

The Struggle for Dominance in the Automobile Market: The Early Years of Ford and General Motors

Richard S. Tedlow
Harvard University

This paper contrasts the business strategies of Henry Ford and Alfred P. Sloan, Jr. in the automobile market of the 1920s.¹ The thesis is that Henry Ford epitomized the method of competition most familiar to neoclassical economics. That is to say, his key competitive weapon was price. Alfred P. Sloan, Jr. beat Ford because he understood that the nature of the market had changed and that new tools were needed for success in the modern world of oligopolistic competition.

Henry Ford and the Old Competition

In the world of neoclassical economics, the business landscape is studded with anonymous, small producers and merchants and the consumer has perfect information. Buyers do not know other buyers; buyers do not know sellers; sellers do not know other sellers. No seller can, without collusion, raise price by restricting output. It is a world of commodities. All products are undifferentiated. Prices are established through the mechanism of an impersonal market, where the "invisible hand" ensures consumer welfare. Producers in an untrammelled market system have no choice but to accept "the lowest [price] which can be taken" [19, p. 61]. In Adam Smith's world, business people do not lose sleep over the issue of whether or not to compete on price. Price is competition's defining characteristic.

Conditions approximating this description may have existed in the United States prior to the railroad revolution of the 1840s [6, pp. 13-78]. With the building of the railroad network, however, the context of business activity began to change. First in transportation infrastructure, then in the distribution sector through economies of scope, and finally in production in those industries in which scale economies obtained, a small number of firms grew to dominance. These firms had very high fixed costs. Early railroad managers did not fully comprehend the competitive implications of the unprecedented cost structure of

¹It is based on a book on the history of the marketing of consumer products in the United States during the twentieth century to be published by Basic Books in 1989.

their companies. Prisoners of the past, they tried to compete in the traditional manner with their revolutionary enterprises. Thus they were always cutting prices; and bankruptcy was the common result, not at all what Adam Smith would have predicted. By the 1870s, many railroad men were coming to believe that "the logic of railroad competition was bankruptcy for everyone" [8, p. 237].

With the development of high concentration in some manufacturing industries during and after the 1880s, businesses began to work out new ways to compete. These firms-- and I am referring here to the likes of Standard Oil, DuPont, Singer, International Harvester, Swift, and others [6, pp. 285-376; 21, pp. 134-213]-- experienced greatly reduced operating costs with the increased scale of their works and were thus able to offer quality merchandise at very low prices while enhancing profits. But price as a competitive weapon now had to share the stage with a number of other tools. Competitors in oligopolies, as Alfred D. Chandler, Jr. points out in his forthcoming *Scale and Scope*, had to make a threefold investment in production, marketing, and an organization of managers to administer their facilities. With these assets and capabilities, these firms

competed or negotiated for market share through functional and strategic effectiveness; that is by improving their product, their process of production, their marketing, their purchasing and their labor relations more effectively than did their competitors; or they moved more quickly into new and growing markets, and out of older and declining ones.

Such rivalry for market share and profits normally increased the enterprise's functional and strategic capabilities and therefore its organizational capabilities as a whole [4, ch. 1].

Thus was born the new competition of the twentieth century oligopoly. This was the competition that Henry Ford never understood. Chandler has characterized the historical development of highly concentrated industries as "ten years of competition and ninety years of oligopoly." This was surely the case in automobiles. In 1896 Henry Ford could build a quadricycle in a shed and be in the business. But as early as 1913 two firms (Ford and General Motors) had more than half of the business and were manufacturing automobiles in some of the largest plant complexes in the world.

Let us take a look at how Ford competed in this new environment, using Chandler's criteria:

1. Production. Ford made a huge investment in production facilities. But these were single-minded, special-purpose works dedicated to an unchanging Model T. When the absolute necessity of bringing out a new vehicle penetrated even Ford's imperviousness in 1927, the facilities were utterly unprepared for the resulting strain and havoc was the result.

