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Corporate Diversification

Cynthia A. Montgomery

In most models offered to introductory and even intermediate students of economics, firms are homogeneous producers of single products. This abstraction has a powerful impact on the way we think about economic behavior: firms in an industry look like one another and management, who by definition is located at the business (as opposed to the corporate level), makes decisions without regard to the firm's participation in other markets. While economic science has become increasingly sophisticated within these confines, the tools and models that have made it easier for us to address homogeneous single product firms have painted a picture that excludes large diversified corporations.

In 1992, the 500 largest U.S. public companies sold \$3.7 trillion worth of goods and services, or approximately 75 percent of the output of all U.S. public companies. While the popular press and some researchers have highlighted recent divestiture activity among these firms, claiming a “return to the core,” some changes at the margin must not obscure the fact that these firms remain remarkably diversified.

Table 1 shows the number of major lines of business in which these firms engaged in 1985, 1989, and 1992. These years were chosen to enable a comparison between the level of diversification for these large public firms and public firms in general. While Lichtenberg (1992) showed that the level of diversification declined between 1985 and 1989 for his sample of 6505 firms, these data show that diversification actually increased during this period for the 500 largest firms.

The U.S. is not the only country where diversified companies have a significant role in economic activity. Although recent data are difficult to obtain,

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Table 1
Diversification in the Top 500 U.S. Public Companies

<i>Number of SIC Codes</i>			
	1985	1989	1992
Mean	10.65	10.85	10.90
<i>Distribution of Firms</i>			
Number of SIC Codes	1985	1989	1992
1	11.8%	12.4%	12.4%
2 or less	18.8%	18.4%	18.4%
3 or less	23.2%	22.6%	21.8%
More than 5	67.6%	68.6%	69.6%
More than 10	42.0%	43.6%	43.8%
More than 20	13.8%	14.0%	14.0%
More than 30	0.6%	0.8%	0.8%

Source: Compustat PC Plus, April 30, 1993
SIC assignments are made by Compustat employees and are primarily at the 4-digit SIC level.

historical trends indicate that diversification is pronounced in Canada (Caves et al., 1980), Japan (Goto, 1981), the United Kingdom (Goudie and Meeks, 1982; Utton, 1977) and other advanced economies. Large conglomerates, often controlled by family groups or government, are also prominent in many developing economies.

While the average level of diversification may increase or decrease somewhat in the decades ahead, multiple-line businesses are here to stay and will remain a dominant feature in the economic landscape. This paper examines what economists know about this important phenomenon and suggests where we may best place our attention moving forward.

Why Do Firms Diversify?

Many arguments have been made about why firms diversify. This paper will examine three comprehensive perspectives that synthesize a number of individual points. Two of these, the market-power view and the resource-view, are consistent with profit maximization, but only the latter is consistent with the efficient use of resources. The other, the agency view, is managerial in nature, and is consistent with neither profit maximization nor efficiency.

The Market-Power View

Traditionally, economists' interest in diversification stemmed from a concern for its potentially anti-competitive effects. This view argues that diversified firms will "thrive at the expense of nondiversified firms not because they are any more efficient, but because they have access to what is termed *conglomerate power*" (Hill, 1985, p. 828). This approach was perhaps first expounded by Corwin Edwards (1955) in "Conglomerate Bigness as a Source of Market Power."

A concern that produces many products and operates across many markets need not regard a particular market as a separate unit for determining business policy and need not attempt to maximize its profits in the sale of each of its products, as has been presupposed in our traditional scheme. . . . It may possess power in a particular market not only by virtue of its place in the organization of that market but also by virtue of the scope and character of its activities elsewhere. It may be able to exploit, extend, or defend its power by tactics other than those that are traditionally associated with the idea of monopoly.

Economists following Edwards have emphasized three ways in which conglomerates may yield power in an anti-competitive way: cross-subsidization, wherein a firm uses its profits from one market (sometimes known as "deep pockets") to support predatory pricing activities in another; mutual forbearance, where competitors meeting each other in multiple markets recognize their interdependence and compete less vigorously (Bernheim and Whinston, 1990); and reciprocal buying, where the interrelationships among large diversified firms foreclose markets to smaller competitors. The fear is that these practices will lead to reduced competition and higher industry concentration.

