

Diversified Firms Entering the Wood-based Industry

by Merger: A Review¹

by

Jay O'Laughlin and Paul V. Ellefson²

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² The authors are Research Assistant and Associate Professor, respectively, Department of Forest Resources, College of Forestry, University of Minnesota.

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INTRODUCTION

Corporate mergers are economic events that have played a major role in shaping the structure of industry on an international scale. The significance of a merger as a corporate strategy is that it is an attractive and quick way to achieve corporate growth.³ Since the turn of the century mergers have without question become an important economic force. But what of the effects of unrestrained corporate growth on society? Whatever they may be, it is presumed they require public attention. Public treatment of market or corporate power can take three basic forms: antitrust laws and their enforcement, regulation of industries, and public enterprise (Shepherd 1975). The spate of merger activity the economy is now experiencing has the potential of rivaling the conglomerate merger wave of the late 1960's (see Appendix A). The structure of industry will undoubtedly be altered.

What does this have to do with forestry? The merger wave of the 1950's and 1960's resulted in a host of new firms entering the forest products or wood-based industry. Some of these entrants were firms called conglomerates,⁴ others were established firms seeking to diversify their products and markets.

³ Technically speaking, a merger is a combination of two similarly sized firms. An acquisition, then, is the swallowing-up of a smaller firm by a larger one. There will be no further attempt to make any distinction; merger and acquisition will be used as synonyms. The usage of these and other unfamiliar or ambiguous terminology are defined in the Glossary.

⁴ A distinction must be made between a conglomerate merger and a conglomerate firm (see Glossary). Conglomerate mergers are not the exclusive province of conglomerate firms. Nor are all mergers consummated by conglomerate firms conglomerate mergers. The Federal Trade Commission is to thank for this confusion because of its classification scheme for mergers (see Glossary and Steiner 1975, p. 17-22).

Relatively little is known about how such corporations⁵ operate their wood-based divisions, thus little can be said about the implications posed by these firms for forestry and society in general. To say the least, it is a subject that warrants investigation.

CURRENT INTEREST IN MERGERS

Concern over the current wave of merger activity has led to the drafting of four proposed laws that have been introduced to the Congress. The proposals reflect the following convictions of their sponsors (Shapiro 1979):

--that present antitrust procedures (relating to discovery, interest on recoveries, collateral estoppel, and intrastate mergers) need improvement (Antitrust Procedure Improvements Act of 1979, S.390 [Metzenbaum]),

--that changes in the complexion of business call for new kinds of merger restraints to keep the marketplace open and competitive (Small and Independent Business Protection Act of 1979, S.600 [Kennedy]),

--that regulated industries are being directed in such ways by Federal agencies that undesirable anticompetitive results are showing up (Competition Improvements Act of 1979, S. 382 [Kennedy, Hatch et al.]), and

--that victims of antitrust violations, even if removed one or two steps from the violation, need new ways of recovering damages (Antitrust Enforcement Act of 1979, S.300 [Illinois Brick reversal]).

⁵ The terms corporation, firm, and company will be used interchangeably (see Glossary). A diversified firm may be a conglomerate, but all diversified firms are not conglomerates. When dealing with any large organization, such terminology is ambiguous and naturally leads to thinking abstractly of one single unit, when in reality, these organizations are composed of many smaller units.

Each such organization is an entity so unique and complex that generalizing about groups of them really tests the limits of analytical abilities. Even describing them is difficult. For an example of the complexity of a large forest products firm, see Appendix B.

The proposed laws are all concerned in some way or another with corporate size and market domination. The one with the greatest potential for altering the economic landscape is Kennedy's S.600, namely, the Small and Independent Business Protection Act of 1979. In reality the proposal focuses on banning big conglomerate mergers.⁶ It has been estimated that roughly three-fourths of all mergers occurring since 1946 would have been jeopardized by the proposed law.⁷

The rationale behind the new interest in anti-merger strategies is markedly different than that which previously has been offered. The current emphasis of legislators and bureaucratic trust-busters does not focus on economic grounds, but rather on social and political concerns--namely, that big conglomerate mergers increasingly concentrate political and social power in the hands of relatively few giant companies (Reilly 1979). For the first time, mergers are to be prohibited solely on the basis of size.

⁶ The provisions of the proposed law attack bigness per se and assume something is wrong with American industry as currently structured (Shapiro 1979). The proposal would 1) ban all mergers between companies with sales or assets exceeding \$2 billion each, and 2) block acquisition of a company with more than 20% of a market or \$350 million in sales or assets by a company valued at more than \$350 million--unless the acquiring company could prove that the acquisition would result in efficiencies, or it was willing to spin off an equal share of assets (Reilly 1979).

⁷ A study by Richard Posner at the University of Chicago mentioned by Reilly (1979) illustrates that of the 294 mergers since 1946 that were studied, 46% of them would have been blocked by the leading firm proviso in the bill and another 27% halted by the \$350 million stipulation; for a total of 73% of all sampled mergers since 1946 that would have been banned.

Businessmen are deeply concerned about renewed interest in antimerger efforts. As Robert S. Hatfield, Chairman of the Continental Group, Inc.,⁸ says, the " ... problem with these claims is that they are totally unsupported by any concrete evidence. These social and political issues are only now becoming the subject of serious research. While the research deserves our support, there is currently no basis in theory or in fact for attributing social or political problems to the phenomenon of large scale enterprise."⁹ In a similar vein, Irving S. Shapiro, Dupont's chairman, states "... it is time to take antitrust policy away from the theoreticians who have little experience with the economy and even less responsibility for its day-to-day performance. For once we ought to say to them, 'Your theories are not the stuff that made this nation great, and we now insist on hard facts that are convincing to any open mind'."¹⁰ Hatfield (1979) also points out that antitrust considerations play at least some role in most of the important business decisions being made today.

Interestingly, the very forces which shaped the rise of the conglomerate organization are in large measure a result of public policies aimed at reducing monopoly power resulting from horizontal and vertical mergers. The growth-minded organization has been forced to look outside its own

⁸ The Continental Group, with its Continental Forest Industries division, is in the top 15 North American pulp, paper, and paperboard companies. The forest industries division provides about 1/4 of the Group's total sales revenues.

⁹ Hatfield (1979, p. 701).

¹⁰ Shapiro (1979, p. 564).

historic markets for takeover targets to fuel its appetite for expansion. Public antitrust policy stems from basic federal laws--the Sherman Act 1890, Clayton Act 1914, FTC Act 1914, Cellar-Kefauver Amendment 1950, and from legal definitions, in enforcement terms, handed down by the Supreme Court. Further guidance to public policy is given by the Antitrust Division of the U.S. Department of Justice. The latter has issued a set of guidelines for antitrusters (Table 1).

Mergers and Growth

Corporate growth plays a very important part in the merger game.¹²

"The basic motive for growth in sales and profits is that a firm, like a tree, must either grow or die."¹³ Galbraith (1973a) argues that growth is a more significant corporate objective than are profits. Why? Because growth, as well as profits, are a source of prestige and therefore influence. In the end, growth and profits allow Galbraith's "technostructure"--the managers and their specialist underlings in the modern corporation--to expand their power.

¹² Reid (1975) uses the term "merger game" to refer to the propensity of a few relatively large firms to rapidly add increments of size to achieve their objective of size maximization, thus touching off waves of mergers (see Appendix A) as other firms follow suit and get into the game. Reid feels that size maximization is perhaps the most common overall merger objective, at the least it is the one that can best be empirically isolated.

A chapter in the Nader (1972) report on antitrust enforcement dealing with the Federal Trade Commission is titled "The Merger Game." The players are the FTC's merger division staff and the corporations seeking growth by merger.

¹³ Ansoff and Weston (1962, p. 49).

Table 1. Department of Justice Merger Guidelines.¹¹

HORIZONTAL MERGERS

- (1) Where the four-firm concentration ratio is 75 or more, a merger will ordinarily be challenged if the firms involved possess the following market shares:

Acquiring Firm		Acquired Firm
4% or more	AND	4% or more
10% or more	AND	2% or more
15% or more	AND	1% or more

- (2) Where the four-firm concentration ratio is less than 75, a merger will ordinarily be challenged if the firms involved possess the following market shares:

Acquiring Firm		Acquired Firm
5% or more	AND	5% or more
10% or more	AND	4% or more
15% or more	AND	3% or more
20% or more	AND	2% or more
25% or more	AND	1% or more

- (3) Other mergers may be challenged, especially those where the acquired firm has at least 2% of the market, if either the acquiring firm or the acquired firm is among the eight largest firms in that market and the market share of the eight largest firms has increased 7% or more in the ten years preceding the merger.

VERTICAL MERGERS

- (1) Mergers will be ordinarily challenged where the firm supplying inputs accounts for 10% or more of sales in its market and the purchasing firm accounts for 6% or more of the purchases in the same market.
- (2) Mergers will ordinarily be challenged where the firm which is purchasing inputs accounts for 6% or more of purchases in the market and the supplying firm accounts for 10% or more of the sales in the same market.
- (3) Other mergers may be challenged outside of the above limits.

CONGLOMERATE MERGERS

- (1) Mergers will ordinarily be challenged where: (a) the acquired firm has 25% of the market; (b) the acquired firm is one of the two largest firms in the market and the top two firms have at least 50% of the market; (c) the acquired firm is one of the four largest firms in the market and the top eight firms in the market have at least 75% of the market and the acquired firm at least 10% of the market; (d) the acquired firm is among the largest eight firms in a market where the largest eight firms have at least 75% of the market.
- (2) Mergers will ordinarily be challenged where a danger of reciprocal buying might result.
- (3) Mergers will ordinarily be challenged where the acquisition might increase the acquiring firm's market power or raise barriers to entry.

Source: "Merger Guidelines," U.S. Department of Justice, May 30, 1968, Commerce Clearing House, Trade Regulation Reporter, 1, Paragraph 4430.

¹¹ From Koch (1974, p. 231).

A merger is then a growth strategy ultimately designed to extend the scope of corporate power. The debate between antitrusters and business interests is not whether corporate power extends beyond market power to include political and social power. There can be no doubt that it does. The question becomes one of either accepting the premise that corporate power is "bad" or demonstrating that it is. Public policy should require the latter. How power may be examined in this context remains to be seen, for investigations of power have been the province of sociology, not economics. But if economics is to concern itself with political economy, as it once did, power must enter the picture and, somehow, the analysis.

The most reasonable approach to discovering and documenting the effects of mergers on the economy would be to look at pieces of the puzzle and see how they fit together, rather than looking in the box at a jumbled disarray of pieces. The pieces are corporations. Sub-assemblies or fits of pieces are industries. The whole puzzle is the economy. What is needed is more case-by-case, industry-by-industry analysis to first establish some sub-assemblies of the pieces.

Prevalence of Megacorporations

Megacorporations are those in the Fortune 500 annual ranking of the largest U.S. industrial corporations, which includes manufacturing and mining firms. Firms in the utilities, transportation, merchandising, and financial sectors are not part of this population.

As Table 2 indicates, the industrial corporations are clearly the most important component of the U.S. economy, representing almost 40% of the contribution of business to the national income.

Table 2. National Income, 1972.¹⁴

(billions)			
		<i>Percentage of Business</i>	<i>Percentage of Total</i>
Industrial	\$ 312.5	39.4%	33.2%
Transportation	36.0	4.5%	3.8%
Utilities & Communication	38.2	4.8%	4.1%
Wholesale & Retail Trade	139.7	17.6%	14.8%
Services	120.1	15.2%	12.8%
Finance, Insurance and Real Estate	107.9	13.6%	11.5%
Agriculture, Forestry and Fishing	30.4	3.8%	3.2%
Rest of World	7.5	0.9%	0.8%
Total Business	\$ 792.3	100.0%	84.1%
Government Total	149.5		15.9%
National Income	\$ 941.8		100.0%

Source: U.S. Department of Commerce, Survey of Current Business, July 1973, Table 1.11.

Industrial corporations employ about one-third of all business employees and account for one-half of all business sales, capital expenditures, and corporate profits.¹⁵ If the industrial corporations are indeed the core of the U.S. economy, the Fortune 500 are the crux. These 500 firms are ranked by sales and assets and, although its makeup is continually changing,¹⁶ it is the most convenient framework to assess the industrial sector. Table 3 gives some idea of the significance of the

¹⁴ From Blumberg (1975, p. 21).

¹⁵ Ibid. p. 20.

¹⁶ From 1967 to 1973, 197 corporations were displaced by others. Ibid. p. 22.

Fortune 500 relative to all industrial firms. Their shares of total sales, assets, employees, and net income has steadily increased from 1955 to 1973, at which time they accounted for 66% of sales, 83% of assets, 76% of employees, and 79% of net income.

Table 3. The performance of the 500 largest industrials.¹⁷

(Money in billions; employees in millions)					
	1955	1960	1965	1970	1973
Sales of 500 Largest	161.4	204.7	298.1	463.9	667.1
Total Industrial Sales	278.4	345.7	492.2	708.8	1,017.2
Percentage	58.0%	59.2%	60.6%	65.4%	65.6%
Assets of 500 Largest	122.3	176.2	251.7	432.1	555.5
Total Industrial Assets	190.1	255.9	359.1	578.2	670.1
Percentage	64.2%	68.8%	70.1%	74.7%	82.9%
Employees of 500 Largest	8,605	9,179	11,279	14,608	15,531
Total Industrial Employees	17,514	17,508	18,694	19,972	20,445
Percentage	49.1%	52.6%	60.3%	73.1%	76.0%
Net Income of 500 Largest	11.2	11.6	20.1	21.7	38.7
Total Industrial Net Income	15.1	15.2	27.5	28.6	49.0
Percentage	77%	76%	78%	76%	79%

Sources: 1973 Abstract Tables Nos. 786, 1198; Federal Trade Commission, Quarterly Financial Reports for Manufacturing Corporations; U.S. Department of Labor, Employment and Earnings, July 1974, Fortune, May 1974.

Furthermore, about 100 firms receive a greater share of net profits than the remaining 370,000 corporations, proprietorships, and partnerships engaged in manufacturing. The sales of the top Fortune 500 are almost ten times greater than the next 500 largest firms. Assets of the second 500 are less than one-tenth of the top 500 (Reid 1976).

There should be little doubt about the importance of the Fortune 500 in the U.S. economy. Investigation to date has revealed that there are in excess of 50 of the top 500 firms that have wood-based operations

¹⁷ Ibid p. 25.

(see Appendix D). About half of these are "traditional" forest products firms. The other half are new entrants (since 1950) who have diversified into the industry by merger. Some of these diversified companies (about one-third) are truly conglomerate firms, the remainder still have a strong identifiable interest in one industry as their major line of business.

MERGERS AND THE WOOD-BASED INDUSTRY

Mergers are an important public policy concern with vast implications for society due to the resulting shifts in power structures. Mergers have been a significant factor in changing the structure of the industries that make up the wooden nickel in the U.S. dollar. These wood-based industries (lumber and plywood; pulp, paper, and paperboard; and, less important on a volume of wood basis, furniture) represent better than 5% of the U.S. Gross National Product. So there should be concern about what mergers and antitrust have done to shape this industry. In turn, this may lead to some important implications for forestry--the art and science of fulfilling human wants from forested areas.

Everyone has a stake in these concerns. The owners, stewards, and users of all the 754 million acres of forest that cover one-third of the United States¹⁸ have vested interests to protect. So too do the processors

¹⁸ Of the 754 million total forested acres in the U.S., 500 million are classified as commercial forest (see Glossary). Ownership status of commercial forestland (expressed as a percent of the total 500 million acres) is:

of raw wood, the manufacturers of wood products, and the national and regional marketing organizations that in many cases perform all of the aforementioned functions as well. Not to mention end consumers of finished goods based on wood. And all of this is complicated by Samuelson's (1976, p. 467) immutable observation that, "Everybody loves a tree and hates a businessman."

Structural Impact of Regulation and Antitrust

In the past, the lumber segment of the wood-based industry has been identified as an example of a "competitive" industry. However, because a large portion of the industry's timber supply is furnished by public lands, Mead (1966) has suggested that from the resource input perspective, the industry has some oligopsonistic tendencies. Large firms with timberlands have an advantage over smaller ones in bidding for public timber. In recognition of this fact, the Small Business Administration sets aside a certain amount of public timber for small operators, ostensibly to keep a competitive balance in the industry. Such policies, aimed at getting public timber into the processing and marketing channels of the industry

18	Private sector:		73%
	Forest industry	14%	
	Farm	26%	
	Miscellaneous private	33%	
	Public sector:		27%
	National Forest	18%	
	Other federal	3%	
	State	4%	
	County and Municipal	2%	
		<u>100%</u>	<u>100%</u>

Source: USDA Forest Service. 1973. The outlook for timber in the United States. FRR-20, p. 11.

in an equitable fashion, are of a regulatory nature. Without them, the industry would most likely be more concentrated than it is. The marginally efficient small firm without guaranteed public timber would either be forced to exit the industry or merge.

Antitrust activities have also been important factors in developing the competitive structure of the wood-based industry. In the early 1970's, the Louisiana-Pacific Corporation was created by antitrust action aimed at curbing the rapacious merger appetite of the Georgia-Pacific Corporation (See Appendix C). In the mid-1970's, the Federal Trade Commission (FTC) brought price-fixing charges against three segments of the paper industry that has resulted in executives being jailed and huge fines being levied against the firms involved (Briggs 1979, Michaels 1979, Sonnenfeld and Lawrence 1978).

Briggs (1979) cites low profits and overcapacity of the paper industry in the 1960's as the environment that led to price fixing (see Asch and Seneca 1975, Erickson 1976). The job order nature of the carton segment of the industry was also an important factor. In fact, survival may have been the real motive for price fixing. Low profit operations might have been doomed by corporate decision makers, thus price fixing may have contributed to the survival of the weakest firms and preservation of jobs. Further concentration in the industry may have been averted by allowing the weak to remain viable. But this is only a hypothesis. Even if true, it is no defense under the law. The law, then, may contribute to increasing levels of concentration.

The proposed Antitrust Enforcement Act of 1979, in parlance the Illinois Brick Reversal, was previously mentioned as a current legislative concern. If passed, it may have drastic effects on the paper industry. Price fixing fines have already cost the industry a half billion dollars. If the proposal becomes law, customers and even end consumers could recover monetary damages from price fixing violations. This could mean a cost of many billions to the industry. The result could be further embarrassment and inconvenience, and possibly ruin (Briggs 1979).

Going even beyond that, the ultimate policy question, in both forest and anti-merger terms, might well be: should General Motors or Standard Oil be allowed to merge Weyerhaeuser Company? There can be no doubt that they could--antitrust considerations aside. In fact, a smaller firm can merge a larger firm.

As Newsweek (1977) reports, even giant companies are vulnerable to takeovers. For example, in 1976 Babcock & Wilcox had sales of \$1.7 billion. This would rank them about 125 on the Fortune 500. Two firms desired to take them over in what was to be the largest hostile deal yet seen. United Technologies, with sales of \$5.2 billion qualifying it for about 35th rank in Fortune, bid \$42 as a tender for Babcock stock, then selling at \$35 a share. Babcock's board balked. J. Ray McDermott & Co., with sales of \$1.3 billion about 175 on the Fortune list, entered the picture, announcing they had bought 9% of Babcock's stock on the open market. Babcock took both suitors to court. The megacorporations were fighting amongst themselves, perhaps to heighten interest in a flagging market for equity financing via securities.

Legal hurdles were overcome in a few months. United Technologies bid \$48 for the shares, McDermott countered with a \$55 bid. After complicated counterbids, McDermott wound up with control over Babcock & Wilcox at a final price of \$65 a share, nearly double the starting price in a matter of months. And, maybe more important, McDermott is a smaller company than its hard-won acquisition.

This has also happened in the wood-based industry. As reported in Financial World (1979), in 1962 the Albermarle Paper Manufacturing Co. took over Ethyl Corp., until then strictly a producer of lead compounds. The new president of the now consolidated Ethyl Corp. was the former head of the paper company that engineered the merger. The company is successful today, and looking hungrily for further acquisitions as premium grade gasoline becomes dinosaur food.

Interestingly, Ethyl no longer has wood-based operations. In 1968, the Albermarle Paper Co. assets were sold to Hoerner Waldorf (since 1977 a division of Champion International) for \$56 million. In 1967 Ethyl merged Oxford Paper Co., which was sold in 1976 to Boise Cascade for \$90 million.

