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THE INTRAORGANIZATIONAL POWER STRUGGLE: RISE OF FINANCE PERSONNEL TO TOP LEADERSHIP IN LARGE CORPORATIONS, 1919-1979*

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Choosing a president in an organization is an important political decision that reflects who controls the organization and the bases for that control. In this paper, a model of power based on resources in the organization and the environment is specified in order to understand how power shifted between intraorganizational units in the 100 largest U.S. firms between 1919 and 1979. Early in the century, large firms were controlled by entrepreneurs or personnel who came up through manufacturing. In the middle decades, sales and marketing personnel controlled large firms. In the past 25 years, finance personnel have become increasingly dominant. These shifts resulted from changes in the strategy and structure of the organizations, changes in antitrust laws that promoted an increase in product-related and unrelated mergers in the postwar era, and the mimicking of firms in similar environments.

Choosing a president in an organization is an important political decision. The choice reflects who controls the organization and the bases for that control. It is also a symbolic decision that affirms organizational strategy and structure and the contingencies in the environment. A change in top leadership provides an opportunity to observe whether there is continuity in control or whether new forces are gathering to alter the organization's directions by acting on new internal or external circumstances (Pfeffer 1981; Pfeffer and Salancik 1978a, 1978b).

The large modern corporation has undergone a number of fundamental changes (Chandler 1962, 1977): shifts in organizational form from functional/unitary to multidivisional (Fligstein 1985), shifts in strategy from operating in one industry to operating in a range of industries (Gort 1961; Rumelt 1974; Fligstein 1986b), and increased mergers as a strategy for growth (Schere and Ravenscraft 1984). It follows that those holding power in large firms have also changed, reflecting these organizational shifts.

Early in this century, manufacturing personnel and entrepreneurs dominated large firms (see Table 2). From the late 1930s to the late 1950s, sales and marketing personnel came to dominate large firms. In the past 25 years, finance

personnel came to dominate large firms. This paper documents how power struggles developed from 1919 to 1979 in response to shifts in strategy and structure and suggests which groups within firms benefitted from these unique developments.

This study uses a structural theory of power derived from two literatures, one on the link between organizations and their environments (Pfeffer and Salancik 1978a; Meyer and Scott 1983; Aldrich 1982) and the other on internal power processes within firms (Pfeffer 1981; Bacharach and Lawlor 1980; Karpik 1978). Actors' claims to power must rest on two sources: their positions within organizational structures and their claims to define and resolve important problems in an organization. This study shows how key actors gain power both as a result of events outside their organizations and by their definition of key problems within them.

The paper discusses the relation between organizations, actors, and environments; the importance of power relations; and the genesis of the power struggle in the largest U.S. firms. The paper also presents quantitative models that provide support for its theoretical perspective and offers some tentative conclusions and future directions for research.

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A THEORETICAL VIEW OF ORGANIZATIONS

The sociological side of the theory developed here is latent in the work of such scholars as White (1984), Hannan and Freeman (1984), Pfeffer (1981), Meyer and Rowan (1977), DiMaggio and Powell (1983), and Lawrence and Lorsch (1967).

Organizations evolve in three institutional contexts. First, the organization has in place a set of strategies, structures, technologies, and physical limits that constrain and shape patterns of growth. Second, the organization is embedded economically among other organizations grouped by product lines, markets, or firm size. These other organizations include suppliers, distributors, or competitors; their actions greatly influence the actions that any given organization takes. Actors in organizations mimic what they perceive as successful strategies and organizational structures in their environment. The source of these new forms is often the innovations of actors in other organizations. Third, the state shapes the possibility for growth through direct and indirect actions, including general economic policy that affects the overall environment and legislative regulation of industry.¹

Actors who control organizations in both the private and the public sectors must interpret their internal and external environments and then make policy based on their reading of those environments. This policy, by necessity, is bounded by what those actors know, how they perceive the world, and what they define as appropriate organizational behavior. Because of this subjectivity and uncertainty, actors often choose to imitate those around them. Institutionalization of what is perceived as appropriate behavior rises directly from this condition of the actors.

The question of causality in this context is important. Key actors can choose to initiate new actions based on their reading of the environment. The creation of new strategies and structures or the recognition and formalization of tendencies already in the organization can lead to new organizational forms and goals. Some organizations and their leaders innovate and other organizations implement those innovations. Both innovators and followers must have the power to implement their new strategies and structures. A continuation of older strategies also requires actors to have power to continue business as usual. Where the key causal links appear depends on where one cuts into the process. Sometimes actors in subunits are able to transform the organization's strategies and structures. At other times those strategies and structures that are in place are used to maintain control. By its very nature, the process is dynamic and difficult to model.

¹ Though these definitions may seem applicable only to profit-making firms, they also have conventional usages that make them appropriate to understanding all organizations.

THE INTRAORGANIZATIONAL POWER STRUGGLE

Representative arguments in the literature concerning the intraorganizational power struggle include power based on subunit control of important resources (Perrow 1970, 1972), political economy (Zald 1969, 1970), strategic contingencies (Hickson, Hinings, Lee, Schneck, and Pennings 1971; Hinings, Hickson, Pennings, and Schneck 1974), resource dependence (Pfeffer and Salancik 1978a, 1978b), and Pfeffer's (1981) recent attempt to summarize and synthesize a theory of organizational power. We have drawn upon these literatures to formulate the theory that informs the historical and quantitative analyses.

All large organizations contain an internal power struggle over claims from various actors over the goals and resources of the organization. Those who control are those who can use the resources available to force their view of appropriate organizational behavior. In the largest firms, there are two bases of control: formal ownership and authority. Those who own the firm obviously control by virtue of ownership. Authority relations embedded in the organizational structure provide legitimization whereby managers exert control.

Any model of organizational power must specify the basis of power, allow both internal and external arrangements to impinge on the power outcome, and account for changes in the bases of power. Further, the model must be structural in the sense that claims to power must rest not on personal characteristics but on organizational position. The basis for organizational power must rest on a claim to solve important organizational problems, and the claim must rest on a form of dependency relationship (Emerson 1962). Whether these problems are real or perceived as part of the organizational culture or cultural environment is irrelevant.

The two major resources in power struggles are the environment and the internal organization of the firm.² This study defines the environment in conventional political and economic terms. The political environment consists of the state, a greatly neglected source of organizational power and change (see Aldrich 1982, chap. 7, for an important exception). The state regulates organizations in a number of ways, and organizations also control the activities of the state. The state is a resource in that actors can claim power on the basis of their interpretation of state actions and how the

² It is the ability of actors to interpret and use aspects of the organization and the environment that allows these structures to become resources.

organization needs to respond in order to benefit from those actions.

