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As economists, managers, and industry analysts pause to look back on the past decade, there remains little doubt that the business environment in the United States grew increasingly hostile during the 1970s. More important, there is now little doubt that this hostile environment will continue (and perhaps even worsen) during the decade ahead, reflecting the combined effects of:

> Slower, erratic growth in domestic and world markets.
> Intensified inflationary pressures on manufacturing and distribution costs.
> Intensified regulatory pressures on business conduct and investment decisions.
> Intensified competition, both from traditional domestic competitors and also from the new wave of foreign competitors entering U.S. markets with different objectives and frequently lower ROI expectations.

As a result of these growing pressures, large U.S. manufacturing corporations are witnessing a major evolution in industry structures and competitive behaviors. Many structures that were stable and highly profitable during the "go-go" decade of the 1960s are now moving toward instability and marginal profitability.

Moreover, the broad range of corporate strategies and business "success formulas" which brought prosperity in those earlier years are no longer working. Instead, these are being replaced with a much narrower range of strategic choices that are becoming essential to survive in the hostile environment ahead.

The purpose of this article is to present some preliminary findings from an ongoing research project that my colleagues and I are conducting to explore these strategic and structural changes in more depth. This project is focusing on two broad questions:

1. How are industry structures in the mature markets evolving in the face of the adverse external pressures of the late 1970s?

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2. Given this evolution, what business strategies are appropriate? Which strategic choices give the best chances for survival, growth, and return in the hostile environment ahead?

In-Depth Investigation

To examine these issues, I selected eight major domestic manufacturing industries for comprehensive study because of their importance to national and/or regional economic development and also because the adverse external trends of the 1970s have been especially severe in their impact on them. As a result, during the 1970s, all eight industries underwent a significant structural change which is expected to continue into the 1980s. Within these industries, I examined the strategies and evolving competitive positions of the 64 largest companies by using a combination of public data sources and field interviews.

In examining the impact of external pressures on these companies, I found that the eight industries either matured during the 1970s or will mature in the 1980s, resulting in lower growth records and growth expectations as shown in *Exhibit I*. While the industries (on average) exceeded national economic growth rates in the 1950s and 1960s, they grew only slightly faster than the GNP in the 1970s, and they are projected to grow significantly more slowly than the U.S. economy in the 1980s.

During this maturation period, these eight industries, which are capital, raw material, and labor intensive, have been subjected to heavy inflationary pressures that cannot easily be price recovered. All are being forced by regulatory agencies to make major investments to comply with new occupational safety and health regulations and with new product safety, performance, and environmental protection standards.

In addition to the domestic pressures, foreign competition has been harsh in the eight basic industries selected for study. Foreign competitors have achieved significant market shares in three of the industries—steel, tire and rubber, and automotive; moderate shares in two—heavy-duty trucks and construction and materials handling equipment; and entry positions in the other three—major home appliances, beer, and cigarettes.

Because many of these foreign competitors are either nationalized, quasinationalized, or highly salient in their own countries, they are frequently willing to accept lower returns in U.S. markets, offsetting these lower returns against unemployment, balance of payments, and capital gains at home. While these foreign approaches have been criticized as unfair, the results have altered U.S. domestic industry structures in all eight cases.

EXHIBIT I Compound Annual Real Growth Rates in Demand—United States
Eight Basic Industries

	1950–1970	1971–1980	1980 forecast*
Industrial goods			
Primary products			
Steel	4.0%	2.2%	1.5%–2.5%
Tire and rubber	4.2%	1.4	1.0–1.5
Intermediate products			
Heavy-duty trucks	7.0	2.8	2.5
Construction and materials handling equipment	7.8	3.6	2.3
Consumer goods			
Durable products			
Automotive	4.8	3.5	2.0–3.0
Major home appliances	6.2	2.9	2.3–2.8
Nondurable products			
Beer	3.1	2.5	2.3
Cigarettes	1.6	1.0	0
Average growth rates—eight industries	**4.8%**	**2.4%**	**1.9%**
Average growth rates—U.S. GNP	**3.7%**	**2.3%**	**2.5%**

*Based on economic forecasts and industry projections.

Needless to say, the net effect of these adverse trends has made life anything but pleasant for managers and companies in these basic industries. Profitability and sales growth levels have generally fallen to or below the average manufacturing returns in the U.S. economy (*Exhibit II*). And industry spokesmen frequently speak out, urging either public assistance or some type of return to the simpler, less painful world of the 1960s.

As one senior executive I interviewed commented: "Maybe I should have accepted that job as an IBM systems engineer after graduation from college. It sure would be fun to look forward to going to work in the morning." Despite the outcries, the adverse external trends haven't gone away, and structural evolution continues at a slow, but inevitable, pace.