Economic Theory and Power

Although this review is not designed to be a policy analysis of treatments of market power, any consideration of merger motives and effects must necessarily deal with the political and social climate of the times. Looking at how forestry is affected by new industry entrants must be placed in the proper policy perspective to be meaningful. What follows is a brief treatment of the general setting for assessing mergers.

A starting point must be the theoretical foundation of economic organization, namely, the field of applied microeconomic price theory termed industrial organization. Current anti-merger legislation based on political and social, rather than economic, power structures necessitate looking at why economic theory does not deal with this subject to the satisfaction of public and private policy makers. The basic literature on industrial organization is inadequate for the task. Adams and Dirlam (1976) focus on two problem areas. The first concerns industrial organization economists who have abandoned their historical, institutional, individual industry and firm case study approach, and have substituted the Holy Grail of quantitative precision, embarking on journeys into arid statistical empiricism, in the name of scientific policy formation. All their efforts have supported what economic theory has always taught--that competition and concentration vary inversely. Little else has been revealed.

The second problem area discussed by Adams and Dirlam (1976) is that of the planners for giant corporations who are constantly searching for better ways of doing things that, from a social perspective, should perhaps not be done at all. This refers to the search for a rationale for diversification by merger--a search that never clarifies how a broader social purpose will be achieved. Nowhere do proponents of large firm diversification discuss how the economy can benefit from having the giant firm change its activities; likewise, the alternative of having small independents enter or remain in the field is never explored.

Galbraith censures economists for unnecessarily distorting the realities of economic life by perpetuating the myth of a free market system (Lekachman 1979). Galbraith says, "the most damaging feature of neo-classical and neo-Keynesian economics is the arrangement by which power--the ability of persons or institutions to bend others to their purposes--is removed from the subject."¹⁹

Looking at mergers as redistributions of power arrangements is not a new idea. Manne (1965) advanced a proposition that mergers were transactions in the market for control of corporations. This control was perceived as a valuable asset independent of scale economies and monopoly profits, the traditionally accepted merger rationales. Corporate control was seen to have formed a special market for such an asset. Blake (1973) recognizes that the conglomerate firm may have had invigorating effects on the market for corporate control. The linkage between the market for corporate control and power--be it power of the economic (or market), social, or political variety--seems intuitively obvious, yet it may not exist, depending on how one feels about merger motives.

The basic inadequacy of conventional economic theory as applied in the realm of industrial organization to deal with changing economic structure resulting from mergers is more fully developed in Appendix C. This idea will continue to be a thread woven into subsequent discussions presented here.

¹⁹ Lekachman (1979, p. 74).

Merger Motives and Effects

Merger motives play some role in whatever power relationships are involved. There can be no single merger motive, for that would be an oversimplification of economic reality. In truth, for any merger there are several motives.²⁰ Some of them deal with power, some don't.

The wood-based industry is of particular interest regarding merger motivations because it is dependent on wood as a raw material, and thus large land areas to provide the forests from whence the wood comes. Assured raw material supply is perhaps the most important merger motive within the industry. This explains the reasons for horizontal and vertical mergers to a great extent--but what about conglomerate mergers?

Why would a corporation want to enter the wood-based industries? The simple answer may be to acquire timberlands, an undervalued asset and an excellent inflation hedge.²¹ The effects of new entrants to the industry has not been explored in any detail. The redistribution, if any, of timberland ownership is thus an important consideration.

²⁰ This is the main finding of Steiner (1975), which devotes a monograph to the motives, effects, and policies regarding conglomerate mergers. Evidence is given to support at least a dozen merger motives (see Appendix E).

²¹ This is perhaps illustrated best by Robert H. Smith, senior vice-president for corporate development at the multinational megaconglomerate IIT, who said, "We want assets in the ground in the U.S." in reference to IIT's acquisition of the coal company, Carbon Industries (Newsweek, 1977, p. 182). Direct references to timberland acquisition because it is an undervalued asset and inflation hedge abound (see Brown 1978, p. 23; Clephane 1978a, 1978b; Forest Industries 1979; and Samuelson 1976).

The consequences of the conglomerate merger wave that peaked in 1969 have been the subject of considerable attention in general. Unfortunately, the effects of conglomerate merger on the wood-based industry have not been well documented nor thoroughly reviewed. As to the effect of the 1960's merger wave on the economy in general, findings are that this unprecedented conglomerate merger activity has had no harmful economic effects (Lorie and Halpern 1970; Beman 1973; Goldberg 1973 and 1974). There were no increases in concentration or decreases in competition. Richard E. Caves, an economist at Harvard University, says, "It's not clear that increased diversification within corporations benefits the economy much, but it's also not clear that it does much harm."²² On the other hand, there are no demonstrable benefits from conglomerate mergers other than that corporate growth is expedited; and, as recent experience indicates, this often occurs at the expense of earnings for stockholders.²³

There is, however, at least one area where conglomerate firms have generated a real cost to society. As Mueller (1973) argues, corporate secrecy is an enemy of the market economy in a free society. This economy presumably operates on the responses of businessmen and investors to opportunities for profit. As a firm becomes increasingly conglomerated, its public financial reports become less useful for guiding investors. Both profits and losses of its diverse operations are masked. A further result is that social scientists have little meaningful data to analyze.

²² Business Week (1977, p. 184).

²³ See Galbraith (1973a, p. 5), Salter and Weinhold (1978).

Beman (1973) discusses the ingenuity that conglomerators employed in the late 60's to boost their profit records, which in many instances was really accounting legerdemain. These opportunities, termed "dirty pooling," have since been limited by changes in accounting practices. But because loopholes still remain in the merger game, Beman feels, as does Mueller, that more steps need to be taken to tighten rules governing corporate financial reporting. Big companies, he feels, should be required to make more detailed disclosures about the operations of their divisions to keep investors informed and the competitive-enterprise system strong.

It is argued by those prescribing stricter merger laws that one of the effects of mergers is a concentration of economic, and other, power. But this is an oversimplification. Adams (1973, p. 138-139) says, "I find that the trend toward concentration of economic power is not a response to natural law or inexorable technological imperatives. Rather, it is the result of institutional forces which are subject to control, change, and reversal, such as magnitude, velocity, and character of successive merger movements; the inadequacy of existing antitrust laws and/or the desultory performance of the enforcement agencies; and the unwise, man-made, discriminatory, privilege-creating actions of Big Government." These propositions are then illustrated by cursory examination of the steel and oil industries.

Even if one accepts the inevitable, that mergers concentrate economic power, measuring that concentration is almost an impossible task. This is discussed briefly in Appendix C, and more fully in Rose (1969).

Adelman (1951) summarized the concentration debate, and his words of wisdom then still may ring true, with modification, today. Adelman wrote:

"1) The American economy is highly concentrated. 2) Concentration is highly uneven. 3) The extent of concentration shows no tendency to grow, and it may possibly be declining. Any tendency either way, if it does exist, must be at the pace of a glacial drift."²⁴

The effects of today's merger wave are a different case. Instead of a group of newly created aggressive acquirers, what we are now seeing are diversification moves by giant firms well-established in their principle industries and lines of business. These firms are not really deserving of the "conglomerate" monicker which should be reserved for the phenomena of the 1960's such as International Telephone and Telegraph (ITT), Gulf & Western Industries, Olin, and their like (see Appendix F). Rather, they are the diversified supercorporations or megacorporations.²⁵ Mobil Corporation serves as an excellent example, since it is in the wood-based industry in a big way, yet is primarily an oil company.²⁶

²⁴ Rose (1969, p. 238).

²⁵ Blumberg (1975) defines a megacorporation as one of Fortune's top 200, thus some of the larger true conglomerates, such as ITT, are included in this group. This underlines the definitional difficulty of devising classification schemes for corporations and any subsequent useful application of such schemes.

²⁶ Container Corp. of America, one of the top 10 North American pulp, paper, and paperboard companies, merged with the retailing firm of Montgomery Ward in 1968 to form Marcor, Inc. Mobil Oil merged the holding company Marcor in 1974, forming the Mobil Corp., a holding company operating Mobil Oil, Montgomery Ward, and Container Corp. Container Corp. provided about 4% of Mobil sales in 1978.

Time, Trees, and Corporate Strategy

The entry of diversified firms to the wood-based industry must be viewed with mixed feelings. It could pose little in the way of structural changes. The cost of transporting wood raw materials might very well keep local mills active whether they are (a) locally owned, (b) owned by a large vertically integrated forest product giant located in an adjoining state, or by (c) a megacorporation headquartered across the continent. However, the management policies and constraints imposed on milling operations could--and probably would--be markedly different under the ownership regimes just mentioned. The consequences of ownership would depend on the organizational structure of the parent firm, which in turn depends a great deal on the strategy of the firm. Berg (1965) sees the strategy/structure nexus as important because of its impact on project development. And this is a critical concern in forestry enterprises. A wood-based firm committed to long planning horizons peculiar to forestry operations could become terribly uncomfortable when placed in the hands of a new entrant to the wood-based industry. Concerns could result from the parent firm's perspective on resource stewardship--conservation, if you will--how such stewardship will be influenced, and what criteria will be used to influence it. The concerns of the wood-based firms being acquired may well relate to some belief that forestry is a special endeavor in light of the long-term nature of the biological processes involved in growing trees. Such processes usually require time periods in excess of the usual long-term corporate planning horizon of twenty years. From such a perspective, the

critical element leading to separation of the diversified firm from the traditional wood-based firm in any industrial classification system will most likely be time, for the long time periods involved in growing trees and harvesting wood are what sets forestry enterprises apart from others. A commitment to forestry requires that a long-term strategy be adopted by a firm (see Appendix D).

This long-term commitment of resources can adversely affect short-term goals, namely corporate profitability. Thus, performance evaluation of a corporate manager and his division or operation may force a trade-off between short-term operation considerations and long-term organizational goals. There is a natural tendency for managers to rely on short-, rather than long-term goals. There are obvious forestry implications in such a trade-off.

The Mead Corporation was concerned enough about such trade-offs to finance a study examining the prevalence and nature of them. Banks and Wheelwright (1979) studied and analyzed the problem in six unidentified major corporations. There were two natural resource-based firms from separate industries in the study group. The focus was on ways of controlling the short/long trade-off. The authors described a number of steps that can be taken to deal with the problem of counterbalancing the tendency to emphasize the short-term in decision making, which provide a pool of tactics management can use to plan future activities.

Diversification as a Strategy

A diversified firm is one that enters new product markets where they have not previously competed. This is one way that growth can be achieved. The "product portfolio" concept says that if a company is to both grow and to allocate resources wisely, it must develop a proper mix between its new and established businesses. But achieving a balanced portfolio is more difficult in practice than in theory because of the inherent riskiness of launching new businesses (Biggadike 1979).

Since mid-1977 diversifications by merger have been accelerating. The main reasons are excess cash positions of some corporations, depressed stock prices, and slow economic growth that make mergers attractive investment alternatives (Salter and Weinhold 1978; see also Appendix A).

Rich (1978, 1979a,b,c,d) has recently studied and reported on how the top 20 U.S. forest products companies have employed the strategy of diversification. Prominent among the findings are that the product portfolio concept is being implemented as a business investment portfolio concept to achieve these objectives: maintaining or expanding market shares; securing and utilizing a strong timberlands base; and diversification. Changing attitudes of antitrusters have also led to diversification into chemicals in favor of horizontal product extensions. Diversification may be followed by divestiture of nonforest products businesses, such as land development and on-site housing ventures which recently caused several companies to lose millions.

Louisiana-Pacific's current interest in acquiring the Portland Timbers franchise in the North American Soccer League is an example of a diversification strategy, although it has not yet been consummated.

Evidence indicates that some firms whose primary business is outside the industry and have acquired wood-based divisions as a diversification strategy have now abandoned them through voluntary divestiture.²⁷ This fact warrants further investigation as to why these firms were unsatisfied with their move into forest products. Irland (1976) says that poor experience in the conglomerate merger boom of the 1960's has caused many wood-based firms to return to the fundamentals of forest products. Doubtless firms based in other industries have had bad diversification experiences, perhaps some of them with ventures into the wood-based industry. Indeed, Bradley and Korn (1979) conclude that mergers are risky decisions, with a high percentage of transactions constituting divestitures. Most are simply failed marriages, most commonly due to over-optimism in business projections, a lack of adequate contingency planning, and failure to see mismatches in management or operational mismatches.

But diversification by merger is a fact of economic life today which poses social problems. The problem of diversification by large firms is well summarized by Berry (1975), which was an effort focused on growth and diversification in the large firm, using the Fortune Plant and Product Directory. This directory identifies the plants and 5-digit SIC codes of

²⁷ The Appleton Papers division of the NCR Corp. was acquired by B.A.T. Industries. The Oxford Paper division of Ethyl Corp. was acquired by Boise Cascade. Both of these divestitures occurred between 1976 and 1978 (Brown 1978). AMAX, Inc., has agreed to sell its AMAX Forest Products, Inc. subsidiary after a three year experience in the industry. AMAX entered in 1976 by acquiring 143,000 acres of southern timberlands, along with a couple of sawmills (Pulp and Paper 1979).

the products of those plants.²⁸ Berry points out two contrasting views of the large diversified firm, or the large firm that is diversifying. "On the one hand, the development of large diversified corporations can be, and has been, characterized as part of the trend toward increased corporate concentration generally, with increased market power ... as an inevitable result." An alternative interpretation, "on the other hand, would regard such a trend toward increasing diversification by large industrial corporations as one possibly diminishing the significance of precisely those entry barriers which have been most conducive to the development and preservation of market power."²⁹

The concept of corporate growth via diversification has received widespread attention in the literature of economics and business. As might be expected, arguments for and against such a strategy abound--the jury, however, has yet to issue its verdict. A review of these arguments seems in order.

Scott (1973) calls the Galbraithian arguments about power structures and the large corporation--mentioned previously and more fully developed in Galbraith's (1967) The New Industrial State and (1973b) Economics and the Public Purpose--a call to the colors for civil servants, leaners to socialism, and professors of economics. They are to restore the public interest through economic planning and public control. The insidious

²⁸ The last edition of the Fortune Plant and Product Directory was published in 1966. Fortune has no plans to update the directory.

²⁹ Berry (1975, p. v).

engine of destruction is presumed to be the decline of the market system and the disappearance of competition at the hands of corporate planners who have designed strategies and internal organizational structures to circumvent external market exchanges with internalized transactions.

Williamson (1974) sees hope for focusing research on these internal transactions, calling for an emphasis on the internal organization and control processes of the large firm, which would focus analysis on determining whether transactions take place across markets or within firms. It is felt this transactional approach would explain certain phenomena that occur in the real world for which conventional economic theory cannot provide a rationale, particularly the concepts of vertical integration and conglomerate organization (Weston 1974).

Posner (1974) discusses the political and social power associated with large firms and continues the discussion of the inadequacy of the perfect competition model as an analytical tool for these broad social issues because of the omission of important real world aspects. Among Posner's more significant findings is that there is no sufficient reason to ban large conglomerate mergers based on bigness per se. And he points out that corporations do not wield the political power that some attribute to them, because of their inability to get favorable antitrust treatment and accounting practices legislated. Why, then, the continual attacks on big business? Posner offers three reasons. 1) A lack of understanding of the operation of the market system. 2) A vested interest in disparaging the operation of the market system because of the preference for social

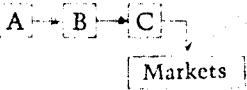

planning. 3) A sociological need to have a sinister force to serve to explain economic and political ailments (Weston 1974).

Scott (1973) concedes that the Galbraithian view fits some companies, namely one-industry companies managed through functional organizations without product divisions and subunit profit centers. Companies such as Raytheon and Lockheed in the so-called military-industrial complex fit Galbraith's theories. Not surprising, since they are the firms he has studied most extensively. In the era of diversification, Scott shows empirically that there are few companies still wedded to a one-industry strategy. Among the industries that are, he names big oil, steel, meat packers, major raw material processors--pulp and paper companies are mentioned--and the major automobile companies.

A three stage model put forth by Scott describes the developmental sequence for corporate strategy and structure, two critical areas where corporate management is able to exercise managerial choice. The three stages of development are characterized on Table 4. The Stage II company fits the Galbraithian analysis. Stage III companies with their diversified operations, profit centers, and variable executive compensation based on economic performance do not. Thus, instead of company evolution from small to medium to large, the actual pattern is from small to integrated to diversified.

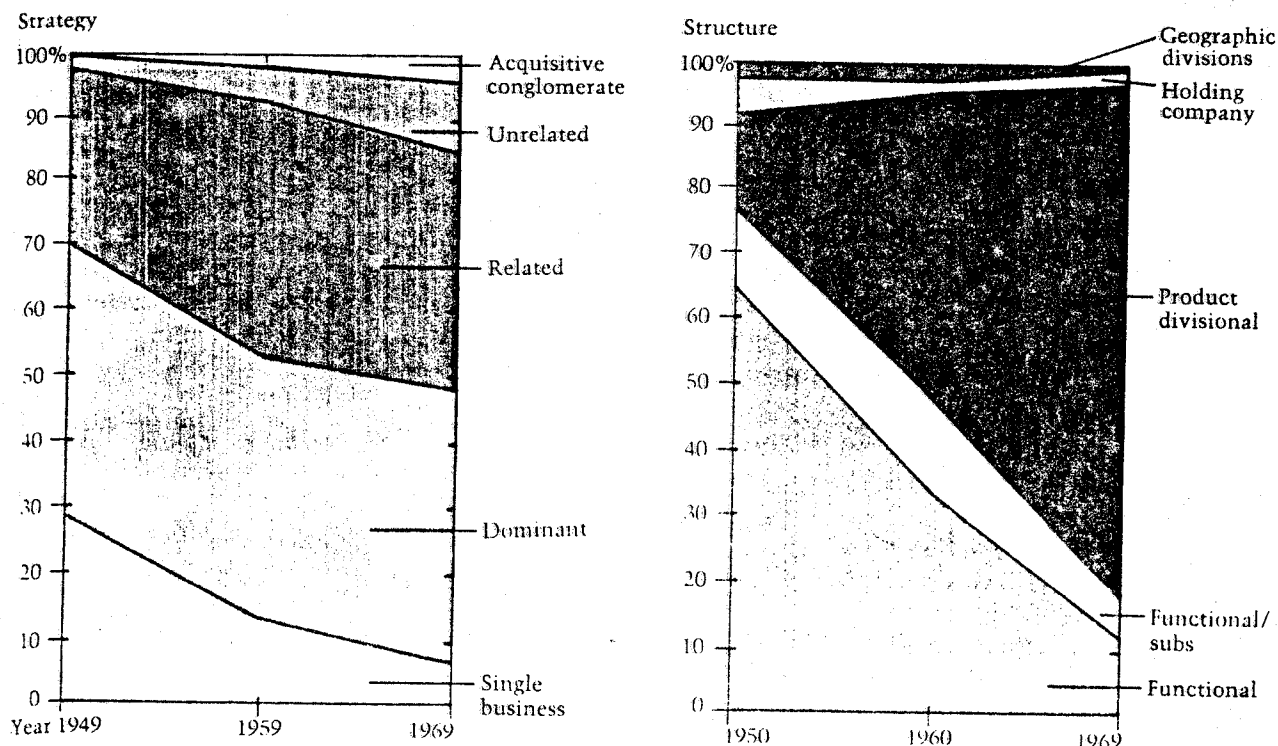
Rumelt (1974) sampled 40% of the Fortune 500, tracing their evolution of strategy and structure from 1949 to 1969, which is depicted on Figure 1.

