. Another important feature of union organization is the dependence of the elected leadership on membership contributions for the support of administrative and program operations. Although national labor unions usually have alternative sources of income through investment programs, contributions by members in the form of per capita tax payments and regular or special assessments are their primary sources of income. Increases in per capita tax rates or assessments are usually voted on by members' representatives in national conventions, although in some cases referendum voting procedures are used when issues involve financial matters. But, as numerous commentators on union organization have noted, union members are generally penurious in granting such increases.[19]

This particular feature of union organization undoubtedly affects the degree to which bureaucratic norms of technical efficiency govern administrative developments. Unlike business corporations, the labor union, generally speaking, does not have a range of alternative means of raising capital to support its operations. Its scale of

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[20]It is the author's observation, based on many hours spent reading national convention proceedings, that the lengthiest and most acrimonious debates on the convention floor are usually those involving increases in per capita tax rates or the levying of special assessments.

operations is dependent on the amount of resources it commands, which in turn is closely tied to the size of its membership, the members' satisfaction with the performance of elected officials, and, at least to some extent, the wage structure of the industry in which the union is located.[20] Summarily stated, there are three key implications of this aspect of resource procurement in labor unions for administrative operations.

First, in the national labor union considerable emphasis must be placed on maintaining and, if possible, increasing the size of the membership because of the nexus of organizational stability and resource level.[21] This implies that, as a matter of technical rationality, primary attention will be paid to the deployment of staff in positions most directly related to membership maintenance or augmentation. In general, these are the positions that appear in the national organizations of labor unions under the various labels of international representative, field representative, or organizer.

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[20]This, of course, is a characteristic shared with other membership-service-type organizations. It may well be, though, that some labor unions are in a more advantageous position than most other membership-service organizations, principally because of union security clauses in collectively bargained contracts providing for mandatory union membership within a given time period after initial employment and dues checkoff systems.

[21]For Weber, constancy of income was a necessary condition for the development of a stable and formalized, or bureaucratic, administrative structure. See Weber, From Max Weber: Essays in Sociology, op. cit., p. 208.

Second, it might also be expected that, as a matter of political astuteness, in the development of the administrative apparatus of the national organization, major consideration will be given to the development of those staff positions which are most visible to the membership, inasmuch as affirmative votes on recommended increases in members' regular contributions relate closely to the sentiments of the membership toward the elected leadership. By and large, it is the servicing type of representative mentioned in the preceding point which has this characteristic of visibility.[22]

There is a third obvious but important implication of resource procurement processes in labor unions for administrative structure, namely, that the level of resources available to the national organization places limits on the size of its staff component. In brief, the complement of personnel and the specialization of their functions that might be considered desirable by union leaders on grounds of efficiency, will be constrained by the amount of resources available for these sorts of administrative elaborations.

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[22]Generally speaking, the rationale presented to convention delegates by officers for increases in per capita tax rates is largely based on intended increases in the number of field-servicing staff and organizers. The author's observation, based on extensive reading of convention proceedings, is also that the granting of such increases is frequently tied to policy directives by the delegates that the new monies are to be used primarily for these direct administrative purposes.

The foregoing points make it clear that both technical and political aspects of resource procurement in the labor union may combine to effect particular colorations in the development of the staff component. Presumably, then, the resource capacity of the union should be an important analytical characteristic in understanding particular aspects of its administrative development.

3. Another distinctive feature of national labor unions is related to the fact that, from the standpoint of their key centers of administration, they are rather simply structured. The primary structural units are the national organization and the constituent local unions.[23] Not infrequently, there may be intermediate organizational units located midway between the national and local levels of organization, but these are not found universally in national labor unions.[24] However this may be, in general terms it can be said that the national labor union displays an organizational structure of rather flat shape.

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[23]There are a few national labor unions which do not charter local unions as administrative units but they are a distinct minority. Only national labor unions having administratively separate locals are considered in this study.

[24]Some intermediate bodies are financed by per capita taxes received from affiliated local unions; others are supported by the national organization and are, in effect, extensions of the executive arm of the national organization. In general, intermediate bodies of the former type enjoy greater independence of action in relation to the national organization.

The relatively noncomplex structural configuration in the national labor union--as contrasted with formal organizations having deeper hierarchical structures--is decidedly advantageous for one of the major analytical emphases of the study. In recent studies of organization size and administration, there is detectable a growing emphasis on the implications of organizational complexity for the organization size-administration relationship, with the complexity variable treated variously in terms of subsystem differentiation or role specialization within the organization system(s) being analyzed.

From the vantage point of the national organization as the administrating unit, the key administered units in a national union are the local unions. At any point in time, the number of locals and their relative membership sizes are results of the aggregation of the organization's membership into differentiated subsystems arranged along lateral, rather than hierarchical, dimensions.[25] The resulting configuration provides an important and relatively uncomplicated means of determining the degree of

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[25]This does not mean that the union controls the differentiation process, so that the number and relative sizes of local unions are completely matters of policy determination. The union has greater or lesser control over this process, depending largely upon the local union's geographic base--plant, community, or larger geographical area--but usually the union's options are quite limited. From one standpoint, though, this is a question of little moment, since it is the end product of the differentiation process that is important, not the underlying reasons for a particular configuration.

structural complexity within the total administered system.

4. In the national labor union, the relationship between the national and local levels of organization departs somewhat from that commonly encountered in organizations having subunits which are fiscally and administratively under the executive control of a central organization. Although subordinate in important ways to the national organization, local unions must be viewed as administratively separate units of organization having varying degrees of autonomy, and it is against this backdrop that the administrative characteristics of national labor unions must be studied. There are wide areas of activity in which the fiscal and administrative autonomy of local unions are formally assured by constitutional provisions.

This point must not be overdrawn, however, for there are several mechanisms available to the national organization which enable it to exercise greater or lesser degrees of administrative control over activities in local unions. For example, although fiscal control of locals by the national organization is largely confined to obligations for payment of per capita taxes and other assessments by the local, control over strike and emergency funds is typically placed in the hands of national officials. Under certain conditions, the national organization may exercise trusteeship over a local's administration of its affairs. There

may also be provisions in the national constitution of the union permitting the national organization to review and sanction decisions made at the local level, although this varies among unions, and no single statement would be applicable without qualification. Finally, it should also be noted that the administrative scope of the national organization, both in terms of its broad knowledge of industry developments and its complement of staff experts, contributes in no small way to its influence over locals' activities.

5. Partly as an extension of the previous point, mention should also be made of what is generally regarded as a major institutional trend in modern unionism, namely, the centralization of control at the national level of organization. In a sense the more recent developments in this direction may simply represent a continuation and perhaps acceleration of a longer-term trend.[26] Typically, this centripetal tendency is seen as emanating from a combination of influences. The following quotation from Tannenbaum is generally representative of several commentaries on this phenomenon.

> The centralization of control in national labor unions and the power of the leadership can be understood in large measure in terms of the requisites of collective bargaining objectives and the political and economic environment within which these objectives must be pursued. Growing centralization in industry, industrywide

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[26]Glocker, op. cit.

> bargaining, government intervention, and the need for union experts, have all militated in the direction of more bureaucratic and centralized union organization.[27]

Administrative patterns do vary among labor unions, however, and conclusions regarding the centralizing tendencies in modern unionism must be placed into proper perspective. Generalizations relative to the pervasiveness and scope of centralization can be qualified by taking note of two related aspects of administration in labor union organization.

First, in the national labor union centralization of control is not necessarily tantamount to direct supervision of activities at subnational levels by a representative of the national organization. The deployment of personnel is partly a technical problem involving the efficient use of available resources, regardless of the criteria utilized in adjudging efficiency in any particular setting. Organizational control, as a processual aspect of the administrative function of coordination, may be achievable by means other than continuous or direct scrutiny of subsystem activities by an administrative functionary. Simon has noted that there are two very different aspects of administrative centralization:

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[27]Arnold S. Tannenbaum, "Unions," Handbook of Organizations, ed. James G. March (Chicago: Rand-McNally Book Co., 1965), p. 752. References to the centralizing trend in unionism can be found in most works dealing with union structure and government.

> On the one hand, decision-making powers may be centralized by using general rules to limit the discretion of the subordinate. On the other hand, decision-making powers may be centralized by taking out of the hands of the subordinate the actual decision-making function.[28]

At this point, it is important only to note that, in discussing the so-called "bureaucratic drift" in union organization, a distinction should be maintained between the decision-making and decision-implementing dimensions of this trend. In some unions, organizational control, in the sense of prescribed authority to establish standards for, and exercise review of, decisions made at subnational levels of organization, may reside in the national offices, while the pattern of operating administration for decision-implementation may be largely decentralized.

Second, there is general agreement among students of the labor movement that an important influence on the degree of administrative centralization in the national labor union is the character of the product market in the industry (or industries) where jurisdiction is exercised.[29]

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[28]Herbert A. Simon, Administrative Behavior (New York: The Free Press, 1957), p. 234.

[29]See, for example, the discussion in Marten Estey, The Unions: Structure, Development and Management (New York: Harcourt, Brace and World, Inc.), especially pp. 61-65; and, Walter Galenson, A Primer on Employment and Wages (New York: Vintage Books, 1964), pp. 50-51. Also, this theme is explored at various points in several of the papers contained in Arnold R. Weber, (ed.), The Structure of Collective Bargaining: Problems and Perspectives (New York: The Free Press of Glencoe, 1961).

Generally speaking, the geographic scope of the product market is viewed as an environmental condition effecting interdependence among local unions in terms of the union goals of wage improvement and the elimination of wage differentials.

In unions operating in industries where the product market is predominantly local or regionally limited in character, it is administratively feasible--and perhaps desirable, from the standpoint of efficiency--to permit considerable autonomy in locals' collective bargaining actions, in that the effective area of wage comparison is relatively narrow in geographic scope. This does not mean, however, that the national organization does not monitor locals' actions. Such participation may be by indirection--for example, as noted in the previous point, by the setting of collective bargaining standards or by reviewing and sanctioning locally-negotiated contracts.

On the other hand, in unions located in industries where the product market is predominantly national or broadly geographic in scope, some form of administrative centralization may be necessary to protect against the debilitating effects of wage competition among affiliated locals. In this latter instance, the national organization is the administrative unit most capable, both from the standpoint of resources and administrative scope, to effect the necessary coordination of locals' bargaining objectives and activities.

In summary, the foregoing discussion has attempted to illustrate the potential contributions of this study to theoretical and empirical interests in the organization size-administration relationship. This has been done by alluding to the pragmatic values associated with the general study design and by concentrating on the distinctive qualities of the national labor union as an organizational form. In a general sense, it can be stated that the study affords a considerable number of opportunities to compare findings generated by research in other organizational settings with those from one of somewhat different dimensions.

Conclusion

This opening chapter has been primarily concerned with providing a general orientation to the research objectives and empirical focus of the study. Consequently, the problem area and chief concerns of the study have been sketched only in broad outline. In subsequent chapters detailed consideration is given to the conceptual, methodological and analytical components of the study.

Chapter II is concerned with a review of previous studies of organization size and administration; in addition, attention is also given to a number of theoretical considerations pertaining to the emergent results of these earlier studies.

Chapter III discusses the methodology of the study, with particular attention paid to problems of data reliability in connection with the usage of secondary data. In this chapter the several independent and dependent variables that are analyzed in the study are introduced, with emphasis placed on demonstrating their conceptual relatedness to other studies of the organization size-administration relationship and their adequacy in reflecting important aspects of union organization and administration.

Chapter IV is devoted to data analysis. The observed relationships are interpreted both in terms of the particular setting of union organization and general theoretical interests in the study of organization size and administration.

Chapter V presents a summary of findings and discusses the implications of this study for further conceptual and empirical work in this general area of organizational analysis.

CHAPTER II

A REVIEW OF LITERATURE

As an integral part of this study, a review was made both of research studies that have focused attention on the organization size-administration relationship and other commentaries that are related, directly and indirectly, to conceptual concerns in this area of organizational analysis. This review provides the basis for the discussion in this chapter.

The materials which follow are organized into two major sections. The first deals with the research literature itself and recounts the findings of these earlier studies, though without making extensive comparisons among them. The second deals with a number of theoretical considerations about the organization size-administration relationship, basing the discussion on an interplay of information derived from the empirical results of the research studies and more general commentaries relevant to the study of organization size and administration.

A Review of Research Literature

Lack of conceptual and empirical continuity in research studies dealing centrally with the organization size-administration relationship makes systematic organization of a review discussion somewhat difficult. It is helpful, though, to note two essential features of the literature in this area of study. (1) The greatest amount of research has been conducted in the setting of business and industrial organization, and some systematization is achieved by grouping these studies for review purposes; as for the remainder, there is no overall convenient categorization. (2) Some order can also be achieved by delimiting three varying emphases that run throughout the studies: the relationship between organization size and relative size of the administrative component, with no additional independent variables considered and no differentiation made between different groups or parts comprising the administrative component; the effects of increasing organization size on differentiated groups or parts comprising the administrative component; and the effects of other organizational characteristics, considered as independent variables, on the relative size of the administrative component.

Of the studies reviewed, the earliest to appear was that conducted by Mēlman, who analyzed changes in the administrative overhead of American manufacturing firms

between the years 1899-1947.[1] His investigation revealed an inverse relationship between size of firm, as measured by number of production personnel, and proportion of administrative personnel. Melman did not apply statistical analysis to his data, which are presented in a series of scatter diagrams. Thus, a precise statement on the strength of the relationship between these two variables is not possible, but inspection of the scatter diagrams would appear to indicate that the magnitude of the correlation is very low.[2]

Using information drawn from German industrial experience between 1907 and 1933, Bendix showed that for concerns having six employees or more, the percentage of salaried administrative workers, in relation to all employees, declines with increasing size of establishment, while the comparable percentage of salaried technicians rises. Since the former is the larger of the two groups, "the overall tendency remains for bureaucratization to be highest in the smaller firms."[3]

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[1]Seymour Melman, "The Rise of Administrative Overhead in the Manufacturing Industries of the United States, 1899-1947," Oxford Economic Papers, 3 (February, 1951), 62-112.

[2]Ibid., 100.

[3]Reinhard Bendix, Work and Authority in Industry (New York: John Wiley and Sons, 1956), p. 222.

In a longitudinal study of growth patterns in four industrial firms, Haire presents findings which suggest that the relative size of that part of the administrative component represented by supervisory and managerial personnel is inversely related to size of organization, indicated by number of employees in the firm.[4] He also presents some additional information regarding rates of increase for different types of administrative personnel in relation to organization growth rates. These latter findings can be summarized in two points.

1. As the firm grows, the ratio of "staff" personnel (i.e., employees who "provide specialized support, advice and help") to "line" personnel (i.e., those directly engaged in the making and selling of a product) increases rapidly in the earlier years and then tapers off to a relative stable figure illustrating parallel growth rates in the two groups.[6] The relevance of this finding to the present study is indirect, in that Haire's discussion of just what constitutes the "line" and "staff" components in relation to the total administrative component is not clear. The instructive note for present research objectives would seem to be an indication in Haire's data that

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[4]Mason Haire, "Biological Models and Empirical Histories of the Growth of Organizations," Modern Organization Theory, ed, Mason Haire (New York: John Wiley and Sons, 1959), pp. 296-297.

[5]Ibid., pp. 288-289.

size of organization is related both to the need for, and the resource capacity to support, specialized functions not directly involved in the production activities of the organization.

2. Haire concludes that the part of the administrative component represented by clerical staff increases as company size increases at a generally proportionate rate, and it is only as a company ages that the tendency to acquire a larger percentage of clerks appears. He regards "the growth of clerks not as a function of size, but as a function of time"[6]--but, of course, both size of organization and size of the clerical component are related to age. The implication of Haire's analysis is that the information processing needs of the organization--which are supplied primarily through clerical routines--increase proportionately with organization growth but tend to grow at a slightly accelerated rate as the organization ages.[7]

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[6] Ibid., pp. 297-298.

[7] Inspection of the several line graphs presented by Haire (Ibid., pp. 298-301) to depict growth of the clerical indicate that, while the size of the clerical component does indeed increase with both company size and age, there is a somewhat erratic pattern to the lines, with many rises and dips. It is interesting to speculate on these variations. It may be that clerical personnel are both necessities and luxuries in any organization; that is, clerical tasks do exist in all organizations and must be performed, but whether the relative size of this component rises above a level of some "minimum need" may be related to the amount of "slack" resources (i.e., resources not immediately necessary for direct production activities) that can be diverted to this area of indirect administration. This is, of course, an untested speculation.

A recent attempt to deal with the organization size-administration relationship in industrial organizations is found in a cross-sectional study conducted by Rushing. Using data concerning the proportion of administrative personnel in relation to total number of production employees in industrial firms, Rushing demonstrated that increases in average size of establishment are differentially related to increases in the relative sizes of different administrative groups.[8]

In his study Rushing concentrated on the relative size of the administrative component, as represented by the average number of managerial and/or clerical personnel per firm in an industry. His findings can be summarized in three points. (1) No significant relationship was observed between organization size (i.e., average firm size in an industry) and relative size of the total administrative component (i.e., total administrative component = average number of managerial personnel + average number of clerical personnel in an industry). (2) Total organization size was inversely related at a significant level to the relative size of the managerial component. (3) Total organization size was positively related at a significant level to the relative size of the clerical component.[9]

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[8]William A. Rushing, "Two Patterns of Industrial Administration," Human Organization, 26 (Spring/Summer, 1967), 32-39.

[9]Ibid., 33-36.

In discussing his findings Rushing notes that confusion often arises in research on organization size and administration because no distinction is made between different types of administrative personnel. For example, the negative correlation found between size of organization and relative size of the managerial component is a logical one, if the assumption is made that increases in organization size may affect the total administrative burden more in a quantitative rather than qualitative direction; that is, administrative tasks do increase as size of organization increases, but perhaps more in the direction of additional routine, repetitive activities, than in decision-making or policy formulation demands. Managerial surveillance can thus be expanded without necessarily adding significant numbers of managerial personnel, provided clerical staff are added to supply the informational needs of those making decisions and formulating policy. Addition of clerical staff becomes, then, a less costly but functional alternative from the standpoint of operating efficiency.[10]

In a related study Rushing has offered a suggestion for further refinement in the methodology of studying the organization size-administration relationship by advancing the hypothesis that the relative size of the administrative component may be independently affected by

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[10] Ibid., 36-38.

the degree of complexity within the administered unit(s). This hypothesis is based on an assumption that the primary function of administration is that of coordination; consequently, the overall administrative burden should be greater in organizations having a more complex division of labor.[11]

The findings of Rushing's second study have limited relevance to this review discussion, in that industry size, measured by total number of production employees within an industry, rather than organization size is included as a key independent variable. In contrast to the first study, he provides no information concerning average firm size in an industry. At the same time, his findings regarding the relationship between division of labor and the administrative component are both interesting and instructive. The division of labor is measured by observing the uniformity or diversity of occupational types among production personnel within each industry and is analyzed in relation to the relative size of the managerial, professional, and clerical staff components. In each case the relationship between organizational complexity and relative size of the staff component is shown to be positive, thus lending credeace to the hypothesis as a general relationship to be examined in studies concerned with the

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[11]William A. Rushing, "The Effects of Industry Size and Division of Labor on Administration," Administrative Science Quarterly, 12 (September, 1967), 273-295.

organization size-administration relationship.[12]

One of the earliest studies to examine the organization size-administration relationship in a nonindustrial organizational setting was conducted by Terrien and Mills. In their study data were collected on school districts in California in order to test the relationship between total staff size and the proportion of the total staff in administrative positions. Analysis of the data provided apparent support for the Parkinsonian thesis, in that the administrative component contained a higher mean percentage of the total staff in large than in small school districts.[13]

Questions regarding the validity of Terrien and Mills' conclusion were later raised, however, on the basis of results obtained by Anderson and Warkov in their study of the relationship between total staff size and relative size of the administrative component in Veterans Administration hospitals.[14] In outward appearance, their findings were directly contradictory to those obtained by Terrien and Mills, in that among the hospitals studied, the mean

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[12] Ibid., 288-291.

[13] Frederic C. Terrien and Donald L. Mills, "The Effect of Changing Size upon the Internal Structure of Organizations," American Sociological Review, 20 (February, 1955), 11-13.

[14] Theodore R. Anderson and Seymour Warkov, "Organizational Size and Functional Complexity: A Study of Administration in Hospitals," American Sociological Review, 26 (February, 1961), 23-28.

percentage of employees in administrative positions declined with each size category arranged on an ascending scale.[15]

In discussing the different results of theirs and the Terrien and Mills study, Anderson and Warkov suggested that the difference might be attributable to variations in the structural complexity of the two organizational settings. For example, while each of the hospital organizations studied had a single location, school districts, especially larger ones, may include several school locations. Thus, the possibility arises that, in the Terrien and Mills study, by not introducing the number of school locations as a control variable, the factor of complexity was allowed to vary freely, thus accounting for the discrepancy between the two studies.

That this is a plausible interpretation is given support by the results of a later study of school systems conducted by Lindenfeld. His data showed that the organization size-administration relationship is an inverse one, when number of schools in the system is held constant.[16] Lindenfeld also extended his analysis to examine the further relationship between organization size and the relative sizes of upper and lower echelons in the administrative

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[15] Ibid., 25-26.

[16] Frank Lindenfeld, "Does Administrative Staff Grow as Fast as Organization?" School Life, 43 (May, 1961), 20-23.

component. Although the data are presented in cross-tabular form, observation indicates that the relationship is an inverse one in both cases, with the negative effect probably most pronounced in the case of upper-level administrators.[17]

Before moving on in the review discussion, note should be taken of three specific propositions advanced by Anderson and Warkov, which they feel might offer a basis for resolving the discrepancy between theirs and Terrien and Mills' findings, by taking account of organizational complexity. These propositions are:

> 1. The relative size of the administrative component decreases as the number of persons performing identical tasks in the same place increases.
>
> 2. The relative size of the administrative component increases as the number of places at which work is performed increases.
>
> 3. The relative size of the administrative component increases as the number of tasks performed at the same place increases (or as roles become increasingly specialized and differentiated).[18]

These propositions are important for their indications of two different possible dimensions of what can be generically termed organizational complexity. The distinguishing element is whether the focus is on number of tasks performed or number of work places as the key component of

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[17] Ibid., 22.

[18] Anderson and Warkov, op. cit., 27. (Italics in original)

the complexity criterion. The former relates to the nature of role specialization as the conceptual basis for understanding complexity; the latter points to a structural form of complexity which takes the pattern of subsystem differentiation as the indicator.

Hence, if Anderson and Warkov are correct, two conceptual approaches are identifiable--one based on compositional features of the task-performing subunits, most clearly expressed in terms of role specialization, and the other based on structural differentiation of the total organizational population into subsystems.

To stipulate that one or the other of these approaches is the correct one for conceptualizing organizational complexity would appear to be inappropriate. In any empirical instance, both could be important, thus making it necessary to take account of the compositional features of the task-performing subunits and the pattern of structural differentiation within the total system.

In a study of institutions of higher education, Hawley and associates attempted to shed light on the organization size-complexity issue raised by Anderson and Warkov.[19] Variables used in their study included size of teaching faculty as a measure of organization size, number

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[19]Amos H. Hawley, Walter Boland and Margaret Boland, "Population Size and Administration in Institutions of Higher Education," American Sociological Review 30 (April, 1965), 252-255.

of full-time professional administrators as a measure of administrative staff size, and number of departments and nondepartmentalized schools as a measure of organizational complexity. As can be seen, their conceptualization of organizational complexity focuses on the nature of structural differentiation in the organization--in this instance, the results of departmentalization in the universities studied.

It is difficult to determine the full implications of Hawley and associates' study for the relationship of organization size and complexity to the relative size of the administrative component, since, with the exception of one table presented, their measure of the administrative component is in terms of absolute numbers, rather than a relative size index. Thus, the comments which follow are primarily based on the findings presented in a single table,[20] in which the administrative ratios (i.e., number of full-time equivalent administrators per 100 total faculty) are presented for various cross-tabulated categories of faculty size and number of departments and schools.

The data presented by Hawley and associates indicate that organization size and relative size of the administrative component are negatively related. Since the

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[20]Table 2 in ibid., 253.

administrative ratios are presented for size categories only, there can be no confident assertion about the underlying linearity of this relationship, but inspection of their table gives an impression that the negative effects of size may tend to level off as the larger size ranges are reached.

Using number of departments and non-departmentalized schools as an indicator of complexity, Hawley and associates found the complexity-administration relationship to be negative. However, this operationalization of complexity may be questioned, since the number of organization parts is not necessarily a good indicator of organizational (or structural) complexity. The degree of complexity within the administered system may be better determined by a relative measure; for example, the number of parts in relation to the total population size of the organization. Using this alternative approach to the variable of complexity, it can be shown in the tabular data presented by Hawley and associates that complexity and relative size of the administrative component are positively related among the institutions studied.[21]

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[21]The problem of an appropriate operational approach to the variable of organizational complexity is probably related to the way in which Anderson and Warkov's second proposition (see p. 41 above), which this study apparently attempts to test, is interpreted. The proposition actually makes little sense unless prefaced by a qualifying phrase, "When organization size is controlled . . . ," since complexity, in whatever form, must somehow relate to the way in which population elements are distributed among organization parts (subsystems) or among

The study by Hawley and associates also included the total amount of resources available to the organization, as indicated by total operating budget, as an analytical variable. Interestingly, this was the only study reviewed which included a resource measure, although on logical grounds it is reasonable to assume that an organization's resource base would be an important determinant of its ability to develop the administrative apparatus.

In the study total operating budget was found to have a strong positive relationship to both size of faculty and size of administrative staff. This, of course, is not a surprising finding, but it does lend support to the suggestion that it may be profitable to include a resource capacity measure as a test variable in analyzing the organization size-administration relationship.

The only other study reviewed which has focused its investigation on a single class of organizations was conducted by Raphael, who analyzed data on local labor unions. Briefly summarized, her study showed virtually no relationship between membership size of the local union and relative size of the administrative component but a fairly strong positive correlation between membership size

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different kinds of roles (specialization). The study by Hawley and associates does not take cognizance of the implied population dimension, resulting in an operationalization which, to the present writer, is questionable.

and organizational complexity, the latter indicated by the degree of occupational diversity in the local's membership.[22]

There is one methodological feature in Raphael's study that is a bit confusing, however, from the standpoint of typical usages of concepts in the study of the organization size-administration relationship. This relates to the operations she uses to determine size of the administrative component. The measurement is an index term based on whether day-to-day administrative decisions in the local union are made primarily by high-ranking officers or are shared between officers of both higher and lower rank, with the latter circumstance receiving the higher score.

It would seem that Raphael's index is, in reality, an indication of the relative degree of "oligarchy" or "democracy" in the decision-making structure of the local union, and elements of administration as usually conceived are only indirectly incorporated into the index. It is possible that this is a function both of the relatively

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[22]Edna E. Raphael, "The Anderson-Warkov Hypothesis in Local Unions: A Comparative Study," American Sociological Review, 32 (October, 1967), 768-776. Raphael's concept of organizational complexity is, of course, conceptually similar to that which takes the nature of role specialization as its definitional base. It can also be noted that Raphael's findings also show a fairly strong negative correlation ($r = -.377$) between spatial dispersion of members' workplaces and size of the administrative component. This, however, probably reflects only that local unions which have members working at spatially dispersed points depend more on the single, roving business agent for service functions than do local unions whose members are concentrated in factory or shop settings.

small membership size of many local unions and of their character as voluntary associations. On the average, local unions do not normally demand high levels of continuous administrative service, and much of the work can be performed through voluntary service contributions. It is necessary that they reach a certain membership size before employment of full-time officers or appointed staff is economically feasible. It is possible, then, that the character of administrative processes in local labor unions differs according to whether administration is handled by full-time employees or by volunteer workers.

In summary, Raphael's study probably reveals more about the administrative dilemmas facing relatively small-sized voluntary associations than about the organization size-administration relationship which, in terms of currently available conceptualizations, may well be limited in study potential to organizations that are more formalized in structure and have continuous administrative needs.

Two other research studies were reviewed, each of which included organizations of varying type in its study sample.

In a study of 30 organizations, Haas and associates examined the relationship between relative size of the "supportive" administrative component (the dependent variable) and total organization size, age of organization, number of operating sites, and amount of diversity in key

activities performed within the organization.[23] The supportive component was operationally defined by distinguishing between administrative personnel engaged in direct administrative activities (e.g., executive and managerial) and those engaged in indirect, supportive administrative services (e.g., bookkeeping and other clerical, personnel administration, maintenance service).

In testing each relationship it was hypothesized that increases in the value of the independent variable would be associated with a disproportionate increase in the dependent variable. None of the hypotheses was supported. Except for age of organization, rank-order correlations were negative in each case, though none attained a level of significance. Age of organization showed a positive but weak relationship to size of the supportive component. The authors do assert that inspection of scatter diagrams suggests that the relationship between organization size and size of the supportive component is slightly curvilinear; that is, the relationship is slightly positive in the case of the smallest organizations and the largest ones.[24]

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[23]Eugene Haas, Richard H. Hall, and Norman J. Johnson, "The Size of the Supportive Component in Organizations: A Multi-Organizational Analysis," Social Forces, 43 (October, 1963), 9-17.

[24]Ibid., 14-15.

The study by Haas and associates should be viewed with some caution. The 30 organizations included in the study represent a diversity of types, extending from a local labor union to a manufacturing firm to a bank. It is possible that differences in structural and environmental features within each type render reliable comparisons difficult, given the central concerns of the study.

Indik, in a study of five different types of organizations, examined the relationship between the relative number of supervisors and employment or membership size of the organization.[25] Each organization was a local unit of a larger parent organization. Operationally, only persons in each organization whose functional role involved either decision making or direct interpersonal supervision of others' work were classified as supervisory personnel; all individuals serving mainly clerical functions were excluded. Relative size of the supervisory component was based on the ratio of number of supervisors to total number of members in the organization.

Correlation coefficients were negative for each set of organizations studied. These correlations were strongest for industrial labor union locals, followed in order of descending magnitude by nonpartisan political organization chapters, volunteer fire companies, automobile

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[25]Bernard P. Indik, "The Relationship between Organization Size and Supervision Ratio," Administrative Science Quarterly, 9 (December, 1964), 301-312.

sales dealerships and package delivery stations.[26] Although the data in the two studies are not entirely comparable, Indik's findings show considerable correspondence with those of Rushing discussed previously.[27]

Conclusion

The preceding discussion has concentrated mainly on depicting the empirical findings of various studies which have focused major attention on the organization size-administration relationship. Some comparisons have been made between studies, but for the most part each has been treated in a rather discrete manner. Further comparisons of the findings in these studies are deferred until the next section, which is concerned with an identification of key conceptual issues and their theoretical implications in the study of organization size and administration.

Conceptual and Theoretical Implications of Previous Research Studies

In general, the review of research literature discussed in the preceding section has shown the following: (1) The volume of research studies focally concerned with

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[26] *Ibid.*, 307.

[27] See above, pp. 36-37.

organization size and administration is still quite small, although increasing. (2) The analytical tone of the investigations is largely exploratory, which is probably attributable in large measure to a lack of continuity in conceptual developments and investigative interests among most of the studies. (3) The level of theoretical development, particularly in terms of identifying general statements about relationships between variables, is relatively low, a condition which is partly a consequence of the combined influence of the two preceding points.

In this section a number of theoretical considerations are advanced about the organization size-administration relationship, basing the discussion on an interplay of information derivable from the several research studies and more general commentaries relative to the study of organization size and administrative structure. The discussion is confined to those organizational characteristics which have already appeared in the literature under the general rubric of research interest in organization size and administration--namely, the administrative component, as a dependent variable, in relation to the independent variables of organization size, complexity, and resources

The objective pursued in this section is a modest one, namely, to work toward a more systematic organization of certain key issues as a means of specifying the general

contours of a conceptual scheme that might be profitably used in examining the effects of organization size, complexity, and resources on the administrative component. In an immediate sense, the discussion serves the purpose of providing a clearer analytical perspective for the empirical investigation of these relationships among national labor unions.

Two major questions underlie the organization of this discussion. Why is organization size, or complexity, or resources, an important influence on the development of administrative structures in formal organizations? And, what are the underlying organizational dynamics which give particular colorations to the variable relationships between these organizational characteristics and the administrative component? These questions do not exhaust the logical dimensions of the problem under consideration, but, practically speaking, they provide convenient handles with which to grasp the basic character of the theoretical problem.

The Principle of Coordination and the Concept of the Administrative Component

Essential ingredients of an answer to the first of the above two questions are derivable from two assumptions that are commonly made regarding administration in formal organizations. (1) Every organization is faced with the

key administrative problem of coordinating the various activities which occur within it. Viewed in this way, coordination is primarily an internal, integrative function, but it also has external relevance, in that the coordination achieved internally affects organizational output. (2) The coordinative problems in an organization are partly functions of its population size and internal complexity.

To these two assumptions can be added a third, which, though not commonly found in the literature on organization size and administration, has emerged in the present study as a potentially important factor, namely, the resource capacity of the organization. Presumably, the amount of resources available to an organization has implications for the type of administrative apparatus which is, or can be, developed to deal with problems of coordination.

None of these assumptions is unique or even new. They have conceptual linkages, for example, with the early work of Durkheim, Weber and Simmel. With reference to societal development, Durkheim associated increases in population size with increased organizational complexity and, consequently, with coordinative problems.[28] In Weber's discussion of bureaucracy, the process of

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[28]Emile Durkheim, The Division of Labor in Society, trans. George Simpson (New York: The Free Press of Glencoe, 1964 edition), pp. 256-282.

bureaucratization, leading to the formalization and elaboration of an administrative apparatus, is associated in part with the phenomenon of organization growth.[29] Weber also noted that the stability of the resultant administrative machinery depends upon constancy of income (a dependable resource supply) to the organization.[30] In discussing the formal properties of group structure, Simmel asserted that increases in the size of a group create the potential for a breakdown in group solidarity, thus jeopardizing the possibility of coordinated group activity. Consequently, the creation of intermediary positions, charged with coordinative and communications functions, are necessary responses to increases in group size.[31]

Though stated with varying degrees of explicitness, emphasis on the coordinative function of administration is also found in the research studies reviewed in the preceding section. On the whole, the assumption is made that the primary function of administrative personnel is that of coordination, whether this is accomplished directly through the exercise of executive or supervisory functions or indirectly through the use of technical expertise and clerical routines, the last of which facilitates

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[29]Weber, op. cit., pp. 209-216.

[30]Ibid., p. 208.

[31]Georg Simmel, The Sociology of Georg Simmel, trans. Kurt H. Wolff (New York: The Free Press of Glencoe, 1950 edition), pp. 87-116.

coordination through the processing of information and the handling of formal communications.

In this study emphasis is also placed on coordination as the major function of administrative personnel. It should be noted, however, that the principle of coordination does not by itself provide clues to the form of the organization size-administration relationship. On the one hand, it simply implies the existence of relationships between organization size, complexity and resources, and administrative structure, though predictive statements about these relationships must be decided on other groups. On the other hand, it serves an important definitional function by indicating the same aggregate of positions in the organizational system has unit character because of common involvement in the administrative function of coordination and can be conceptualized as the administrative component.

With respect to this latter point, it is also instructive to register an additional note relative to the manner in which the administrative component is treated conceptually and an analytical component is established to interpret relationships between it and other organizational characteristics. Within the total administrative component, there will be specialized functions contributing in different ways to the overall achievement of coordination. In the design of research studies on organization size and administration, or interpretations of others' studies,

careful attention must be paid to what is being defined as the administrative component and what form of differentiation, if any, is being made between different functional aspects of administration in determining operational measures. As a general principle, it can be stated that there is no singular best usage of the concept "administrative component," and only when there is a clear delineation of a particular operational usage can there be research continuity leading to generalizations of broad scope.

The review of research literature presented earlier has indicated some variations in operational approaches to the concept of the administrative component. This general observation is not intended as a criticism of any individual study or group of studies, since a specific usage is partly a result of pragmatic considerations related to levels of refinement in available data and of a researcher's confinement of interest to a particular functional aspect of the administrative apparatus in the organizations studied. It is not possible, however, to dismiss these differences as having simply a curiosity value, for the cumulative evidence of these studies indicates that different parts, or aspects, of the administrative component may be differentially associated to any one of the major organizational characteristics of organization size, complexity or resources.

A summary review of the research studies suggests that, at a general level, there are two major aspects of administration which provide a meaningful basis for analytical distinctions between administrative personnel. Each is related to a different form of participation in the overall administrative function of coordination.

1. An important part of the administrative component is represented by those personnel who are directly engaged in control and supervisory functions in relation to the selection and carrying out of organizational programs and activities. In general terms, this aspect of the administrative apparatus can be labeled the "direct" administrative component.[32]

2. A different part of the administrative component is represented by those personnel who participate indirectly in the administrative function of coordination, primarily by means of providing supportive services to those in direct administrative positions. This aspect of

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[32]The particular adjectival term applied to this aspect of the administrative component varies among the several studies incorporating a corresponding usage. However, reference can be made to the following: the "managerial" component, as used by Rushing, "Two Patterns of Industrial Administration," op. cit.; the "salaried administrators" component, as used by Bendix, op. cit.; the "line" component, as used by Haire, op. cit.; the "supervisory" component, as used by Indik, op. cit.; the "professional administrators" component, as used by Hawley et al., op. cit.; the "administrative officials" component, as used by Lindenfeld, op. cit. In each of these studies, reference is being made to a functional aspect similar to what is termed here the "direct" administrative component.

the administrative apparatus can be generally termed the "supportive," or "indirect," administrative component.[33] To a great extent, supportive administrative personnel are involved in informational processes, either in the sense of providing specialized forms of information (technical and professional staff) or by the handling of formal communications pertaining to organizational programs and activities (clerical staff).

A comparison of previous studies indicates that, in general terms, there have been two operational approaches to the concept of the administrative component. In some instances, a broad definition has been used and the administrative component regarded as including all staff involved in the coordinative tasks of administration, both direct and indirect. In others, a narrower definition has been used, resulting in an implied or explicitly stated distinction between different types of administrative personnel. As this study proceeds, it will become evident that cognizance of these differences in approach serves an important purpose as a caveat in working toward summary statements about research findings and tentative generalizations regarding relationships among major variables in

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[33]Four of the studies reviewed included operational measures having some correspondence to the "supportive" or "indirect" administrative component, as defined here. They are: the "supportive component," as used by Haas et al., op. cit.; the "salaried technicians" component, as used by Bendix, op. cit.; the "clerical component, as used by Rushing, "Two Patterns of Industrial Administration," op. cit.; and the "clerical" and "staff" components, as used by Haire, op. cit.

this area of organizational analysis.

Organization Size, Complexity and Resources in Relation to the Administrative Component

The research studies previously reviewed indicate that three organizational variables have been examined in terms of their relationship to the relative size of the administrative component--size, complexity and resources. In the present discussion, and throughout the remainder of the study, the major focus of attention will be on these organizational characteristics as independent variables.

Although each of these organizational attributes has been included in one or more studies as an independent variable, there is considerable variation in the amount of empirical evidence regarding the effect each has on the relative size of the administrative component, or differentiated aspects of it. Organization size appears as an independent variable in each of the studies reviewed, organizational complexity in four and resources in but only one.

The information that is available suggests, however, that each of these variables can be analyzed from two vantage points: (1) as an independent variable relating in important ways to the relative size of the administrative component; and (2) as a control variable, with possible conditioning effects on the character of generalizable

conclusions that are formulated about the relationship between the other independent variables and the relative size of the administrative component.

Inasmuch as organization size is the only one of the three variables for which the span of empirical evidence is relatively complete, it will be used in the subsequent discussion as the focal independent variable, and information regarding the characteristics of complexity and resources will be incorporated as the discussion proceeds.

In simplest terms, there are three possible forms for a general hypothesis regarding the relationship between organization size and relative size of the administrative component; namely, that the two variables are (1) positively related, (2) unrelated,[34] or (3) negatively related.[35] It

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[34]Without further specification of what "unrelated" means, this hypothesis is unclear with respect to general interest in the phenomenon of organizational growth and administrative development. The hypothesis of "no relationship" can have two meanings: first, that the proportionate rates of increase for organization size and for the administrative component are essentially random in relation to each other; or second, that organization size and the size of the administrative component tend to increase at approximately the same rates. Which is the better explanation of an observed relationship according with this hypothesis would depend on additional observations relative to the linearity of effects between the two variables.

[35]Although the characteristics of size, complexity and resources reflect a different organizational attribute, they share a common operational dimension in that each can be arranged on an ascending (or descending) scale of values, with the values reflecting larger (or smaller) increments in the measurement units of the particular variable. Thus,

should be recognized that the applicability of any one of these hypotheses may be affected by the manner in which the concept "administrative component" is dealt with operationally; that is, organization size may be differentially related to the relative sizes of different aspects, or parts, of the administrative component.

Several studies have investigated the relationship between organization size and the relative size of what can be regarded as the total administrative component--that is, the entire complement of officials and staff employees engaged in both direct and indirect administrative functions. The cumulative evidence of these studies does not suggest unvarying support for the applicability of any one of the three aforementioned general hypotheses to this relationship. The only summary statement that can be confidently offered about the organization size-total administrative component relationship is one of negative stipulation; namely, that the relationship is not positive in form.[36] On balance, the studies reviewed range from those showing virtually no relationship between organization size

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an examination of the relationship between complexity or resources and relative size of the administrative component would be, in effect, a test of the plausibility of these same three general hypotheses.

[36]Only the study by Terrien and Mills offered data showing a positive relationship, but, as noted earlier, a careful review of their methodology suggests that this relationship may have been spurious, since a factor of organizational complexity was left uncontrolled in the analysis.

and relative size of the total administrative component to those indicating an inverse relationship, though usually of modest strength.[37]

There are, of course, good reasons for the inability to generalize with specificity about the organization size-total administrative component relationship from one study to the next, particularly if the studies being compared differ as to the type of organizations being analyzed. Essentially, this is attributable to the fact that the relative size of the total administrative component is itself a product of the way in which personnel are distributed among its subcomponents and the relationship which each of these subcomponents has to organization size.[38] Organizations in different types of task-environments may differ

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[37] In actuality, few of the studies reviewed used correlational analysis; hence, this observation is based largely on inspection of data presented in contingency tables.

[38] Although implicit in several of the studies reviewed, in only one is this point clearly explicated. Bendix compared the relative numbers of administrative employees and salaried technicians in German industrial firms of different sizes. He found the former to be inversely related and the latter to be directly related--a difference he attributes generally to processes of functional specialization associated with organization growth. However, the relationship between total administrative staff size (i.e., administrators + technicians) and firm size he found to be inverse, a result which he explains in the following manner: "Because administrative employees are always more numerous than technicians . . . the overall tendency remains for bureaucratization to be highest in the smaller firms." Bendix, op. cit., pp. 222-223.

in their needs for a particular balance of direct and indirect administrative positions.

The cumulative evidence of the studies reviewed is much clearer with respect to the relationship between organization size and relative size of the direct administrative component. The findings in several studies suggest that this relationship is an inverse one and of fairly strong magnitude.

Information regarding the relationship between organization size and relative size of the indirect, or supportive, administrative component is somewhat unclear. It will be recalled that Rushing found average firm size and relative size of the clerical component, which can be viewed as part of the indirect component, to be positively related.[39] Haire's findings on the clerical component can be similarly interpreted.[40] On the other hand, Haas and associates found organization size and relative size of the supportive administrative component, which would include clerical personnel as a major part, to be unrelated.[41] In sum, predictive statements regarding the indirect component of administration would probably depend on the level of refinement in the data and the particular method of operationalization. What does seem clear is the

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[39]Rushing, "Two Patterns of Industrial Administration," op. cit.

[40]Haire, op. cit.

[41]Haas et al., op. cit.

general implication of these studies that the direct and indirect administrative components display differential rates of increase in relation to increases in organization size.

It is likely that the particular form of any of the three relationships discussed above is influenced by the manner in which organizational complexity is implicated in the general pattern of increasing organization size. This contention depends for its viability on a particular conceptual approach to the definition of organizational complexity, and the discussion which follows is concerned with explicating such an approach.

One approach to the concept of organizational complexity is based on mathematical specifications which indicate that arithmetic rates of increase in the population size of an organization are accompanied by geometric rates of increase in the number of possible relationships between the population elements.[42] The tenability of this approach must be examined from the vantage point of an implicit assumption underlying its formulation, namely, that the potential relationships between the population elements are all compelling influences on administrative processes of coordination.

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[42]Theodore Caplow, "Organizational Size," Administrative Science Quarterly, 1 (March, 1957), 484-505; William M. Kephart, "A Quantitative Analysis of Intragroup Relationships," American Journal of Sociology, 55 (1950), 544-549.