The heavy-duty truck manufacturing industry provides an excellent example of this evolution. In the early 1960s, spurred by rapid growth in the economy and by the completion of the U.S. interstate

EXHIBIT II Financial Returns and Revenue Growth Rates, 1975–1979
Eight Basic Industries

	Return on equity	Return on capital	EPS growth	Revenue growth
Steel	7.1%	5.7%	5.5%	10.4%
Tire and rubber	7.4	5.9	3.9	9.6
Heavy-duty trucks*	15.4	11.6	13.8	13.8
Construction and materials handling equipment	15.4	10.7	16.8	13.0
Automotive*	15.4	11.6	13.8	13.8
Major home appliances	10.1	9.0	3.2	6.8
Beer	14.1	10.2	6.2	12.4
Cigarettes	18.2	10.5	8.9	12.2
Average—eight industries	**12.9%**	**9.4%**	**9.0%**	**11.5%**
Average *Fortune* "1,000" company	**15.1%**	**11.0%**	**13.1%**	**13.1%**

*All vehicle manufacturers.

highway system, the industry grew at more than 8% per year. Eight major manufacturers—International Harvester, General Motors, Ford, Mack, White Motor, Diamond Reo, Chrysler, and Paccar—participated fairly equally in this growth, producing 60 truck models to serve the rapidly growing light-heavy and heavy-duty segments (19,000 pounds and greater gross vehicle weight).

However, by the late 1970s, annual growth had slowed to less than 3%. Emission regulations and inflation had raised unit costs. Investments for new truck model development had slowed to the extent that the number of models had dropped from 60 to 35 by 1979.

As a result of this movement toward a hostile environment, Chrysler closed its heavy-duty truck manufacturing operation, Diamond Reo was in bankruptcy, and White lingered near receivership. Both Mack and International Harvester had lost significant market share and were searching for foreign assistance or major cost-cutting programs to maintain their viability. Of the eight healthy domestic competitors in the early 1960s, only three—General Motors, Ford, and Paccar—maintained free-standing, vibrant, competitive positions as they entered the decade of the 1980s.

Similar moves toward lower profitability and consolidation occurred in all eight industries as the hostile environment took its evolutionary toll. In steel, Bethlehem announced in 1977 the largest corporate quarterly loss in U.S, history up to that time (exceeded by Chrysler two years later and U.S. Steel in late 1979), Jones & Laughlin and Youngstown merged under the failing firm provision of U.S. antitrust laws in 1978, and Kaiser tried to sell its steelmaking operation to the Japanese in 1979. In rubber, industry analysts waited impatiently for Uniroyal to exit the industry; and in automotive, Chrysler made front-page headlines in its race against time to achieve federal loan assistance. Words like "dinosaur" and "dog" were coined by industry observers to describe the evolving competitive profiles in all eight industries.

However, the profiles of basic industry problems and corporate failures tell only part of the story. These "disaster" tales need to be juxtaposed against some success stories to see how some companies have survived and even prospered in the same hostile environment. The resulting comparisons provide important insights into survival strategies and industry dynamics not only for general managers in the eight industries under study but also for managers in other industries as they lead their companies into the new decade. For example, a careful comparison of success and problem strategies in the eight industries in this study demonstrates that:

> Great success is possible, even in a hostile environment.
> Strategies leading to success share common characteristics.
> Successful strategies come from purposeful moves toward a leadership position.
> Problems come from failure to gain or defend a leadership position.
> For a deteriorating position, diversity may not be the proper recovery approach.
> Structural evolution moves toward a dynamic equilibrium as basic industries face a hostile environment.

I will amplify and discuss each of these insights in subsequent sections of this article.

Great success is possible, even in a hostile environment

When one looks at the eight industries in this study, as well as at other basic manufacturing industries facing the hostile environment of the 1980s, it is easy to slip into generalizations by extrapolating from aggregate industry problems to the individual companies within the industry.

Recent articles in the business press, asking "What Killed the U.S. Steel Industry?", "Is Chrysler the Prototype?", or proclaiming "Tire Industry Goes

Flat" or "Last Chances for Cigarette Producers," are typical of those that tend to project adverse trends uniformly onto all competitors in the industry. In fact, however, nothing could be further from the truth. Some of the most vibrant, successful companies in the world reside and prosper in these seemingly hostile industry environments.

If one eliminates from my eight-industry sample of 64 companies all competitors who gain a majority of revenues and profits from diversification efforts outside their basic industry (e.g., Armco Steel and General Tire), then the most profitable remaining competitors (the industry leaders) in terms of corporate return on equity are those shown in *Exhibit III*.