Table 4. The three stages of organizational development.³⁰

Company characteristics	Stage I	Stage II	Stage III
Product line	Single product or single line	Single product line	Multiple product lines
Distribution	One channel or set of channels	One set of channels	Multiple channels
Organization structure	Little or no formal structure; "one-man show"	Specialization based on function	Specialization based on product-market relationships
Product-service transactions	Not applicable	Integrated pattern of transactions 	Nonintegrated pattern of transactions 
R&D organization	Not institutionalized; guided by owner-manager	Increasingly institutionalized search for product or process improvements	Institutionalized search for <i>new</i> products as well as for improvements
Performance measurement	By personal contact and subjective criteria	Increasingly impersonal, using technical and/or cost criteria	Increasingly impersonal, using <i>market</i> criteria (return on investment and market share)
Rewards	Unsystematic and often paternalistic	Increasingly systematic, with emphasis on stability and service	Increasingly systematic, with variability related to performance
Control system	Personal control of both strategic and operating decisions	Personal control of strategic decisions, with increasing delegation of operating decisions through policy	Delegation of product-market decisions within existing businesses, with indirect control based on analysis of "results"
Strategic choices	Needs of owner versus needs of company	Degree of integration, market-share objective, breadth of product-line	Entry and exit from industries; allocation of resources by industry; rate of growth

Source: Bruce R. Scott, *Stages of Corporate Development* (Case Clearing House, Harvard Business School). Copyright © 1971 by the President and Fellows of Harvard College.

Figure 1. Evolution of strategy and structure of the Fortune "500," 1950-1970.³¹



Source: Richard Rumelt, *Strategy, Structure and Financial Performance of the Fortune "500," 1950-1970* (unpublished DBA dissertation, Harvard Business School, 1972).

Rumelt (1974) and Scott (1973) deal with four basic categories of strategy: single business, dominant business or product line, related product line, and unrelated product line. Acquisitive conglomerates are a subcategory of the unrelated group. Structure categories are five in number: 1) functional, 2) functional with subsidiary, 3) product divisional, 4) holding company, and 5) geographic divisions.³²

³¹ From Scott (1973, p. 139).

³² The first three organizational formats are the dominant types, as Figure 1 depicts. Simplified organizational charts for each of these three are presented in Appendix B as tables.

To summarize the information portrayed on Figure 1, Rumelt (1974) says that a profound change occurred among the Fortune 500. In 1949 over two-thirds of them were chiefly committed to one business area, and over three-quarters used functional forms of organization. By 1969 the situation had been reversed. Two-thirds of the top 500 U.S. industrial corporations were following broad diversification strategies and three-quarters had adopted the product division organizational format.

The companies best fitting Galbraith's view are the single or dominant businesses with functional, or functional with subsidiaries, management organizations. These groups represent less than half of the Fortune 500 and are declining as a percentage of the total, as Figure 1 clearly indicates.

Scott (1973) uses the data displayed on Figure 1 to support his contention--opposite of Galbraith's--that modern corporations are not insulated from competition. Diversification strategy into related and more profitable areas makes a firm's product divisions face an internal competition for funds among its businesses, where the newer activities compete with the old. Profits are the performance measure. Thus, modern corporations still respond to competitive market forces. Galbraith hypothesized an end to competition because of technological imperatives and management's use of planning to replace the marketplace. Scott counters, saying most large companies have used better planning to build research and development capabilities to identify new, attractive growth and profit opportunities to diversify into.

Since the majority of large firms do this, there is external competition for takeover targets, as well as internal competition by product divisions. Adams and Dirlam (1976) point out that new tendencies in corporate organization--particularly Scott's (1973) shift from Stage I, single product focus, through vertical integration in Stage II, into Stage III of diversification--has brought about a revitalization of competition as a prime mover in shaping the decisions of large, diversified corporations. Accompanying this is the failure of economists to understand the nature and implications of business planning.

These arguments could continue indefinitely. What is important about them is that there has been a rather profound change in the strategies and organizational structures of large firms since 1950. The trend towards diversification has been largely ignored by Galbraith, and used by others to refute Galbraith's arguments. Galbraith also overlooks the importance of marketing, choosing to base his arguments on production processes. Thus, his arguments are incomplete and inappropriate. His concerns about concentrated power remain justified, but this is an ancient argument that defies simple analysis or resolution. It is rather a fact of economic life, and will not be further treated here.

RESEARCH AVENUES

Avenues for research concerning economic structures are many (Ellefson and Chopp 1978). Some effort has gone into assessing the effects of horizontal and vertical mergers on the industry.³³ None, however, has been directed at the effects of conglomerate mergers on the industry.

What is needed is research that addresses:

- the adequacy of economic theory to assess merger effects. Power and its effects should be an important consideration here.
- the motives for mergers. Any merger has a multitude of motives.
- the effects of mergers. There seem to be no good ones or bad ones, in economic terms.
- diversification as a corporate growth strategy. Why corporations need to grow and how diversification can accomplish growth should be explored.

Any attempt to research corporate growth strategies and power relationships in a society must focus on public policy. Such industrial policies deal, of necessity, with treatments of power. Study of the wood-based industries should reveal something about how corporate growth achieved by diversification into the wood-based industry affects the supply of wood and wood products. Society demands this output; the industry supplies it. New firms in the industry may hinder or enhance the ability of their newly acquired wood-based divisions to supply these demands now and in the future.

³³ Le Master (1974) has treated the subject using the industrial organization theory of a relationship between the structure, conduct and performance of an industry, and assessing mergers within that framework. Irland (1976, 1975) also mentions merger activity in the same fashion, drawing heavily on both Le Master (1974) and Mead (1964).

Because of the special basic characteristics of a forestry enterprise, exemplified by the long time periods between investment and return, firms in the wood-based industry must be willing to trade-off on the short-term/long-term time planning horizon to favor the long-term. This is the essence of any workable definition of conservation--to postpone some consumption today for the needs of tomorrow. Firms must be willing to invest now rather than later and to not defer future maintenance in order to build short-term profits. And not as a sacrifice, rather a legacy.

The delicate question is determining the balance weight on each side of the short-term/long-term fulcrum. It is a sensitive issue, and will be affected by many variables, including organizational strategy, organizational structure, and organizational attitudes toward forestry.

Firms with a long history in the industry may be better equipped to meet future demands. Perhaps this feeling--based on the knowledge that sometime in the future society will place a high value on the wood return from investments made today--carries over to the new division of a large diversified firm without previous experience in the industry when a merger is consummated. Then again, maybe it is stifled by the new organizational structure within which it must now operate.

A current assessment of wood supplies (Popovich 1979) suggests that industry better get geared up to spend, plant, and thin as the wood freebies left by Mother Nature in the Pacific Northwest and itinerant farmers in the South are harvested. It is conceivable that firms with a history in

the industry understand this better than those new to it and are better able to react to it by making the necessary investments.

There are three facets of the problem that need to be examined in order to comment on the actual or potential performance of the new entrants. They are how forest resources, processing and manufacturing facilities, and marketing or distribution channels are affected. The immediate task ahead is to determine what questions to ask, why they need to be asked, and who can furnish the answers. How to ask these questions is an important consideration. Firms new to the wood-based industry may be especially reluctant to discuss how they operate their division. Research to date offers the promise of cooperation, however. Hatfield's remark, cited earlier, about supporting these types of applied social science research also offers encouragement.

Enk's (1975) thesis was aimed at describing and analyzing strategic and land-use decision-making by large corporations in the forest products industry. The analysis was based on a literature review, in-depth interviews with executives of 15 wood-based firms³⁴ and a mail questionnaire

³⁴ Of the 15 firms interviewed by Enk (1975), 8 have headquarters on the East Coast:

Great Northern Nekoosa Corp.	New York, N.Y.
Hammermill Paper Co.	Erie, Pa.
International Paper Co.	New York, N.Y.
Riegel Paper Corp.	New York, N.Y.
St. Regis Paper Co.	New York, N.Y.
Scott Paper Co.	Philadelphia, Pa.
U.S. Plywood-Champion Papers Inc.	New York, N.Y.
Westvaco	New York, N.Y.

The remaining 7 companies are headquartered on the West Coast:

Boise Cascade Corp.	Boise, Idaho
Crown Zellerbach Corp.	San Francisco, Calif.
Evans Products Co.	Portland, Ore.
Fibreboard Corp.	San Francisco, Calif.
Georgia-Pacific Corp.	Portland, Ore.
Potlatch Forests, Inc.	San Francisco, Calif.
Weyerhaeuser Co.	Tacoma, Wash.

sent to 5 additional firms.³⁵ Ten firms out of the population of the 30 largest forest products firms chose not to participate in Enk's study.³⁶ Le Master's (1974) thesis used publicly available information to examine the causes and consequences of merger activity of the largest forest industry firms, using the industrial organization analytical triad of structure, conduct, and performance. He felt that a useful area for further research would be to look at the conduct and performance of the relatively new entrants to the wood-based industries. Current research will follow that suggestion, although the industrial organization analytical format will not be the main emphasis.³⁷ Instead, corporate strategy and organization will provide the theoretical background for the analysis. Control

³⁵ The 5 firms answering Enk's (1975) questionnaires were:

Ethyl Corporation	Richmond, Virginia
Hoerner-Waldorf Corp.	St. Paul, Minn.
Inland Container Corp.	Indianapolis, Ind.
The Mead Corp.	Dayton, Ohio
Owens-Illinois, Inc.	Toledo, Ohio

³⁶ In addition, 10 of the top 30 forest products who chose not to participate in Enk's (1975) study were:

American Can Company
 Container Corp. of America (Mobil now, Marcor then)
 Continental Can Co. (now Continental Group)
 Diamond International Corp.
 Flintkote Co. (merged into Louisiana-Pacific, 1979)
 ITT Rayonier Inc.
 Kimberly-Clark Corp.
 Olin Corp.
 Standard Packaging Corp.
 Union Camp Corp.

³⁷ See O'Laughlin (1979).

devices and mechanisms, such as project investment criteria, employed by the central management unit in directing the operations of divisions will be one focus of the investigation. Corporate attitudes toward forestry and the long time period between the investment of capital and the return of wood should also be central to an inquiry.

GLOSSARY

Acquisition. The purchase of one company by another, whereby the purchased company is swallowed up into the purchasing company. Will be used synonymously with merger.*

Affiliate. A company related to another by virtue of ownership, usually less than a 50% ownership. Contrast with subsidiary, where ownership exceeds 50%. Synonymous with joint venture.

Affiliated company. Davidson *et al.* (1974, p. 7): "Said of a company controlling or controlled by another company."

Charter. Davidson *et al.* (1974, p. 13): "Document issued by a state government authorizing the creation of a corporation."

Commerical forest land. Land both available and suitable for growing continuous crops of sawlogs or other industrial timber products (USDA Forest Service 1973, p. 8).

Company. A number of persons united or incorporated for joint action, especially business. Used synonymously with firm.

Conglomerate (verb). To bring together into a cohering mass; to collect or cluster together.

Conglomerate firm (company or corporation). A firm that has achieved substantial growth by conglomerate merger enough so that it no longer has any readily identifiable major line of business it is associated with. To be distinguished from the diversified firm. See Appendix F.

Conglomerate merger. See merger classifications.

Consolidation. A special merger where both companies form a single entity and both lose their former identities (Enk 1975, p. 28).

Corporation. Davidson *et al.* (1974, p. 16): "A legal entity authorized by a state to operate under the rules of the entity's charter." Used synonymously with firm and company.

Diversified firm (company or corporation). A firm that has achieved substantial growth by conglomerate merger, but not enough to lose its identify as associated with its major line of business. To be distinguished from the conglomerate firm.

Diversification. Koch (1974, p. 207): "Diversification is the combination or merger of one firm with one or more other firms that are either at different stages in the same productive process or in totally different productive processes."

* Underlining indicates another term defined in the Glossary.

Division, of a Corporation. An organizational subunit, usually delineated by like product classifications in the modern diversified firm.

Firm. Synonymous with company.

Holding company. Davidson *et al.* (1974, p. 27): "A company that confines its activities to owning stock in, and supervising management of, other companies. Usually owns a controlling interest in the company whose stock it holds."

Horizontal merger. See merger classifications.

Joint venture. Synonymous with affiliate.

Large merger. Merger involving an exchange of assets in excess of \$10 million. Defined by the Federal Trade Commission.

Market. Where and when the buyers and sellers of a commodity set the terms of the sale or exchange of assets.

Market structure. The economically significant features of a market which affect the behavior of firms in the industry supplying the market. Main elements are: seller concentration, product differentiation, barriers to the entry of new firms, buyer concentration, height of fixed costs, growth rate of market demand (Caves 1977).

Megacorporation. A member of Fortune's top 200 (Blumberg 1975).

Megamerger. Merger involving an exchange of assets in excess of \$100 million, as distinguished from a large merger involving \$10 million.

Merger. The act of combining two or more companies into a single entity.

Merger classifications. The Federal Trade Commission classifies mergers in the following groups (Blumberg 1975, p. 73; Mueller 1970, p. 79):

- (1) Horizontal: combination of companies making the same or closely related products in the same market; e.g., two pulp mills in Green Bay, Wisconsin.
- (2) Vertical: a combination of companies with a buyer-seller relationship; e.g., a pulp mill and a paper maker.
- (3) Conglomerate: a residual classification further subdivided into:
 - a) Conglomerate market-extension: a combination of companies making the same or closely related products for sale in different (vertical) geographical markets; e.g., a fine paper distributor in Chicago and a fine paper distributor in Minneapolis.

- b) Conglomerate product extension: a combination of companies making products which do not compete, but which are related in production or distribution; e.g., a fine paper manufacturer and a newsprint manufacturer.
- c) Other conglomerate: where the companies lack any buyer-seller relationships and their products are not functionally related; e.g., a paper mill and a manufacturer of gasoline additives.

Power. The ability of persons or institutions to bend others toward their purposes (Galbraith 1973a).

Conglomerate Power. Adams (1973, p. 145): "Created when a firm's operations are so widely diversified that its survival no longer depends on success in any given product market or any given geographic area."

Corporate Power. Adams (1974, p. 369): "The essence of a firm's economic power is the ability to insulate itself from the social control mechanism imposed by the market or by government or by both. It is the capacity to avoid market or political sanctions for poor performance."

Economic Power. Arndt (1976, p. 33): "...exists when a person is able to get an economic advantage to the disadvantage of others who don't know anything of it or, if they know it, are too weak to protect themselves."

Market Power. Certain characteristics of a market's structure confer economic power on those in the market. It gives a firm some discretion in making pricing and output decisions (Mueller 1970).

Monopoly Power. Synonymous with market power. The essence of the distinction between competition and monopoly is the absence or presence of it (Mueller 1970).

Political Power. The ability to affect decisions made in the political arena.

Social Power. The ability to exert discretionary authority over the lives of individuals. E.g., the Penn Central Railroad cannot earn a decent rate of return on an investment, so cannot be said to have economic power in the true sense, but their operating decisions nonetheless affect the lives of thousands of employees, commuters, and suppliers.

Profit Center. Davidson *et al.* (1974, p. 39): "A segment of a business responsible for its own revenues and expenses."

Subsidiary. Davidson *et al.* (1974, p. 48): "Said of a company more than 50 percent of whose voting stock is owned by another." Contrast with affiliate, where ownership is less than 50 percent.

Supercorporation. Synonymous with megacorporation.

Traditional forest products firm. A firm whose major line of business has been forest products for at least thirty years.

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 b. (April 30) 163(8):13.
 c. (June 15) 163(11):cover ff.
 d. (September 15) 163(17):15.
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APPENDIX A

Merger History and the New Wave of Activity

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Merger Waves

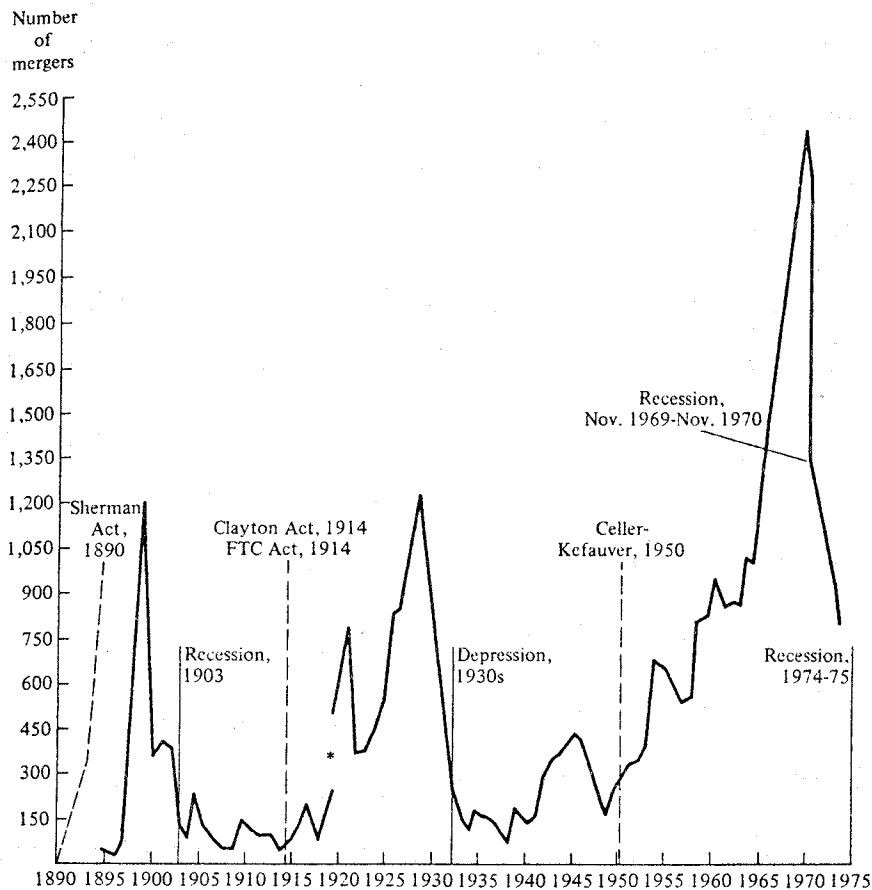
The economic structure of American industry has been shaped to a great extent by merger activity. Students of industrial organization are in general agreement that there have been three distinctly different peaks in merger frequency, each of which has had a lasting impact on the industrial sector of the economy. The first merger wave occurred between 1887 and 1904, the second between 1916 and 1929, and the third started after World War II, continued into the 1960's and perhaps continues on into the present. Table A.1¹ and Figure A.1 indicate and display the levels of merger activity; superimposed on them are dates of the important antitrust policies and economic events.

The first merger wave peaked in 1899, as Table A.1 indicates and Figure A.1 depicts. These mergers resulted in the formation of many of today's large firms, such as AT&T, American Tobacco, DuPont, U.S. Steel, and Standard Oil of New Jersey. In the wood-based industry, International Paper and American Can trace their corporate roots to this wave. As Scherer (1971) points out, the resultant monopoly power was such a striking feature of this wave that it is hard to straight-facedly deny that it was not the major motivating factor.

The second wave of merger activity reached its zenith in 1929. Unlike the first wave, it was not confined to the industrial sector, as large combinations occurred in the public utilities and food products

¹ Table A.1 follows the text, appearing as the last page of this appendix.

Figure A.1 Major merger waves, antitrust laws, and business conditions, 1890-1978.²



*The two series are not directly comparable.

Sources: National Bureau of Economic Research (Nelson), 1895-1920; Federal Trade Commission (and T.N.E.C.), 1919-1974. Reid 1976, p. 3.

sectors. Petroleum and primary metals were the industrial sectors most affected. Eis (1969) demonstrated that this wave was characterized primarily by horizontal mergers. Stigler (1950) says the difference between the first and second merger waves are that the former were mergers for monopoly, the latter were mergers for oligopoly.

² Reid (1976, p. 3).

The main contours of many industries were established by the first two merger movements. Today many of the large basic industries such as steel, automobiles, petroleum, tires, and copper are dominated by the same three or four big companies that held the same position before the Great Depression of the 1930's brought an end to the second merger wave (Mueller 1970).

The third merger wave commenced in 1950. It is debatable whether or not this wave has culminated. Most observers would say that it peaked in 1969. Now, in the late 1970's, merger activity has once again begun to increase. This current activity has the potential of surpassing the historically high 1969 peak, but is of a decidedly different nature than was the activity of a decade ago.

The rise and fall of the conglomerate

Until the recent upsurge began, the most outstanding feature of the third wave was the frequency of mergers that diversified the activities of the acquiring firm, particularly the rise of conglomerate mergers as Table A.2 indicates. A new type of firm was born--the conglomerate. The rise of Gulf & Western, LTV, Textron, ITT, and their like are clearly reflected by the increase of conglomerate mergers in Table A.2. In the 1926-30 time period, only 19.3 percent of all mergers were conglomerate; in 1966-68, 81.6 percent were conglomerate (Koch 1974).

