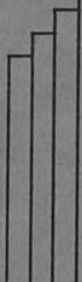


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PRIVATE STRATEGIES, PUBLIC POLICIES & FOOD SYSTEM PERFORMANCE

**A FRAMEWORK FOR ANALYSIS OF ALTERNATIVE
RESTRUCTURING STRATEGIES EMPLOYED BY
LARGE FOOD MANUFACTURERS IN THE 1980s**

BY

JOHN Y. DING and JULIE A. CASWELL*

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NOVEMBER, 1991

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A Framework for Analysis of Alternative Restructuring Strategies Employed by Large Food Manufacturers in the 1980s, John Y. Ding and Julie A. Caswell, University of Massachusetts at Amherst.*

Introduction

The 1980s are very likely to be remembered as the Decade of the Deal as a large number of firms were actively engaged in major corporate restructuring through mergers, acquisitions, leveraged and management buyouts, and selloffs. This wave of activity was facilitated by, among other things, the prevalence of easy financing such as junk bonds on Wall Street and relaxed antitrust enforcement during the Reagan administration [Clark 1990]. By the end of the decade, a total of \$1.3 trillion had been spent on shuffling assets [O'Neal 1990]. Food and tobacco manufacturers were among the most active participants in these restructuring activities. Five of the 20 largest mergers, acquisitions, and leveraged buyouts (LBOs) made between 1980 and 1989 involved food manufacturers. The LBO of RJR Nabisco in 1989 holds the record price tag of \$24.7 billion.

Interim assessments of the impact of restructuring activities undertaken during the 1980s on corporate diversification, firm performance, and market performance are now appearing in the economics and management literature. This paper contributes to that literature by developing a prototype analytical framework for a systematic description and analysis of restructuring patterns among large food manufacturers during the 1980s. The prototype analysis includes a small sample of the 10 largest firms of 1990 operating in SICs 20 and 21 (see Table 1). This paper differs from much other research in its focus on the cumulative effect of restructuring activities over the decade on the firm's portfolio of product lines and activities. As discussed below, much of the analysis to date has been on the outcomes of specific transactions and industry trends rather than the overall impact of several such transactions on the firm over a period of time.

Restructuring and Diversification

Observers believe the key difference between the corporate restructuring that occurred in the 1980s and that attendant to the 1960s merger wave is in the degree of relatedness between the acquiring and acquired firms or lines of business. The earlier wave is characterized as conglomerate in nature with firms making large numbers of acquisitions in lines of business not closely related and, in some cases totally unrelated, to their core businesses. In the latter wave, restructuring is associated with firms selling off unrelated and acquiring more closely related business lines. In fact, the latter wave appears to be largely concerned with undoing the results of the previous wave (Porter 1987). Thus restructuring may be associated with either increases or decreases in diversification.

Researchers in industrial organization and strategic management have employed varied definitions of diversification. In a comprehensive survey of diversification studies, Ramanujam and Varadarajan [1989] found at least five commonly used definitions of diversification. In the most general sense, a diversified firm is one which produces a number of different products and services [Needham 1978]. Diversification can be classified as related or unrelated. According to Salter and Weinhold [1979], diversification is considered related if it involves businesses that:

- 1) Serve similar markets or use similar distribution systems,
- 2) Employ similar production technologies,

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Table 1. Sample Firms Ranked by Food Sales in 1990.

COMPANY	FOOD SALES	TOTAL SALES	PERCENT FOOD
	(\$ Millions)	(\$ Millions)	
PHILIP MORRIS COMPANIES, INC.	26,368	44,759	59
CONAGRA, INC.	17,253	19,763	87
ANHEUSER-BUSCH COMPANIES, INC.	10,011	10,284	97
PEPSICO, INC.	9,992	15,200	66
COCA-COLA COMPANY	8,900	8,966	99
IBP, INC.	8,586	9,129	94
ARCHER DANIELS MIDLAND COMPANY	7,130	7,751	92
NESTLE HOLDINGS, INC.	6,781	6,969	97
CAMPBELL SOUP COMPANY	6,200	6,200	100
RJR NABISCO, INC.	5,783	12,764	45

Source: *Food Processing's* 1990 Top 100 Food Companies Report and Moody's Industrial Directory (1990).

- 3) Exploit similar science-based research, or
- 4) Operate at different stages of the same commercial chain.

Unrelated diversification involves business lines that do not share any of these characteristics.

The term restructuring as used in this paper refers to all mergers, acquisitions, leveraged buyouts, management buyouts, and selloffs by sample firms during the 1980s. Such transactions change the firm's strategic posture in the marketplace and its competitive interaction with rival firms. More specifically, restructuring is defined as the buying or selling of pieces of the company in an effort to reposition the company in its competitive environment. Depending on the firm's starting position and strategy, restructuring may lead to decreased diversification, as in the case of a conglomerate firm that sells off related businesses, or to increased diversification, as in the case of a single line firm that acquires related lines of business. While the accepted wisdom is that restructuring activities during the 1980s have resulted in a movement to the middle from the ends of the horizontal and vertical diversification spectrums, the systematic research to support this belief is largely yet to be done.

Diversification Theory and Empirical Studies

Like other features of firms' behavior, diversification is the outcome of their attempts to achieve certain objectives subject to a number of constraints. Diversification may be undertaken to exploit efficiency or market power opportunities, or because further expansion in the firm's current markets is blocked by antitrust policy. Except perhaps in the latter case, the degree of diversification is a conscious strategic decision that should have a positive impact on firm profitability. Based on the performance of conglomerates in the 1970s and 1980s, however, the devotion of corporate management to profit maximization has been severely questioned. Most prominently, Jensen [e.g., 1989] argues that the public corporation is going into eclipse because it provides inadequate discipline to corporate management to forgo pursuing unprofitable opportunities and disperse excess cash to stockholders. Further, corporate managers may, from time to time, simply make mistakes in formulating diversification strategy [Porter 1987].

Three streams of research deal with the relationship between diversification strategy and firm financial performance: those in industrial organization, strategic management, and finance [Palepu 1985, Amit and Livnat 1988]. Early industrial organization research, including the pioneering studies published by Gort [1962],

Arnould [1969], and Markham [1973], found no significant relationship between diversification and firm performance. This came as a surprise since most economists, despite their differing beliefs about the motivations for diversification, expected to find a positive relationship between diversification and firm performance. Partly because of the lack of empirical support for the established theories and partly because of the subsidence of the merger wave of the 1960s and early 1970s, interest in diversification-performance research declined. Instead industrial organization studies focused on other motives for corporate diversification, such as entry into new markets or avoidance of antitrust challenges.