This assumption has doubtful validity since it ignores an important facet of administration in formal organizations. The key units through which administrative coordination is achieved are typically different types of subsystems into which individual members are aggregated as a matter of administrative convenience; for example, departments in a business concern, local unions in a national labor union, congregations in religious denominations, and the like. Consequently, the degree of organizational complexity in an organization is more correctly determined by observing the number and relative sizes of these administered subsystems than by placing reliance on index characteristics based on potential numbers of interactions within groups of varying size.

This latter approach to organizational complexity stems from a particular conceptualization of an organization as a task-performing unit. In a recent discussion of differentiation and integration in complex organizations, Lawrence and Lorsch have noted that many students of large organizations "tend to start with the individual as the basic unit of analysis and build toward the larger organization. . . ."[43] They suggest that an equally effective approach can start with "larger sociological entities--the

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[43]Paul R. Lawrence and Jay W. Lorsch, "Differentiation and Integration in Complex Organizations," Administrative Science Quarterly, 12 (June, 1967), 3.

entire organization and its larger subsystems."[44] Viewed in this way, the concept of organization comes to have a particular definitional form. To quote Lawrence and Lorsch:

> An organization is defined as a system of interrelated behaviors of people who are performing a task that has been differentiated into several distinct subsystems, each subsystem performing a portion of the task, and the efforts of each [subsystem] being integrated to achieve effective performance of the system.[45]

It can be easily seen that this definitional approach is quite similar to the concept of "complex social system," used by Ramsoy "to refer to the problematic relationship between an inclusive system and its subsystems."[46] The usefulness of Lawrence and Lorsch's and Ramsoy's approaches is based primarily on the attention they direct to the nature of structural differentiation in the organization.

To understand more clearly how organizational complexity might operate as a contingent condition affecting the organization size-administration relationship, it is necessary to consider (1) the relationship between complexity and the relative size of the administrative component, as indicated in previous studies, and (2) certain

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[44] Ibid.

[45] Ibid. (Italics in original)

[46] Ramsoy, op. cit., p. 11.

other conditions that may influence the way in which structural differentiation is associated with increasing organization size.

Organizational complexity has been included as an independent variable in only three of the studies reviewed. In each case the dependent variable related to organizational complexity can be regarded as the direct administrative component.[47] In each instance the relationship was found to be positive, which is not unexpected on the basis of the assumption that coordination becomes more difficult under conditions of increased complexity. It is also logical to assume that the relationship between organizational complexity and the relative sizes of the other two aspects of the administrative component--total and supportive--are probably of the same general form, though perhaps varying in magnitude.

How, then, might organizational complexity be implicated as a conditional influence on the organization size-administration relationship? There are three general conditions that may affect the character of its contingency effects.

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[47]The three studies which included organizational complexity as an independent variable were those conducted by Rushing, "The Effects of Industry Size and Division of Labor on Administration," op. cit.; Anderson and Warkov, op. cit.; and Hawley, et al., op. cit. Complexity was included in a fourth study (Lindenfeld, op. cit.) but only as a control variable affecting the organization size-administration relationship.

1. From the standpoint of administrative rationality, it would be expected that organizations would attempt to achieve the maximum size in their administered subsystems that is feasible in terms of technological and environmental constraints.

2. No organization is in complete control of differentiation processes determining the size of subsystems within its operating structure. Differences in production technologies and environmental constraints will influence the size characteristics of subsystems that are possible for integrated organizational activity leading to effective task performance.[48]

3. In many instances organization size and the relative sizes of the administered subsystems may stand in a direct relationship to each other. This is based on an assumption that population elements in an organization are themselves a type of resource to be distributed among the subsystems, and larger organizations by their very nature have greater amounts of this resource. As noted in the preceding point, however, organizations will vary in the degree of control they have over this allocation process.

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[48]For example, the size of production units in a manufacturing or extractive industry might be affected by the nature of materials or resource concentrations; the geographical concentration or dispersion of certain types of populations may affect the sizes of congregations in a religious denomination; the structure of bargaining units in an industry can affect the relative sizes of local unions in a national labor union, and so forth.

By building on the foregoing discussion, it is possible to specify more particularly how organizational complexity may be involved in the process of organizational growth and thus influence the form of the organization size-administration relationship. Two general statements can be made.

1. As an organization grows, if the level of complexity remains relatively constant, the relationship between organization size and relative size of the administrative component will remain generally proportionate from one size level to the next. This statement in effect posits an equilibrium principle which assumes that for each increment in organization size, the level of organizational complexity increases at a similar rate, so that over a series of comparisons organization size and size of the administrative component vary directly.

2. As an organization grows, if the level of organizational complexity decreases--which would result from an increase in the physical density characteristics of the administered subsystems--over a series of comparisons, the relationship between organization size and relative size of the administrative component would move in a negative direction. This statement posits an economy-of-scale factor as an explanatory principle, thus assuming that increasing organization size, though resulting in an absolute increase in the total administrative burden, can

have the effect of reducing the relative degree of organizational complexity.[49]

The foregoing points, of course, project a partial model of organizational growth, and to make the statements amendable to study designs utilizing a cross-sectional, single-point-in-time approach, it is necessary to suggest certain transformations. Essentially, this is achievable by incorporating organizational complexity--in terms of physical density characteristics of administered subsystems--as a test variable and controlling for its effects on the organization size-administration relationship. Oppositely, organization size itself may be used as a test variable in analyzing the organizational complexity-administration relationship, since size characteristics may have an important influence on the general form of this relationship.

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[49]This is, of course, closely related to the interpretations applied to findings about spans of supervisory control in general administrative theory. In general, there are two facets of the span-of-control argument that size may be inversely related to the relative size of the administrative component. (1) A part of the managerial function of administration involves the making of decisions and designing of programs for policy implementation to guide activities of the task-performing subunits. Thus, as the size of an organization increases, it is not necessary that the managerial component increase at a similar rate, but that the content of decisions and programs be communicated to a wider range of personnel. (2) The number of personnel that can be directly supervised by a single administrator is not inelastic. The studies of Haire and Indik, which are included in the present research review, indicate that, as organization size increases, the supervisory spans of control can be increased with no apparent impairment of organizational efficiency.

The third independent variable to be considered in this discussion is that of organizational resources. The study by Hawley and associates would indicate the probability that the amount of resources an organization commands is directly related to the size of its administrative component.[50] Although this is the only study reviewed which included such a variable, on logical grounds there is considerable justification for its inclusion in an analytical schema focusing on organization size and administration. There are essentially two forms of reasoning which lend credence to this contention.

1. Adding to the administrative staff of an organization is greatly influenced by two conditions--the level of demand for a particular administrative service, which cannot be met efficiently by redistributing responsibilities to existing staff, and a sufficient and dependable resource-flow to support the new position. However, the level of demand and resource capability may not be coincident, so that the organization may simply have to "make do" with a smaller administrative staff than ideally desirable.

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[50] Hawley, et al., op. cit. The dependent variable analyzed in relation to organizational resources was the "professional administrators" component, which is a part of what has been termed in the present discussion, "direct administration." At the same time, there is no reason to assume that the relationship between resources and other aspects of the administrative component would be other than positive.

2. Organizations may also be in a position of having "slack resources"--that is, resources not critically required for current production functions and programs. March and Simon note that organizations with this type of resource capability are able to engage in more intensive specialization of functions than are others lacking them.[51]

Regardless of which form of reasoning might apply in a particular instance, the general suggestion can be made that the amount of resources an organization commands is importantly related to the degree of elaboration in its overall operations and, consequently, positively related to the size characteristics of its administrative component. However, it can be further suggested that the usefulness of organizational resources as an analytical variable helping to explain the relative size of the administrative component may be enhanced if its operational form is determined by a standardized measurement which permits comparisons among organizations of widely varying population sizes. Viewed in this way, it is not the absolute amount of resources available to the organization which is the critical analytical factor but the resource capacity of the organization relative to that of another (or many others).

Little can be said at this point about the potential effects of a resource capacity measure as a control variable

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[51]James G. March and Herbert A. Simon, Organizations (New York: John Wiley and Sons, 1958), p. 187.

in relation to the organization size-administration relationship. In the study by Hawley and associates, the total operating budget of the organization was found to have a strong positive relationship to both size of faculty and size of administrative staff; thus, the partialling effects of total operating budget on the relationship between the latter two variables was considerable.[52] However, on logical grounds, there is no reason to assume that resource capacity, as a relative measure, stands necessarily in a positive relationship to organization size. In short, the single study by Hawley and associates provides little advance information about the conditioning effects of resource capacity characteristics on the relationship between organization size and the relative size of the administrative component.

Conclusion

The preceding discussion has not attempted an exhaustive examination of theoretical dimensions involved in the study of organization size and administration. Rather, its key purpose has been to provide a clearer focus on major conceptual issues as a means of establishing an analytical perspective on the relationships between organization size, complexity and resources, and relative size of the administrative component. In an important sense it

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[52]Hawley, et al., op. cit., 254.

serve as a prelude to the next chapter, in which the particular forms of variables and relationships to be examined in this study of national labor unions are explicated.

CHAPTER III

METHODOLOGY OF THE STUDY AND STATEMENT OF RELATIONSHIPS TO BE ANALYZED

Methodological procedures used in the study were greatly influenced by three conditions. First, the necessity of assembling a single body of data from several sources of information imposed some constraints on the study design. For example, a determination of the number of unions to be studied was necessarily deferred until the extent of available information on national labor unions was known in some detail.

Second, the use of existing documents and reports as data sources tended to accentuate issues of data reliability. Consequently, considerable attention was paid to this aspect of methodological procedure. For the most part, technical questions of measurement reliability are discussed in a separate appendix, rather than the main body of this chapter.

Third, the study was intended to be cross-sectional, and in order to ensure compatibility of data on the several unions studied, it was necessary to specify a focal time period for data collection. The year 1964 was selected as the target period, although it was recognized that differences

among unions in fiscal reporting periods and national convention dates would make this somewhat proximate. This choice was not accidental, however, in that the most comprehensive body of relevant data available to the author fell within this time range.

Sources of Data

Data for this analysis were obtained from existing reports and documents pertaining to national labor unions in the United States. A general description of the four basic data sources used is presented below.

The Bureau of Labor Statistics

The Bureau of Labor Statistics (BLS) of the U. S. Department of Labor was used as a source for both published and unpublished information about national labor unions. The Directory of National and International Labor Unions in the United States, issued biennially by the BLS,[1] provides one of the most comprehensive published summaries of the current status and developmental trends in unionism in the United States. The 1965 issue of the BLS Directory was used as a primary data source in this study.

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[1]Actually, the BLS Directory has been issued on a biennial basis only since 1953. Earlier editions appeared in 1950, 1948, and 1947, the last-named being the first year of its publication. There were, however, four handbooks of national labor unions antedating the first issuance of the Directory--prepared by BLS personnel in 1944, 1936, 1929 and 1926.

Each edition of the BLS Directory contains information for the preceding year as well as comparative summaries regarding trends in union growth and development over longer periods of time. Most of the current information in each Directory is obtained by means of questionnaires sent to central offices of national labor unions headquartered in the United States.[2] In cases where replies are not received or partially completed questionnaires are returned, the BLS may report information from other sources for the particular union(s), if these alternative sources are adjudged by the BLS to be reasonably accurate. In the published Directory, notations are placed alongside items taken from sources other than the self-reporting questionnaire.

Unpublished data regarding the number of full-time officers and staff employees of national labor unions included in the 1964 BLS survey were obtained directly from BLS personnel. These data were originally compiled by means of the questionnaire used in preparing the 1965 Directory and were made available for use in this study

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[2]The inclusion criteria used by the BLS in its survey are presented in the Preface to the 1965 Directory: "The basic requirement for inclusion in the Directory listing of national and international unions [is] affiliation with the AFL-CIO or, for unaffiliated unions, the existence of collective bargaining agreements with different employers in more than one State (except for national unions of Government employees and those in the Federal service meeting the recognition requirements under Executive Order 10988. Every effort [is] made to include all unions that [meet] this standard."

on condition that the anonymity of the responding national unions be preserved in the analysis.

Office of Labor-Management and Welfare-Pension Reports

The Office of Labor-Management and Welfare-Pension Reports (OLMWP) of the U. S. Department of Labor is the key agency given governance over labor organization reporting requirements set forth by the Labor-Management Reporting and Disclosure Act of 1959 (LMRDA).[3] The LMRDA requires labor organizations in the United States engaged in "industries affecting commerce" to file various informational and fiscal reports with the OLMWP on an annual basis. Essentially, the LMRDA definition of "labor organization" applies to federated bodies and to national, intermediate and local union organizations whose members work for employers in the private sector of the economy. Labor organizations whose members work exclusively for units of government are exempted from the reporting requirements of the Act.

In the study two documentary sources available from the OLMWP were used to obtain data: (1) the OLMWP Register of Reporting Organizations (1964); and (2) the annual financial reports submitted by national labor unions to the OLMWP. Each of these is described below.

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[3]The Labor-Management Reporting and Disclosure Act of 1959 is commonly referred to as the "Landrum-Griffin Act."

1. The Register lists all labor organizations having reports on file with the OLMWP as of January, 1964. Each reporting organization is identified by type of organization (e.g., national, local, intermediate), State where central office is located, and national union affiliation, if applicable.

2. All labor organizations with central office locations in the United States or its territories which receive and dispense funds, other than those which deal exclusively with units of government, are required to file detailed financial reports with the OLMWP on an annual basis. Each reporting organization is required to follow standardized procedures in recording information about fiscal operations in the preceding year. The reporting period is based on the individual organization's beginning and ending fiscal year dates. There is no uniform reporting period for all organizations filing with the OLMWP. The only requirement is for each annual report to be submitted within a 90-day period following the close of the organization's fiscal year.

The annual financial reports submitted to the OLMWP are public documents and are available for research and other purposes. They are of two types: The longer LM-2 form is required of all labor organizations having annual receipts of $30,000 or more. The LM-3 form is a condensed version of the LM-2 and is required of labor organizations having annual receipts of less than $30,000.

Only LM-2 reports were used as data sources in this study. It was decided that the reporting categories used on the LM-3 form were much too broad to provide usable information regarding administrative or fiscal activities.

Each LM-2 form requires an itemized listing of receipts and disbursements as well as a statement on assets and liabilities during the annual reporting period. For certain of the aggregate expenditure categories, additional scheduled sections of the LM-2 form require more detailed information. Only selected portions of the LM-2 reports were used to obtain data, and information about these is presented below in the appropriate sections dealing with operationalizations of variables.

It should be noted that each LM-2 (or LM-3) report received by the OLMWP is audited for omissions or reporting irregularities. In some cases, supplemental or corrected reports are filed by a reporting organization. In the study, supplemental reports, where found, were treated as the primary documents for the particular national labor union(s) involved.

Union Constitutions

National labor union constitutions were used as sources of information about formal characteristics of union government and administration. Copies of constitutions for the majority of unions studied were obtained by

written requests to the national headquarters of each union. Use was also made of files available in the OLMWP and the industrial relations libraries at Michigan State University and The University of Michigan.

Union constitutions are admittedly limited guides to the dynamics of union government and administration. In this study information derived from constitutional provisions was used in two ways: first, to provide indicators of formal characteristics of union structure and procedures; and second, to provide information regarding per capita tax rates and structures.

Union Convention Proceedings, Officers' Reports and Union Periodicals

National convention proceedings, officers' reports, and union periodicals were used in different ways to obtain data. They were particularly helpful in supplying information on the number of full-time field staff employed by particular unions. They also served two further ancillary functions: first, as a cross-check on the reliability of information obtained from one or another of the other data sources; and second, to supply information unobtainable from one of the other sources. In these latter instances, their usage was selective, primarily because the number of unions for which either type of problem arose was relatively minor.

The industrial relations library collections at Michigan State University and The University of Michigan were used to obtain copies of proceedings, officers' reports and periodicals for examination.

Selection of Unions to be Studied

The selection of national labor unions to be studied was carried out in a two-step process: (1) General selection criteria, mandated by certain analytical objectives of the study, were applied initially to constitute a potential study group. (2) The number of national unions in this first group was reduced by a series of eliminative decisions resulting from missing data or dubiety regarding the reliability of data on certain organizational characteristics. Each of these procedural steps is discussed below.

Selection of a Potential Study Group

Five inclusion-exclusion criteria were used in selecting a potential study group. They were as follows.

1. Only national labor unions listed in both the 1965 BLS Directory and the 1964 OLMWP Register were considered as potential units for study. The availability of uniform information about receipts and expenditures on an annual basis for each union, which is reliably obtainable from reports filed with the OLMWP, gave initial preference

to the listing in the OLMWP Register in establishing selection criteria. Also, the reporting requirements of the LMRDA apply chiefly to unions whose members work for private employers, and it was felt that dependence on the OLMWP listing would assist in providing a group of national labor unions with general functional similarities. Further, since both the OLMWP Register and the BLS Directory were to be used as data sources, the inclusion of each union in both listings was a minimum requirement.

2. All national labor unions which filed LM-3 reports were excluded from the study. As explained earlier, the reporting categories on the LM-3 form are too general to provide much useful information about fiscal or administrative operations.

3. All national labor unions having fewer than 5,000 members, as reported in the 1965 BLS Directory, were not included as potential units for study. As might be expected, this criterion partly overlapped the preceding one, because many of these smaller unions were also those having total annual receipts of less than $30,000. But the choice of this membership figure as a cutoff point was also a result of two other considerations: (a) Several of these unions did not have an elected official or appointed staff employee as a full-time administrator. Thus, across the range of cases having fewer than 5,000 members, there was considerable unevenness in comparative administrative

development. (b) This decision was also based partly on conversations with several individuals having broad knowledge of the labor movement, among whom there was general agreement that unions in this size category do not typically display stable patterns of administrative development.

4. National union organizations which have independently chartered national organizations, rather than local unions, as member units were excluded, though listed in both the 1965 BLS Directory and the 1964 OLMWP Register. It was felt that the structural and administrative features of these organizations would differ enough to make them noncomparable to national labor unions which are parent organizations of affiliated local units.

5. Those national labor unions not having local levels of organization, in the "conventional" sense of independently chartered and administratively separate local unions, were not included in the potential study group. In these types of unions, members affiliate directly with the national organization, although in some there may be regional branch offices as executive extensions of the national organization. It was decided that this basic dissimilarity to the more conventional organizational pattern of national and local units would have introduced noncomparable units into the analysis.

Table 1 shows the operative results of the application of these initial selection criteria.

Table 1

RESULTS OF APPLYING INCLUSION-EXCLUSION CRITERIA IN SELECTING A POTENTIAL STUDY GROUP

Inclusion/Exclusion Category	Number
Unions appearing in both BLS Directory and OLMWP Register listings	161
Unions excluded because fewer than 5,000 members reported in BLS Directory and/or LM-3 reports filed	38
Unions excluded because of federated form of organization with other national organizations as member units	2
Unions excluded because of no independently chartered local organizations, although having more than 5,000 members	4
Total number of unions excluded for all reasons	44
Total number of unions included in potential study group	117

Selection of the Final Study Group

Application of the general selection criteria resulted in a potential study group of 117 national labor unions. Preliminary examination of data on these unions necessitated further eliminations on other grounds, as noted in the following points.

1. For several of the national labor unions regarded as potential units for study, a reliable membership figure was judged not to be obtainable. In two instances this was due to an inability to obtain access to a copy of the union's national constitution. In six others, membership figures were initially calculated but later adjudged probably not to be reliable because of wide discrepancies between the calculated figure and alternative membership figures used as reliability checks. One other union, which resulted from a mid-1964 merger of two former national unions, was omitted because of incomplete information about membership size following the merger.

2. Another reason for additional exclusions was a lack of information resulting in varying amounts of missing data on major organizational characteristics other than membership size. In ten cases information on one or more of the major analytical variables in the study was not obtainable, at least in a reliable form, from any of the data sources used.

3. Three other unions were excluded because the values of one or more of the analytical variables were in each instance so extreme as to make these unions noncomparable to others selected for study. Whether or not these extreme values were the results of misapplications of data collection techniques by the author or of special conditions operating within these particular unions cannot be stated

with certainty, but attempts to examine the former possibility showed negative results. In any event, their retention in the final study group would have undoubtedly had serious disturbing effects on the relationships between independent and dependent variables included in the analysis.[4]

A summary presentation of the reasons for, and frequency of, these additional exclusions is provided by Table 2.

TABLE 2

REASONS FOR EXCLUDING OTHER UNIONS FROM THE POTENTIAL STUDY GROUP

Reason for Exclusion	Number
Reliable membership figure not obtainable	6
Information on other major analytical characteristic(s) not obtainable from data sources used	10
Value of major analytical variable(s) too extreme for reliable comparisons to other unions studied	5
Total number of unions excluded for all reasons	21
Total number of unions included in the final study group	96

[4]This observation is based on inspection of scatter diagrams showing the relationship between each independent and dependent variable included in the analysis--before and after excluding these three cases.

Key Characteristics and Limitations of the Final Study Group

In the end, 96 national labor unions were selected for study. In summary form they have the following key characteristics: (1) With one exception,[5] each union has more than 5,000 members. (2) With two exceptions, they are national labor unions in which the great majority of members work for private employers. Thus, considered in the aggregate, they are national unions displaying a relatively complete range of activities commonly associated with labor unions, including collective bargaining and strike actions. (3) They share the basic structural similarity of being parent organizations of independently chartered and administratively separate locally based affiliates.

There are two aspects of the selection processes used in the study which place some limitations on the generalizability of results in the analysis.

1. The national labor unions selected for study do not constitute a representative sample of any known universe of organizations. The general selection criteria were purposefully established to assure that (a) each union studied would be of sufficient membership size to make

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[5]Because of a coding error, one of the smaller unions, having slightly less than 5,000 members, was included in the final study group. Because this error was not detected until midway through the final data analysis, and in view of time and financial considerations, this case was retained in the analysis.

comparative analysis of the organization size-administration relationship a meaningful undertaking, and that (b) the unions studied would share certain structural and functional similarities beyond those implied by the common label, "national labor union." The intended effect of the general selection criteria was to define, for analytical purposes, a study population having particular size and structural characteristics.

2. The possible effects on the analysis of additional exclusions from the final study group is a question of a different order. It will be dealt with here in two ways: (1) Since organization size is a major independent variable in the study, and relatively complete and reliable information about size characteristics was available for both included and excluded cases, an examination of the way in which different membership size categories are affected by these exclusions provides one basis for comment about their possible effects. (2) The industry type classification proposed as a major control variable in the study[6] offers a second basis for discussion of the possible effects of these exclusions, although it requires some assumptions regarding the appropriate classifications of the excluded unions. In Table 3 the included and excluded

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[6]Industry type classifications used in the study are based on predominant product market characteristics in the industry (or industries) where a union exercises jurisdiction for purposes of organizing and collective bargaining. These are discussed in detail in a later section of this chapter.

TABLE 3

NATIONAL LABOR UNIONS INCLUDED OR EXCLUDED FROM THE FINAL STUDY GROUP, BY MEMBERSHIP SIZE AND INDUSTRY TYPE CLASSIFICATION

Membership Size Category[a]	Industry Type Not Determined	Local Market Industry Type[b]		National Market Industry Type[b]		Railroad Unions Only	
		Included	Excluded	Included	Excluded	Included	Excluded
5,000-24,999	1	8	2	15	2	5	0
25,000-74,999	1	8	2	16	5	3	1
75,000-249,999	0	11	2	9	2	3	0
250,000 and over	0	10	0	7	1	1	0
Not determined	2	0	0	0	0	0	0
Total	4	37	6	47	10	12	1

[a]Membership size figures taken from the 1965 BLS Directory; unions classified as "Not determined" are those for which independent figures showed membership size to be greater than 5,000, although not precisely determinable.

[b]Industry type classifications for excluded unions are based on presumed characteristics, as derived from information available in general commentaries on unionism.

unions are cross-tabulated by membership size, using figures reported in the 1965 BLS Directory,[7] and industry type classification.

Focusing first on industry type classification, Table 3 does not indicate any undue concentration of excluded cases within a particular category. The highest proportion of exclusions is found among the national market unions, with 17.5% (10 of 57) of the cases eliminated for various reasons; however, the figure for the local market category is only slightly lower, with 13.6% (6 of 43) of the original cases excluded. The smallest proportion of exclusions (7.7%, or 1 of 12) is found among the railroad unions, but the total number of these unions included in the study is quite small, thus making comparisons between this category and the others somewhat dubious. In sum, the proportionate distribution of excluded cases among the three industry type categories did not appear to indicate significant problems for the subsequent analysis of data.

A consideration of the implications of exclusions within different membership size categories poses a different type of problem, primarily because of the extensive range of membership sizes in the study sample itself. The categories used in Table 3 were largely selected for

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[7]Although the BLS-reported membership figures are not used in the study to operationalize the variable of organization size, they are used in the comparisons here because for certain of the excluded unions this was the only membership size figure available.

illustrative purposes and do not necessarily imply theoretical significance. Thus, it is possible only to comment in a proximate sense on the analytical implications of the comparative distributions of included and excluded cases, as shown in Table 3.

A lack of proportionment among the numbers of cases excluded in each size category could have the effect of giving some degree of disproportionate influence to those cases in size categories where the proportion of excluded cases is smallest. For example, as can be seen in Table 3, among the local market unions, there is an over-representation of the larger unions in the final study group in terms of the relative balances between included and excluded cases for each size category. Among the national market unions, a similar type of over-representation is observable for both the smallest and the largest membership size categories. The small number of railroad unions precludes any specific comment about the single excluded case.

In general, the lack of balance between the number of excluded and included cases among the membership size categories could possibly indicate that relationships between organization size and other variables in the analysis might be slightly affected because of these tendencies. However, it is necessary to emphasize that this is a <u>possible</u> result, since a lack of information on the meaning of various increments in membership size for the organization

size-administration relationship--which must be decided by observation and not assumption--precludes any precise determination of effects at this point.

In summary, it can be noted that the national labor unions selected for study do not constitute a representative sample of any known universe of organizations. In terms of definitions used for inclusion in the study, recognizing, of course, that certain cases were excluded for lack of information, they form a designated population of similar organizations. At the same time, the possible effects of excluded cases on relationships among variables advises a cautionary note with respect to the formulation of generalizations based on the findings.

Concluding General Comments about the National Labor Unions Selected for Study

As a matter of general interest, two further comments will be made about the national labor unions included in this study. The points noted are not of primary importance for the subsequent data analysis, but they do provide further contextual information about these particular unions.

1. The 1965 BLS Directory reported approximately 17.9 million members for the 189 national labor unions included in the 1964 BLS survey. Using these same BLS-reported figures, the 96 national unions in this study

account for about 15.2 million members, or approximately 85 per cent of the total reported membership. Thus, while the unions in this study do not represent the entirety of national unions in the United States, they do include the great majority of organized workers affiliated with national unions.[8]

TABLE 4

NUMBER AND PERCENT OF FULL-TIME NATIONAL OFFICERS AND EMPLOYEES FOR NATIONAL LABOR UNIONS IN THE FINAL STUDY GROUP

Number of Full-time Officers and Employees	National Unions	
	Number	Percent
Less than 25	23	24.0
25 to 49	30	31.2
50 to 99	15	15.6
100 to 149	10	10.4
150 to 199	8	8.3
200 to 399	4	4.2
400 and over	6	6.3
Totals	96	100.0

[8]With two exceptions, the national unions in this study are composed primarily of members working for private employers. When appropriate adjustments are made within the BLS figures for national unions of public employees--and allowing for some small margin of error--it can be estimated that about 90 per cent of all members in national unions operating predominantly in the private sector are affiliated with one of the unions in this study.

2. As can be seen in Table 4, more than half of the national unions in this study have fewer than 50 full-time national officers or staff employees. Only six of these unions (7.2 percent of the total) have more than 400 officer and staff personnel in the national organization.

In view of the number of members served by the various national unions in this study, the sizes of these national administrative components may seem to be surprisingly small, overall. But it must be remembered that the national organization represents only one administrative level in the total national union, albeit one of major importance. Thus, a comparatively small central administrative agency can accommodate the service needs of a sizable membership.

Data Collection

The data collection phase of the study involved two major types of activity. The initial task was to locate sources of relevant information and obtain access to the required reports or documents either by obtaining personal copies for use or by visiting locations where copies were available for examination. Next, the data on each union were compiled in a form suitable for tabulation and analysis, using coding categories devised for this study.

The only complications in the collection of data were related to the fact that none of the data used was

generated originally for this study. Thus, the problems encountered were essentially those of translating the existing information into usable data forms for analysis. In order to systematize this process, a standard information form was prepared, specifying the categorical types of information sought on each union studied. In effect, this meant creating for each union a brief dossier containing information on each variable to be included in the analysis.

In most cases the raw data were already in a standard form, and the primary task was that of tabulating these in terms of data codes or measurement indexes formulated especially for this project. This was true for most of the data derived from the BLS or OLMWP sources. Some of the basic information, however, was in a nonstandard form, particularly that gleaned from union constitutions, national convention proceedings and officers' reports. In these cases care was taken to assure compatibility of data obtained from different sources.

The several data collection tasks were carried out by the author, aided at various points by research assistants of the Institute of Labor and Industrial Relations, The University of Michigan-Wayne State University. Each item of data obtained from a documentary record other than what was considered a primary source for the particular datum was made the subject of joint discussion before accepting it as a dependable substitute.

Independent and Dependent Variables Included in the Analysis

The selection of independent and dependent variables to be analyzed was a product of two considerations: (1) the evidence of previous studies of the organization size-administration relationship and related commentaries in delimiting conceptual areas of analytical import; and (2) a careful scrutiny of commentaries on unionism as a means of discovering typical aspects of union organization and administration which correspond to these key areas of concern in the study of organization size and administration.

In this section the independent and dependent variables included in the present study are specified, with attention given both to the conceptual relevance of these variables, in terms of the literature reviewed in the preceding chapter, and their underlying measurements. For the most part, the several issues of data reliability connected with the measurements of variables in this study, some of which require rather lengthy explanation, are treated in an appendix rather than the main body of the text, so as not to distract attention from the present objective.[9]

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[9]See below, Appendix B. Notations are also made at appropriate points in the subsequent parts of this section, directing attention to extended discussions in Appendix B of particular measurement problems.

Independent Variables

Organization Size

With one exception,[10] in the research studies reviewed in the preceding chapter organization size has been operationally defined according to the number of population elements in the administered unit(s).[11] This is understandable, if it is recalled that in studies of the organization size-administration relationship, emphasis is placed on the coordinative function of administration in directing activities of organizational participants.

In this study the characteristic of population size is also used as an indicator of organization size. The operational definition of organization size is the total membership of the national labor union, expressed in terms of a full dues-paying membership figure for each union studied. This method of determining membership

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[10]Anderson and Warkov, op. cit. The measure used in this study is number of beds in each hospital. This particular measurement index is closely related to population size as a referent, in that the problem of administration is not related to the number of persons occupying beds over a given time period but the potential or average occupancy.

[11]Alternative measures have been suggested. Blau, for example, notes several different approaches--"number of employees of a factory, number of voters for a party, number of beds in a hospital, or total assets of a firm." "The Comparative Study of Organizations," op. cit. Starbuck has remarked that, in manufacturing firms, for certain analytical problems total employment may not be as good an indicator of organization size as sales volume or some other index of output. "Organization Growth and Development," op. cit., p. 514.

size results in what can be termed a "full membership equivalent" figure, rather than an enumeration of all individuals whose names might appear on the union's membership rolls in a given time period.[12]

Logarithmic transformations of the organization size variable are used in correlation analyses throughout the study. The decision to use this procedure resulted from an examination of the distribution of the cases in the final study group which showed, as expected, a wide range of values. Thus, the logarithmic transformations served to improve the normality of this distribution. In addition, it should be noted that a basic emphasis in the analysis is on the rate of increase in organization size, as opposed to a concentration on each unit increment in the membership size of the national union.

For the great majority of national labor unions in the final study sample, the technique used to derive membership size figures involved dividing the total per capita tax receipts of a union within an annual period, as shown in its LM-2 report, by the prevailing per capita tax rate for an individual full dues-paying member for the same period of time, as indicated by provisions in the national union's constitution. It was not possible to apply this technique to all the national labor unions

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[12]Further discussion of the rationale for using this technique is contained in Appendix B.

studied, since some have variable per capita tax rates for different classes of members (e.g., apprentices and journeymen, or male and female members) and a few specify per capita tax rates based on a percentage of a member's earnings over a given period of time (e.g., one-half of one percent of monthly earnings). However, alternative methods were used only if they were adjudged to yield comparable estimates of full dues-paying membership.[13]

Physical Density Characteristics of Administered Subsystems

The second independent variable included in the analysis is closely related to the characteristic of structural complexity discussed in the preceding chapter.[14] There it was noted that administrative functions are to a great extent mediated through different types of subsystems into which organizational members have been aggregated for purposes of coordinated activity. Thus, it is a logical expectation that the organization size-administration relationship will be affected by the distributive pattern resulting from differentiation of the organizational population into these administered subsystems.

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[13]The alternative methods and their comparability to the basic measurement device are discussed in Appendix B.

[14]See above, pp. 66-68.

In national labor unions, the form of elemental subsystem found most pervasively is that of the local union. Local unions constitute, in Chamberlain's words, "the building blocks of which the nationals are constructed."[15] In the present study, therefore, the characteristic of organizational complexity is considered with reference to membership size features of the local organizations in the national union.

The number and size of local unions were used to derive a physical density index for each union studied. The index figure for each union was operationally determined by dividing the total membership of the national labor union by the number of affiliated local unions reported in the 1965 BLS Directory.[16]

An examination of the distribution of cases in the final study group by values on the physical density index scale showed a tendency toward concentration in the lower ranges with a relatively few cases scattered in the upper ranges. Consequently, logarithmic transformations of the physical density index variable are used in correlation analyses throughout the study.

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[15]Neil W. Chamberlain, The Labor Sector (New York: McGraw-Hill Book Co., 1965), p. 190.

[16]Reliability characteristics of the BLS figures on local unions are discussed in Appendix B.

In sum, the physical density index is a summary measure which has the dual qualities of representing the underlying conceptualization of structural complexity and standardizing the variable itself for comparisons among unions of widely varying membership sizes.

Resource Capacity

Although only one of the studies discussed in the preceding review of research literature included a measure of organizational resources in its analytical design,[17] considerable attention is given to such a variable in this study. Its inclusion is predicated on the assumption--with supportive evidence based on the single study mentioned above--that the amount of resources available to an organization affects its capacity to develop its total program of operations, of which the administrative component is an important part.

In the analysis, the resource capacity variable was operationally defined as the per capita receipts of the national organization from contributions of the members. The per capita figure for each union was determined by dividing the total receipts from membership contributions by the number of members in the union. Total receipts from membership contributions was regarded as the

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[17]Hawley *et al.*, *op. cit.*

sum of all receipts recorded by a union in its annual LM-2 report as coming from any or all of the following: dues or per capita tax receipts; fees and fines; assessments; and fees for work permits issued.[18] Except for four cases, in which it was necessary to use figures for only one of the years 1963 or 1964, the resulting per capita figure was based on a two-year annual average for each union (1963 and 1964).[19]

As can be seen, the present measure differs from that used by Hawley and associates, in that emphasis is placed on per capita amounts of resources rather than the total amount of resources an organization commands. This is a direct result of an emphasis in the present study on the relative resource capabilities of the unions studied--i.e., the resource capacity of each union in comparison to others. Thus, it was necessary to use a standardized measurement which permits comparisons among organizations that, because of variations in total membership size, may

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[18]An alternative approach, based on total receipts of the union from all sources was considered but, for reasons discussed in Appendix B, was disallowed in favor of the approach discussed here. Other characteristics of this resource capacity measure are also treated in Appendix B.

[19]With few exceptions, these data were taken from printouts of data input tapes provided by the OLMWP. In a few cases, certain figures for one or the other years were illegible or an array of figures was incomplete. In these instances, it was considered more desirable to base the index on a single annual figure (1963 or 1964) rather than to risk error because of misreadings or presumed incompleteness of the figures.

differ considerably in the total amount of annual receipts from membership sources.

Industry Type

The variable of industry type is not directly derived from previous studies of the organization size-administration relationship. Besides its qualities as an independent variable in the study, it has an intended special usage as a major control variable providing a safeguard against presuming an unwarranted similarity in environmental circumstances among the national labor unions constituting the final study sample. As such, an important part of the analysis tests its value as a control variable in deriving more homogeneous groupings of unions for a clearer analysis of the relationships between other independent and dependent variables included in the study.

The formulation and inclusion of the industry type variable was a product of two considerations.

1. At a general level, attention was directed toward the implications of a recent statement by Perrow, who presents a strong argument for considering technological similarities and differences in grouping

organizations for comparative analyses.[20] For example, he states the following with respect to organization size as a major analytical variable: "A meaningful study of the effect of size on structure can be made only if we control for technology, and compare, say, large and small banks all of which have similar services, or large and small R and D labs."[21]

2. Careful consideration of the literature on union organization and administration led to the conclusion that an important distinction between national labor unions may be attributable to environmental influences associated with product market characteristics of the industry(ies) in which the union operates. Some background information about this environmental characteristic was presented

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[20]Charles Perrow, "A Framework for the Comparative Analysis of Organizations," American Sociological Review, 32 (April, 1967), 194-208. In this article, Perrow focuses mainly on routine and nonroutine aspects of work performed in the organization as indicators of technology. In the present study the variable of industry type is based on predominant characteristics of the industrial environments in which unions operate. Although the latter is much more general in its formulation, environmental influences are very much involved in shaping technological structure in an organization or group of functionally similar organizations. Thompson has recently noted that the particular form of production technology in an organization--regardless of the particular usage of the term, production, in a concrete instance--is strongly influenced by the necessity of the organization to cope effectively with its environment, both in terms of resource procurement and dispensing of organizational output. See James D. Thompson, Organizations in Action (New York: McGraw-Hill Book Co., 1967), pp. 14-24 et passim.

[21]Perrow, op. cit., 204.

earlier.[22] In general, the several commentaries which discuss differences in product market features agree that national labor unions operating in predominantly local market industries are more decentralized, administratively, than those in industries having product markets that are national or broadly geographic in scope.

The above two considerations resulted in a decision to incorporate the variable of industry type into the analytical design, with emphasis placed both on its relationship as an independent variable to the administrative component and its value as a major control variable in other aspects of the data analysis. It is scaled at a nominal level, utilizing a classification scheme of three categories. Information on which to base each classification was obtained variously from union convention proceedings and officers' reports, case studies of particular unions and industries, and specific and general commentaries on industry characteristics as they affect union organization.[23]

The categories used for classification purposes and their descriptive content are as follows.

1. Local or regionally limited: Unions classified in this category were those which operate in industries

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[22]See above, pp. 27-28.

[23]Further discussion of these sources and the content of this variable is presented in Appendix B.

having product or service markets which are predominantly local in character, or if regional, are confined largely to market areas which are limited in geographic scope.[24]

2. National or broadly geographic: Unions classified in this category were those which operate in industries having product or service markets which are predominantly national in character, or if less than national, have broad geographic scope.[25] One major exception to this

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[24]Improvements in communication and transportation systems have resulted in the expansion of product and service market areas in some industries which have long been regarded as predominantly local in character. For example, many of the building trades unions have had to adjust collective bargaining strategies to deal effectively with the expansion of markets beyond a local area. This does not mean, however, that there is an abrupt or direct shift of market characteristics from local to national scope; thus, the qualifying term "regionally limited," by which is meant that the effective area of wage competition may still be generally quite limited. To a great extent, industries of local market character tend to be in the building or contract construction, printing, and service industries.

[25]The term "broad geographic scope" is applied to national unions in industries where there may be several concentrations of product supply, each of which may be distributed in a broad geographical region rather than nationwide. However, the interpenetration of market areas in these industries, and the increasing entry of firms with multiple locations in many of them, create what are, from one point of view, national product markets. At a minimum, they are distinguishable from the product markets that are basically local or regionally limited in character. Also, there are some unions which are geographically concentrated because of the regional character of an industry; these have been classified in the category of "national or broadly geographic" if the effective area of wage comparison extends throughout the industry region. Although there are a few exceptions, national market industries tend to be in the manufacturing sector, with mass-production and factory or shop settings as predominant characteristics of the work technology.

classification was made in the case of the railroad unions, for reasons explained below.

3. Railroad unions: National labor unions in which the majority of members work in the railroad industry, although classifiable on many counts in the national market category, were separately classified because of certain conditions related to their operation.

The exceptional features of the railroad unions are largely attributable to their coverage under provisions of the Railway Labor Act (first passed in 1926 and then amended in 1934)--a specialized form of federal labor legislation applying only to the railroad and airlines transportation industries.[26] The Act is deliberately designed to encourage orderly settlement of labor disputes without interruptions to interstate commerce. Over time, a complex system of labor-management relations has developed to handle two major categories of disputes noted in the Act: those involving proposed changes in rules, working conditions and rates of pay; and those related to grievances arising out of interpretations of applications of negotiated agreements.

The comprehensiveness of the industrial relations system in the railroad transportation industry has resulted

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[26]Other unions in the private sector are covered by the National Labor Relations Act (or, Wagner Act) of 1935. It should be noted that no unions in the airlines transportation industry are in the final study group.

in considerable centralization of administrative control in the national organization with respect to certain issues of contract negotiation and grievance settlement. However, at the national level, a considerable part of this direct administrative function may be accomplished by working with and through two extra-union agencies. One of these is a federal agency--the National Mediation Board--which has responsibilities for assisting in the resolution of disputes involving union representation and contract negotiation. The other is the National Railway Adjustment Board--a permanent bipartisan body with equal representation of carriers and unions--which is concerned with grievance disputes growing out of contract interpretations.

Below the national level of administration, there is, in most of the railroad unions, a complex underlay of local and intermediate-level committees of adjustment to deal with disputes settlement close to points of origin, if possible.

In sum, the decision to classify the railroad unions separately was based on an assumption that these special circumstances might cause the structure of administration in these unions to be dissimilar in certain ways to what is found more typically in other unions placed in the national market category.

Intermediate Administrative Bodies

Many commentaries on union organization suggest that intermediate bodies--i.e., organization units located intermediate to the national and local levels of organization--may serve important functions in the overall pattern of operating administration in some national labor unions. It is noted that intermediate bodies may contribute to the administrative pattern by coordinating collective bargaining and other employer relations efforts of affiliated locals and presenting a united front to employers within a delimited geographical territory, thus lessening the total administrative burden of the national organization.[27]

Cognizance is taken in this study of the potential importance of intermediate bodies in understanding certain features of union administration, though limited in two ways: (1) Interest is confined to those intermediate bodies which are independently chartered by the national organization and financed by affiliated local unions, and which have delegated administrative responsibilities in the key areas of contract negotiation, strike control or regulation of working conditions. (2) Although formulated as an independent variable, it is not treated as a major

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[27]See, for example, the following discussions: Barbash, op. cit., chap. v; Leiserson, op. cit., chap. xiii; Herbert J. Lahne, "The Intermediate Union Body in Collective Bargaining," Industrial and Labor Relations Review, 6 (January, 1953), 163-179.

interpretive variable in the study, but rather is analyzed in terms of its conditional effects on interpretations applied to other independent-dependent variable relationships.

Operationally, the variable pertaining to intermediate bodies is represented by a dichotomous classification, with only those unions considered to have such bodies as important administrative units for which an affirmative response was possible to each of the following checklist criteria. (1) Does the national constitution of the union provide for intermediate bodies and authorize them to act in one or more of the following ways on behalf of affiliated locals: contract negotiation; strike control; grievance settlement; regulation of wages, hours and working conditions? (2) Is there provision in the national constitution for support of the intermediate body by contributions of affiliated locals? (3) Are the intermediate bodies of the national union shown to be operative by appearing in the listing of the OLMWP 1964 Register? (4) Is the ratio of intermediate bodies to local unions in a national labor union of a 1-to-30 proportion or less? This operationalization is admittedly a crude one, but the amount of information regarding these types of union organizations is itself surprisingly sparse.

Union-sponsored Membership Benefit Programs

In this study membership benefit programs refer to special programs, other than those providing for strike or unemployment benefits, that are sponsored by the national labor union and financially supported by contributions of participating members. Examples are death benefit, disability, and retirement pension programs.

The variable pertaining to membership benefit programs was operationally defined by a dichotomous classification, with only the presence or absence of such programs noted for each union studied. The basic information for making each classification was obtained from provisions in the union's constitution (if applicable) specifying the outlines of the program or indicating a special apportionment of each per capita tax payment to such a program.

This variable, like that pertaining to intermediate union bodies, is not used in the study as a major independent variable. Its singular function is that of clarification with respect to certain relationships observed between major independent and dependent variables.