The Ford retooling of 1927-1928 was the most elaborate thing of its kind yet undertaken by anyone in so short a space of time. Nearly every piece of the company's monolithic equipment, laid out on the assumption that the Model T would linger on forever, had to be torn down and rebuilt. The staggering changeover necessitated the replacement of some 15,000 machine tools, the total rebuilding of another 25,000, as well as the redesigning and rearrangement of \$5,000,000 worth of dies and fixtures [20, p. 199].

This retooling and plant closure idled tens of thousands of workers and cost an estimated \$100,000,000. Ford's market share collapsed to under 10% in 1927, and though it rebounded when the Model A came on line, Ford's market dominance was gone forever [3, p. 3]. Perversely enough, Ford proceeded to handle the Model A as he had the Model T. The Model A was to be another unchanging standard. So the same system of special purpose production was instituted with the concomitant difficulties.

2. Marketing. At one time in his life, in the early 1900s, Henry Ford understood the needs of consumers for a cheap, reliable transportation vehicle. By the 1920s those needs were changing. By then, however, Ford had come to believe that he was in the business of building Model Ts. In fact, like every other business executive, he was in the business of satisfying consumers. He mistook the product for the service it performed. Here is how Alfred P. Sloan, Jr. analyzed the situation:

The old master had failed to master change. Don't ask me why. There is a legend cultivated by sentimentalists that Mr. Ford left behind a great car expressive of the pure concept of cheap, basic transportation. The fact is that he left behind a car that no longer [by 1927] offered the best buy, even as raw, basic transportation.... Mr. Ford, who had had so many brilliant insights in earlier years, seemed never to understand how completely his market had changed from the one in which he had made his name and to which he was accustomed [18, pp. 186-87].

The marketing function offers a variety of competitive tools to the firm. These can be considered under four headings.

a. Product Policy. One product only-- the Model T. Changes in the product were made only grudgingly. What was worse, Ford developed no concept of a product line which he might be able, so to speak, to grow a customer through. Because he felt so strongly that there should not be a need for anything more than basic transportation, he became convinced that there was no such need. The automobile market, he felt sure, was not subject to any life cycle. Thus he felt no need for new products.

b. Distribution. Ford treated his dealers as if they were men without memories. He exploited them when he had the power to do so, creating a powerful incentive to get out from under him when that was possible. He left behind a trail of rebellious and embittered people.²

c. Communication. Ford left it largely to the dealers. He had no consistent advertising strategy [14].

d. Price. This was the sum and substance of Ford's strategy and it was Ford's single-minded reliance on price which is the reason for our labeling him an "old" competitor. The demise of the Model T and the downfall of the company are a clear indication of what happens in an oligopolistic consumer product industry when a major firm acts the way neoclassical economics suggest it should act.

Unfortunately, there was a limit to what price, unconnected to the other strategic variables, could do. By the mid-1920s Ford's profit per Model T was already very low. And the meaning of price to the consumer was being changed by General Motors' use of credit.

3. Organization. Ford eliminated his management team and the systems they had tried to put into place because he saw their intrusion into his world as, in some sense, an attempt to steal his company from his personal control and oversight. He thought he could run a company which numbered its dealers in five figures, its employees in six, its customers in eight, its assets in nine, and its sales (at their peak) in ten as if it were a mom and pop shop. For him, managers, like partners and stock-holders, stood between him and his company. As he did with his stock-holders and partners, he got rid of his managers.

The result was cataclysmic. By the late 1930s the Ford Motor Company was probably the least efficient and certainly among the (for lack of a better word) meanest large organizations in the free world-- the brontosaurus of big business, living off its fat, governed by a tiny brain, blubbing its way through the tar pit of life.

It would take Henry Ford II to bring to his grandfather's company the understanding that managers were not the enemy but rather the sine qua non of the exercise of power over an organization by a charismatic leader [12].

