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# Are Acquisitions a Poison Pill for Innovation?

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# Are acquisitions a poison pill for innovation?

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Executive Overview

***The recent wave of acquisition activity may be damaging the innovative capabilities of American firms, thus making them less competitive in the global marketplace. In fact, acquisitions often serve as a substitute for innovation, which may cause further neglect of internal research and development (R&D) programs. Additionally, acquisitions often lead to increases in leverage, diversification, and absorb significant amounts of executive time, which may lead to reduced managerial commitment to innovation.***

***In this article, evidence is presented suggesting that acquisition activity may result in reductions in R&D inputs and outputs. On average, the 191 firms in the sample reduced their allocations to R&D relative to their competitors following acquisitions. Furthermore, the firms also experienced reductions in the number of patents.***

***Implications from this evidence are offered for executives and acquisition strategies. Specifically, based on our results, we propose that firms can compensate for the negative effects of acquisitions. Moreover, acquisitions, when properly planned and targeted, may enhance or complement a firm's innovation processes. Firms should search for acquisitions that complement R&D projects, facilitate product commercialization and/or enhance their core competences.***

Article

The David Sarnoff Research Center produced many innovations for RCA. One of the Center's widely recognized innovations, the electron gun, is used as a receiver for the color system found in most televisions sets in the United States. In 1988, the Center discharged 300 employees, reducing its staff by twenty-five percent. The reduction occurred at the time GE transferred ownership of the Center to SRI International, a nonprofit organization (GE acquired the Center as a part of its $6.4 billion acquisition of RCA). NBC, a division of RCA, had the largest market share of viewers in 1986 when it was acquired by GE. NBC, however, failed to produce any major hit shows in 1989 and 1990. As a result, its ratings were down twelve percent and its operating profit fell twenty-seven percent in 1990 (and are expected to fall a similar amount in 1991).

NBC's loss of market share and the virtual give away of the acclaimed Sarnoff Research Center are symptomatic of deeper problems within GE. Michael Porter of Harvard suggested that GE's strategy leads managers to focus on size rather than building competitive advantage. Tom Peters argued that the strategy also stifles creativity and noted that GE hasn't created a new business in decades.[1] Unfortunately, these symptoms are common in too many U.S. businesses. In fact, a recent special report by *Business Week* stated,

*"For nearly two decades the world's strongest economy has experienced a market decline in its share of global output and an insidious decline in its living*

*standard . . . It has been apparent, each time we return to the subject of competitiveness, that much needs to be done. Yet, Americans have failed to act."*[2]

Why have American firms lost much of the competitive advantage they once enjoyed? The answer is not simple. However, one prominent reason may be the lack of innovation relative to global competitors. International competition has awakened us to the fact that the United States is losing its innovativeness.[3]

***A recent study found that almost one-third of the acquired firms are eventually divested, suggesting that a number of acquisitions may not perform well.***

The solution to the U.S. competitiveness problem seems simple—innovate more. The answer, however, is probably quite complex. For example, some have argued that part of the problem stems from U.S. executives' fascination with and emphasis on mergers and acquisitions. One fact is clear—U.S. firms have been highly attracted to acquisitive growth in recent years. In fact, the number of acquisitions has grown successively for the last three decades.

The evidence suggests that the value added by acquisitions is, at best, controversial. Research shows that the target (or acquired) firm shareholders gain value from the acquisition. In contrast, the value of acquisitions for acquiring firm shareholders' varies closely around zero. It is not uncommon for acquired firms to be divested in the years following an acquisition. A recent study found that almost one-third of the acquired firms are eventually divested, suggesting that a number of acquisitions may not perform well. Of course, there are many potential reasons. For example, the original acquisition price paid may have been excessive. Also, the newly acquired firm may be poorly integrated into the acquiring firm or ineffectively managed after the acquisition.

***One problem often cited in conjunction with ineffective management of acquired firms is the unwillingness (inability) to invest adequate resources to continue their growth and development. Dennis Maxwell, vice president of SRI International, claimed that one result of the frenzied pace of acquisitions has been less in-house R&D being conducted by acquiring companies. Kenneth Flamm, an economist for the Brookings Institution, argued that acquisitions and other types of restructuring have focused executives' attention on short-term returns which contributed to a reduction of basic research.***

In 1988, approximately 3 percent of R&D expenditures were allocated to basic research, down from 5.4 percent in 1979. In fact, total R&D expenditures may also be reduced. For example, in 1988, GE reduced total R&D expenditures by $300 million from 1987.

John Young, president of Hewlett Packard Co., suggested that reductions in R&D are harming U.S. firms' competitiveness. He noted that R&D investment as a percent of U.S. GNP is significantly below that in West Germany and Japan. He also argued that U.S. firms must increase R&D investments to "play in this league."[4]

The reduction of investments in basic research and in total R&D outlays may lead to fewer innovations. While this is a critically important issue, there has been little definitive empirical research examining the effects of acquisitions on R&D investments and outputs. Accordingly, we conducted a study to examine the effects of acquisitions on R&D investments and outputs.