Dependent Variables

Three dependent variables are included in the analysis, each represented by a summary measure indicating

the relative size of a functionally differentiated aspect of the officer and staff component in the national organization of each union studied. These variables were selected on the basis of two major criteria: consideration of the different occupational types and administrative functions common to national headquarters operations in labor unions; and, consideration of practical issues relative to the quality and range of available data regarding different parts of the officer and staff component at the national level of organization.

Total Administrative Component

The basic empirical reference for this variable is the total number of full-time officers and appointed staff in the national organization of each union. As such, the variable incorporates a congeries of occupational types involved in both direct and supportive administrative functions--policy and program development, supervision, research, record keeping, and the like--and, as will be shown, is far less refined in its specifying qualities than the other two dependent variables.

In the analysis, the total administrative component was operationally defined by an index figure based on the ratio of the number of full-time employees (elected officers and appointed staff) of the national organization to number of members in the national labor union. In each

case, this ratio was first calculated as a decimal fraction of six places, but for convenience in presentation and analysis, this fraction was converted to a whole number by simply ignoring the decimal point. This was viewed as a legitimate methodological device, since the emphasis in the study is on the relative differences in values and not true fractional values.

Information regarding the number of full-time officers and staff of each national organization was obtained from representatives of the BLS, with the exception of four unions for which information was obtained directly from national officers' reports to convention bodies.

Reliability characteristics of data regarding the number of full-time officers and staff employees in each union are discussed in Appendix B.

Direct Administrative Component

The formulation of this variable is based on the rationale that a functionally distinct segment of the total administrative component is represented by those personnel whose major tasks involve the design of organizational programs, decision making and/or direct supervision in relation to the central activities of the organization.

Three major occupational types in the national organization of the union were used to constitute the

direct administrative component: full-time national officers,[28] whose major tasks involve policy and program development for the total union, and not infrequently direct contact with local unions for purposes of assisting in matters of organizing, contract negotiation, and disputes settlement; administrative assistants to the aforementioned officers, since their tasks are directly related to the executive assignments; and field representatives, whose assignments primarily involve the servicing of local unions on matters of organizing, negotiation, contract enforcement, disputes settlement and the interpretation of national policies to local leaders and members. To a great extent the international representative is the primary link between the national and various subnational levels of organization.

In the analysis, the direct administrative component was operationally defined by an index figure based on the ratio of the number of full-time elected officers--other than those excepted, as noted above--administrative assistants to these officers and field representatives to the total number of members in the union. This ratio was converted to a whole number, using the same technique mentioned in regard to the total administrative component.

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[28]Exceptions to this general designation are those national officers who, according to job title are immediately responsible for tasks of an indirect, or supportive, character--as for example, an elected editor or legislative representative.

Information on the numbers of individuals comprising the direct administrative component for each union was obtained primarily from national officers' reports, convention proceedings, LM-2 reports, and in a few instances, union periodicals. A more complete discussion of these data and their reliability characteristics can be found in Appendix B.

Supportive Administrative Component

In one sense this dependent variable implies the obverse of the preceding one, that of the direct administrative component, in that supportive administrative activities are those which, although making important contributions to the overall achievement of coordination, are not directly involved in policy formulation or supervisory functions in relation to the central goal-attaining activities of the organization. Although the actual positions comprising this component of administration may include a variety of occupational types, three general categorical functions fall within its definitional range: the provision of professional and technical expertise; the handling of formal communications, commonly associated with clerical routines; and the maintenance of records, which can have a number of concrete expressions, depending on the information storage needs of particular types of organizations.

The supportive administrative component was operationally defined by an index figure based on the ratio of the number of full-time staff of the national organization, other than those occupying positions of a direct administrative character,[29] to the total number of members in the union. This ratio was converted to a whole number, using the same technique mentioned in regard to the total and direct administrative components.

As can be seen, the supportive administrative component has been defined in a largely residual sense; that is, the figure for each union is based on the difference between the total number of full-time personnel in the national organization minus the total number of those regarded as parts of the direct administrative component. Originally, it was intended to distinguish within the category of supportive personnel between those performing professional and technical assignments and others of a more clerical nature, but this did not prove possible for nearly half of the unions studied. Thus, this component of administration can be generally regarded as consisting of several occupational types sharing the common characteristic of being supportive in their administrative functions.

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[29]Full-time elected officials occupying essentially supportive administrative roles, as for example, auditors or editors, were counted as part of the supportive administrative component.

A more complete discussion of the data used in formulating this variable and their reliability characteristics is presented in Appendix B.

Examination of Relationships in the Analysis of Data

The General Mode of Analysis

Udy has recently commented that comparative organizational studies usually reflect one of two predominant analytical modes: exploration of a body of data in an attempt to make sense out of it; and, testing of hypotheses that have been theoretically deduced or otherwise independently suggested.[30] This study is not satisfactorily characterized by exclusive emphasis on one or the other of Udy's analytical types.

This study has been undertaken largely on a descriptive level, and included within its general design are a number of essentially exploratory investigative interests. Thus, the organization of data presentation and analysis is designed to elucidate relationships among variables rather than test specific hypotheses. In view of the present state of conceptual and theoretical development in the study of organization size and administration, which can be characterized as rather rudimentary,

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[30]Udy, op. cit., p. 680.

it was considered more productive to design the analysis in this way.

The analyses and interpretations of relationships observed in this study must necessarily be presented within the framework of two areas of concern. (1) Because the data pertain to a particular organizational context, that of the national labor union, it is necessary that attention be paid to any aspects of the findings which may be associated with the particular setting of union organization and administration. (2) To be meaningful in a broader sense, similarities and differences must be noted between the findings in this study and those of studies conducted in other organizational settings, particularly with reference to conceptual issues relating to the general study of the organization size-administration relationship.

In the data analysis each of the major independent variables is analyzed in terms of two types of effects: (1) as an independent variable relating in particular ways to the different aspects of the administrative component; and (2) as a control variable conditioning or modifying the relationships between other independent variables and the different aspects of the administrative component. The two other variables relating, respectively, to the presence or absence of intermediate bodies or of union-sponsored membership benefit programs, although formulated as independent variables, serve an ancillary function in the

analysis, namely, that of clarifying or extending interpretations applied to other independent-dependent variable relationships.

In sum, the study has been designed to utilize techniques of multivariate analysis and thus, through progressive refinements of data, to investigate the relationships between each major independent variable and differentiated aspects of the administrative component. In the analysis particular attention is paid to the ways in which the partialling effects of other variables condition or modify general conclusions about these relationships.

Tests of Relationships

The statistical technique receiving greatest emphasis in this study is that of product-moment correlation, with various usages of zero-order and partial correlations. Some of the data have been cross-tabulated, with contingency effects noted, but in the main reliance is placed on correlation coefficients indicating the direction and strength of particular relationships among variables.

Tests of statistical significance are not used in the data analysis. As noted earlier, the national labor unions selected for study are not a representative sample of any known universe of organizations. Within the general category of organizations commonly identified

as national labor unions, they form a subpopulation selected for analysis on the basis of certain distinctive organizational features.[31] Strictly speaking, there is no inferential basis for generalizing the results of this analysis beyond the particular group of national labor unions being studied.

This limiting feature of the analysis should not be construed, however, as implying that such studies as this one are without theoretical import outside of their immediate empirical contexts. To do so would deny the essentially crescive note in the developing body of knowledge concerning the organization size-administration relationship. An important objective underlying this study is to compare the results of this analysis with those of studies conducted along similar lines in other organizational settings. At the same time, there is a general implication that theoretical extensions of these comparisons can be made only with a suggestive emphasis; that is, as generalized statements subject to verification in further studies designed for appropriate usages of statistical inference in hypothesis testing.

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[31]Thus, the national labor unions chosen for study do not form a "study sample," at least in the commonly accepted meaning of that term. The alternative designation, "study group" is used at most points in the discussion to maintain this distinction.

Conclusion

The major objective of this study is to examine the relationship between organization size and relative size of the administrative component, or functionally differentiated aspects of this component, in a designated study group of national labor unions. The analysis is not intended as an in-depth exposition of union organization or administration, but seeks only to investigate patterns of relationships among a relatively small set of formal attributes.

The preceding discussion has dealt with methodological procedures used in the study and has outlined the basic features of the design of analysis, noting wherever appropriate, the limiting features of the study.

On the basis of the discussion in this chapter, it can be stipulated that two judgmental criteria of the study have been met: (1) its descriptive emphasis, which depends for its meaningfulness on an adequate portrayal of formal aspects of union organization and administration that can be analyzed across a broad range of national labor unions of varying membership sizes; and (2) its comparability to other studies of organization size and administration, which depends for its viability on similarities in conceptual usages between this study and earlier ones.

The succeeding chapters concentrate singularly on analyzing the relationships among variables noted in the preceding discussion and comparing the findings in this analysis with those of previous studies that have focused on the organization size-administration relationship.

CHAPTER IV

PRESENTATION OF FINDINGS

The discussion in this chapter is organized into four major sections, following by a short concluding discussion. The first section examines the relationship between industry type and the administrative component, and investigates the importance of industry type as a major control variable in the subsequent data analysis. In the second section the relationships between organization size and the different parts of the administrative component are analyzed. The third section deals with the relationship of resource capacity to the administrative component and its effect on the organization size-administration relationship. The fourt section similarly examines the relationship of physical density characteristics to the administrative component and to the organization size-administration relationship. A brief concluding section summarizes the results of the foregoing analyses.

Industry Type as a Control Variable and Its Relationship to the Administrative Component

In the preceding discussion dealing with certain general aspects of union structure and administration,[1] it was noted that many commentaries on union organization stress the importance of product market characteristics as environmental influences affecting the pattern of developments in operating administration in national labor unions. In this study, the variable of industry type, which is treated operationally according to differences in product or service market characteristics of industries in which national unions exercise jurisdiction, has been given a prominent place in the analytical design.

The first series of relationships examined in the data analysis concentrates on comparisons of the relative sizes of the different indexes of the administrative component before and after division of the larger study sample into industry type subgroups. Attention is also paid to the comparative values of the other independent variables within the separate industry type categories. It is necessary that these two sets of comparisons be viewed in their proper analytical perspectives.

Demonstrable relationships between industry type and the relative sizes of the different indexes of the

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[1] See above, pp. 27-28, 106-109.

administrative component are themselves of considerable interest in this study. However, such relationships can provide at best only partial documentation of the effectiveness of industry type as a major control variable in the subsequent data analysis. It is entirely possible for industry type, when analyzed as an independent variable, to bear a strong relationship to the administrative component indexes but yet be relatively ineffective as a control variable in relation to other independent variables included in the general analysis.

The value of industry type as a major control variable must be determined by two lines of investigation: (1) the presence or absence and implications of any observed relationships between industry type and the separate indexes of the administrative component; and (2) the effects of industry type on the distributions of the values of the other independent variables included in the analysis. If categorization of the total study group by industry type effects particular distributions of the administrative component indexes and of the other independent variables, then its potential effectiveness as a control variable is enhanced, and doubt can be cast on the advisability of basing any general conclusions on observed relationships

within the entire undifferentiated study group.[2]

Industry Type and the Administrative Component

Many commentaries on union organization and administration stipulate that the geographical extensiveness of the product market[3] of an industry where a national union exercises jurisdiction is an important influence on the degree of administrative centralization (or decentralization) in its operating structure, particularly in the key areas of collective bargaining, contract administration and disputes settlement. Generally speaking, as the market area becomes larger, it is necessary that locals' activities be coordinated at supra-local levels of organization in order to avoid deleterious consequences of differential settlements on wage terms and working conditions. On the basis of these commentaries, it can be generally concluded that national labor unions operating

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[2]With respect to industry type as a control variable, an important point is whether such a variable, although crude in its formulation, provides subgroups of greater homogeneity than would result from relying on the entire study group. As noted at an earlier point, Perrow has argued that the major control variable in comparative organizational analyses should in some way reflect the technological style of a group of organizations with respect to their major task-performing activities. See Perrow, op. cit., 203-204.

[3]The term "product market" should be understood as applying also to industries where the product is a service performed for some clientele; for example, retail sales or municipal services.

in industries having predominantly local or regionally limited product markets show greater tendencies for administrative responsibilities to be decentralized to subnational units of organization than national unions in industries where the product market is national or broadly geographic in scope.

Translated into the context of the present study, this conclusion leads to a general expectation that the relative size of the officer and staff component in the national organization should vary by industry type subgroup. This expected relationship is based on the assumption that the size of this administrative component is related to the amount of administrative supervision or services provided at the national level. In concrete terms, national labor unions of a predominantly local market type would be expected to have, on the average, relatively smaller administrative components at the national level than those of a national market type.

To examine the relationship between industry type and the administrative component, unions constituting the total study group were separated according to industry type and the mean sizes of the different indexes of the administrative component were computed for each subgroup. The results are shown in Table 5.

The data in Table 5 show strong concurrence with expectations derivable from the several commentaries

TABLE 5

MEAN SIZES OF DIFFERENT INDEXES OF THE ADMINISTRATIVE COMPONENT: BY SEPARATE INDUSTRY TYPE

Industry Type	TAC Index[a]	DAC Index[a]	SAC Index[a]
Local market industry type (N = 37)	555	280	275
National market industry type, not including railroad unions (N = 47)	1112	676	436
Railroad unions only (N = 12)	1592	731	861
Entire study group (N = 96)	964	527	437

[a]These designations are used here and afterward to identify the different aspects of the administrative component; thus, TAC = Total administrative component index, DAC = Direct administrative component index, and SAC = Supportive administrative component index.

emphasizing the importance of product market characteristics on the development of administrative structures in national labor unions. Regardless of the particular aspect of the administrative component on which the comparison is based, the figure for the local market category is noticeably smaller than the corresponding ones for either of the other two subgroups.

Two general statements can be advanced on the basis of these results.

1. The data in Table 5 provide positive support for the suggested hypothesis that, of the three industry

type classifications, national unions in the local market subgroup are the most decentralized, in their administrative structures. This is implied by the data, if it is assumed that the relative sizes of the different aspects of the administrative component are directly related to the amount of direct administrative supervision or the number of administrative services provided by the national organization.

At the same time, it must be noted that the data in Table 5 relate only to a particular organizational level--that of the national organization--and the presumed tenability of the hypothesis must be regarded as an implied conclusion. It is not possible, by relying solely on Table 5, to project the forms or extent of administration existing at subnational levels of organization, although presumably there is a greater lodging of responsibilities for operating administration at these lvels in the local market type unions. But, the defensibility of this conclusion must, in this case, rest on an indirect form of proof. What can be confidently stated is that Table 5, from a methodological standpoint, provides positive, though partial, documentation on the value of industry type as a major control variable in the subsequent analysis.

2. It is interesting to note in Table 5 the differences among the industry type subgroups in the way personnel are distributed between the two subdivisions of

the total administrative component, as indicated by the relative sizes of the respective means. Within the local market category, there is little difference between the mean sizes of the direct and supportive administrative component indexes. This is not so in the case of the other two industry type subgroups. In the national market category, the mean size of the direct administrative component index is considerably larger than the corresponding figure for the supportive administrative component. An opposite effect, though not as great, is observable for the railroad unions.

Why these comparative differences occur is a timely, as well as interesting, question because of certain possible implications for interpretations of data at later points in the analysis. Essentially, there are two major points which can be made about these particular aspects of the data in Table 5.

First, as defined in this study, the supportive administrative component consists of a number of distinct occupational types, including those of a clerical, records-maintenance, technical and professional nature. However, an important part of the total supportive administrative function is the provision of supportive services to those in direct administrative positions. Thus, it might be expected that, if the relative size of the direct administrative component is smaller among the local market type

unions (presumably a consequence of decentralization), the relative size of the supportive administrative component should display a similar tendency, though not necessarily decreasing at a similar rate.

As can be seen in Table 5, the general directional tendency of the columnar means for the direct and supportive administrative component indexes, respectively, is the same; in either instance, the figure for the local market category is the smallest. This suggests that the quantitative characteristics of both the direct and supportive administrative functions are directly related to the degree of decentralization in the administrative system, an argument essentially reiterating that presented earlier about the relationship of industry type to the administrative component. It does not, of course, explain the comparative differences between the mean sizes of the direct and supportive administrative component indexes within the separate industry type subgroups.

Second, the relative rates of increase or decrease in the sizes of the direct or supportive administrative components may be influenced by other conditions which vary in their operative effects on each component. The following presents an important illustration of these possible differences.

It was noted in an earlier chapter that an important part of the direct administrative function involves

the direct supervision or monitoring of subunit activities, and for the most part cognizance of the individual member in the subunit is unnecessary. In another section the argument has been presented that, in the case of unions of a predominantly local market type, decentralization of direct administrative functions to subnational levels of organization is possible without serious compromise of the effectiveness of the total union in its important collective bargaining activities.[4]

On the other hand, certain parts of the supportive administrative function are probably not as susceptible to decentralization in relation to differences in the industrial environment. A number of information-processing tasks at the national level involve the maintenance of records derived from local unions as source units, as well as the provision of services--for example, a union periodical or benefits payments--to the individual member. With respect to these types of activities, the level of supportive services should be relatively unaffected by differences in industry type, since they rely heavily on the existence of centralized service units in the national organization. In short, many of the activities of a supportive nature simply cannot be decentralized or delegated in the same way as those of a direct administrative character.

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[4]On each of these points, see the materials presented earlier

Table 6, for example, indicates the union-sponsored membership benefit programs tend to occur most frequently among the local market type unions and the railroad unions. These programs, it should be noted, are essentially of a transfer-payment type; that is, they are based on regular financial contributions of participating members, which are then held by the national organization--presumably invested for interest gains--and returned to members of their beneficiaries at a later time in the form of benefits.[5]

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[5]Why there is a relatively greater concentration of such programs among unions in these two categories is a separate, though not unimportant, question. In general, these programs are found more frequently in unions which are older and retain relatively strong craft and/or fraternalistic orientations--which tend also to be unions concentrated in local product market industries, such as the building trades, and the railroad industry. In both cases, the tenure of membership maintenance is, on the average, of sufficient length to make the member's investment in such a program over time quite beneficial. Too, in certain of the local product market industries, the individual member may be working in a craft requiring frequent changes in employers and work sites; consequently, the union sponsorship of the benefits program affords him a stability not available within the industry itself.

National market type unions, which tend on the average to be younger and of an industrial stripe, have not developed these types of programs to any notable degree, apparently preferring in most instances to negotiate with employers for similar types of benefits. Within this industry type category, however, there are a number of unions which, though perhaps quite diversified at present in membership composition, retain many of the fraternalistic elements of their craft lineage, one expression of which are membership benefit programs.

TABLE 6

FREQUENCY OF UNION-SPONSORED MEMBERSHIP BENEFIT PROGRAMS, BY INDUSTRY TYPE

Industry Type	No Programs	One or More Programs
Local market industry type	13	24
National market industry type, not including railroad unions	36	11
Railroad unions only	4	8

The operation of membership benefit programs might be expected to create a relatively greater demand for supportive administrative personnel because of the various supervisory and clerical tasks associated with records maintenance and other operations connected with these programs. Consequently, within the local market and railroad union subgroups, where the greatest frequencies of such programs are found, an upward push on the mean size of the supportive administrative component index would be a natural outcome of this phenomenon.

In sum, the foregoing discussion provides two sources of explanation about the relative mean sizes of the direct and supportive administrative component indexes within each industry type. First, certain supportive administrative tasks are directly contributory to the direct administrative function, so that, in general, the directional

tendency of the columnar means in Table 5 for the two indexes is as might be expected. Second, the rates of change in the respective means show some variations among the different industry types in the case of the supportive administrative component, a difference which is probably attributable to the fact that certain parts of the supportive administrative function in the national organization are not susceptible to the influence of variations in industrial environment.

Examination of the relationship between industry type and the administrative component provides, then, the following summary information.

1. Assuming a direct relationship between the relative size of the officer and staff component in the national organization and the nature of centralization (or decentralization) in the administrative structure of the national union, those of a local market industry type would appear to be the most administratively decentralized of the three subgroups compared. (Table 5). This observation concurs with the suggested hypothesis in the literature on union organization regarding the relationship between product market characteristics and administrative structures in national labor unions.

2. Table 5 provides positive, though incomplete, evidence about the advisability of incorporating industry type as a major control variable in the subsequent data

analysis. A more conclusive statement must await an examination of the relationship between industry type and other independent variables included in the analysis.

3. Industry type, as a meaningful indicator of decentralizing influences associated with varying environmental contexts, may have somewhat differing effects on different types of administrative functions. Considered jointly, the data in Tables 5 and 6 indicate, with respect to the direct and supportive administrative components, that the influence of industry type differences may be more direct and pervasive on the former.

Industry Type and Other Independent Variables in the Analysis

The data in Table 5, although demonstrating a relationship between industry type and the administrative component indexes, are incomplete with respect to a determination of the value of using industry type as a major control variable in the remaining analysis. It is also necessary to examine the relationships between industry type and the other independent variables and to compare the pattern of these relationships with the directional tendencies of the columnar figures in Table 5 for the different industry type subgroups.

As will be shown, Tables 7, 8 and 9 provide strong evidence when considered conjointly with Table 5 in favor of using industry type as a major control variable.

TABLE 7

FREQUENCY AND PERCENTAGE OF UNIONS IN STUDY GROUP, BY ORGANIZATION SIZE AND INDUSTRY TYPE

Organization Size	Local market industry type		National market industry type, not including railroad unions		Railroad unions only	
	No.	%	No.	%	No.	%
5,000 to 24,999	8	21.6	15	31.9	5	41.7
25,000 to 74,999	9	24.3	18	38.3	3	25.0
75,000 to 249,000	11	29.7	7	14.9	4	33.3
250,000 and over	9	24.3	7	14.9	0	0.0
Totals	37	99.9	47	100.0	12	100.0

TABLE 8

MEAN SIZE OF PHYSICAL DENSITY INDEX,
BY INDUSTRY TYPE

Industry Type	Mean Size, Physical Density Index
Local market industry type (N = 37)	415
National market industry type, not including railroad unions (N = 47)	315
Railroad Unions only (N = 12)	108
Entire Study Group (N = 96)	329

As can be seen in Table 7, there is a sizable concentration in the national market category of unions in the smaller membership size classes, while the local market unions distribute rather evenly among the size classes. The railroad unions, although small in number, tend toward the lower end of the membership size scale.

Somewhat similar results are observable for the physical density index (Table 8), in that the mean size of the index for the local market unions is considerably larger than the corresponding figures for either of the other two industry type categories. The figure for the railroad unions is notably smaller than both the others, suggesting that, on the average, local organizations in

the railroad unions tend to have very small memberships.

Both Tables 7 and 8 provide strong documentation for the advisability of using industry type as a major control variable in the subsequent data analysis. On the whole, they indicate that generalizations based on observed relationships between any of the indexes of the administrative component and organization size or physical density within the entire study sample would have spurious qualities. This would be due, primarily, to the dissimilarities in the distributional tendencies of the columnar means in Table 5, in which the local market unions display the lowest values, and the values of the organization size and physical density index variables in Tables 7 and 8, in which the local market unions display the largest values, overall. Further, in both Tables 7 and 8, the railroad unions show a marked tendency to distribute differently than unions in either of the other two subgroups.

Table 9 shows the mean sizes of the resource capacity measures for each of the industry type subgroups. As can be seen, there is a demonstrable relationship between industry type and resource capacity. Furthermore, the direction of the differences among the means is similar to what was earlier observed for the separate indexes of the administrative component in Table 5, in that the figure for the local market unions is the smallest, followed by that for the national market unions and the railroad unions,

TABLE 9

MEAN SIZE OF RESOURCE CAPACITY INDEX, BY INDUSTRY TYPE

Industry Type	Mean size, resource capacity index
Local market industry type (N = 37)	19.82
National market industry type, not including railroad unions (N = 47)	26.02
Railroad unions only (N = 12)	38.40
Entire Study Group (N = 96)	24.73

respectively. This, however, is not surprising, since unions having smaller national officer and staff components would be expected, on the average, to require comparatively smaller amounts of resources for administrative operations at the national level.

One other feature of Table 9 should also be noted, since it may have some relevance for later interpretations in the data analysis. The difference in the mean sizes of the resource capacity indexes for the local market and national market unions is not as great as might have been expected on the basis of the comparative difference in the mean size of the total administrative component index, as shown in Table 5. On the other hand, the mean size of

the resource capacity measure is considerably larger for the railroad unions than for either of the other two industry type subgroups. These differences can be explained in part in terms of the comparatively high frequency of union-sponsored membership benefit programs found among both the local market and railroad unions. In those unions having such programs, a certain portion of the resource capacity measure will be represented by a financial component that is not available for general administrative purposes.

In sum, the relationship between resource capacity and industry type, although varying somewhat from the findings regarding organization size and physical density, also provides a measure of support for utilization of industry type as a major control variable in the subsequent data analysis.

Conclusion

The major findings in this section on the variable of industry type are summarized in the following three points.

1. A relationship was found between industry type and each index of the administrative component. In each instance the mean size of the administrative component index was substantially smaller in the case of the local market industry type unions (Table 5). These results

substantially accord with the suggested hypothesis in the literature on union organization that national labor unions operating in industries having predominantly local or regionally limited product markets tend to be more decentralized in their administrative structures than those in industries having product markets that are national or broadly geographic in scope.

2. An examination of the relationship between industry type and each of the other major variables in the analysis has provided substantially convincing evidence about the effective capacities of the industry type variable in differentiating analytically meaningful subgroups. Thus, in the remainder of the analysis, the focus of attention is on observed relationships within each industry type subgroup and comparisons of results as between these subgroups.

3. A separate question of a more theoretical nature can be posed in terms of other possible effects that may be related to differences in industry type. For example, the factor of administrative centralization or decentralization may also influence the way different unions respond to the administrative problems associated with differences in organization size, complexity or resource capacity. This general issue is considered at later points in this chapter, and further comment is reserved until the results of the subsequent analyses are presented.

Organization Size and the Administrative Component

As noted earlier in the study, there are three possible statements for a general hypothesis about the organization size-administration relationship; namely, that organization size and relative size of the administrative component are (1) positively related, (2) unrelated, or (3) inversely related. Previous studies focusing on this relationship have not provided consistent support for one or another of these hypotheses as a general statement. A review of these studies has shown that this lack of consistency may be partly attributable to the existence of differential associations between organization size and different functional aspects of the administrative component.

In this section of the analysis, a comparative examination is made of the relationships between organization size and relative size of each aspect of the administrative component--total, direct and supportive--considered in the study. The zero-order correlations in Table 10 show the direction and strength of these relationships, with separate observations made for each of the industry type subgroups. Scatter diagrams for these relationships, which will be shown to be relevant to interpretations of the correlations, are presented separately in Appendix A.

It should be noted that the results in Table 10 provide only a tentative basis for summary statements about the organization size-administration relationship among the national labor unions studied. In subsequent parts of the analysis, the further possibility is considered that different aspects of this relationship may be affected by the way in which organization size relates to resource capacity characteristics or to the nature of organizational complexity within the administered system.

TABLE 10

ZERO-ORDER CORRELATIONS BETWEEN ORGANIZATION SIZE AND THE ADMINISTRATIVE COMPONENT INDEXES: BY INDUSTRY TYPE

Independent Variable	Dependent Variables		
	TAC Index	DAC Index	SAC Index
Organization Size:			
Local market industry type (N = 37)	-.364	-.562	-.121
National market industry type, not including railroad unions (N = 47)	-.140	-.300	.146
Railroad unions only (N = 12)	-.805	-.906	-.502

Organization Size and the Total Administrative Component

As can be seen in Table 10, there are rather sharp differences among the industry type subgroups in the way organization size relates to the total administrative component index. In each instance the correlation is negative, but the strengths vary considerably and that for the national market subgroup is of a very low magnitude.

In a general way these results accord with expectations based on the cumulative results of earlier studies that have examined the organization size-total administrative component relationship. As was noted earlier,[6] the summary evidence of these previous studies is not altogether clear about the form of this relationship, other than to suggest, in a negative sense, that the relationship is probably not positive in direction. But the implicit principle underlying this broad generalization is one of administrative, rather than distinctly sociological, importance; namely that organization growth does not result in a proportionately greater increase in administrative overhead, which would be an inefficient consequence of increasing size.

The negative character of the relationships shown in Table 9 might suggest that, among national labor unions,

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[6]See above, pp. 61-62.

increasing organization size is associated with an economy-of-scale in respect to the size of the total administrative apparatus in the national organization. This is one possible implication of the three correlations, though those for the local market unions (r = -.364) and the railroad unions (r = -.805) provide apparent stronger support for this interpretation than does that for the national market unions (r = -.140).

A careful inspection of the scatter diagrams for each of the organization size-total administrative component relationships (Appendix A, Figures 1, 4 and 7), indicates that such an interpretation must be applied with great caution, and in the case of the national market unions would be an essentially incorrect conclusion.

The scatter diagrams depicting the covariation of organization size and the total administrative component index among the national market unions (Figure 4) show considerable scatter of the Log X,Y points. There would appear to be a slight U-shaped curvilinearity in this relationship, with a modest upturn occurring among unions in the larger size ranges. This curvilinear effect can be largely understood as a result of the opposing regression tendencies associated with the separate correlations between organization size and the direct administrative component index (r = -.300) and the supportive administrative component index (r = .146), as shown in Table 10.

The general effect of the difference in the direction of these correlations is to render any specific generalization about the organization size-total administrative component relationship among the national market unions an unwise gesture.

The local market unions offer a somewhat differing picture. As can be seen in Figure 1, for those unions having less than 25,000 members, there tends to be a noticeable scatter of the Log X,Y points--a phenomenon which, incidentally, is also observable for national market unions in this size range (Figure 4). But for local market unions having more than 25,000 members, the negative progression of these points is fairly regular.

A partial explanation of the difference in the organization size-total administrative component relationship for the national market and local market unions can be suggested by referring back to earlier discussion of the presumed relationship between industry type and administrative centralization (or decentralization). There it was argued that data in the present study provide evidence strongly in favor of the suggested hypothesis in the literature on union organization that national unions operating in predominantly local product market industries are more decentralized in their administrative structure than those located in predominantly national product market industries.

In the light of these earlier data, it is not overly presumptuous to suggest that local market unions may respond to the administrative imperatives associated with increasing membership size not by proportionate increases in the total administrative apparatus of the national organization but by continuing delegations of operating responsibility to subnational levels of organization. This would be in keeping with the implied administrative mode of decentralization. To a great extent it is not an option openly available to national market unions, which must always be concerned with the administrative implications of the economic interdependence among affiliated locals in product market industries having broad geographic scope.

The foregoing is presented as one possible form of explanation for the differences observed in Table 10 and the related scatter diagrams in Figures 1 and 4. Further comment about this interpretation will be presented later, when the relationships between organization size and the other administrative component indexes are analyzed.

One further issue must be dealt with here. This relates to the correlation between organization size and the total administrative component index among the railroad unions, which has some similarity to that observed for the local market unions, although stronger in magnitude. The railroad industry certainly cannot be regarded

as having local market features, and this similarity in results requires some explanation.

With respect to the total complex of national labor unions in the study, the railroad unions have certain distinctive characteristics. One of these is important because of its methodological implications for interpretations here and elsewhere in the data analysis. It is simply that the number of unions in this industry type subgroup is quite small (N = 12), and the freedom of any variable to vary is quite limited. This means that any of the correlation coefficients relating to these unions can be strongly affected by a single extreme value in a particular distribution. This suggests that any general conclusions emerging from the data analysis are more confidently based on observations made within the other two industry type subgroups, with comparative reference made, but primary reliance not placed upon, relationships observed among the railroad unions.

A second distinctive feature of the railroad unions is the fairly sharp separation in the values of the total administrative component indexes for the six smallest and six largest unions, respectively. (Figure 7). Why the smaller unions show a tendency toward much higher values on the total administrative component index scale is a question that can be treated here in only a speculative sense, but it is probable that one or more of the following reasons is implicated in each case.

1. As noted earlier, the national market character of the railroad industry and the implications of provisions in the Railway Labor Act necessitate a well-integrated coordination of locals' activities in the key areas of collective bargaining and contract interpretation and enforcement. This requisite integration can be achieved primarily in two ways: (a) by elaborating the administrative component in the national organization, so that coordination is achieved by direct contact between the national and local levels of organization; and (b) by aggregating members into subnational units that are of sufficient size, geographic scope and resource capacity to sustain an adequate complement of administrative services over a broad geographical region, thereby lessening the total administrative load otherwise accruing to the national organization.

The dispersed nature of the railroad industry has apparently resulted in the formation of local unions which are, on the average, comparatively small in membership size (Table 8). In fact, the mean size of the physical density index for the six smallest railroad unions is only 60, as compared to a mean of 108 for the entire subgroup. This implies that the second alternative mentioned above is not very feasible. But at the same time, the comparatively high level of complexity in the administered system of the railroad unions, as indicated by the low mean value

on the physical density index, would suggest that these unions are faced with either (a) elaborating the administrative component in the national organization to a very extensive degree, or (b) developing extra-local but sub-national units of organization as administrative surrogates.

The second of these alternatives would seem to be the predominant response of the railroad unions to this general administrative issue. The intermediate body as an administrative agency is found in the majority of the railroad unions studied (9 of 12, or 75%). However, it should be noted that the ability of the national organization to use these intermediate bodies as effective units in coordinating locals' activities is probably related to total membership size of the national union. Given the dispersed character of the industry, a small total membership undoubtedly results in diminishing returns in the administrative efficiency achieved by this form of structural elaboration; in these instances the national organization must still act as the key provider of coordinative and other administrative services functions.

In sum, the greatest effect of intermediate bodies should be found among the larger railroad unions. That this is probably the case can be seen by examining the relationship between organization size and the total administrative component index, as shown in Figure 7. Of the six largest railroad unions, five have intermediate bodies as

important administrative units, and the sixth, although not having these intermediate units of administration, has the largest value on the physical density index of all the unions in this subgroup.[7]

2. Another contributing factor to the comparatively high values on the total administrative component index for the smaller railroad unions may be related to the phenomenon of declining employment that generally characterizes the present-day railroad industry. It is possible that the consequences of what can generally be termed the "negative lag hypothesis" of administrative development have some operative effects on the total size of the officer and staff component at the national level in these unions.

Briefly stated, the "negative lag" principle alludes to the hypothesis that rapid declines in organizational membership are accompanied by proportionately lesser rates of decline in the size of the administrative component.[8] Essentially, this difference is explained as a consequence of the fact that, although the membership

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[7]The physical density index value (386) for this case is considerably higher than any of the others; the next largest value for any other union in this category is 143.

[8]John E. Tsouderos, "Organizational Change in Terms of a Series of Selected Variables," American Sociological Review, 20 (April, 1955), 206-210. In his study of four industrial firms, Haire alludes to the "remarkable staff resistance to negative growth." Op. cit., p. 292.

base may be declining, the need for certain administrative services continues at a relatively high level because of institutional commitments built up over time. In the present case, it is possible that the smaller railroad unions are the most affected by a confluence of declining employment in the industry and organizational commitments both internally to their own memberships and externally to other organizations and agencies.

In conclusion, a comparison of the relationships between organization size and relative size of the total administrative component for each industry type subgroup results in the following general observations.

No single summary statement adequately characterizes the form of the relationship for each of the subgroups. Correlations for both the local market unions and the railroad unions were negative and of fairly strong magnitude, but for reasons discussed above, this similarity in statistical effects may in actuality be a consequence of different processes of administrative development associated with particular features in the industrial environment of each union.

The correlation between organization size and the total administrative component index for the national market unions was also negative but of a very low magnitude. A careful inspection of the scatter diagram for this relationship (Figure 4) showed that, for all practical

purposes, no relationship existed. This differed considerably from the covariance tendency for these variables in the case of the local market unions, which showed a general stable negative progression of the Log X,Y points for unions having more than 25,000 members. In the case of the railroad unions, the relatively small number of cases and the sharp distinction in the values of the total administrative component index for the six largest and smallest unions, respectively, precluded any but a most general explanation of the strong inverse relationship between organization size and relative size of the total administrative component.

None of the findings in the foregoing analysis contradicts the general evidence about this relationship stemming from previous studies; namely, that the direction of the relationship is other than positive. However, the findings in this analysis cannot themselves be directly generalized to other organizational contexts, inasmuch as, in any particular setting, the organization size-total administrative relationship will be affected by the relative sizes of the different parts of the administrative component and the way each of these parts itself relates to organization size.

Organization Size and the Direct Administrative Component

As can be seen in Table 10, in all three subgroups organization size and relative size of the direct administrative component are negatively related. These correlations suggest a general tendency for increases in membership size to be associated with proportionately fewer numbers of full-time officers and staff performing direct administrative functions in the national organization.

Scatter diagrams showing the covariation of organization size and the direct administrative component index for each of the industry type subgroups (Figures 2, 5 and 8) indicate that the negative linearity underlying each correlation coefficient is in general of an orderly character. But there are some differences among these several diagrams that deserve further comment.

Among the local market unions, the covariation of organization size and the direct administrative component index (Figure 2) is generally similar to what was observed for the organization size-total administrative component relationship among these same unions (Figure 1). The slopes of the underlying curves differ--which is reflected in the correlation coefficients in Table 10--but in both cases the negative movement of the Log X,Y points achieves greatest regularity for national unions having more than 25,000 members. In addition, there is comparatively less scatter of the points in the case of the organization

size-direct administrative component relationship, which implies an apparently greater precision in the development of this component in relation to increasing organization size.

With respect to the national market unions, Figure 5 indicates that the correlation between organization size and the direct administrative component index ($r = -.300$) is much less precise in depicting a general negative trend in the covariation of these two variables. The scatter of Log X,Y points, though generally conforming to a negatively sloped logarithmic curve, does not display the orderliness or precision in the relationship between organization size and the direct administrative component index that was observed for the local market unions. In short, among the national market unions, organization size, though negatively correlated with the direct administrative component index, does not appear to be a very stable predictor of the relative size of the direct administrative component.

Figure 8 shows the covariation of organization size and the direct administrative component index for the railroad unions included in the analysis. As can be seen, there is a sharp decline in the values of the direct administrative component index as size increases, a negative sloping that is reflected in the correlation coefficient shown for this relationship ($r = -.906$) in Table 10. A

closer inspection of this relationship, however, suggests a slightly varying interpretation can also be applied to these results.

Among the larger railroad unions, the Log X,Y points tend to concentrate at points on the direct administrative component index scale at levels resembling those observed previously in the case of the local market unions.[9] In terms of information presented earlier about the role of intermediate bodies as key administrative units among certain of the railroad unions, this effect is not altogether surprising. The capabilities of the railroad unions, after reaching a certain membership size level, to utilize intermediate bodies in the performance of major parts of the direct administrative function implies a decentralizing process with some similarities to what has been interpreted as the probable mode of administrative structuring among local market unions.

In summary, the inverse relationships shown in this analysis between organization size and relative size of the direct administrative component generally confirms what has been found in other studies. While there are some variations in the apparent strengths of the relationships reported in these earlier studies, there is general agreement that organization size and the relative

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[9]The mean size of the DAC index for the six largest railroad unions is 288, as compared with the overall mean size of 280 for the entire subgroup of local market unions.

size of that part of the administrative component represented by individuals performing direct administrative functions are negatively related.

The principal reason usually presented to explain the negative character of the organization size-direct administration relationship is one suggesting that larger organizations have a greater overall potential for increasing the span of administrative control, thereby reducing the proportionate number of direct administrators needed to perform managerial and supervisory functions.[10] There would appear to be two distinguishable facets to this general "span of control" explanation of the economy-of-scale effect between increasing organization size and the direct administrative component.

1. A part of the direct administrative function involves the formulation and communication of policy and program directives to operating subunits in the organizational system. Consequently, an extension of the coverage of these communications to larger numbers of persons may not require a proportionate increase in the number of administrative personnel involved in the process, thereby representing some return-to-scale in relation to increasing organization size. In the present analysis, there is no way in which this principle can be tested, except in a

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[10] Cf., Haire, op. cit., pp. 293-297; Rushing, "Industry Size and the Division of Labor," op. cit., 288-289; and Starbuck, op. cit., pp. 496-498, 503, 509.

very oblique sense; namely, by observing the character of the organization size-direct administrative component relationship when the effects of other conditioning variables have been partialled out.

2. A different aspect of this argument focuses on the nature of subsystem differentiation in the operating structure of the organization; that is, the relative degree of organizational complexity resulting from the aggregation of organization members into administered subsystems of varying population size. In Chapter II it was noted that the way in which organization size and complexity interrelate may have important consequences for the development of generalizations about the organization size-administration relationship. In the present analysis, this particular form of explanation will be directly considered by examining the intercorrelation of organization size and physical density characteristics of local unions, and the effects of this interrelationship on generalized interpretations of the organization size-administration relationship.

Organization Size and the Supportive Administrative Component

Table 10 shows that the correlation between organization size and relative size of the supportive administrative component is very weak in both the local market and national market industry type subgroups. The magnitudes of these correlations are so low as to suggest that very little, if any, relationship exists between these two variables in either subgroup. As noted earlier in the study,[13] however, in the present analysis the observed effect of "no relationship" must be carefully considered because of two possible interpretive meanings that can be applied to it.

On the one hand, a statement that no relationship exists can mean that the correlated variables are essentially random in relation to each other; that is, the scatter of points showing their covariation may not display any proportionality or rectilinearity in the relationship. As was noted in the preceding discussion of the organization size-total administrative component relationship, the scatter diagram for the national market unions displayed this sort of randomness (Figure 4).

On the other hand, the scatter of points for the correlated variables may show no important linearity of a

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[13]See above, p. 60.

positive or negative character, but yet indicate a proportionateness in the relationship by moving within a relatively narrow rectilinear band on a horizontal level.

Maintaining a distinction in this analysis between these two possible modes of covariance associated with a lack of correlation may have important implications for the manner in which conclusions are formulated. This is principally due to the way in which the administrative component has been operationalized.

In order to make this study generally correspondent with others, the major focus in the analysis is on the relative sizes of the different aspects of the administrative component. Thus, a lack of correlation between organization size and any of the indexes of the administrative component can be viewed, interpretively, in two ways: (1) There is no important positive or negative linearity in the relationship. (2) There may be an implied proportionateness about the way in which organization size covaries with the absolute size of a particular aspect of the administrative component, depending on which of the aforementioned patterns of covariance prevails.[14]

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[14]In most instances regression analysis would be a more suitable technique for investigating issues of covariance in the changes of two (or more) variables. However, this is a cross-sectional analysis, and it is the pattern of relationships between variables, rather than respective growth rates in a time-series plan, that is the issue being investigated. Also, regression analysis is similar to product-moment correlation in that both are designed primarily to detect positive or negative linearity

Scatter diagrams for the organization size-supportive administrative component relationship among both the local and national market unions (Figures 3 and 6) suggest a general tendency--with a few deviations in each subgroup--for the points to move within a fairly narrow rectilinear band on an essentially horizontal level. Both the correlation coefficients (Table 10) and the related scatter diagrams show slight differences in the directional tendencies of these relationships, but in neither case does there appear to be notable linearity of a positive or negative character.

In short, these results suggest, at least for these two industry type subgroups, a general tendency for organization size and the absolute size of the supportive administrative component to increase at approximately similar rates. There is also some evidence in the scatter diagrams for both subgroups that this covariance effect may be more precise for unions larger than 25,000 in total membership. However, interpretations applied to this developmental pattern, as implied in Figures 3 and 6, must be stated with great caution.

As used in this study, the concept of the supportive administrative component is crudely defined in terms

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in relationships among variables. Thus, in terms of the general issue posed here, regression analysis has no inherent superiority over visual inspection of the covariation between organization size and the administrative component.

of specific types of personnel falling within its purview. Commentaries abound, both within general organization theory and the literature on union organization, that increasing organization size results in greater specialization of function, particularly in the direction of increased utilization of professional and technical personnel.[15] There is some logic in assuming that, in the national labor union, as membership size increases an important part of the total increment in the supportive administrative component will be represented by professional and other specialist staff.[16]

This assumption, if true, poses a different sort of interpretive problem for this analysis; namely, that the size of that part of the supportive administrative component represented by general clerical personnel might possibly show a proportionate rate of decline in relation

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[15]For a study of professionals in national labor unions, see Harold L. Wilensky, Intellectuals in Labor Unions (New York: The Free Press of Glencoe, 1955). It should be noted that Wilensky's figures showing the number of "intellectuals" in each of the national unions surveyed imply that there are considerable differences among unions in proclivities toward the use of professional and technical staff.

[16]The creation of functionally specialized positions is not, however, an automatic consequence of increasing size. There are two essential conditions: (1) a continuous level of demand for the specialized activity, which may indeed be directly related to organizational growth; and (2) an adequate supply of financial resources to support the new position on a continuous basis. These two conditions are not necessarily coincident in every instance.

to increasing organization size. This would be contradictory to the positive relationship between organization size and relative size of the clerical component shown in two other studies.[17] In fact, if the supportive administrative component, as defined in this study, was itself totally composed of general clerical personnel, the correlations between organization size and the supportive administrative component index shown in Table 10 would not be in line with the results of these other studies. The following points offer possible reasons for this difference in results, in terms of particular aspects of the task-environment in which national labor unions operate.