Gribbin (1976) added an important qualifier to these arguments, pointing out that conglomerate power is a function of the firm's market power in its individual markets. To wield power across markets, a firm must first have some measure of strength in its individual markets. In other words, a firm with insignificant positions in a number of markets will not, in sum, have conglomerate power.

In general, authors raising market power issues have tended to stress the consequences of diversification, rather than its causes. They tend to emphasize the ways in which diversification can be uncompetitive, not necessarily what motivates it, nor what efficiencies or inefficiencies it may involve. Even so, many scholars following this line of reasoning have argued, based solely on market power effects, that one should observe a positive relationship between diversification and firm performance.

The Agency View

The 1980s witnessed many abrupt shifts in corporate control and vigorous debates about the appropriate scope of diversified firms. When interpreting

this activity, many financial economists saw it through the lens of agency theory.

In 1932, Berle and Means cautioned against the separation of the owners (principals) and the managers (agents) of firms. As Morck, Shleifer and Vishny (1988, p. 293) explain: "When managers hold little equity in the firm and shareholders are too dispersed to enforce value maximization, corporate assets may be deployed to benefit managers rather than shareholders." Mueller (1969), Jensen (1986), Shleifer and Vishny (1989) and others have argued vigorously that, absent significant ownership stakes, managers pursue value-reducing strategies to further their own interests at the expense of the firm's owners. Mergers, particularly conglomerate mergers (Mueller, 1969), appear to be a convenient vehicle for doing so.

Arguments which link diversification and firm growth are typically tied to the life cycle of the firm. In this view, young and growing businesses have plenty of profitable opportunities in which to re-invest earnings. However, as businesses mature, these opportunities become scarce, and managers begin to use cash flows from earlier innovative efforts to pursue increasingly far-flung opportunities (Mueller, 1972, p. 124). Jensen (1986, p. 328) described this as a theory of "free cash flow." He wrote:

Acquisitions are one way managers spend cash instead of paying it out to shareholders. Therefore, the [free cash flow] theory implies managers of firms with unused borrowing power and large free cash flows are more likely to undertake low-benefit or even value-destroying mergers. Diversification programs generally fit this category, and the theory predicts they will generate lower total gains.¹

Besides the pure pleasures of empire-building, at least two other reasons have been proposed for why a self-interested manager might pursue excessive expansion. First, a manager might direct a firm's diversification in a way that increases the firm's demands for his or her particular skills. Shleifer and Vishny (1989, p. 137) term this behavior managerial entrenchment, and argue that in pursuing such interests, "managers often invest beyond the value-maximizing level." The second rationale is based on the idea that although shareholders can efficiently diversify their own portfolios, managers cannot so efficiently diversify their employment risk. Accordingly, managers may pursue diversified expansion as a means of reducing total firm risk, thus improving their personal positions while not benefitting the firm's stockholders. According to Amihud and Lev (1981, p. 606), such mergers "may be viewed as a form of managerial perquisite intended to decrease the risk associated with managerial human capital. Accordingly, [their consequences] may be regarded as an agency cost."

¹Roll (1986) points out that bad acquisitions might not be intended as such. In consummating a merger, managers may not believe they are pursuing activity that is counter to shareholders' long-term interests; they may simply be suffering from hubris in overestimating their ability to add value to the business.

In contrast to the market power view of diversification which emphasizes the benefits a firm may reap at the expense of its competitors and customers, the agency view emphasizes the benefits a firm's managers may reap at the expense of its shareholders. Accordingly, the agency view would predict a negative relationship between diversification and firm value.²

The Resource View

While many economists will be familiar with the market power and agency theory explanations for corporate diversification, fewer will have considered the resource-view, which is based on the work of Edith Penrose. Although *The Theory of the Growth of the Firm* was published in 1959, it has not had a strong impact on the direction of economic discourse. The treatise differs from orthodox economic theory in two important respects: first, it focuses on heterogeneous, not homogeneous, firms; and, second, it is a theory of growth, not equilibrium. Although both assumptions are difficult to work with in standard economic modeling, both may be necessary to understand large diversified firms.