While some variation in returns exists among these leading competitors (Goodyear and Inland had significantly lower returns and growth rates than the other six), the corporate average return on equity earned over the last half of the 1970s easily places these companies in the top 20% of the *Fortune* "1,000" industrials and well ahead of the median *Fortune* company on return on capital and annual growth rate.

Moreover, the average returns on both equity and capital in my sample of industry leaders are well ahead of those earned by the leading international oil company (Phillips Petroleum). These average returns are also well ahead of those earned by companies heralded by the business community as technology leaders (Xerox, Eastman Kodak, Texas Instruments, and Digital Equipment), and these returns are likewise well ahead of those earned by corporations singled out as models of progressive diversification and acquisition planning (General Electric and United Technologies).

In fact, as *Exhibit IV* shows, the industry leaders shown in Exhibit III outperformed all of the highly touted companies during the most recent five years. In addition, the industry leaders grew faster than premier corporations like 3M and IBM, and they returned only slightly less to their shareholders and capital investors than these same "blue chip" competitors in high-growth industries.

In retrospect, perhaps the much publicized article, "TI Shows U.S. Industry How to Compete in the 1980s,"[1] should have been written about one of the leading companies in my sample instead of about Texas Instruments, because 75% of the leaders in the basic industries I studied outperformed TI during the latter half of the 1970s. Moreover, they outperformed TI in industries that averaged only 2.4% real growth during the past decade, significantly less than the 15% to 20% compound growth rates of the semiconductor industry during this same period.

1. *Business Week*, September 18, 1978, p. 66.

EXHIBIT III Financial Returns and Growth Rates, 1975–1979

Leading Companies in Eight Basic Industries*

	Average return on equity	Average return on capital	Annual revenue growth rate
Goodyear	9.2%	7.0%	10.0%
Inland Steel	10.9	7.9	11.4
Paccar	22.8	20.9	14.9
Caterpillar	23.5	17.3	17.2
General Motors	19.8	18.0	13.2
Maytag	27.2	26.5	9.1
G. Heileman Brewing	25.8	18.9	21.4
Philip Morris	22.7	13.5	20.1
Average	**20.2%**	**16.3%**	**14.7%**
Median *Fortune* "1,000" company (same time period)	**15.1%**	**11.0%**	**13.1%**

*Excluding those companies which gained a majority of their returns from diversification efforts.

EXHIBIT IV Financial Returns and Growth Rates, 1975–1979

Leading Companies in Other and More Rapidly Growing Industries

	Average return on equity	Average return on capital	Annual revenue growth rate
International oil			
Phillips Petroleum	19.5%	14.7%	16.6%
Technology leaders			
Xerox	17.8	14.4	15.5
Eastman Kodak	18.8	17.7	11.8
Texas Instruments	17.2	16.3	14.6
Digital Equipment	17.0	15.5	37.4
Diversification leaders			
General Electric	19.4	16.9	10.5
United Technologies	18.3	12.6	19.0
Average of these "high performance" leaders	**18.3%**	**15.4%**	**17.9%**
Average (leading companies in basic industries from Exhibit III)	**20.2%**	**16.3%**	**14.7%**
"Blue chip" competitors			
IBM	21.9	21.2	13.5
3M	20.7	17.7	13.1

Thus even a cursory analysis of leading companies in the eight basic industries leads to an important observation: survival and prosperity are possible even when the business environment turns hostile and industry trends change from favorable to unfavorable. ln this regard, the casual advice frequently offered to competitors in basic industries—that is, diversify, dissolve, or be prepared for below-average returns[2]—seems oversimplified and even erroneous. A hostile environment offers an excellent basic investment opportunity and reinvestment climate, at least for the industry leaders insightful enough to capitalize on their positions.

Strategies leading to success share common characteristics

A more detailed, in-depth examination of the business strategies employed by the top two performing (nondiversified) companies in each of the eight industries sampled reveals that these success strategies share strong common characteristics, irrespective of the particular industry. Indeed, throughout their modern history, all 16 of these leading companies have demonstrated a continuous, single-minded determination to achieve one or both of the following competitive positions within their respective industries:

□ Achieve the lowest delivered cost position relative to competition, coupled with both an acceptable delivered quality and a pricing policy to gain profitable volume and market share growth.
□ Achieve the highest product/service/quality differentiated position relative to competition, coupled with both an acceptable delivered cost structure and a pricing policy to gain margins sufficient to fund reinvestment in product/service differentiation.

A rough categorization of the strategies employed by these 16 companies, based on selective field studies and observed behavior over time, is shown in *Exhibit V*. In most cases, the industry growth and profit leaders chose only one of the two strategic approaches, on the basis that the skills and resources necessary to invest in a low-cost position are insufficient or incompatible with those needed to simultaneously invest in a strongly differentiated position.