1. As noted earlier in this chapter, an important part of the supportive administrative function in national labor unions involves the provision of supportive services, including those of a general secretarial and clerical nature, to personnel in direct administrative positions. But, in contradistinction to what Rushing and Haire assert in the case of industrial organizations, it is probably true that in national labor unions major aspects of the direct administrative function simply cannot be discharged through surrogate activities of clerical or secretarial staff. In the national labor union it is a matter of both

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[17] Rushing, "Two Patterns of Industrial Administration," op. cit.; Haire, op. cit.

efficiency and political astuteness[18] that the monitoring and servicing of local programs and activities be carried out largely through personal contacts by representatives of the national organization with local unions or other subnational units of organization. There is, therefore, no necessary logical basis for expecting that among national labor unions organization size and the relative size of the clerical staff component should be positively related.

2. It can be presumed that an important part of the total supportive administrative function in national labor unions involves records-maintenance activities. It is the author's observation, based on extensive reading of national convention proceedings and reports, rather than a systematic compilation of data, that many of the larger national unions probably utilize machine-based processes extensively in the handling and storage of organizational records. The conversion to mechanized processes of record keeping on the part of larger unions may

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[18]Earlier in the study (see pages 19 and 21), it was noted that the major source of financial support for the national organization is the individual member's contribution in the form of per capita tax payments or assessments, the level of which are usually voted on by members' representatives in national conventions. Thus, a major concern of the national administration must be the maintenance of members' satisfactions with the administrative services provided by the national organization. Such services are most vividly represented by direct contacts between national representatives and the local organizations.

have two different, though related, consequences--sizable investments of capital resources generally available for supportive administrative services and substitution of machine processes in lieu of proportionate increases in particular types of supportive personnel.

The foregoing discussion of general patterns in the development of the supportive administrative component in relation to increasing organization size has been presented with reference to unions in the local market and national market categories. As was true in the case of the organization size-total administrative component relationship, and to a lesser extent in the organization size-direct administrative relationship, the railroad unions present a special case in point.

Table 10 shows the correlation between organization size and relative size of the supportive administrative component among the railroad unions to be negative. Figure 9, however, indicates that there is considerable irregularity in the covariance tendency underlying this relationship. Briefly stated, these results suggest no systematic conclusion about the organization size-supportive administrative component relationship among these unions.

It is possible, of course, that these observed irregularities are partly related to the fact that several of the railroad unions sponsor extensive and complex membership benefit programs, which may require sizable numbers

of supportive staff for their operation. It is also possible that certain of these unions, though declining in membership as a result of the larger pattern of declining employment in the railroad industry, continue to have relatively large supportive staffs because of service commitments built up over time.

Conclusion

The preceding discussion has concentrated on the relationships between organization size and relative size of each aspect of the administrative component--total, direct and supportive--with separate observations made for each of the industry type subgroups. These analyses have directed attention to two aspects of each relationship examined: (1) the correlation coefficient indicating the strength and direction of the relationship; and (2) the underlying pattern of the relationship, as indicated by a scatter diagram showing the covariance effects of the variables correlated.

Three general observations can be made about the foregoing analyses.

1. The several relationships examined summarily testify to the positive value of distinguishing between functionally differentiated aspects of the administrative component in analyzing the organization size-administration relationship. This, of course, concurs with what was

previously concluded from a review of earlier research studies in this general area of organizational analysis.

2. The comparative differences in the forms of the relationships observed for the three industry type subgroups suggest that differences in environmental circumstances may effect particular colorations of the relationship between organization size and the administrative component.

3. Among both the local market and national market unions, relationships between organization size and the different parts of the administrative component appear to be more stable for unions above 25,000 in total membership. Possibly, national unions below this size level are more influenced in their administrative development by certain fortuitous circumstances than are the larger unions. For example, the geographical concentration or dispersion of work settings may have a sizable effect on the way smaller unions are able to allocate limited resources to develop an administrative structure.

Whatever the specific reasons, the scatter diagrams appear to indicate that there is comparatively greater fluctuation in the relationship between organization size and the administrative component local market and national market unions having fewer than 25,000 members. The preceding discussion also noted some apparent differences in administrative development between the larger and smaller

railroad unions, but the total number of these unions is too small to make a similar comparison.

In the next two sections of the analysis, the relationships between organization size and each of the administrative component indexes are submitted to a more detailed analysis by examining the effects of resource capacity and physical density characteristics on each relationship.

Resource Capacity and the Organization Size-Administration Relationship

Resource Capacity and the Administrative Component

As can be seen in Table 11, resource capacity is directly related to the relative size of each aspect of the administrative component in all three industry type subgroups. These results substantially accord with expectations based on the study by Hawley and associates and other information regarding the presumed logical connection between organizational resources and capacities for administrative and program development.[19]

Scatter diagrams for the local market and national market unions showing the covariation of resource capacity

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[19]See the earlier discussion on these points, pp. 71-72.

TABLE 11

ZERO-ORDER CORRELATIONS BETWEEN RESOURCE CAPACITY AND THE ADMINISTRATIVE COMPONENT INDEXES, BY INDUSTRY TYPE

Independent Variable	Dependent Variables		
	TAC Index	DAC Index	SAC Index
Resource Capacity:			
Local market industry type (N = 37)	.648	.600	.516
National market industry type, not including railroad unions (N = 47)	.487	.403	.440
Railroad unions only (N = 12)	.601	.426	.732

and each index of the administrative component indicate considerable regularity in the positive linearity underlying each relationship (Figures 19-24). Some lack of precision in the scatter of X,Y points in each case is not surprising, in view of certain limitations of the measurement used to operationalize the resource capacity variable.

Per capita receipts from membership sources does not represent the totality of income that might be available to the national organization for administrative purposes, although they represent the basic source of

financial support enabling the national organization to develop its operational capabilities as an administrative center. The measure itself was recognized as being less than a completely satisfactory indicator of the relative resource capacities of all the unions studied, and its selection was regarded as a matter of superior reliability in comparison to other possible indicators.[20]

In sum, for both the local market and national market unions, resource capacity and the administrative component indexes can be described as (1) positively related, and (2) displaying covariance effects of considerable regularity and precision.

Similar summary statements cannot be made about these same relationships among the railroad unions. The scatter diagrams for these unions (Figures 24-27) show generally irregular patterns, which can be partly attributed to the small number of cases in this subgroup and the tendency of certain unions toward extreme values on the resource capacity scale. Thus, interpretations applied to the correlations shown in Table 11 for the railroad unions must deal with these observed irregularities.

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[20]See Appendix B for a more detailed discussion of the characteristics of this variable and the alternative measures that were considered.

As can be seen in Table 12, railroad unions having higher values on the resource capacity scale tend also to be those in the smaller membership size ranges. This is not surprising, in view of information presented earlier about the comparatively greater potential in the larger unions for decentralization of administrative responsibilities to subnational levels of organization, particularly intermediate bodies. It would be expected that the larger unions would require, on the average, comparatively smaller amounts of financial resources to support administrative operations at the national level.

TABLE 12

ORGANIZATION SIZE AND RESOURCE CAPACITY: RAILROAD UNIONS ONLY

Organization Size Category	Six Smallest Values on Resource Capacity Scale	Six Largest Values on Resource Capacity Scale
Six smallest railroad unions in membership size	1	5
Six largest railroad unions in membership size	5	1

The Effects of Resource Capacity on the Organization Size-Administration Relationship

Table 13 shows the partial correlations between organization size and the separate indexes of the administrative component for each industry type subgroup, controlling for resource capacity. These partial correlations suggest very little in the way of alteration or respecification of the earlier summary statements about these relationships. There is a slight difference in effect between the national market unions and the other two subgroups, which is noted in the following discussion.

TABLE 13

PARTIAL CORRELATIONS BETWEEN ORGANIZATION SIZE AND INDEXES OF THE ADMINISTRATIVE COMPONENT; CONTROLLING FOR RESOURCE CAPACITY; BY INDUSTRY TYPE

Industry Type Category	Partial Correlation Between Organization Size and the Specified Administrative Component Index, Controlling for Resource Capacity		
	TAC Index	DAC Index	SAC Index
Local Market Industry Type (N = 37)	-.299	-.552	-.010
National Market Industry Type, not including railroad unions (N = 47)	-.169	-.323	-.158
Railroad Unions Only (N = 12	-.839	-.910	-.471

Among the national market unions, the effect of resource capacity as a control variable appears to be that of reducing the amount of random variation in the administrative component indexes in relation to organization size. As can be seen in Table 20 (Appendix A), there is virtually no relationship between organization size and resource capacity in this industry type subgroup ($r = .013$).

This lack of intercorrelation demonstrates that, among the national market unions, the effects of organization size and of resource capacity on the different indexes of the administrative component are essentially independent of each other. Thus, whatever partialling effect resource capacity has on the relationship between organization size and any of the indexes of the administrative component can be attributed primarily to its operation as a "disturbing" influence on the relationship. The general effect of resource capacity is to increase the magnitude of these correlations, as can be seen by a comparison of the results in Table 10 and Table 13 for these unions. In no instance, though, is the change of an order to suggest summary reinterpretations of these relationships.

Table 22 (Appendix A) shows that, among the local market unions, organization size and resource capacity are inversely related ($r = -.219$). Although relatively weak, this correlation points to a general tendency within this

subgroup for values on the resource capacity scale to decline as organization size increases. Thus, the overall effect of resource capacity as a control variable on the organization size-administration relationship should differ in the case of the local market unions from what was observed for unions in the national market subgroup.

The partial correlations in Table 13 for the local market unions show that a difference does exist. But the only changes of note occur in the case of relationships between organization size and the total and supportive administrative component indexes, respectively. Resource capacity has virtually no effect on the organization size-direct administrative component relationship (total r = -.564; partial r = -.552).

As for the other two relationships, the original correlations decrease, when resource capacity is controlled. The change in the organization size-total administrative component relationship (total r = -.364; partial r = -.299) is primarily a product of what occurs in the organization size-supportive administrative component relationship (total r = -.121; partial r = -.010), since little or no change was observed for the relationship between organization size and relative size of the direct administrative component. In general, though, these effects, while differing from what was observed for the national market unions, do not suggest important changes in the earlier

interpretations of the organization size-administration relationship among the local market unions.

Table 20 (Appendix A) shows that organization size and resource capacity are inversely related among the railroad unions, though at a weak level ($r = -.263$). However, with the number of cases in this subgroup so small, this intercorrelation is of slight consequence for the organization size-administration relationship. A comparison of Tables 10 and 13 indicates that resource capacity has very little effect on the relationship between organization size and any of the administrative component indexes in the railroad union subgroup.[21]

In summary, resource capacity would appear to have at best a modest conditioning influence on the organization size-administration relationship in any of the industry type subgroups. Consequently, the interpretations offered earlier about the various aspects of this relationship in each subgroup are affected very little when resource capacity is introduced as a control variable.

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[21]The use of partial correlation in this instance may itself be dubious. Because of the previously noted irregularities in the relationships of both organization size and resource capacity to the separate administrative component indexes, the variability involved in each relationship contributing to the partial correlation is sizable.

Physical Density Characteristics and the Organization Size-Administration Relationship

Of the research studies reviewed, those that have investigated the relationship between organizational complexity and relative size of the administrative component agree that these variables are directly related. The general interpretation of this finding is one stipulating that increasing organizational complexity intensifies problems of coordination and thus necessitates disproportionate increases in the number of administrative personnel, who are primarily concerned with coordinative functions.

The physical density variable is used in this analysis as a particularly indirect type of indicator of complexity in the administered system of the national labor union. The measure is based on the average size of local unions, since the local union is the elemental administered subsystem in the national labor union. However, the index of physical density differs from measures used in the earlier studies to represent organizational complexity.

The physical density index focuses not only on the number of organization parts (i.e., local unions) comprising the administered system, but also on the way the total membership of the national union is distributed among these

parts. Emphasis is placed on the relative degree of complexity in each union, as indicated by the physical density characteristics of the administered subunits. In short, it is assumed that national labor unions having, on the average, larger local unions are less complex than those having smaller local unions.

One consequence of this measurement technique is that the implied hypothesis for the relationship between the physical density index and the relative size of the administrative component is the obverse of that suggested by previous studies of the complexity-administration relationship. In this analysis, it is generally expected that the physical density index and relative size of the administrative component are inversely related.

The assertion of this expected relationship is a derivative of the complexity-administration hypothesis noted above. Important aspects of the administrative function of coordination are achieved by communications and monitoring actions directed toward organizational subunits rather than individual members. Thus, the degree to which the national labor union is able to aggregate its total membership into larger local unions, which are the primary subunits, the less the total administrative

burden on the national organization, which is the central coordinating unit.[22]

Physical Density Characteristics and the Administrative Component

Table 14 shows the zero-order correlations for the relationships between physical density and the administrative component indexes in each industry type subgroup. As expected, all of the correlations are negative. There is a tendency, however, for the magnitudes of these correlations to differ according to the particular aspect of the administrative component being analyzed. There are also some apparent differences in the results for the local market and national market unions and those for the railroad unions.

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[22]There is another aspect of the physical density measurement that is important in understanding labor union administration. As noted earlier in the study, local unions must be viewed as administratively separate units of organization in the national labor union. However, the local union's capacity for developing its administrative capabilities independent of assistance from the national or other supra-local level of organization is probably directly related to the amount of resources it commands, which in turn is related to its membership size. The large local, for example, may be able to employ full-time officers and/or staff, engage in locally financed organizing campaigns, contract for needed professional services, and the like. The financial limitations of the smaller local may increase its dependence on the national organization for various general and specialist administrative services.

TABLE 14

ZERO-ORDER CORRELATIONS BETWEEN PHYSICAL DENSITY AND THE ADMINISTRATIVE COMPONENT INDEXES: BY INDUSTRY TYPE

Independent Variables	Dependent Variables		
	TAC Index	DAC Index	SAC Index
Physical Density:			
Local market industry type (N = 37)	-.460	-.467	-.320
National market industry type, not including railroad unions (N = 47)	-.485	-.567	-.211
Railroad unions only (N = 12)	-.450	-.342	-.493

Scatter diagrams for the covariation of physical density and each administrative component index in both the local market and national market subgroups are presented in Figures 10-15 (Appendix A). The negative linearity underlying each of these relationships is shown to be fairly regular for both industry types. As might be expected, in both subgroups the greatest scatter of the Log X,Y points occurs in the case of the physical density-total administrative component relationship, since the precision in this relationship is influenced by the regression tendencies underlying each of the other two relationships. Thus, the operative effects of physical

density characteristics on the administrative component are more clearly understood by focusing on the differential associations between physical density and the direct and supportive administrative components.

Among both the local market and national market unions, there is a moderately strong negative relationship between physical density and relative size of the direct administrative component (Table 14; Figures 11 and 14). These data indicate that national unions in each subgroup having larger local unions tend to require proportionately fewer personnel at the national level engaged in direct administrative activities.

Similar results are observable for the relationship between physical density and relative size of the supportive administrative component among these same unions, though in both instances the correlations are weaker (Table 14). The scatter diagrams for these relationships (Figures 12 and 15) suggest a general tendency for increases in physical density to be associated with lesser rates of increase in the relative size of the supportive component. Of these two subgroups, the relationship for the local market unions shows a closer fit to the underlying curve.

For both the local market and national market unions, the relationships between physical density and the administrative component indexes are generally in accord with the results of previous studies that have examined

the organizational complexity-administration relationship. This is indicated by the inverse relationships between physical density and the relative sizes of both the direct and supportive administrative components.

As shown in Table 13, among the railroad unions physical density and the different indexes of the administrative component are also negatively correlated. However, scatter diagrams for these relationships (Figures 16-18) reveal considerable scatter of the Log X,Y points, thus indicating no identifiable tendency to conform to an underlying curve.

Succinctly stated, physical density characteristics do not appear to relate systematically to the relative size of the administrative component in the case of the railroad unions. This is not a surprising finding, in view of earlier information about the comparatively small size of local memberships among these unions. On the whole, the railroad unions are apparently unable to develop locals of sufficient size and resource capacity to provide for an adequate complement of administrative services relatively independent of assistance supplied by supra-local levels of organization.

As will be discussed later in more detail, the larger railroad unions are apparently able to handle this problem effectively by utilizing different types of intermediate bodies to deal with coordinative and service needs arising from the predominant pattern of relatively small local

unions. Probably, the combination of comparatively small local unions and the differential capacities of the smaller and larger railroad unions to develop viable administrative agencies in the form of intermediate bodies accounts for much of the irregularity in the relationships between physical density and the different indexes of the administrative component.

The Effects of Physical Density on the Organization Size-Administration Relationship

In this section attention is directed toward the interrelationship of organization size and physical density and its effect on the organization size-administration relationship in each industry type subgroup. The general issue considered is whether organizational complexity is implicated as a contingent condition affecting the relationship between increasing organization size and development of the administrative component.

It is frequently assumed that organization size and complexity are directly related, but there is little empirical evidence for such an association when indicators of complexity are viewed in relation to population size characteristics of organizations. This appears to be true, whether complexity is conceptualized in terms of

the number of organization parts or the nature of role specialization within the organizational system.[23]

Earlier in this study it was argued that, contrary to this common assumption about organization size and complexity, in some instances increasing size may actually enhance an organization's potential for reducing, to some proportionate degree, the level of complexity in its operating structure.[24] Presumably, whether or not this occurs is a result both of decisions within the organization relative to the way in which members are aggregated into administered subsystems and of the limiting or facilitating features of the task-environment affecting the relative sizes of these subunits.

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[23]It is probably correct in most instances that organization size and the number of organization parts or the number of specialized roles are positively related. But these variables are not necessarily meaningful measures of complexity, when the problem at issue is the relative size of the administrative component. Both ignore a very important element; namely, the number of organization parts or distinct types of roles in relation to the number of population elements comprising the organizational system. Otherwise, to state that large organizations are more complex than small organizations is tantamount to asserting that large organizations are larger than small organizations. The physical density variable used in this analysis, rather than focusing on the actual number of organizational subunits (local unions), concentrates instead on the distribution of the union's membership among these parts. Thus, the higher the value on the physical density scale, the less complexity in the operating structure of the national union.

[24]See above, pp. 67-69.

As can be seen in Table 20 (Appendix A), the correlation between organization size and the physical density index is positive and moderately strong for both the local market unions (r = .612) and the national market unions (r = .407). This correlation is also positive for the railroad unions (r = .438), but in view of other evidence about the physical density variable in this subgroup, the question must be carefully considered as to whether this correlation is very dependable.[25]

Generally speaking, the positive correlation between organization size and the index of physical density indicates that, among the national labor unions studied, organizational complexity tends to decrease as organization size increases. The fact, however, that this correlation is only moderately high in any of the industry type subgroups suggests that there are differential opportunities for taking advantage of what is, from the standpoint of

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[25]As noted previously, the range of variation in the physical density variable for the railroad unions is not great, and in comparison to the other two industry type subgroups, the average size of local memberships in the railroad unions is quite small. (Cf. Table 5.) A scatter diagram for these unions (using a log-log grid) for the covariation of organization size and physical density showed some curvilinearity in the relationship, with the highest values on the physical density index for the small and largest unions, respectively. However, in view of the small number of cases in this subgroup and the limited range of variation on the physical density index scale, it is questionable whether any refined meaning can be attached to this pattern of covariation.

the national organization, a potential economy-of-scale feature of increasing size.[26] This, of course, has important implications for the way in which generalizations are formulated about the organization size-administration relationship.

In the discussion which follows, the interrelationship of organization size and physical density is analyzed in terms of its effect on the relationship of each to the different aspects of the administrative component. The partial correlations shown in Tables 15 and 16 provide the basic data for this analysis. Since the relationship between organization size or physical density and the total administrative component is a consequence of the combined effects of the relationship of

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[26]It is also possible that in some cases a national union may prefer not to take full advantage of this economy-of-scale, although, generally speaking, there is a proclivity in unionism to associate membership size with bargaining power on every level of organization. However, as Gouldner points out in his discussion of interdependence and functional autonomy in social systems, the more resources commanded by a subsystem--which in labor unions is directly related to the membership size of the particular subunit--the greater is its potential to operate independently of the larger social system, with the possible consequence of weakening the level of integration in the parasystem. In certain instances the administrative problem for the national organization may be that of achieving balance between the economics of administrative efficiency associated with larger local memberships and the related problem of effective administrative control. Gouldner's discussion of this general issue can be found in Alvin W. Gouldner, "Reciprocity and Autonomy in Functional Theory," Symposium on Sociological Theory, ed. Llewellyn Gross (New York: Harper and Row, Publishers, 1959), pp. 241-270.

either to the direct and supportive components, emphasis is placed on results involving the latter two as dependent variables.

TABLE 15

PARTIAL CORRELATIONS BETWEEN ORGANIZATION SIZE AND INDEXES OF THE ADMINISTRATIVE COMPONENT, CONTROLLING FOR PHYSICAL DENSITY: BY INDUSTRY TYPE

Industry Type Category	Partial Correlation between Organization Size and the Specified Administrative Component Index, Controlling for Physical Density		
	TAC Index	DAC Index	SAC Index
Local market industry type (N = 37)	-.117	-.395	.100
National market industry type, not including railroad unions (N = 47)	.071	-.093	.260
Railroad unions only (N = 12)	-.757	-.895	-.366

TABLE 16

PARTIAL CORRELATIONS BETWEEN PHYSICAL DENSITY AND INDEXES OF THE ADMINISTRATIVE COMPONENT, CONTROLLING ON ORGANIZATION SIZE: BY INDUSTRY TYPE

Industry Type Category	Partial Correlations between Physical Density and the Specified Administrative Component Index, Controlling for Organization Size		
	TAC Index	DAC Index	SAC Index
Local market industry type (N = 37)	-.322	-.188	-.313
National market industry type, not including railroad unions (N = 47)	-.473	-.512	-.299
Railroad unions only (N = 12)	-.183	-.144	-.351

The Direct Administrative Component

Table 15 shows the partial correlations for the organization size-direct administrative component relationship within each of the industry type subgroups, when physical density is controlled. In Table 16, organization size is used as the control variable, and partial correlations are presented for the relationship between physical density and the direct administrative component index. The results differ somewhat, according to industry type

category; consequently, the findings for each subgroup are treated separately.

1. As can be seen in Table 15, among the national market unions, physical density has a considerable effect on the relationship between organization size and the direct administrative component index. The zero-order correlation for this relationship (total r = -.300) is substantially reduced when physical density is introduced as a control variable (partial r = -.093). However, as shown in Table 16, controlling for organization size does not greatly diminish the negative correlation between physical density and the direct administrative component index among these same unions (total r = -.567; partial r = -.512).

These findings signify that the negative relationship between organization size and the direct administrative component index is to a large extent a function of the intervening effects of physical density characteristics. The partial correlations in Table 15 and 16 jointly indicate that the average size of local memberships and not organization size is the stronger and more stable influence on the proportionate number of direct administrative personnel in the national organization. In short, the degree of complexity in the administered system, rather than total membership size, is the key determinant of the relative size of the direct administrative component among the national market unions.

2. In the case of the local market unions, Table 15 shows that the total correlation between organization size and the direct administrative component index (total r = -.562) is reduced when physical density is controlled (partial r = -.395). This indicates that physical density is not an unimportant influence on this relationship. But the partial correlation is still relatively strong, thus illustrating that organization size has a considerable independent effect on the relative size of the direct administrative component.

On the other hand, controlling for organization size has a notable effect on the relationship between physical density and relative size of the direct administrative component (total r = -.467; partial r = -.188). (Table 16.) In contrast to what was found for the national market unions, in the local market subgroup organization size is of greater consequence than physical density for the direct administrative component, though neither variable completely overrides the other.

3. Among the railroad unions, the effect of physical density on the relationship between organization size and the direct administrative component index is very slight. As can be seen in Table 15, the inclusion of physical density as a control variable has virtually no effect on this relationship (total r = -.906; partial r = -.895).

Earlier, it was pointed out that physical density does not appear to relate systematically to the relative size of the direct administrative component in the railroad union subgroup, even though a negative correlation does exist (total r = -.342). When organization size is controlled, the partial correlation for this relationship (partial r = -.144) indicates little more than added substantiation for this conclusion. Briefly stated, the data in Tables 15 and 16 add little, if anything, to interpretations offered earlier about the organization size-administration relationship among these unions.

The preceding three points have shown organization size and physical density to have variable effects on the direct administrative component, according to differences in industry type. To a great extent, these variations are probably attributable to the way different characteristics of the environmental setting of each subgroup influence the development of organizational and administrative structures. Below, the findings on each industry type subgroup are considered from the standpoint of this general explanation.

1. Of all the national labor unions studied, those in the local market category demonstrate the streongest and most consistent tendency for local memberships to increase in size as total membership increases. This is shown both by the comparatively high correlation

between organization size and physical density (r = .612) and by data in Table 17 indicating that this developmental pattern is relatively consistent across the entire range of membership sizes.

TABLE 17

MEAN SIZE OF THE PHYSICAL DENSITY INDEX FOR DIFFERENT CATEGORIES OF ORGANIZATION SIZE: LOCAL MARKET AND NATIONAL MARKET UNIONS ONLY

Organization Size	Mean Size of Physical Density Index for Specified Industry Type Subgroup	
	Local Market Unions	National Market Unions
5,000 to 24,999 members	184 (N = 8)	297[a] (N = 15)
25,000 to 124,999 members	307 (N = 13)	278 (N = 19)
125,000 or more members	639 (N = 16)	392 (N = 13)

[a]For one of the unions in this cell, the average size of locals is unusually large in comparison to the others. When this case is excluded, the mean size of the physical density index in this cell reduces to 244.

Among local market unions, then, there is an overall tendency for the relative complexity of the administered system to decrease as total membership increases. Generally speaking, there are two features of the industrial environment in which these unions operate which probably facilitate this type of development.

First, many of the local market unions are comprised of members working mostly in industries where the work sites are non-permanent and frequently changing. The building trades unions are primary examples. Among these sorts of unions, the physical work setting is less of a limiting factor on the membership size of the local union than is the geographical extensiveness of the area a local can have jurisdiction over and still be an effective administrative unit for conducting employer relations activities and providing other member services.[27]

Second, even among workers employed in plant or other sedentary work settings, the localization of the product market may still make it feasible to aggregate members from different work locations into the same local union, since the nature of wage problems and other

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[27]Many of the local market unions, particularly those of a craft type, follow a policy of chartering only one local union in a community. In some other instances, the jurisdiction of a local may cover more than one community area, providing the work force of the industry organized is a mobile one, since both members and their employers may be able to move freely within a multi-community, though still limited, regional area.

collective bargaining issues will be relatively homogeneous within the relevant market area.[28]

It should be noted that these comments about the nexus of organization size and physical density among the local market unions refer to an average tendency within this subgroup. Its occurrence is undoubtedly affected by the number of members or potentially organizable units within a geographical area that is administratively feasible as a local jurisdiction. Thus, as was seen earlier, physical density is not an unimportant influence on the direct administrative component but is simply of lesser significance than organization size as a predictor.

There is another general feature of union organization--already mentioned in reference to railroad unions--that is relevant to interpretations of the organization size-administration relationship in the case of the local market unions. This is the role of intermediate bodies as administrative agencies in the national union.[29]

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[28]Frequently, locals are organized in this way to deal effectively with employer associations, which may represent, for purposes of collective bargaining, all or a majority of organized employers competing within a product market area.

[29]It should be remembered that the only type of intermediate body considered in the analysis is that which (1) is independently chartered and financed separately from the national organization, and (2) has a constitutionally defined mandate to represent affiliated local unions in activities connected with contract negotiation and enforcement, or disputes settlement. This was the only intermediate organizational form for which data were available on an extensive scale.

Slightly less than half of the local market unions (17 of 37, or 46 percent) have some type of independently chartered intermediate body as a key administrative unit in the national union (See Table 18). The data in Table 18 also demonstrate that these intermediate bodies are found more frequently among the larger of the local market unions.

The key functions of the type of intermediate body considered in this analysis can be viewed from two standpoints, which are complementary rather than exclusive. On the one hand, they coordinate the activities of affiliated locals to insure that the actions of one do not undercut those of another (or several others) and provide services that individual locals may be unable to provide for themselves. At the same time, they may also reduce the total administrative burden of the national organization by acting, in effect, as administrative surrogates, particularly in monitoring and servicing local union programs and activities.

It is likely, then, that the tendency of the larger local market unions to develop intermediate bodies of the type considered in this analysis is an important intervening factor in understanding why, as between organization size and physical density, the former is the stronger predictor of the relative size of the direct administrative component.

TABLE 18

ORGANIZATION SIZE, INTERMEDIATE BODIES, AND THE DIRECT ADMINISTRATIVE COMPONENT INDEX, BY INDUSTRY TYPE

Organization Size	Intermediate Bodies Present		Intermediate Bodies Absent	
	High DAC Index[a]	Low DAC Index[a]	High DAC Index[a]	Low DAC Index[a]
Local Market Industry Type (N = 37)				
Smaller Unions	2	2	11	3
Larger Unions	2	11	2	4
National Market Industry Type, not including railroad unions (N = 47)				
Smaller Unions	1	5	13	5
Larger Unions	4	4	3	12
Railroad Unions Only (N = 12)				
Smaller Unions	4	0	2	0
Larger Unions	0	5	0	1

[a]What constitutes High and Low DAC indexes varies, of course, by industry type. An attempt was made to divide the cases in each industry type subcategory into approximately equal High and Low DAC groups, depending partly on natural breaks in the data. Thus, in the local market industry type, High = 260 and over, Low = less than 260; in the national market industry type, High = 725 and over; Low = less than 725; and in the railroad unions category, High = 550 and over, Low = less than 550.

2. Among the national market unions, there is also a tendency for total membership size and the average size of local membership to be directly related, as shown by the correlation between organization size and physical density ($r = .612$). However, this developmental trend is not nearly so marked or consistent as that previously observed for the local market unions. This can be illustrated not only by the difference between the respective correlations for organization size and physical density (Table 20, Appendix A), but also by a comparison of the respective trends in the mean sizes of the physical density index for various categories of organization size (Table 17).

A comparison of these two sets of data for both the local market and national market subgroups suggests that unions in the latter category have, on the average, a lesser capacity to form larger local memberships as total membership size increases. It is not surprising, then, that in contrast to what was found for the local market unions, organizational complexity rather than size appears to be a strong influence on the direct administrative component among the national market unions. Why the national market unions differ in this respect can be largely explained in terms of certain general features of the industrial setting in which they operate, particularly as these contrast with what obtains in the case of most local market unions.

First, most national market unions probably have a great majority of their membership employed in factory-type settings.[30] Consequently, the size of a local union will be largely determined by the number of members working in a single plant--although certain unions do find it feasible to develop some amalgamated locals consisting of members employed in different shops in the same community area.[31] In general, though, it is likely that the average size of local memberships in a particular national market union is mostly a product of the sizes of organized plant sites.

In comparison with the local market unions, those in the national market subgroup would appear to be much more limited, on the whole, in their potential for developing larger local memberships as total membership increases. It is true that the direct relationship between organization size and physical density implies a general tendency for the larger national market unions to have comparatively larger local unions, but the

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[30]There are undoubtedly national market unions which have members working in non-factory, mobile settings, but in most cases these contingents should be a small minority of the total membership.

[31]Amalgamated locals are frequently mixtures of workers from shops--often small ones--making the same, or very similar, types of products. Amalgamated locals would seem to be exceptions to the more general case in which the boundary of a local union is conterminous with a single plant or shop setting.

underlying pattern of this developmental trend is much less precise than that observed for the local market unions.

Second, the geographical extensiveness of the product market in the industries in which these unions operate means that the national organization must be concerned about effectuating coordination in wage demands and other employer-related activities among local unions that may be widely separated by geographical location. Among local market unions, the localization of coordinative responsibilities is a workable pattern of operating administration; the environment in which national market unions operate does not make this a viable alternative.

One apparent consequence of this difference is that independently chartered intermediate bodies of the type found in many of the local market unions do not seem to be potent forces for administration among unions in the national market category. As can be seen in Table 18, fewer than one-third of these unions have such intermediate bodies as important administratuve units--at least in terms of criteria used in this study to adjudge their "importance" in the national union.[32] Nor does

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[32]The criterion of "importance" was determined operationally by (1) assessing the mandate of the intermediate body as falling within the area of authorization to represent affiliated locals in various aspects of employer relations, and (2) by determining that the ratio of intermediate bodies to local unions was of a 1-to-30 proportion or less. See above, p. 111.

Table 18 indicate that they have any systematic effect on the relative size of the direct administrative component.

This does not mean that unions of a national market type do not utilize other types of intermediate-level organization to effect coordination among locals sharing some commonness in collective bargaining objectives. For the most part, though, these are conciliar bodies that are organized, financed and administered either directly by national headquarters staff, as in the case of industry councils of local unions operating in different plants of the same corporation, or by regionally assigned officers or representatives of the national organization. As such, these intermediate types of organization are primarily extensions of the national organization and possess little independence, either in authority or administration.

3. Among the railroad unions, organization size and physical density are positively related ($r = .438$), and in thise sense there is a similarity between this subgroup and the other two. At the same time, there is a very important distinction between the railroad unions and the others, in that the range of values on the physical density index is generally concentrated at much

lower scale points than are those for unions in the other two subgroups.[33]

These comparatively low values on the physical density index suggest that the railroad unions have, on the average, much more complex systems to administer than do unions in either of the other two subgroups. The relatively small local memberships are probably the direct results of the dispersed nature of the railroad industry.

At the same time, neither the total correlation between physical density and the direct administrative component index (total r = -.342) nor the partial correlation between these two variables (partial r = -.144), controlling for organization size, indicates that this complexity is a direct influence on the relative size of the direct administrative component. In short, it would appear that differences in the average size of local memberships in the railroad union subgroup simply have different implications for the direct administrative component from what was found for unions in the other industry type categories.

Earlier findings suggest that two general statements may be appropriately applied to the organization

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[33]See Table 8 above. Among the railroad unions themselves, the two highest values on the physical density index scale are 386 and 143, respectively, with the other values ranging downward to a low of 38.

size-direct administrative component relationship among the railroad unions.

Apparently, one of the ways in which the railroad unions are able to deal with the problem of organizational complexity in the administered system of the national union is by means of intermediate bodies which serve to coordinate the activities of locals within a defined jurisdiction. Generally speaking, these intermediate bodies are organized in terms of both railroad properties and geographical areas, as contrasted to the single criterion of geographical region used most commonly by the local market unions.[34] Table 18 shows that three-fourths (9 of 12) of the railroad unions have independently chartered intermediate bodies as important administrative units.

There is also some evidence in Table 18 suggesting that the larger of these unions are probably able to utilize these intermediate bodies more effectively in the decentralization of administrative responsibilities than are the smaller unions. On the part of the smaller unions, it is possible that the dispersed nature of the industry prevents many of these intermediate bodies from becoming strong enough in numbers of affiliated locals and related resource capabilities to act independently of considerable assistance from the national organization.

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[34]Leiserson, op. cit., chapter xii.

The Supportive Administrative Component

In this subsection, the major findings relating to each industry type subgroup are discussed separately. The basic data for the general discussion are contained in Tables 15 and 16, presented earlier.[35]

1. Among the local market unions, the partialling effect of physical density characteristics on the relationship between organization size and the supportive administrative component index is to move the correlation in a positive direction (total r = -.121; partial r = .100). This generally implies that the character of the organization size-supportive administrative component relationship is to some degree a function of the way in which increasing organization size relates to the nature of complexity in the administered system.

The partial correlation between physical density and the supportive administrative component index suggests an interesting extension of the preceding statement. As can be seen in Table 15, controlling for organization size has very little effect on the total correlation (total r = -.320; partial r = -.313). This suggests that variations in physical density values among these unions has a fairly stable effect on the supportive administrative component. Generally interpreted, the relative size of the supportive

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[35]See above, pp. 188 and 189.

administrative component is more systematically related to the average membership size of local unions than to total membership size of the national union.

This represents somewhat of a reversal of what was found in the case of the direct administrative component in this same subgroup. There, it will be recalled, organization size was shown to be the more stable predictor of the relative size of the direct administrative component, although physical density was not without some effect. In the present instance, the order of importance appears to be reversed.

It should be remembered, however, that the relatively strong negative relationship remaining between organization size and the direct administrative component index after the effects of physical density were partialled out was interpreted as resulting from two conditions: first, the comparatively strong relationship between organization size and physical density indicating an overall tendency among local market unions for the relative degree of complexity in the administered system to decrease as total membership size increases; and second, a tendency for a majority of the larger unions to utilize intermediate bodies as surrogates in the performance of direct administrative functions.

Table 19 indicates that the presence or absence of intermediate bodies among the local market unions has

no apparent systematic effect on the relative size of the supportive administrative component, even when differences in organization size are taken into account. This is not a surprising result on two counts. First, the constitutionally defined mandates of these intermediate bodies assign responsibilities that are, for the most part, of a direct administrative nature--collective bargaining, strike control, grievance handling and the like. Second, a number of supportive administrative activities in the national organization are not easily decentralized to intermediate or local levels. The maintenance of fiscal and membership records on a national basis, the preparation and publication of the national union newspaper, periodical or other bulletins, and the preparation and dissemination of research information about industry-wide developments and wage settlements are examples of supportive administrative activities that must necessarily rely heavily on centralized service units in the national organization.

It is understandable, though, that physical density might show some degree of negative correlation with the relative size of the supportive administrative component. Certain aspects of the activities performed by supportive administrative personnel rely upon and utilize information supplied by, or otherwise pertaining to, local unions. To the extent that there is less complexity in the

TABLE 19

ORGANIZATION SIZE, INTERMEDIATE BODIES, AND THE SUPPORTIVE ADMINISTRATIVE COMPONENT INDEX: BY INDUSTRY TYPE

Organization Size	Intermediate Bodies Present		Intermediate Bodies Absent	
	High SAC Index[a]	Low SAC Index[a]	High SAC Index[a]	Low SAC Index[a]
Local Market Industry Type (N = 37)				
Smaller Unions	3	1	9	5
Larger Unions	7	6	3	3
National Market Industry Type, not including railroad unions (N = 47)				
Smaller Unions	2	4	8	10
Larger Unions	6	2	7	8
Railroad Unions Only (N = 12)				
Smaller Unions	4	0	1	1
Larger Unions	1	4	0	1

[a]What constitutes High and Low SAC indexes varies by industry type. An attempt was made to divide the cases in each industry type subgroup into approximately equal High and Low SAC categories, depending partly on natural breaks in the data. Thus, in the local market category, High = 260 and over; Low = less than 260; in the national market category, High = 425 and over; Low = less than 425; and in the railroad unions category, High = 630 and over; Low = less than 630.

administered system of the national union, there may be a proportionate reduction in the total administrative task performed by the supportive component. In the present case, the negative correlation between physical density and the supportive administrative component index, though modest in strength, provides evidence in support of this interpretation.

2. Among the national market unions, the effects of physical density characteristics on the relationship between organization size and relative size of the supportive administrative component are generally similar to what was observed for the local market unions. When physical density is controlled, the correlation for this relationship changes in a positive direction (total r = .146; partial r = .260). This suggests that the organization size-supportive administrative component relationship is partly a function of the interrelationship between organization size and physical density. There is a slight tendency for organization size and relative size of the supportive administrative component to be positively related, but unions with relatively less complexity in the administered system--which also tend to be the larger unions--generally require proportionately fewer supportive staff.[36]

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[36]Table 19 indicates that the presence or absence of intermediate bodies has no observable systematic effect on the supportive administrative component index among the national market unions.

On the other hand, when organization size is controlled, the correlation between physical density and the supportive administrative component index changes in a negative direction (total r = -.211; partial r = -.299). It is interesting to note that this partial correlation is very similar to its counterpart in the case of the local market unions. This suggests that similar influences may be operating on both industry type subgroups with respect to the manner in which organizational complexity affects the relative size of the supportive administrative component.

It is probable that the interpretation offered earlier to explain the physical density-supportive administrative component relationship among the local market unions is also applicable to unions in the national market subgroup. Essentially, there are two key components to this explanation. On the one hand, it is necessary for many of the supportive activities to be performed by personnel or service units centrally located in the national organization. On the other hand, various aspects of these activities utilize local unions for both the collection and dissemination of information involved in the supportive administrative function. Thus, in both the local market and national market subgroups, there is a tendency for higher values on the physical density index scale--indicating relatively less complexity

in the administered system--to be associated with relatively smaller supportive administrative components. The magnitudes of these inverse correlations are, understandably, of modest proportions.

3. With respect to the railroad unions, the data in Tables 15 and 16 indicate that both organization size and physical density have a modest negative relationship to the supportive administrative component index, when the intruding effects of the other has been partialled out. In neither case, though, is the change from the original negative correlation of a significant proportion, considering the small number of cases in this subgroup and the several irregularities earlier indicated as underlying each of the original relationships.

With respect to the railroad unions, it is questionable whether these partial correlations add anything of substance to earlier interpretations of the relationships of organization size and physical density, respectively, to the relative size of the supportive administrative component. It is possible that this general picture is complicated by the fact that many of the railroad unions have the most extensive and complex membership benefit programs of all the unions studied. This could have a sizable independent effect on the relative size of the supportive administrative component for certain of these unions, though not necessarily

bearing any relationship to differences in organization size or physical density characteristics.

Conclusion

The foregoing analyses of data have clearly indicated that no single summary statement can adequately characterize the relationship between organization size and the administrative component among the national labor unions studied. To the contrary, the general picture presented is one of variegated proportions.

Only in the case of the interrelationship between organization size and resource capacity characteristics of the national unions studied are the results relatively clear-cut. The findings generally indicate that, while resource capacity has a moderately strong positive relationship with each of the administrative component indexes, differences in resource capacity characteristics have very little effect on the relationships between organization size and the relative sizes of the different aspects of the administrative component.

On the other hand, the findings on national labor unions strongly imply that the degree of complexity in the administered system of an organization may be of considerable importance in understanding how organization size is related to the relative size of its administrative component, or to functionally differentiated aspects of

this component. In the present study, the data suggest that organization size and complexity have variable effects on the administrative component, according to (1) the way in which features of the environmental setting facilitate or constrain an organization's handling of the organization size-complexity issue, and (2) variations in the types of imperatives associated with different administrative functions. The implications of the organization size-complexity nexus for administrative development are given further consideration in the general summary chapter which follows.

CHAPTER V

SUMMARY AND CONCLUSION

The central objective in the foregoing analysis has been to examine the relationship between organization size and relative size of the administrative component in a designated study group of national labor unions. Particular attention was paid to the ways in which other formal attributes of national labor union organization affect the pattern of this relationship. The variables selected for analysis were chosen because of their conceptual correspondences to usages elsewhere in the study of the relationship between organization size and the administrative component, and their adequacy in reflecting important characteristics of national labor union organization and administration along these same lines.

Although the predominant analytical mode in this study has been that of description, the study was designed with a view to comparing the results with those of others conducted in different organizational settings but focusing on the same general research question. Thus, the discussion in this concluding chapter is concerned with summarizing the findings in this analysis and drawing comparisons with the results of earlier studies.

The preceding analyses of data on national labor unions and the earlier review of previous research studies clearly indicate that the relationship between organization size and relative size of the administrative component cannot be easily depicted by a simple summary statement. Hence, although not necessarily considered seriatim, three major emphases underlie the discussion which follows: (1) a summary of findings of the foregoing analyses, which have focused on the organization size-administration relationship in a particular organizational setting--that of the national labor union; (2) comparisons of these findings with those of previous studies that have investigated this relationship in other organizational contexts; and (3) the advancement of suggestions for further research and conceptual refinement in the study of organization size and development of the administrative component.

General Features of the Analytical Design

The general research question posed in this analysis focused on the relationship between organization size and relative size of the administrative component among national labor unions. It is important to recognize, however, that the study included only national labor unions having the following characteristics: (1) 5,000 or more members during the focal time period of 1964; (2) with

two exceptions, a majority of members working for private employers; and (3) the basic structural similarity of independently chartered local unions as the elemental subunits in the national union. Thus, the national labor unions studied are not representative of all union organizations that may be regarded as subsumable under the general label, "national (or international) labor union."

It is also important to note that, while the general issue of the organization size-administration relationship served as the initiating question for the study, the analysis was elaborated in two important ways--each of which is discussed in the following points.

1. One of the research problems posed in the analysis was whether different functional aspects of the administrative component in the national labor unions studied were differentially related to organization size or to other independent variables included in the study. The results generally indicate that such differential associations do exist among the labor unions studied. In developing summary statements about the findings, it is thus necessary to maintain distinctions between different aspects of the administrative component, as operationally determined in the analysis.