Table A.2 The Changing Character of Mergers, 1926-1968.³

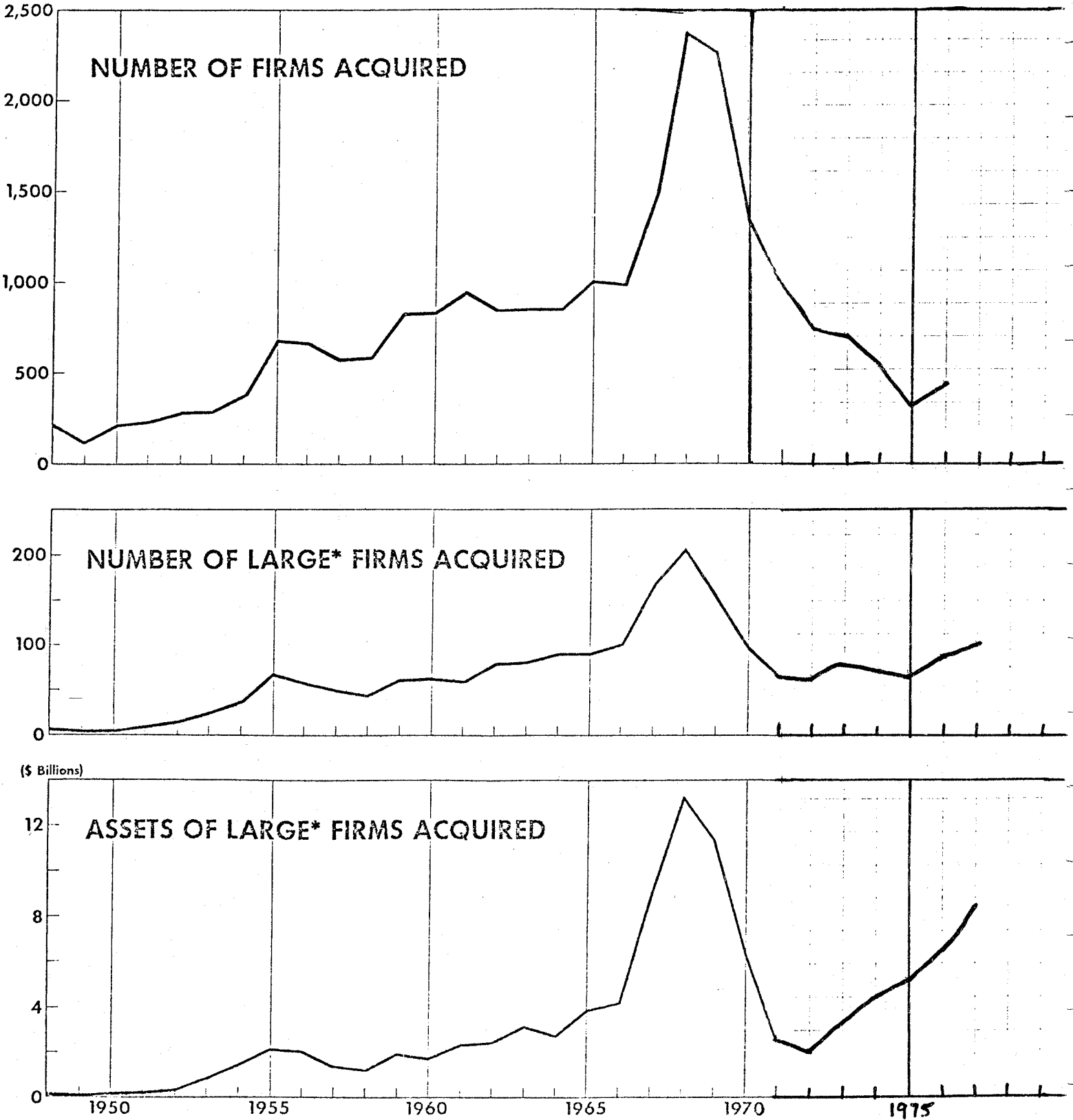
Type of Merger	Time Period					
	1926- 1930	1940- 1947	1951- 1955	1956- 1960	1961- 1965	1966- 1968
Horizontal	75.9%	62.0%	39.2%	30.1%	22.5%	8.6%
Vertical	4.8%	17.0%	12.2%	14.9%	17.5%	9.8%
Conglomerate	19.3%	21.0%	48.6%	55.9%	60.0%	81.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Federal Trade Commission, Economic Report on Corporate Mergers, Hearings on Economic Concentration, Subcommittee on Antitrust and Monopoly, U.S. Senate, 91st Cong., 1st sess. (Washington, D.C.: U.S. Government Printing Office, 1969), p. 63.

Several salient features of the third surge in merger activity are illustrated on Figure A.2. The upper section indicates the trend in total industrial merger activity, and is a truncated blow-up of Figure A.1. The middle and lower sections show the trend in large mergers--those in excess of \$10 million--for the third wave; the middle displays the number of large firms acquired, the lower shows the trend in assets of large firms acquired. The steep and steady rise of large firm assets acquired since 1971 relative to the less steep slope of the trends in the number of firms acquired since 1971 indicates that although relatively fewer firms are now being acquired, they represent much larger individual acquisitions.

³ Koch (1974, p. 209).

Figure A.2 Manufacturing and mining firms acquired, 1948-1978.



*Firms with assets of \$10 million or more.

The significance of the amount of assets involved in the recent large acquisitions is borne out by Table A.3, which indicates the rise in the number of mergers involving deals in excess of \$100 million. These huge deals are called megamergers to distinguish them from the over \$10 million large mergers. Although the total number of mergers is not as great as it was in 1969, the considerably higher average size of deals today now makes the total value of mergers rival that of the late 1960's. The predicted value of mergers for 1979 equals that achieved in 1968, the historic peak (see Table A.4). And, as Business Week (1977) argues, because stock prices are no higher now than then, the figures probably represent about an equivalent amount of assets, despite inflation.

Table A.3 Megamergers: Number of deals exceeding \$100 million.

Year	Number of deals > \$100 million
1979	? ^a
1978	80 ^b
1977	41 ^b
1976	39 ^c ; 38 ^d (23 complete, 15 pending)
1975	14 ^c
1974	15 ^c ; 35 ^d (26 complete, 9 pending)
1973	28 ^c

Source: a) to be determined
 b) Reilly (1979)
 c) Business Week, 11/14/77
 d) Bureau of Economics, Federal Trade Commission, Statistical Reports on Mergers and Acquisitions.

The Megamerger

The importance of large and megamerger today make the number of total acquisitions less important as a trend indicator or time comparison statistic. Exchanged assets, represented on the lower portion of Figure A.2, and total values involved in mergers, depicted on Table A.4, are now the more relevant dimensions for comparison. And they are approaching the historic highs of 1969.

Table A.4 Total value of reported mergers (billions of dollars.)

Year	Total value of mergers	Source	Notes
1979	43.0	a	(projected estimate)
1978	34.2	b	
1977	21.9	b	
1976	20+	b	(highest since 1969)
1975			
1974			
1973			
1972			
1971			
1970			
1969	24+	c	
1968	43	b	(historic peak)

Source: a) Paper Trade Journal, 8/15/79, p. 8.
 b) Reilly (1979)
 c) Business Week, 11/14/77 (W. T. Grimm & Co. Statistics).

The current surge in activity is significantly different than that of the 1960's on three distinct counts: 1) the major acquiring companies are old-line conservative titans such as General Electric, Atlantic Richfield, and Mobil--not the freewheeling conglomerates who fueled the meteoric rise in 1960's conglomerate merger activity; 2) more acquirers are big companies from abroad--for example, Germany's Bayer and Switzerland's Nestle (the 15th and 19th biggest non-U.S. firms) bidding for Alcon Laboratories--who are drawn to the U.S. by the declining dollar; and 3) most major deals today are done in cash because of the strong cash positions of big U.S. businesses, accompanied by a hesitancy to invest in new plants. In the 1960's, most deals were built around packages of securities (Business Week 1977).

Another significant difference that Business Week (1977) mentions as being related to large cash reserves is the increasing use of cash tender offers, many of them hostile. Resultant bidding between corporate giants for takeovers can become frenzied, driving stock prices higher and higher, to as much as 80% above the market price before bidding began.

Wood-based industry examples

These new facets of merger activity can be illustrated with forest industry examples. Mead successfully fought off a hostile tender offer takeover bid by Occidental Petroleum in late 1978, the latter citing the ferocity of the opposition as the reason the bid was terminated (Paper Trade Journal 1979a).

Rumors that Phillips Petroleum or another oil giant might attempt to take over Crown Zellerbach caused the New York Stock Exchange to suspend trading of Crown Zellerbach stock on May 9, 1979, when it jumped from \$33 to \$37 in two days after the rumor hit Wall Street. Analysts estimate that it would take \$1.4 billion to consummate this deal. Crown Zellerbach is an attractive target due to its large timberland base, which makes the stock actually worth \$80 a share as opposed to the \$37 when trading was halted (Paper Trade Journal 1979c).

Clephane (1978b) presents information on 34 timberland owning firms. One of the many interesting findings is that 3 of these 34 firms have undervalued timberlands on their books to the extent that their stock price needs to be multiplied by a factor exceeding 3 to reflect the actual value of their owned timberland. Crown Zellerbach is the one major firm among the 3 requiring the multiplier 3. A major timberland owning firm will be defined as a firm owning timber and land with an actual 1978 value exceeding one billion dollars.

The population of these \$1 billion major timberland owning firms is a select group of 13 wood giants. Some summary data on them are presented in Table A.5.

As Table A.5 shows, Weyerhaeuser, with total timber and land values of almost \$9 billion, is far and away the leader in this dimension. The next three largest--International Paper, Georgia-Pacific, and Crown Zellerbach--barely exceed Weyerhaeuser's total market value of land and timber assets. And the case of the recent International Paper-Bodcaw merger, the

Table A.5 The billion dollar wood giants.

Company	Estimated Valuation (millions of dollars)		Acres Owned (thousands)	Timber Inventory (millions of cubic feet)	Timber Value Premium to	
	Total	Timber			Book Value	Stock Price 4/20/78
Weyerhaeuser	8,985	8,075	5,865	12,500	16.9	2.62
International Paper	3,265	2,360	8,503	8,380	8.3	1.77
Georgia-Pacific	3,170	2,675	3,900	5,560	8.2	1.07
Crown Zellerbach	2,610	2,340	1,879	4,010	14.2	3.25
Champion	1,670	1,290	3,083	3,770	5.5	1.50
Boise Cascade	1,650	1,420	2,632	3,610	10.0	2.18
Burlington Northern	1,450	1,320	1,500	2,965	N.A.	2.51 ⁵
ITT Rayonier	1,235	1,055	1,200	2,035	9.7	0.29
St. Regis	1,225	925	3,151	3,340	7.8	1.41
Louisiana- Pacific	1,165	1,090	696	2,040	8.2	2.69
Scott Paper	1,080	900	2,958	3,155	12.1	1.87
Pacific Lumber Co.	1,015	990	165	1,320	145.0	2.10
Potlatch	880	740	1,297	2,360	19.1	2.00

Source: Clephane (1978b).

N.A. = Not applicable.

largest to date in the wood-based industry, points to the conclusion that Clephane's estimations from early 1978 may be very conservative in 1979's merger market when land and timber appraised at \$405 million along with mineral rights appraised at \$70 million for an appraised total of \$475 million are sold to the highest bidder for \$805 million. The particular players and their strategies will be introduced shortly.

Relying on the information of Clephane (1978b), 7 firms out of the group of 34 studied need a multiplier between 2 and 3 applied to their stock price as of April 30, 1978, to reflect true timber values. The major owners--billion dollar wood giants--in this group are Boise Cascade, Burlington Northern, Louisiana-Pacific, Pacific Lumber Co., Potlatch, and Weyerhaeuser. Eleven firms of the 34 need a multiplier between 1 and 2. Major owners in this group are Champion International, Georgia-Pacific, International Paper, St. Regis, and Scott Paper.

The only billion dollar wood owning firm in Clephane's (1978b) group that has not been mentioned is ITT Rayonier. This firm and 12 others in the group of 34 are to have a multiplier of less than 1 applied to their stock price to adjust for the timber value premium. In other words, these stocks are overvalued in relation to the estimated value of their timberlands relative to 4/20/78 stock prices. Those with multipliers exceeding 1 are similarly undervalued. In the overvalued group of 13 with ITT Rayonier are 6 other diversified firms nonforest products based that operate wood-based divisions. No diversified entrants to the industry in Clephane's group have a stock price multiplier exceeding 1, which would qualify them to be termed undervalued on timberland ownership.

The largest merger deal in the wood-based industry to date--\$805 million--resulted from the 1979 bidding war for the closely held Bodcaw Co. waged between International Paper and Weyerhaeuser, with Mobil as an ally of the latter wood-based firm because of some oil and gas properties involved. Mobil, acting alone; Tenneco; and the Hunt family's Placid Oil had submitted earlier bids for Bodcaw, whose holdings were appraised at \$405 million for land and timber and \$70 million for mineral rights. International Paper won Bodcaw with the high bid and immediately sold off the oil properties to Placid Oil for \$188 million. Of further interest, International Paper had only recently divested its General Crude Oil Co. subsidiary that it had acquired in early 1975 to Mobil for \$800 million after a bidding war for it saw Gulf, Mobil, Tenneco, and Southland Realty in competition (Paper Trade Journal 1979b, d; Fortune 1979).

As Fortune (1979) points out, the reasons International Paper wanted Bodcaw so badly were strategic. Pulp and paper, I.P.'s forte, are the least lucrative segments of the industry. I.P. was eager to get into more profitable lumber and plywood operations. Bodcaw's lands and automated low-cost mill are in the heart of I.P.'s home turf. And above all, I.P. wanted to keep Weyerhaeuser from intruding into its domain. I.P. leads Weyerhaeuser in sales, but lags in profits. I.P.'s 1978 sales and profits were \$4.2 billion and \$234 million, respectively; Weyerhaeuser's figures were \$3.8 billion sales and \$371 million profits.

So it is clearly evident that the new wave of merger activity has affected the wood-based industry. The implications of the effects are less clear. It is, however, now widely recognized that timberlands are the key to the future in the forest products industry. And firms are aggressively competing for takeover targets. Big oil's "windfall" profits will keep them active in the market for corporate control. As Reilly (1979) reports, a new Kennedy proposal for legislation would prohibit them from entering into megamergers. They would not be allowed to acquire firms with assets over \$100 million. This proposal is on a "very fast track," has lots of support, and is viewed by antitrusters as the wedge they need to move a more comprehensive anti-conglomerate merger bill ahead.

Table A.1 Number of reported mergers and acquisitions in manufacturing and mining, 1895-1978.*

Sherman Antitrust Act (1890)		Clayton and FTC Acts (1914)		Celler-Kefauver Antimerger Amendment (1950)	
Year	Annual total	Year	Annual total	Year	Annual total
1895	43	1915	71	1951	235
1896	26	1916	117	1952	288
1897	69	1917	195	1953	295
1898	303	1918	71	1954	387
1899	1,208	1919	171	1955	683
1900	340	1920	206	1956	673
1901	423	1921	487	1957	585
1902	379	1922	309	1958	589
1903	142	1923	311	1959	835
1904	79	1924	368	1960	844
1905	226	1925	554	1961	954
1906	128	1926	856	1962	853
1907	87	1927	870	1963	861
1908	50	1928	1,058	1964	854
1909	49	1929	1,245	1965	1,008
1910	142	1930	799	1966	995
1911	103	1931	464	1967	1,496
1912	82	1932	203	1968	2,407
1913	85	1933	120	1969	2,307
1914	39	1934	101	1970	1,351
		1935	130	1971	1,011
		1936	126	1972	690
		1937	124	1973	667
		1938	110	1974	505
		1939	87	1975	355
		1940	140	1976	461
		1941	111	1977	
		1942	118	1978	
		1943	213		
		1944	324		
		1945	333		
		1946	419		
		1947	404		
		1948	223		
		1949	126		
		1950	219		

Source: Ralph L. Nelson, Merger Movements in American Industry 1895-1956, Princeton: Princeton University Press, 1959, p. 37; Federal Trade Commission, Report on Corporate Mergers and Acquisitions, Washington, D.C., 1955; and Federal Trade Commission, Bureau of Economics.

*Reid (1976, p. 146).

APPENDIX B

What is a Corporation?

An Organizational Overview of the Mead Corporation

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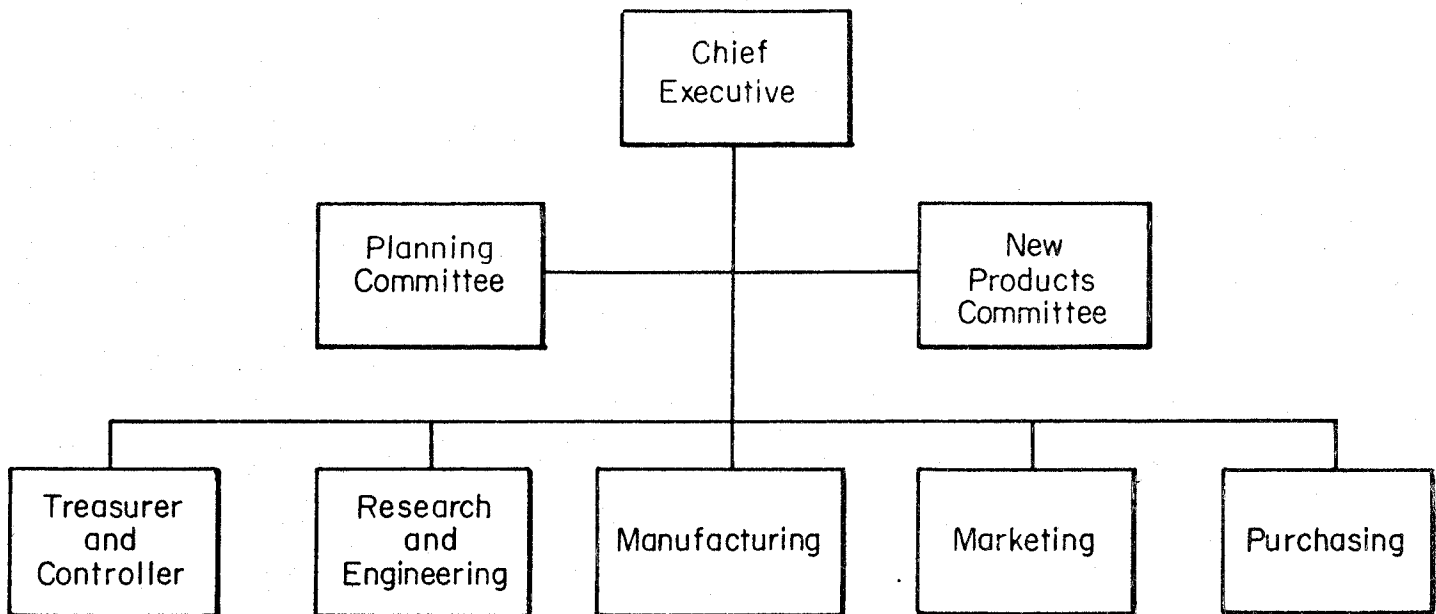
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Corporate Organization Structure

To gain a proper perspective on the complexity of a large diversified corporation, it is necessary to get down to cases. To facilitate the understanding of how to look at an organization, a chart is generally prepared to graphically link the important elements of the organization. The following three figures from Rumelt (1974) depict the three most common forms of the organizational structure of a large firm.

The functional organization, depicted on Figure B.1, has divisions demarcated by the various functions any large, industrial firm must perform. This format lends itself well to single product businesses.