Alfred P. Sloan, Jr. and the New Competition

The Depression of 1920-- the same depression which led Henry Ford to force more Model Ts on his dealers than they could handle-- was a disaster for General Motors. Here is how Alfred P. Sloan, Jr. described the situation facing

²See, for example, S.J. Vinson to "Brother Ford Dealer[s]," February 10, 1927; C.R. Baker to Edsel B. Ford, October 14, 1930; C.R. Baker to Henry Ford, February 8, 1933 [Accession 1, Box 123, Ford Archives; Dearborn, Michigan]; B.C. Forbes, "How Ford Dealers Are Treated, As Described by One of Them," Forbes, May 15, 1927, pp. 17-19; "Confessions of a Ford Dealer as Told to Jesse Rainsford Sprague," Harper's, June 1927, pp. 26-35.

the corporation at the time of the forced resignation of his predecessor, William C. Durant:

The automobile market had nearly vanished and with it our income. Most of our plants were shut down or assembling a small number of cars out of semifinished materials in the plants. We were loaded with high-priced inventory and commitments at the old inflated price level. We were short of cash. We had a confused product line. There was a lack of control and of any means of control in operations and finance, and a lack of adequate information about anything. In short, there was just about as much crisis, inside and outside, as you could wish for if you liked that sort of thing [18, p. 45].

In addition to the company's own problems was the fact that its major competitor was the Ford Motor Company. We must keep in mind the obvious but nevertheless easily overlooked fact that GM executives did not know in 1920 and 1921 what the future held for Ford. Both man and company were, in those years, at the height of their prestige. In an industry in which market share has been and still is a key to profitability, every other automobile sold in the United States in 1921 was a Model T. Ford's 55.67% share that year represented 845,000 vehicles. General Motors was second, but its unit sales of 193,275 were just 22.87% of Ford's and 12.73% of the industry as a whole [3, p. 3]. GM's sales toward the end of 1920 had slumped disastrously. Car and truck sales for the final quarter came to 43,532, well under half the 106,946 sold during the comparable period the previous year. From April 30 to October 31, inventories soared almost 25% to \$209,000,000. The current ratio at the end of 1920 was 2.24:1 compared to 3.84:1 and 5.5:1 at the close of 1919 and 1918 respectively. The stock price had dropped from \$27.625 on May 29 to \$13.25 by Christmas [16, pp. 197-208].

Sloan's assignment-- to beat Ford-- thus appeared a daunting one. Nevertheless, his qualifications for carrying out his mission were impressive. Sloan was an engineer and production man who had been closely associated with the automobile industry since its inception. He knew all the pioneers and indeed had corresponded with Henry Ford before the turn of the century. Despite being a production man and despite his admiration for Ford, Sloan had none of Ford's "artisan mentality" [2, p. 513]. He did not try to run his business by rote; and he understood the critical necessity of changing with the times.

Like Durant, whom he professed to admire, Sloan was a man of daring, imagination, and vision. "I have always believed in planning big," he announced in his autobiography, and in what might be said to have been his credo, he declared, "I put no ceiling on progress" [18, p. xv]. On the other hand, Sloan was a consummate believer in reality-- in finding out what it was and acting accordingly. Sloan thus embodied the virtues of Ford and Durant without their

shortcomings and he brought an additional strength to the scene which neither of them possessed-- an acute understanding that excellence in organization was the essential for success in the automobile industry. Sloan's organizational achievement at General Motors stands as one of the great success stories in the history of American business [see, for example, 5, 7, 11]. The essence of his accomplishment, briefly, was his creative approach to the problem of how to combine a degree of decentralized responsibility with centralized control. Under his aegis the relationship of the divisions to the corporate office was defined, and not just for General Motors, but for its legion of imitators in a host of industries. The task of actually running the business and of achieving a specified return on the investment entrusted to them was placed in the hands of the division general managers. These men were measured against standards established by Donaldson Brown and patterned on Brown's work at Du Pont. If they exceeded their goals, these executives were cut in on a handsome bonus plan. If they failed to meet them and could not provide an acceptable explanation, they might well find themselves looking for work.

The responsibility for setting standards, for evaluating performance, for making major decisions concerning personnel, and for forecasting future demand lay with the central office. Thus the central office established policy and the divisions administered it. And at the pinnacle of the central office was the iron fist within the iron glove of Sloan, whose prestige and power increased with each successful year.

Thus, the GM organization designers separated and differentiated the company according to the strategy of serving different markets. But they also created interdivisional committees (later called policy groups) to coordinate functions such as purchasing, engineering, and research common to the entire group. This new corporate structure allowed GM to reap the benefits of two different sorts of organization: decentralization and wide market coverage (the groups and divisions), and centralized planning, financial services, and other administrative functions coordinated at various levels of management, including the top [10, pp. 26-27].