In the last 15 years, most diversification-performance research occurred in the strategic management literature. Some of these studies found significant relationships between diversification strategies and firm performance. In particular, studies by Rumelt [1974, 1982], Montgomery [1979], Christensen and Montgomery [1981], and Palepu [1985] suggested that firms that are diversified into related businesses were usually more profitable than other firms. On the other hand, the finance literature on diversification, including studies by Bettis [1981], Bettis and Hall [1981], and Bettis and Mahajan [1985], has argued that it was a mistake to evaluate the diversification-performance relationship without considering the risk/return trade-offs faced by firms operating in related versus unrelated businesses.

Diversification-performance studies generally focus on the relationship between diversification (measured either by subjective schemes of categorization [Rumelt 1974, 1982, Montgomery 1985]), or some kind of diversification index as in most industrial organization studies [Gort 1962, Gollop and Monahan 1989] and performance (measured by various forms or approximations of firm profitability). The findings are contradictory.

Some studies suggest that diversification does lead to better performance and that specific types of market failures give rise to specific classes of diversified firms. For example, imperfections in product and technology markets lead to related-diversified firms and capital market failures give rise to unrelated-diversified firms [Lubatkin 1987, Michel and Shaked 1984, Dundas and Richardson 1980, Weston and Mansinghka 1971]. Others argue that diversified firms have little market power with which to influence price, and thus profit, and are often less efficient than specialized firms [Backaitis et al. 1984, Salter and Weinhold 1979, Bettis 1981, Palepu 1985, Montgomery 1985]. The question that arises is: If profitability is indeed positively correlated with the relatedness of a firm's businesses, why were firms so actively engaged in unrelated diversification? Studies by Mueller [1977] and Ravenscraft & Scherer [1987] suggest that many diversification precipitated mergers and acquisitions were not motivated by pursuit of efficiency or profit but by pursuit of "corporate growth or other objectives not directly related to stockholder welfare and economic efficiency [Mueller 1977]." This is formally analyzed in the literature on firm internal organization, corporate control, and agency costs [Chandler 1977, Jensen and Meckling 1976, Fama 1980, Aron 1988, Dyl 1988]. Empirical findings on agency costs and markets for corporate control have been largely mixed and inconclusive [Dyl 1988, Eckbo 1986].

One of the important potential benefits of diversification is the reduction of risk, especially through unrelated diversification. Firms may diversify to reduce financial risk and increase survivability rather than for the single purpose of profit maximization. The risk reduction argument has not received proper attention and has often been rejected as a legitimate reason for unrelated diversification [Hill and Jones 1989, Salter and Weinhold 1979]. The risk of a security can be decomposed into two parts: the "unsystematic" portion which is specific to each company and the "systematic" portion which is common to all securities [Salter and Weinhold 1979]. Critics suggest that corporate diversification can only eliminate the unsystematic portion of total risk and the systematic portion is nondiversifiable. They argue that the risk reduction and income stabilization objective can be achieved by individual shareholders through portfolio diversification and that the diversified firm is simply duplicating shareholders' diversification efforts [Hill and Jones 1989].

Proponents of the risk reduction argument counter that this criticism ignores two fundamental factors. First, individual shareholders may not have the same quality of information as firms have and may be less successful in minimizing the risk of their holdings. Second, transaction costs for individual shareholders may be high enough to prevent them from diversifying their holdings. Even if a diversified firm offers no advantage in terms of reduced variance per dollar of gross expected return compared to portfolio diversification, diversification of productive activities may still offer advantages to management [Needman 1978]. If management is concerned with the firm's survival, corporate diversification may be superior to specialized operations given the same or sometimes even lower expected earnings.

Bettis and Hall [1981] were one of the first to shed some light on the nature of the linkage between diversification strategy and risk/return performance. Using return on assets and its standard deviation as a measure of risk/return performance, they found evidence of a positive relationship in unrelated diversified firms, a negative relationship in related-linked firms, and no relationship in related constrained firms. Another study by Bowman [1980] investigated a sample of 85 industries using return on equity and its variance as a measure of risk/return performance. He found evidence of a negative risk/return relationship in more than 60 percent of the industries. A more recent study by Bettis and Mahajan [1985] examined the risk/return trade-off for 80 large related and unrelated diversified firms. The results suggest that although related diversified firms outperform unrelated diversified firms on average, related diversification is no guarantee of a favorable risk/return performance. In fact different diversification strategies can result in similar risk/return performance. These findings indicate that diversification may indeed reduce risk at the expense of profitability, as industrial organization theory predicts. What is even more interesting is that these findings suggest a well-devised diversification strategy could simultaneously reduce risks and increase returns. Beyond these three studies, however, there has been very little empirical research on the relationship between risk and return. Out of 56 diversification studies reviewed by Ramanujam and Varadarajan [1989], only two dealt with risk reduction.

That empirical studies of diversification-performance linkages have not produced a consensus is not surprising given the wide variety of diversification strategies and multiple factors influencing firm performance. There are many possible relationships between diversification and other aspects of firms' operations, corresponding to differences in objectives and constraints. Furthermore, it is widely recognized that firm diversification strategy has been influenced by the vigor of merger law enforcement [Scherer and Ross 1990, Shleifer and Vishney 1990].

Restructuring Theory and Empirical Studies

Restructuring activities may lead to increases or decreases in a firm's diversification. Even where restructuring transactions are horizontal in nature, added activity in one line of business will change the balance of the firm's overall business and therefore its level of diversification. In light of the often dismal performance of highly diversified firms, careful reevaluation of corporate strategies that emphasize diversification are in order. As noted above, it is generally thought that the restructuring that occurred in the 1980s resulted from firms' reassessment of the expansion strategies of the late 1960s and 1970s. Analyses of the outcomes of restructuring activities covering parts of the 1980s have begun to appear [e.g., see Blair et al. 1991]. For example, Porter [1987] examined the diversification records of 33 large U.S. companies for the years 1950-1986 tracking entry into new industries through acquisitions, joint ventures, and start-ups. Using as a straightforward measure of the success of diversification, whether the acquired firm or line of business was ultimately kept by the acquirer, Porter found that his results paint a sobering picture: "On average corporations divested more than half of their acquisitions in new industries and more than 60% of their acquisitions in entirely new fields [p. 45]." Porter concludes that many managers have a poor track record in creating stockholder value through diversification.