The second environmental factor that affects the power struggle is the presence of competitors, suppliers, and customers. Their actions and the perception of the success of those actions act as stimuli to change. To the degree that these actions have direct economic consequences (for instance, control over a key input), they can affect the balance of power.³ The third environmental factor includes cultural definitions of appropriate organizational behavior. DiMaggio and Powell (1983) argue that organizations come to resemble one another through the mechanisms of coercion, mimicry, and exchange of personnel. Appropriate strategies and structures are constantly defined and redefined by firms in the environment. The more immediate economic environment is a resource when actors can claim to redirect their organization on the basis of its relation to the other organizations in the environment. These claims can rest on real dependency relations or the perceptions that other organizations are benefiting from innovations and that an actor's own organization should therefore adopt those innovations.

Internal organizational resources include strategy and structure (Chandler 1962, 1977; Rumelt 1974). Strategy is "the determination of the long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals" (Chandler 1962, p. 13). In essence, the firm power struggle revolves around the organizational strategy and how that strategy is implemented. Those who are able to shape that strategy will have power; current strategy is obviously one important source of power. Structure refers to "the actual design of the organization and it includes actual lines of communication and authority between administrative offices as well as flows between them" (Chandler 1962, p. 14). Structure is important to the firm power struggle as it provides actors with two important resources: information and authority. Actors who can control either will have more organizational power.

The sources of changes in power can be located in these resources; shifts in resources affect firm power struggles. Further, the consolidation of power by one group can lead to its eventual decline through the unintended consequences of social action. Certain groups may be able to set the organizational agenda, but the

implications of setting that agenda could be to undermine their power base.

THE CASE OF MANAGERIAL SUCCESSION

Political economy theory (Zald 1970) suggests that managerial succession is one of the three most important political issues firms must resolve. Pfeffer (1981, p. 254) argues that the selection reflects which subunit in the organization has the most power, and that subunit changes over time is a good indicator of the firm power struggle and its resolution. One would expect the selection of a new leader from a subunit to reflect the resource base and power of that subunit and that the five basic resources previously elaborated would predict which subunit has power.

The empirical focus in this paper is on subunit control of the large corporation since 1919. The subunit background of the corporate president is taken to reflect shifts in power of the subunits over time. We will not examine how actors bring about new strategies and structures, issues taken up in other work (see Fligstein 1985; Fligstein 1986a, 1986b). Instead, we will link existing or new strategies and structures to who is able to control the organization. A small number of subunit positions in the large modern corporation are considered: entrepreneurs, manufacturing personnel, sales and marketing personnel, finance personnel, and lawyers. Each occupies a position in an organization and each can make a claim to the goals of the organization on the basis of its strategic position within the organization and its links to the environment.

The Rise of Finance Presidents in Large Firms

The member list of the 100 largest corporations in the U.S. economy has been quite fluid (Table 1); indeed, the average ten-year turnover in the past 60 years was 21.5 percent. Fifty of the 100 largest corporations remained on the list for the entire period, and 166 other firms made a temporary appearance on the list. There has been both great stability and great change in the identities of the largest firms in the American economy, suggesting the importance of both selection and adaptation processes (Aldrich 1982).

The early dominant pattern of manufacturing personnel and entrepreneurs heading the largest firms decreased steadily over the period (see Table 2).⁴ By 1979, entrepreneurs were one of the

³ Those actors who can interpret and copy the acts of other organizations in the environment can use those other acts as a basis for claims on organizational power.

⁴ How the data in Table 2 were collected and coded is detailed in the data and methods section.

Table 1. Number of Firms That Stay, Come, and Leave the List of the 100 Largest U.S. Firms, 1919-79

	1919-29	1929-39	1939-48	1948-59	1959-69	1969-79
Stayers	69	82	86	79	75	80
Comers	31	18	14	21	25	20
Leavers	31	18	14	21	25	20
Total	131	118	114	121	125	120

smallest categories. Manufacturing personnel dominated in 1929 and declined subsequently.⁵ During the period 1929-59, sales and marketing personnel rose steadily as heads of large firms, but never formed the largest group and, from 1959 on, declined in their control. Finally, finance personnel increasingly came to control large firms from 1949 to 1979 and by 1979 formed the single largest group of presidents. The other category that expanded in this period was general management. Hence, finance specialists and generalists occupied the top positions in a plurality of the largest U.S. firms in 1979.

The periods and the roles of strategies, structures, and the state in the determination of the firm power struggles are summarized in Figure 1. It divides the periods along historically defensible lines and shows the dominant strategies and structures in each period and the corresponding subunit power base. Figure 1 also presents the innovative strategies and structures that emerge over time and the subunit associated with these. Implicit in the figure is the argument that the new strategies and structures are picked up by key actors in other organizations (the institutionalization process discussed earlier), many of whom share the subunit base of the new strategy and structure. Innovative strategies and structures form the basis of changes in the environment and they, in turn, can be caused by shifts in actions of the state.

⁵ The increase in manufacturing presidents between 1919 and 1929 has much to do with the decline in entrepreneurs. Even in 1979, manufacturing was the second largest subgroup.

1900-1919

Many of the largest corporations grew out of two merger movements earlier in the century, from 1895 to 1905 and 1920 to 1929 (Nelson 1959; Eis 1969; Moody 1909). A large proportion of the corporations formed at the turn of the century failed (Moody 1909; Kolko 1963). The dominant strategy for success was the attempt to control the main market in which a firm operated by merging with competitors, that is, monopolization. This strategy failed for two reasons. First, the federal government prohibited the creation of pure monopolies in any industry. The Sherman Antitrust Act was used to great effect against the largest of the would-be monopolies (Letwin 1965). The second force that undermined monopolization was competition. There were seldom sufficient barriers to entry in the largest industries to prevent the emergence of competitors.

The early years of monopoly capital were difficult for several other reasons. The first key problem was internal organization. To actually control the market, the firm needed to produce efficiently, not just exert pure market power. This meant that firms had to pay attention not only to production, but also to sales and marketing (Chandler 1977, chap. 11). Market shares were open to competition, and in order to maintain a market share, firms needed to insure control over their sales staff. There were a number of organizational solutions that revolved around both strategy and structure and who had the power to implement the solutions. First, the entrepreneur who founded the firm ruled autocratically and made all the important

Table 2. Subunit Origin of Presidents at Each Decade Point for All Firms

	1919 (n = 131) ^a	1929 (n = 118)	1939 (n = 114)	1949 (n = 121)	1959 (n = 125)	1969 (n = 120)	1979 (n = 120)
Manufacturing ^b	30 (22.9) ^c	40 (33.8)	39 (34.2)	32 (26.4)	32 (25.6)	30 (25.0)	29 (24.2)
Sales	7 (5.3)	10 (8.5)	16 (14.1)	25 (20.7)	28 (22.4)	23 (19.2)	20 (16.7)
Finance	10 (7.6)	8 (6.8)	7 (6.1)	14 (11.6)	20 (16.1)	27 (22.5)	33 (27.5)
General	11 (8.4)	7 (5.9)	9 (7.9)	13 (10.7)	13 (10.4)	13 (10.8)	19 (15.8)
Entrepreneur	36 (27.5)	28 (23.7)	21 (18.4)	16 (13.2)	16 (12.8)	6 (5.0)	6 (5.0)
Lawyer	5 (11.5)	12 (10.2)	13 (11.4)	9 (7.4)	12 (9.6)	13 (10.8)	8 (6.7)
Missing	22 (16.8)	13 (11.0)	9 (7.9)	12 (9.9)	4 (3.2)	8 (6.7)	5 (4.2)

^a Number of cases.