The resource view argues that rent-seeking firms diversify in response to excess capacity in productive factors, here called resources.³ These include factors the firm has purchased in the market, services the firm has created from those factors, and special knowledge the firm has accumulated through time. According to Penrose (1959, p. 68), the attainment of a "state of rest" (equilibrium position) is precluded by three significant obstacles: "those arising from the familiar difficulties posed by the indivisibility of resources; those arising from the fact that the same resources can be used differently under different circumstances, and in particular, in a 'specialized' manner; and those arising because in the ordinary processes of operation and expansion new productive services are continually being created." In this view, so long as expansion provides a way of more profitably employing its underused resources, a firm has an incentive to expand.

Teece (1980, 1982) pointed out that the economies of scope Penrose described have no direct implications for the breadth of the firm unless their external transfer is subject to market failure. That is, if a firm's unused resources can be efficiently sold in the market, the rationale for diversification evaporates. It is reasonable to expect, however, that market failures do exist in the sale of many of these assets, particularly as one moves from physical assets

²Smith and Stulz (1985) point out that such risk reduction does not necessarily reduce the value of the firm. Risk averse employees, suppliers, and customers will require some form of extra compensation to bear their nondiversifiable claims. So long as the costs of risk reduction (through hedging or diversification) do not exceed the benefits (for example, reduction in managerial compensation), the value of the firm will not be reduced. Lewellen (1971) and Marshall, Yawitz, and Greenberg (1984) offer other reasons why reduction of total firm risk may not be at odds with shareholder wealth maximization.

³Penrose (1959, p. 67) used the word "resource" more narrowly, to refer only to the "physical things a company buys, leases, or produces for its own use, and the people hired on terms that make them effectively part of the firm."

the firm has purchased to the services and knowledge it has created itself. Many of a firm's skills and much of its knowledge are deeply imbedded in the routines of the firm (Nelson and Winter, 1982). The transfer of these systemic resources may require the transfer of organizational as well as individual knowledge (Teece, 1982). Further, there are well-known contracting problems involved in the sale of intangible assets (for example, Wernerfelt, 1988; Caves, 1982).

The literature on business strategy would suggest that the same characteristics that make resources difficult to transfer across company boundaries may also make them difficult for competitors to imitate, and thus potentially a source of competitive advantage in the markets in which they are applied (for example, Lippman and Rumelt, 1982). The value the firm derives from these resources is increased when the resources don't obey the law of conservation (Teece, 1980, p. 226). Brand names, for example, may be used in several non-competing applications without substantially impairing their value (Montgomery and Wernerfelt, 1992).

The resource view suggests that a firm's level of profit and breadth of diversification are a function of its resource stock. Montgomery and Wernerfelt (1988) noted that a firm's resources differ in specificity. They argue that more specific resources, such as productive skills in biotechnology, may only efficiently be applied in a small number of industries, but may yield higher marginal returns due to their specificity. In contrast, less specific factors, such as standard-issue milling machines, may transfer further and provide the basis for a widely diversified firm, but support lower rents because they are in wider supply. This has important implications for predictions made by the resource view. Because firms are different, they will have different optimal levels of diversification. For a firm with less specific resources, profits may be maximized at a relatively high level of diversification even though a firm with more specific resources could obtain absolutely higher profits with less diversification.

Evidence on Diversification and Firm Performance

Assessing the relationship between diversification and firm performance has proven quite difficult. For starters, simply defining diversification and measuring its associated returns is anything but straightforward. Research in the management field and a fair proportion of the work in industrial organization has searched for relationships between a firm's total amount of diversification and its overall profitability. In contrast, work in the agency-theoretic tradition has focused almost exclusively on mergers and acquisitions—changes at the margin, rather than an evaluation of a firm's diversification as a whole. Each of these approaches has its merits and drawbacks. Here I will try to extrapolate from the particulars, and look for emerging patterns.

Diversification has been included in a number of standard industrial organization studies which examine the relationship between firm performance

and a host of industry structure variables: concentration, industry growth, scale, and so on. In these studies, performance has generally been measured by accounting indices, such as return on equity or return on invested capital. Diversification has generally been operationalized as a continuous variable analogous to the Herfindahl index; for example, one minus the sum of the squared percentages of a firm's total revenues (or total employment) in each of its markets. These studies nearly always find a neutral or negative, not a positive, relationship between diversification and firm performance (Rhoades, 1974; Utton, 1977; Montgomery, 1985; Palepu, 1985). Montgomery and Wernerfelt (1988) performed a similar analysis using Tobin's q (the capital market value of the firm divided by the replacement value of its assets) to measure performance. They also found that firm profitability decreased as a continuous measure of diversification increased.