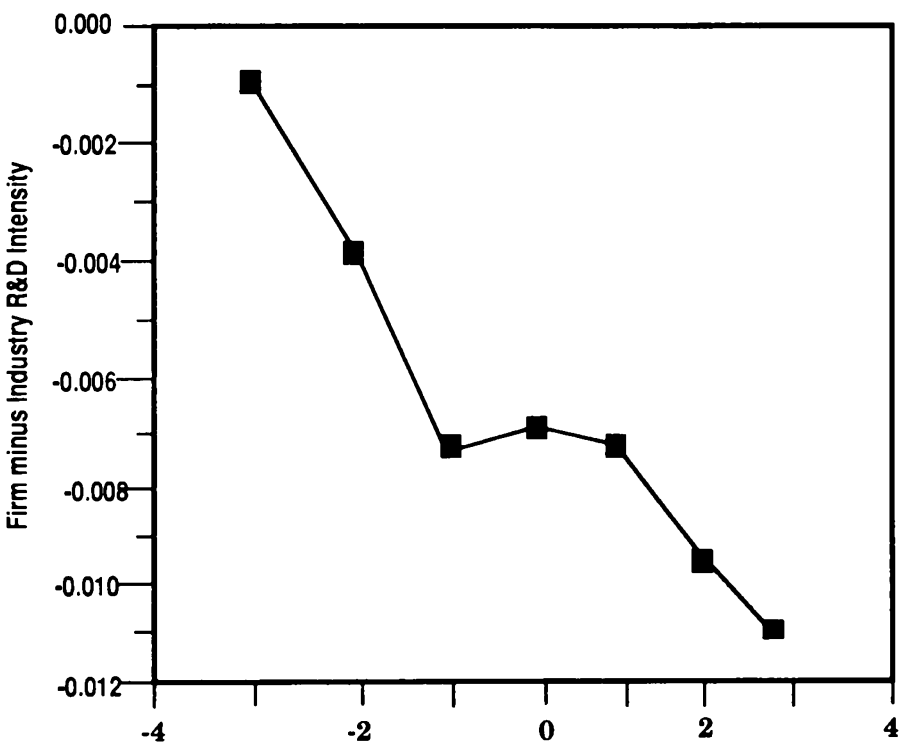
**The Study**

Our study examines the effects of acquisitions on R&D intensity (R&D divided by firm sales) as a measure of R&D inputs and patent intensity (the number of patents divided by firm sales) as a measure of R&D outputs. Data were collected on 191

acquisitions completed between 1970 and 1986. Firms from twenty-nine separate industries were included in our sample. We collected data on the acquiring and target firms for three years prior to the merger and for three years after the year in which the merger was completed (seven-year span).[5] The influence of several variables that may affect R&D intensity and patent intensity (e.g., average industry R&D intensity, return on assets, diversification of the acquiring firm, leverage, firm size, and liquidity) were controlled.

**The Findings**

After acquisitions, we found that R&D intensity increases slightly but not significantly (that is, the change is not statistically significant). However, the slight increases were due primarily to overall growth in R&D expenditures in the acquiring and target firms' industries. The combined average R&D intensity of the acquiring and target firms is close to the industry average three years prior to the acquisition. However, the gap grows as the year of acquisition is approached and continues to grow larger after the acquisition. The difference between firm and industry R&D intensity is shown more clearly in Exhibit 1. As shown in this exhibit, the difference increases between three years and one year prior to the acquisition but then levels off. However, the gap increases in each of the second and third years after the acquisition. Therefore, acquiring firms invest less in R&D than their competitors and the gap widens after the acquisition is consummated.




Difference between pre- & post-acquisition observations is statistically significant at p<.01

Exhibit 1. Difference Between Firm and Industry R&D Intensity Before and After Acquisition[1]

Some have discounted R&D spending as a robust measure of R&D effectiveness or innovation. Stating this somewhat differently, resources can be wasted in R&D labs, just as in other parts of the organization, and therefore, "more R&D is never a substitute for better R&D." Larger firms (e.g., those created by mergers) enjoy scale economies through which they can operate more efficiently (i.e., larger firms have the ability to produce greater outputs with the same or fewer resources).[6] Therefore, it is important to examine the outcomes from R&D before and after acquisitions. Our measure of R&D outputs was patent intensity (number of patents divided by total sales revenue).

Our findings are depicted in Exhibit 2. As shown, the combined number of patents (relative to size of the firm) for the acquiring and target firms increases in two of the three years before the acquisition. In fact, the average annual change in patents is +1.69 prior to the acquisition. However, there is a dramatic reduction in patent intensity in the first year after the acquisition (leveling off for the next two years). The average annual change in patents is −1.88 after the acquisition. In addition, we found the reductions in the number of patents to be particularly acute in diversifying acquisitions (where target and acquiring firms are in industries unrelated to each other). Clearly, these results do not support the notion that acquisitions yield efficiencies in R&D.