Porter argues that most diversification attempts failed because there were simply too many pitfalls. According to Porter for an acquisition to be successful, it must pass three essential tests: 1) The newly entered industry must be structurally attractive to the parent firm; 2) The cost of entry must not capitalize all the future profits; and 3) Either the new unit or the parent must gain competitive advantage from the link. Porter argues that most diversification attempts of the 1960s and 1970s failed because they did not meet these standards. Morck et al. [1990] suggest that most acquisitions are driven by the personal objectives of corporate managers, not stockholder wealth maximization. This is particularly "stressful" because both good and bad managers make bad acquisitions. Good managers make bad acquisitions because they are overconfident and think they can manage everything. Bad managers make bad acquisitions because they cannot make their existing firms work and want to try their luck with something new. Morck et al. suggest that one way to correct these mistakes is through restructuring. A study by Williams et al. [1988] of firm level restructuring activity for 82 conglomerates over the period 1975-84 supports this view. Williams et al. report counts of acquisitions and divestitures; measures of changes in relatedness of such transactions to the companies' core businesses; and breakdowns for subperiods. They conclude that during this period managers of conglomerates decreased the average number of businesses they managed and increased the relatedness of their remaining lines of business.

Other recently published studies focus on the outcomes of particular classes of transactions undertaken during the 1980s, in large part attempting to explain the premia earned by the stockholders of acquired firms. Kaplan [1989] examined a sample of 76 large management buyouts (MBOs) that occurred from 1980-86. He found that for the 48 MBOs with post-buyout data cash flows increased significantly and they were associated with valuable operating improvements. Kaplan finds support in these results for the agency theory hypothesis that corporate forms such as MBOs give improved incentives to managers for good performance. Interestingly, a study by Bhagat et al. [1990] reaches a contradictory conclusion based on an analysis of all 62 hostile takeovers that occurred from 1984-86 with purchase prices of \$50 million or more. They find that:

The role of the raiders and MBO boutiques seems to be largely to take diversified firms, bust them up, and sell the divisions to other firms in the same business. Management buyout organizers and raiders thus serve as brokers working for the ultimate purpose of increased concentration. Their goal is to create a temporary organization that facilitates the allocation of assets to related buyers...The evidence is clear that the goal of divestitures is typically to realize gains from industry consolidation, not to improve performance through an incentive-intensive organizational form [p. 44].

Bhagat et al. further conclude that "hostile takeovers represent the deconglomeration of American business and a return to corporate specialization [p. 2]." While differences in transactions analyzed may account for some of the difference in findings between the two studies, further data on the ultimate disposition of business units acquired in different types of transactions is needed.

Measuring Restructuring Activity

In describing restructuring activity during the 1980s, the beginning and end points as well as the path between them are important. The contribution of the approach outlined here is to combine endpoint and path analyses. The approach describes the extent to which particular food and tobacco manufacturing firms have become more or less diversified over the course of the 1980s; the underlying relatedness among a firm's retained business lines; and the level of each firm's acquisition and divestiture activity during the period and how it resulted in the observed change in diversification. While most empirical studies of diversification are based on large cross-sectional data sets, this study uses data from two closely related industry groups: food and tobacco manufacturing. We focus on company histories and overall trends in diversification.

Measures of Diversification

The diversity of a firm's businesses can be measured by a number of alternative measures. Early industrial organization economics studies used simple product or industry count indexes to measure the total diversity of a firm's operations [Gort 1962]. Most strategic management studies employ categorical measures based on a classification scheme developed by Rumelt [1974]. As Montgomery [1982] points out, both approaches have strengths and weaknesses. The diversification product or industry count indexes are simple, easy to compute, objective, and replicable. However, a major criticism of these indexes is that while they do reflect the diversity of a firm's operations, they do not distinguish between related and unrelated diversification. Nor do they weight each line of business based on its importance to the firm. The categorical diversification schemes, on the other hand, are more comprehensive and capture not only the diversity but also the relatedness of a firm's operations. Their drawback is that they are somewhat subjective, very time-consuming, and difficult to replicate. Recognizing the problems with both approaches Montgomery [1982] concluded that "perhaps further work with continuous measures that distinguish between diversification within and between major industry groups will better address this issue."

Partly in response to criticisms of early diversification measures, more sophisticated indexes have been proposed that are much more comprehensive than the simple product count approach [Berry 1971, 1979, McVey 1972, Utton 1977, Pomfret and Shapiro 1980, Gollop and Monahan 1989]. A number of studies [Palepu 1985, MacDonald 1985] have applied the so-called "entropy measure of diversification" (also known as the Shannon index) which was first proposed by Jacquemin and Berry [1979]. This measure effectively captures three elements of a firm's diversity of operations: 1) the number of product segments in which the firm operates,

2) the distribution of the firm's total sales across the product segments, and 3) the degree of relatedness among the various product segments.

The Shannon index addresses a situation in which there are a number of industry groups and within each industry group there are a number of industry segments. Initially for this study, an industry group is defined as a two-digit SIC group and an industry segment is defined as a four-digit SIC industry. If a firm operates in a total of N four-digit industries in all the two-digit industry groups, then the firm's total diversification (C_T) can be measured as:

$$C_T = \prod_{i=1}^N (1/P_i)^{P_i}$$

where P_i is the share of a firm's sales from the i th four-digit industry. This index not only takes into account the number of industry segments in which a firm operates, it also gives weights to each segment according to its share in total sales. In addition, it can be decomposed to reflect the firm's diversification across two-digit groups and four-digit industries, respectively. If we classify the N industry segments into M industry groups, then C_{4j} is a measure of diversification among four-digit industries in the j th two-digit group:

$$C_{4j} = \prod_{i \in j} \left(\frac{1}{P_i^j} \right)^{P_i^j}$$

where P_i^j is the share of the i th four-digit industry of the j th group in the total sales of the group. In this study, related diversification (C_{4n}) will be initially defined as diversification across four-digit industries within the two-digit groups SICs 20 and 21.¹ For a firm that operates across more than one two-digit group (with SICs 20 and 21 being counted as one group), its four-digit level diversification can be defined as the weighted sum of the C_{4j} 's, where P^j is the share of the j th group in the total sales of the firm:

$$C_{4T} = \sum_{j=1}^M C_{4j} \cdot P^j$$

Let C_2 be diversification across two-digit groups, then according to the definition of the index:

$$C_2 = \prod_{j=1}^M \left(\frac{1}{P^j} \right)^{P^j}$$

Furthermore, it can be shown [Palepu 1985] that:

$$C_T = C_2 + C_{4T}$$

In this study, C_2 will be used to measure diversification outside of food and tobacco manufacturing. C_{4n} , a component of C_{4T} , will be used to measure the relatedness dimension of firm diversification [MacDonald 1985].