It would seem valuable to recount briefly the essential features of the conceptual bases and operational usages underlying the key term, "administrative component,"

in this study. Such a treatment will also contribute to the discussion in a subsequent section, which will be concerned with comparisons between this study and others.

In the present study, the "total" administrative component has been defined in terms of a particular structural unit in the organizational system of the national labor union. The empirical referent for this concept is the national organization of the union, consisting of the complement of full-time elected officials and appointed staff at the national level who perform administrative tasks on behalf of the total national union.

This operational approach to the total administrative component does not imply that administrative activities are not undertaken at other organizational levels, for they assuredly are. But the national organization comprises a structural unit, or aggregate of organizational positions, which has a distinctive administrative character in the formal organization of the national labor union.

This definitional approach to the administrative component in national labor unions was predicated on the combined observations that the national organization is an administrative unit which is (a) recognized in union constitutions as being the governmental and administrative center of the national union organization, (b) has constitutionally defined mandates to act as the central

coordinating unit for activities occurring at all organizational levels, and (c) is a separately maintained and nationally (or internationally) supported fiscal entity within the total administrative system of the national union.[1] Units below this level were viewed in the study as components of the administered system toward which the administrative functions of the national organization are primarily directed.

As is true in other studies which have utilized a broad definition of a total administrative component, the national organization in labor unions is comprised of different occupational types engaged in varying direct and indirect administrative activities. To a great extent, there is considerable similarity in conceptual usage between this study and earlier ones employing a similar definitional approach.

A major question involved in this study is the degree to which a heterogeneous aggregate of organizational positions as implied in the concept of a total administrative component is of positive theoretical benefit in the study of the organization size-administration relationship.

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[1]The general characteristic of administrative and fiscal separability can also be applied, in varying degrees, to other levels of organization in the national union--both local and international. The distinguishing feature of the national organization is its administrative and fiscal scope, which is national (or international).

The general dimensions of this issue are considered in detail in another section of this chapter. For present purposes, it can be noted that a distinction was made in the analysis between the "direct" and "supportive" components as proposed analytically meaningful subdivisions of the total administrative component in national labor unions.

The direct administrative component was constituted by focusing attention on those full-time officer and staff positions in the national organization most directly concerned with the supervision, monitoring and/or servicing of locals' activities in the core activity areas of collective bargaining and other aspects of employer relations.[2] In short, the empirical reference for this concept was directed toward a distinguishable category of positions in the national organization performing direct coordinating functions in relation to subnational levels of organization, as well as engaging in policy and program development for the total national union.

The supportive administrative component was comprised of full-time staff (and in a few instances certain

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[2]The designation of collective bargaining and other employer relations activities as the "core" functional areas of unionism is derivable from nearly all commentaries on the institutional and major goal characteristics of American labor unions. The oft-used phrase "business unionism" to describe the prevailing spirit of American unionism is a general indicator of the central importance of the collective bargaining function, which can be regarded as the major "production" activity of the American labor union.

full-time elected officials) performing administrative tasks which are, in large measure, ancillary to the direct administrative functions. In comparison to the direct administrative component, the supportive component is more general in its definitional quality, since supportive activities range through a number of occupational specializations, including professional and technical, clerical, and records-maintenance functions. In general, supportive administrative functions are those which promote the central goal-attaining activities of the national union, without assuming direct command of the associated coordinative tasks. Thus, the supportive component consists mainly of personnel involved in the provision of technical information or counsel, the handling of formal communications, and the application of indirect control techniques, such as fiscal accounting and records-maintenance.

In the analysis, major attention was focused on the differential associations of the total, direct and supportive aspects of the administrative component in the national labor unions studied to the major independent variables included in the study.

2. Organization size, as indicated by total membership size of the national union, was treated in the analysis as the focal independent variable in relation to the administrative component. It was not, however, the only independent variable given major attention in the study.

Three other independent variables were regarded as major analytical factors. They were: (a) Industry type, as determined by predominant product market characteristics of the industry(ies) in which particular national unions operate; (b) resource capacity, operationalized by determining the per capita receipts of the national union from membership sources on an annual average basis; and (c) physical density characteristics of administered subsystems, as indicated by the average membership size of affiliated locals in the national union.

Two other descriptive characteristics of national labor unions were also considered in the analysis. Although regarded as important aspects of operating administration in the national union, they served ancillary interpretive functions in extending or clarifying certain features of the relationships between other independent and dependent variables. They were: (a) Independently chartered and financed intermediate bodies as units in the total administrative system of the national union; and (b) the presence or absence of special union-sponsored membership benefit programs administered by the national organization.

In summary, it can be noted that the analysis was not designed to test specified hypotheses regarding relationships among the variables selected for study; rather, it proceeded by posing certain issues to be examined.

Essentially, three major questions undergirded the analysis of relationships: (1) To what extent do national labor unions in different industrial environments vary with respect to their basic modes of administrative development, as reflected in quantitative aspects of their respective administrative components? (2) What is the relationship between organization size and relative size of the administrative component in national labor unions, and what differences in this relationship are observable for national unions in different environmental settings? (3) How is the organization size-administration relationship affected by the intruding influences of differences in resource capacity or physical density characteristics? These major research issues are used to order the summary discussion in the next section.

A Summary of Findings

Industry Type and the Administrative Component

One of the questions posed in this analysis was whether national labor unions in differing industrial settings varied with regard to the relative sizes of their respective administrative components. This was considered an important issue for investigation, since a demonstrable relationship between environmental differences and relative size of the administrative component would suggest

usage of a major control variable based on the environmental factor in examining the organization size-administration relationship in national labor unions.[3]

The decision to formulate the industry type variable and include it in the analytical design was based on information derived from many commentaries on union organization and administration. These commentaries emphasize the importance of product market characteristics of an industry in which jurisdiction is held as environmental influences on the patterning of administrative structure in the national labor union.

It is suggested that as the geographical character of the market changes from local to national scope (theoretically conceivable as a continuum of change), there is a tendency for increased centralization of direct administrative control over collective bargaining and other employer relations activities in the national organization. The key idea underlying this suggested relationship is one stipulating that the geographical scope of the product market is an important environmental condition affecting the nature of interdependence among local unions with

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[3]Recent commentary on comparative organizational study suggests taking account of environmental and technological similarities and differences among the units being studied in conducting such analyses and formulating generalizations about observed relationships between organizational attributes. See Perrow, op. cit. and Thompson, op. cit.

respect to the union's major economic goal of "taking wages out of competition" by the elimination of wage differentials.

Where the product market is predominantly localized, local unions may have considerable autonomy in the conduct of collective bargaining activities, since wage settlements in one area will not have a major impact on local unions in other market areas. In this type of industrial environment, a strong centralized system of direct administrative control is not necessary. But as the market expands, it is necessary to coordinate the collective bargaining activities of local unions at the national or other supralocal level in order to guard against the detrimental effects of differential wage settlements on locals that may be widely separated by geographical area.[4]

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[4]Analogous findings are reported by Baker and France, who investigated the administration of industrial relations policies in a sample of multiplant corporations. Although few of their data are reported in statistical summaries, the narrative presentations of results suggest that administrative centralization of industrial relations activities are partly influenced by (1) the geographical concentration of plants of the same firm, particularly if participating in the same or interpenetrating labor markets, (2) similarities in product lines among plants of the same corporation, and (3) situations where plants of the same corporation are bargaining with locals of the same national union. See Helen Baker and Robert R. France, Centralization and Decentralization in Industrial Relations (Princeton, N.J.: Industrial Relations Section, 1954), especially pp. 70-72 and 166-169.

The implied hypothesis concerning the relationship between product market characteristics and differing modes of administrative structuring was regarded in the analysis as having potentially important ramifications for understanding how the national organization functions as a central coordinating unit in differing environmental contexts. It was not possible, using data available in this study, to undertake a direct test of the suggested relationship between differences in product market characteristics of the industries organized and administrative centralization or decentralization among the unions studied.

It was considered valuable, however, to determine what relationship existed, if any, between industry type, as determined in this study, and the relative size of each aspect of the administrative component in the national labor unions studied. The rationale for undertaking this analysis was based on the assumption that the size of the administrative component, or functionally differentiated aspects of this component, should be related to the amount of direct administration or services provided by the national organization to the constituent subnational units.[5]

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[5]With specific reference to business organizations, Ernest Dale notes that a reduction in the size of the central administrating unit is a consequence of reorganization for decentralization. The necessity for top management to coordinate all major decisions and activities is considerably reduced, and in the smaller administrative units--usually organized around major product lines--responsibilities for basic operating responsibilities are clearly

This issue was examined by developing a classification scheme, based on the predominant product market characteristics of the industries in which jurisdiction is exercised and examining the mean size of the administrative component indexes[6] in each of the industry type categories. The classifications used in operationalizing the industry type variable were as follows.

1. National unions located in industries having predominantly local or regionally limited product market characteristics were grouped into one category, generally referred throughout the analysis as the local market industry type.

2. National unions operating in industries where the product market is national or broadly geographical in scope were grouped in a second industry type category, generally referred to in the analysis as the national market industry type.

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fixed. There may be, however, a necessity for increases of certain types of indirect administrative staff "to provide more expert advice and to control the results of delegated responsibility and authority." See Ernest Dale, "A Study of the Problems of Centralization and Decentralization in Relation to Private Enterprise," The Balance Between Centralization and Decentralization in Managerial Control, ed. H. H. Kruisinga (Leiden, The Netherlands: H. E. Stenfert Kroese, N.V., 1954), pp. 27-43.

[6]The term "administrative component index" is used in this chapter, as in the preceding one, in reference to the relative size of a designated part of the administrative component in the national labor unions studied. Operationally, it is based on the ratio of the absolute size of the particular component to total membership size of the union.

3. National unions having a majority of members working in the railroad industry were placed in a third category, labeled simply "railroad unions." The decision to classify the railroad unions in a separate industry type category was based on observations concerning special conditions associated with their coverage under a specialized form of federal labor legislation, the Railway Labor Act.[7]

In general, it was expected that, of all the unions studied, those in the local market category should have, on the average, relatively smaller administrative components. Findings to this effect could also be regarded as positive evidence in support of the suggested hypothesis relating product market characteristics to administrative structures in national labor unions.

Findings regarding the industry type-administrative component relationship are summarized in the following points. It should be noted, however, that in the analysis direct comparisons were mostly limited to the local and national market type subgroups. In this part of the investigation, as throughout the analysis, the railroad unions were largely considered as a special case in point.

1. As expected, the mean size of each administrative component index--total, direct and supportive--was

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[7]See the earlier discussion on the industry type classifications, pp. 106-109.

notably smaller in the case of the local market unions in comparison to the national market subgroup. Subsequent analyses of the relationships between industry type and organization size and physical density characteristics, respectively, indicated that these results could not be attributed to the intervening effects of either of these other two variables.

2. A related analysis of the relationship between local and national market industry type and resource capacity characteristics showed the mean size of the resource capacity index to be smallest in the case of the local market unions. This was not surprising on the basis of a presumed relationship between the relative size of the administrative component and resource requirements for administrative operations.

At the same time, particular findings can also be regarded as additional documentation for the suggested relationship between a local product market environment and administrative decentralization among national labor unions. There is no logical reason for assuming that the per capita amounts of resources received from membership sources for operations at all levels in the national union are necessarily smaller in the local market type unions,

although this may certainly be true in some instances.[8] On the whole, it is more likely that such resources are distributed differently among organizational levels in the varying industry type unions, with differential resource concentrations directly related to varying administrative modes of operation.

There are no data in the present study which would have permitted a conclusive test of the relationship between industry type and differential concentrations of resources between national and subnational levels of organization. The only evidence to this effect in the analysis was a related finding showing a greater frequency among local market unions, as compared to those in the national market category, of independently chartered and financed intermediate bodies as important administrative units in the national union. At best, however, this provides a very meager indication of possible differences in resource-allocation patterns between these two types of unions.

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[8]It should also be noted that an examination of the presence or absence of special union-sponsored membership benefit programs showed a much higher frequency of occurrence among the local market unions, as compared with those in the national market category. These benefit programs are of a basic transfer-payment form and are supported by membership contributions usually included as a specially designated part of the member's per capita tax payment. Thus, the resource capacity measure used in the analysis undoubtedly overstates, to some degree, the relative amounts of resources available to certain national unions for administrative purposes, a large number of which are of the local market type.

3. Another interesting aspect of the industry type-administrative component relationship involved the observed differences between the mean sizes of the direct and supportive administrative component indexes, respectively, for the local market and national market industry type subgroups.

The mean size of the direct administrative component index for the national market unions was found to be considerably larger than the corresponding figure for the local market unions. On the other hand, the difference between the mean sizes of the supportive administrative component indexes for these two subgroups, while showing the same direction of difference, was not nearly so large.[9]

The fact that the direction of the differences between each set of means was the same was not an unexpected result, based on the assumption that, among the national market type unions, there is, in general, a greater need for centralization of administrative control and service functions in the national organization. Many aspects of supportive activities are, of course, directly contributory--or even attached--to direct administrative functions. Thus, the general similarity in the directional tendencies of the differences between the two sets of means is not surprising. At the same time, the question remains

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[9]The specific reference for these differences is to data shown in Table 5.

as to why the differences in index values turned out to be much larger in the case of the direct administrative component.

These differences can probably be attributed to variations in the degree to which major aspects of different administrative functions can be effectively delegated to local or other subnational levels of organization. Of the two general categories of administrative activity, direct and supportive, those of the former type are, on the whole, more easily decentralized without serious negative consequences for the overall effectiveness and internal integration of the national union.[10]

Many supportive activities in the national organization, such as fiscal accounting, record-maintenance, and the analysis of research information, have union-wide scope. For the most part, these sorts of tasks must necessarily be performed by centralized service units at

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[10]Discussions of management theories concerning centralization and decentralization frequently note the necessity of retaining certain administrative units and/or activities on a centralized basis in an otherwise decentralized administrative system. Typical examples are cost analysis and accounting units, research and development units, and other like specialist service units. From the standpoint of administrative theory, it is suggested that the retention of these sorts of activities on a centralized basis affords an economy of usage of specialized services and facilities, and provides for an indirect form of administrative control in checking the performance of operating subunits. For a general discussion of this aspect of administration, see H. J. Kruisinga, op. cit., especially the articles by E.F.L. Brech, pp. 8-26 and E. Dale, pp. 27-43.

the national level, regardless of the particular industrial setting. Others, such as the publication and distribution of the union's newspaper or other periodicals and bulletins, are themselves important devices for administrative coordination and control, since they communicate national policies, activities and points of view. These, too, must be maintained and operated at the national level in order to be effective.[11]

In sum, the noted comparative differences between these two sets of means can be understood on the basis of a presumed distinction between local market and national market unions in their essential modes of administrative structuring.

4. It is difficult to formulate summary statements about the industry type-administrative component relationship as it pertains to the railroad unions because of certain peculiarities, both methodological and substantive, which underlie the findings. For example, of the three industry type subgroups, the mean values for each index

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[11] In commentaries on unionism, one often encounters the negative criticism that communications media in the national organization are frequently used as propaganda channels to applaud the achievements of the elected national administration, and thus serve as political, as well as administrative, control mechanisms. This is undoubtedly true, but such criticisms implicitly underplay the extent to which communications media are similarly used as control devices in other types of organizations to represent in a favorable light the points of view of top management. In many respects, the difference is one of degree, though in either instance the use of formal communications as indirect control devices is an important aspect of administration.

of the administrative component was highest in the case of the railroad unions.

Little substantive meaning can be attached to this comparison, though, for other data in the analysis show that the range of individual values on the administrative component index scales is far greater for the railroad unions than for either of the two two subgroups.[12] This intra-group variability among the railroad unions lends an illusory effect to the central tendency measurement used in analyzing the industry type-administrative component relationship. From a methodological standpoint, direct comparisons between the railroad unions and the other two subgroups based on these particular data would be largely fallacious.

At the same time, it is questionable as to how greatly this particular feature of non-comparability between the railroad unions and the other subgroups detracts from the issue being investigated. Although the classification scheme used to operationalize the industry type variable is admittedly a crude one, between the local and national market categories there is an implied continuum

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[12]A similar range of variability is also observable for the resource capacity variable among the railroad unions. To a great extent, differences on this variable are probably attributable to the rather extensive, and in some instances, multiple, membership benefit programs operated by several of the railroad unions--a feature which appears to be reflected in the range of values on the administrative component index scales.

based on the predominance of local or national product market characteristics in particular industries where jurisdiction is exercised. Inasmuch as the relationship being discussed refers primarily to this particular environmental dimension, there would seem to be considerable justification for limiting major aspects of this research summary to observations pertaining to these two industry type subgroups.

This does not mean that the railroad unions can be dismissed as having little or no value in the analysis. From the standpoint of information contained in the literature on union organization, there are many reasons to regard them as constituting a viable industry type subgroup; and, as will be noted later, a summary of the findings relating to these unions provides some interesting comparisons with the results shown for the other two subgroups. But, in the main, it would seem most profitable to consider the railroad unions as a special case in point and base general extensions of the results in this study largely on findings relating to the local and national market industry type unions.

In summary, the question can be posed as to what was contributed to the total analysis by an examination of industry type-administrative component relationship? There are two aspects of this part of the analysis to consider in dealing with this question.

On the one hand, the effect of the industry type variable in discriminating between different subgroups of national labor unions was not an unimportant result from the standpoint of basic methodological considerations in comparative organizational study. The analysis indicated that basing conclusions about the organization size-administration relationship in national labor unions on observations made on the undifferentiated study sample would have resulted in summary statements charged with considerable spurious qualities. Thus, in the remainder of the analysis, the industry type classification was used as a major control variable in examining other relationships.

On the other hand, the several findings in this part of the analysis pointed to possible substantial differences in basic patterns of operating administration in the different industry type unions. It was not possible in this analysis to test directly the suggested hypothesis that national unions in different product market industries vary with respect to the degree of centralized administrative control residing in the national organization.

The data on the industry type-administrative component relationship can be interpreted, however, as providing evidence that such a relationship does exist, at least with respect to comparisons made between the local and national market industry type subgroups. Consequently, in subsequent parts of the analysis, the

observed quantitative variations in the administrative component indexes by industry type subgroup were regarded as potential indicators of qualitative distinctions in the types of coordinative problems faced by national labor unions in differing industrial settings.

The Organization Size-Administration Relationship

This part of the data analysis involved three investigative steps. In the first of these, the relationship between organization size and each administrative component index was examined. Analyses of these relationships generally showed that (1) there were variations in the findings, according to the particular aspect of the administrative component being analyzed as the dependent variable, and (2) there were further differences among the relationships, depending on the particular industry type subgroup.

A second part of the analysis focused on relationships between resource capacity and the different indexes of the administrative component. Two issues were considered in this part of the analysis: (1) whether differences in resource capacity were related to the relative size of particular parts of the administrative component; and (2) whether resource capacity acted as a conditioning influence on the organization size-administration relationship.

In the third part of the analysis, the relationships between physical density characteristics, as indicated by the average size of local memberships in the national union, and the administrative component indexes were examined. The physical density variable provided a standardized measure based on the number of local unions in relation to the total membership of the national union.

In the analysis, the physical density index was regarded as an indirect indicator of complexity in the administered system of the national union, since it focused on local unions as the elemental administered subsystems. The size characteristics of local unions were viewed as having two potentially important ramifications for the development of the national organization as the central administrative agency in the national union: (1) To the degree that the national union is able to develop large local memberships, the administrative burden of the national organization should be lessened, since administrative functions are primarily directed toward local unions as the basic operating subunits. (2) The operational capabilities of the local union as an administrative unit should be directly related to its membership size, assuming a nexus between size of membership and level of resources. Because of financial limitations, smaller locals may be more dependent on the national organization for administrative and specialist services.

In the subsections which follow, the results of these analyses are summarized. For purposes of direct comparison, findings for the local market and national market subgroups are discussed in one subsection. The railroad unions are treated separately, with similarities and contrasts in results noted for this subgroup in comparison with the others.

The Organization Size-Administration Relationship in Local Market and National Market Unions

Organization size and the administrative component:--Among the local market unions, organization size was found to be inversely correlated with the relative size of the total administrative component ($r = -.364$). In the case of the national market unions, a weak negative correlation was found between these two variables ($r = -.140$), but an accompanying scatter diagram indicated that this correlation was not dependable. However, in both of these industry type subgroups, other data indicated that differential associations existed between organization size and the direct and supportive administrative component indexes.

A moderately strong negative correlation was found between organization size and relative size of the direct administrative component for the local market unions ($r = -.562$). This correlation was also negative among the

national market unions, but at a weaker level (r = -.300).

On the surface, these findings suggest that, in both industry type subgroups, increases in organization size are related to proportionately lesser rates of increase in the size of the direct administrative component. However, scatter diagrams showing the covariance tendencies in this relationship for each subgroup showed this developmental pattern to be much more regular in the case of the local market unions. Among the national market unions, the negative correlation pointed to a general covariance tendency for organization size and relative size of the direct administrative component, but the accompanying scatter diagram showed a considerable lack of precision underlying the relationship.

On the other hand, a very weak relationship was found between organization size and relative size of the supportive administrative component for both the local market unions (r = -.121) and the national market unions (r = .146). In each case, though, a scatter diagram indicated that values on the supportive administrative component index scale tend to be fairly regular in moving horizontally as organization size increases. This suggested a possible alternative interpretation of these results, namely, that organization size and size of the supportive administrative component tend to increase at approximately similar rates.

In summary, zero-order correlations between organization size and the administrative component indexes in the local and national market subgroups led to the following general conclusions.

1. The differences in the relationships between organization size and the direct and supportive administrative components, respectively, call into question the utility of formulating generalizations on the basis of relationships involving the total administrative component as the dependent variable. As was noted in the analysis, the organization size-total administrative component relationship is primarily a product of the way personnel are distributed between the direct and supportive administrative components, and the way each component relates to organization size. The issue raised here is one which will be treated at a more general level in the closing section of this chapter.

2. In both subgroups, there is a general tendency for the larger unions to have relatively smaller direct administrative components. In the case of the national market unions, however, there are numerous exceptions to this pattern, so that, among these unions organization size cannot be generally regarded as a very stable predictor. On the other hand, among the local market unions, there is considerably greater precision in the negative trend of this relationship.

3. In each subgroup, values on the supportive administrative component index scale tend to move horizontally in a relatively narrow band as organization size increases.[13] This suggests, as a general principle, that in each of these subgroups, there is a tendency for organization size and the absolute size of the supportive component to vary directly.[14]

Resource capacity and the organization size-administration relationship:--In both the local market and national market subgroups, a positive relationship was found between resource capacity and each index of the administrative component.[15] These were not surprising

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[13]This, of course, describes a general, though fairly regular, pattern in this relationship, based on visual inspection of the relevant scatter diagrams.

[14]As noted in the earlier chapter on methodology, the supportive administrative component, although relating to a distinguishable administrative function in the national organization, is itself an aggregate of somewhat varying occupational types. What internal differences exist in its composition at different size levels is not detectable, using data in this analysis. On the basis of general literature on union development, it can be conjectured that, with increasing membership size, there is a tendency for full-time professional or other specialist staff to become a larger proportion of the supportive component. Assuming that the above finding is valid, that is, that the relative size of the supportive component remains about the same across the organization size scale, what part of this component may be undergoing a proportionate decrease? One possibility is that larger national unions may find it economically feasible to use data-processing equipment to accomplish certain clerical and/or records-maintenance functions that in smaller unions are performed, on a part- or full-time basis, by particular supportive staff.

[15]See above, Table 11, page 171 for these correlations.

results, since it is logical to expect that the potential of the national organization to develop its operational capabilities as an administrative agency will be facilitated (or, conversely, constrained) by the amounts of financial resources it is able to command.

Partial correlations indicated, however, that in neither subgroup did resource capacity have much effect on the zero-order correlations between organization size and relative size of the different aspects of the administrative component. In the case of the national market unions, organization size and resource capacity were found to be virtually unrelated ($r = .013$). Among the local market unions, a weak negative correlation was found between these same variables ($r = -.219$), but its magnitude was too small to assign it any particular theoretical meaning. In sum, resource capacity was of little consequence for the organization size-administration relationship in either industry type subgroup.

Physical density and the organization size-administration relationship:--Among the local market unions, physical density and the relative size of each part of the administrative component were found to be inversely related. The correlation between physical density and the direct administrative component index ($r = -.467$) was found to be stronger than that for the physical density-supportive component relationship ($r = -.320$).

A moderately strong negative correlation was found between physical density and relative size of the direct administrative component in the national market subgroup ($r = -.567$). Physical density was also found to be inversely related to the supportive administrative component index, but at a much weaker level ($r = -.211$).

There was considerable similarity in the results shown for the physical density-administrative component relationship in both the local market and national market industry type categories. In both instances, the findings generally indicated that national unions having larger local memberships require relatively fewer administrative personnel at the national level, with this effect most pronounced in the case of the direct administrative component.

It was found, however, that organization size and physical density were positively correlated in both subgroups ($r = .612$ for local market unions; $r = .407$ for national market unions). This suggested the possible value of examining the partialling effect each had on the other's relationship to the administrative component. These multivariate analyses provided some of the most interesting results in the study. The findings are summarized below, with attention paid only to those relationships involving the direct and supportive administrative components.

1. For the local market unions, partial correlation showed that, when physical density was controlled, the negative correlation between organization size and the direct administrative component index was reduced in magnitude, though still remaining reasonably high (partial r= -.395). But when organization size was controlled, the negative correlation between physical density and the direct administrative component index was reduced substantially, though not entirely vanishing (partial r = -.188). In short, among the local market unions, organization size proved to be a more stable predictor of the relative size of the direct administrative component.

Among the national market unions, the priority of these two variables in relation to the direct administrative component was largely the opposite of what was found for the local market subgroup. With physical density controlled, the negative correlation between organization size and the direct administrative component index vanished (partial r = -.093). On the other hand, organization size had little effect on the physical density-direct administrative component relationship. With organization size controlled, physical density still retained a moderately strong negative correlation with the direct administrative component index (partial r = -.512).

To understand why these notable differences occurred between unions in the local and national market categories,

it is necessary to work outward from other findings regarding the relationship between industry type and the administrative component. Earlier, it was noted that the findings suggest that, of the two industry type subgroups--national and local--there is greater centralization of administrative control at the national level among unions of the former type. It is important, therefore, to consider carefully how variations in environmental settings may affect the development of administrative systems in the different industry type unions.

In the national market union, it may be necessary to have a fairly high degree of direct administrative control and coordination of the employer relations activities of local unions, so as to avoid the deleterious consequences of differential settlements on wages and working conditions, even though the affected locals may be widely separated, geographically. Larger local memberships mean that there are fewer local subunits to be coordinated in relation to the total membership served. Thus, national market unions having higher values on the physical density scale have relatively less complexity to deal with in the administered system.

It is important to recognize that, to a great extent, unions in national market industries organize workers in factory settings. There are undoubtedly many exceptions, but in the majority of cases the jurisdiction

of the local union is probably conterminous with a single plant or shop setting. Thus, the membership size of the local union will be heavily influenced by the size and dispersion of plant sites that are organized in the industry.

The analysis showed a general tendency for organization size and physical density to be directly related among the national market unions, thus indicating that the larger unions have, on the average, larger local affiliates. This correlation was not particularly high, however, and there were other indications of considerable unevenness in the relationship. Considering the national market unions as a group, multivariate analysis showed that it was not organization size but physical density which was a strong influence on the relative size of the direct administrative component.

What, then, explains the differences in results for national market unions and those for unions of a local market type? The findings in this analysis suggest that several factors must be considered in understanding why organization size and physical density relate differently to the relative size of the direct administrative component among the local market unions.

First, the environmental setting of the local market union is generally one permitting considerable autonomy to local unions in matters of contract negotiation

and enforcement, since settlements in one market area will not have a major impact on local unions elsewhere. Thus, in comparison to national market unions, the need for continuous supervision or direct involvement in the collective bargaining activities of local unions is far less intense.

It is possible, therefore, that increases in membership size or number of local unions simply have less of a direct impact on the size of the direct administrative component in the local market union. Because of the generally decentralized character of the administrative system, it may be feasible for the scope of direct administrative to be considerably extended before new personnel are added. This may partly account for the negative relationship between organization size and relative size of the direct administrative component, a correlation that was not substantially reduced when physical density was introduced as a control variable.

Second, of the two industry type subgroups, those in the local market category show a much stronger tendency for the relative complexity of the administered system to be reduced as a direct consequence of increasing membership size. This was indicated by the relatively strong positive correlation between organization size and physical density among these unions--a trend that was fairly regular across the entire range of membership sizes. In the local market

unions, it was not that physical density was without effect on the direct administrative component, but that physical density itself was to a great extent a function of increasing organization size.

The strong nexus of organization size and physical density among the local market unions can probably be attributed largely to the way in which the environment of these unions generally facilitates the development of local unions. For the most part, local market unions are of a non-factory type, and there are relatively few constraints on the geographical extensiveness of a local's jurisdiction, other than those of union tradition and administrative feasibility with respect to collective bargaining functions. Of course, the size of a local will be determined by the number of organizable members within the determined jurisdiction.

Third, data in the analysis indicated that independently chartered and financed intermediate bodies are important administrative units in many of the local market unions. The findings showed that (a) they are found much more frequently among the larger unions, and (b) that unions which have intermediate bodies tend also to have relatively smaller direct administrative components. These findings also help explain the inverse relationship between organization size and relative size of the direct administrative component among the local market unions.

To understand how intermediate bodies affect the organization size-administration relationship among local market unions, it is important to take account of two major administrative functions they perform. (a) Where the product or service market extends beyond the jurisdiction of a single local union, although regionally limited, they serve to coordinate the collective bargaining activities of affiliated locals so as to insure that the actions of one will not undermine those of another, or several others. (b) They also serve a type of surrogate administrative function for the national organization, particularly in the sense of reducing the direct administrative burden of the national organization in the monitoring and servicing of affiliated local unions.

In summary, the preceding discussion has suggested that the relationship between organization size and relative size of the direct administrative component takes on different colorations, according to the way in which the environmental setting of the national union affects the development of its organizational and administrative structure.

2. Multivariate analyses of the effect which organization size and physical density have on the other's relationship to the supportive administrative component yielded very similar results in both the local and national market industry type subgroups. In both cases, when

physical density was controlled, the correlation between organization size and the supportive administrative component index moved in a positive direction, though not radically changing in either instance.[16]

On the other hand, among the local market unions, with organization size controlled, the negative correlation between physical density and the supportive administrative component index remained virtually unchanged (partial r = -.313). In the case of the national market unions, controlling for organization size increased the negative correlation between physical density and the supportive component index to a level approximating that observed for the local market unions (partial r = -.299).

These partial correlations do not suggest any summary reinterpretations of the conclusions offered earlier about the organization size-supportive administrative component relationship, namely, that in both subgroups the relative size of this component tends to remain within a relatively narrow range as organization size increases.

At the same time, the partial correlations indicate that, in both subgroups, physical density and the relative size of the supportive administrative component are negatively related. In short, national unions of either type having, on the average, larger local memberships tend also

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[16]See above, Table 15, page 188 for these partial correlations.

to have relatively smaller supportive administrative components, though the underlying pattern of this relationship is not pronounced.

That the effects observed in both subgroups should be similar for the relationships of both organization size and physical density to the supportive administrative component is not surprising. In earlier discussion concerning the industry type-administrative component relationship, it was noted that, regardless of the industrial setting, there are many supportive administrative activities which probably cannot be decentralized or otherwise delegated to subnational units without serious impairment of the national organization's functioning.

However, in many instances, local unions are the source units for information gathered and utilized by certain supportive units in the national organization. That there should be in both subgroups a slight negative relationship between physical density and the relative size of the supportive administrative component may be partly explained on this basis.

In general, though, the lack of information in this study on the internal composition or dynamics of development of the supportive administrative component in national labor unions makes any attempted refined interpretations of its relationship to organization size or to physical density characteristics largely conjectural.

The Organization Size-Administration Relationship in the Railroad Unions

As noted earlier in this chapter, the small number of cases in the railroad union subgroup and the tendency toward wide ranges of values on certain of the independent and dependent variables made this industry type category non-comparable in many ways to the other two. It was generally concluded that there were several important factors affecting the administrative component in this subgroup that probably could not be accounted for in terms of the limited number of analytical variables included in this study.

For example, the supportive administrative component among these unions showed no tendency to relate systematically to any of the independent variables other than resource capacity. This is probably attributable to the fact that a majority of the railroad unions operate extensive membership benefit programs, and the actual content of this component among these unions extends far beyond what it was conceptualized to be in the general research design.

On the other hand, there is an interesting feature of the organization size-direct administrative component relationship among the railroad unions, particularly when viewed from the standpoint of the implications for this relationship of the correlation between organization size and physical density.

In the railroad union subgroup, a strong negative correlation was found between organization size and relative size of the direct administrative component ($r = -.906$). But physical density showed no systematic relationship to the relative size of this component, though a comparatively weak negative correlation existed ($r = -.342$). As a group, the average size of local memberships among the railroad unions was shown to be much smaller than the corresponding figure for either of the other industry type subgroups. Partial correlation showed that physical density had very little effect on the organization size-direct administrative component relationship (partial $r = -.895$).

Inspection of the scatter diagram for the covariance of organization size and relative size of the direct administrative component indicated a tendency for the six largest cases, as compared with the remainder, to concentrate at comparatively low points on the direct administrative component index scale. These larger unions had scale values within the lower range generally typifying the local market unions.

These results raised the question as to why the larger railroad unions had direct administrative components of a relative size approximating those of the local market unions, when there is little doubt of substantial differences in the environmental contexts of the two types. Subsequent analysis suggested that, among the larger railroad unions,

independently chartered intermediate bodies apparently function as key administrative units in all but one of the unions.[17] The apparent effect of these intermediate bodies is to lessen the direct administrative burden of the national organization. At least, this is a plausible inference based on the relatively small size of the direct administrative components in these larger unions.

The instructive note in this finding is the suggestion that there are different environmental conditions among national labor unions encouraging the development of intermediate administrative structures. In the case of the local market unions, the primary purpose would seem to be that of coordinating the efforts of local unions in situations where jurisdictions overlap or interpenetrate in a single market area which is local or regionally limited. In the railroad unions, they would appear to function more in the sense of the administrative economy that is achieved in response to the relatively high degree of complexity resulting from comparatively small local unions in a geographically dispersed industrial environment.

General Comments about the Study

The previous section dealt with summaries of the specific findings in this analysis. This section is

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[17]This exceptional case had the highest value on the physical density index--386, as compared to a mean value of 108 for the entire subgroup of railroad unions.

concerned with more general comments about the study, with attention paid to certain of its limitations. There are, of course, several areas in this study where the availability of more refined research data might have improved the results. Most of these were noted earlier in the chapter dealing with methodology. The following points deal with a more general level of concern.

1. This study has sought to investigate patterns of relationships among selected formal characteristics of union organization and administration. From the beginning it was recognized that, in confining the analysis to a particular problem area and dealing only with a limited number of formal attributes, there would be some areas of organizational dynamics in national labor unions which would necessarily be ignored. No claim has (or could be) made that this study represents an in-depth analysis or exposition of the entirety of administrative developments in the national labor union.

National labor unions are, of course, complex organizational systems. There is no question that many other elements besides those considered in this study affect the development of their organizational and administrative structures. Individual developmental histories, the essence of unionism as a political institution, the continuous interplay of democratic ideologies and administrative necessities of adapting to changing market forces,

variations in leadership and managerial styles--all these may be variously implicated in the mapping of administrative structures and operating strategies in particular national unions.

Generally speaking, this study is not exceptional in regard to this concern about limitations in the analytical focus, for similar issues are at least implicitly involved in other studies of the organization size-administration relationship. And, as Blau has noted, a narrowing of focus to a small set of organizational attributes is a practical necessity in nearly all comparative studies utilizing organizations themselves as units of analysis.[18] The present rudimentary state of development in the study of the relationship between organization size and relative size of the administrative component makes it generally advisable to deal with a relatively small set of analytical variables.

2. It would have been desirable to know much more in detail about the industrial settings in which different national labor unions operate. Although the industry type classification proved to be a valuable analytical factor in this study, it represents a crude approach to understanding how environmental variations influence the structuring of administrative functions in national labor unions.

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[18]Blau, op. cit.

The classification scheme used in the analysis is itself a static representation of what is, theoretically at least, a continuum of scale positions.

Nor was it intended in the analysis to convey an impression that product market factors are the only important environmental influences on patterns of operating administration in national labor unions. For example, industries vary in the nature of corporate concentration, in the pace of technological alterations and consequent changes in employment structure, and in the percentage of firms or the organizable work force that is unionized, and these undoubtedly have some impact on the development of a union's policies and programs for effective administration of collective bargaining processes and local union activities.

In summary, the industry type classification, though general in its formulation, was decidedly beneficial to the analysis by providing a summary indication of possible major differences in modes of administrative development among national labor unions. At the level of general concern with the study of organization size and administration, this aspect of the study provides an instructive note about possible unwarranted presumptions of functional similarity based on nominal class identities in grouping organizations for comparative analysis.

3. It should also be noted that the present study

has been cross-sectional in nature, with analyses of relationships based on single-point-in-time observations for each national labor union studied. Starbuck, among others, has commented that studies of this type may be subject to certain inefficiences when a question at issue is the relationship of organizational growth and administrative development.[19]

Generally speaking, there are three aspects of cross-sectional studies which may complicate the application of findings to growth models of organizational development. First, the terms "increasing organization size" and "organizational growth" cannot be directly substituted, unless the frame of reference for both is to repeated observations on the same organization, or set of organizations. Second, cross-sectional studies may implicitly make simplifying assumptions about the individual developmental histories of the organizations being studied, particularly in the sense of assuming that all have been exposed to generally similar institutional forces. Third, and perhaps most important, such studies necessarily assume--whether by logic or some form of empirical demonstration--that the units being compared are sufficiently similar in critical class characteristics that comparisons

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[19]Starbuck, op. cit., pp. 519-520. See also, Haire, op. cit., p. 292.

among them offer a valid basis for general summary statements.[20]

There are two aspects of the general design of the present study which enable it to deal in part with these criticisms. First, the study was purposefully designed to insure that the national labor unions selected for study would reflect certain general features of structural and functional similarity. Second, within the final study group, further differentiations were made, using the industry type classification as an additional homogenizing device. Even so, it cannot be stated that the general criticisms mentioned above were successfully bypassed by either of these actions.

In general, it can be stipulated that cross-sectional studies are undoubtedly subject to limitations but are not without meaning in the study of organizational

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[20]This is a problem which, to some degree, may affect organizational studies utilizing cohorts on a time-series analysis of organizational growth and administrative correlates. In order to use an organization as its own control--as cohort analyses tend to do, either explicitly or implicitly--it would seem necessary either (a) to assume that the technological base of the organization remains essentially unchanged (or, at a minimum, does not change radically) from one time period to the next, or (b) to take specific account of technological or environmental shifts which might affect the organization's size and scale of operations. To a great extent, the general issue posed is the same for both longitudinal and cross-sectional studies; namely, the necessity for demonstrating that the units being compared are similar in certain critical features or that any such differences have been incorporated into the study design as interpretive characteristics.

growth and development of the administrative component. They can have considerable capabilities for (a) indicating that certain patterns of relationships do obtain in a sample of functionally similar organizations, and (b) suggesting variables and relationships to be examined in studies designed as time-series analyses.

In summary, it can be registered that the present study was subject to several limitations, both from the standpoint of data characteristics and more general aspects of research design. In attempting to compare the results in this analysis with those of other studies, considerable caution is necessary.

A Summary Comparison

Study of the relationship between organization size and the administrative component has not yet advanced, either from the standpoint of conceptual usages or the statement of theoretical principles, beyond the point where comparisons among studies can be more than crudely drawn. This study was undertaken with the objective of contributing to the developing fund of empirical knowledge about the organization size-administration relationship, which itself is meager, both in volume and in comparability beyond the imposition of relatively crude conceptual similes.

In this comparative summary, it is intended to comment on this study and others, using as the basic topical device the different operationalization of the administrative component included in this analysis--total, direct, and supportive.

The Total Administrative Component

Several studies have used an operationalization of the administrative component that has included a wide variety of administrative types within the organizations analyzed. The results of these studies have been varied, with findings about the relationship between organization size and relative size of the administrative component ranging from those showing no relationship to others showing a modest negative relationship. On balance, the only empirical generalization that is derivable from these studies is one of negative stipulation; namely, that the relationship is probably other than positive.

The findings in this study on the relationship between organization size and relative size of the total administrative component do not contradict these other studies. However, the further findings in this analysis to the effect that differential associations exist between different parts of the total administrative component and organization size brings into question the ultimate

theoretical value of utilizing umbrella-like definitions encompassing a variety of occupational types engaged in different administrative functions.[21]

Rushing has also raised the issue as to whether in the study of the organization size-administration relationship, the administrative component can be meaningfully represented by a single summary measure--for example, as a total administrative component. Rather, there may be greater benefit in proceeding by identifying different classes of personnel that may vary in the types of administrative functions performed.[22]

The findings in this study are very pertinent to the general issue Rushing has raised. One of the questions investigated was the possibility that different parts of the administrative component in national labor unions were differentially related to organization size and to other major independent variables included in the analysis. The results were clear in showing that such differences do exist among the labor unions studied.

In general, then, it can be concluded that there

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[21]This is not, of course, the only study pointing to this conclusion; see, for example, Haire, op. cit., and Rushing, "Two Patterns of Industrial Administration," op. cit.

[22]William A. Rushing, "Organizational Size and Administration: The Problems of Causal Homogeneity and a Heterogeneous Category," Pacific Sociological Review, 9 (Fall, 1966), 100-108.

is probably limited theoretical utility in such a broad conceptualization as a total administrative component, whether in this study or in others. At best, it would appear to be an operational approach providing only the most general indication of the pattern in the relationship between increasing organization size and development of the administrative component. The evidence in this study strongly suggests that the imperatives for development associated with increasing organization size may vary considerably for functionally differentiated aspects of the administrative component.

The Direct Administrative Component

Several studies have incorporated an operational measure of the administrative component having considerable conceptual similarity to what was termed in this study the "direct" administrative component--referring thereby to those administrative positions most directly concerned with the supervision or monitoring of activities occurring in the operating subunits of the organization. In each of these studies, the relationship between organization size and relative size of the administrative component being analyzed was inverse.

The findings in this study also show an inverse relationship between organization size and relative size

of the direct administrative component. However, further analysis indicated that it was not simply the number of population elements as such, but their distribution among the administered subunits (local unions) which was a determining factor in this relationship.

Among the national market unions, this pattern was relatively clear-cut. In the local market subgroup, a refined determination of the relative effects of total membership size and the average size of local unions was somewhat complicated by the fact that a number of local market unions have intermediate bodies as key administrative agencies, and these are staffed and financed independently of the national organization. In both groups, though, the average size of local unions was shown to be an important influence on the direct administrative component.

In essence, the findings in this study strongly suggest that closer attention should be paid to the possible nexus of organizational size and complexity in analyzing how the direct administrative component develops in relation to increasing organization size. To this point, the concept of complexity has figured in relatively few studies concerned with the organization size-administration issue.

There are, of course, different conceptual approaches to what is generically referred to as complexity

in organizational analyses.[23] In this study, the physical density index served as an indirect indicator of one type of complexity in the administered system of the national labor union. Even with its comparatively crude features, the physical density index proved to be an important interpretive variable in analyzing how organization size and relative size of the direct administrative component are related.

The Supportive Administrative Component

Very few studies have focused on the relationship between organization size and general or specific aspects of that part of the administrative component engaged in indirect, or supportive, activities. In two studies of industrial organizations, Haire[24] and Rushing[25] reported findings of a positive relationship between increasing organizational size and relative size of the clerical

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[23]For example, Anderson and Warkov allude to the nature of role specialization in the administered system as one type of functional complexity. Op. cit. In Woodward's study of British industrial establishments, the concept of "technical complexity" is used to refer to differences in production systems. See Joan Woodward, Industrial Organization: Theory and Practice (London: Oxford University Press, 1965).

[24]Haire, op. cit.

[25]Rushing, "Two Patterns of Industrial Administration," op. cit.

component. On the other hand, Haas and associates reported no relationship between organization size and relative size of the supportive administrative component in a study of 30 organizations of varying type.[26]

In the present study, no relationship was found between organization size and relative size of the supportive administrative component. However, inspection of scatter diagrams for this relationship in the local market and national market subgroups suggested in both cases a general tendency for the relative size of the supportive component to stay within a comparatively narrow range on a horizontal level as size increased. This finding pointed to the further tendency, in both subgroups, for organization size and the absolute size of the supportive component to be directly related.