The rudiments of this strategic trade-off can be found as early as the 1920s in Alfred P. Sloan's statements regarding General Motors' selection of a cost-reduced strategy:

EXHIBIT V Competitive Strategies Employed by Leading Companies
Eight Basic Industries

Industry	Achieved low delivered cost position	Achieved "meaningful" differentiation	Simultaneous employment of both strategies
Steel	Inland Steel	National	
Tire and rubber	Goodyear	Michelin (French)	
Heavy-duty trucks	Ford	Paccar	
Construction and materials handling equipment		John Deere	Caterpillar
Automotive	General Motors	Daimler Benz (German)	
Major home appliances	Whirlpool	Maytag	
Beer	Miller	G. Heileman Brewing	
Cigarettes	R.J. Reynolds		Philip Morris

> "Management should now direct its energies toward increasing earning power through increased effectiveness and reduced expense. . . . Efforts that have been so lavishly expended on expansion and development should now be directed at economy in operation. . . . This policy is valid if our cars are at least equal to the best of our competitors in a grade, so that it is not necessary to lead in design."[3]

However, in at least three cases, the leading companies in my sample chose to combine the two approaches, and each has had spectacular success.

Caterpillar has combined lowest cost manufacturing with higher cost but truly outstanding distribution and after-market support to differentiate its line of construction equipment. As a result, Caterpillar, ranking as the 24th largest and 39th most profitable company in the United States, is well ahead of its competitors and most of the *Fortune* "500" glamour companies.

Similarly, the U.S. cigarette division of Philip Morris combines the lowest cost, fully automated cigarette manufacturing operation in the world with highest cost, focused branding and promotion to gain industry profit leadership, even without the benefit of either the largest unit volume or segment market share in both domestic and international markets.

2. See, for example, Theodore Levitt, "Dinosaurs among the Bears and Bulls," HBR January–February 1975, p. 41; also the section on basic industries in Richard P. Rumelt, *Strategy, Structure, and Economic Performance* (Boston: Division of Research, Harvard Business School, 1974), pp. 128–139.

3. Alfred P. Sloan, Jr., *My Years with General Motors* (New York: Doubleday, 1964), pp. 65–66, 172.

And finally, Daimler Benz operates with elements of both strategies but in different segments, coupling the lowest cost position in heavy-duty truck manufacturing in Western Europe with an exceptionally high quality, feature differentiated car line for European and North American export markets.

A more complete picture of the strategic and performance profiles of all major competitors in these eight hostile environments can be obtained by positioning on a matrix those businesses whose axes reflect the relative delivered cost position and the relative product/service differentiation with respect to other competition. The result is a conceptual diagram like that shown in *Exhibit VI.*

While the quantification of competitive profiles in this format is typically inexact—because of the proprietary nature of relevant cost, sector, and performance data—a qualitative attempt to perform this analysis for the heavy-duty truck manufacturing industry is presented in *Exhibit VII.* This representation, based on an analysis of industry interviews and public records, is imprecise, yet it correlates perfectly with the industry performance profiles over time.

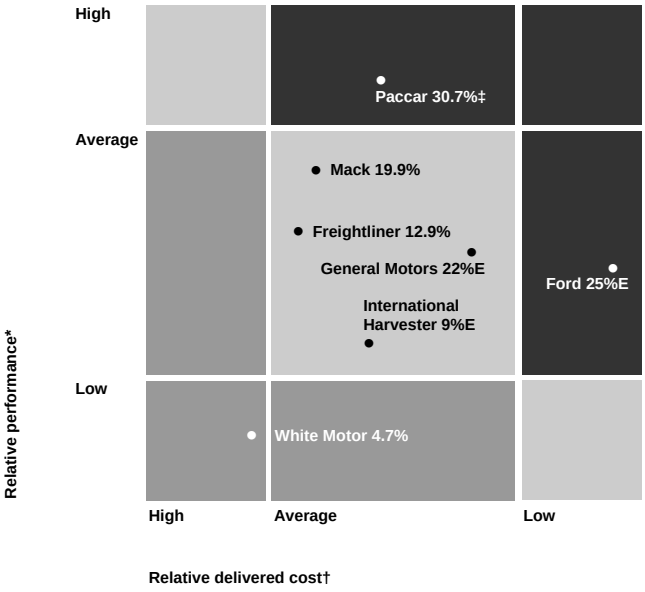
For example, from Exhibit VII, it is clear why Ford and Paccar continually lead the heavy-duty truck industry in growth and financial performance. It is equally clear why White lingers near bankruptcy and also why Freightliner and International Harvester are rethinking their strategies for heavy-duty trucks. (Freightliner recently entered into a distribution agreement with Volvo in an attempt to differentiate its distribution system in the light-heavy segment, and International Harvester initiated a major cost-reduction effort in truck design and manufacturing in an attempt to improve its weak relative cost position.)