We have called Sloan an exemplar of the "new competition." Why? What do we mean by this? Sloan employed a wide variety of tools to compete in the marketplace rather than relying on a single element in the marketing mix. This variety gave General Motors the flexibility that Ford lacked. In the process of formulating and implementing this approach Sloan showed how supple a huge firm with enormous fixed costs serving a consumer market could be.

Sloan may have been well prepared in general to grasp the reigns of the company, but it is not intuitively obvious what it was in his background that made it possible for him to become perhaps the greatest master of marketing in

American business history. His business experience up to December 1920 did not on the face of it suggest marketing expertise. He had spent his whole professional life as a production man. The company he operated and, to a large degree, owned prior to coming to General Motors was Hyatt Roller Bearings, an industrial goods concern. Until he took over General Motors, Sloan had never sold a product to a consumer. There is nothing in his writings or in what has been written about him to suggest that his views on marketing were affected in the slightest by the popular and academic works which were being published in growing numbers by the 1920s.

A number of reasons present themselves for Sloan's appreciation of the importance of excellence in marketing. First of all, though production oriented, Sloan at Hyatt was truly a general manager. "He came up through the small corporation," remarked Walter S. Carpenter, president of Du Pont in the 1950s, and was, therefore, "always impressed with all aspects of business management..." [quoted in 11, p. 46]. Carpenter singled out Sloan's interests in finance, but marketing was also important to him. In his early years, Sloan learned about managing sales forces, about serving customers, and about product quality.³

As important as anything substantive which Sloan found out was his understanding of process. When one reads his two autobiographies, one sees Sloan learning the most important thing that any executive can learn: how to learn. He was that *rara avis*, a man capable of changing his mind in the face of reasoned argument. In 1941 Sloan wrote that "Today, the appearance of a motorcar is a most important factor in the selling end of the business-- perhaps the most important single factor because everybody knows that all cars will run" [17, p. 185]. This is an observation which Henry Ford would never have taken seriously and which Durant would never have thought to make. Sloan, the production man, had been led to a new view of his business by reality.

Let us proceed at this point to a discuss of the marketing program at General Motors.

A. Product Policy

The first question the marketer must ask is what markets he chooses to serve with what products. We are going to turn our attention to two aspects of General Motors' answer to this question: the product line and the annual model change.

Sloan's product policy was clearly enunciated.

We said first that the corporation should produce a line of cars in each price area, from the lowest price up to one for a strictly high

³See Sloan's discussion of his encounter with Henry M. Leland when Leland, at the time general manager of Cadillac, was complaining about the quality of Hyatt's bearings [17, pp. 33-40].

grade, quantity production car, but we would not get into the fancy price field with small production; second, that the price steps should not be such as to leave wide gaps in the line, and yet should be great enough to keep their number within reason, so that the greatest advantage of quantity production could be secured; and third, that there should be no duplication by the corporation in the price fields or steps [18, p. 71].

Sloan himself observed that the idea for what came to be known as "the car for every purse and purpose" did not, in hindsight, seem revolutionary, no more startling than, for example, a shoe manufacturer deciding to sell shoes in more than one size. Nor was the idea original with the Sloan regime. Durant had tried a similar approach.

This product line strategy was not predominant in the industry in the early 1920s. The pattern was to depend heavily on one winning entry, such as the Model T. The addition of vehicles to a company's offering greatly increased the complexity of the business. It was Sloan's organizational genius which made it possible for General Motors to achieve the goal Durant had set for it, insulation from the vagaries of the consumer market. It is easy to envision the goal of decentralized authority with central control. But the actual adjudication of the relationship among the divisions and between the divisions and the market was extraordinarily difficult and became the very stuff of management. The company managed to achieve the security it needed-- mid- and high-priced cars in good times and the Chevrolet in the Depression-- while at the same time being sufficiently united through the committees and the central office to gain the advantages of scale economies.