^b See text for definitions.

^c Percentages in parentheses.

Fig. 1. Periodization of the History of Who Controls Large Firms

PERIOD	ROLE OF STATE	DOMINANT STRATEGY	INNOVATIVE STRATEGY	DOMINANT STRUCTURE	INNOVATIVE STRUCTURE	DOMINANT PRESIDENT'S SUBUNIT	SUBUNIT ON THE RISE
1900–19	Outlaws monopolarization	Monopolization	Manufacturing Integration	Holding Company	Functional	Entrepreneur	Manufacturing
1919–39		Manufacturing Integration	Product Related/Multinational	Functional	Multidivisional	Manufacturing	Sales and Marketing
1939–59	Outlaws mergers for vertical and horizontal integration	Product Related/Multinational	Product Unrelated	Multidivisional		Manufacturing/Sales and Marketing	Finance
1959–Present		Product Related/Unrelated		Multidivisional		Finance/Manufacturing	

decisions. But entrepreneurs chose a number of different strategies and structures.

One organizational solution was the holding company. A large corporation organized as a holding company was a set of companies, each operating autonomously. The central office was an accounting firm and merely evaluated financial performance. This solution was problematic because it provided the firm with little or no planning, made investment difficult, and generally made it hard to respond to competitors. Examples were U.S. Steel and Standard Oil, which were formed as attempts to create monopolies and were organized as holding companies in their early years (Chandler 1962).

The functional form was built mainly in response to the perceived need to control the production process from input to sales. The organizational solution was to divide the corporation into departments that controlled the flow of materials sequentially. The object was to reduce coordination problems in manufacturing by controlling the stages of production in order to insure an adequate supply of materials from origin to ultimate users. The functional form was thus a manufacturing strategy.

Firms in the oil industry were generally organized in terms of function, reflecting two major problems. Since Standard Oil was able to form a virtual monopoly by controlling oil pipelines (Williamson and Daum 1959, pp. 725–31), oil firms that competed with Standard needed to develop their own alternative sources of supply and transportation. Also, the costs of investing in petroleum refining were so high that firms decided to invest in oil production and transportation in order to avoid having idle plant capacity. Metal-making firms faced similar problems and they tended to implement functional forms.

1919–39

Because the dominant strategies of firms were oriented towards the manufacture of a single product group through a tightly centralized

functional organization, the firm power struggle from 1919 to 1939 was resolved through the dominance of entrepreneurs, lawyers, and manufacturing personnel. Entrepreneurs controlled firms they had created. Since holding companies were basically legal devices whereby a large number of firms were held like a stock portfolio, lawyers were often chosen to lead them.⁶ Manufacturing personnel, having specialized knowledge of what a firm produced, were the natural winners in power struggles that centered on coordination of a large firm. The functional form of organization reflects the total dominance of the manufacturing strategy.

A new strategy and structure began to emerge in this era. In the early 1920s, certain firms (DuPont, General Motors) created multiple divisions in order to better coordinate disparate product lines (Chandler 1962). Within each division there were independent manufacturing, sales and marketing, and finance units. The central office coordinated divisional activity, managed troubleshooting within divisions, and, more importantly, formulated long-term strategy.

The multidivisional form reflected an organization that had explicitly recognized an alternative strategy for growth. Firms that could not guarantee their existence by controlling one market could enter multiple markets. The strategy of diversification into related products allowed firms to guarantee a certain level of production independent of market or level of concentration in an industry. This is a sales and marketing strategy in that instead of concentrating on controlling a single market, firms attempted to differentiate their products from their competitors, end price competition, and enter new markets to gain market share across related products.

⁶ Lawyers tended to be presidents of large firms early in the period. While lawyers currently appear to have more power in organizations, their number of presidents have not increased dramatically (see Table 2).

The actual selection of a strategy and structure varied across firms, industries, and time. Before 1920, almost all firms were oriented towards either a monopoly or manufacturing strategy. A few firms in a few industries—primarily chemical, electrical equipment, food, and machine-producing (including transportation equipment)—produced multiple product lines. Even in these industries, most of the firms produced a single product for a single market, and most organizations were organized functionally. Between 1919 and 1939, diversification began to spread more rapidly. With this new strategy, sales and marketing began to come to the fore, and sales and marketing personnel began to rise to control the largest firms.

1939–59

The diversification strategy began to dominate for two reasons. First, during the Depression diversified firms outperformed vertically integrated firms (Fligstein 1986a). Second, firms found that to survive, they had to develop new products. Firms pioneering this strategy were emulated by other firms in their industries and in other industries. In the 1930s the largest firms introduced a large number of new products (Gort 1961), in fact, more new products than during the 1920s, an era of prosperity (Thorp 1941).

This era created the notion of a product cycle. A firm could create a new product, advertise it, and rapidly experience growth in sales and profits. A successful product would then mature in its market. The firm could use the profits from a mature market to subsidize a new product and start the cycle over. The multinational strategy was an extension of the product cycle concept: once a product had matured in its own market, a firm could take the product into new markets overseas. During the period 1930–59, firms pursued the twin strategies of multinationalization and product differentiation. The product cycle approach encouraged manufacturers to create products related to their dominant products. The multidivisional form allowed firms to organize themselves around product lines, and the central office essentially manipulated the product-cycle strategy by watching profits and growth and directing product differentiation. These strategies spread across industries during the Depression, and in the early 1950s all the largest firms were diversifying rapidly.

The persons or subunits who were most likely to control the organization were in sales and marketing. Finance personnel were also in a position to gain power because the product-cycle strategy was a financial strategy of redirecting capital from mature to newly devel-

oped product lines. The structure that gradually came to be accepted by the majority of the largest firms was the multidivisional form.

One could take issue with this entire line of argument. Today, the multidivisional form is viewed primarily as a mechanism whereby firms create internal capital markets and allocate capital to divisions on the basis of the likelihood of producing profit (see Williamson 1975, chap. 7). The multidivisional form thus ensures the dominance of a finance strategy. The power of actors from functional units other than finance is greatly reduced, since the expertise of manufacturing or sales and marketing personnel is restricted to one product line or division. Therefore, the multidivisional form should favor only finance personnel because they are empowered to evaluate and act on the divisions' requests for funds, and they do so entirely on financial criteria.

This view is misguided for two reasons. First, it reads history from the present to the past. The impetus towards the multidivisional form was the need to decentralize decision-making when firms were producing multiple products. Those who favored producing multiple products generally justified their choice on the grounds of producing for multiple market segments. The notion of the product cycle, the increase in product diversification, and multinationalization all reflected the search for more markets for firms. Second, basic sales and marketing strategies entail differentiating one's products from one's competitors'. The strategy applies across products and is not product-based. That the multidivisional form has turned into a financial device to evaluate the relative performance of divisions and to allocate capital in accord with profitability is a phenomenon of the post-1950 period.