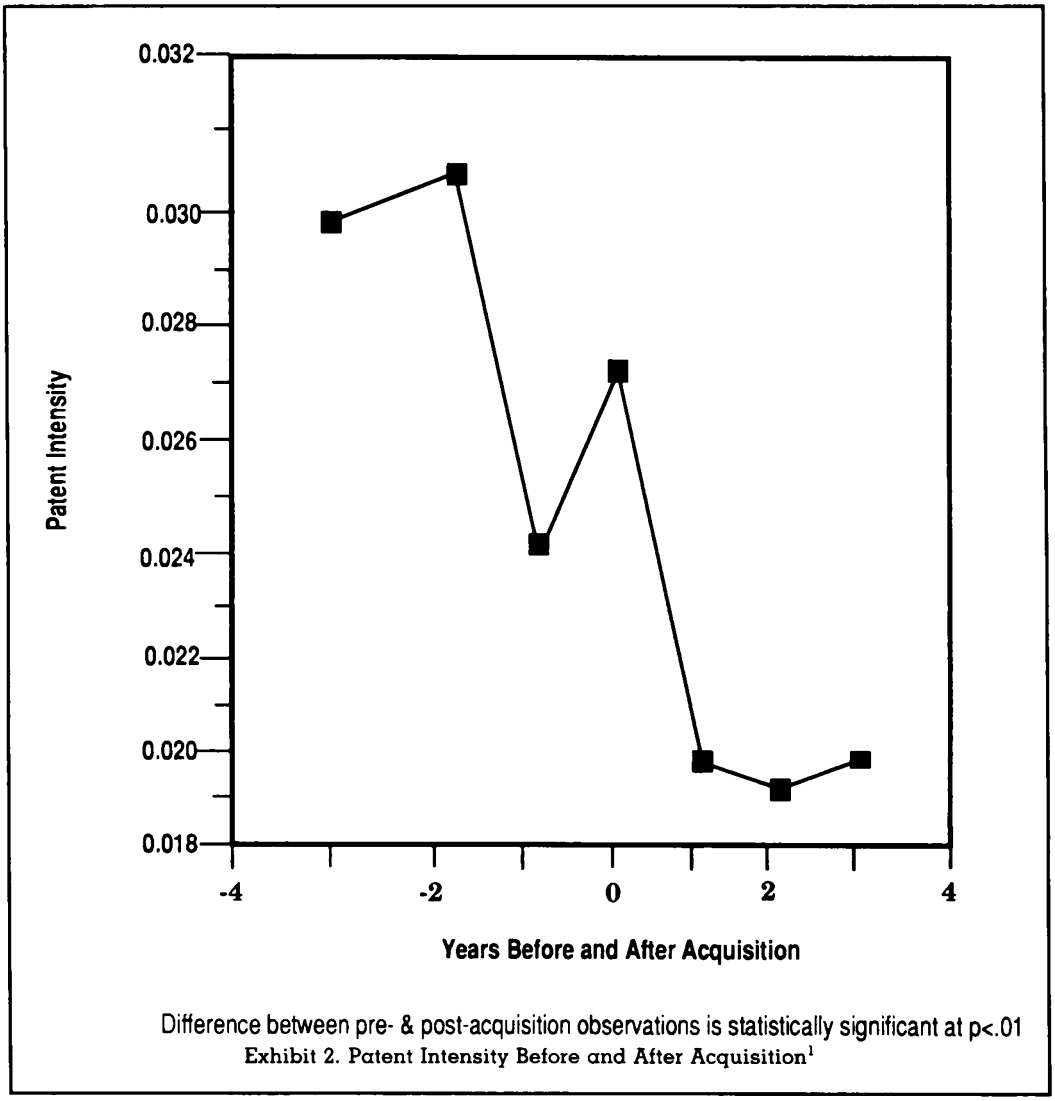


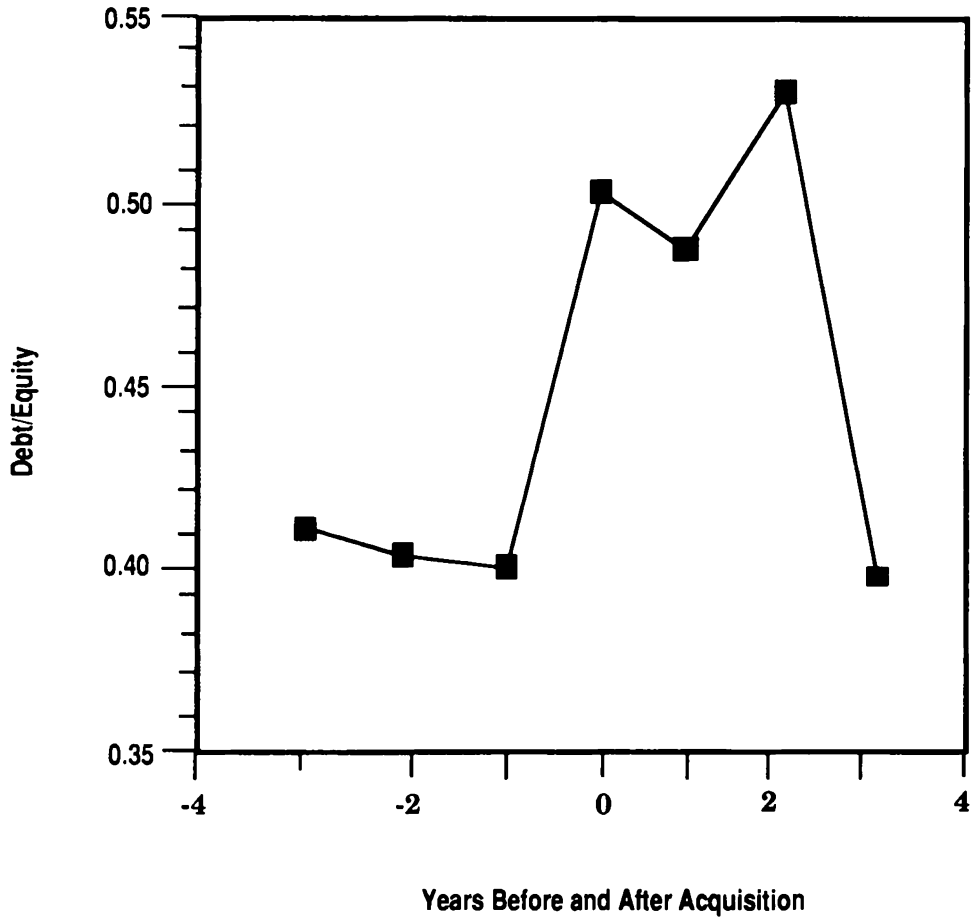

Exhibit 2. Patent Intensity Before and After Acquisition[1]

These findings also likely underestimate the effects of acquisitions because firm size, diversification, leverage, liquidity, and profitability have also been argued to affect investments in R&D.[7] The amount of leverage (Exhibit 3) increased dramatically the year of the acquisition and increased again in the second year after the acquisition. In the third year after the acquisition, the amount of leverage decreased to approximately pre-acquisition levels. Firms likely paid off the debt from operating funds. Exhibit 4 shows dramatic effects of acquisitions on profitability. Return on assets are significantly lower in the post-acquisition compared to pre-acquisition period. Liquidity also declines significantly after acquisitions.