The annual model change, the second element of product policy under discussion, was the innovation no one wanted. It put tremendous pressure on the production facilities and cost a fortune. It demanded a major commitment to the management of style and fashion, with their inherent component of unpredictability. It put a strain on the sales force, with a constant need to educate the dealer about what new features the new model had and why it was (supposedly) superior to previous versions. Indeed, Chevrolet sales manager Richard Grant was opposed to the annual model policy [18, pp. 190-91]. Needless to say, it was anathema to Ford [11, p. 92]. Social commentators have lambasted the policy quite often [see, for example, 15, pp. 26-53].

As Sloan said, "[W]e are all against yearly models, [but] I don't see just what can be done about it" [18, p. 190]. Yearly models meant that the changes taking place in the product could be programmed on a regular basis. But, more important, they were the ideal device to stimulate new car sales. The auto manufacturers in the 1920s needed a story to tell the consumer to convince him that the car he presently owned was obsolete. What better way to achieve this goal than to claim that last year's model was no longer in fashion?

The annual model change, problematic though it may have been, had its virtues from GM's point of view. First of all, smaller competitors simply did not have the resources to play the game. Writing of the 1920s, Robert Paul Thomas has asserted that "no small firm could have survived and played the annual model change game. Either a firm grew larger or failed." And, indeed, the number of producers fell from 88 in 1921 to 20 in 1929 [22, pp. 135, 120-21]. Second, the Ford Motor Company was ill-prepared to play the annual change game. Henry Ford was opposed to it on principle and his organization sorely lacked the capability to bring it about smoothly.

B. Price

Reviewing the prices of the ten cars which General Motors produced in 1921, Sloan was struck by the "irrationality" of the pricing strategy. There was no true low-priced entry, "but in the middle, where we were concentrated with duplication, we did not know what we were trying to do except to sell cars which, in a sense, took volume from each other" [18, p. 65].

Sloan's idea was to throw an array of cars at strategically selected price points within specified price ranges. The result would be that GM's entry would appeal to the consumer looking for a lower priced car on quality and to the consumer looking for a more expensive car on price. These price points, at least in theory, would be sufficiently separated so that the company would not be competing primarily against itself.

Here is Sloan's analysis of how this strategy worked against Ford:

In 1921, Ford had about 60 percent of the total car and truck market in units, and Chevrolet had about 4 percent. With Ford in almost complete possession of the low price field, it would have been suicidal to compete with him head on. No conceivable amount of capital short of the United States Treasury could have sustained the losses required to take volume away from him at his own game. The strategy we devised was to take a bite from the top of his position, conceived as a price class, and in this way build up Chevrolet volume on a profitable basis. In later years, as the consumer upgraded his preference, the new General Motors policy was to become critically attuned to the course of American history [18, p. 76].

In this particular, as in so many others of the GM strategy, Ford was attacked not head-on by doing what he did best, but in a flanking maneuver by which GM refused to play Ford's "own game." Ironically enough, in recent years the Japanese have done to the American manufacturers precisely what GM did to Ford, the principal difference being that the first "bite" they took was from the bottom rather than the top of the market. The principal similarity was that they

attacked seemingly overwhelming competition at its Achilles heel and then watched theirs become the policy "critically attuned to American history."

General Motors not only worked out a rational price strategy for its product line. By devising a new institution it worked to change the meaning of price to the consumer. This new institution was the General Motors Acceptance Corporation (GMAC). As an expensive, mass-marketed durable, the sale of automobiles not surprisingly called for assistance in financing both dealer inventory and consumer purchase at retail. Bank financing was difficult to obtain because of continuing skepticism about the industry. General Motors stepped into this void with the establishment of the wholly owned GMAC at John J. Raskob's suggestion in 1919. It was not unprecedented. "Makers of durable goods for a mass market, like sewing machines, typewriters, and agricultural implements, had many years before worked out ways to finance dealers and consumers so that purchases could be made on time or installment plans" [7, p. 466]. But General Motors was the first to establish a wholly-owned subsidiary for this purpose in the automobile industry.