The Shannon index clearly represents an improvement over earlier measures of diversification and is useful in examining inter-industry, cross-sectional data. However, we are interested not only in changes in

¹Further work will use more precise measures of relatedness by relaxing the assumption that all 4-digit industries within the 2-digit SICs 20 and 21 are related.

diversification indexes over time but also in what underlies a particular diversification pattern. The Shannon index does not incorporate this kind of information on the path between beginning and endpoints or the strategy that determined that path. This insight requires qualitative information on the kinds of businesses in which diversified firms in food and tobacco manufacturing tend to be involved. This qualitative information can be achieved for a relatively small sample such as the 10 firms selected here.² Our research design incorporates industry counts, use of the Shannon diversification index, and descriptive and quantitative information on sample firms' acquisition and divestiture histories.

Data Sources

Data for the study come from a number of sources. The ten firms in the sample are selected from *Food Processing's* annual Top 100 Food Companies Report. The ranking of the sample firms is based on the firms' 1990 food sales, not total sales. Because of the extensive restructuring activities that occurred during the 1980s, some of the sample firms were not in the Top 10 at the beginning of the decade. Many moved into the Top 10 through mergers and acquisitions (e.g., ConAgra, Philip Morris). Other firms were in the Top 10 at the beginning of the decade but dropped out due to being acquired (e.g., Kraft, General Foods, Nabisco Brands) or because of relatively slower growth (e.g., CPC International, Ralston Purina).

Industry participation as measured by the number of 4-digit SIC industries a firm operates in is obtained from the Standard & Poor's Register of Corporations (1980, 1990). Information on firms' restructuring histories is collected from a number of sources, including Moody's Industrial Directory (1990), the Food Institute Report (1984-1990), the *Wall Street Journal*, the Merger Data Base of the Food Marketing Policy Center at the University of Connecticut, and *Mergers & Acquisitions*. These sources provide the following information: 1) a listing of the acquisitions and divestitures made by firms over the ten-year period, 2) the kinds of businesses/products involved in these transactions, 3) some indication of the strategic considerations of divesting/acquiring firms, and in some cases 4) information on terms of the transaction (e.g., sale price, method of payment). The *Compustat* Business Segment tape will be used to compute Shannon indexes.

Restructuring Activity Among the Top 10 Food Manufacturers in the 1980s

The average levels of diversification among leading food manufacturers increased continually between 1919 and 1972. But the trend slowed and stabilized between 1972 and 1977 [MacDonald 1985]. Of particular interest here are MacDonald's measures of diversification patterns among the top 100 U.S. food manufacturing firms between 1950 and 1977. By all measures, the level of diversification increased between 1950 and 1972. A number of factors contributed to the increase, including the fact that many relatively specialized firms began to produce other products within food manufacturing. By 1972, most leading food manufacturers were widely diversified within the food industries. At the same time, some large conglomerates had diversified into food manufacturing. MacDonald found that the level of diversification among food firms of all size classes stabilized between 1972 and 1977. A number of explanations were offered for this stabilization. By the early 1970s, many of the firms that had been drawn into the merger and acquisition wave of the 1960s had time to reassess their diversification moves and recognize that they were not in the firms' best strategic interests. Also during the 1970s, many conglomerate firms that had entered the food industries during the 1960s began to divest their food interests. By the end of the 1970s, conglomerates such as ITT, LTV, RCA, and Gulf & Western had divested most of their food manufacturing businesses.

Here we report on restructuring trends for the 1980s. Data availability prevents us from calculating Shannon index results at this time for the 10 sample firms. We report preliminary results on an industry participation index and a categorical scheme based on qualitative analysis of firms' acquisition/divestiture histories. The industry participation index is a count of the number of 4-digit SIC industries in which each firm is involved in 1980 and 1990, a net change count for the period, and counts of the number of 4-digit SICs added and deleted during the 1980s within and outside food and tobacco manufacturing (SICs 20 and 21). For the 8 firms for which full data is currently available, Table 2 shows that the firms are evenly divided between those that had positive net changes in the number of 4-digit industries operated in and those that had negative changes.

²The full study will use a sample of the 100 largest food and tobacco manufacturers.

Table 2. Changes in 4-Digit SIC Industry Participation, 1980-1990.

COMPANY	# SIC (1980)	# SIC (1990)	NET Δ	+SIC w/i 20 & 21	-SIC w/i 20 & 21	+SIC OUTSIDE	-SIC OUTSIDE
PHILIP MORRIS	15	12	-3	8	2	2	11
CONAGRA	12	15	3	7	4	1	1
ANHEUSER-BUSCH	5	6	1	2	2	2	1
PEPSICO	8	6	-2	1	1	0	2
COCA-COLA	6	4	-2	1	3	0	0
IBP							
ADM	6	11	5	4	1	2	0
NESTLE							
CAMPBELL SOUP	7	6	-1	1	2	0	0
RJR NABISCO	4	13	9	10	1	0	0

Source: Moody's Industrial Directory, 1980 and 1990.

Table 3. Food Sales as a Percentage of Total Company Sales, 1977, 1982, 1987, and 1990.

COMPANY	1977	1982	1987	1990
	(Percent Food Sales)			
PHILIP MORRIS	23	30	50	59
CONAGRA	100	76	73	87
ANHEUSER-BUSCH	95	93	89	97
PEPSICO	76	71	71	66
COCA-COLA	95	100	84	99
IBP	100	100	94	94
ARCHER DANIELS MIDLAND	100	100	91	92
NESTLE	100	100	97	97
CAMPBELL SOUP	100	100	100	100
RJR NABISCO	5	20	63	45

Source: See data section, p. 7.