**Explanation for the Effects of Acquisitions on Innovation**

*Investments in R&D*

At least three reasons may explain a potential negative effect of acquisitions on R&D investment. First, managers may prefer to pursue acquisitions in lieu of allocating what are typically significant amounts of resources that are required to




Difference between pre-and post acquisition observations is not statistically significant (because of large reduction of leverage in the third year after the acquisition).

Exhibit 3. Financial Leverage Before and After Acquisition[1]

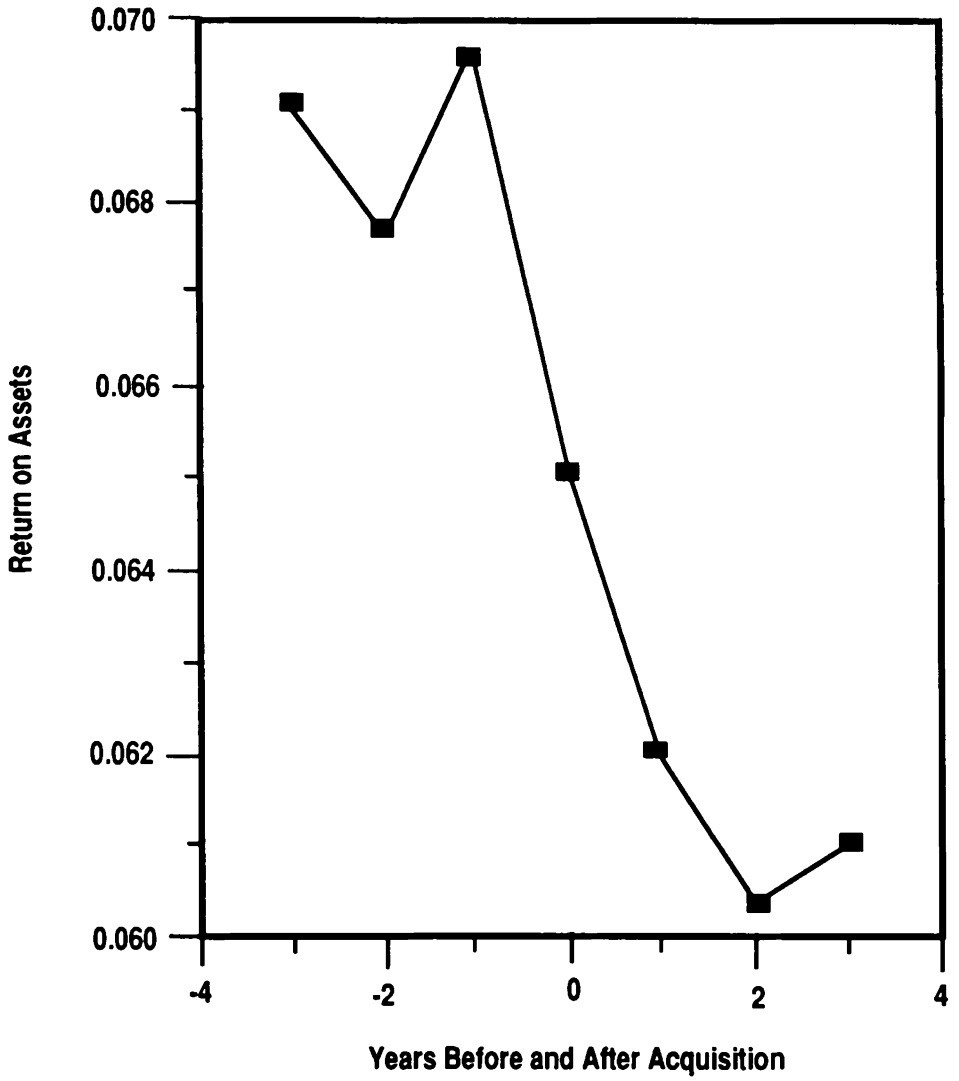



Exhibit 4. Profitability Before and After Acquisition[1]

develop product innovations through internal operations. The fact that acquisitions offer immediate entrance to a new market and/or a larger share of a market served currently by the firm may be attractive to managers. Furthermore, because of resource constraints, either acquisitions or internally-based product innovations—but rarely both—tend to be emphasized in most firms. DuPont & Co. exemplifies the effects of such research constraints. In the early 1980s, DuPont spent $7.4 billion to acquire Conoco Inc. and spent billions of dollars on other acquisitions as well. The expenditures resulted in a deemphasis on internal R&D. In fact, in the middle 1980s, DuPont drastically reduced its costs, partially through layoffs and early retirements of approximately eleven percent of its workforce.[8]

While risk is associated with acquisitive activity, the outcomes may appear more certain to managers because forecasting demand for acquired firms' established

products may be easier than with internally based product innovations. In fact, it has been argued that acquisitions are a common means used to avoid risky R&D expenditures and outcomes.[9] Two examples are shown in the acquisitions of Kraft and RJR Nabisco. Prior to the Philip Morris acquisition of Kraft, experts predicted that it would mean more retreads of current products in multiple varieties (e.g., "new and improved" versions) based on actions following its General Foods acquisition. Product line extensions are the least risky way for Philip Morris to attempt to dominate shelf space in the retail food outlets. Executives at Philip Morris apparently prefer to let other firms take the risk.