And once again, Henry Ford's staunch opposition to innovation helped make GMAC an important competitive plus. The only concession Ford made to time payment was the Ford Weekly Purchasing Plan, inaugurated on April 7, 1923. This was more like a Christmas Club than an installment plan, in that although the consumer did make small, regular payments toward the purchase of an automobile, he did not take possession of the merchandise until it was completely paid for. Not surprisingly, the Ford plan was not very successful [13, pp. 267-69].

C. Communication

Ford never worked out an intelligent and consistent advertising strategy. At General Motors, institutional advertising and public relations programs were undertaken at the corporate level [18, p. 119] and product advertising was carried on by the divisions.

The most impressive aspect of GM's advertising program was its sheer size throughout the 1920s. There is, unfortunately, no compendium of advertising expenditures encompassing all available media, but we can get indications of GM's presence from a variety of sources. Statistics assembled by the Crowell Publishing Company indicate that in 1928 the automotive industry ranked third behind food and beverages and slightly behind drugs and toilet goods in national magazine advertising expenditures [9, p. 9]. General Motors was dominant, with \$3,240,800 (excluding Frigidaire) out of \$9,108,510, or more than one third of expenditures among major auto advertisers (i.e., those among the top 75 magazine advertisers). Indeed, General Motors became the largest national magazine

advertiser in 1923 (counting all the divisions) and it has remained at or near the top of national advertisers in all media through the twentieth century.⁴

Advertising was merely one aspect of the corporation's comprehensive communications programs. Each division had its own sales force. Early sales force leadership was supplied by Ford alumnus Norval Hawkins. His successor was Richard Ralph Hallam Grant, "Dynamic Dick" the "Little Giant." Massachusetts born and Harvard educated, Grant came to General Motors by way of the National Cash Register Company, where his mentor was John Henry Patterson.

Grant left National Cash for Delco-Light in 1915. Three years later Delco-Light became part of General Motors. Following dramatic success with Frigidaire, which had become part of Delco-Light in 1921, Grant moved on to Chevrolet in 1924.

The Chevrolet was named after the race driver Louis Chevrolet. He teamed up with Durant in 1911 and the Chevrolet Motor Company was the wedge Durant used to regain the presidency of General Motors in 1916. In Sloan's plan, as we have seen, Chevrolet was going to be the division through which General Motors was to attack Ford, but the division's performance had been erratic, if not without promise, through 1924. It was the leading division in the company in 1920, accounting for 144,502 units, 42% of the total and 28,289 greater than runner-up Buick. The following year Chevrolet sales were almost halved and it was outperformed by Buick. In 1923 sales reached a record 464,800 units but the next year they fell off badly [1, 1925, p. 23].

While Grant ran sales, Chevrolet grew dramatically. Sales set records each year from 1925 to 1929 inclusive. In the latter year volume reached 988,191 passenger vehicles, a three and a third increase over 1924. During the same years, fleet sales of Chevrolets rose from 19,277 to 344,963 [1, 1929]. The result of this performance was a corporate vice presidency for Grant. Executives whom he had trained at Chevrolet brought the Grant approach to the other GM car divisions.

D. Distribution

It has been said that part of Sloan's genius as a businessman was that he was able to direct his energies toward those problems which were most pressing. By this criterion, dealer relations were a pressing dilemma indeed. "When I was chief executive officer of General Motors," he wrote in 1963,

⁴"Farm Paper Advertising by Leaders," Sales Management, September 21, 1929, p. 136, September 27, 1930, p. 144E; "Radio Advertising," Printers' Ink, January 17, 1936, pp. 63-64; "Magazine Advertising," Printers' Ink, January 16, 1936, pp. 68+; "Advertising Hits the Long Pull," Business Week, January 18, 1936, pp. 9-11; "Outlay of 322 Advertisers," Printers' Ink, January 28, 1937, pp. 63+; "Outlay of 348 Advertisers," Printers' Ink, January 27, 1938, pp. 55+; "Advertising Stages A Comeback," Business Week, January 20, 1940, pp. 38-40.

I gave a large part of my attention to dealer relations, amounting at times, you might say, almost to a specialization ... I made it a practice throughout the 1920s and early 1930s to make personal visits to dealers. I fitted up a private railroad car as an office and in the company of several associates went into almost every city in the United States, visiting from five to ten dealers a day. I would meet them in their own places of business, talk with them across their own desks in their "closing rooms" and ask them for suggestions and criticisms concerning their relations with the corporation, the character of the product, the corporation's policies, the trend of consumer demand, their view of the future, and many other things of interest in the business [18, pp. 325, 329].