It should be noted, though, that in the present study the supportive administrative component reflected a very crude operationalization of a general type of administrative function in the national labor union. Unfortunately, the available data did not permit a determination of the different occupational types (e.g., professional versus clerical staff) making up this component. It would be difficult, therefore, to stipulate how, if at all, the findings in this study compared to those of Haire, Rushing, or Haas and associates.

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[26]Haas et al., op. cit.

To suggest that additional research is needed on the indirect component of administration is, of course, a strong understatement. Particularly, emphasis should be placed on how specific parts of this aspect of the administrative apparatus in organizations develop in relation to increasing size.

Conclusion

It is evident that, at this stage of its development, empirical study of the relationship between organization size and the administrative component is--and probably will remain for some time--largely exploratory, relying mainly on the cumulative results of studies that are basically descriptive in emphasis. While it is possible at present to identify some tentative generalizations as research guides, considerably more effort at methodological and conceptual refinement is necessary before broadly applicable research propositions can be developed.

APPENDICES

APPENDIX A

INTERCORRELATIONS OF MAJOR INDEPENDENT VARIABLES AND SCATTER DIAGRAMS

TABLE 20

INTERCORRELATIONS BETWEEN ORGANIZATION SIZE,[a] PHYSICAL DENSITY[b] AND RESOURCE CAPACITY

	Organization Size	Physical Density	Resource Capacity
Local Market Industry Type (N = 37)			
Organization Size	----		
Physical Density	.612	----	
Resource Capacity	-.219	-.314	----
National Market Industry Type, Not Including Railroad Unions (N = 47)			
Organization Size	----		
Physical Density	.407	----	
Resource Capacity	.013	-.351	----
Railroad Unions Only (N = 12)			
Organization Size	----		
Physical Density	.438	----	
Resource Capacity	-.263	-.312	----

[a]Organization size variable transformed to logarithmic base.

[b]Physical density variable transformed to logarithmic base.

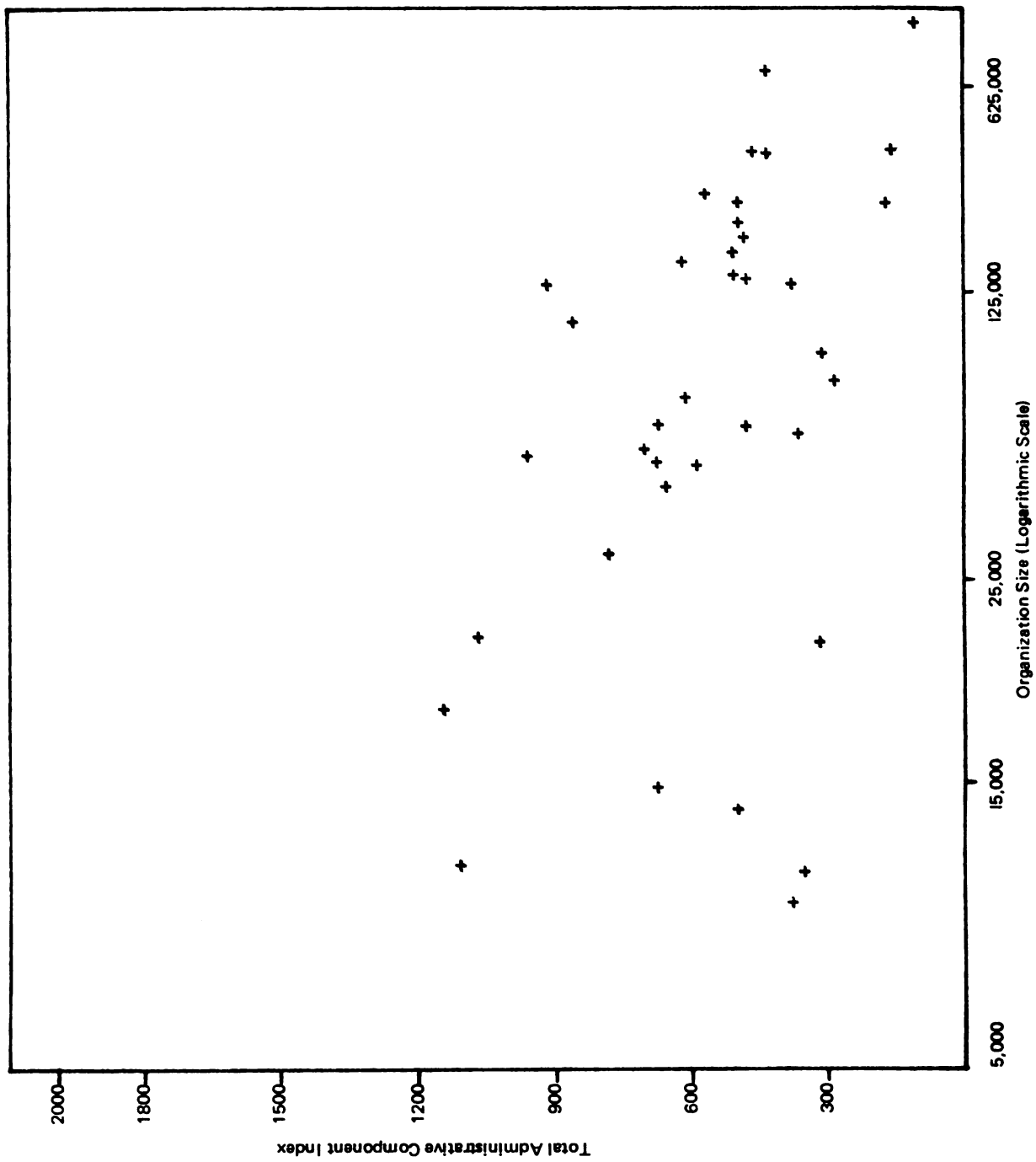


Figure 1.—Covariation of organization size and the total administrative component index: Local market unions

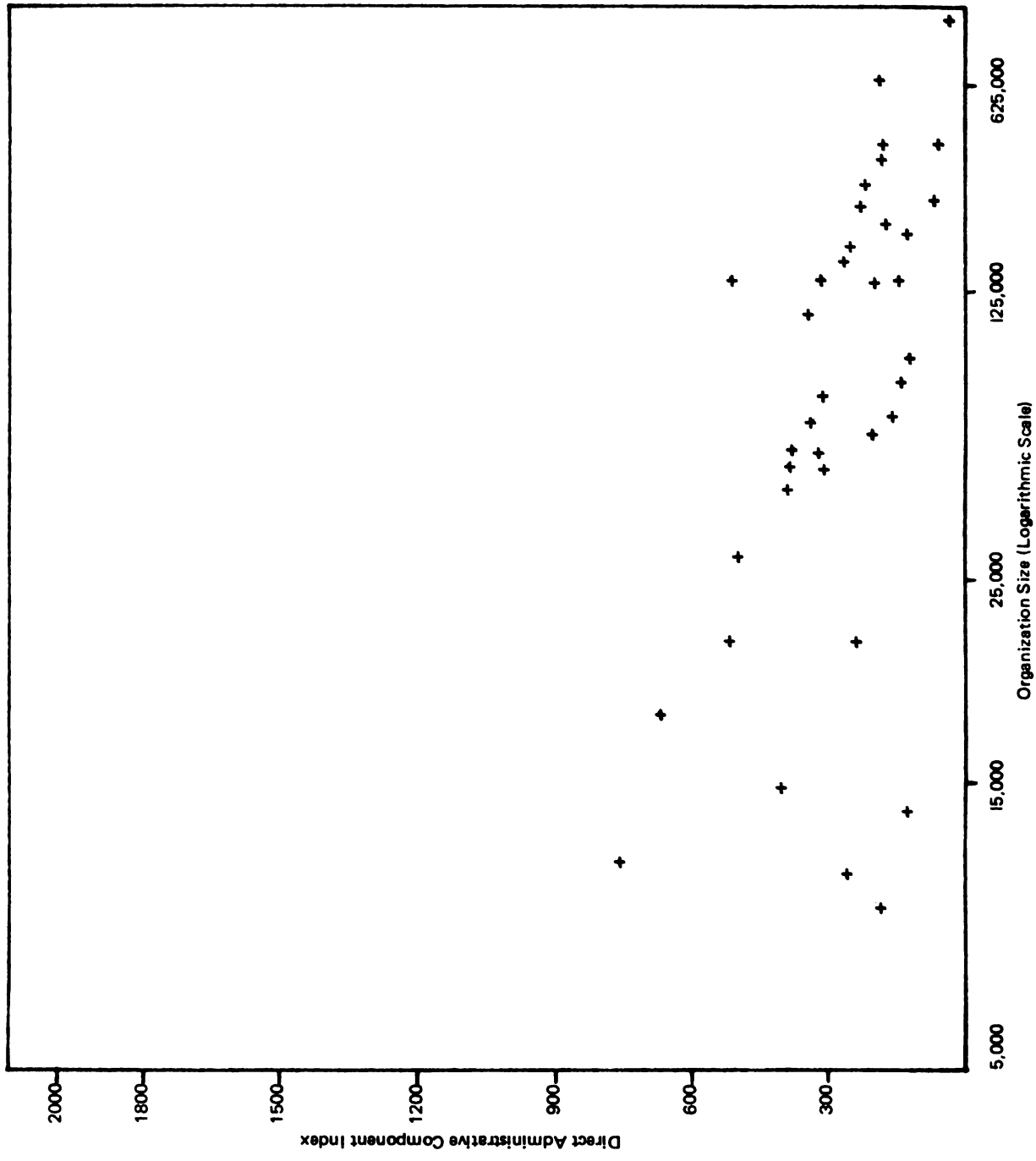


Figure 2.—Covariation of organization size and the direct administrative component index: Local market unions

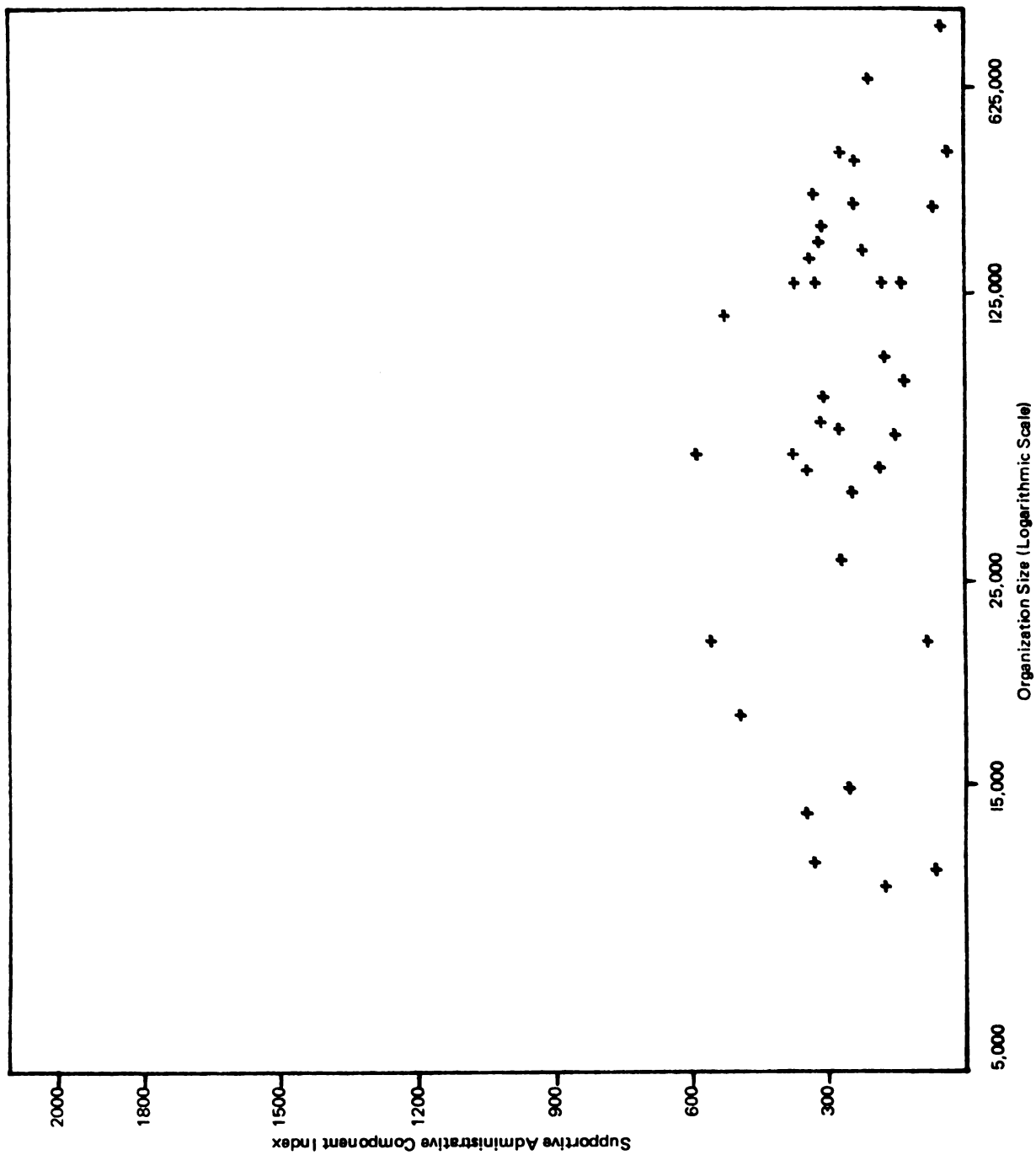


Figure 3.—Covariation of organization size and the supportive administrative component index: Local market unions

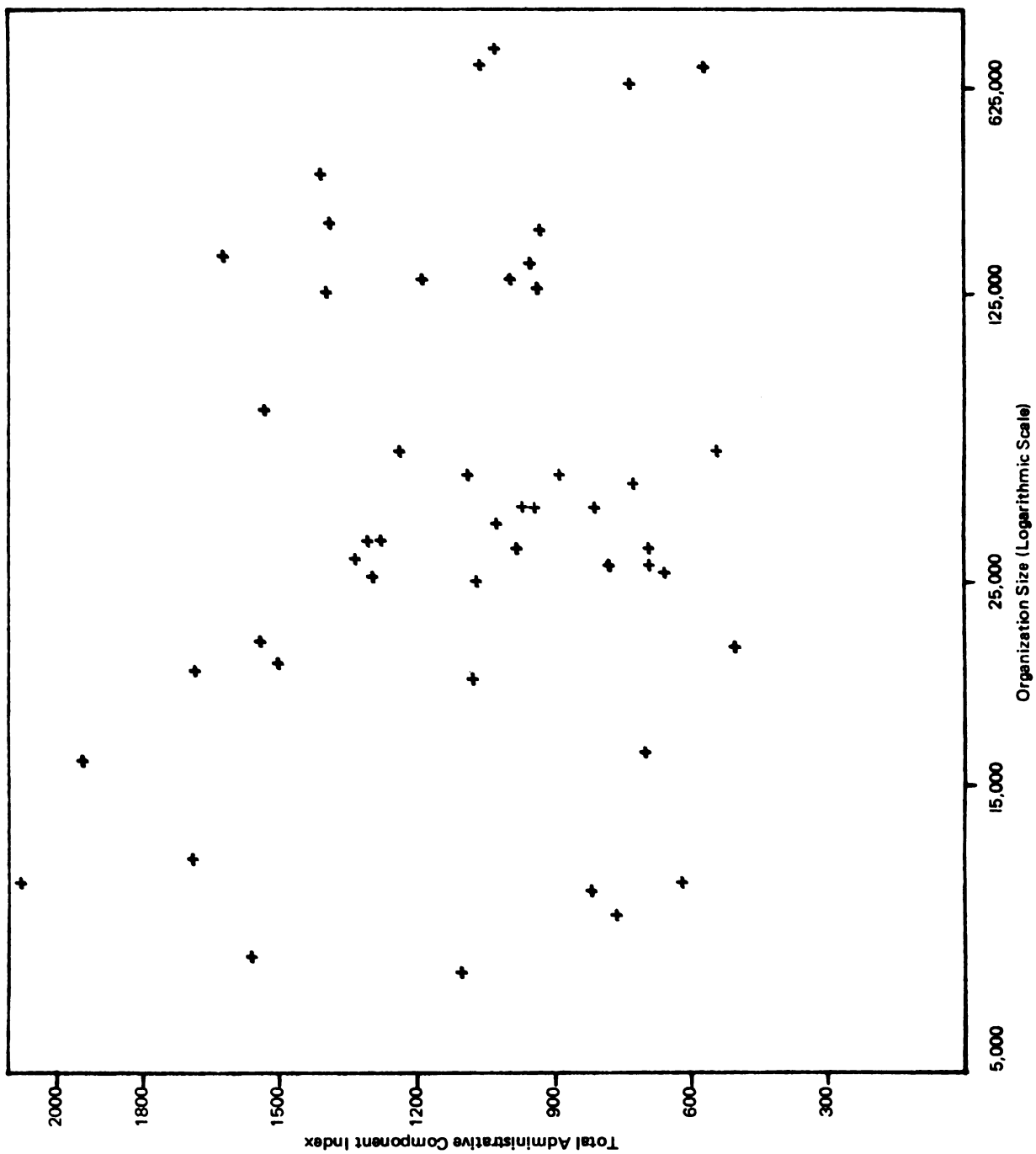


Figure 4.—Covariation of organization size and the total administrative component index: National market unions

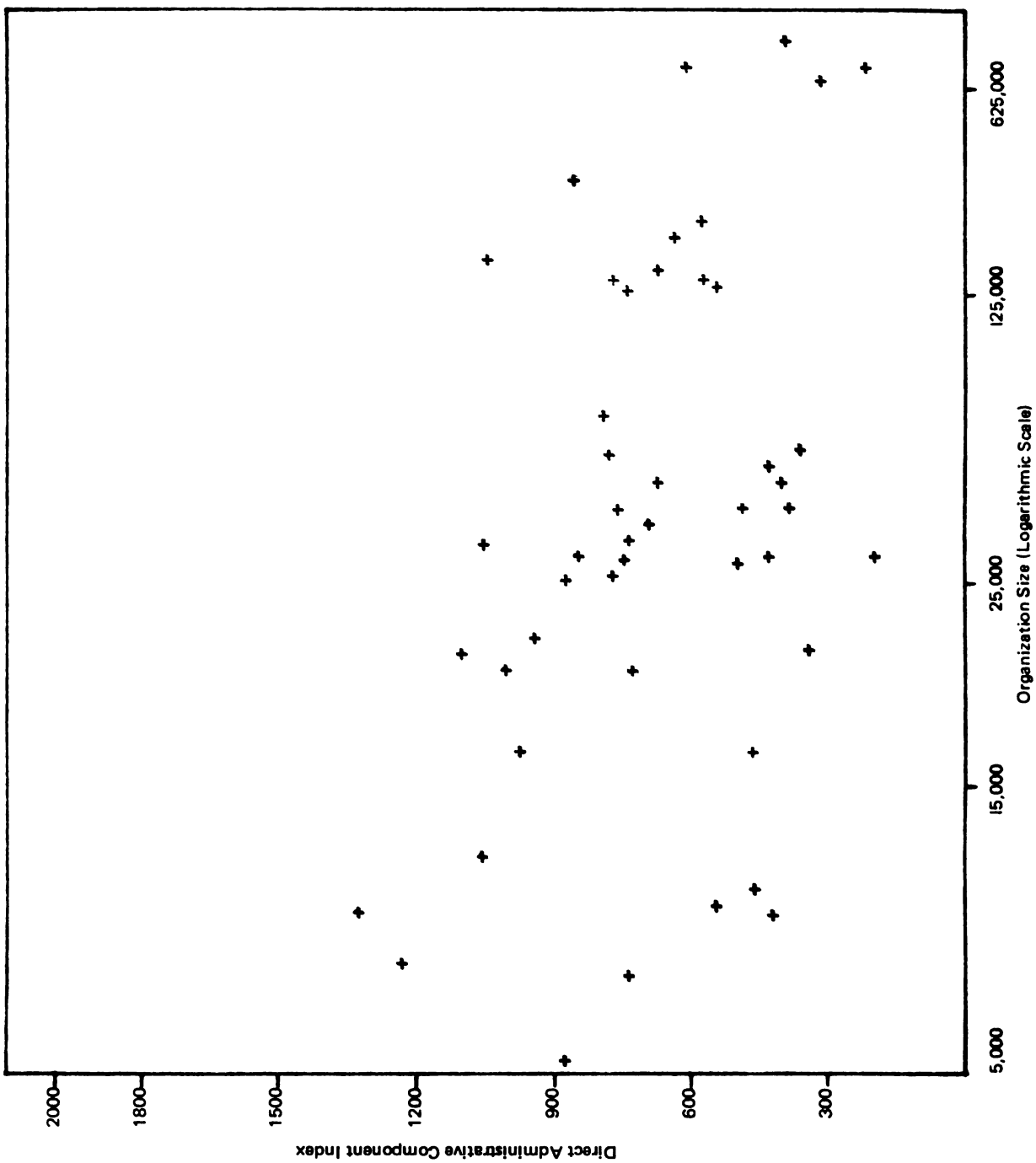


Figure 5.—Covariation of organization size and the direct administrative component index: National market unions

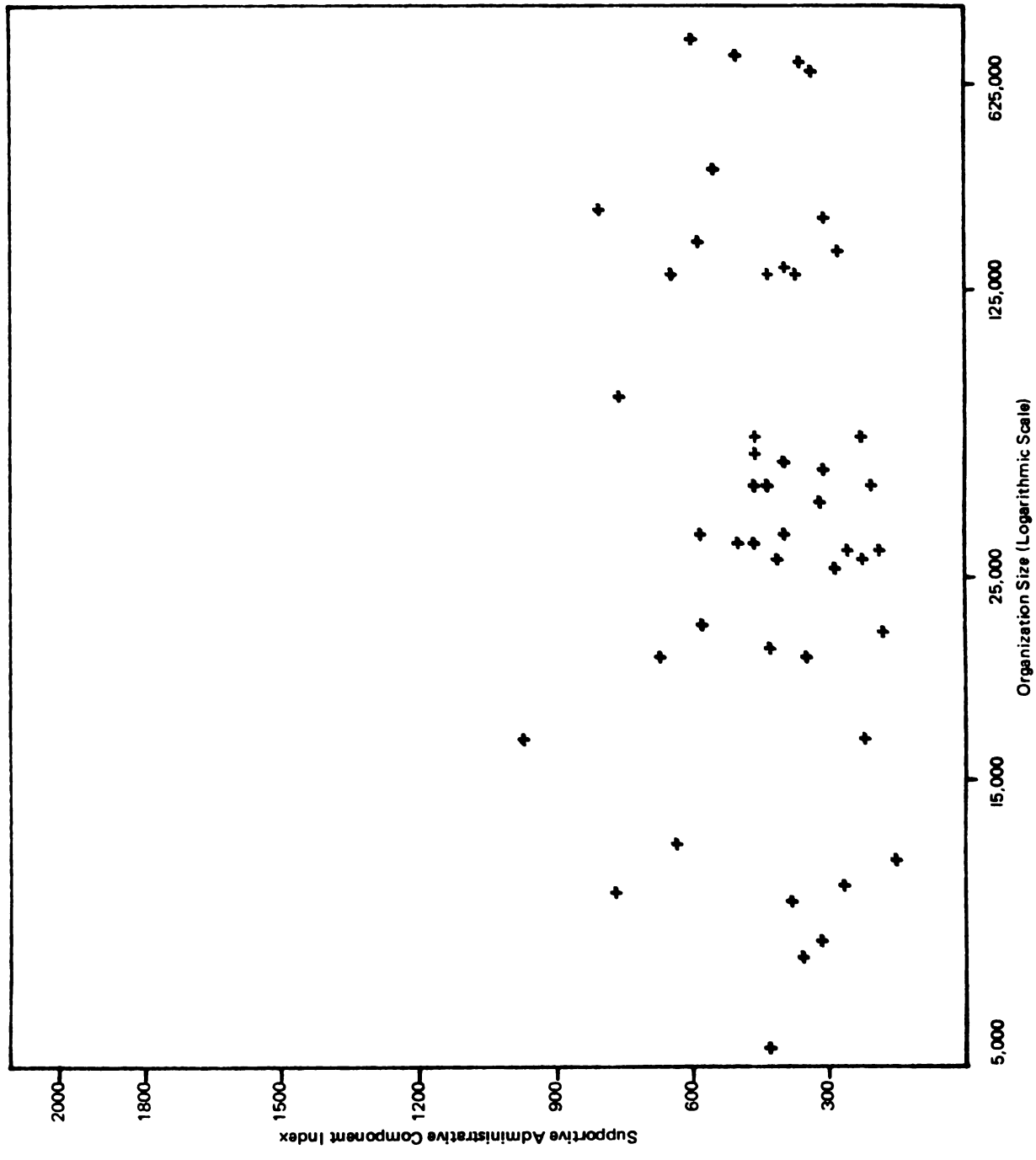


Figure 6.—Covariation of organization size and the supportive administrative component index: National market unions

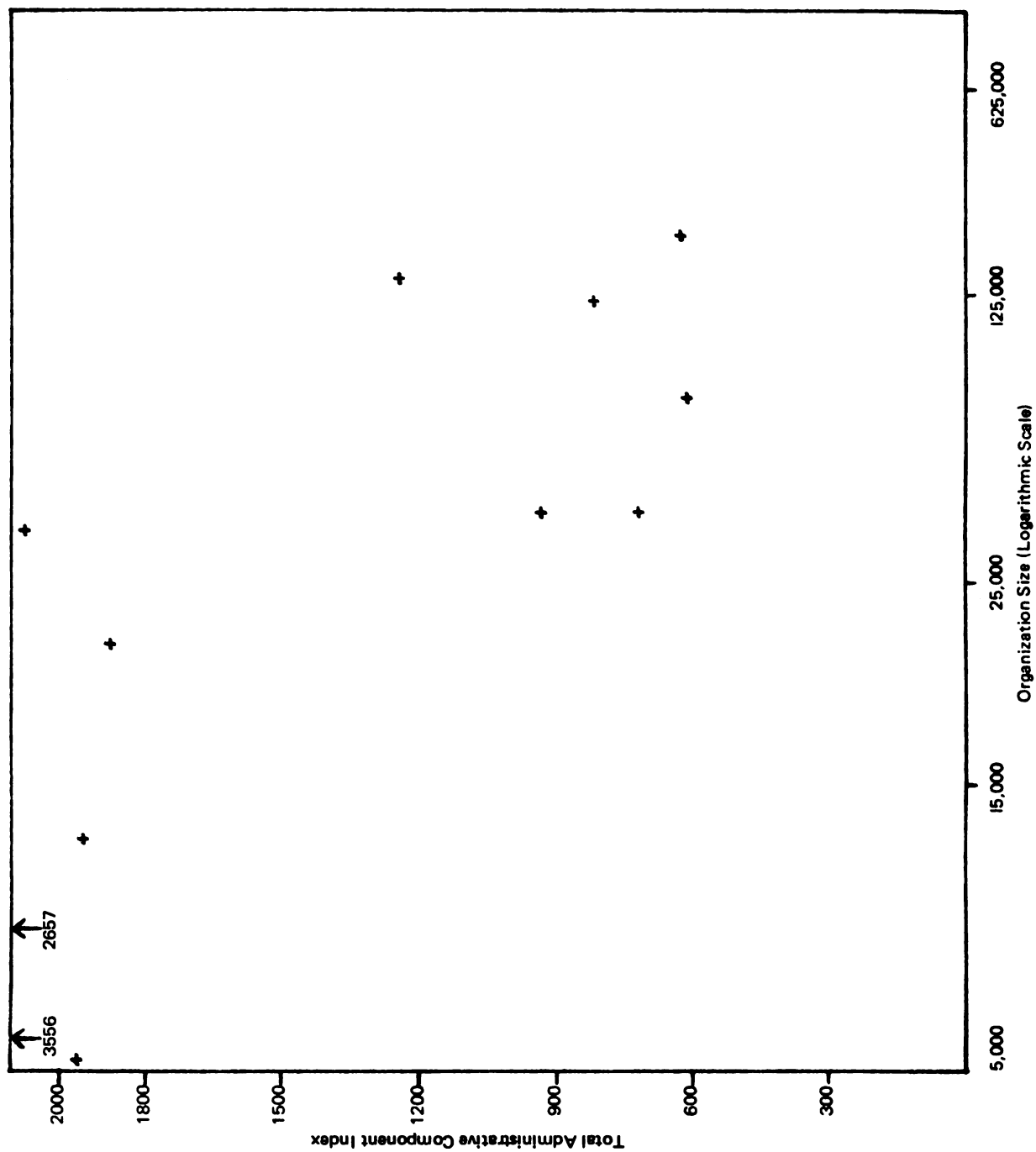


Figure 7.—Covariation of organization size and the total administrative component index: Railroad unions only

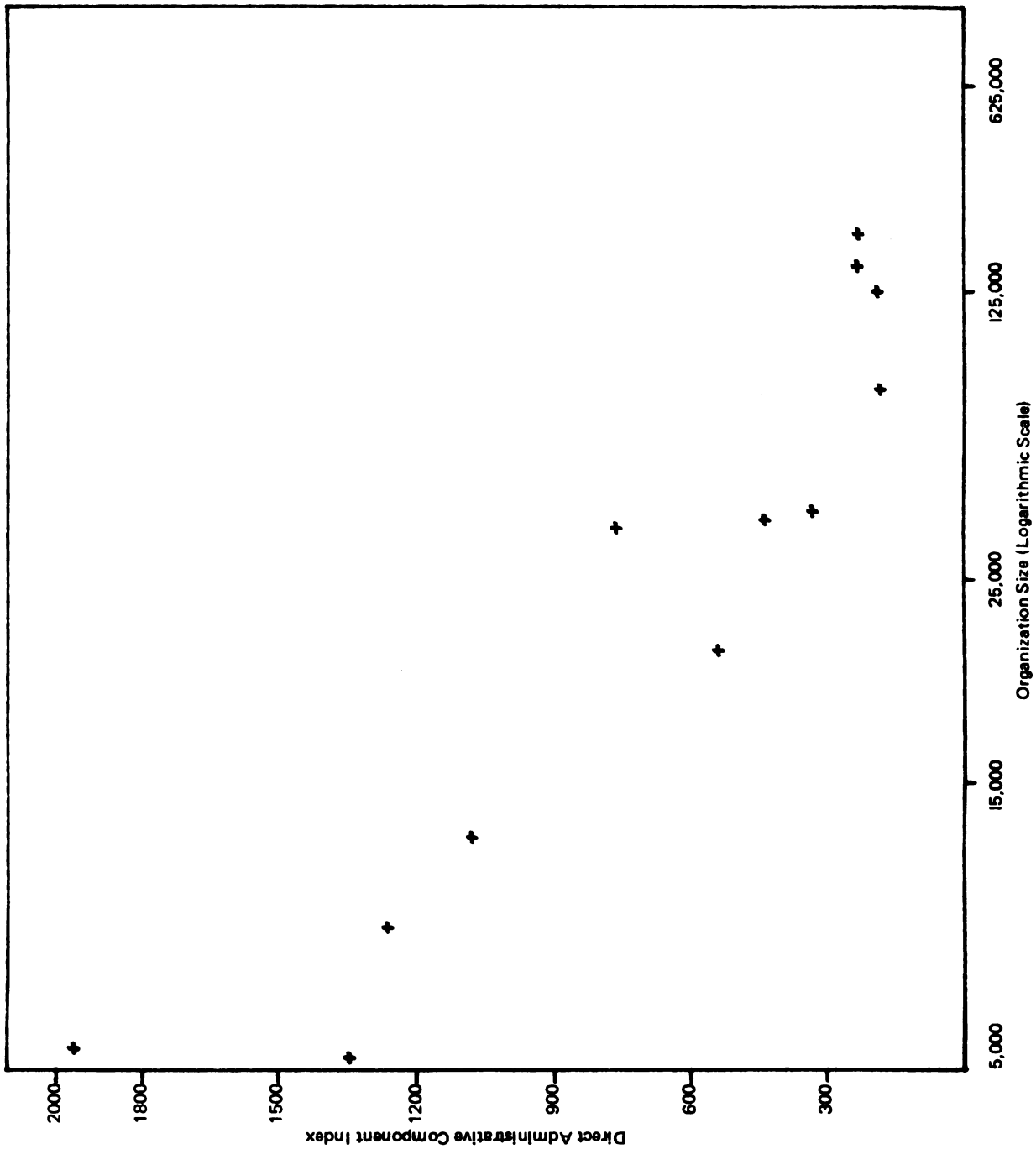


Figure 8.—Covariation of organization size and the direct administrative component index: Railroad unions only

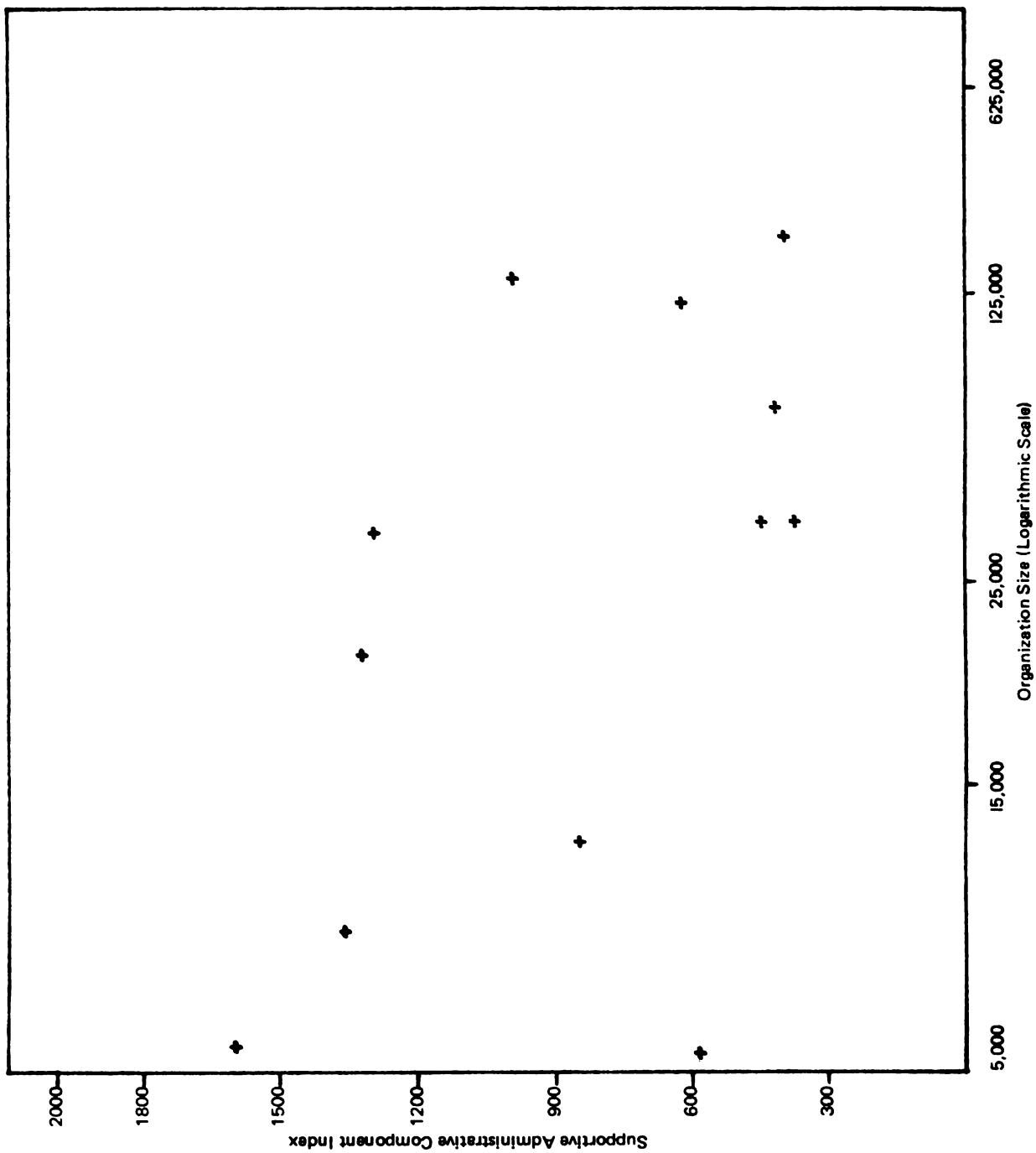


Figure 9.—Covariation of organization size and the supportive administrative component index: Railroad unions only

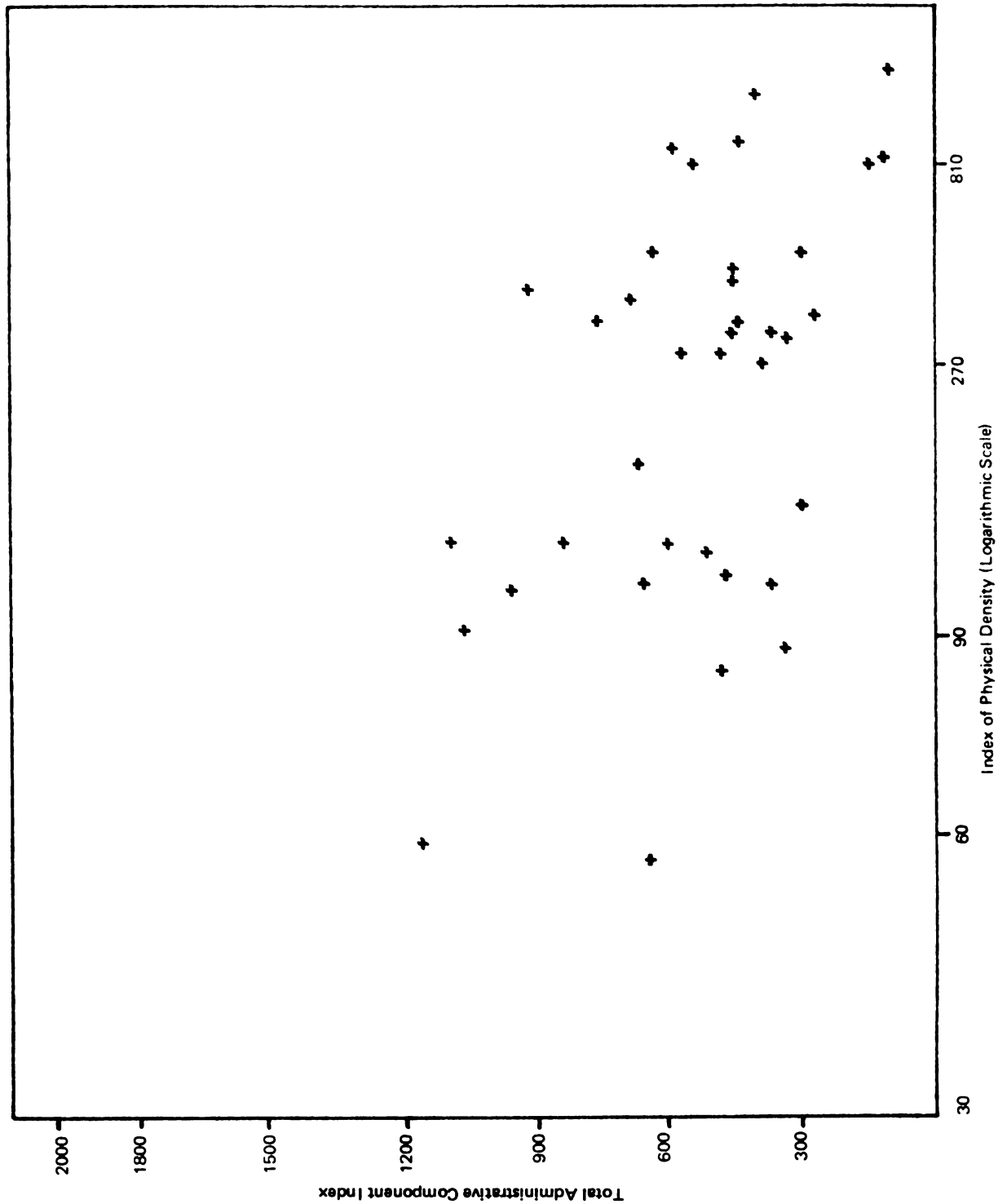


Figure 10.—Covariation of the physical density index and the total administrative component index: Local market unions

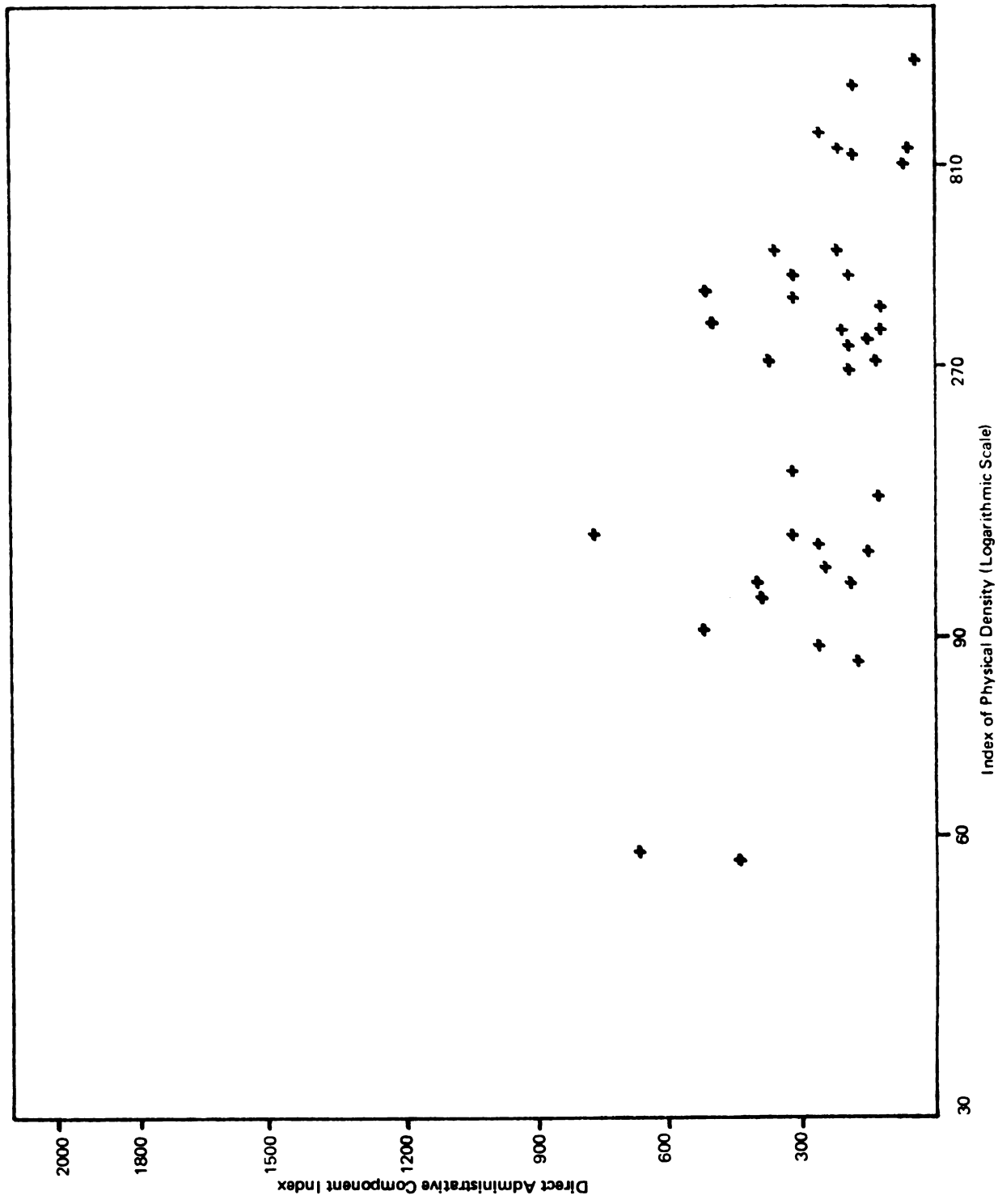


Figure II.—Covariation of the physical density index and the direct administrative component index: Local market unions