***The fact that acquisitions offer immediate entrance to a new market and/or a larger share of a market served currently by the firm may be attractive to managers.***

After RJR Nabisco's leveraged buyout by Kohlberg, Kravis, and Roberts, Nabisco Brand's business grew by forty percent and RJR's operating income increased by thirty-one percent. However, Nabisco also aggressively reduced costs by firing high-paid research engineers and through cutbacks in marketing expenditures. Therefore, profits were increased at the possible expense of future growth and profits.[10]

Decisions to emphasize acquisitions and/or deemphasize research may be subject to increased managerial commitment. As managers complete acquisitions, their commitment to this approach may increase over time. One factor that could stimulate greater commitment is reduction in R&D competency resulting from longitudinal decreases in the resource allocations to R&D. For example, the donation of the Sarnoff Research Center to SRI by GE significantly reduced its capability to produce innovations in television product lines.

A second possible explanation for a negative effect of acquisitions on investments in R&D relates to the additional levels of debt that firms absorb to complete acquisitions. Lack of internal capital or access to increased equity capital forces firms to use additional debt. However, greater amounts of debt increase financial risk. Managers are constrained by this risk to use cash flows to cover increased interest expenses and to repay portions of the debt. These allocations of available cash are necessary to maintain credit ratings and credibility with the capital markets.

Also associated with additional debt are stricter operational constraints imposed by creditors. These constraints result in more conservative managerial investment strategies. Such conservative strategies may explain, at least in part, a reported negative relationship between increased debt levels and R&D allocations.

***A number of prominent finance scholars have argued that use of debt can and should be quite positive. First, they suggest that debt serves as a disciplining force on managers causing them to be more efficient. Second, debt costs transfer funds from firms that are inefficient to bondholders who allocate them to other firms that will use them more efficiently. Unfortunately, heavy debt costs often force managers to substitute payments of these costs not from inefficient uses but rather from investments that can be postponed without immediate negative outcomes (e.g., R&D). Furthermore, managers requiring debt for discipline to produce efficiency should be replaced by more effective managers.***

Taken to an extreme, excess debt can destroy a company. For example, in 1985, Fruehauf Corp. was the market leader in truck trailer manufacturing. However, according to Joseph White, a reporter for the *Wall Street Journal*, in 1989, "Fruehauf once the General Motors of truck trailers is a jackknifed wreck." The firm was losing $1 million per week and could not meet its $101 million per year debt payments. As a result, the firm's assets were carved up and sold off. The Southland Corporation faced a similar situation when it took on a huge debt load

to finance an LBO to abort a takeover attempt. Eventually, to pay debt costs Southland had to sell off assets from its highly profitable 7-11 division and accept a majority partner from Japan. Additionally, Integrated Resources Inc. defaulted on its debt of $2 billion in high yield junk bonds.[11] The point is that debt has its risks. Obviously, none of the executives in these three firms were concerned about innovation; rather, they were concerned about their firm's survival.

A third reason that acquisitions may negatively affect R&D investments concerns the substantial amounts of senior executives' time and energy required to first negotiate and then complete acquisitions. Acquisitions often require extensive preparations and sometimes laborious negotiations, particularly in unfriendly acquisitions. Firms actively pursuing acquisitions conduct searches for viable target firms. Typically, these searches are completed through sophisticated data gathering techniques and analytical processes. The breadth and depth of the reports and recommendations submitted to top level executives for their evaluation and action typically absorb extensive amounts of managerial time.

Even friendly acquisitions require agreement among the parties on a range of meticulous details. As a result, the identification, selection of, and negotiations with potential acquisition targets require top executives to process significant quantities of disparate information. Because of information overload, managers may choose to delegate other critical decisions and operational matters. Nonetheless, top level managers must still make major resource allocation decisions. Managers' information constraints accentuate the riskiness of internal development.

***Ineffective management and the use of financially based outcome controls caused managers to become less interested in developing and championing new products (because of the risk and potential return only in the long term).***

These problems are not limited to executives of the acquiring firm. Often, target firm managers become absorbed in negotiating the deal or in fighting the takeover attempt. Additionally, other managers in the target firm sometimes operate as if in a state of suspended animation. They continue current operations but without making long-term plans or investments (unless done to make the firm unattractive as a takeover target). Takeover attempts often distract the attention of target firm managers. For example, they may react as did RJR managers just prior to the KKR financed leveraged buyout. An article in the *Wall Street Journal* reported that many of the managers were angry and spent time swapping rumors about the potential effects of an LBO. For example, many were fearful of losing their jobs in cost reduction moves and as a result, were on the job market in anticipation of potential cutbacks.[12] Thus, time and energy absorption, combined with managerial risk aversion, may result in lower resource allocations to R&D.

In total, the evidence suggests that an emphasis on acquisitive growth may result in risk-averse managerial mindsets. In turn, such mindsets may cause managers to reduce their commitments to innovation. This commitment, defined as a managerial willingness to allocate resources and champion activities that lead to the development of new products, technologies, and processes consistent with marketplace opportunities, may be critical to internal product development activities.