The companies with positive net changes include ConAgra, Anheuser-Busch, Archer Daniels Midland, and RJR/Nabisco, while those operating in fewer 4-digit industries include Philip Morris, PepsiCo, Coca-Cola, and Campbell Soup. Net changes, however, mask some differences in underlying patterns of change in industry participation. Philip Morris, ConAgra, Archer Daniels Midland, and RJR Nabisco all increased the number of food industries in which they participated but only Philip Morris' increase in food industry participation was accompanied by a substantial decrease in participation in industries outside of food and tobacco manufacturing. All the other firms showed little change in unrelated diversification.

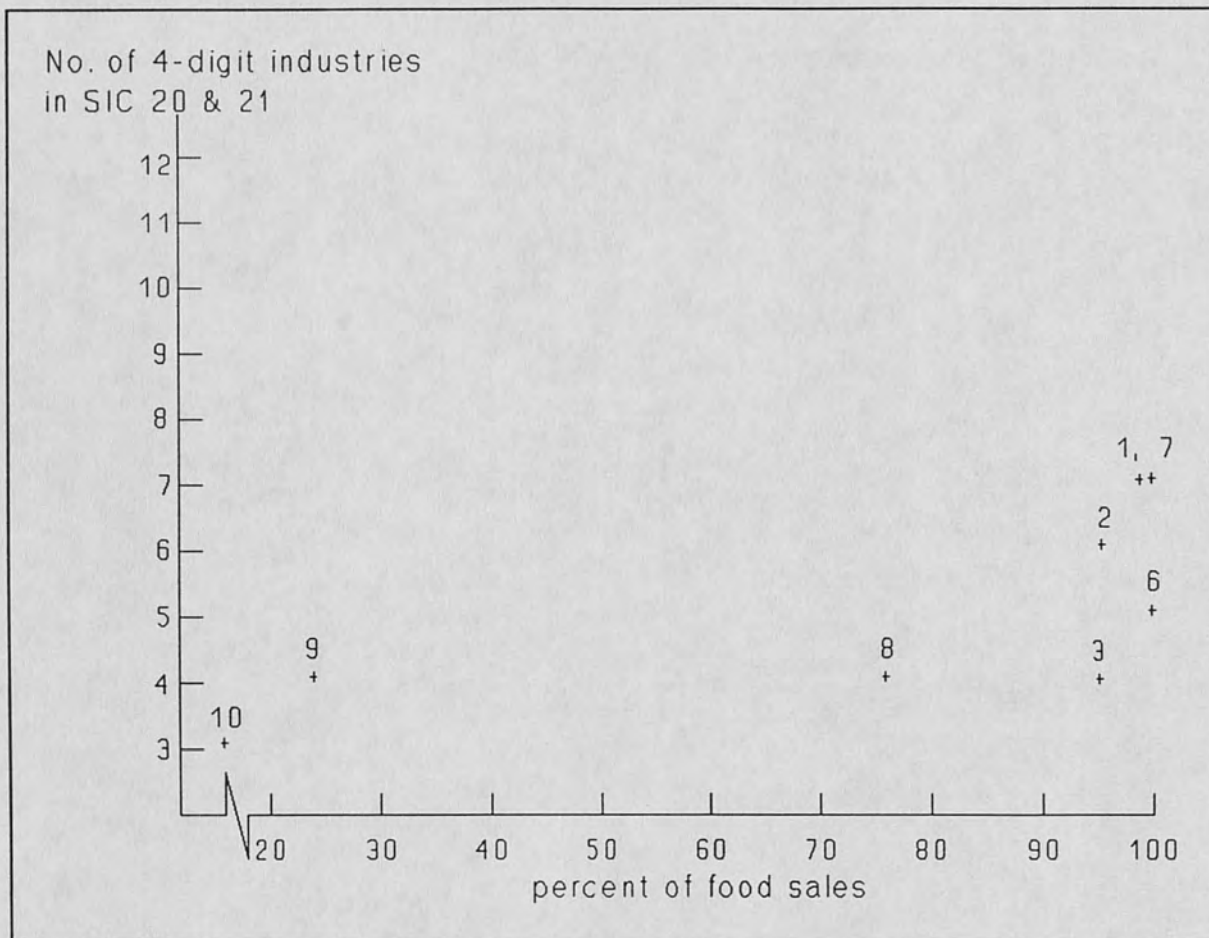
A rough measure of the impact of changes in industry participation on the overall relatedness of a firm's businesses can be seen in trends in the percent of the firm's total sales that are in food (SIC 20). These percentages are shown in Table 3 for the Top 10 firms for 1977, 1982, 1987, and 1990. Four of the 10 companies began and ended the period from 1977-1990 with over 95% of their sales in food, although 2 of these companies (Anheuser-Busch and Coca-Cola) had significant decreases and then increases in their food specialization during the intervening years. ConAgra, IBP, and Archer Daniels Midland began the period with 100% of their activity in food and became somewhat less specialized by the end of the period. Meanwhile, PepsiCo also became somewhat less specialized in food, beginning from a more diversified base. The 2 tobacco companies, Philip Morris and RJR Nabisco, show the most marked pattern of change with their participation in the food industry growing very significantly. Figures 1 and 2 illustrate the movement between 1980 and 1990 for the 8 firms for which data are currently available in terms of the number of SIC 20 and 21 industries engaged in and the percent of sales in food.

Table 4 shows data on the number of acquisitions and divestitures and their value made by the 10 sample firms during the 1980s. Based on this data and company histories presented in the Appendix, the sample firms' restructuring experiences can be characterized by a categorical scheme. An examination of this information suggests a four-way classification:

1. Firms that remained quite specialized over the period. IBP is the only firm in the sample that fits this category.
2. Firms that remained quite diversified within related food industries but had little participation in unrelated diversification. These firms did not experience much restructuring during the 1980s. They include Anheuser-Busch, Coca-Cola (except for its foray into the entertainment business), and Campbell Soup. Nestle and PepsiCo also belong in this group, although PepsiCo's large restaurant business makes it less specialized in food manufacturing.
3. Firms that increased their related diversification within the food industries and modestly increased their unrelated diversification outside food. This group includes ConAgra and Archer Daniels Midland.
4. Firms that greatly increased their related diversification within the food and tobacco industries. This group includes the 2 tobacco firms, Philip Morris and RJR Nabisco. In Philip Morris' case, this restructuring was accompanied by significant exit from industries outside food and tobacco manufacturing. RJR Nabisco's restructuring is still underway so characterizing its actions at this point may be somewhat premature.