Figure B.1 A Simplified Functional Organization

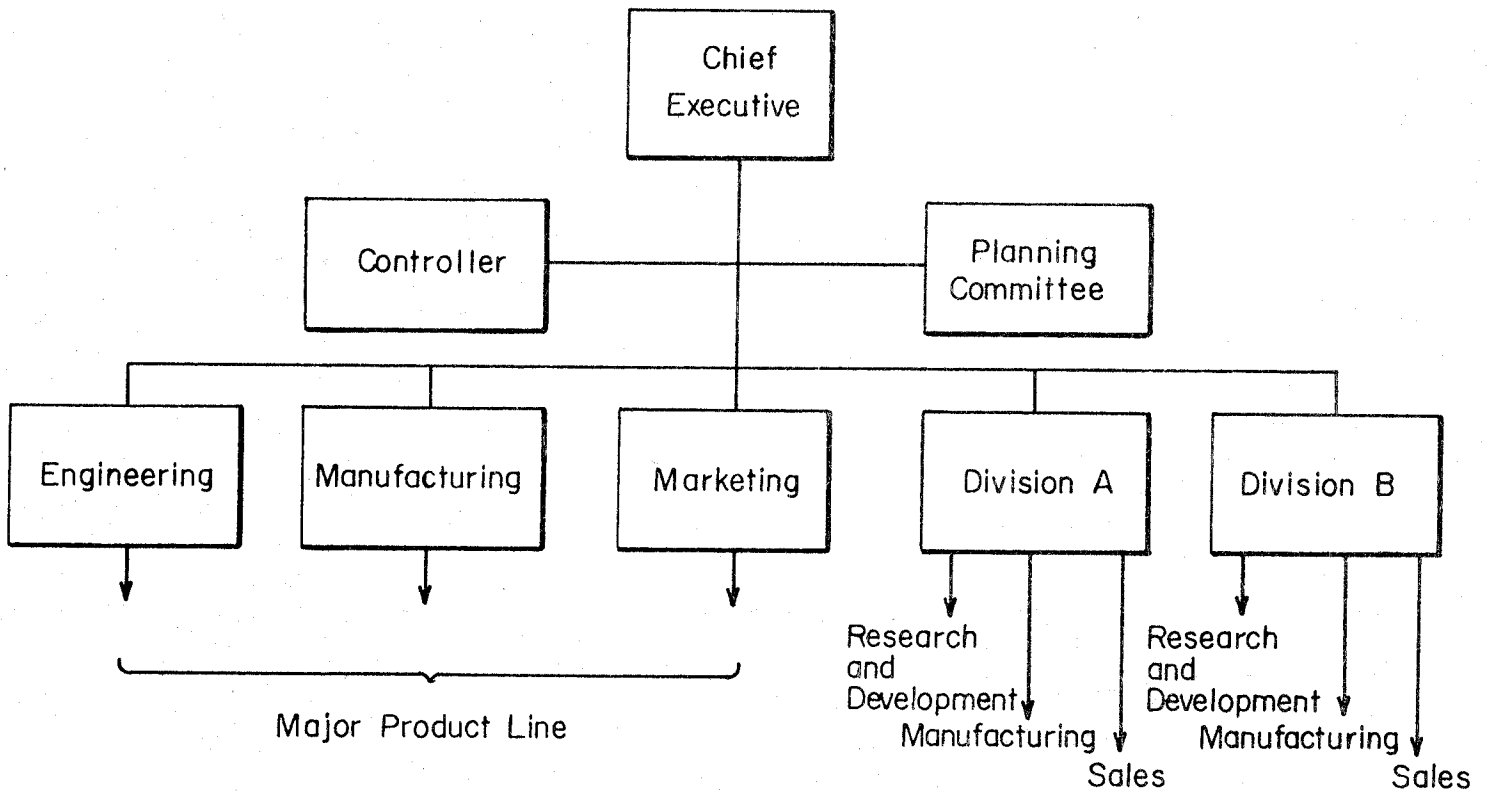


NOTE: There is great variety in the way different firms define functions and in the ways in which they are coordinated and related. This chart illustrates one possible pattern.

Source: Rumelt (1974, p. 34).

Figure B.2 illustrates a modification made to the functional format to accommodate diversification. In essence, this is entering new businesses or industries that serve to supplement, for whatever reason, what was once the only business line and still remains as the most significant segment of the firm. It adds subsidiaries to the functional organization.

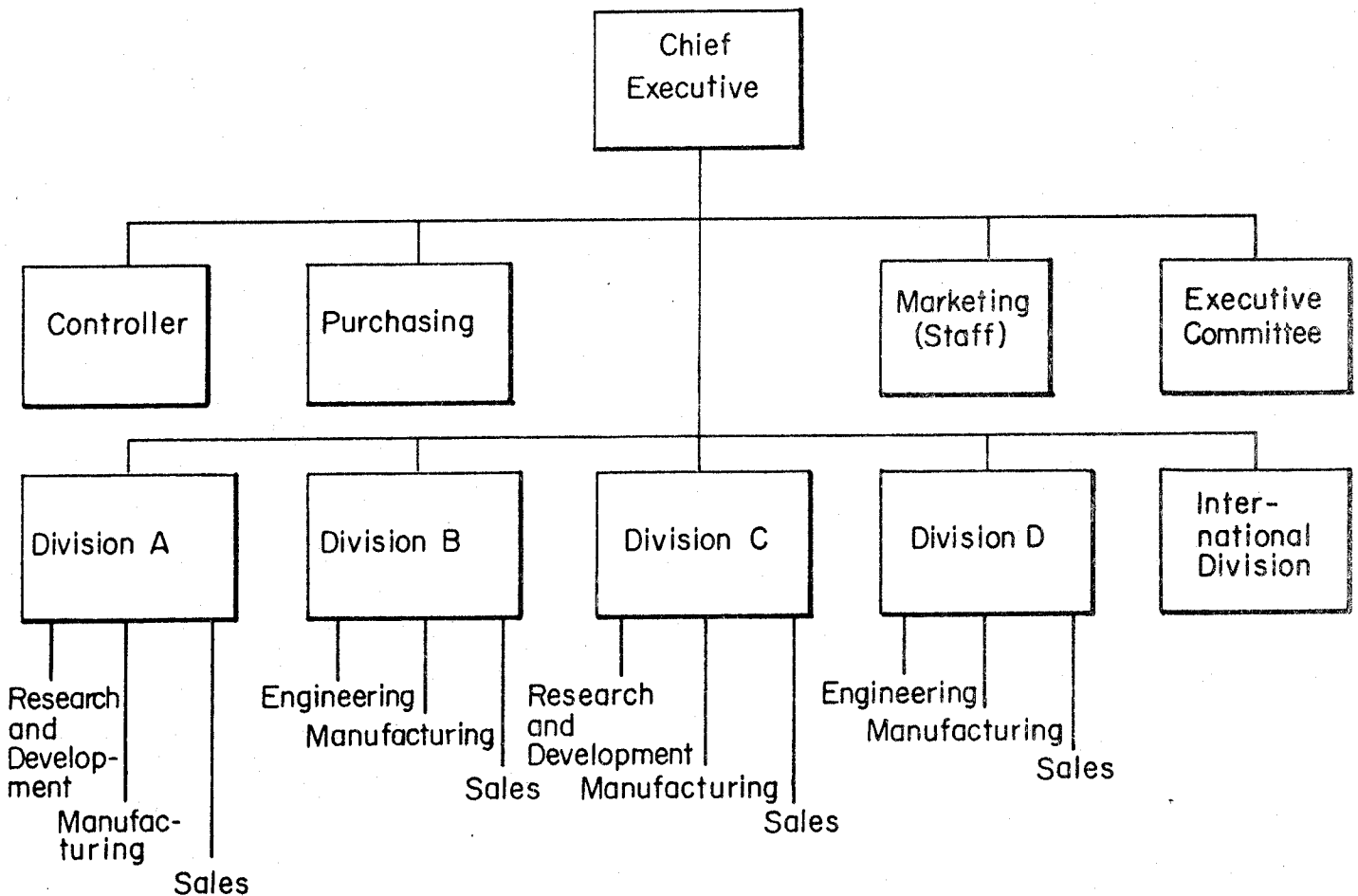
Figure B.2 A Simplified "Functional-with-Subsidiaries" Organization.



Source: Rumelt (1974, p. 39).

Figure B.3 typifies, again in simplistic fashion, the product-division organization that Rumelt (1974) found 70% of a sample of almost 300 of the Fortune 500 members were using as their organizational pattern in 1970. Rich (1979a, b) in a recently completed study, found that 16 of the top 20 forest products firms now use this format.

Figure B.3 A Simplified Product-Division Organization.



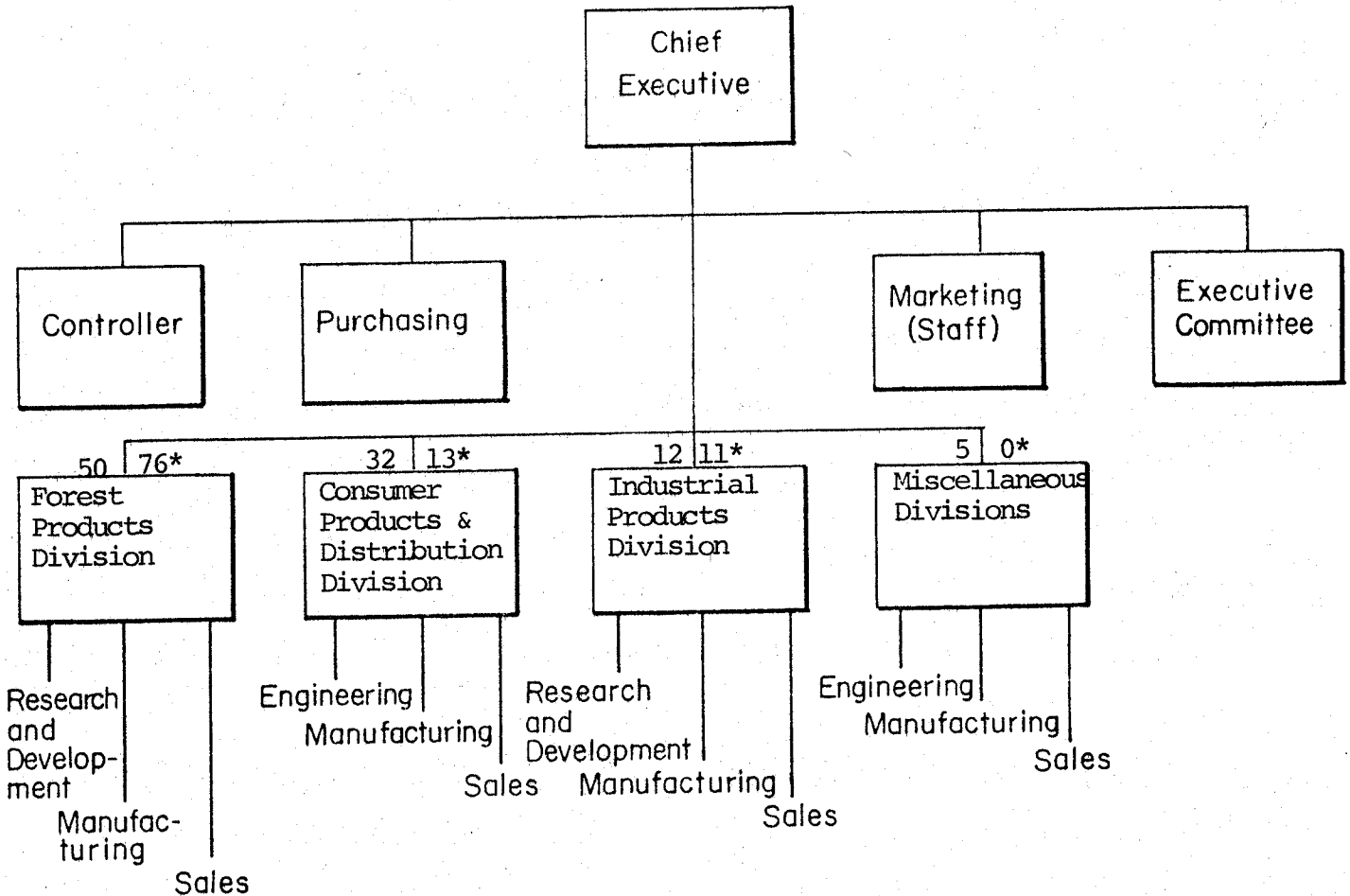
Source: Rumelt (1974, p. 35)

Mead Corporation's Structure

The remainder of this appendix will look in depth at a wood-based firm. Mead Corporation--ranked 127 in the 1978 Fortune 500, up from 138 in 1977 and the recent successful fender-offer of a hostile tender offer resulting in a bitter battle with bidder Occidental Petroleum--serves as the case. An attempt to summarize the vastness of its scope onto an organizational chart is first presented on Figure B.4. Any such attempt to simplistically treat such a complex entity, as the rest of this appendix will indicate that Mead is, requires that vast amounts of detail be lost. Ownership patterns are obscured by large numbers of businesses, divisions, subsidiaries, affiliates, and joint ventures with other corporate entities. An organization that employs 28,000 people is hard to summarize in a few pages.

The Mead organizational structure chart begins with Figure B.4, an adaptation of Rumelt's (1974) organization chart for the product-division set up, previously presented on Figure B.3. The generic divisions have been replaced with Mead's 3 major business sectors, plus a miscellaneous category. These 4 categories correspond to Rumelt's product-divisions on Figure B.3. Also displayed on Figure B.4 is the contribution of each product-division to overall corporate revenues and earnings, which are superimposed at interdivisional nodes. The four divisional categories and their percent contributions to sales and earnings are Forest Products (50,76); Consumer Products and Distribution (32, 13); Industrial Products (12,11); and Miscellaneous (5,0).

Figure B.4 Mead Corporation: Simplified Product-Division Organization.



* % of total revenues/earnings.

Adapted from Rumelt (1974, p. 35).

As the Mead corporation is involved in 3 major business sectors, comprised of 26 distinct businesses, constructing a simple chart is no longer so simple. From one perspective, that of the central management group, called in this case the Mead Corporation, the simple product-division organization chart (Figure B.3 in general, and B.4 in this case) is all that is necessary, for each division is generally regarded by the

central decision making group as a profit center. The central group determines the direction the whole corporation moves in, the divisions in turn must figure out how to operate to meet the centrally imposed constraints. The operating division is, of course, physically much more than the profit center concept might suggest. In reality it is a vast complexity of groups, divisions, businesses, affiliates, subsidiaries, and joint ventures.

The following chart, Figure B.5, adds these business units to the simple organization chart in Figure B.4. The simple chart has expanded to reveal complex layers of organization beneath the simple product-division categories. Because some of Mead's 26 distinct business lines are called divisions, others businesses; some subsidiaries, others affiliates, the term product-division becomes confusing. It shall be referred to as a sector henceforth, in order to distinguish Mead's three distinct major business sectors (product-division categories) from some of the business divisions that form the product-division major business sectors. This sector layer, as well as the group layer and division, business, affiliate layer, are identifiable on Figure B.5, where the ovals represent either a division, business, or affiliate; and a rectangle represents a sector or group.

As Figures B.4 and B.5 indicate, the Forest Products Division (sector) is the lifeblood of Mead, contributing 50% of all corporate sales and 76% of all earnings in 1977. But considering that Mead is generally regarded as a forest products company, it is perhaps surprising that these figures are not higher. Mead is obviously a highly diversified organization.

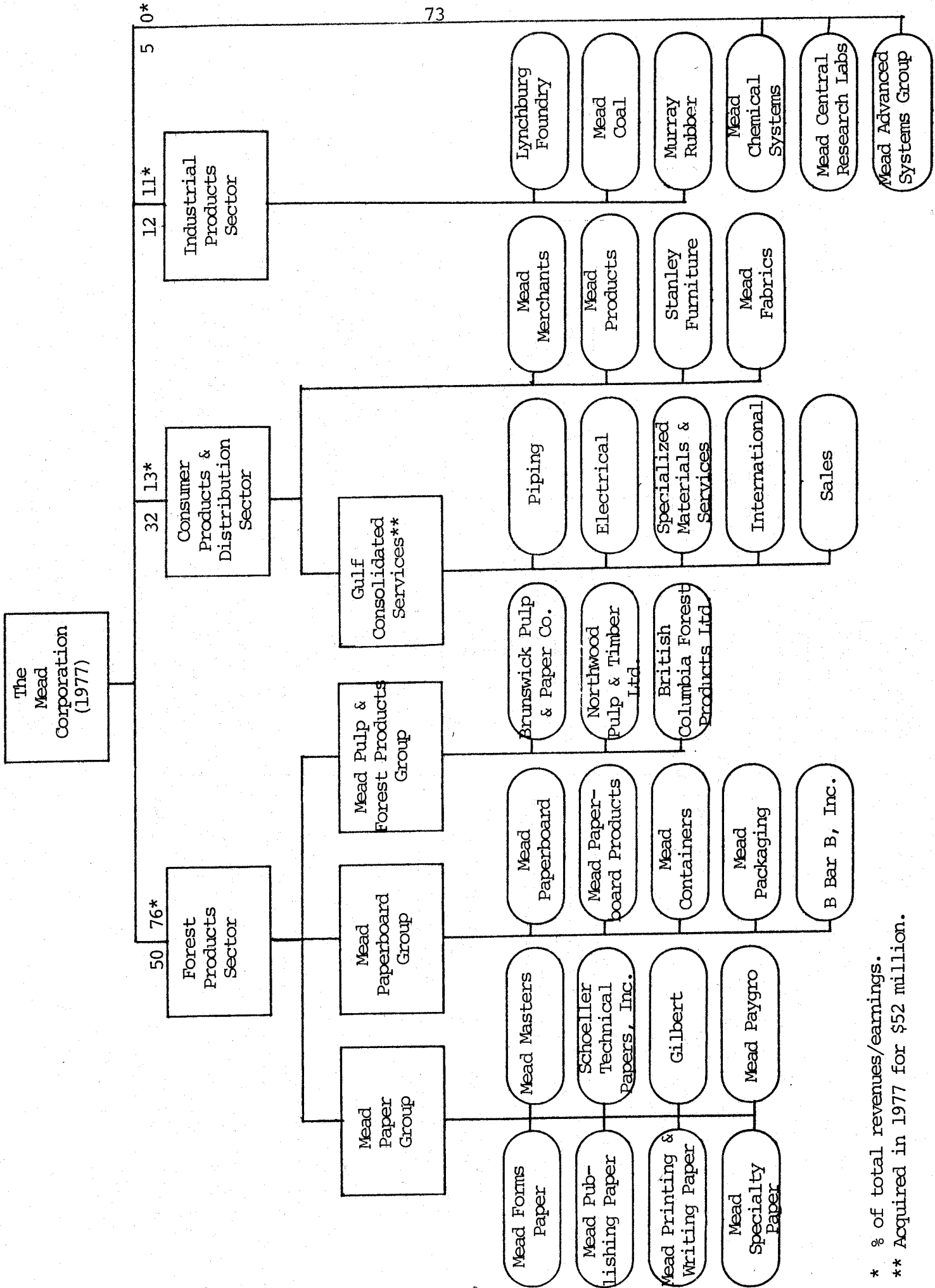
As a contrast, Champion International--number 74 on the 1978 Fortune 500, down from 68 in 1977--had 88% of its sales and 90% of its income¹ in 1976 from wood-based products.

Figure B.6, which follows, charts Mead's Forest Products product-division sector down through its three groups--paper, paperboard, and pulp and forest products--into the complex maze of the various divisions, businesses, and affiliates that operate the many mills and plants of the Mead Forest Products sector.

The remainder of this appendix is taken verbatim from Ellefson and Chopp (1978, p. 215-230, 244). This material served as the basis of the presented Mead organization charts, and should serve further to illustrate how complex a large corporation can be. Not all the detail presented could be captured on the one-page charts.