A similar analysis of business-level returns for all 16 leading competitors in the eight industries (*Exhibit VIII*) indicates some interesting aspects of the respective strategies, as the following comparison reveals:

□ The *lowest delivered cost* leader typically grows more slowly, holding price increases and operating margins down to gain volume, fixed-cost reductions, and improved asset turnover. In addition, this competitor will typically have a lower sales turnover than the differentiated producer, reflecting the higher asset intensity necessary to gain cost reductions in production and distribution.

□ The *differentiated position* leader typically grows faster, with higher prices and operating margins to cover promotional, research, and other product/ser-

EXHIBIT VII Strategic Profiles in U.S. Heavy-Duty Truck Manufacturing



*Based on customer and industry interview data.

†Based on manufacturing and distribution cost analysis, evaluating economies of scale, and vertical integration profiles.

‡Operating return on assets; E= Estimated from industry sources.

EXHIBIT VI Strategic Profile Analysis

Basic Mature Industries

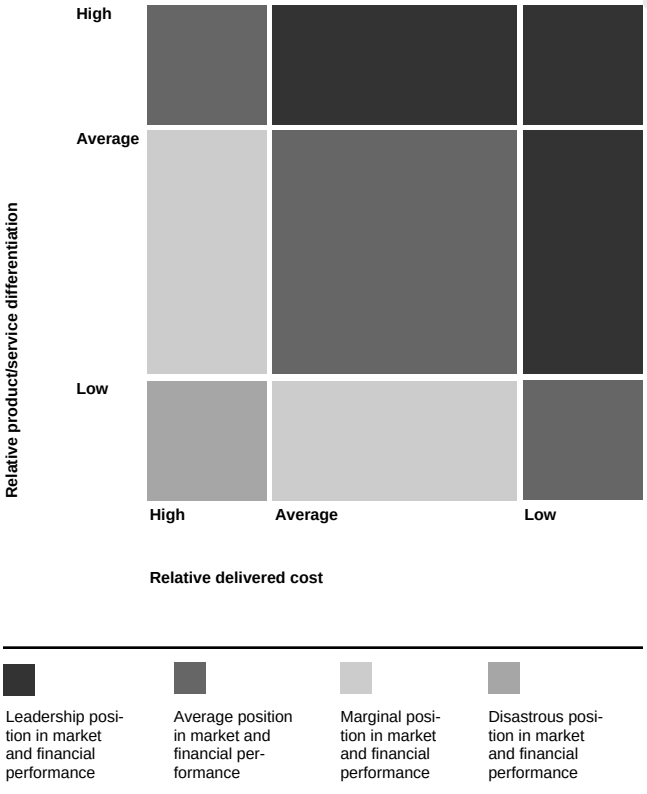


EXHIBIT VIII Business Level Returns and Revenue Growth Rates

	Operating margins	Sales turnover	Operating ROA	Revenue growth rates, 1975–1979
Leading industrial goods producers* 1978				
Steel				
Inland Steel	8.3%	1.3	10.8%	11.4%
National	12.0	1.5	18.0	12.0
Tire and rubber				
Goodyear	8.6	1.5	12.9	10.5
Michelin	10.0 (est.)	N.A.	N.A.	N.A.
Heavy-duty trucks				
Ford	11.0 (est.)	2.3	25.0 (est.)	12.7
Paccar	12.7	2.4	30.5	15.5
Construction and materials handling equipment				
Caterpillar	15.5	1.8	27.9	14.9
John Deere	10.0	1.3	13.0	17.5
Leading consumer goods producers* 1978				
Automotive				
General Motors	9.6%	2.0	19.2%	13.2%
Daimler Benz (automotive)	11.0	2.4	26.4	15.1
Major home appliances				
Whirlpool	8.4	1.0	8.4	5.3
Maytag	21.8	1.8	39.2	9.1
Brewing				
Miller	8.2	1.5	12.3	29.2
G. Heileman Brewing	9.5	3.5	33.3	32.2
Cigarettes				
R.J. Reynolds	17.1	2.3	39.3	15.0
Philip Morris	17.7	1.4	24.8	20.1

*Lowest delivered cost producer listed first, followed by most differentiated producer.

vice costs. At the same time, this competitor typically operates with lower asset intensity (higher sales turnover), reflecting both higher prices and a lower cost, "flexible" asset base.

Successful strategies come from purposeful moves toward a leadership position

In examining the business strategies and subsequent performance of the leading competitors, it becomes clear that purposeful movement toward and defense of a "winning" strategic position—either lowest cost and/or superior, price-justified differentiation—has been the fundamental long-term objective of all 16 high performance companies. There is little doubt that consistency and clarity of purpose have helped to mobilize and coordinate internal resources in gaining and defending a leadership position.