1959–Present

The increasing rise of sales and marketing personnel was ended, indirectly, by state intervention. During the 1940s there was a small merger movement, which attracted the attention of a series of congressional committees. In response, Congress enacted the Celler-Kefauver Act of 1951. This remarkable piece of legislation essentially froze concentration in product lines at the three-digit Standard Industrial Classification (SIC) level. The legislation was upheld in an important Supreme Court decision (Van Cise 1982), *Brown v. U.S.* This case and others sent a message to the business community: vertical and horizontal mergers and sales and marketing strategies were likely to bring antitrust enforcement from the Justice Department. After 1951 almost all mergers have been product-related and unrelated, while before

1951 almost all mergers were vertical and horizontal (Stigler 1966; Eis 1969).

Given this political disruption of the environment, the internal power struggle in the firm was once again problematic. A new strategy emerged in the 1950s: the conglomerate strategy. Royal Little (Textron), Jim Ling (LTV), and Tex Thornton (Litton Industries) began to fashion large companies through the merger of firms that were relatively large and almost always unrelated in product lines. Since 1960 large-scale mergers have become a way of economic life.⁷ The merger strategy and the product-unrelated strategies reflect a shift precipitated by government intervention. Dominant corporate strategy changed, and instead of growth in market shares, firms pursued growth into different product lines. While there had been a fair amount of product diversification earlier, after 1960 it increased dramatically (Rumelt 1974).

Since the goal of a finance strategy is to maximize growth (and profits), the type of goods produced and sold becomes less important. Therefore, a firm is likely to choose a wide variety of products that reflect markets growing at different rates. Investment decisions for divisions are made usually with a short time frame, and mergers are a favored part of the finance strategy, because they allow for rapid growth in a short period. When the goal of business is to maximize short-term growth and profit, the best strategy to achieve such growth is acquisition (Scherer and Ravenscraft 1984). This strategy has spread across firms across industries. The acquisitive conglomerates are the most spectacular examples of this process, but almost all of the largest firms adopted some form of this strategy in the past 25 years.

The most likely winners in the firm power struggle became those with a finance background. Since the firm was no longer involved in a few product lines, manufacturing expertise proved too narrow and sales and marketing strategy applied only to growth in market share of related products. Once firms started investing in products too dissimilar to consider related, the only criterion that could be used to evaluate product lines was financial.

HYPOTHESES

We expect the following to predict the power of the manufacturing department. First, in terms of internal strategy and structure, we expect manufacturing presidents to dominate firms with

unitary or functional structures and firms that produce one main product line. In terms of the political environment, we expect manufacturing presidents to head more large firms before than after the Celler-Kefauver Act. We also expect firms in industries following production-based strategies to have manufacturing presidents. In particular, metal-making and petroleum firms will be more likely to have manufacturing presidents than chemical, transportation, and machine-making firms.

The cultural environment is the most difficult factor to specify.⁸ In periods and industries where there existed a culture that promoted manufacturing presidents, they would be more likely to dominate. We expect that over time the ability of manufacturing personnel to control large firms will decrease because of the spread of alternative strategies and structures that undermine narrow, production-oriented expertise.

We expect the multidivisional form to operate to select sales and marketing personnel to head large firms. Moreover, firms with product-related strategies will be more likely to have sales personnel heading them. In the period when this strategy was a dominant force, we expect the presence of sales and marketing personnel as presidents of other firms to affect the likelihood of a given firm having a sales and marketing president.

In terms of the external environment, we expect firms in food, transport, machine-making, and chemical industries, which have multiple product lines, to be more likely to be headed by a sales and marketing person. Finally, we expect the Celler-Kefauver Act to have negative consequences for a strategy based on growth in market share; hence, sales and marketing people will lose power relative to finance personnel following implementation of the Celler-Kefauver Act.

Finance personnel should dominate in firms with a multidivisional form and, in particular, in those firms with product-related and unrelated strategies (because financial expertise will allow them to claim that they can best make decisions regarding future growth and profitability). We expect the Celler-Kefauver Act to greatly affect the likelihood of the emergence of finance presidents because of the shift that the Act entailed towards product-unrelated strategies and mergers as strategies for growth. The theory does not allow one to predict directly which

⁷ The number of purely acquisitive conglomerates is small, but their strategy of using mergers to aid growth was pursued by many firms.

⁸ Many of the measures that tap other variables may also be interpreted as cultural effects. For instance, industry-wide norms may be tapped into by using industry as a proxy for purely technological or economic effects.

industries will favor finance presidents. In terms of culture, where financial strategies dominate industries or an era, finance presidents will be more likely to have power.

DATA AND METHODS

Collecting comprehensive data on a large sample of firms since the turn of the century would be nearly impossible, for there are few extant lists of the largest firms, and they refer only to a few time points. As an alternative strategy, the 100 largest firms were sampled at ten-year intervals from 1919 to 1979 because data are available for this period and most of the changes of theoretical interest occurred during it. The dates also reflect a sensible periodization of the historical record.

Lists of the 100 largest firms at each time point are from Collins and Preston (1961) for the years 1919–48 and *Fortune* magazine (1960, 1970, 1980) for the years 1959–79. The lists were made compatible by including certain retail and entertainment firms (like Sears and Twentieth Century Fox) on the *Fortune* lists. Strictly speaking, the lists represent the 100 largest nonfinancial corporations. This definition is broader than the *Fortune* definition, which requires that manufacturing account for at least 50 percent of a firm's revenues. It proved easier to find data on the largest nonfinancial firms using the *Fortune* list than to construct the *Fortune* definition back to 1919.

Data were collected for the time point before a firm entered the list (if the firm entered after 1919) and for the time point after the firm exited the list (if the firm exited). The data were then organized into files reflecting changes over decades, 1919–29, 1929–39, 1939–48, and so on.⁹

The dependent variable in the analysis is the origin of the president in the firm, assessed in the following way. The name of the president or chief executive officer of each firm was collected at each time point from *Moody's Manuals*. Career descriptions in *Who's Who in America* and *Who's Who in Business*, and other sources were then used to trace how the person came up through the firm. Categories reflecting previous job titles were coded: manufacturing, sales and marketing, finance, general management, entrepreneur, lawyer, and unable to ascertain. The general management category applies to a person who held titles in different parts of the firm (for example, plant manager and vice-president in charge of finance). In the

actual data analysis presented here, the measure refers to the end of the decade and has been collapsed into four categories: manufacturing, sales and marketing, finance, and other. Firms with missing data were excluded from the analysis.

Since the data have the structure of firms entering and exiting the list, it was necessary to control for this by constructing two dummy variables to indicate whether or not the firm arrived on the list during the decade, or whether or not the firm exited the list. The omitted category was staying on the list.