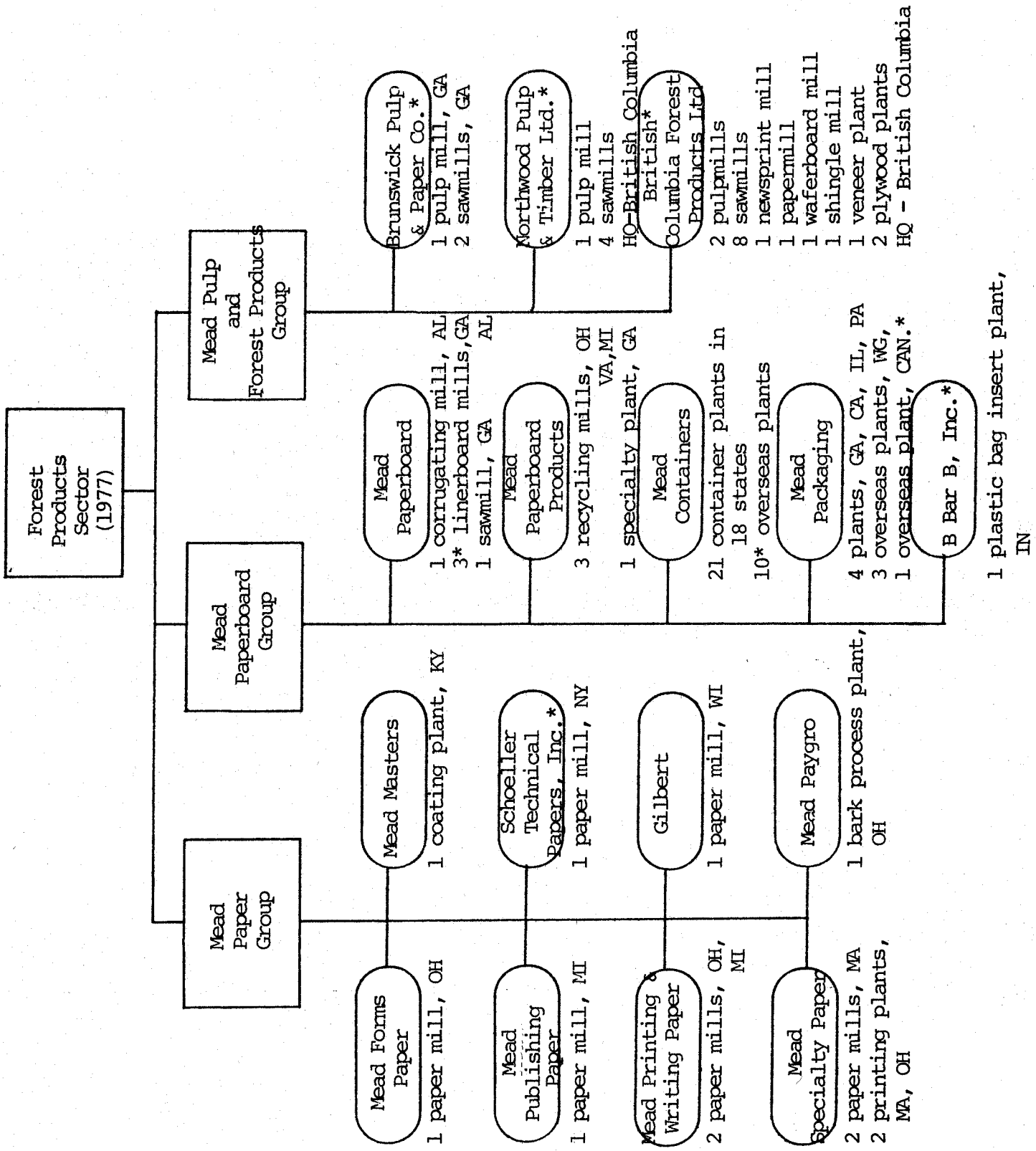
¹ The terms income and earnings used respectively for Champion and Mead may or may not be comparably defined.

Figure B.5. Mead Corporation: Product-division sectors and groups; with divisions, businesses, and affiliates.



* % of total revenues/earnings.
 ** Acquired in 1977 for \$52 million.

Figure B.6. Mead Corporation: Forest Products Sector.



* affiliate

Intercompany relationships

The forest products industry is often portrayed as an industry comprised of a vast multitude of independently operating firms. For the most part this is not the case. Rather, much of industry can be portrayed as a bewildering maze of complex conglomerate firms and independent operations that were woven together by joint ventures, subsidiaries, affiliates and the like.² Further, it is not uncommon for some forest products firms to be wholly or partly owned companies whose primary interest is not forest products and who are based far from any forest region. To illustrate the presence and prevalence of intercompany relationships, this section will focus on the Mead Corporation--a firm of long tradition in pulp and paper yet currently diversifying its product offerings. As will become obvious, the Mead Corporation is a large lumber producer. In fact, the Corporation is one of North America's largest lumber producers--even though it failed to show up in Forest Industries tabulations of lumber producers.

Portraying a company's organizational structure is surprisingly difficult. Data sources are imperfect. Terms carry different definitions and are often used interchangeably, e.g., subsidiaries and divisions. Data

² Terms such as "joint venture," "affiliate," and "subsidiary" are liberally used throughout the corporate literature. Unfortunately, standardized definitions of such terms are elusive. For purposes of this report, a subsidiary company is defined as one having the majority (50 percent plus) of its assets owned by another company. An affiliate company is defined as one having less than a majority (less than 50 percent but greater than zero percent) of its assets owned by another company. "Joint venture" and "affiliate" will be used interchangeably.

and definition problems aside, an attempt will be made to illustrate the fact that forest product companies are not always independent entities. Rather, they may be captives of a larger corporate structure.

The Mead Corporation

While more than half of the Mead Corporation's sales come from its family of forest products--pulp, paper, paperboard, shipping containers, and packaging--the company balances its growth by serving other expanding markets.

Consumers know Mead for its school and stationery products and the stylish Stanley Furniture line. Major industries know Mead for engineered castings, pipe, metallurgical coal, and custom-molded rubber products. Two Mead businesses are based on an unusual degree of expertise in the distribution of products--the Mead Merchants (paper and related industrial supplies) and Gulf Consolidated Services (pipe, fittings, valves, and electrical supplies).

Among the important resources which stand behind Mead's operations are 1.4 million acres of U.S. timberlands and harvesting rights sufficient to support the extensive pulp and lumber operations of Mead's Canadian affiliates. Mead is organized as 26 distinct businesses with 80 mills and plants and 71 distribution centers. The company employs 28,000 men and women (The Mead Corporation 1977).

The Mead Corporation is an aggressive company which places emphasis on product distribution and diversification. From a historical perspective, the effect of the company's 1950-1970 external expansion activity (i.e.,

mergers and acquisitions) was to make the firm's organizational structure much more vertically integrated, its market much broader and deeper, and its business activity extensively diversified outside of the paper and paperboard industries (Le Master 1974) (Table 106).

Organizational Structure

The Mead Corporation is structured primarily into three business sectors, namely:

- forest products
- consumer and distribution
- industrial products

Three primary sources of information used to explore these sectors are: the Mead Corporation 1977 Annual Report; Moody's 1977 Industrial Manual; and Lockwood's Directory, 1978, published by Bulkley Dunton and Co.

Forest Products Sector

The Mead Corporation forest products sector accounted for 50 percent of the company's 1977 sales and 76 percent of the company earnings in the same year. The sector is composed of three major groups, namely, the Mead Paper Group; the Mead Paperboard Group; and the Mead Pulp and Forest Products Group.

Table B.1 Domestic mergers and acquisitions by the Mead Corporation, 1950-1970.

Date	Firm	Asset Size (million dollars)	Location of Operations
11/55	Chillicothe Paper Co.	7.8	OH
12/56	Atlanta Paper Co.	10.2	NC, NY, OH, PA, WI
12/56	Jackson Box Co. ^c	5.5	FL, GA
6/57	Cleveland Paper Co.	.4	OH
6/57	Industrial Container & Paper Corp.	2.0	IL
8/57	Excello Paper Products Co.	2.3	OH
10/57	Hurlbert Paper Co.	4.9	MA
10/57	Shelby Paper Box Co.	3.0	TN
1/58	Ottawa River Paper Co.	3.3	OH, MI
6/58	Grand Rapids Container Co.	.8	MI
7/58	Miller Container Corp.	.2	KY
10/58	Wrenn Paper Co.	1.6	OH
/58	Birmingham & Prosser Co.	10.2	No Cen
1/59	A & P Corrugated Box Corp.	7.3	MA
1/59	Industrial Container Corp.	1.6	MD
3/59	Gibraltar Corrugated Paper Co.	5.7	NJ
4/59	Delavans, Inc.	1.2	NY
11/60	Gilbert Paper Co.	5.9	WI
11/60	Chatfield & Woods Co.		No Cen
9/61	Waterloo Container Corp.	2.4	IA
10/61	Dixon Paper Co.	4.2	CO
10/62	Lockfold Paper Box Co.		PA
11/62	Oakland Paper Box Co.	.3	CA
10/63	Beecher, Peck & Lewis Papers, Inc.	6.5	MI
/63	Noland Paper Co.		CA
3/64	Taylor Container Co.	.6	MO
4/64	Fine Papers, Inc.	.5	NY
6/64	Edwin F. Deline Co.	.3	CO
7/64	Morart Gravure Corp.	2.3	MA
10/64	Celu-Kote, Inc.		MI
10/64	Evert Container Corp. ^c		WI
2/66	Tri-State Paper Co.		MD
6/66	Westab, Inc.	30.8	U.S.
9/66	Timberlands of M. G. and J. J. Dorn, Inc.		
12/66	Sargent Art Corp. ^b		PA
/66	Union Paper & Twine Co.		MI
8/67	Payne & Co., Inc.	1.7	OH
9/67	Becky Bag Co.		TN
9/67	Cramer Force Co., Inc.		NY
10/67	Payne Poly Fabricators, Inc.	.2	OH
12/67	Colonial Paper Co.		OH
/67	Amarillo Paper Co.		TX
4/68	Data Corp.	2.2	OH
5/68	Mac Sim Bar Division of Hoerner Waldorf		MI
7/68	American Paper & Plastic Products, Inc.		WI
7/68	Roane Electric Furnace Co.		TN
7/68	Schoeller Technical Papers, Inc. ^b		NY
9/68	Florida Paper Mill Products, Inc.		FL
11/68	Graham-Jones Paper Co.		FL
11/68	SE & M Vernon, Inc.	11.9	MO, NJ
11/68	Woodward Corp.	28.0	S, CA, IN, IL
2/69	Photogrametry, Inc.	.4	MD
3/69	Tulsa Paper Co.		OK
8/69	Highland Products		TN
8/69	Nashville Products		TN
9/69	Stanley Furniture Co.	24.9	NC, SC, VA
11/69	Otto Schmidt, Inc.		NY, PA

Source: Le Master 1977.

Mead Paper Group's divisions, affiliates, businesses, and their locations are (The Mead Corporation 1977):

Mead Forms Paper: paper mill at Chillicothe, Ohio

Mead Publishing Paper: paper mill at Escanaba, Michigan

Mead Printing & Writing Paper: paper mills at Chillicothe, Ohio, and Kingsport, Tenn.

Mead Masters: a coating plant at Florence, Kentucky

Mead Specialty Paper: two paper mills and a printing plant at South Lee, Massachusetts, specializing in saturating and overlay products for decorative laminates; a gravure plant and design center at Dayton, Ohio

Schoeller Technical Papers, Inc.*: a technical and photographic paper mill at Pulaski, New York

Gilbert: a paper mill at Menasha, Wisconsin, specializing in watermarked cotton-fiber grades

Mead Paygro: a bark processing operation at Chillicothe, Ohio, producing mulch for gardening and landscaping

*Affiliates

Mead Paperboard Group's divisions, affiliates, businesses, and their locations are (The Mead Corporation 1977):

Mead Paperboard: a corrugating medium mill at Stevenson, Alabama. Georgia Kraft* linerboard mills at Macon, Georgia; Phenix City, Alabama; and Rome, Georgia; and a sawmill at Greenville, Georgia

Mead Paperboard Products: three recycling mills at Cincinnati, Ohio; Lynchburg, Virginia; and Otsego, Michigan; a paperboard specialty plant at Macon, Georgia

Mead Containers: container plants at Albert Lea, Minnesota; Amarillo, Texas; Atlanta, Georgia; Bridgeview (Chicago), Illinois; Cincinnati, Ohio; Covington, Georgia; Durham, North Carolina; Flint, Michigan; Fort Dodge, Iowa; Fort Smith, Arkansas; Gardner, Massachusetts; Lewisburg, Tennessee; Louisville, Kentucky; Memphis, Tennessee; Milwaukee, Wisconsin; St. Joseph, Missouri; Spartanburg, South Carolina; Syracuse, New York; Toledo, Ohio; Washington Court House, Ohio; and Waterloo, Iowa. Color-Corr® plant at Louisville. West Germany: container plants* at Tornesch, Illingen, Wepoba (West Berlin), and Bottrop; two secondary fiberboard mills* at Meldorf. Spain: container plants* at Madrid, Seville, and Córdoba; secondary fiberboard mill* at Córdoba; continuous business forms plants* at Madrid and Seville. Lebanon: container plant* and molded pulp plant* at Beirut

Mead Packaging: packaging plants at Atlanta, Georgia; Buena Park, California; Chicago, Illinois; Fairless Hills, Pennsylvania; Trier, West Germany; Roosendaal, The Netherlands; Chateauroux, France; and Toronto, Canada*; subsidiary marketing companies in Brazil, Canada, Hong Kong, and Japan; joint marketing ventures in Italy, Japan, and Australia; licensees in 15 countries

B Bar B, Inc.*: a plant at New Albany, Indiana, producing plastic bag inserts for corrugated boxes

*Affiliates

Mead Pulp and Forest Products affiliates and businesses which supply pulp to the Mead Corporation are as follows (The Mead Corporation 1977):

Brunswick Pulp & Paper Company*: a pulp mill and two sawmills. Headquartered at Brunswick, Georgia

Northwood Pulp and Timber Ltd.*: a pulp mill, four sawmills, and logging operations. Headquartered at Prince George, British Columbia

British Columbia Forest Products Ltd.*: two pulp mills, eight sawmills, logging operations, a newsprint mill, a paper mill, a waferboard mill, a shingle mill, a veneer plant, two plywood plants, a lumber assembly wharf, and deep-sea dock facilities. Affiliated pulp and lumber complex under construction in Quebec. Headquartered at Vancouver, British Columbia

***Affiliates**

Consumer and Distribution Sector

The Mead Corporation consumer and distribution sector accounted for 32 percent of the Corporation's sales in 1977 and 13 percent of its earnings. Mead enlarged the potential of this sector in 1977 with the acquisition of Gulf Consolidated Services and the R. W. Norman Company. Gulf Consolidated was acquired for more than \$52 million.

The divisions and affiliates of the consumer and distribution sector are as follows (The Mead Corporation 1977):

Gulf Consolidated Services:
Division Headquarters, Houston, Texas

Piping:

Gulf Supply Company: Houston, Beaumont, Corpus Christi, and Freeport, Texas;
Baton Rouge, Harvey, and Lake Charles, Louisiana; Bridgeport, New Jersey
Geigher Pipe Supply: St. Louis, Missouri
Gulfalloy: Houston, Texas
International Materials & Service Company: Houston, Texas
Island Supply Company: Ponce, Puerto Rico
Polymer Piping & Materials: Houston, Texas
Valve Systems & Controls: Houston, Texas
Gulf Supply Latina: Houston, Texas
Gulf Mexicana, S.A.: Mexico City, Mexico

Electrical:

Nunn Electric Supply Company: Houston, Beaumont, Corpus Christi, and Texas City, Texas; Baton Rouge and New Orleans, Louisiana; Ponce, Puerto Rico
 G & B Marine Supplies: Beaumont, Texas
 Reichardt Electric Company: Freeport, Texas
 Royal Wholesale Electric: Carson, Santa Ana, and Vernon, California
 Nunn Electric Latina: Houston, Texas

Specialized Materials & Services:

Econotherm Insulation Company: Houston, Texas
 Houston Tool Supply Company: Houston, Texas
 Material Management Systems: Beaumont, Texas

International:

Gulf Consolidated International: Houston, Texas; London, England

Sales:

Offices: Dallas, Texas; Kansas City, Missouri; Lafayette, Louisiana; Los Angeles, California; New York, New York; Pascagoula, Mississippi

Mead Merchants:

Atlanta Paper: Atlanta, Georgia
 Beecher Peck & Lewis: Detroit and Flint, Michigan
 Bermco: New York, New York
 Birmingham & Prosser: Akron, Ohio; Hillside (Chicago), Illinois; Kalamazoo, Michigan; Kansas City and St. Louis, Missouri; Minneapolis, Minnesota
 Capital Paper: Oklahoma City, Oklahoma
 Chatfield Paper: Cincinnati, Ohio; Hartford City and Indianapolis, Indiana; Louisville, Kentucky
 Chatfield & Woods: Pittsburgh, Pennsylvania
 Chatfield/Scioto Paper: Columbus, Ohio
 Clements Paper: Birmingham, Alabama; Chattanooga, Knoxville, Memphis, and Nashville, Tennessee
 Colonial Paper: Steubenville, Ohio
 Fort Dearborn Paper: Chicago, Illinois
 Graham-Jones: Fort Myers, Jacksonville, Orlando, and Tampa, Florida
 Tri-State Paper: Cumberland, Maryland
 Tulsa Paper: Tulsa, Oklahoma
 Union Paper & Twine: Cleveland, Ohio
 Seaboard Paper Company*: San Francisco, California

Mead Products: plants in Alexandria, Pennsylvania; Atlanta, Georgia; Garden Grove, California; Kalamazoo, Michigan; St. Joseph, Missouri; Salem, Oregon; Terrell, Texas. Distributors and licensees in 21 countries

Stanley Furniture: three furniture plants at Stanleytown and Waynesboro, Virginia, and West End, North Carolina; a supply division at Ferrum, Virginia; factory showrooms in three cities

Mead Fabrics:

Norman's of Salisbury, a custom drapery and bedspread manufacturer at Salisbury, North Carolina, with showrooms in eight cities
 Payne Fabrics, a decorative fabric distributor and converting center at Dayton, Ohio, with showrooms in 15 major cities

Industrial Products Sector

The industrial product sector of the Mead Corporation accounted for 12 percent of company sales in 1977 and 11 percent of earnings in the same year. This sector's divisions and businesses are as follows (The Mead Corporation 1977):

Lynchburg Foundry: five castings foundries at Lynchburg, Archer Creek, and Radford, Virginia; a pressure pipe foundry at Radford, Virginia

Mead Coal: a coal mine and preparation plant at Mulga, Alabama

Murray Rubber: two plants and a research and technical center at Houston, Texas

Other Mead Businesses

The Mead Corporation is also engaged in a number of other businesses, including Mead Chemical Systems, Mead Central Research Laboratories, and businesses within Mead's Advanced Systems Group. The latter include the following (The Mead Corporation 1977):

Mead Technology Laboratories: laboratories and manufacturing plant in Dayton, Ohio

Mead Digital Systems: research, manufacturing, and commercial image centers in Dayton, Ohio

Mead Data Central: headquarters in New York, New York

Subsidiaries of the Mead Corporation

Moody's 1977 Industrial Manual has identified the largest wholly owned and jointly owned subsidiaries of the Mead Corporation (Moody's Investors Service, Inc. 1977).

The corporations wholly owned subsidiaries are as follows:

Mead Pulp Sales, Inc.
 *Mead Data Central, Inc.
 Mead Packaging International, Inc.
 Forest Kraft Company
 *Escanaba Paper Company
 *Mead Technical Laboratories, Inc.
 Estimco, Inc.
 *Lynchburg Foundary Company
 Mead Timber Company
 Mead Land Services, Inc.
 *Mead Digital Systems, Inc.
 Meadisc, Inc.
 Skyline Plastics Corporation
 Mead-Embellage, France
 Mead Management Services, S.A., Switzerland
 Mead Packaging Canada Ltd., Canada
 Mead Packaging Europe S.A.R.L., France
 Mead Verpackung G.M.B.H., Germany
 Mead Verpakking B.V., the Netherlands
 Meadpac Italia, S.P.A., Italy

The Corporation's jointly owned subsidiaries are as follows:

*Schoeller Technical Papers, Inc.
 *Brunswick Pulp and Paper Company
 *Northwood Pulp and Timber Ltd.
 *British Columbia Forest Products, Ltd.
 *Georgia Kraft Company

Problems in identifying and defining subsidiaries are very real. For example, Moody's 1977 Industrial Manual (based on 1976 information) lists the 25 subsidiaries specified above. The Mead Corporation's 1977 annual report, however, refers to only ten--those identified by an asterick (*). The situation becomes even more muddled if yet another information

source is consulted, namely, Lockwood's Directory, 1978. The latter portrays the Corporation as follows (Bulkley Dunton and Company 1978):

Divisions:
 MEAD PAPER GROUP:
 Forms Paper Div.
 Gilbert Paper Co.
 Master Paper Div.
 Paygro Div.
 Printing & Writing Paper Div.
 Publishing Paper Div.
 Specialty Paper Div.
 MEAD PAPERBOARD GROUP:
 Paperboard Div.
 Paperboard Products Div.
 Containers Div.
 Packaging Div.
 MEAD CONSUMER DISTRIBUTION GROUP:
 MEAD MERCHANTS DIVISION
 Beecher, Peck & Lewis
 Bermco
 Bermingham & Prosser
 Capital Paper
 Chatfield Paper
 Chatfield & Woods
 Clements Paper
 Colonial Paper
 FCF Paper
 Fort Dearborn Paper
 Graham-Jones
 Chatfield/Scioto Paper
 Tri-State Paper
 Tulsa Paper
 Union Paper & Twine
 Waight Supply
 MEAD PRODUCTS GROUP (Westab)
 MEAD INTERIORS DIVISION
 MEAD ADVANCED SYSTEMS GROUP

Affiliates:
 B Bar B Inc.
 British Columbia Forest Products Ltd.
 Brunswick Pulp & Paper Co.
 Escanaba Pulp Co.
 Georgia Kraft Co.
 Packagemaster Ltd.
 Northwood Pulp Ltd.
 Schoeller Technical Papers, Inc.
 Seaboard Paper Co.
Subsidiaries:
 Escanaba Paper Co.
 European Board Sales Inc.
 Forest Kraft Co.
 Mead Containers Europe Inc.
 Mead Dint Inc.
 Mead Packaging International Inc.
 Mead Papers Inc.
 Mead Pulp Sales Inc.
Research & Development Centers:
 Chillicothe, OH, C.L. Spalding

Lockwood's Directory identifies Package-Master Limited and the Escanaba Pulp Company as affiliates of the Mead Corporation. Additionally, there are subsidiaries named by Lockwood which do not appear in either Moody's or the Corporation's annual report.