*Outcomes from R&D Investments*

The relative degree of managerial commitment to innovation may be reflected by the amount of resources invested in R&D and by the number of outputs (such as patents) achieved through these investments. Because patents indicate an intention to commercialize a product, they serve as a meaningful measure of R&D outputs. Thus, regardless of the resources invested, the R&D process must be managed effectively if desired successes are to be attained. In addition, ideas must be appropriately championed if they are to be developed into patentable products and/or processes.[13]

Unfortunately, an acquisition may negatively affect a firm's championing culture. For example, if top executives become less committed to innovation, they will offer

fewer rewards and/or incentives to those desiring to create and champion internally based product innovations. In turn, lower level managers become less interested in expending efforts required for the development of product or process ideas that lead to patents. As a result, the transfer of new product ideas to marketable products is less likely to occur.

The problems of managing and commercializing product innovations are exacerbated in diversifying acquisitions. In his latest book, Alfred Chandler, noted business historian, argued that diversification into new product markets became an accepted and preferred means of corporate growth in America. These firms diversified early based on products from their own research laboratories. However, as more firms invested in R&D, the development of innovative products became more expensive and risky. As competition grew more intense, firms began to invest in acquiring businesses unrelated to their current markets rather than investing more in R&D and other developmental functions. As a result, Chandler concluded that these firms lost their competitive advantage. Managers were overseeing businesses they did not understand and thus could not manage effectively. Because they lacked appropriate understanding of the businesses, financial controls (focused on short-term oriented and risk-averse financial outcomes) became the norm for management of diversified firms (as opposed to longer-term strategic controls).[14] Ineffective management and the use of financially based outcome controls caused managers to become less interested in developing and championing new products (because of the risk and potential return only in the long term). As a result, there was a reduction in commitment to innovation and commercializing it. This may explain why we found lower patent intensity after diversifying acquisitions.

***General Signal exemplifies the inability to manage diversification effectively. In the 1980's, General Signal went on a diversification binge that included a foray into glamorous but treacherous high technology industries (such as semi-conductor equipment). The strategy produced a firm of forty-four businesses, many of them unrelated to one another. Because of mountains of red ink, a new CEO began selling off assets, more than $200 million to date. He also attempted to sell the $130 million telecommunications business but unfortunately, no buyers were found. To date, the divestments have yet to turn around the firm's profits. Experts predict more sell-offs before the firm becomes profitable and manageable.***

More specific effects are shown in the Eastman Kodak Co. acquisition of Sterling Drug Co. (for $5.1 billion). Kodak executives felt they could install "Kodak management" and turn around the drug company's performance. In particular, the "Kodak management" focused on Sterling's R&D operation. However, Sterling's problems became more severe after Kodak's acquisition and installation of its management team. Its new drugs have not been testing well while, at the same time, its current product line faces fierce competition. Kodak managers quietly cut projects that were predicted to generate new products for Sterling. As a result, debt on the Sterling acquisition exceeded the firm's operating earnings by $50 million in 1989. Critics argued that Kodak paid too much for a business that it had no expertise to manage.[15]

In summary, based on the available evidence, we expected and found firms following an acquisition strategy to invest less in R&D and to produce fewer patents.

**Conclusions and Implications**

Some believe the raucous days of mergers and acquisitions are over, but the demise of this popular strategy has been predicted previously. Nonetheless, the

number of mergers and acquisitions has increased with each decade beginning with the 1960s. With growing pressures for global competition, new financing alternatives and pressures from Wall Street for improved performance, many expect the popularity of the acquisitive growth strategy will continue unabated.[16]

While acquisitions are expected to continue, the importance of innovation grows. Lessons from history suggest the importance of being a first mover in the market. This position is also supported by recent research examining fifteen different global industries and found that sales growth was clearly linked with investments in R&D. Regardless of the industry, the firms that invested more in R&D had greater sales growth during the ten-year period of the study.[17] Innovativeness is an important ingredient for global competitiveness.

The Singer Co.'s demise provides an example of the importance of innovation for competitiveness. When Singer executives saw the U.S. sewing market begin to shrink, instead of reinvesting profits in continued development of their sewing products, they milked profits from this business to finance acquisitions. Eventually, the sewing machine division was spun off to SSMC Inc. The 1600 company-owned stores were closed (or sold), eliminating a dealer network built during four decades. The poor quality of its new machines has severely hurt Singer's ability to compete and harmed its reputation.[18]

***We return to the primary question underlying this research and article, "Are acquisitions a poison pill for innovation?" Results from our study suggest that acquisitions may well lead to lower innovation. The results clearly show that in addition to the effects of debt, diversification, size, profits, and liquidity, investments in R&D (relative to competitors), and number of patents decrease after acquisitions. Interestingly, the results also show that relative R&D and patents are generally decreasing before the acquisitions and continue to decrease thereafter. These results reinforce the concern that some of these firms are using acquisitions as a substitute for innovation.***

However, it is important to emphasize that not all acquisitions mean a poison pill for innovation. In an earlier article, we argued that targeted and well-planned acquisitions may well enhance firm innovation, growth, and overall value. Some acquisitions may well be used to complement or enhance R&D and innovation. For example, firms may acquire a company (often times smaller) with a complementary patent, process, product market or other specialized skill/capability not possessed by the acquiring firm and necessary to commercialize a product idea produced by R&D. Thus, acquisitions may be necessary to commercialize internal R&D projects. Therefore, an R&D project may be unsuccessful not because of its lack of value, but because the innovation (or acquisition) is mismanaged.