Two measures of internal resources were coded. Strategy was coded as product dominant, product related, and product unrelated, following Rumelt (1974) and *Moody's Manuals*.¹⁰ Product dominant denotes that the firm produced primarily one type of output (at least 70 percent of output) even though different end products might result. Product-related denotes that firms produced multiple products that were related, or market extensions (for example: chemical companies producing paint and explosives), with no single product line accounting for more than 70 percent of output. Product-unrelated or conglomerate strategies denote that firms engaged in unrelated businesses for a substantial proportion of their revenue (no product accounts for more than 70 percent of revenue);¹¹ an example is Ling-Temco-Vought, which produced guided missiles, steel, and owned a rental car company at one point in time. These strategies were coded into two

¹⁰ Rumelt's sample is of the 500 largest firms at three points in time: 1948, 1958, 1968. He generated his data for all of the firms that appear on each of the lists for all three time points. His data are used when companies in his sample also appear in the sample here. He uses a somewhat different distinction for strategy than the one used here. It can be collapsed into our threefold distinction. The coding was done here by two coders, and Rumelt was used as a check. When coders disagreed, the author resolved the issue.

¹¹ The 70 percent rule was chosen following Rumelt (1974). In his study, he found that firms were either well above or well below the 70 percent line for a single dominant product. This is a somewhat arbitrary dividing point, but the measures are consistent across studies. One would have liked to use some more precise rule, for instance, product lines as defined by SIC scores. This was impossible to do because the data were unavailable for most cases in the earliest period; it was sometimes impossible to separate product lines by relative sales. In these cases verbal descriptions of products were used to make an informed judgment. Distinctions between product related and product dominant would imply something like products being produced across two-digit SIC scores with some logical link (for example, petroleum companies producing petrochemicals), while product unrelated would imply products being produced across two unrelated two-digit SIC scores.

⁹ The year 1948 was used because Collins and Preston's list referred to that year. Their major source of data was a Federal Trade Commission report (1957).

dummy variables, with product dominant as the left-out category. The measurement refers to the beginning of the decade.

Another measure of strategy was the number of mergers a firm engaged in over the decade. Mergers are a growth strategy that reflect a product-related or unrelated strategy that could favor finance presidents. Mergers were coded from *Moody's Manuals* before 1948 and from the Federal Trade Commission's Report on Mergers (1981).¹² Structure was indexed with a dummy variable indicating whether or not a firm had a multidivisional form at the beginning of the decade. These data were collected from several sources, including Chandler (1962), Rumelt (1974), and *Moody's Manuals*.

The external economic environment was coded into major industry groups at the beginning of the decade. These groups included food; metals and mining; machine making, including electrical equipment; transportation equipment; chemicals; petroleum; and miscellaneous. Dummy variables were used and the left-out category was metals and mining.

One other measure of the external environment was based on the activities of the state, in particular, the implementation of the Celler-Kefauver Act. Since the act and the cases that upheld its legality were products of the 1950s and early 1960s, this is obviously the earliest it could have an effect. A series of dummy variables was created that took on the value of "zero" when the observation was not from the first decade and "one" when the observation was from the second decade in each part of the data analysis. The theoretical argument suggests that the dummy variables for time would favor finance presidents in the latter decades. The dummy variables also control for period effects. Interpreting period effects is partially problematic; an effect reflects one of two factors: those associated with time or left-out variables in the equation.

The cultural environment of the firm is the most difficult variable to operationalize. The key issue is how to capture a mimetic effect. Such a measure must capture some aspect of the relevant environment. It could be argued that firms watch other firms in similar environments. Industries would appear to be a good proxy for this kind of effect. An argument that can be made is that if one saw other firms in one's industry being controlled by one department or another and one believed that those firms were

successful, one might mimic those firms. To capture this effect, at each initial decade point, the percent of presidents with finance, manufacturing, and sales backgrounds were calculated in each industry code (measured at the two-digit SIC code level).¹³ Three variables were thus created that could vary by industry by decade and that reflected the percent of firms in that industry having a president with each of those backgrounds. While this is only one possible source of mimetic effects, it seems plausible.¹⁴

Three additional control variables were introduced in order to control for potential effects of organizational demography. Size of the firm was indexed in two ways. Assets at the first decade point were coded in millions of dollars standardized to 1967 dollars. The percent change in assets over the decade was likewise included in the model. Large size might imply structural inertia (Hannan and Freeman 1984), and hence, the larger the firm, the less likely that it would have a sales or finance person heading it. It also could imply monopoly power, which would lead to structural inertia whereby manufacturing personnel might dominate. The second measure is the age of the firm. Hannan and Freeman argue that younger firms are more likely to innovate; hence, sales and finance persons may head younger firms while manufacturing personnel could dominate older firms. The age variable may also capture life-cycle effects: older firms might be more likely to be led by a finance or sales and marketing personnel as the firm enters into a new growth phase by virtue of its age. With age and period effects in the model, it is possible to assess whether any period effects are related to the average age or life cycle position of the firm or to real period effects.

It is not possible to analyze the data decade by decade for two reasons. First, to test the hypothesis about the Celler-Kefauver Act, results would have to be compared across decades. Second, with a dependent variable containing four categories and a large number of independent variables, there are too many parameters to estimate for each decade, given the number of cases. The alternative solution was to stack the data into three sets matching the historical periods 1919-39, 1939-59, and 1959-79. In this way, one could evaluate the

¹² The FTC Report (1981) gave information on all mergers involving assets greater than \$1 million. *Moody's Manuals* reported all significant mergers over the decade. A better measure of mergers would probably be assets purchased through mergers. Unfortunately, these data were unavailable prior to 1948.

¹³ This level of detail is much greater than the industry dummy variables, and hence it minimizes collinearity between the measures.

¹⁴ This is in no sense a tautological measure. The measure refers to the first time point for the entire industry. In computing the measure, the firm was left out of the calculation. It is a measure of the pure effect of what types of subunit control existed in the industry at the first time point.

effect of the Celler-Kefauver Act and at the same time achieve stable estimates for the rest of the variables. The data were analyzed using the multinomial logit program available in GAUSS (1985). The left-out category was presidents from all other backgrounds, and the program produced parameters for the likelihood of finance, sales and marketing, and manufacturing presidents versus that category.¹⁵

ANALYSIS

Table 3 contains the means and standard deviations of the variables included in the data analysis by decade and for the entire sample. The multidivisional form diffused as the accepted organizational form quite rapidly from 8 percent in 1939 to 73 percent in 1969, the most rapid shift to the form occurring in the 1948-59 period. At the same time, the extent of product-related and conglomerate strategies also increased. The level of product-related strategies was already quite high by 1919, and by 1939 a majority of the largest firms were sufficiently diversified to fit this category.

¹⁵ The case of continuous time methods, ideally preferable, is inappropriate, since we do not have continuous time data.

The industrial mix of the largest firms also changed over time. Food and metal-making industries decreased in importance, while chemical, machine-making, and transportation industries increased their representation. Petroleum firms have relatively stable representation on the list of largest firms. The rise of machine-making, transportation, and chemical industries reflects the basic shifts in the American economy over the period.