It is important to note that the time-phased pattern of investment decisions used to attain and hold these winning positions was based on "doing the right things" to gain leadership in lowest costs and/or differentiation. As a result, all the high performers in my sample used careful strategic analysis to guide their investments, avoiding simplistic adherence to doctrinaire approaches toward strategy formulation which come from the naive application of tools like:

> Share/growth matrices—planning models which suggest that mature market segments should be "milked" or "harvested" for cash flows.
> Experience curves and PIMS[4]—planning models which suggest that high market share and/or lowest cost, vertically integrated production are keys to success in mature markets.

Instead, based on a case-by-case analysis, the performance leaders made investment decisions which frequently conflicted with these doctrinaire theories:

□ The leadership positions in mature markets were not being milked by any of the 16 competitors, contrary to the advice of consultants who emphasize the portfolio approach to asset management. In fact, the top managers in two of the leading companies I interviewed laughed when they discussed this concept. They pointed out that their future success and growth opportunities were far greater if they aggressively reinvested in their base business than if they redeployed assets into other (diversified) industries.
□ Low-cost production is not essential to prosper in mature markets, contrary to the belief of strong proponents of the experience curve. Instead, high sus-

4. PIMS (Profit Impact of Market Strategies) is a multiple regression model which relates profitability to a number of associative variables. See Sidney Schoeffler, Roberts D. Buzzell, and Donald F. Heany, "Impact of Strategic Planning on Profit Performance," HBR March–April 1974, p. 137.

tainable returns also come from reinvesting in an average cost, highly differentiated position, as the data of the previous section and Exhibit VIII demonstrate, and as the ongoing track records of companies like Paccar and Maytag clearly illustrate.

□ High market share and accumulated experience are not essential for cost leadership in a mature market, as indicated by proponents of the experience curve and some large-sample empirical studies like PIMS. In fact, four of the eight low-cost producers in this study—Inland Steel, Whirlpool, Miller, and Philip Morris—have achieved their lowest cost positions without the benefit of high relative market shares.

Rather, these producers have focused their plants by emphasizing modern, automated process technology, and they have heavily invested in their distribution systems to gain scale economies and other cost reductions in their delivery systems.

□ Vertical integration is not necessary to exploit cost leadership in mature markets, as suggested by a number of empirical and economic studies. In fact, all of the low-cost producers in the industries under study were less vertically integrated into upstream and downstream activities than at least one other major competitor in their industry.

Instead of emphasizing vertical integration as a policy, all looked for selective integration into high value-added, proprietary componentry, following the type of integration policy first delineated by General Motors in the 1920s of "not investing in general industries of which a comparatively small part of the product is consumed in the manufacture of cars."

Instead of fully integrating, the low-cost leaders invested to have the most efficient process technology in at least one selective stage of the vertical chain. Consider, for example, Ford in truck assembly and Inland in order entry-distribution. The result in all cases is focus—the ability to orient management attention to gain low costs in a partially integrated operation. As one of Ford's major competitors observed:

"Ford is the least integrated of any of the high-volume, heavy-duty truck manufacturers in the world, yet it is still the low-cost producer and gains one of the highest ROIs in the industry. In retrospect, Ford's strategy was brilliant; they let the rest of us learn to manufacture componentry while they learned to manufacture profits."

Problems come from failure to gain or defend a leadership position

A more detailed examination of the marginal or failing competitors in each of the eight basic industries (*Exhibit IX*) also reveals some interesting observations:

□ The historical strategies and policies pursued by these companies have placed them in an unstable position. All are the high-cost producers in their segments, and all have a product that not only is largely undifferentiated in any meaningful sense but also in many cases is below average in quality and performance.

□ The external pressures that these companies complain about—unwarranted regulation and unfair foreign competition—are simply the final blows, sealing a fate that was predestined by improper strategic positioning or repositioning in the 1950s and 1960s, a period when there was still growth and time to maneuver.

□ Many of these marginal producers held low-cost or differentiated positions in these earlier years, and made strategic errors in their reinvestment decisions which contributed to their marginal or failing positions today, as the following examples show.

International Harvester led the U.S. heavy-duty truck manufacturing industry in 1965 with a market share of 30%. However, over the next decade, IH failed to reduce costs as rapidly as Ford and GM. As a result, the IH truck division is now a high-cost, low-margin producer.