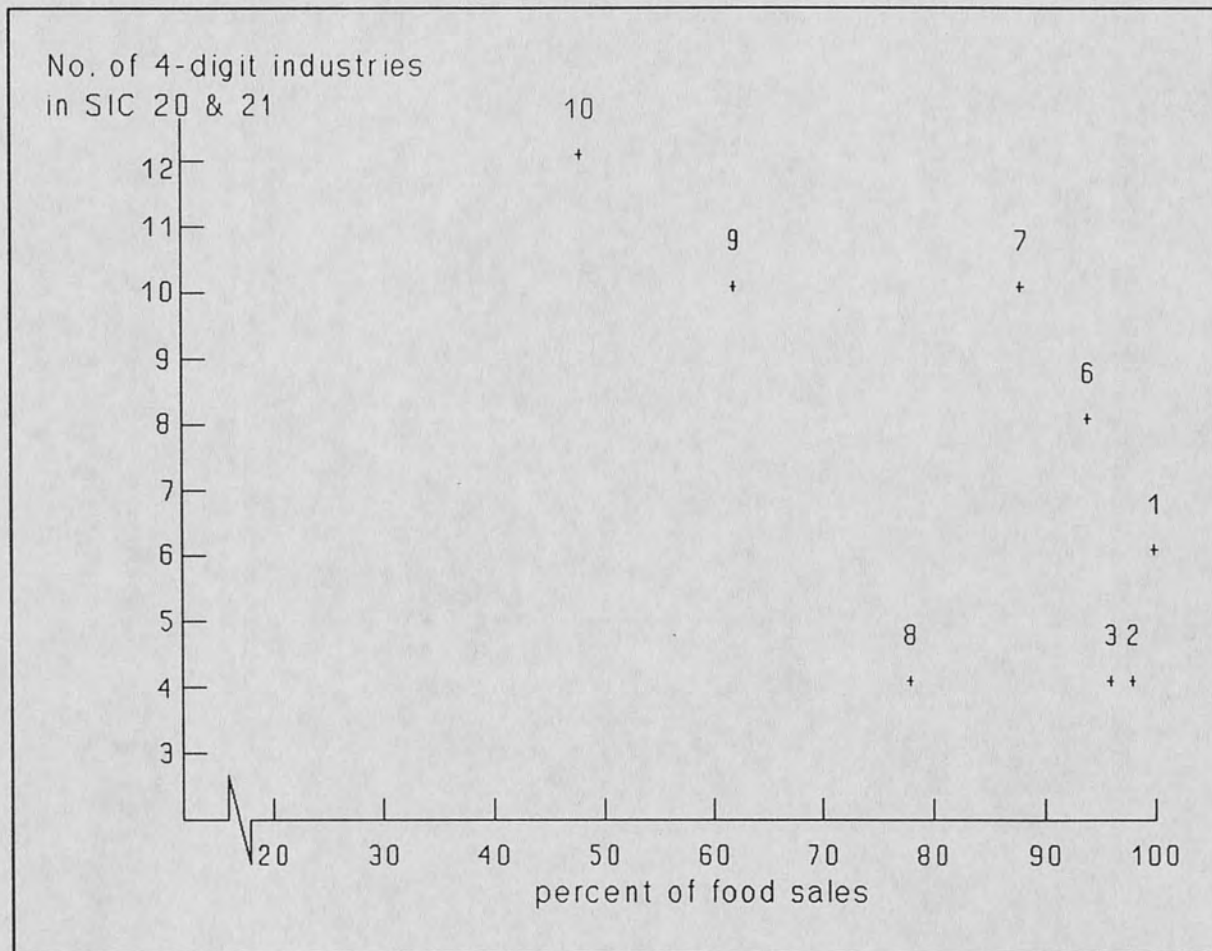
This classification suggests that no single restructuring scenario characterizes the experience of leading food firms in the 1980s. Half of the firms were in fewer 4-digit SICs in 1990 than in 1980 but the other half were in more. Most remained highly centered in the food business while the two tobacco firms in the sample diversified further into this business. Significant exit from 4-digit SICs outside of food and tobacco manufacturing did not occur for most companies largely because many began the period with low levels of unrelated diversification. Thus the accepted wisdom about the nature of restructuring activities among large firms in the 1980s appears to be only half true for large food companies. While these firms in general concentrated on related diversification, this concentration was not coupled with widespread shedding of unrelated business lines.

Figure 1. Number of SIC 20 and 21 Industries and Percent of Sales in Food, 1980.



1. CAMPBELL SOUP COMPANY
2. COCA-COLA COMPANY
3. ANHEUSER-BUSCH COMPANIES, INC.
4. NESTLE HOLDINGS, INC.
5. IBP, INC.
6. ARCHER DANIELS MIDLAND COMPANY
7. CONAGRA, INC.
8. PEPSICO, INC.
9. PHILIP MORRIS COMPANIES, INC.
10. RJR NABISCO, INC.

Figure 2. Number of SIC 20 and 21 Industries and Percent of Sales in Food, 1990.



1. CAMPBELL SOUP COMPANY
2. COCA-COLA COMPANY
3. ANHEUSER-BUSCH COMPANIES, INC.
4. NESTLE HOLDINGS, INC.
5. IBP, INC.
6. ARCHER DANIELS MIDLAND COMPANY
7. CONAGRA, INC.
8. PEPSICO, INC.
9. PHILIP MORRIS COMPANIES, INC.
10. RJR NABISCO, INC.

Table 4. Summary of Firm Acquisition and Divestiture Activity, 1980-1990 (Preliminary Data).

COMPANY	Acquisitions			Divestitures		
	#	Sales(*) (000)	Price (*) (000)	#	Sales (*) (000)	Price(*) (000)
PHILIP MORRIS	15	\$18,910,118 (3)	\$18,906,000 (5)	10	\$120,000 (2)	\$910,000 (2)
CONAGRA	61	\$16,141,884 (27)	\$18,349,462 (27)	2	NA	NA
ANHEUSER-BUSCH	10	\$1,114,000 (1)	\$1,899,000 (4)	6	\$80,000 (1)	NA
PEPSICO, INC.	20	\$910,262 (5)	\$4,378,500 (9)	4	NA	\$526,000 (2)
COCA-COLA	29	\$2,182,652 (6)	\$4,905,700 (11)	14	NA	\$315,000 (2)
IBP	5	NA	\$2,500 (1)		NA	NA
ADM	24	\$683,540 (6)	\$62,700 (2)		NA	NA
NESTLE HOLDINGS	10	\$6,316,300 (6)	\$56,300 (1)	9	NA	NA
CAMPBELL SOUP	36	\$729,500 (13)	\$5,500 (1)	9	\$79,000 (2)	NA
RJR NABISCO	11	\$6,431,091 (3)	\$5,883,100 (4)	37	\$340,000 (3)	\$1,608,500 (9)

(*) Number of transactions with value data.