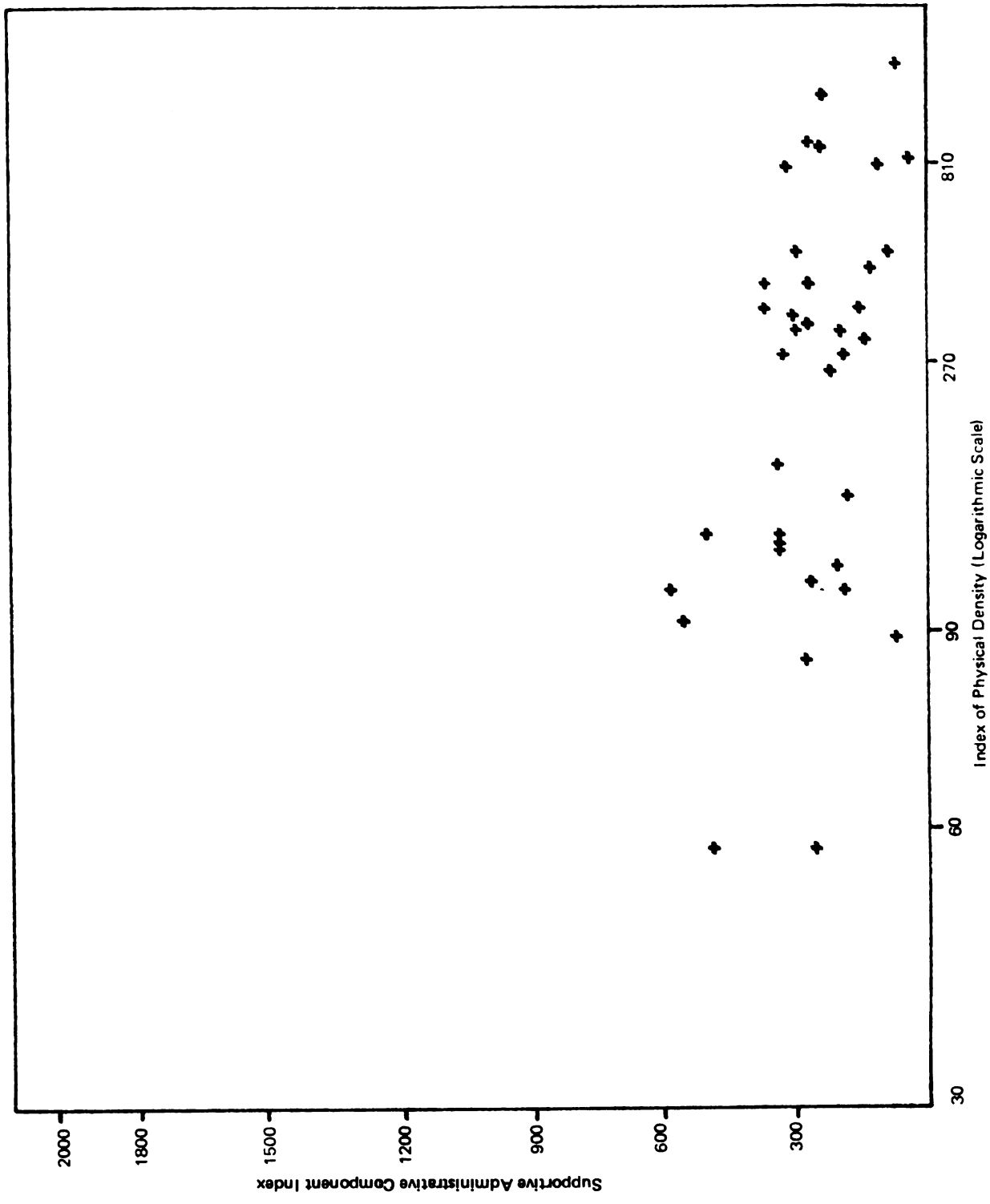


Figure 12.—Covariation of the physcial density index and the supportive administrative component index: Local market unions

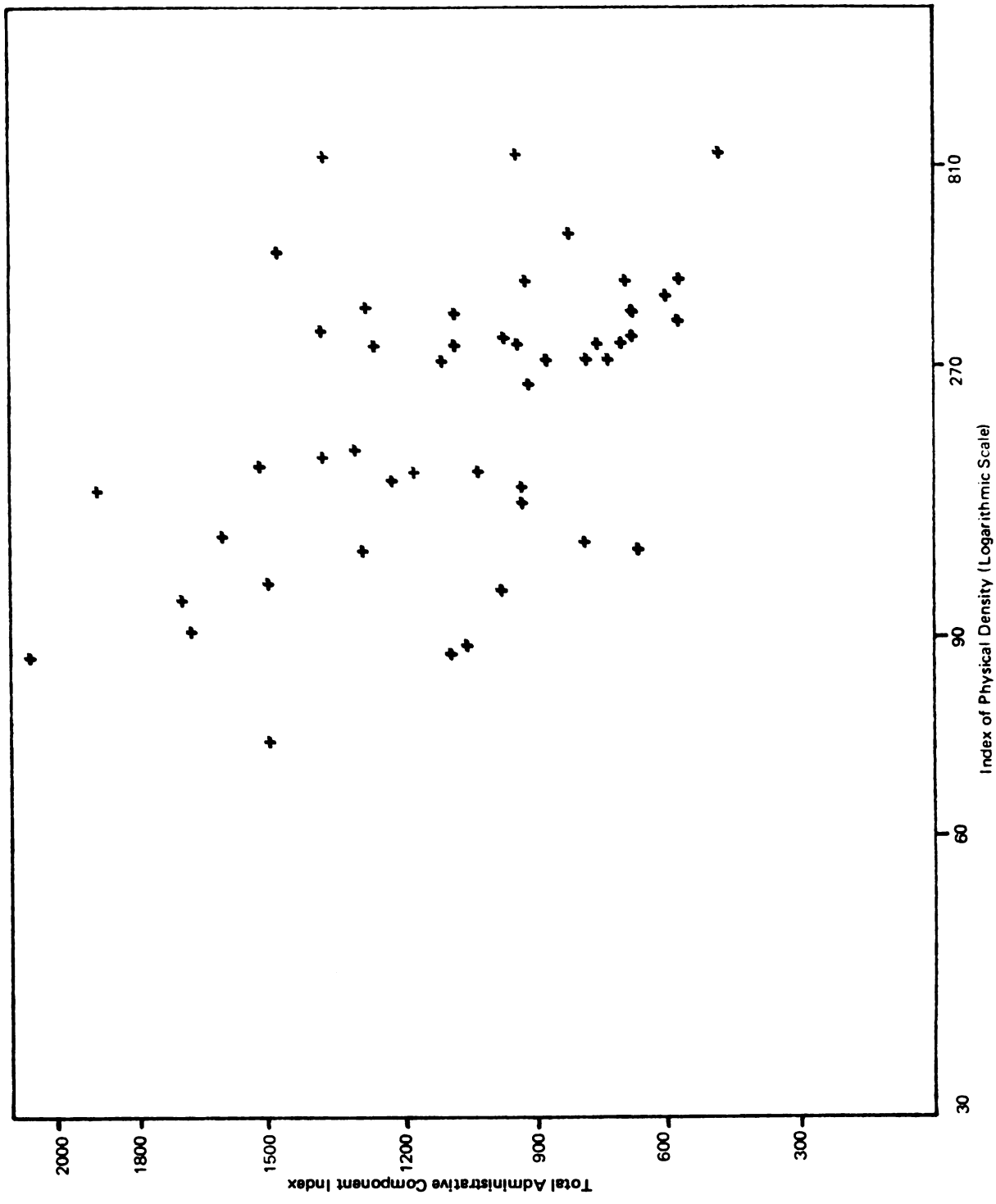


Figure 13.—Covariation of the physical density index and the total administrative component index: National market unions

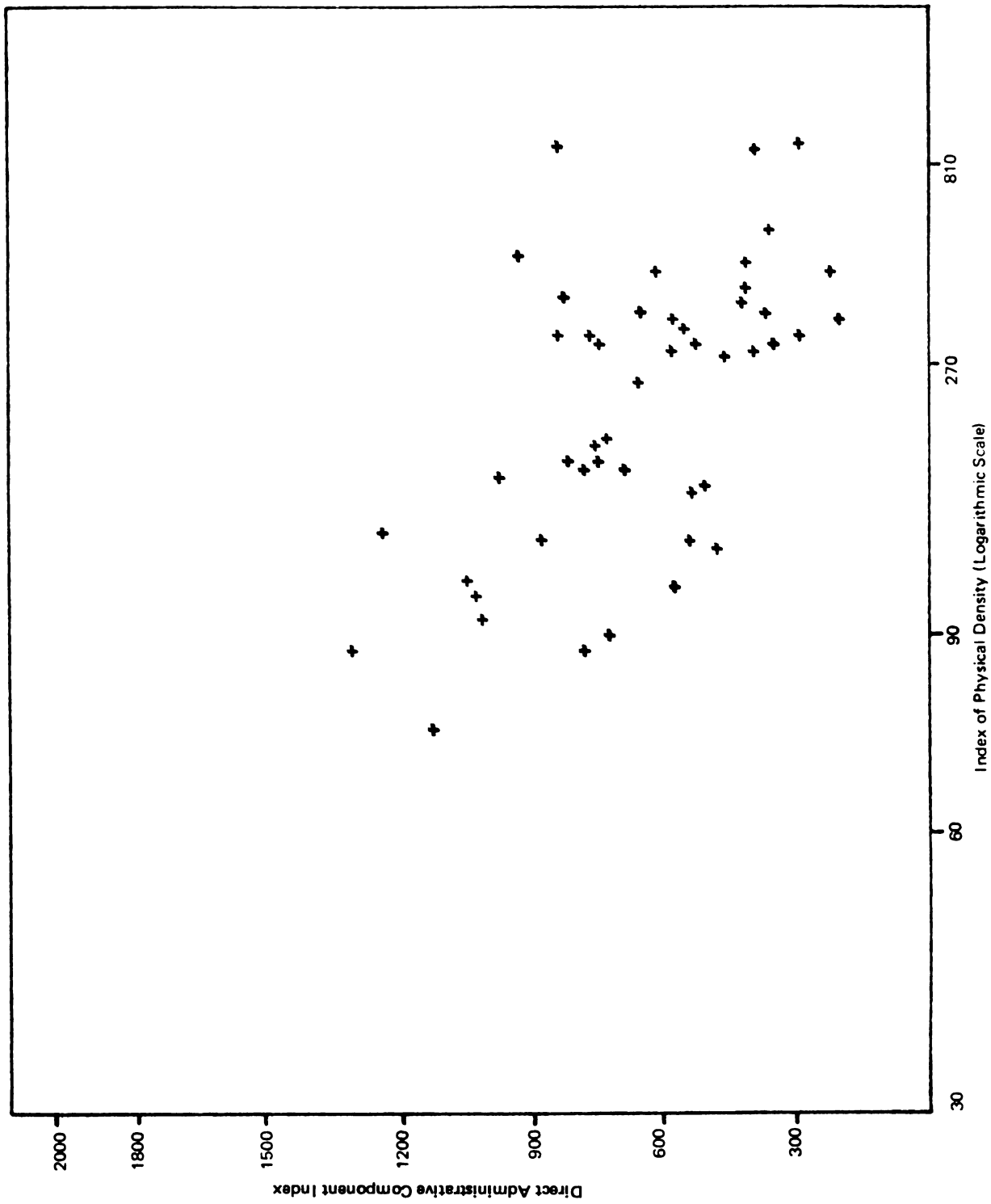


Figure 14.—Covariation of the physical density index and the direct administrative component index: National market unions

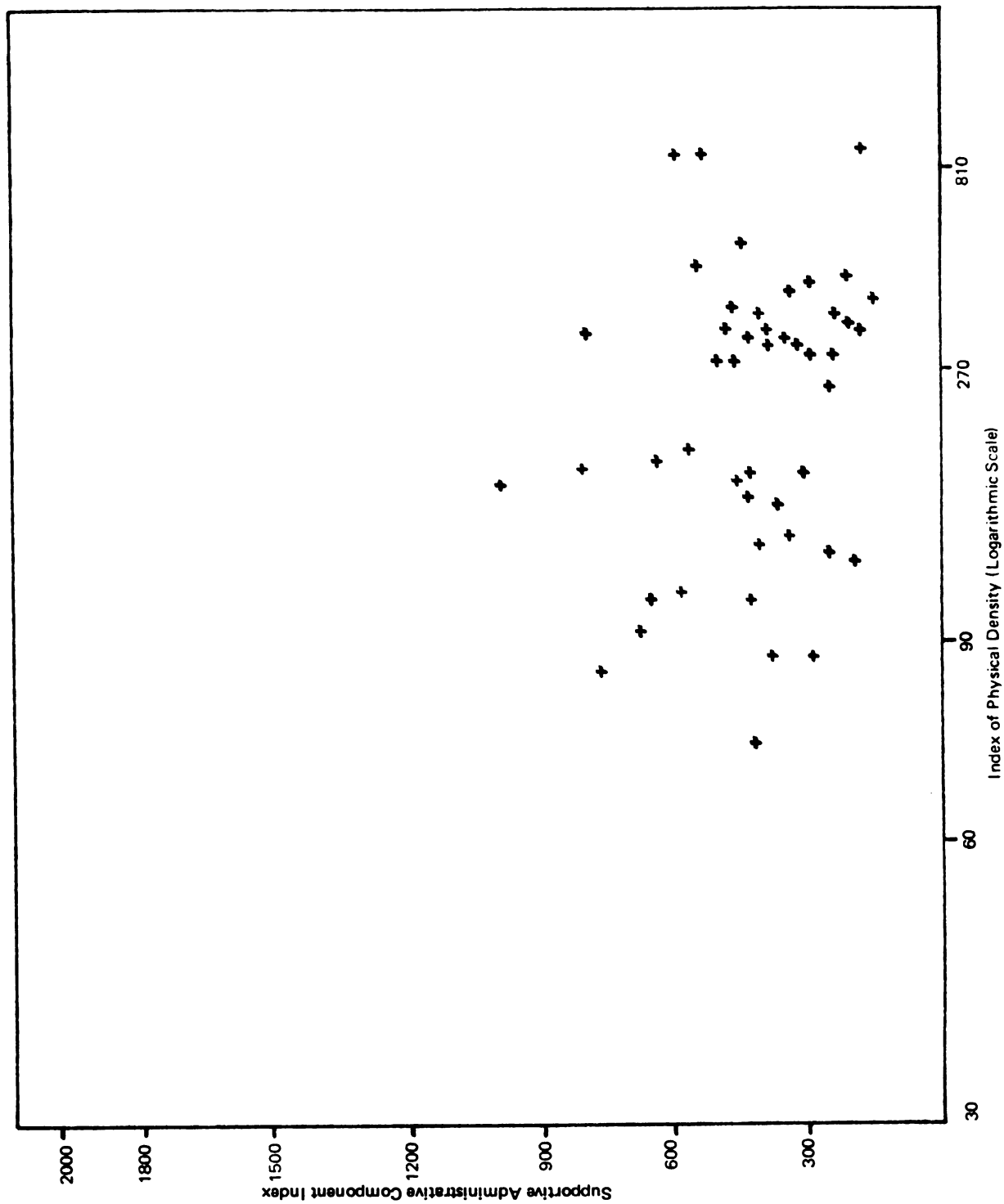


Figure 15.—Covariation of the physical density index and the supportive administrative component index: National market unions

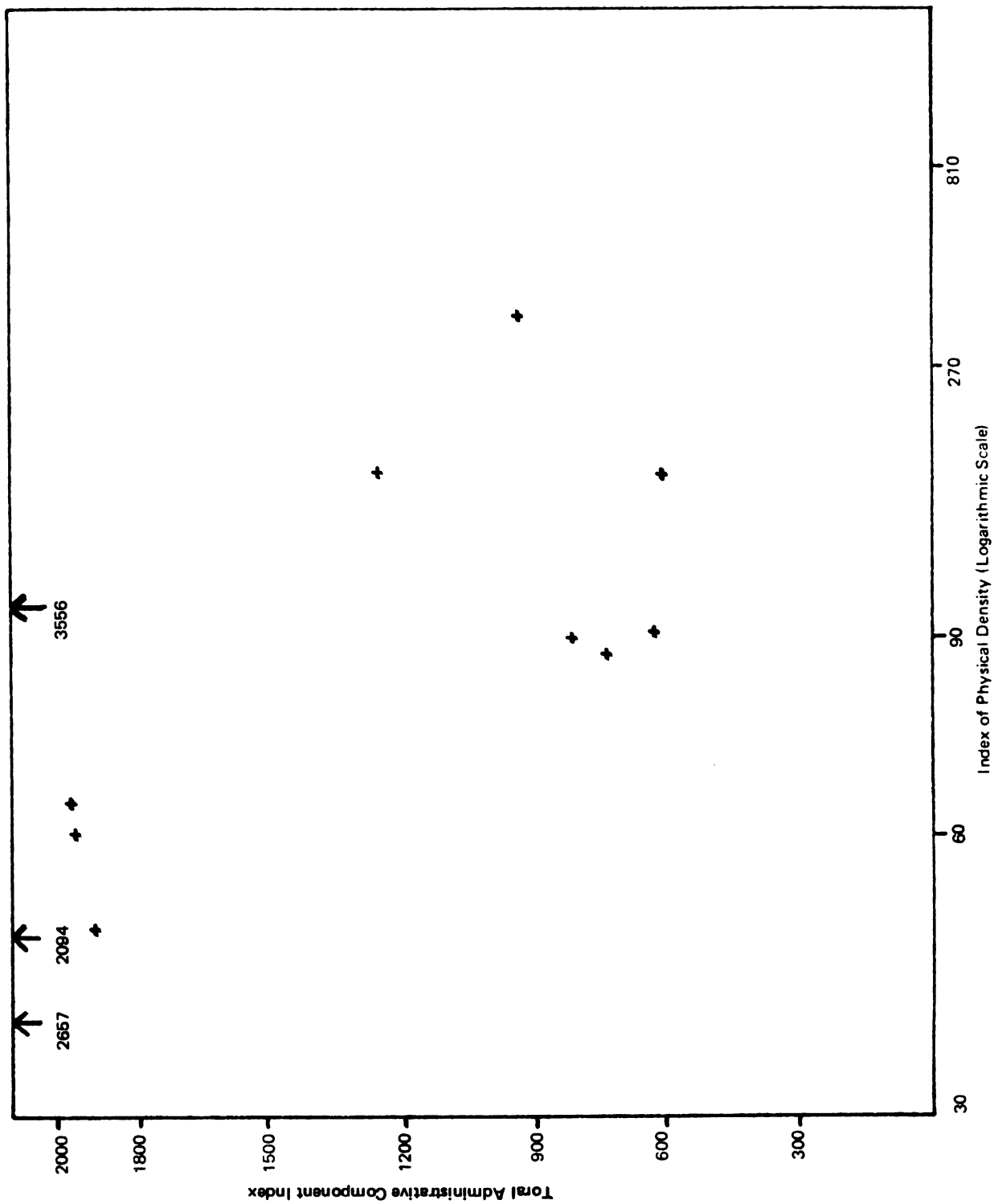


Figure 16.—Covariation of the physical density index and the total administrative component index: Railroad unions only

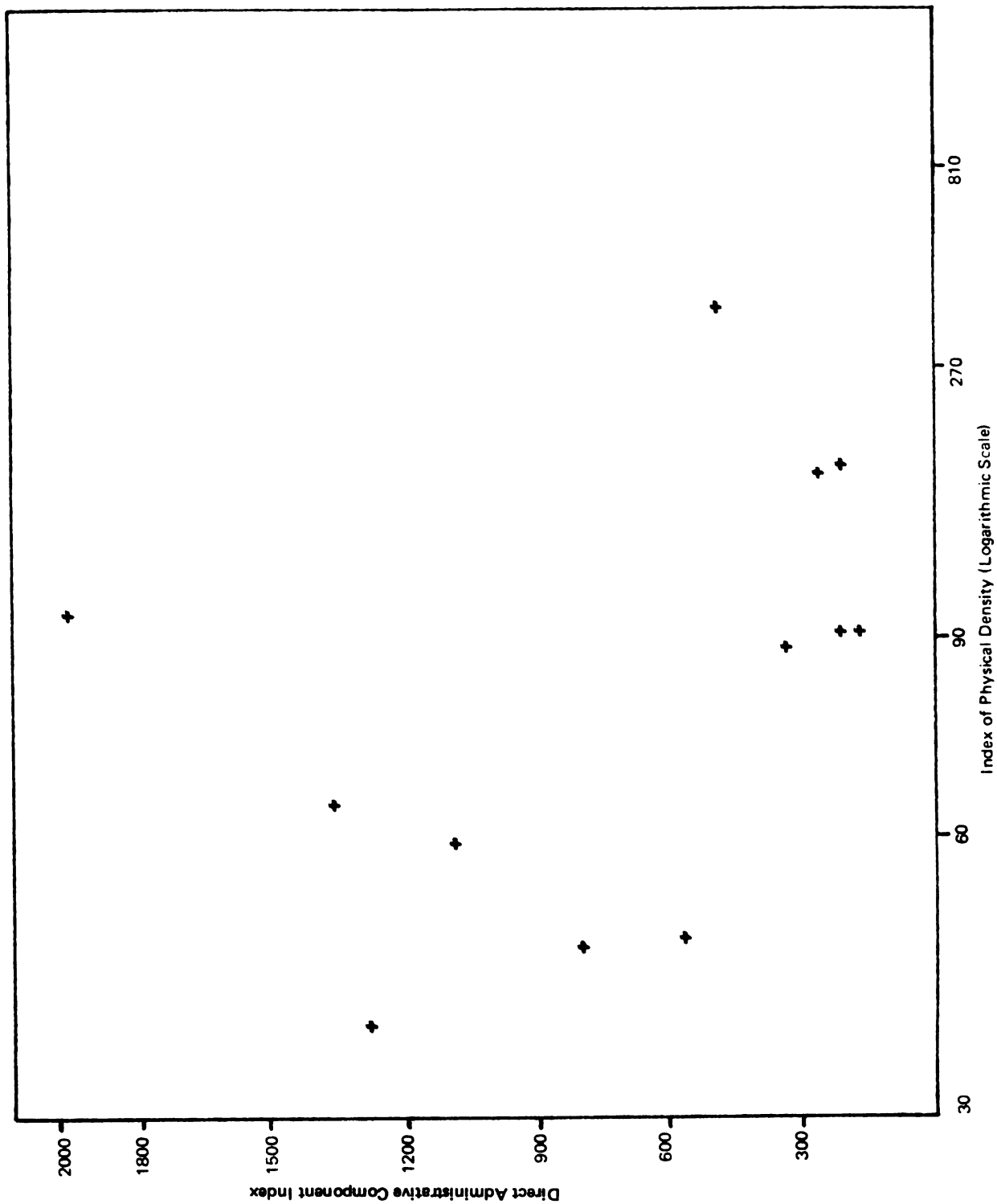


Figure 17.—Covariation of the physical density index and the direct administrative component index: Railroad unions only

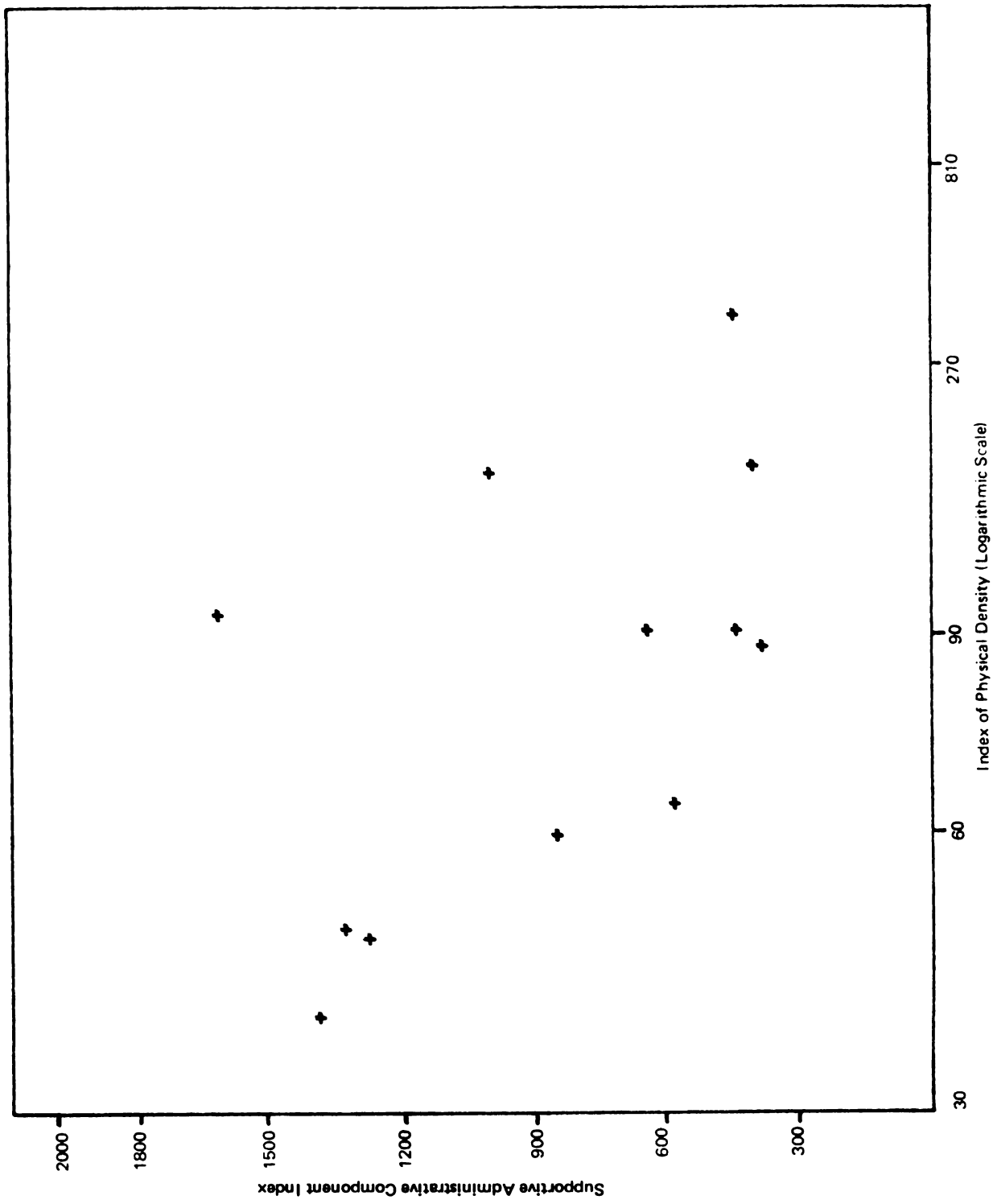


Figure 18.—Covariation of the physical density index and the supportive administrative component index: Railroad unions only

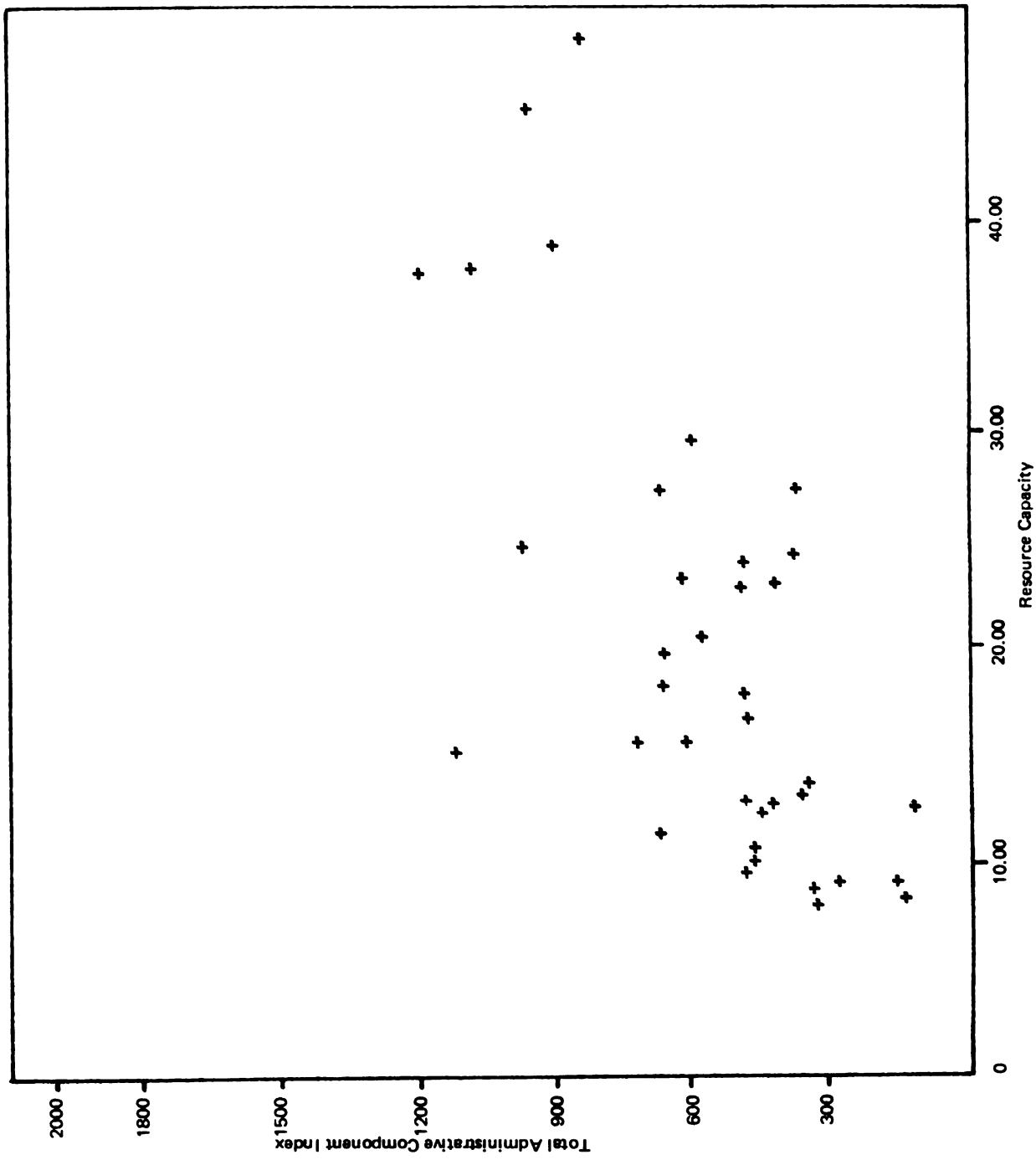


Figure 19.—Covariation of resource capacity and the total administrative component index: Local market unions

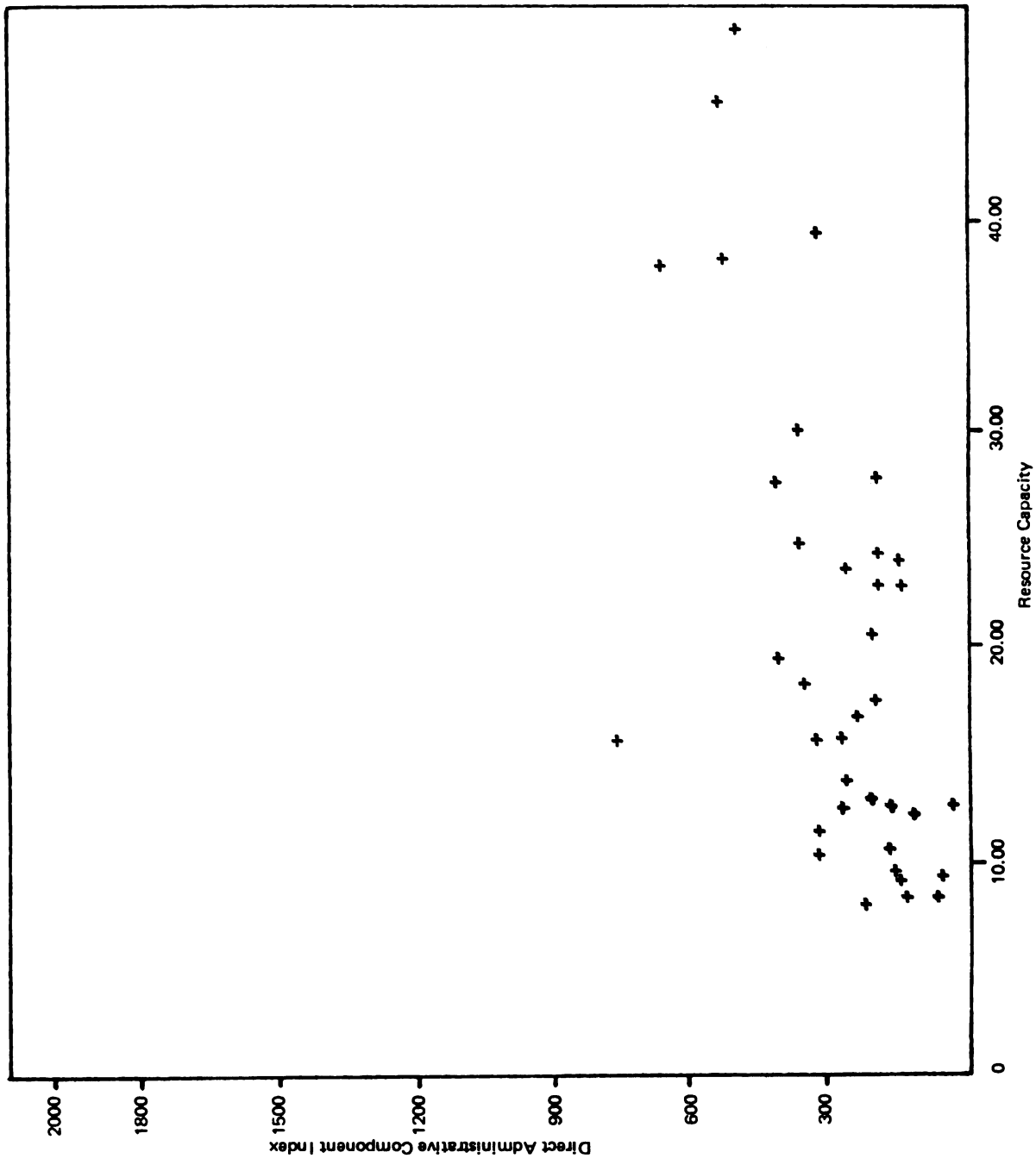


Figure 20.—Covariation of resource capacity and the direct administrative component index: Local market unions

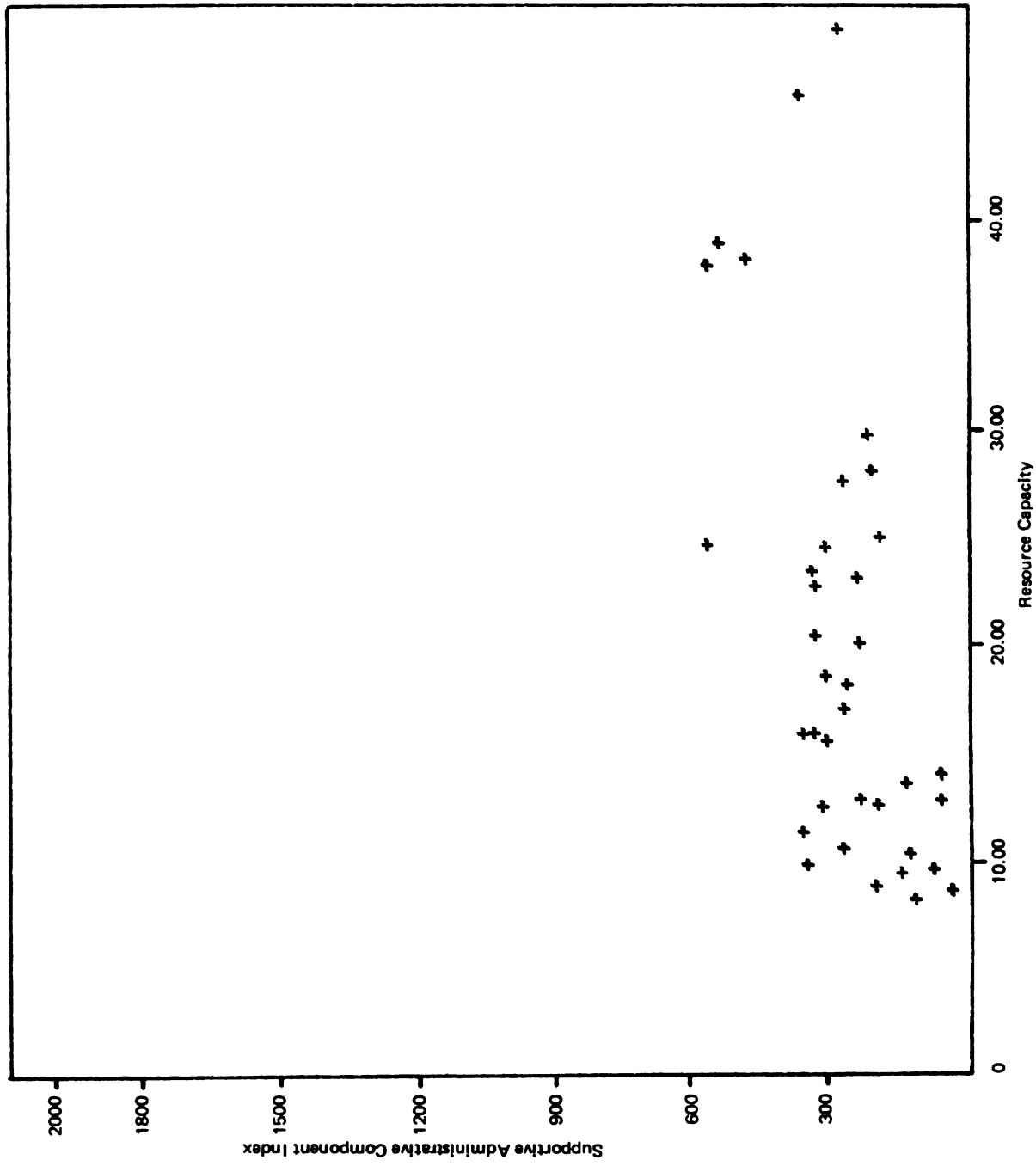


Figure 21.—Covariation of resource capacity and the supportive administrative component index: Local market unions

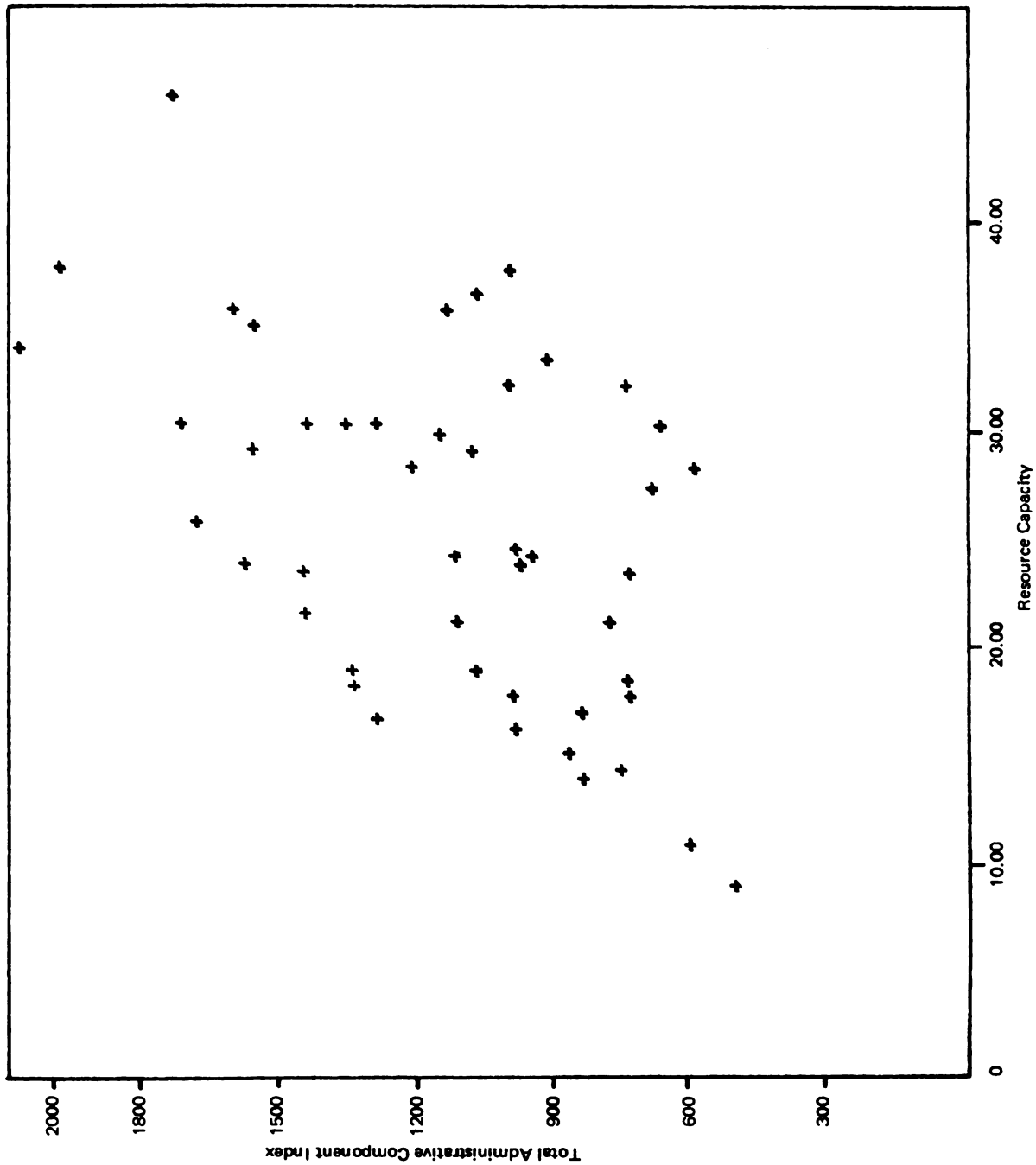


Figure 22.—Covariation of resource capacity and the total administrative component index: National market unions

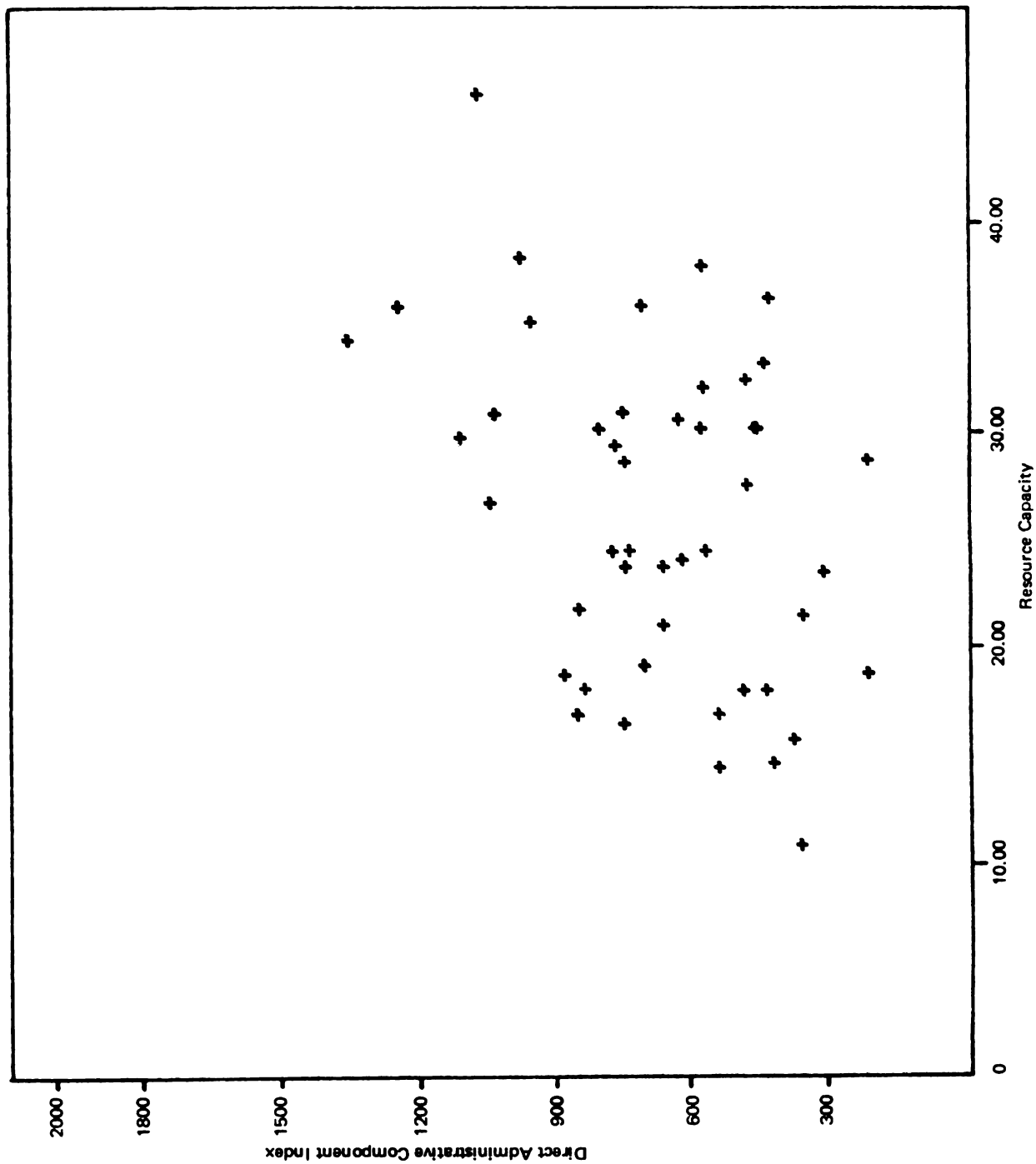


Figure 23.—Covariation of resource capacity and the direct administrative component index: National market unions