Affiliates of the Mead Corporation

Inter-company relationships as they might arise via company affiliates are also difficult to identify. For the most part such relationships can only be identified for jointly held companies.³ Where feasible, partners of a corporation are noted. A word of caution in identifying inter-company relationships seems in order. The fact that they exist should not be grounds for automatically judging them not in the best interest of society. In the case of the pulp and paper industry joint ventures may be socially beneficial simply because the combining of financial resources may be required in the face of the tremendous capital requirements of a large scale pulp and paper complex. On the other hand, opportunities for collusive behavior may present themselves.

The following Mead Corporation affiliated companies have been identified using information sources previously specified:

Schoeller Technical Papers, Inc.
 Brunswick Pulp and Paper Company
 Northwood Pulp and Timber Ltd.
 British Columbia Forest Products Ltd.
 Georgia Kraft Company
 B Bar B, Inc.
 Seaboard Paper Company
 Packagemaster Ltd.
 Escanaba Pulp Company

A brief description of a selected few Mead Corporation affiliates seems in order. They are presented as follows:

Schoeller Technical Papers, Inc., is 50 percent owned by Mead and 50 percent owned by Schoeller Finanz K.G. The company produces technical and photographic paper at Pulaski, New York.

³ Jointly held plants will be ignored here.

Brunswick Pulp and Paper Company manufactures bleached kraft pulp and board at its mill in Brunswick, Georgia. The company is 50 percent owned by Mead. The Scott Paper Company owns the remaining 50 percent interest.

Northwood Pulp and Timber Ltd. is 50 percent owned by Mead and 50 percent owned by Noranda Mines Ltd. Northwood manufactures bleached softwood kraft pulp at its 800 ton per day mill in Prince George, British Columbia, and manufactures lumber in its four sawmills in British Columbia. Principal markets for its consumer pulp are in midwestern United States, western Europe, and Japan. Northwood's lumber is sold primarily in the United States through Northwood Mills Limited (Moody's Investors Service, Inc. 1977).

The ownership of British Columbia Forest Products (BCFP) is unique. The Mead Corporation directly holds a 15 percent interest in the company, while Brunswick Pulp and Paper Company holds a 27 percent interest. Since Mead owns 50 percent of Brunswick Pulp and Paper Company, Mead effectively owns an additional 13.5 percent of BCFP, giving it a 28.5 percent total interest. Noranda Mines Ltd. follows up with a 28 percent interest. The Mead Corporation and Noranda Mines vote their BCFP shares through Northwood Pulp and Timber Limited (Moody's Investors Service, Inc. 1977).⁴

⁴ Noranda Mines Ltd. also owns Northwood Mills and 55 percent of the Fraser Company (Noranda Mines, Ltd. 1976). It is apparently through Northwood Mills that Noranda owns 50 percent of Northwood Pulp and Timber.

Georgia Kraft Company manufactures uncoated kraft linerboard at Macon and Rome, Georgia, and coated and uncoated kraft linerboard at Mahrt, Alabama. Mead owns 50 percent of Georgia Kraft. Inland Container owns the remaining 50 percent.

Information is not readily available regarding B Bar B, Inc., Seaboard Paper Company, Packagemaster Ltd., and the Escanaba Pulp Company.

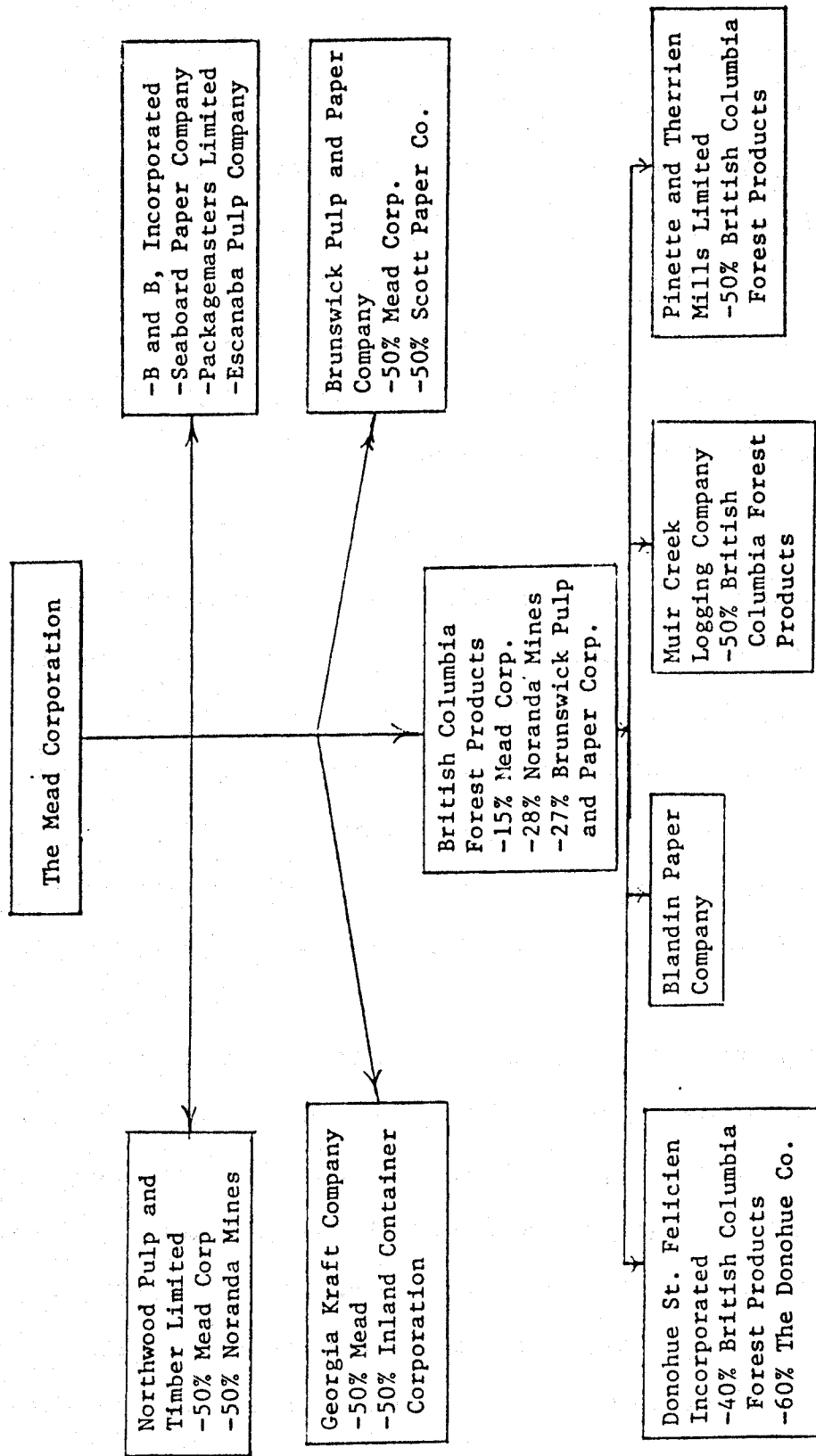
Figure B.3 presents a graphic picture of some of the Mead Corporation affiliates. Information necessary for a complete graphic picture of these affiliates is not readily available.

Impact on Measurement of Economic Concentration

The impacts of the Mead Corporation's jointly owned companies on pulp and paper concentration ratios are already reflected in the concentration ratios developed from Pulp and Paper. However, for other products, e.g., lumber, such is not the case. Mead is not a substantial lumber producer.⁵ However, British Columbia Forest Products was the sixth largest U.S.-Canada lumber producer in 1976 (720 million board feet). Northwood Mills Ltd., which markets Northwood Pulp and Timber Company's lumber production, was ranked seventh (690 million board feet). According to the 1978 Directory of the Forest Products Industry, Brunswick Pulp and Paper Company operates a sawmill in Pearson, Georgia, that produced 40 million board feet of lumber in 1976. According to the same sources, Georgia Kraft

⁵ Mead, however, summarizes its share of 1976 lumber production by its affiliated companies at 504,000,000 board feet (The Mead Corporation 1977).

Figure B.3 Affiliates of the Mead Corporation^a



^aOwnership percentages, where known, are stated.

Source: Ellefson and Chopp (1978, p. 229).

operates a sawmill in Greenville, Georgia, capable of 260 thousand board feet production per day (Miller Freeman Publications 1978).

Pinette and Therrien Mills, which is 50 percent owned by the British Columbia Forest Products Company (BCFP) was ranked 48th with 157 million board feet production. Donohue St.-Felicien Inc., which is 40 percent owned by BCFP, was ranked 57th with 1976 production of 126 million board feet. The Blandin Paper Company, a subsidiary of BCFP, is a minor producer of lumber (4 million board feet).

Conclusions

Documenting the manner in which wood-based corporations are organized to carryout their operations is not an easy task. The closer one looks at a company, the more puzzling the picture becomes. Large companies are a maze of entangled divisions, subsidiaries, affiliates, or joint ventures. One is never fully certain as to what a specific business unit is, nor whether one has identified all there is to identify. Large corporations are terribly complex structures that simply defy brief investigation and description.

In addition to the complexity of defining a company's business units and activities, there exists the subject of intra- and intercompany business agreements, some of which are very involved. Subsidiaries may be suppliers or marketing outlets in which the parent company plays either a major management or holding company role. In other cases, subsidiaries or affiliates may be engaged in a business that is unrelated to a parent company's main thrust of activities. Relationships between independent

companies can focus around joint ventures, marketing agreements, timber sales and swaps, and so on.

The study of the inner workings of the industry is beyond the scope of this study. However, we have scratched the surface just deep enough to illustrate that the forest products industry is not composed of isolated easily defined companies, and that further, more indepth review of the subject seems to be in order (Ellefson and Chopp 1978).

APPENDIX C

A Case Example of Antitrust:

The Birth of the Louisiana-Pacific Corporation

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Introduction

The case example that follows illustrates the effect that antitrust action can have upon the forestry sector of our economy; more specifically, the effect on the structure of the forest industry that serves the important function of processing raw materials coming from our public and private woodlands into either intermediate or final consumer goods.

It should be recognized at the outset that any effect of antitrust action is intimately intertwined with the reasons underlying such actions. One might call this the policy regarding antitrust. This appendix will develop the idea that our government has no specific antitrust policy, so this case serves more as an example of muddling through and compromise--the way decisions are made on many complex public policy issues. Antitrust is one such issue.

Reasons for antitrust action will be pursued through a brief review of literature on the subject. This is no easy task, for it delves into an area of economics termed industrial organization. This specialty has managed to accumulate a voluminous, somewhat inconsistent, and rather inconclusive literature since its inception at Harvard University some forty years ago.

Industrial organization seems to be an application of economics in search of a theory. This, it must be recognized, is not a desirable situation. A brief review of the literature in industrial organization will be included to substantiate this claim.

Antitrust actions, if the case to be examined is at all representative, seem to be compromises between the government and private corporations over whose discretionary authority and power to direct the lives of the American populace is stronger. The government has the law as its weapon. The corporations have no effective shield, other than their wits, to ward off the blows.

The Case: How to create a wood-based giant overnight

During the summer of 1972, Georgia-Pacific Corporation's (hereafter referred to as G-P) top brass were perspiring more than usual. The reason why had nothing to do with the weather.

Harry Merlo was the star player at G-P. Since G-P acquired Merlo's own showplace redwood mill in 1967—"Mainly to get Harry," according to an associate¹--he had ascended the corporate ladder, built of plywood, at a rapid rate. He had put together a string of acquisitions that gave the plywood giant a good chunk of the lumber business as well.

In June of 1971 the Federal Trade Commission (FTC) made a move to halt G-P's acquisitive drive, "charging that the company had substantially lessened plywood competition in the South."² The FTC "insisted that G-P had gotten so big that it was monopolizing plywood production in the South."³

¹ Business Week (1973).

² Ibid.

³ Forbes (1973).

The FTC allegations proved out to be strange, although they were within the letter of the law. Merlo had been active mainly in the Far West and in lumber, not plywood. The FTC action put him on the shelf and G-P acquisitions ground to a halt.

Merlo became restless and wanted to leave G-P. He offered to buy out the companies he had been running so successfully. This gave Robert Pamplin, G-P's Chairman and chief sweater under the FTC allegations, an idea.

G-P had thought it could defeat the FTC by arguing that most of its fourfold increase in sales and earnings in the sixties had come from internal expansion and not through acquisition. G-P lawyers had discovered that of 150 parallel FTC cases, 80 had been settled out of court with an agreement between the company involved and the FTC. Of the 70 other cases, only one company had gotten off the hook without some kind of penalty (Forbes 1973).

Pamplin went to see the FTC to strike a bargain with them. In exchange for dropping the antitrust action--which was based on the complaint that G-P's acquisition of 16 southern lumber companies may substantially lessen competition in violation of the Clayton Antitrust Act⁴--G-P would spin off Merlo and his operations. The FTC asked G-P to throw in ten more mills and 118,000 acres of timber in Louisiana and Texas. G-P agreed and was allowed to keep virtually all of its southern pine operations that had triggered the FTC case in the first place (Forbes 1973).

Overnight, then, the second leading lumber and sixth leading plywood producer all rolled into one was born. Its name was the Louisiana-Pacific Corporation (hereafter referred to as L-P). Public hearings, with some

⁴ Wall Street Journal. December 27, 1972, p. 1.

debate, were held and a formal consent order issued by the FTC on December 27, 1972, requiring G-P to divest itself of assets representing about twenty percent of the company's earning capacity. Then "the divestiture followed FTC charges that G-P's acquisitive nature tended to create a monopoly in the softwood plywood industry."⁵

Where is the consistent, well thought out government policy underlying the facts in this case? There isn't any such thing. It is an example of muddling through and compromise. Certainly the intentions of the FTC in the case are not clear, so it is difficult to say what identifiable problem is being muddled through; other than to say it is a regulatory agency of the government exercising its discretionary power, using the law as the power source. In so doing, they presumably were reducing the economic power of G-P to influence the market for plywood. But the facts of settlement in the case contravene that purpose. What the FTC was really doing in this antitrust case is open to question and wide interpretation.

Was the FTC trying to reduce the size of G-P? Reduce its economic power (whatever that is)? Restructure the plywood or lumber market?

What effect did this action have on G-P? Only one year after L-P was spun off and formed from its foundation of twenty percent of G-P's assets, G-P's sales and earnings grew by twenty percent over what they had been before the spin off. Pamplin was quoted as saying the spinoff worked so well that he and other companies might well consider a similar future move in lieu of the traditional stock splits (Business Week 1973). G-P is now

⁵ Biderman (1973).

challenging Weyerhaeuser for industry leadership. Were it not that Weyerhaeuser pays an income tax of about thirty percent of its sales versus G-P's forty percent, because of Weyerhaeuser's capital gains tax advantage from its heavy position as a forest landowner, the earnings race would have belonged to G-P in 1977. Significantly, seventy percent of G-P's earnings come from the southern operations (Wiegner 1978).

So if the FTC intended to strip G-P of some of its market influence or economic power, it surely did not. What, then, was this case really all about? Perhaps a look at antitrust in general might be enlightening.

The Rationale: Antitrust

What is antitrust all about? In a few words, "The task of antitrust is to identify and prohibit those forms of behavior whose net effect is output restricting and hence detrimental."⁶

Economists oppose monopoly situations because they are an inappropriate use of society's scarce productive resources as a result of monopoly profits. Public antitrust policy has no such official rationale, rather it is to prevent monopoly and promote competition. There are policies aimed at both the structure and conduct of industries (Caves 1977).

The Clayton Act, relevant to the case under consideration, is aimed at prohibiting corporate business policies that would "substantially lessen competition or tend to create a monopoly"⁷ forbidding mergers failing to meet this acquisition test (Caves 1977). This is an attempt to deal with

⁶ Bork (1978, p. 122).

⁷ Language from the Clayton Act.

conduct and is a vague test at best, if a test at all. The language is not specific enough to define a policy that could really answer the question of what motivated the FTC in this case.

Brozen (1979) describes the FTC as the second most anti-consumer agency in Washington, after OSHA.⁸ He contends that they are penalizing efficiency and thus consumer benefits by some ill-defined passion for an equality of results that now pervades public policy; a "Final erosion, perversion, or transmutation of democracy from individual sovereignty into mobocracy--tyranny by majority."⁹

Antitrust is an attempt by the government to both restructure and police the conduct of industry. Thus, it relies, or should rely, heavily on theories and facts relevant to these areas. Industrial organization is the field of economics that attempts to deal with the theory underlying such problems. At least it tries to provide a framework for answering structure-conduct-performance questions.

The Theory: Industrial Organization

The traditional point of view regarding industrial organization as an economic specialty is that the structure, conduct, and performance of an industry are somehow related. It is applied price theory and relies, to a great extent, on oligopoly theory. But, as Weiss (1974) demonstrates,

⁸ Occupational Safety and Health Administration; their acronym was immortalized by their intricate regulations that prescribes, among other things, which toilet seat and urinal is legal for your business establishment. The theory is a good one; the application is amiss.

⁹ Brozen (1979, p. 20).

there are too many oligopoly theories to give the field a meaningful theoretical underpinning.¹⁰ Demsetz (1974) concludes that the theoretical support of a market concentration doctrine--a structure parameter--is weak or non-existent, regardless of whether one believes that monopoly power can be produced by a firm either with the aid of government action or without Uncle Sam's help. These two views of monopoly power creation, covering almost all situations, do not in Demsetz's view offer any more support to the field of industrial organization than do the many oligopoly theories. So where can one turn to enlist the aid of the practitioners of this speciality that promises some help with clarifying antitrust problems and their far-reaching implications?¹¹ A brief introduction to some of the literature is provided.

Grether (1970) examines the history and future of the specialty. The traditional structure-conduct-performance trilogy of analysis as espoused by Bain, Stigler, Caves, and others is discussed by Coase (1972); who also looks at future research directions. McKie (1972) expounds on the traditional view, the new view, and the new, new view.

¹⁰ Oligopoly theories discussed by Weiss (1974) are those of Cournot, Bertrand, Von Stackelberg, Chamberlin, two variations on Chamberlin, the game theorists, Stigler, and finally Bain.

¹¹ That antitrust is a complex problem cannot be denied. Nader (1972, p. xi) has this to say about it, "... antitrust violations are part of a phenomenon which, to the public, is too complex, too abstract, and supremely dull. The specified legal and economic professions, rigorous in their myopia, have done little to relate antitrust policy to any audience beyond their tightly knit fraternities."

The turning point--the new, new, new view--in the academic specialty of industrial organization seems to have been triggered by a legislative proposal offered in 1974 by Senator Phillip A. Hart, D-Michigan. The Hart Bill was designed to deconcentrate certain selected industries for which criteria were devised to test. One such criterion was a high four firm concentration ratio. The limitations of this "statistic" are widely recognized.¹²

The Hart Bill precipitated a conference of the leading economic specialists, or at least those of the new-cubed awareness in industrial organization theory. The thrust of the meeting was to re-examine four decades of thought that had produced little, if any, antitrust policy guidance. The proceedings of this meeting--appropriately titled Industrial Concentration: The New Learning¹³--are simultaneously enlightening and confusing.