Source: Moody's Industrial Manual [1990], Food Institute Report [1983-1990], and Standard and Poors *Million Dollar Directory* [1982-1990].

Appendix. Case Histories of Sample Firms.

ANHEUSER-BUSCH COMPANIES, INC.

Founded in 1852 by Eberhard Anheuser, a prosperous soap manufacturer in St. Louis, and assisted by his son-in-law, Adolphus Busch, the Anheuser-Busch Company is now the nation's largest brewer of light, premium, and super-premium beers with 11 breweries across the country. Throughout its 140 year history, Anheuser-Busch has taken a relatively conservative approach to growth strategies. In fact, the company had very much limited itself to the beer industry until the 1970s. Since the 1970s, the company has expanded into refrigerator cars, metal containers, corn syrup, starch, and yeast, all of which are related to the beer industry. During the same period, the company has made conscious efforts to move into food products by acquiring Campbell Taggart, the second largest bakery in the U.S., and developing Eagle Snacks, which distributes snack food to bars, taverns, and grocery and convenience stores. As part of its long-term strategic marketing plan, the company ventured into the entertainment industry. It has developed theme parks called Busch Gardens in Virginia and Florida. These introduce Anheuser-Busch's name to a new target group, the younger generation and their parents. The company's ownership of the St. Louis Cardinals also helps to popularize Anheuser-Busch products with sports fans who are the most loyal beer consumers.

ARCHER DANIELS MIDLAND COMPANY

The company was founded by John W. Daniels in 1878 as a flaxseed processor. Throughout its history, ADM has been clearly focused and states it has no intentions to diversify outside food related businesses. Since its early years the company's methods have been consistent. They feature strong research and development, which emphasizes new production methods and uses for agricultural products, coupled with a bottom-line mandate for high performance and cost efficiency. The company is well positioned in several markets because it supplies basic ingredients to a wide range of industries. It is the United States' leading processor of linseed oil, the fourth largest flour miller, and the largest soybean processor. In addition to the food industry, it is involved in the paint, leather, printing, gasoline, paper, cosmetics, pharmaceutical, rubber, ceramics, munitions, and insecticides industries. The company attributes much of its success to its conservative management style. In 1986, the oilseed operations accounted for 45% of revenues, the corn operations 34%, the wheat and flour operations 12%, and all others 9%. It has quietly become one of the world's largest agricultural processors and plans to remain exclusively in the food business.

CAMPBELL SOUP COMPANY

The Campbell Soup Company was established in 1860 in Camden, NJ. In its early days, the company was known as a maker of canned vegetables, mince meat, jams and jellies, although it did make a variety of soups. The company's luck with soup came in 1899 when one of its chemical engineers successfully developed a method of canning condensed soup. This innovation greatly reduced the cost of shipping and made it possible to make more varieties of soups. Over the next 50 years the company gradually reduced its canned produce and increased canned soups and eventually became the number-one maker of soups.

Like most other food manufacturers, the company began to diversify into other businesses in the 1970s and early 1980s. Some of the acquisitions, such as Vlasic Foods (a producer of pickles), Snow King Frozen Foods (a producer of uncooked frozen specialty meats), and Mrs. Paul's Kitchens (a processor of frozen prepared seafood and vegetables). These acquisitions were largely successful in complementing the company's soup business. Like many other food manufacturers, the company was also caught up in the merger fever and ventured out into unfamiliar grounds. In the early 1980s, the company acquired Annabelle's, a restaurant chain; Triangle, a manufacturer of physical-fitness and sports medicine products; and a pet food manufacturer. By

1985, it was clear that these unrelated acquisitions were hurting the company's financial position. In 1987, the company began to sell off the less-successful ventures and eventually got rid of almost all of the unrelated businesses.

During the same period, the company continued to acquire companies that were more compatible with its traditional lines of business, including the Open Pit barbecue sauce line, an American olive producer, and Freshbake Foods Group PLC, a British producer of frozen foods. In short, during much of its history, Campbell Soup has been a specialized maker of canned soups and canned produce. In recent years, the company became more diversified but still remained close to its traditional lines of business.

COCA-COLA COMPANY

In 1886 when Dr John Styth Pemberton concocted a mixture of sugar, water, caffeine, and extracts of the coca leaf and the kola nut, he thought he was making a headache remedy. Instead the resulting syrup became the ingredient of the world's most popular soft drink. A century after its creation, Coca-Cola is the largest soft drink company in the world. Prior to the 1960s, the company had been essentially a one-product concern. In recent decades, it has diversified into such industries as food products, entertainment, and clothing. The company began to diversify in 1960 when the Minute Maid Corporation merged with Coca-Cola. Since then the company acquired the Duncan Foods Corporation, Belmont Springs Water Company, and Taylor Wine Company. The company also introduced several new products within its soft drink line and has made numerous acquisitions of bottling companies during the 1980s. In 1981, the company purchased Columbia Pictures which the company later sold. Despite its diversification attempts, the company has stayed close to its core business of soft drinks.

CONAGRA, INC.

The Nebraska Consolidated Mills Company was formed in September, 1919. Seventy years and a name change later, ConAgra is a diversified international company whose products range from agricultural supplies such as fertilizers, pesticides, and feeds to prepared gourmet dinners. The company first started as a flour milling firm serving the local Nebraska market. It soon became known for its rapid, multi-dimensional expansion into other geographical and product areas. Prior to the 1980s, the company's competitive strategy focused on expanding into markets outside of Nebraska. In 1942, the company opened a flour mill and an animal feed mill in Alabama. In 1958, the company built the first major grain processing plant in Puerto Rico. Throughout the 1960s and into the 1970s, the company developed mills and distribution centers for feed and flour in the Southeast and Northwest. During this period, the company also began to move into the European market by going into partnership with Bioter-Biona, S.A., a Spanish producer of animal feed and animal health products.