If the dealers were frank in their "suggestions and criticism" to Sloan, he doubtless got an earful on these forays.

Sloan liked "win-win" situations-- "I have never been interested in business relationships that are not of benefit to all concerned" [18, p. 326]. But the manufacturer-dealer relationship offered a very tempting opportunity for other executives to bludgeon the dealer in order to make his own numbers look better while leaving his successor to pick up the pieces after he moved on to his next job.

Conflicts like these, and many others, have formed the essence of dealer relations since the 1920s. GM has probably managed them better than the competition if not as well as they should have been managed. The company did think long term and unlike Ford showed a willingness to change its policies when change was called for.

Conclusion

This paper has tried to suggest how Alfred P. Sloan, Jr. brought General Motors to the leadership of the American automobile industry in a decade-- a task which, when he took it on, seemed daunting if not impossible. Sloan's success is a perfect illustration of Alfred D. Chandler, Jr.'s thesis that the large corporation must make a three-pronged investment-- in manufacturing, marketing, and management [4]. Sloan made that investment. Henry Ford, on the other hand, invested only in manufacturing. This was a strategy which cost his company dearly.

References

1. *Annual Report of the General Motors Corporation*, various years.
2. Irving Bernstein, *Turbulent Years* (Boston: Houghton Mifflin, 1971).
3. Alfred D. Chandler, Jr., *Giant Enterprise* (New York: Arno, 1980).
4. _____, *Scale and Scope* (Cambridge: Harvard University Press, forthcoming).
5. _____, *Strategy and Structure* (Cambridge: MIT Press, 1962).
6. _____, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge: Harvard University Press, 1977).
7. _____ and Stephen Salsbury, *Pierre S. du Pont and the Making of the Modern Corporation* (New York: Harper and Row, 1971).
8. _____ and Richard S. Tedlow, *The Coming of Managerial Capitalism* (Homewood, Ill.: Irwin, 1985).
9. Crowell Publishing Company, *National Markets and National Advertising*.
10. Davis Dyer, Malcolm S. Salter, and Alan M. Webber, *Changing Alliances* (Boston: Harvard Business School Press, 1987).
11. Arthur J. Kuhn, *GM Passes Ford, 1918-1938* (University Park, Pa.: Pennsylvania State University Press, 1986).
12. Harold C. Livesay, "Entrepreneurial Persistence Through the Bureaucratic Age," *Business History Review*, Vol. 51, No. 4 (Winter, 1977), pp. 415-43.
13. Allan Nevins and Frank E. Hill, *Ford: Expansion and Challenge, 1915-1933* (New York: Scribner's, 1957).
14. G. A. Nichols, "What Will Take Place of Advertising in Ford's Marketing Scheme," *Printers' Ink*, June 17, 1926, pp. 17-20.
15. Emma Rothschild, *Paradise Lost: The Decline of the Auto-Industrial Age* (New York: Random House, 1973).

16. Lawrence H. Seltzer, *A Financial History of the American Automobile Industry* (Boston: Houghton Mifflin, 1928).
17. Alfred P. Sloan, Jr., *Adventures of a White Collar Man* (New York: Doubleday, Doran, 1941).
18. _____, *My Years with General Motors* (Garden City, NY: Doubleday, 1963).
19. Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, edited by Edwin Cannan (New York: Modern Library, 1937).
20. Keith Sward, *The Legend of Henry Ford* (New York: Atheneum, 1968).
21. Richard S. Tedlow, *The Coming of Managerial Capitalism: Case Commentary and Teaching Technique* (Homewood, Ill.: Irwin, 1985).
22. Robert Paul Thomas, "Style Change and the Automobile Industry During the Roaring Twenties" in Louis P. Cain and Paul J. Uselding, eds., *Business Enterprise and Economic Change: Essays in Honor of Harold F. Williamson* (Kent, Ohio: Kent State University Press, 1973).