Firms may also acquire companies with new technology. This is particularly effective when large firms with developed manufacturing and distribution systems acquire smaller firms with developed innovative capacity. In this way, the core competences of each firm complement the other (creating synergy).[19]

Some acquisitions seek to capitalize on market power from combining two firms R&D capabilities (e.g., in the highly competitive telecommunications or pharmaceuticals industries). An example is the merger of Beecham and Smithkline (now called Smithkline Beecham PLC). Combined, the firm is among the top five global drug-makers, with Beecham strong in European markets and Smithkline strong in the U.S. They cover more research areas, thereby increasing the probability of discovering a blockbuster new drug.[20]

Alfred Chandler noted that history has shown large-scale multinational corporations to build competitive advantage by long-term investments in and commitment to manufacturing, R&D, and marketing (distribution). As such, they built and maintained capabilities to compete in their markets. Thus, acquisitions should be aimed at enhancing or maintaining the firm's core competences (i.e., critical skills, capabilities, and knowledge). Likely these acquisitions will entail businesses in related, as opposed to unrelated, product markets. ASK Computer Systems' acquisition of Ingres Corporation, maker of database software, may exemplify this case. The CEO of ASK, Sandra Kurtzig, has taken other bold moves such as increasing funds for new products from ten to fifty percent of the R&D budget. New products will be based on Ingres' database and will work on most computers, broadening ASK's market.[21]

Our results suggest that unless acquisitions are well planned and targeted they may injure a firm's innovation capabilities. Innovation seems critical for long-term global competitiveness. Firms such as Nestle, Corning, and Warner Lambert have been innovative and may be well positioned to solidify their position in global markets in the 1990s and beyond. While Philip Morris has focused on product line extensions in its General Foods and Kraft businesses, Nestle has been investing in and developing innovations in nutrition, health foods, and elaborate freshly prepared chilled entrees (refrigerated, not frozen). Warner-Lambert has invested heavily in R&D and the investments are paying off with two new drugs, Cognex, the first drug to treat Alzheimer's disease and Novon, a biodegradable substance designed to replace disposable plastic products.

***Our message to executives is that you can follow an acquisition strategy and be innovative, but only with careful planning and execution.***

Corning has built an excellent global network of interrelated businesses that share technology and human resources. To do so, Jamie Houghton, the CEO, has focused on quality, formed alliances (currently a partner in nineteen joint ventures) primarily to enhance or complement technology or marketing capabilities, and share technology across businesses (thereby leveraging investments).[22]

Our message to executives is that you can follow an acquisition strategy and be innovative, but only with careful planning and execution. Based on the results of our study, we offer the following guidelines for successful acquisitions and innovations:

(1) Search for target firms that will complement R&D projects and/or enhance your firm's core competences.
(2) Search for innovative target firms whereby the integration with your core competences (e.g., manufacturing, marketing) creates synergy.
(3) Consider joint ventures as alternatives to acquisitions. In some cases joint ventures can enhance/complement technology more than acquisitions.
(4) Share technological advances across businesses within your firm to leverage investments.
(5) Avoid unrelated acquisitions unless there is a high probability of achieving other than financial synergy (e.g., enhancing/complementing core competences).
(6) Develop information systems that link R&D with key stakeholders (including suppliers, customers, manufacturing, design, and marketing personnel) across business units.
(7) Develop incentives that both foster R&D cooperation as well as encourage product championing by key executives.
(8) Consider the long-term consequences of actions, prior to reducing investments in R&D (relative to the industry) and/or lowering commitment to innovation in other ways (e.g., reduction of the championing of innovations for commercialization).

The results of our study suggest some important implications for managers to maintain the innovative output of their firms and their firms' ability to compete in global markets. Our main theme is best summarized by the following quote:

*"Mergers and acquisitions have become an almost routine fact of life in corporate America. Preparation for mergers, however, is by no means routine. The quality of the effort expended up front may determine the success of the resulting merger."*[23]

## Endnotes

[1] Information on GE acquisitions, sell offs and strategy can be found in L.H. Clark, Jr. and A.L. Malabre, Jr., "Slow Rise in Outlays for Research Imperils U.S. Competitive Edge," *Wall Street Journal*, November 16, 1988, A1, A5; J. Guyon, "GE Chairman Welch Though Much Praised, Starts to Draw Critics," *Wall Street Journal*, August 4, 1988, A1, A12; J.H. Taylor, "General Electric: Whither NBC's Peacock?" *Business Week*, March 4, 1991, 40-41.

[2] K. Pennar, "Ask Not What Your Economy Can Do For You," *Business Week*, December 17, 1990, 92.

[3] A.H. Van de Ven and H.L. Angle, "An introduction to the Minnesota-Innovation Research Program," In A.H. Van de Ven, H.L. Angle and M.S. Poole, *Research on the Management of Innovation*, (New York: Harper & Row, 1990).

[4] M.C. Jensen, "Takeovers: Their Causes and Consequences," *Journal of Economic Perspectives*, 1988, 2, 21-48; Clarke and Malabre, *op. cit.*

[5] M.A. Hitt, R.E. Hoskisson, R.D. Ireland, and J.S. Harrison, "The Effects of Acquisitions on R&D Inputs and Outputs," *Academy of Management Journal*, September, 1991, 693-706.