Because of the cyclical nature of agricultural commodities, the company has always been concerned about balancing its cash flows. To counter the cyclical profit pattern of basic agricultural commodities, the company made conscious attempts to diversify into other businesses. During the 1960s, the company developed poultry growing and processing complexes in Georgia, Louisiana, and Alabama and by 1982, ConAgra took over first place in the chicken industry. During the 1970s, through a series of acquisitions, ConAgra also expanded into agricultural chemicals. During the 1980s, ConAgra decided that prepared foods were a better way to balance cyclical profits in the food industry. It acquired a number of seafood processors, including Singleton Seafood, Sea-Alaska Products, Trident Seafoods, O'Donnell Usen Fisheries, and Mrs. Paul's Kitchens (from Campbell Soup). Also during this period, the company moved into the red meat business by acquiring Armour Food Company, a processor of hot dogs, sausage, bacon, ham, and lunch meats. In 1986, the company increased its presence in frozen foods by purchasing the Morton, Patio, and Chun King brands. In 70 years, ConAgra changed from a low-profile flour miller into a producer of basic commodities, and then into an acquisition-driven, diversified international food company with interests across the food industry.

IBP, INC.

IBP began in 1961 as Iowa Beef Packers, with a single beef slaughtering plant in the western Iowa town of Denison. Within a few years, IBP helped to revolutionize the meat packing industry by pioneering boxed beef, a practice which greatly improved the efficiency and reduced the cost of beef processing. Business expansion was achieved through both acquisitions and internal growth. Most of its early acquisitions were in the four midwestern states of Iowa, Nebraska, Minnesota, and South Dakota. Restricted by an antitrust challenge from further expansion in those four states, IBP expanded into Texas, Kansas, Illinois, and the Pacific Northwest during the 1970s. In 1981, IBP was purchased by Occidental Petroleum Corporation, the giant energy conglomerate. With financial backing from its parent, IBP began to expand into the pork industry and in just six years became the world's largest producer of fresh pork. It was at this time that the company officially changed its name from Iowa Beef Processors to IBP, dropping the emphasis on beef. In 1987, Occidental Petroleum sold 49% of its stock in IBP but remained its major shareholder. Throughout its entire history, IBP has built its strength on product and process innovation instead of diversification. In fact the company has never ventured out of the meat processing industry and does not intend to. It is currently exploring a wider variety of products, such as consumer-ready branded meats.

NESTLE S.A.

Nestle is the largest food company in the world. With about 400 manufacturing facilities on five continents, it has often been called the "most multinational of the multinationals." Nestle S.A. is a holding company for some 200 operating units that manufacture and sell a wide variety of products including tea, coffee, dairy products, baby food, frozen foods and ice cream, pet foods, pharmaceutical products, and cosmetics. The company began in 1866 as a manufacturer of condensed milk and milk food for babies. In response to growing demands for its products, the company quickly expanded its operations into European countries, Australia and the United States. During the 1930s and 1940s, the company began to expand into the coffee and tea markets. Its expansion into the food processing industry accelerated in the 1970s when the company acquired Libby's and Stouffer's, and developed Lean Cuisine. Nestle entered the nonfood business for the first time in 1974 when it became a major shareholder in the French company L'Oreal. In the late 1970s, the company also moved into the pharmaceutical industry through its acquisition of Alcon Laboratories. During the 1980s, Nestle continued its expansion into the milk and coffee markets. In 1984, it purchased Carnation, a U.S. manufacturer of milk, pet, and culinary products. In 1985, it acquired Hills Brothers Inc., the third largest American coffee firm. It also continued to expand into the food processing industry by purchasing the Baby Ruth, Butterfinger, and Pearson candy lines from RJR Nabisco in 1990. With its global presence, Nestle has by and large restricted itself to the food industry. Most of its diversification efforts have been based on its technological know-how and distributional network.

PEPSICO, INC.

Officially established in 1919, PepsiCo is now the second largest producer of soft drinks in the United States. Like Coca-Cola, PepsiCo had been a one-product firm throughout much of its history. In the 1960s, the company introduced a number of new brands, including Patio, Teem, Tropic Surf, Diet Pepsi, and Mountain Dew. The company's expansion beyond the soft drink market began in 1965 when it purchased Frito-Lay, a Dallas-based snack food manufacturer. In the late 1960s and early 1970s, the company acquired two well-known fast food chains, Taco Bell and Pizza Hut and, later, Kentucky Fried Chicken. These new subsidiaries became major outlets for Pepsi products. The company also ventured out of the food and drink industry and acquired North American Van Lines, Lee Way Motor Freight, and Wilson Sporting Goods. Most of these latter acquisitions eventually failed apparently because the company did not have the managerial experience required to run subsidiaries outside the food and drink industries. The company sold off most of these businesses and vowed to stay away from "unfamiliar territories."

PHILIP MORRIS COMPANIES, INC.

Throughout much of its early history, Philip Morris operated exclusively in the tobacco industry. Since the early 1970s, the public's concern over the health effects of cigarette smoking led to a slowing of demand for cigarettes. To reduce its dependence on tobacco, Philip Morris began to diversify into other businesses. Most of its diversification efforts have been based on its superior skills in product positioning and promotion. In 1970, it acquired the Miller Brewing Company. It also diversified into the manufacturing of branded food products. By acquiring large companies such as General Foods and Kraft, it became the largest food manufacturer in the U.S. Its food business has grown steadily in the last decade. Even though tobacco still generates more profit for the company than any of its other products, Philip Morris has been consciously placing more and more emphasis on its non-tobacco businesses.

RJR NABISCO, INC.

The R. J. Reynolds Tobacco Company was established in 1899. Like Philip Morris, RJR was strictly a tobacco manufacturer during much of its early history. For much the same reasons as led Philip Morris, RJR began to diversify in the late 1960s and continued throughout the 1970s and early 1980s. Its early acquisitions covered a wide range of businesses including food manufacturing, transportation, oil and gas, mineral water, and soft drinks. By the mid-1980s, most the company's non-tobacco businesses were in food manufacturing, mostly packaged food products including canned fruits and vegetables. The acquisition of Nabisco Brands in 1985 made RJR one of the largest food manufacturers in the U.S. In 1988 the company was bought out and taken private by the investment group Kohlberg Kravis Roberts (KKR) in a much-publicized leveraged buyout. In order to pay off the debt incurred in the buyout, the company sold off most its non-food/non-tobacco businesses and most of its food lines not under the Nabisco flagship. It is expected that the company will shrink further into its core tobacco business. Therefore in the last two years the company has become more specialized than it had been in the previous ten years.

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