In opening the proceedings Dewey (1974) says, "A quick sampling of the literature of industrial organization suggests that the study of concentration has traditionally had much in common with evangelical theology. One influential dogma asserts that concentration occurs because it creates scale economies in production and research The other major contending dogma asserts that industrial concentration comes about because it creates monopoly power and so makes possible the collection of economic rents."¹⁴

¹² See Bock (1970; 1974), Rose (1969), and McGee (1971).

¹³ Goldschmid et al. (1974).

¹⁴ Dewey (1974, p. 3).

Peltzman (1977), a few years later, tells us that for all its bulk, concentration-profitability literature--a structure-performance relationship--is incomplete; thus, so is its rationale for a legal hostility to concentration. He says it is not clear that antitrust policy reduces concentration much, but that it is more likely to reduce efficiency, raise prices, and reduce owner wealth.

There is that word again: concentration. Just what does it mean, in the economic sense? Maybe an understanding of that term might help to shed some light on the dimly perceptible area of antitrust.

The Criterion: Concentration

Brozen (1979) calls the episodic attacks on concentration waged by the FTC witch-hunts, and says they are counterproductive to our societal goals of reduced inflation and higher standards of living. The case example presented serves as some evidence of such apparent witch-hunting. It also brings up the question of what concentration is, since that is how the elusive concept of competition is supposedly to be measured and thus maintained.

What concentration is not is the percentage of sales of an industry's top 4, 8, or 20 firms; called the concentration ratio. It is instead a concentration of economic power. "The essence of a firm's economic power is the ability to insulate itself from the social control mechanism imposed by the market or by government or by both. It is the capacity to avoid market or political sanctions for poor performance."¹⁵

¹⁵ Adams (1974, p. 369).

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¹⁵ Adams (1974, p. 369).

With the objective of controlling the behavior and performance of large corporations, Adams (1974) lists the following agenda for action in public policy. The government should:

- 1) Refrain from intervening in workably competitive markets;
- 2) Enact a new antitrust law to control the conduct of giant firms as an alternative to comprehensive restructuring of concentrated industries;
- 3) Amend existing antitrust laws to accomplish basic structural reform;
- 4) As a last resort create public corporations in selected industries that have historically high and persistent levels of concentration.

Adams continues, saying that whatever policy is adopted should be determined by the kind of society we want. The case example seems to indicate that the whims of a regulatory agency are for better or for worse left to determine what we want.

Referring to legislative proposals aimed at deconcentration, Neal (1974) says, "As in most problems of policy, a choice must be made in the face of uncertainty about outcomes and on the basis of highly subjective estimates of possible gains and costs."¹⁶

Phillips (1974), realizing that good policy requires less doctrine and more case-by-case, industry-by-industry, problem-by-problem analysis, calls for neither a total abandonment of concern about concentration nor full attention to it; instead a search for the middle ground.

¹⁶ Neal (1974, p. 377).

Hruska (1974) says that the simple test should be that a policy of increasing competition should have the promise of yielding substantial economic gains. This would then alleviate the existing concentration dogma that consists more of social engineering than an economically sound policy.

There are those who argue on philosophical and sociological grounds, continues the Senator from Nebraska, that big companies should be broken up into "human-sized institutions." But policy shouldn't, or can't, be rationalized to exist solely on the basis of this idea simply because not everyone subscribes to it.

Dewey (1974) says that the disguised goals of antitrust are aimed at deconcentrating discretionary authority--the power to make decisions affecting the lives of other people--not at reducing monopoly power. Aren't these two concepts really the same thing? Or are they? They are in the sense that people are affected. Monopoly power is an economic concept; discretionary authority is social power, not an economic concept.

Whichever the case may be, Dewey continues, saying that economists may support the ideas of antitrust as an attractive second-best policy; the preferred framework being the politically infeasible laissez-faire doctrine. Indeed, Adams (1974) instructs that there are only these alternatives facing us: 1) competition and competitive markets, 2) government regulation, or 3) government ownership. These, in turn, may be interpreted as second, third, and fourth-best policies.

An example of concentrated power is the milk farming industry. This industry is not concentrated by any measure but still seems to be able to wield a considerable amount of power. So do teachers and varieties of labor unions; and banks as well (Phillips 1974). And so too do bankrupt railroads that cannot obtain a positive return on capital and still have the power to affect the lives of thousands of workers, shoppers, and commuters by their decisions (Dewey 1974).

Whether antitrust is a witch-hunt, social engineering, or whatever; the concentration of economic power must be recognized as either a potential or an existing societal problem, and thus something that needs to be dealt with as a matter of policy. As McKie (1972) says, "If we are really in a process of change from an extensive, waste-making, progressive, space-using, technologically oriented society toward an intensive, conserving, relatively static society oriented primarily toward equity and the needs of social participation, the implications for industrial organization will be profound. All agencies of economic and social research will be called on to participate in solving the problems."¹⁷

What does the concentration of economic power and its antitrust implications have to do with forestry, other than the one isolated case presented? The immediately preceding quotation is germane to this question.

Mead (1966) says that the lumber industry on the input side--specifically the federal timber market--displays non-competitive behavior. This he terms oligopsony because there are only a few buyers in any region due to

¹⁷ McKie (1972, p. 13).

transportation costs of timber and lumber, thus a basic lack of competition for the timber. Yet the lumber industry on the output side remains one of the most competitive industries in the American economy. This seeming paradox illustrates that perhaps the structure-conduct-performance analysis based on oligopoly theory as practiced by industrial organization specialists leaves a lot to be desired as an analytical framework. Literature in the field, at least of one ilk, seems to support this notion.

Mead (1966) says that knowledge of the relationship between structure, conduct, and performance is highly significant for antitrust policy. The new learning in industrial organization is telling us that uncovering these relationships has so far proven to be fruitless.

A new strategy of attack must be devised, because the problems involved are much too weighty to ignore. The approach taken by the FTC seems to smack of unguided social engineering, as evidenced by the case example presented involving muddling through and compromise to achieve some unspecified objective. What direction lies ahead? As Dewey (1974) says, it is time to break out of the theological mold and start thinking about industrial concentration as a scientific problem.

APPENDIX D

A Classification Scheme for Wood-based Firms

Table D.1 Firms in the forest products industry. From the 1976 Fortune Double 500 (Ellefson and Chopp 1978, Table 52).

Rank	Classification Group*	Company	Sales (million \$)	Fortune Rank
1	2	Mobil ¹	\$26,062	5
2	3	International Telephone & Telegraph	11,764	11
3	2	Procter & Gamble	6,512	19
4	3	Tenneco	6,389	20
5	2	Eastman Kodak	5,438	28
6	3	W. R. Grace	3,615	50
7	1	International Paper	3,540	52
8	2	Continental Group	3,458	56
9	3	Gulf & Western Industries	3,395	57
10	3	Litton Industries	3,365	60
11	2	American Can	3,142	64
12	2	Philip Morris	3,134	65
13	1	Georgia-Pacific	3,038	68
14	2	Bendix	2,947	70
15	1	Champion International	2,910	74
16	1	Weyerhaeuser	2,868	75
17	2	Owens-Illinois	2,571	84
18	(2)	NCR ²	2,312	96
19	1	Crown Zellerbach ³	2,125	104
20	3	Singer	2,126	105
21	2	Celanese	2,123	106
22	1	Boise Cascade	1,931	116

* 1 = major portion of business in forest products.

2 = diversified firm with a forest products division.

3 = conglomerate firm with a forest products division.

Note: the distinction between a diversified firm and a conglomerate is based on what other researchers have chosen to call the population of conglomerate firms (see Appendix F).

Rank	Classification Group*	Company	Sales (million \$)	Fortune Rank
22	1	Boise Cascade	\$ 1,931	116
23	1	St. Regis Paper	1,642	135
24	1	Mead ⁴	1,599	141
25	1	Kimberly-Clark	1,585	143
26	3	Olin	1,376	164
27	1	Scott Paper ⁵	1,373	166
28	3	SCM	1,331	172
29	2	Johns-Manville	1,308	174
30	2	Jim Walter	1,271	177
31	2	Ethyl	1,271	194
32	3	GAF	1,060	216
33	2	Time, Inc.	1,038	217
34	1	Union Camp	1,002	225
35	2	Times Mirror	964	232
36	2	U.S. Gypsum	962	233
37	(2)	Container Corp. of America ¹	953	237
38	1	Westvaco	922	245
39	1	Diamond International	887	252
40	1	Great Northern Nekoosa	844	259
41	1	Evans Products	781	270
42	1	Hammermill Paper	689	293
43	2	CertainTeed	665	297
44	1	Potlatch	624	308
45	2	National Gypsum	613	314
46	1	Bemis	609	315
47	1	Louisiana Pacific	562	338
48	1	Southwest Forest Ind.	549	344
49	1	Willamette Industries	546	345
50	(1)	Hoerner Waldorf ⁶	511	366
51	(1)	Flintkote ⁷	503	370
52	(2)	Inland Container ⁸	393	435

Rank	Classification Group*	Company	Sales (million \$)	Fortune Rank
53	1	Federal Paper Board	\$ 393	437
54	1	Masonite	386	446
55	(2)	Olinkraft ⁹	341	484
56	(1)	Fibreboard ¹⁰	306	521
57	1	Arcata National	298	530
58	1	Consolidated Papers	293	535
59	1	Longview Fibre	261	573
60	1	Stone Container	250	579
61		Sonoco Products	242	594
62	1	Edward Hines	234	612
63	1	Fort Howard Paper	231	614
64	2	Cleveland-Cliffs Iron	228	622
65	1	Georgia-Kraft	194	680
66	1	Southland Paper Mills	184	703
67	1	Hudson Pulp and Paper	158	761
68	1	Chesapeake Corp. of Virginia	149	787
69	1	Pacific Lumber	146	793
70	1	Brunswick Pulp and Paper	136	817
71		Lane	116	916

¹ Through a wholly owned subsidiary, Marcor, Inc., the Mobil Corporation controls Container Corp. of America. Container Corp. is number 37 on the list.

² NCR divested its Appleton Papers Division to concentrate solely on computer technology (Financial World, 9/1/79, p. 40-41).

³ In March, 1979, Crown Zellerbach was the subject of a rumored takeover attempt by an oil company.

⁴ In late 1978, Mead was the target of a takeover attempt by Occidental Petroleum, which Mead successfully fought off.

⁵ Scott Paper is mentioned as a prime takeover target because of its 3.2 million acres of undervalued timberland (Financial World, 8/1/79, p. 22-23).

- ⁶ In 1977, Hoerner Waldorf merged with Champion International.
- ⁷ In 1979, Flintkote merged with Louisiana Pacific.
- ⁸ In 1978, Inland Container merged with Time, Inc.
- ⁹ In 1978, Olinkraft merged with Johns-Manville.
- ¹⁰ In 1978, Fibreboard merged with Louisiana Pacific.

Note: Absent from this list are Burlington Northern, a transportation firm, thus not an industrial company, nonetheless, the operator of the 41st largest timber concern in North America; and Koppers, Inc., which has some wood-based operations. It is possible that there are other firms that should be included; for example, Textron, Inc., a huge conglomerate, acquired some Oregon plywood plants in the mid-1950's and a furniture division in 1963 that may be wood-based. Other firms, such as NCR and Ethyl, have divested their wood-based operations since 1976. Still others, such as W. R. Grace, whose only wood interest is a Colombian joint venture with International Paper, do not have what could be called major wood-based operations. Singer in 1977 had 6% of its sales (about \$150 million) in furniture. Other firms such as Eastman Kodak, Celanese, and Philip Morris are organized in such a fashion that determining wood-based sales is extremely difficult, and perhaps not significant.

APPENDIX E

The Multivariate Nature of Merger Motivations

Steiner (1975) devotes a monograph to the motives, effects, and policies regarding conglomerate mergers. Evidence is given to support all of the following motives:

1. A desire to limit competition or achieve monopoly profits.
2. A desire to utilize unutilized market power.
3. A response to shrinking opportunities for growth and/or profit in one's own industry due to shrinking demand or excessive competition.
4. A desire to diversify to reduce the risks of business.
5. A desire to achieve a large enough size to realize an economical scale of production and/or distribution.
6. A desire to overcome critical lacks in one's own company by acquiring the necessary complementary resources, patents, or factors of production.
7. A desire to achieve sufficient size to have efficient access to capital markets or inexpensive advertising.
8. A desire to utilize more fully particular resources or personnel controlled by the firm, with particular applicability to managerial skills.
9. A desire to displace an existing management.
10. A desire to utilize tax loopholes not available without merging.
11. A desire to reap the promotional or speculative gains attendant upon new security issues, or changed price earnings ratios.
12. A desire of managers to create an image of themselves as aggressive managers who recognize a good thing when they see it.
13. A desire of managers to manage an ever-growing set of subordinates.

Steiner goes on to develop a multiplicative model for mergers as a framework for analysis and a strategy for research. The following table from Steiner (1975, p. 182) outlines the nature of merger motivations.

Table E.1. The Multivariate Nature of Merger Motivation

I. Actors

Stockholders of affected companies
 Managers of affected companies
 Investors generally
 Speculators
 Financial community
 Antitrust authorities
 SEC
 Congress
 Courts
 President and Executive branch
 Lobbyists
 Political parties
 Public interest groups
 Press

II. Climates

State of economy
 Stock market
 Legal
 Regulatory
 Tax
 Accounting

III. Types of motivation for and against mergers

- A. Profit increasing for the firm:
- Achieving real efficiencies
 - Increasing market power
 - Tax and accounting opportunities
- B. Growth as a goal
- C. General (external) speculative
- D. Insider opportunities:
- To stockholders
 - To acquiring managements
 - To acquired managements
 - To financial groups
- E. Deterrents:
- Antitrust law enforcement
 - Securities law and enforcement
 - Transactions cost
 - Public and congressional opinion

IV. Participants in individual mergers

A. Bidders--classified by:

Type
 Success in attempt versus nonbidders
 --with respect to
 Industry, extent of diversification, size, managerial or
 ownership control, growth, profitability, liquidity,
 stock market performance, etc.

- B. Targets--classified by:
Resistance versus nontargets
Outcome
--with respect to
Industry, extent of diversification, size, managerial or
ownership control, growth, profitability, liquidity,
stock market performance, etc.
- C. Financial institutions:
Brokers
Banks
Mutual funds
Others
-

Source: Steiner (1975, p. 182).

APPENDIX F

Conglomerate Firms

A listing

Table F.1 Conglomerate firms identified in the literature.

Number	Company	Source*
1	AMK	6,7
2	American Metal Climax (AMAX)	7
3	American Standard†	7
4	American Tobacco (Brands)	7
5	A-T-O	6
6	Automatic Sprinkler	4
7	Avco	5,6,7
8	Avnet	6,7
9	Bangor Punta	4,5,6,7
10	Boise Cascade†	7
11	Brunswick	5
12	Cities Service	7
13	City Investing	6,7
14	Colt Industries	2,6,7
15	Condec	3
16	Consolidated Foods	4,7
17	Continental Oil	7
18	Dart Industries	7
19	Diamond Shamrock	7
20	Dresser Industries	6,7
21	Eaton (Yale & Towne)†	7
22	Eltra	5,7
23	Emerson Electric	7
24	Enhard	7
25	FMC	1,4,5,6,7
26	Fuqua Industries	7

* See source list and selection criteria that were utilized at the end of listing.

† Classified in source (5) Rumelt (1974) as having an unrelated passive strategy. A conglomerate is a subgroup of Rumelt's "unrelated" strategy, but is active rather than passive.

Number	Company	Source*
27	GAF†	7
28	General Dynamics	4
29	General Host	5,6
30	General Telephone & Electronics	2,7
31	General American Transportation (GATX)	2
32	Genesco	7
33	Georgia-Pacific	7
34	Glen Aldent†	4,7
35	W. R. Grace	4,5,7
36	Gulf & Western Industries	1,2,3,4,6,7
37	Houdaille Industries	7
38	Hydrometals	3
39	Indian Head Mills	4,6,7
40	International Telephone & Telegraph	1,2,3,4,6,7
41	Walter Kidde & Co.	3,4,6,7
42	Kinney National Service, Inc.	6,7
43	Leasco Data	6
44	LTV	1,2,3,4,5,6,7
45	Lear Siegler	5,7
46	Litton Industries	2,3,4,6,7
47	Loew's	6
48	Maremont	6
49	Martin Marietta†	7
50	Midland-Ross†	7
51	McGraw Edison	4
52	Mid-Continent	3
53	Monogram Industries, Inc.	7
54	National Distillers & Chemical	6,7

* See source list and selection criteria that were utilized at the end of listing.

† Classified in source (5) Rumelt (1974) as having unrelated passive strategy.

Number	Company	Source*
55	National General Corporation	6,7
56	National Industries	6
57	North American Rockwell†	4,7
58	Northwest Industries	7
59	Norton Simon	1,4
60	Occidental Petroleum	7
61	Ogden	6,7
62	Olin Mathieson†	4,7
63	Questor	5
64	Penn Central	6
65	Rapid-American	1,6,7
66	Reliance Electric	7
67	Republic Corporation	6,7
68	SCM	4,7
69	Signal Companies	7
70	Singer	7
71	Studebaker-Worthington	6,7
72	Teledyne, Inc.	2,3,4,6,7
73	Tenneco	4,7
74	Textron, Inc.	1,2,3,4,6,7
75	Transamerica Corporation	6,7
76	TRW†	4,7
77	U.S. Industries	7
78	U.S. Plywood-Champion Papers (Champion International)	7
79	U.S. Smelting	6
80	Vernitron	3
81	White Consolidated Industries	1,2,4,6,7
82	Whittaker Corp.†	6,7

* See Source list and selection criteria that were utilized at the end of listing.

† Classified in source (5) Rumelt (1974) as having unrelated passive strategy.

- Sources: (1) Beman, L. 1973. What we learned from the great merger frenzy. *Fortune* (April) 87(4):70-73+.

Criteria: None specified. Reports on the performance of the nine conglomerates intensively studied by the FTC (see FTC staff's Economic Report on Conglomerate Merger Performance).

- (2) Forbes Magazine Editors. 1975. Annual report on American industry. *Forbes* (January 1).

Criteria: None specified. Reports on the market price performance of the FTC eleven merger-active conglomerates.

- (3) Lynch, H. H. 1971. Financial performance of conglomerates. Boston: Division of Research, Harvard Business School. 297 pp.

Criteria: From a study of 28 new conglomerates formed in the 1962-67 period, the firms had to have: 1) recently rapid expansion through acquisitions; 2) a diversified nature; and 3) a record of superior performance for stockholders.

- (4) Mead, W. J. 1969. Instantaneous merger profit as a conglomerate merger motive. *Western Economic Journal*, (December) Vol. VII:295-306.

Criteria: 24 leading conglomerates were identified from the FTC list of mining and manufacturing mergers involving acquired firms with assets of \$10 million or more over the period 1948-1969, the "product extension" and "other conglomerate" mergers by firms involved in five or more mergers were listed.

- (5) Rumelt, R. P. 1974. Strategy, structure, and economic performance in large American industrial corporations. Cambridge: Harvard University Press. 235 pp.

Criteria: From a sample of the Fortune 500, firms were classified into 5 basic groups of diversification strategies. The acquisitive conglomerates were determined essentially as Lynch did. Firms had to be in the unrelated business lines category and have: 1) an average growth rate in Earnings per Share of at least 10% per year; 2) made at least five acquisitions, three of these into unrelated areas; and 3) issued new equity shares whose cumulative market value was greater than dividends in the same period.

- Sources: (6) Vance, S. C. 1971. *Managers in the conglomerate era*. New York: Wiley. 283 pp.
- (7) Weston, J. F. and S. K. Mansinghka. 1971. Tests of the efficiency performance of conglomerate firms. *Journal of Finance* (September) 26(4):919-936.

Criteria: 63 firms in broad programs of diversification achieved to a substantial degree by external mergers and acquisitions rather than by internal development. The two relevant criteria were: 1) the extent to which growth achieved from external sources; and 2) the degree of diversification represented by external mergers and acquisitions.