White Motor, a strong number-two truck producer in the mid-1960s, invested in backward integration into cabs, frames, axles, and engine manufacturing, assuming that this would reduce costs. Unfortunately, these investments, all made at suboptimal

EXHIBIT IX Marginal or Failing Companies in U.S. Markets

Steel	J&L-Youngstown Kaiser
Tire and rubber	Uniroyal Mohawk Cooper
Heavy-duty trucks	White Motor
Construction and materials handling equipment	Massey Ferguson Allis Chalmers
Automotive	Chrysler
Major home appliances	Tappan
Beer	Most regional breweries Schlitz
Cigarettes	Liggett & Myers

capacities for efficient scale economies, resulted in a relative high-cost position, adding momentum to White's deteriorating situation.

Tappan, the technology leader in ranges in the early 1960s, chose to broaden that product line, to diversify, to reduce R&D expenditures, and to outsource certain key engineering activities. As a result, it failed to gain the low-cost position in ranges (today held by GE). And by failing to reinvest in technology, it lost its differentiated position in ranges to Caloric (gas), Jenn-Air (electric), and Raytheon (microwave).

Chrysler, the technology leader in the U.S. automotive market in the early 1950s with a 25% market share, chose to make questionable international expansion decisions while adopting a "me too" participatory strategy in the domestic market. The subsequent decline in Chrysler's position and returns was predictable, and this disaster trajectory was certainly accelerated in the early 1970s when its management team announced a revised (but highly inappropriate) strategy to "try to be a General Motors in whatever segments of the market we choose to compete in."

For a deteriorating position, diversity may not be the proper recovery approach

Over the past several years, it has become fashionable to recommend product/market diversification as a way out of an unstable or failing position for mature companies in hostile environments. Unfortunately, in the 64 companies I examined in this research, diversification has "helped" overcome major competitive/performance problems in only three—B.F. Goodrich, General Tire, and Armco Steel (now Armco Group). These three competitors recognized the tenuous nature of their positions early in the maturity cycle and took steps to resegment their base businesses into more advantageous positions by redeploying assets in carefully chosen diversification moves.

Goodrich moved into high-margin, specialty segments of the tire industry while diversifying to attain a low-cost position in PVC and other basic chemicals.

General shifted into low-cost production of tires for commercial vehicles while diversifying to attain a participatory position in very high-growth, fragmented industries such as communications and aerospace.

Armco proceeded into low-cost steel production in selected regional segments like oil country pipe, while diversifying into high-growth markets like oil-field equipment, oil and gas exploration, and financial services. (A recent public relations release from Armco announced that most of its new capital investment would go toward growing these diversification ventures, while maintaining only current capacity levels in steel making.)

These early efforts to resegment and to gain meaningful diversification have paid off. General and Armco lead all competitors in the rubber and steel industries in return on capital and growth, while Goodrich has moved into a stable third place among the surviving tire and rubber producers.

On the other hand, efforts to gain meaningful economic diversification have eluded most of the other problem competitors in the eight industries. By waiting too long to begin diversification efforts, most lack the capital and managerial skills to enter new markets and/or to grow businesses successfully in these markets. Thus their diversification efforts to date have been too small or have been managed in too conservative a fashion to obtain sustainable performance improvements, as witnessed by the very minor performance contribution of U.S. Steel's diversification program into chemicals and the continuing problems of Liggett & Myers despite a 43% diversification program out of the tobacco industry.

As a result of these modest, participatory efforts, some of the marginal performers in the eight industries have even divested diversified assets to gain capital and "hang on" for a few more years in the base business. Two notable examples are White Motor's recent sale of its construction equipment operation and Uniroyal's sale of its consumer goods division.

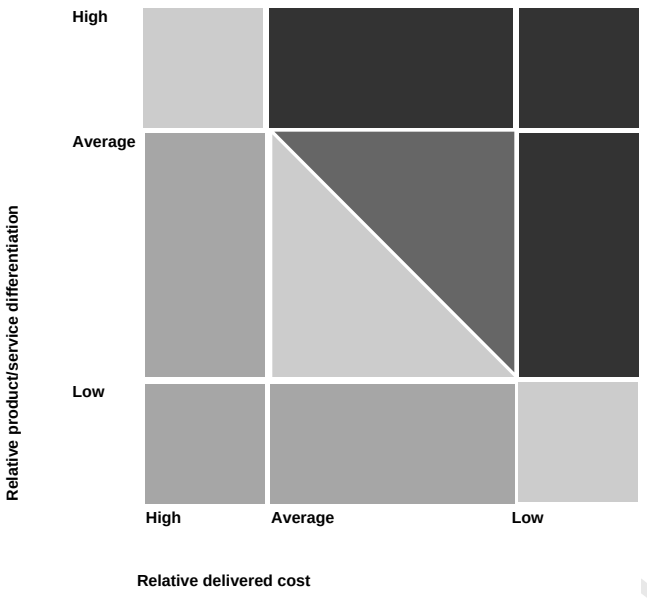
On the whole, it would appear that diversification comes too little and too late for most companies caught in a hostile environment. However, for a courageous few, continued managerial commitment and refocus on the base business to provide a steady flow of capital for promoting meaningful positions in diversified businesses may work to ensure ongoing growth and vitality.