The basic results testing the model are reported in Table 4, which contains a logit regression predicting the rise of, respectively, a manufacturing, sales and marketing, and finance president versus all others for each period. Two models were estimated: one with industry effects and one without industry effects. In many cases, industry turns out to be a proxy for strategy. This implies that some industries diffused strategies more rapidly than others.¹⁶

In the period 1919-39, the most important predictor of the presence of a manufacturing

¹⁶ Certain variables were excluded from various models when the variables did not contain sufficient variation to allow estimation to proceed. In the earliest period, there were too few firms with multidivisional forms in 1919 and 1929 to include that measure. Similarly, there were too few firms with conglomerate or product-unrelated strategies before 1948 to include that measure.

Table 3. Means and Standard Deviations of All Variables at Each Decade Point and Total for All Decades

Variable	1919-29		1929-39		1939-48		1948-59		1959-69		1969-79		Total 1919-79	
	X	S.D. ^b	X	S.D.	X	S.D.	X	S.D.	X	S.D.	X	S.D.	X	S.D.
Manu pres. ^a	0.42	0.32	0.28	0.31	0.25	0.25	0.25	0.30	0.25	0.25	0.25	0.25	0.25	0.30
Sales pres.	0.07	0.16	0.23	0.26	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.18
Finance pres.	0.08	0.07	0.13	0.10	0.21	0.21	0.28	0.30	0.28	0.28	0.28	0.28	0.28	0.15
Other pres.	0.43	0.45	0.36	0.33	0.37	0.37	0.30	0.30	0.37	0.37	0.37	0.37	0.37	0.37
Assets t_1	323.7	480.1	533.6	627.5	608.6	761.0	618.9	723.6	1,197.2	1,560.0	2,251.5	2,389.0	940.0	1,452.7
% change assets	0.87	1.39	0.25	0.82	0.16	0.62	1.17	1.63	10.4	51.5	0.48	0.86	2.26	21.53
Age	20.9	18.85	22.8	18.11	29.4	13.4	38.2	15.1	43.2	17.5	51.1	19.9	34.45	20.48
Comer	0.10	0.12	0.11	0.15	0.19	0.19	0.17	0.17	0.19	0.19	0.17	0.17	0.14	0.14
Leaver	0.23	0.12	0.13	0.18	0.14	0.14	0.15	0.15	0.14	0.14	0.15	0.15	0.16	0.16
MDF t_1			0.08	0.19	0.50	0.50	0.73	0.73	0.77	0.77	0.77	0.77	0.63	0.26
Related	0.37	0.46	0.54	0.65	0.72	0.72	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.63
Conglom	0.00	0.00	0.01	0.03	0.05	0.05	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.05
Food	0.12	0.11	0.14	0.13	0.05	0.05	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.10
Machines	0.12	0.09	0.11	0.09	0.19	0.19	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.13
Chemical	0.06	0.09	0.11	0.09	0.11	0.11	0.14	0.14	0.11	0.11	0.11	0.11	0.11	0.10
Petroleum	0.18	0.15	0.16	0.17	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16
Transport	0.08	0.08	0.07	0.09	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.09
Misc.	0.35	0.31	0.24	0.32	0.25	0.25	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.28
Metals	0.09	0.17	0.17	0.11	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.14
Mergers	2.1	3.9	3.5	5.8	2.2	4.0	0.82	1.4	1.5	2.1	0.87	1.75	1.80	3.59
Mindper	0.24	0.17	0.35	0.20	0.35	0.22	0.24	0.16	0.25	0.15	0.25	0.20	0.28	0.19
Sindper	0.05	0.06	0.09	0.08	0.12	0.09	0.20	0.18	0.23	0.12	0.19	0.17	0.15	0.14
Findper	0.08	0.06	0.07	0.09	0.06	0.08	0.12	0.11	0.15	0.09	0.20	0.10	0.11	0.10
n =	94	98	104	114	105	113	628							

Note: X = mean, S.D. = standard deviations.

^a Manu, sales, finance, other = president's origins at time 2; comer = coming on list; leaver = leaving list; MDF t_1 = presence of multidivisional form at time 1; vert., conglo, related = presence of various strategies at time 1; metals, food, machines, chemical, petroleum, transport, misc. = major industry at time 1; mindper, sindper, findper = percentage of firms in industry at time 1 with a manufacturing, sales and marketing, and finance president. See text for precise operationalizations.

^b Standard deviations are not reported for dummy variables.

Table 4. Results of Logit Model Predicting a Manufacturing, Sales and Marketing, and Finance President Versus All Others

Independent Variable	Manufacturing				Sales and Marketing				Finance			
	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)
1919-39 (n = 192)												
Assets t_1^a	0.003	0.003	0.002	0.002	0.004	0.004	0.006	0.005	-0.001	0.006	-0.005	0.09
% change assets	-0.20	0.22	-0.18	0.21	-0.16	0.27	-0.09	0.29	0.21	0.30	0.11	0.41
Age	0.01	0.01	-0.05	0.05	-0.01	0.02	-0.01	0.02	0.04	0.03	-0.04	0.03
Comer	-0.60	0.74	-0.47	0.74	1.59*	0.73	1.44	0.74	-0.72	1.22	-0.40	1.29
Leaver	-0.30	0.51	-0.30	0.52	-0.75	0.88	-0.68	-0.90	-0.56	0.93	-0.68	1.03
MDF t_1												
Conglomerate												
Related	0.45	0.52	0.42	0.55	1.17*	0.59	1.22*	0.60	-1.07	1.27	0.05	1.25
Mergers	-0.05	0.05	-0.01	0.02	-0.03	0.06	-0.03	0.06	-0.05	0.09	-0.07	0.10
% in industry with:												
Manufacturing pres.	4.76**	1.11	3.83**	1.20	0.31	0.48	0.34	0.46	0.34	0.59	0.36	0.55
Sales pres.	0.83	0.76	0.87	0.74	0.37	0.55	0.37	0.54	-0.73	0.42	-0.70	0.44
Finance pres.	0.24	0.58	0.32	0.56	4.61	3.47	4.60	3.38	2.67**	1.09	1.65	0.86
Food												
Machines			-1.48**	0.57			0.42*	0.20			0.67	0.97
Chemical			-0.86	0.64			0.24*	0.11			0.81	0.87
Petroleum			-0.28	0.60			0.06**	0.01			2.84*	1.27
Transport			0.48*	0.23			0.78	1.16			2.55	1.41
Misc.			-1.32*	0.62			1.14	0.80			1.82	1.67
			-0.42	0.43			0.12	0.23			0.42	0.25
Dec. 1929	-0.60	0.42	0.01	0.01	0.30	0.59	0.30	0.64	-0.18	0.72	-0.09	0.86
Constant	-1.37**	0.58	-1.10*	0.54	-3.60**	0.90	-4.27**	1.11	-2.51*	1.28	-4.18*	2.09
1939-59 (n = 210)												
Assets t_1^a	0.008	0.0045	0.008	0.0047	0.001	0.03	0.001	0.02	-0.001	0.01	-0.000	0.000
% change assets	-0.32	0.26	-0.29	0.27	0.02	0.015	0.05	0.04	-0.58	0.54	-0.38	0.53
Age	-0.01	0.01	-0.01	0.01	-0.02	0.02	-0.02	0.02	0.03	0.02	0.04	0.01
Comer	0.51	0.71	0.45	0.73	-0.48	0.71	-0.61	0.73	-0.44	1.05	-0.65	1.07
Leaver	-1.03*	0.51	-1.08*	0.52	-1.025*	0.51	-0.88*	0.43	-2.65**	1.18	-2.64**	1.20
MDF t_1	-0.10*	0.04	-0.12*	0.06	0.62*	0.30	0.41	0.23	1.44*	0.68	1.15*	0.54
Conglomerate												
Related	0.28	0.54	0.37	0.74	0.44*	0.21	0.40	0.24	0.09	0.08	0.27	0.35
Mergers	-0.03	0.08	-0.05	0.08	0.01	0.05	0.01	0.04	0.08*	0.04	0.06*	0.03
% in industry with:												
Manufacturing pres.	3.98**	1.11	3.29*	1.51	0.39	0.98	-0.09	0.88	0.55	0.97	0.75	0.99
Sales pres.	0.55	0.37	0.59	0.41	3.11**	1.3	3.09**	1.12	-0.17	0.22	-0.60	0.42
Finance pres.	0.24	0.28	0.22	0.29	3.05	2.19	1.51	2.06	4.39**	1.63	4.11*	1.96
Food												
Machines			-0.14	0.10			1.43**	0.57			2.31*	1.11
Chemical			-0.43	0.48			0.53*	0.26			0.19	0.58
Petroleum			0.29	0.19			1.56**	0.62			1.97*	0.89
Transport			0.36*	0.16			0.26	0.96			1.63	1.44
Misc.			0.17	0.13			0.87	1.06			2.43*	1.21
			-0.61*	0.30			0.13	0.11			0.68	0.79
Dec. 1949	0.70	0.53	0.60	0.54	-0.16	0.48	-0.07	0.50	0.63**	0.24	0.55*	0.21
Constant	-2.29**	0.76	-1.83	1.01	-0.67	0.62	-0.85	0.90	-3.09**	1.00	-5.03**	1.73