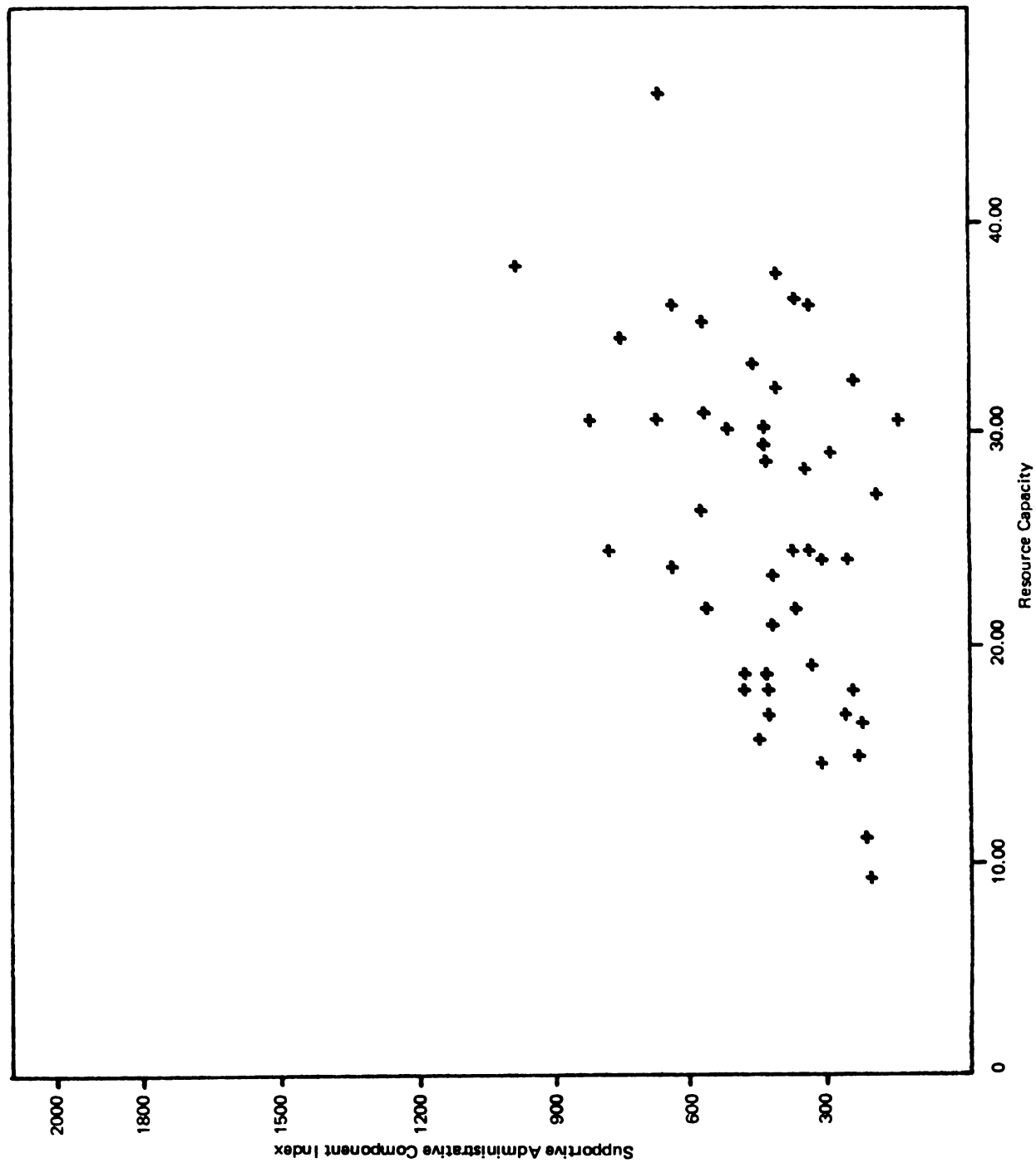


Figure 24.—Covariation of resource capacity and the supportive administrative component index: National market unions

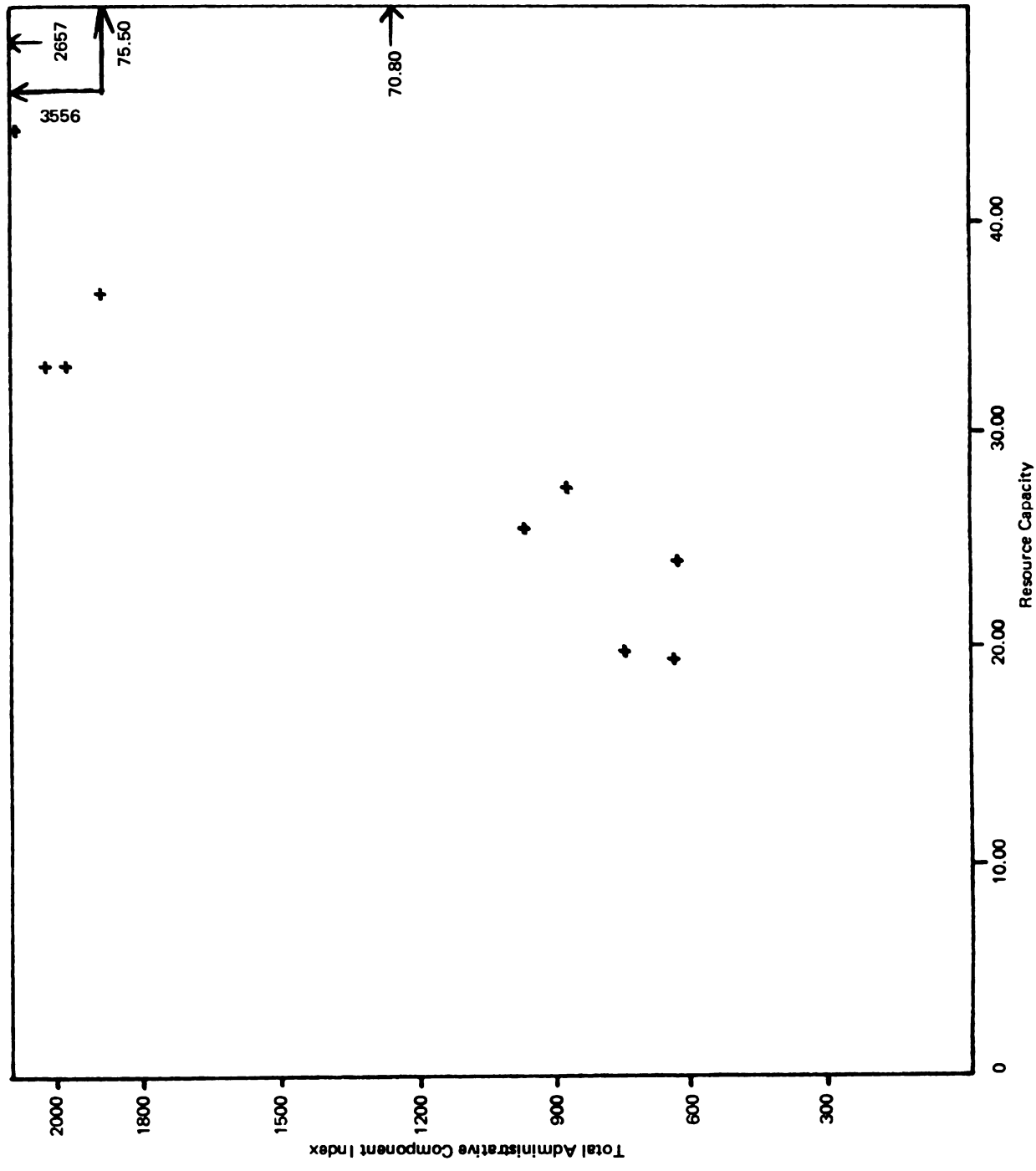


Figure 25.—Covariation of resource capacity and the total administrative component index: Railroad unions only

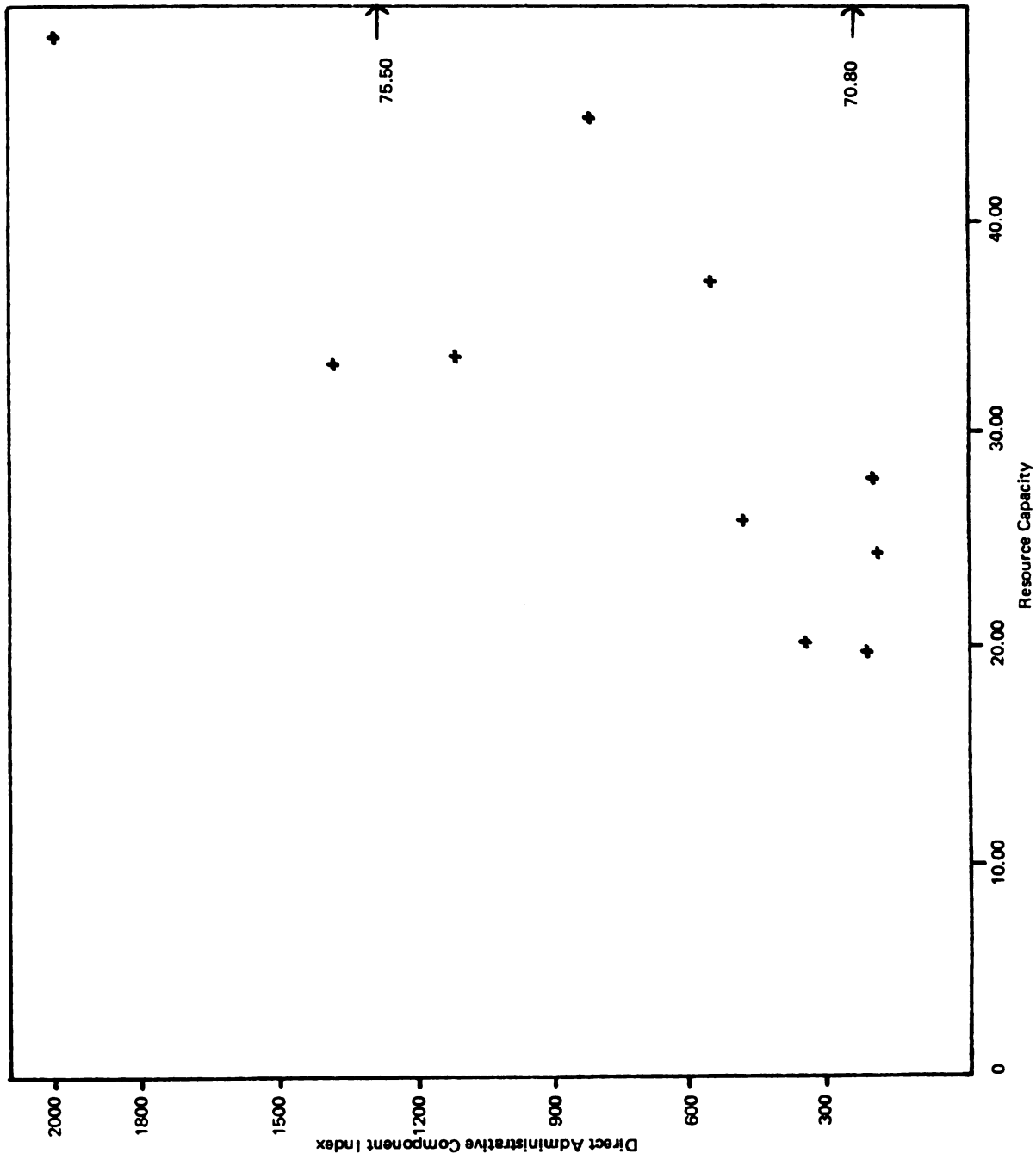


Figure 26.—Covariation of resource capacity and the direct administrative component index: Railroad unions only

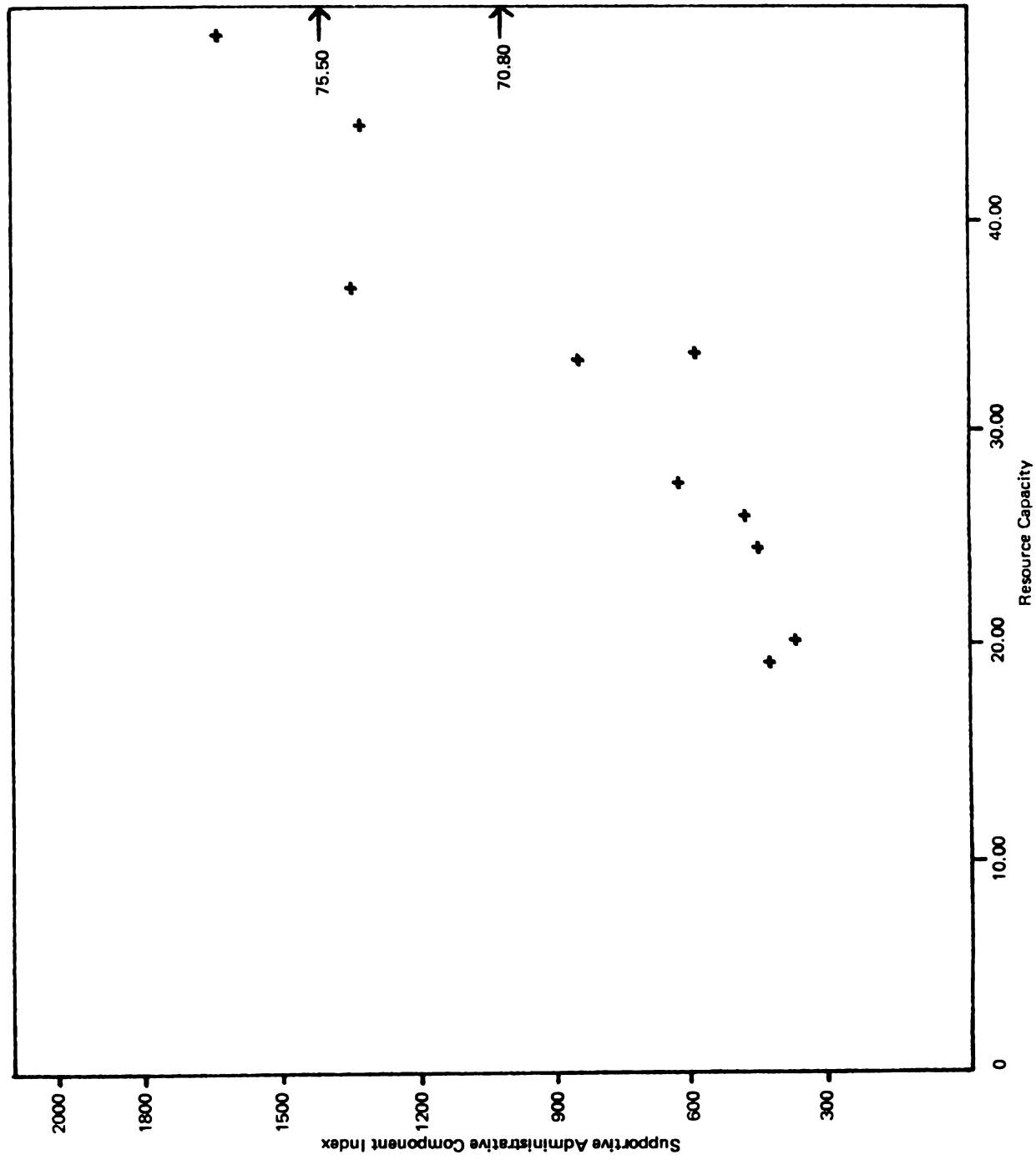


Figure 27.—Covariation of resource capacity and the supportive administrative component index: Railroad unions only

APPENDIX B

RELIABILITY CHARACTERISTICS OF DATA USED IN THE ANALYSIS

Organization Size

There are basically five alternative sources of information on membership size in national labor unions on an extensive scale: (1) by direct request to the union's national offices; (2) by reference to union publications, such as periodicals, convention proceedings and officers' reports; (3) by calculating membership estimates, using per capita tax payments by affiliated national unions to the AFL-CIO; (4) by using membership figures reported in the biennial BLS Directory; and (5) by using a combination of per capita tax receipts and per capita tax rates to derive estimates of membership size in individual unions. Deciding on a basic approach for this study involved adjudging the accuracy and reliability of each possible method across the entire study group.

The first three of the above techniques were elimination for much the same reason; namely, that each could be expected to yield information for limited numbers of national unions--the first because the request would be for noncurrent information, the second because not all

national unions make public reports of membership size, and the third because not all national unions are AFL-CIO affiliates.

The decision not to rely on BLS-reported membership figures as primary data was based on several considerations.

1. Although the BLS has had increasing success in recent years in encouraging the reporting national labor unions to register only "dues-paying members" on its survey questionnaire, it is generally conceded that some unions still deviate by listing members who are retired, in military service, or in a withdrawn status, the latter of which may or may not be permanent.

2. Some have noted a persistent tendency on the part of a few unions to exaggerate membership strength in reporting to the BLS because of relations with employers or with other unions with which there is competition for jurisdictional coverage.[1]

3. The BLS never receives complete returns of the distributed questionnaires and in some cases finds it necessary to find alternative sources of information regarding membership size in particular unions, relying primarily on AFL-CIO and individual union publications.

In sum, it was decided not to use the 1965 BLS Directory as the primary source of information regarding

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[1]See, for example, William Paschell, "Limitations of Union Membership Data," Monthly Labor Review, 78 (November, 1955), 1265-1269.

membership size of national labor unions selected for study. The Directory did, however, prove to be valuable as an alternative source of information in exceptional cases and as a cross-check against the accuracy of information derived from other sources.

After careful consideration of alternative methods, it was decided to use the "full member equivalent" (FME) measurement technique in determining membership size. In general, this approach was selected because of its comparatively greater reliability over others, particularly in terms of uniformity in measurement.[2]

Wherever possible, the FME estimate was calculated by dividing the total number of per capita receipts for a two-year period (1963 and 1964) by the per capita tax rate for a full dues-paying member during the same period of time. As noted earlier,[3] this method was not applicable in the cases of unions having variable per capita tax rates for different classes of members, and it was necessary to use alternative techniques to derive comparable

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[2]See the following: C. E. Ferguson and William J. Stober, "Estimate of Union Membership from Reports Filed under the Labor-Management Reporting and Disclosure Act," Southern Economic Journal, 33 (October, 1966), 166-196; and Marten S. Estey, "Some Comments on the First Four Years of BLMR Research and Statistics," Regulating Union Government, edited by M. S. Estey et al. (New York: Industrial Relations Research Association and Harper and Row, 1964), pp. 209-212.

[3]See above, Chapter III, p.

membership estimates. The alternative methods used were as follows.

1. Many national labor unions which have variable per capita tax rates also have special purpose funds into which an equal amount of each member's per capita tax payment is deposited, regardless of membership classification or total amount paid. Strike funds, defense funds and journal funds are probably the most common of these. By using accounting statements of these funds appearing in officers' reports, union periodicals or convention proceedings, it was possible to apply a formula similar to that used in cases of unions having nonvariable per capita tax rates; that is, the total receipts figure from per capita tax allocations to the special purpose fund was divided by the per member rate over the same time period.

2. Union convention proceedings and national officers' reports were carefully scanned for reports to the membership regarding the number of per capita tax payments received by the national organization in a time period proximate to the calendar years of 1963 or 1964, or the status of the union's membership rolls at the time of a national convention held during one of these years.

3. In cases where none of the aforementioned methods was applicable, decisions to accept or reject an alternatively available figure were made on the basis of

three general criteria. (a) In cases of AFL-CIO affiliates, each union's reported membership appearing in the 1965 BLS Directory was compared with a derived estimate based on per capita tax payments to the Federation during the period from July 1, 1963 to June 30, 1964. If this comparison showed no more than a ten percent discrepancy between the two figures, the union was included in the study group, using the more conservative membership figure, which proved in each case to be the AFL-CIO-based estimate. (b) In certain cases, AFL-CIO affiliates were included in the final group, using the BLS-reported membership figure, since more recent membership figures for 1966 available to the author suggested that they were generally more accurate than estimates based on per capita tax payments to the Federation. (c) Two independent unions were included in the final study group, using the reported membership figures in the 1965 BLS Directory. It was decided that their inclusion would not result in a serious distortion of measurement reliability.

The distribution of the 96 national labor unions in the final study group among the different methods of membership size determination is shown in Table 21. It should be noted that the first four methods are essentially equivalent techniques, and thus it was possible to classify more than 90 percent of the cases by a method emphasizing full dues-paying membership as the key criterion.

TABLE 21

DISTRIBUTION OF UNIONS IN FINAL STUDY GROUP BY METHODS OF DETERMINING MEMBERSHIP SIZE

Method	Number	Percent
By using total per capita tax receipts and per capita tax rates	72	75.0
By using per capita tax allocations to special purpose funds, or else references in union reports regarding numbers of full dues-paying members	10	10.4
By using estimates based on per capita tax payments by affiliates to the AFL-CIO	7	7.3
By using BLS-reported membership figures	7	7.3
Total	96	100.0

The full membership equivalent (FME) measurement used in the study is admittedly a conservative one, inasmuch as it cannot detect the actual number of persons whose names might have appeared on the union's membership rolls in a focal time period, which may be variously affected by layoffs, retirements, withdrawals, entry into military service, the seasonal nature of certain industries, and the like. In the end, however, it was decided to depend, wherever possible, on this measurement approach as yielding the most consistent and reliable membership size figures across the entire group of unions studied.

Physical Density Characteristics

There were no alternative sources of information available to allow extensive cross-checking of the 1965 BLS Directory figures on the number of locals for each union in the study sample. In some cases it was possible to compare the BLS-reported figures with those published in convention proceedings or officers' reports, although the time periods represented by the two sets of figures were usually not coincident. The several comparisons that were made led to the conclusion that the Directory figures were generally quite accurate.

It was possible to obtain a second judgment on the accuracy of the Directory figures by comparing them with the number of locals listed for each national union in the OLMWP 1964 Register. The Register, though, was only partly helpful, because it lists only labor organizations located in the United States or its territories and operating in "industries affecting commerce." But by using Appendix C of the 1965 BLS Directory, which lists for most national unions a self-reported figure on the number of affiliated locals outside the United States, it was possible to derive an independent set of reasonably comparable figures for the majority of cases in the study sample. These comparisons also confirmed the general accuracy of the BLS-reported figures and led to a discovery that three of the unions in the final study sample were apparently understating the

number of their local affiliates. Further investigation--by reference to convention proceedings and officers' reports--disclosed that the confusion in each case resulted apparently from differences in terminology; that is, the label used by the union to signify locally-based affiliates was something other than the commonly used designation, "local union."

One additional note should be registered concerning what this variable indicates. An obvious feature of its operationalization is a dependence on central tendency as the index criterion, which could mean that in certain national unions a relatively few large locals could have a disproportionate effect on the index value. This was recognized to be a possible weakness in the measure but it was one which could not be effectively handled without knowing the actual distribution of locals' membership sizes for each union. On the other hand, it is probable that exceptionally large locals tend also to be affiliates of the larger national unions, which typically have large numbers of medium- and small-size local unions. Thus, the possible influence of extreme cases on the criterion qualities of this index are probably not very disturbing, overall.

Resource Capacity

In the initial design of the study, it was intended to operationalize the variable of resource capacity by utilizing total income of a national labor union from all sources on an annual average basis. As the study progressed, the dubious validity of this approach began to emerge. Specifically, this measurement appeared to be vulnerable to two notable distorting influences.

1. It was noted that some unions provide for "transfer payment" procedures, with the national organization acting as the agent of transfer.[4] In these cases sizable amounts may be recorded on LM-2 reports as income to the national organization, when in fact these monies are not available to the national organization for administrative purposes. Several instances were found where members' payments for the support of their district or regional organization are sent first to the national organization for recording and then remitted to the appropriate regional or district organization. In a very few cases, members' dues are sent to the national organization, which then returns a portion of these to the local union to cover operating expenses. Also, it is not altogether infrequent for the national organization to act as the

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[4] In the receipts section of the LM-2 form, these are found in Items 41 ("On Behalf of Affiliates for Transmittal to Them") and 49 ("From Members for Disbursements on Their Behalf").

agent of transfer for locals' contributions to specially designated external agencies--for example, other labor organizations or political education groups.

2. There are many unions which, in a given year, may sell certain investment certificates or fixed assets[5] and reinvest all or most of the receipts in similar types of assets holdings. To account these receipts as income in the same way that receipts from members' contributions may be treated would be illusory. For the most part, these monies are recirculated within the same fiscal categories, and in a very few cases are they diverted to administrative services categories.

The measurement of resource capacity used in the analysis has the distinct advantage of focusing centrally on sources of funds readily available to the national organization for administrative and service functions. In addition, by concentrating on membership contributions,[6] it utilizes receipts categories that are consistent across the entire study sample. It is possible that in some unions receipts from other sources are important in providing

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[5]This figure is found in Item 41 ("Sales of Investments and Fixed Assets") in the receipts section of the LM-2 form.

[6]"Membership contributions" refers to receipts found in Items 35 ("Dues"--only the portion retained by the national organization), 36 ("Per Capita Taxes"), 37 ("Fees"), 38 ("Fines"), 39 ("Assessments"), and 40 ("Work Permits") in the receipts section of the LM-2 report.

support for administrative operations, particularly in "lean" periods. For example, unions with declining memberships may necessarily have to rely on these ancillary sources of income in order to prevent a serious decline in the service capabilities of the national organization. However, it is likely that few unions experience such rapid declines in membership as to render membership contributions overwhelmingly unable to provide the major support for administrative services.

Industry Type

No single source of information was available on which to base classifications of the unions in the final study sample by industry type; consequently, judgments were made on the basis of information obtained from four types of sources.

1. References were compiled from general commentaries on unionism and collective bargaining and case studies or short descriptions of particular unions and industries.[7]

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[7]Most general commentaries on unionism or labor economics contain some references to the influence of product market characteristics on collective bargaining and administrative strategies in national labor unions. The following works were of considerable help in the present case: Jack Barbash, American Unions: Structure, Government and Politics (New York: Random House, 1967); George Brooks, "Reflections on the Changing Character of American Labor Unions," Proceedings of the Ninth Annual Meeting of the Industrial Relations Research Association, December, 1956, pp. 36-43; Neil W. Chamberlain, "The Structure of Bargaining Units in the United States,"

Industrial and Labor Relations Review, 10 (October, 1956), 3-25; Martin Estey, The Unions: Structure, Development and Management (New York: Harcourt, Brace and World, Inc., 1967); David H. Greenberg, "The Structure of Collective Bargaining and Some of Its Determinants," Proceedings of the Nineteenth Annual Meeting of the Industrial Relations Research Association, December, 1966, pp. 343-353; Van Dusen Kennedy, Nonfactory Unionism and Labor Relations (Berkeley, California: Institute of Industrial Relations, 1955); Richard A. Lester, As Unions Mature: An Analysis of the Evolution of American Unionism (Princeton, New Jersey: Princeton University Press, 1958); David A. McCabe, "Union Policies as to the Area of Collective Bargaining," Proceedings of the Fourth Annual Meeting of the Industrial Relations Research Association, December, 1952, pp. 110-129; Charles M. Rehmus,,"Multiemployer Bargaining," Current History (August, 1967), 91-97; Philip Taft, The Structure and Government of Labor Unions (Cambridge, Massachusetts: Harvard University Press, 1954). In addition to these more general works, a number of case descriptions of particular unions and industries are available. The following ones proved most helpful. Leo C. Brown, Union Policies in the Leather Industry (Cambridge, Massachusetts: Harvard University Press, 1947); Margaret S. Glock, Collective Bargaining the Pacific Northwest Lumber Industry (Berkeley, California: Institute of Industrial Relations, 1955); Michael Harrington, The Retail Clerks (New York: John Wiley and Sons, 1962); Morris A. Horowitz, The Structure and Government of the Carpenters' Union (New York: John Wiley and Sons, 1962); Robert D. Leiter, The Musicians and Petrillo (New York: Bookman and Associates, 1953); Mark Perlman, Democracy in the International Association of Machinists (New York: John Wiley and Sons, 1962); Maud Russell, Men Along the Shore (New York: Brussel and Brussel, 1966); Betty V. H. Schneider and Abraham Siegel, Industrial Relations in the Pacific Coast Longshore Industry (Berkeley, California: Institute of Industrial Relations, 1956); Joel Seidman, The Brotherhood of Railroad Trainmen: The Internal Political Life of a National Union (New York: John Wiley and Sons, 1962); Melvin Rothbaum, The Government of the Oil, Chemical, and Atomic Workers Union (New York: John Wiley and Sons, 1962); Jack Steiber, Governing the U. A. W. (New York: John Wiley and Sons, 1962); U.S. Department of Labor, A Guide to Labor-Management Relations in the United States (Washington, D.C.: Government Printing Office, 1958), Bulletin No. 1225. Finally, a number of works deal with recent changes in the structure of collective bargaining in different industrial sectors. A good collection of articles on this general topic is found in Arnold R. Weber (ed.), The Structure of Collective Bargaining: Problems and Perspectives (New York: The Free Press of Glencoe, 1961). From this anthology, the

2. Convention proceedings and officers' reports were carefully scrutinized for information regarding the characteristics of the industry (or industries) organized. Attention was paid to the way in which union functionaries interpreted the implications of industry characteristics for administrative and collective bargaining purposes.

3. Reference was made to information regarding the degree of seller concentration and product market structure in particular industries.[8]

4. Conversations with individuals having broad knowledge of the American labor movement and its constituent national unions provided considerable information on which to base classifications of many of the unions in the final study sample.

In addition to noting the types and sources of information used to classify unions in the final study sample,

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following articles proved very helpful: John T. Dunlop, "The Industrial Relations System in Construction," pp. 255-277; George W. Brooks, "Unions and the Structure of Collective Bargaining," pp. 123-140; Peter Henle, "Union Policy and Size of Bargaining Unit," pp. 107-121; E. Robert Livernash, "Recent Developments in Bargaining Structure," pp. 33-55; J. Wade Miller, "Collective Bargaining Structure and Experience in the U. S. Chemical Industry," pp. 201-215; George W. Taylor, "Collective Bargaining in Transition," pp. 343-354.

[8]Considerable information on concentration ratios and market structures can be found in the work by Carl Kaysen and Donald F. Turner, Antitrust Policy: An Economic and Legal Analysis (Cambridge: Harvard University Press, 1959). Also, more recent information about concentration ratios can be found in the following report: U. S. Senate, Subcommittee on Antitrust and Monopoly, Concentration Ratios in Manufacturing Industry, 1963 (Washington, D.C.: Government Printing Office, 1966).

it is important to register some other thoughts concerning the implications of the industry type variable in the data analysis.

Typological classifications are by their very nature simplifications of complex phenomena. Although different schemes will possess varying degrees of refinement according to the number of considerations used in defining the types, they largely ignore many peculiarities of the individual units being classified. Thus, the rationale for any such scheme depends not only upon the adequacy of information but also the purposes for which the typology has been created.

In the present study a major function of the industry type variable is to provide relatively homogeneous subgroups for analysis, with the chief criterion being the product market scope of the industry(ies) in which jurisdiction is exercised. Such a scheme overlooks--or perhaps more rightly stated, cannot detect--peculiarities associated with historical developments within particular unions or traditions in employer-union negotiations within particular industries. In effect, this means that the classification scheme, although taking account of an important difference among unions, necessarily results in considerable residual variation due to factors not detectable by the scheme itself. For example, many unions with strong craft orientations, which are often connected with an emphasis on local autonomy, operate in industries

of local market character. The question of which may be more influential in determining administrative patterns, industry characteristics or craft orientations, cannot be answered here.

There is, however, some evidence which indicates that many unions which historically have had strong craft moorings have also, under the influence of industrial unionism and expanding product market scopes, moved rather rapidly in the direction of increased centralization of administrative control in the national organization, with a consequent reduction of local autonomy in matters of contract negotiation and enforcement. On the other hand, there are a number of unions which, although having no strong craft lineage, nevertheless operate in product or service markets that are predominantly local in character, and it is a tenable assumption that certain general characteristics of coordinative problems in these unions are quite similar to those in many of the traditional craft unions in local product market industries.

In sum, what the classification scheme does is to cut across a number of individual features of union history and tradition to form subgroupings in the analysis of relatively homogeneous content on a particular aspect of union organization and administration. It is probable that there are a number of unions near the margin of the dividing line between the classes chosen, and for these

the balance of judgment as to the appropriate classification is not altogether clear. The scheme itself is of a static character and thus is vulnerable to an inexactness that is inherent in a relatively crude operationalization.

The Administrative Component

Cross-sectional studies of organization size and administration in complex organizations are subject to a number of limitations, some of which have special application to the determination of the size of the administrative component. Most organizations are subject to seasonal variations of one sort or another; or, within a given time period they may adjust the total staff component because of budgetary constraints or fiscal re-allocations. Consequently, in a cross-sectional study such as this one, there will always be some conditions preventing the attainment of complete confidence in data accuracy.[9] This may be especially true in the case of labor unions and other membership-service organizations, where activities are composed of both continuous administrative services and

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[9]For example, one national union in the study sample, for which data on total staff size were available for both 1964 and 1965, added five additional field staff persons early in 1965. These additions were made possible by new allocations of money voted on in the national convention held in late 1964.

time-limited special projects.[10]

The discussion concerning reliability characteristics of data used in this study to determine the relative size of each aspect of the administrative component is divided into three parts, each corresponding to one of the variables used to operationalize a particular aspect. Thus, the discussion considers, in turn, data on the total number of full-time officers and employees in the national organization, total number of full-time direct administrative staff and total number of staff in supportive administrative positions.

Total Number of Full-Time Officers and Employees in the National Organization

Primary reliance was placed on employment figures supplied by representatives of the BLS in determining the size of the full-time officer and employee component in the national organization of each union. Thus, the question of data reliability involved adjudging the accuracy of this employment figure for each union studied.

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[10]Most national labor unions use, from time to time, "temporary" international representatives, and, particularly, on the occasion of special projects, may add temporary full-time field staff for the project's duration. The time period for these special projects is usually quite limited, though in some case temporary staff may serve for the better part of a year. In many cases the employment of temporary representatives enables the national organization to augment the limited financial capabilities of an affiliated local or group of locals for special short-run organizing projects.

Since there was no generally applicable method available for determining the accuracy of these data, it was necessary to use a combination of techniques in deciding to accept or reject any reported employment figure. The general procedure followed was to obtain an independent estimate of total staff size for each union and compare this with the employment figure reported by the union to the BLS. Two basic sources of information were used to derive these independent estimates: LM-2 reports submitted by each union to the OLMWP in 1964;[11] and financial reports of the national officers to the membership or the assembled national convention body.

Schedules 8 and 9 of the LM-2 report can provide considerable information about total staff size of the union, if used carefully. Three portions of these reports offer essential types of information: (1) All elected officers receiving any amount of salary or expenses from the national organization during the fiscal reporting period are listed by name and official title. (Schedule 8) (2) All appointed staff receiving a total of $10,000 or more in salary and expenses from the national organization

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[11]Unions vary in the beginning and ending dates of their fiscal year periods; thus, the designation of 1964 as the focal period is proximate for unions not using the calendar year as the fiscal year. To deal with this problem, for unions having fiscal years ending in the period from June 30-December 31, the fiscal period having an ending date in 1964 was used. For others having fiscal years ending in the period from January 1-June 29, the fiscal period ending in 1965 was used.

must also be listed by name and staff position. (Schedule 9) (3) Aggregate salary and expense figures for all other employees are listed as separate items in Schedule 9.

The following technique was devised, using information derivable from Schedules 8 and 9 of the LM-2 reports. (1) All elected officers receiving more than $6,000 in salary during the reporting period were regarded as full-time official staff of the national organization.[12] (2) All appointed staff employees listed by position in Schedule 9 (i.e., employees receiving $10,000 or more in salary and expenses) who received $5,000 or more in salary were counted as full-time employees of the national organization.[13] (3) By using divisors based on the salary distributions of the known employees (i.e., by reference to employees listed by position), an estimate was made of the number of employees included in the remaining aggregate

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[12]There were a very few instances of unions having an unusually low salary scale for officers and employees. In these cases, the full-time salary level for officers was dropped to $5,000.

[13]As may be expected, the majority of employees listed by position in Schedule 9 were international representatives and professional or technical staff at higher echelons in the national organization. Many of the international representatives listed by unions received less than $10,000 in salary but exceeded that total dollar level because of expenses associated with their field service activities.

salary figure in Schedule 9.[14] By adding the separate sums of these three steps, an independent estimate of total full-time staff size was obtained.[15]

The estimate for each union was then compared with the BLS figures. Whenever the estimate and the BLS figure varied more than ten percent (regardless of direction), more information was sought to determine possible reasons for the discrepancy.

The primary reference used for these additional cross-checks was the financial report presented to the membership or assembled convention body by the national officers (usually in a separate report by the international treasurer or secretary-treasurer), which is commonly incorporated into the published convention proceedings.

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[14]Determining the appropriate divisor involved an exercise of judgment based on observations of the salary distributions of the known employees and the level of expense monies paid to employees receiving less than $10,000 in salary and expenses. For example, in cases where employees receiving less than $10,000 also accounted for a very small amount of expense monies, an assumption was made that most of them were probably in clerical positions of a non-technical nature, and the salary level used as a divisor in estimating the number of employees represented in the aggregate salary figure was $5,000. In cases where it appeared that employees other than those at non-technical levels were included in the aggregate salary figure, a salary level of $6,000 was used. Admittedly, this technique has some dubious features, and its defensibility rests largely on its intended use; that is, it was used only as a reliability check, not as an independent source of information on actual staff size.

[15]In eight cases, the LM-2 report contained a complete summary of all officers and employees, by type of position.

These reports were used in different ways, depending on the character of the reporting categories used. In many instances, reports listed salaries paid to individual officers and appointed staff other than those in general clerical positions; for the latter, aggregate salary figures were presented. In these cases a separate estimate was made for number of clerical staff, using the annual salary figure of $5,000 as a divisor. In eight cases, the officers' report accompanying the convention proceedings contained a complete report on total number of full-time officers and appointed staff, including clerical personnel, in the national organization.

By using these various methods of cross-checking, the BLS-reported figures for 89 of the national labor unions included in the final study sample were adjudged to be of sufficient accuracy. For three of the remaining unions in the sample, all of them relatively small in membership size, an estimate based on the LM-2 reports was substituted for the figure reported to the BLS. In each case it was the author's judgment that the figure reported to the BLS was in all probability an overstatement, possibly due to a tendency to report part-time staff as full-time employees. Four other unions were included in the final study sample, although none had responded to the BLS survey question on total staff size. In three of these cases, substitutable figures were available from the

officers' report to the national convention; in the remaining case, an estimate was made of the size of clerical staff and then added to the number of other full-time officers and staff, which was obtainable from the union's LM-2 report.

In summary, it should be noted that a completely satisfactory check on the reliability of the employment figures submitted to the BLS was not possible. In those cases, however, where the BLS figure and the independently derived estimate varied by more than 10 percent, and no supplementary source of information explained this discrepancy, the unions were not included in the final study sample. In general, it can be stated that, while some of the employment figures for unions included in the final study sample have some proximate features, their general reliability is not seriously distorted.[16]

Total Number of Direct Administrative Personnel

The character of available data on the composition of the officer and staff components in the national labor

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[16] It is the author's opinion, though only an opinion based on the several comparisons of figures, that some unions tended to round off actual employment figures--using some multiple of five or ten, depending on the size of the union--in responding to the BLS survey question on employment. For example, one relatively large union, which reported 200 employees to the BLS survey, reported a total of 207 employees to its national convention assembly in mid-1964.

unions studied necessitated a reliance on job titles in determining the numbers of persons occupying direct administrative positions. The following types of positions were regarded as being parts of the direct administrative component.

1. All full-time elected officials, other than those whose job titles indicated tasks of a supportive nature, were regarded as falling within the category of direct administration.[17] Examples of the types of officials excluded from this count are editors, auditors[18] and legislative representatives.

2. Among the full-time appointed staff, all international representatives,[19] other than those with job titles indicating assignments not related directly to the servicing of affiliated locals, were regarded as falling

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[17]As noted earlier, an elected official was regarded as full-time if he received at least $6,000 in salary from the union during the annual reporting period.

[18]The position of auditor in national labor unions is a difficult one to define, since in some unions they are in continuous contact with affiliated locals, though perhaps not in a direct servicing capacity. On balance, however, it was considered more advisable to exclude them from the count of direct administrative staff. It should also be noted that national labor unions using auditors as full-time elected officials or appointed staff are in the distinct minority.

[19]Titles, of course vary among unions; for example, in some cases field representatives are simply referred to as "deputies." Also, caution must be exercised in the case of some unions which designate, for general purposes, any employee who holds membership in the union an "international representative."

within the category of direct administration. In addition, administrative assistants to elected officials already listed as part of the direct administrative component were included within this count.

Data concerning the numbers of persons counted as parts of the direct administrative component in each union were obtained from one or more of the following sources:

1. LM-2 reports were used, with few exceptions, in the case of elected officials, inasmuch as each union is required to list on Schedule 8 all officers by position and total salary and expenses received during the annual reporting period. In the case of appointed staff, reference was also made to these same reports for all personnel receiving $10,000 or more in salary and expenses during the reporting period, as indicated on Schedule 9. In many cases the LM-2 report provided a virtually complete listing for the union, particularly if the salary scale for international representatives was relatively high.[20]

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[20]Most national labor unions have standard salary scales for international representatives, though in some cases distinctions are made between senior and other representatives. However, there is a tendency for certain salary levels to recur on the LM-2 report, and in these instances it is a fair assumption that the recurring amounts represent a standard salary level. Also, the job assignments of most international representatives require considerable travel and, as a result, considerable expense support. Thus, in unions having a relatively high salary level for international representatives, it is possible to project with reasonable certainty that all full-time representatives in the national organization would be listed by position in Schedule 9 of the LM-2 report. A partial check on this assumption was possible by observing the level of expense monies paid to personnel receiving

2. Direct reference was made to convention proceedings and officers' reports. These proved to be surprisingly good sources, primarily because a great number of the unions studied were found to make complete fiscal reports to the membership of payments to officers and appointed staff other than those in strictly clerical positions. In each case, an attempt was made to locate convention proceedings or officers' reports nearest in time to mid-1964.

3. Besides the fiscal reports contained in many of the convention proceedings or officers' reports, other parts of these publications proved useful in some cases. In the case of smaller unions, it was not unusual to find international representatives, as well as other full-time staff, introduced to the convention by one of the officers, with recognition given to those staff members not in attendance at the convention. Several include summaries of activities of field staff representatives in their periodical publications. In a few instances, listings of officers and field staff at the time of the convention appeared in the published proceedings.

In summary, it can be stated that the compilation of the data regarding the direct administrative component

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less than $10,000 in salary and expenses for the year. In nearly all cases--except for the very large unions--this aggregate figure was observed to be very low.

required considerable and lengthy comparisons of figures contained in Schedules 8 and 9 of LM-2 reports with others gleaned from careful readings of convention proceedings, officers' reports and, in some cases, union periodicals. In general, it can be stipulated that these data are accurate, though subject to two possible sources of error, which every attempt was made to minimize. On the one hand, there are possible errors attributable to the necessity of relying on job titles in making the classifications, though certainly it is a fair assumption that job titles are not without meaning. On the other hand, it is probable that some elected officials bearing generally designated job titles--for example, vice-president--are not significantly involved in direct administration but more frequently handle assignments that are more of a supportive nature. These, however, are probably few in number. In short, there is reason to believe that neither type of possible error contributed much distortion to the data in any individual case.

Total Number of Supportive Administrative Personnel

The total number of supportive administrative staff was determined by subtracting the number of direct administrative staff from the total number of full-time officers and staff in the national organization of each union. Thus, the reliability of this figure is largely dependent

on the individual and joint accuracies of the other two. A review of the two preceding subsections demonstrates two possible sorts of error affecting the reliability of this measurement: (1) whether the total number of full-time officers and staff is an accurate figure; and (2) whether the total number of direct administrative staff is not only accurate but is derived from a source whose data closely proximates that used to obtain the figure on total number of full-time officers and staff. As noted in the preceding discussion, every effort was made to minimize the possibility of either type of error. Consequently, the reliability characteristic of this variable can be succinctly summarized by stating that, although there is a margin for error in the measurement, it should be small in any individual case and, when considered across the entire final study sample, of slight consequence.

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