Structural evolution moves toward a dynamic equilibrium as basic industries face a hostile environment

A summary of the underlying data in my study suggests that basic industries in mature, hostile environments are moving through a structural evolution, leading ultimately to four industry and performance subgroups (*Exhibit X*):

1. Leadership position—Competitors who achieve the lowest delivered cost and/or the highest differentiated position. These positions are gained either on a full product line (Caterpillar) or on an economically viable segment (Whirlpool in washers and dryers). At maturity these competitors will have the highest growth rates and returns in the industry, the best reinvestment prospects, and they should be able to prosper and coexist in dynamic equilibrium even though external pressures continue.

Exhibit X Strategic and Performance Subgroups
Basic Industries



Leadership position: survival and prosperity possible given appropriate strategy for reinvestment.

Next best position: company existence and survival possible unless leader aggressive.

Next worst position: instability leads to failure unless company resegments and/or diversifies.

Marginal or failing position: company must fail or be subsidized in perpetuity.

2. Next best position—Competitors who attain the second best position in either cost or differentiation (again on either a full or partial line basis). These companies will have moderate but generally acceptable growth rates and returns, and reinvestments can (and will typically) be made at return levels slightly above the cost of capital. For these companies, vulnerability to strategic and performance deterioration occurs mainly when the industry leaders or a set of externally subsidized competitors choose to aggressively attack. (For example, the recent problems of Ford in the U.S. automotive market can be directly traced to GM's more aggressive market share strategy, coupled with the European and Japanese attacks on U.S. small car markets.)

3. Next worst position—Competitors who finish in third place as the industry matures. Given a hostile environment, growth rates and return prospects for these companies are bleak unless they resegment into uncovered niches and gain a sustainable leadership position in these segments (AMC in utility vehicles, Goodrich in performance tires), or unless they can make major asset redeployment into meaningful diversified markets (like Arco and General). Without the ability to resegment or diversify, competitors in this class ultimately will move toward a marginal or failing position. (Chrysler in automotive, Uniroyal in tires, and Schlitz in brewing are examples of companies currently going through such a transition.)

4. Marginal or failing position—Competitors who end up last in mature, hostile environments ultimately must fail or be subsidized, either through government ownership or aid (Chrysler) or through cash infusions from a diversified parent (Kaiser in steel, Allis Chalmers in construction equipment). Despite efforts to use such subsidies to resegment and refocus their operations, the survey data shows no successful efforts in such turnaround attempts among the 64 competitors in the eight basic industries, raising a fundamental question as to whether there is any real possibility of strategic turnaround. Consequently, a society or a company subsidizing this type of marginal competitor should expect the worst—perpetual subsidies, perhaps slightly offset by infrequent operating returns during high peaks in basic economic cycles.

In Summary

The strategic and performance data from this eight-industry study suggest that both great successes and failures are occurring as basic, mature industries move into a hostile business environment created by slower growth, higher inflation, more regulation, and intensified competition. Uniformly, the successes come to those companies that achieve either the lowest cost or most differentiated position. Simultaneously, survival is possible for those companies that have the foresight to downsize their asset commitments into niches in their basic industry and to use their incremental capital for meaningful diversification moves. For the weaker companies, the inability to achieve a lowest cost or most differentiated position results in high vulnerability and ultimate failure or perpetual subsidy.

For general managers guiding their companies into the economic environment of the 1980s, the implications of these findings are clear. The laws of the jungle change as maturity comes and hostility intensifies. In such a jungle, the range of strategic options narrows, requiring both an early warning of the coming hostility and an early strategic repositioning for a company to survive and prosper.

Hence intensified efforts must be made to create internal administrative structures and mechanisms to recognize and efficiently manage this reposition-

ing. (GM's effective organizational restructuring in the early 1970s to respond to the down-sizing imperative stands as a brilliant case study in the use of such an administrative effort to create strategic change.)

For public policymakers monitoring and attempting to influence the business environment, these results suggest that failures will be inevitable as industry structures evolve in the face of maturity and hostility. The currently popular attempts at forced consolidation and subsidies are one way of dealing with these failures. However, these actions should be taken with full knowledge that they will not stop the driving market forces.

The question that remains in the decade ahead is whether the short-run employment, balance of payments, and fiscal stability provided by such public policy actions is worth the long-run cost of maintaining an inefficient industry structure that conflicts with the driving market forces created by a hostile environment.