president is the percent of firms in the industry with a manufacturing president (Table 4). Since this was the era when manufacturing presidents were the dominant group, that is, the accepted norm, this result is not surprising. Manufacturing presidents were the most likely to head firms in the metal, mining, and petroleum industries. They were least likely to head firms in the food and transportation industries. This conforms to theoretical expectations as firms in the former industries tended towards vertical integration and firms in the latter industries tended towards product diversification. The actual strategy of the firm does not affect the likelihood of choosing a manufacturing president. Further,

none of the demographic variables affect this outcome.

In this era, the best predictor of a sales and marketing president is whether or not the firm pursued a product-related strategy, exactly what the theoretical and historical presentation suggested. Sales and marketing presidents were also more likely to head firms in the food, machine, and chemical industries. The effect of product-related strategies persists even when industry is controlled. These results imply that the beginnings of the shift to a product-related strategy and the already existing norm of that strategy in certain industries was a power base for sales and marketing presidents.

The only factor that predicts a finance

Table 4. *Continued*

Independent Variable	Manufacturing				Sales and Marketing				Finance			
	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)
1959-79 (n = 218)												
Assets r^a	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
% change assets	-0.32	0.25	-0.42	0.29	0.005	0.004	0.004	0.005	-0.001	0.001	-0.001	0.001
Age	-0.01	0.008	-0.01	0.01	0.01	0.01	0.01	0.01	-0.01	0.01	-0.01	0.01
Comer	-0.47	0.76	-0.38	0.77	-0.37	0.24	-0.42	0.64	-0.71	0.56	-0.62	0.58
Leaver	-0.19	0.56	-0.17	0.58	-0.75*	0.33	-0.73*	0.35	-0.56*	0.28	-0.50*	0.24
MDF t_1	0.05	0.45	-0.11	0.42	0.29	0.18	0.22	0.15	0.40*	0.17	0.51*	0.24
Conglomerate	0.14	0.67	0.05	0.07	-0.25*	0.10	-0.52	0.33	0.20**	0.08	0.18	0.12
Related	0.79	0.51	0.91	0.55	0.72*	0.34	0.51	0.27	0.90*	0.44	0.58	0.37
Mergers	-0.20*	0.09	-0.21*	0.08	-0.08	0.09	-0.09	0.08	0.03*	0.014	0.06*	0.03
% in industry with:												
Manufacturing pres.	2.06**	0.89	1.12*	0.43	-1.88	1.64	-1.47	1.02	0.50	0.98	0.81	0.60
Sales Pres.	-0.92	0.77	-0.21	0.23	2.60**	1.04	1.77*	0.86	1.62	1.67	0.85	0.89
Finance pres.	-0.25	0.46	-0.46	0.29	0.61	0.39	0.94	0.61	3.61**	1.44	1.88**	0.71
Food			1.27*	0.61			0.96*	0.44			0.62	0.54
Machines			0.50	0.74			0.91*	0.42			1.58*	0.71
Chemical			0.07	0.07			0.42	0.79			0.57	0.70
Petroleum			0.56	0.68			0.14	0.76			-0.58	0.33
Transport			0.08	0.92			-0.30	0.88			1.14*	0.53
Misc.			-1.01*	0.45			-0.54	0.77			1.40*	0.68
Dec. 1969	-0.17	0.45	-0.21	0.48	-0.01	0.01	-0.05	0.01	0.52*	0.24	0.54*	0.24
Constant	0.35	0.89	1.21	1.19	-2.26**	0.99	-1.69	1.11	-1.48	0.88	-2.28*	1.12

Note: See text for description of technique.

* See text for operationalization.

* p<.05.

** p<.01.

president in this era is the percent of finance presidents in an industry. When the industry variables are added to the equation, this effect disappears. This effect is due totally to the concentration of finance presidents in the chemical industry.

In the 1939-59 period, the best predictor of the presence of a manufacturing president continued to be the percent of presidents with a manufacturing background in an industry (Table 4). Consistent with the theory, manufacturing personnel tended not to head firms with a multidivisional form, but were more likely to preside over firms with a functional or unitary form. Firms headed by a manufacturing person were also less likely to leave the list than those headed by persons in the residual group. This effect reflects that firms headed by entrepreneurs were declining rapidly in this period. When the industry effects are added, manufacturing presidents are most likely to head firms in the petroleum industry and least likely to head those in the miscellaneous group.

This was the era of the rise of sales and marketing presidents. In the reduced form equation, the best predictors of that rise are the presence of a multidivisional form, the existence of a product-related strategy, and the presence of sales presidents in other firms in that industry. These results conform to theoretical expectations. It is also the case that firms headed by sales and marketing personnel were less likely to leave the list. When the industry variables are added, the multidivisional form and strategy effects disappear. Instead, sales and

marketing personnel are more likely to head food, machine-making, and chemical firms, implying that these industries were leaders in the spread of the multidivisional form and the use of the product-related strategy and the leaders of these firms tended to be sales and marketing personnel.