[6] The value of different measures of R&D effectiveness is examined in G.K. Morbey and R.M. Reithner, "How R&D Affects Sales Growth, Productivity and Profitability," *Research-Technology Management*, May-June, 1990, 11-14; Jensen, *op. cit.*; J.A. Schumpeter, *Theory of Economic Development*, (New York: Oxford University Press, 1961).

[7] For example, see M.A. Hitt, R.E. Hoskisson, and R.D. Ireland, "Mergers and Acquisitions and Managerial Commitment to Innovation in M-form Firms," *Strategic Management Journal*, 11 (special issue), 1990, 29-47.

[8] C.S. Eklund and A.L. Cowan, "What's Causing Scratches in DuPont's Teflon?" *Business Week*, December 8, 1986, 60-64.

[9] This argument is included in J. Constable, "Diversification as a Factor in U.K. Industrial Strategy," *Long Range Planning*, February, 1986, 52-60.

[10] A.M. Freedman, "Philip Morris's Bid for Kraft Could Limit Product Innovation," *Wall Street Journal*, October 20, 1988, A1; P. Waldman, "After RJR's Buy-Out: Successes, Worries, Operating Profits Soar, but Questions Remain," *Wall Street Journal*, October 27, 1989, B10.

[11] R. Smith and G. Anders, "Leveraged Buy-Outs that Appear Shaky are on the Increase," *Wall Street Journal*, December 5, 1988, A1; J.B. White, "Fruehauf, Overloaded with Buy-Out Debt, will be Dismembered," *Wall Street Journal*, March 29, 1989, A1; L. Sandler, R. Smith and J. Lebow, "How Junk Bonds Came to Rescue, Then Strangled Integrated," *Wall Street Journal*, June 23, 1989, A1.

[12] J. Helyar, "RJR Employees Fight Distraction Amid Buy-Out Talks," *Wall Street Journal*, November 1, 1988, A8.

[13] For the importance of managerial commitment to innovation, see Hitt et al. (1990), *op. cit;* B.H. Hall, "The Impact of Corporate Restructuring on Industrial Research and Development," *Brookings Papers on Economic Activity*, 3, 1990, 85-135; the important role of product champions is explained in R.A. Burgelman and M.A. Maidique, *Strategic Management of Technology and Innovation*, (Homewood: Richard D. Irwin, 1988).

[14] A. Chandler, *Scale and Scope: The Dynamics of Industrial Capitalism* (Cambridge, MA: The Belknap Press, 1990). Other conceptual and empirical support may be found in B.D. Baysinger and R.E. Hoskisson, "Diversification Strategy and R&D Intensity in Large Multiproduct Firms," *Academy of Management Journal*, 32, 1989, 310-332; R.E. Hoskisson and M.A. Hitt "Strategic Control and Relative R&D Intensity in Large Multiproduct Firms," *Strategic Management Journal*, 9, 1988, 605-621; R.E. Hoskisson, M.A. Hitt, and C.W.L. Hill, "Managerial Risk Aversion in Diversified Firms: An Evolutionary Perspective," *Organization Science*, August, 1991, 296-314.

[15] L. Driscoll, "Can General Signal Escape Its High-tech Hell?" *Business Week*, March 1991, 94-96; K.H. Hammonds, "Kodak May Wish It Never Went to the Drugstore," *Business Week*, December 1989, 72, 76.

[16] J.H. Dobrzynski, "You Just Can't Mail Out 132 Prospectuses Anymore," *Business Week*, January 28, 1991, 62-64; N. Jones, J. Berger, and K. Pennar, "Do All These Deals Help or Hurt the U.S. Economy?" *Business Week*, November 24, 1986, 86-88.

[17] L.G. Franko, "Global Corporate Competition: Who's Winning, Who's Losing, and the R&D Factor as One Reason Why," *Strategic Management Journal*, September-October 1989, 449-474.

[18] J. Willoughby, "A Stitch Not in Time," *Forbes*, April 25, 1988, 124-126.

[19] M.A. Hitt, R.E. Hoskisson and J.S. Harrison, "Strategic Competitiveness in the 1990's: Challenges and Opportunities for U.S. Executives," *The Executive*, 5, 1991, 7-22; The advantages of acquisition to obtain new technology are explained in more detail in O.E. Williamson. *Markets and Hierarchies: Analysis and Antitrust Implications*, (New York: The Free Press, 1975); J.S. Harrison, M.A. Hitt, R.E. Hoskisson and R.D. Ireland, "Synergies and Post-Acquisition Performance:

Differences Versus Similarities in Resource Allocations," *Journal of Management*, 17, 1991, 173-190.

[20] J. Keller, "Dealmakers are Burning Up the Phone Lines," *Business Week*, March 13, 1989, 138-146; M. Maremont, "The First Acid Test of the Drug Megamergers," *Business Week*, February 19, 1990, 62-63.

[21] M. Shao, "The Founder is Back, but So Far, ASK Isn't," *Business Week*, November 12, 1990,132.

[22] J. Marcom, Jr., "Nestle S.A.: Feed the World," *Forbes*, October 1, 1990, 110-118; B. Hager, "Warner-Lambert: Can R&D Take It To the Top Tier?" *Business Week*, September 24, 1990, 66, 68; K.H. Hammonds, "Cornings Class Act: How Jamie Houghton Reinvented the Company," *Business Week*, May 13, 1991, 68-72, 76.

[23] J.F. Kelly, Jr. "Talk Eased Merger Stress for Great American Employees," *Personnel Journal*, October, 1989, 77-85.

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