The strongest predictors of the rise of finance presidents are the presence of a multidivisional form, the use of mergers as a growth strategy, the percent of finance presidents in an industry, and the dummy variable signifying that the decade was 1949-59 (after the Celler-Kefauver Act). The decade after Celler-Kefauver is more likely to have presidents from the finance background than the decade before. The merger strategy and the multidivisional effects also conform to theoretical expectation. Firms headed by finance personnel were also less likely to leave the list. When the industry effects are added, the other effects remain. Finance presidents are more likely to head food, chemical, and transportation firms than metal-making and mining firms.

The 1959-79 period was the era of the rise of the finance presidents (Table 4). Manufacturing presidents tended to appear mostly in industries with a high proportion of manufacturing presidents. They did not head firms executing mergers, reflecting the fact that they did not pursue mergers as a growth strategy. Manufacturing presidents were least likely to head firms in the food and miscellaneous industries and most likely to head metal-making and mining firms. The miscellaneous category contains the

acquisitive conglomerates, and this result is as expected.

Sales and marketing presidents tended not to head firms classified as conglomerate, and they did tend to head firms classified as product-related. This is clear evidence that there was a distinct sales and marketing strategy based on the production of related products, which was incompatible with a strategy based on unrelated products. They were also more likely to appear in industries where the percent of sales and marketing presidents was high. Finally, they were less likely to lead firms that left the list. When the industry dummy variables are added, the effects of strategy disappear. Sales and marketing personnel were most likely to head firms in the food and machine-making industries, where their strategies continued to dominate.

The best predictors of the rise of finance presidents are the presence of the multidivisional form, the presence of product-related or conglomerate strategies, and the number of mergers. Finance personnel were in a position to exploit and implement these strategies and structures. The finance presidents were also likely to be present in industries with a high percentage of finance-headed firms. There is also an effect of decade on finance presidents whereby firms in the 1969-79 decade have more finance presidents than firms in the 1959-69 decade. When the industry dummy variables are added, the strategy measures diminish in size, implying that certain industries were more likely to have different strategies. Finance presidents were most likely to head firms classified as machine-making, transportation, and miscellaneous. The miscellaneous category contains most of the acquisitive conglomerates, explaining why the strategy effects drop off.

In general, the results conform to the hypotheses. In the periods in which presidents representing different subunits came to dominate, the factors that indexed the resources that could be drawn upon helped explain which subunit held power. Strategy and structure provided important resources for manufacturing, sales and marketing, and finance presidents. The way in which the strategy variables operated also conformed to theoretical expectations in that product-related strategies tended to favor sales and marketing presidents and product-unrelated strategies tended to favor finance presidents. The major caveat is that the industry dummy variables sometimes acted as proxies for strategy. When both types of variables were included in models, the strategy effects diminished. This implies that industry measures capture not only purely economic effects, but also what constitutes appropriate firm strategy for a given industry. Further, the

behavior of other firms in an industry in choosing their president greatly affected the choice of a given firm, evidence that there existed an institutionalized view within industries of what kind of person should lead firms. The role of the Celler-Kefauver Act in the shift of power to finance presidents is evident. Finally, it is clear that there are no age, size, or growth effects that predict which subunits have power, implying that the behavior of large firms, in this regard, is more highly related to current conditions in the firms and their environments and less to their overall demography.

DISCUSSION AND CONCLUSIONS

The links between organizations, environments, and the internal firm power struggle have been analyzed theoretically, historically, and quantitatively. The results support a nonfunctionalist interpretation of organizational power and change. At differing historical moments under different structural conditions, actors were able to make claims on their organizations, on the basis of their interpretations of their organizational fields. Those actors' claims were based on an intellectual position consistent with their subunit power base that utilized key features of the organization and environment. Once new actors established themselves in one set of firms, their counterparts in other firms were able to use that fact as a basis of gaining power. These results imply that a dynamic conception of organizations rests on learning more about how actors in organizations view their world, how they vie for power in their organization, and how they selectively absorb information from their worlds.

This conception accounts not just for organizational change, but also for organizational stability. Organizations have a strategy and structure in place and they exist in a known organizational field. These existing social structures provide great stability for a number of reasons. First, they represent already existing sources of power. This means that what is in place will tend to stay in place. Second, they provide any given set of actors in an organizational context with an organizational story that aids in simplifying the world. Any changes in that story could potentially undermine the rationale for any given organization and such revisions will be undertaken only under dire circumstances.

The results of this research suggest two agendas, one unrelated and one related to the problem considered here. The former should entail examination of well-defined organizational fields over some period of time. The goal should be to interview various actors in the

field, both within and across organizations in order to assess their views of the field and the organization and the effects of those views on subsequent organizational change. It would be important to examine both turbulent and stable environments to further our understanding of the role of uncertainty, networks, and institutional definitions in processes of organizational change.

The other research agenda continues with the work done here. One important question is whether shifts in subunit power actually affect the subsequent growth of the organizations in which they occur. A second question focuses on the stability of subunit power: does the presence of a subunit in power at the beginning of a period imply the same subunit in power at the end of the period?

A third question concerns the dissemination of strategy. Fligstein (1985) confirmed Chandler's argument that the spread of the multidivisional form is linked to product-related and unrelated strategies. Strategy does seem to proceed structure. Fligstein has also showed that sales and finance presidents played some role in the shift to the multidivisional form, and also presented evidence that firms mimic one another. It is important to analyze the cause of shifts in strategy also. Do important subunits come to power as a result of shifts in strategies by competitors or as a result of their already having seized power and shaped strategy according to their perception of the key organizational problems? Obviously both could be operating to some degree. Here, we have presented evidence for the former. A final important issue to explore further is the role of the state in the activities of large-scale organizations. It is clear from these data analyses that the state caused an important shift in the ability of various subunits to control large scale firms. There are probably other links between the state and the evolution of power struggles in large firms that can be profitably explored.

Recently, critics of American business have argued that businesses pay too much attention to short-run profits and too little attention to manufacturing quality (Hayes and Abernathy 1980). This criticism is perceptive but fragmented. Manufacturing personnel declined in importance in large firms precisely because they were not able to deliver on increases in sales or profitability. The environment and the internal organization of the firm changed over time to favor, first, sales and marketing personnel, and then finance personnel. This suggests that the problems of American business have extremely deep-rooted structural causes. It is premature to consider what might alter the balance of power in large firms, but it is clear that exhortations based on a psychological analysis of American

managers is not likely to lead far, particularly when structural conditions remain unchanged.

It is clear that the rise of the finance presidents in large firms was the result of a complex but theoretically explicable set of processes that altered the way in which large organizations did their business. These power struggles resulted in the domination of a certain strategy and subunit in these large firms. This analysis shows the vibrancy and dynamics of change in both strategies and structures over time.

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