Feinberg (1985) found some evidence at the company level that multimarket activity increased price-cost margins. In comparison, the evidence of such an effect was weak at the industry level. Scott (1982) found that in markets where both concentration and multimarket contact were high, profits on average were about 3 percent greater than in markets where only multimarket contact was high. Whether this was due to natural scope economies, anti-competitive behavior, or both was not clear.

Wernerfelt and Montgomery (1988) estimated the relative importance of industry structure, diversification, and market share effects in determining firm performance. As did Schmalensee (1985), they found that direct industry effects accounted for the majority of the explained variance. The diversification effect, although considerably smaller, was also significant. Narrowly diversified firms, presumably built around more specialized assets, earn higher levels of profit than do widely diversified firms.

Continuous measures, while objective and easy to calculate, do not differentiate between types of diversification (related versus unrelated, marketing-based versus technology-based, and so on), nor is it likely that they capture the managerial essence of diversification. Using a series of objective and subjective measures, Rumelt (1982) classified firms into nine diversification categories, ranging from single business to unrelated diversifier. He consistently found that firms pursuing strategies of "related constrained diversification"—that is, diversification built around a core organizational capability—were, on average, more profitable than single line businesses or highly diversified firms. These curvilinear results have been widely replicated (Christensen and Montgomery, 1981; Lecraw, 1984; Varadarajan and Ramanujam, 1987).

With respect to industry concentration, Berry (1974) found that diversification into new industries raised concentration in unconcentrated industries, but decreased it in concentrated industries. Similarly, Caves (1981) also failed to find a positive relationship between diversification and concentration in highly concentrated industries, finding instead an increase only in unconcentrated industries. He concluded (p. 292): "The appearance of a positive relation between changes in concentration and diversification only in the least

concentrated industries does not support a market-power interpretation. It can hardly pay to dip into the deep pocket in order to lift four-firm concentration from 18% to 25%."

Although there are some findings to the contrary, the overall weight of the evidence on both concentration and profitability is largely inconsistent with the expectations outlined by the market power view. The combination of widespread diversification and a negative average relationship between diversification and performance can be explained in two ways. One is the agency view which suggests that diversification is undertaken for reasons other than performance maximization. The other is the resource view which suggests that the average relationship reflects an underlying heterogeneity of firms' resources. Specifically, the evidence is consistent with the view that firms with more specific and valuable resources find it optimal to diversify less than firms with less specific and less valuable resources.

An alternative approach to assessing the profit implications of diversification is to consider how total factor productivity at the plant level is impacted by the degree of corporate diversification. In principle, this is a very important question: does being part of a diversified firm leave an individual business better or worse off? Using plant-level Census Bureau data, Lichtenberg (1992) found that the more diversified the firm (in this case, the greater the number of industries in which a parent firm operates), the lower the productivity of its plants. However, the relationship between these variables was significant and negative only after controlling for the total number of parent-firm plants in all industries (itself an indication of a firm's diversification) which had a significant positive sign. These results suggest that a firm divesting an unrelated unit would benefit from the reduction in the number of business lines, but be hurt by the reduction in total number of plants, making the net effect ambiguous.

A wealth of other studies have evaluated the impact of mergers and acquisitions on firm performance. There is not room here to review all the studies, but I will highlight some of the most relevant findings.

Much of the acquisition research focuses on two waves of takeovers in the United States: that of the 1960s, which has been characterized as a wave of unrelated acquisitions, and that of the mid to late 1980s, which has been characterized as a "return to corporate specialization" (Bhagat, Shleifer, and Vishny, 1990). Certain points about acquisitions (and associated divestitures) during this 30-year period are not in dispute. For example, it is widely acknowledged there were high numbers of unrelated acquisitions in the late 1960s and early 1970s (Ravenscraft and Scherer, 1987). Further, the drive to move into unrelated lines of business was motivated in part by very strong antitrust enforcement, which was relaxed by the 1980s (Shleifer and Vishny, 1991). We also know that a substantial number of business units acquired in the late 1960s and early 1970s were later divested (Ravenscraft and Scherer, 1987; Kaplan and Weisbach, 1992), and that acquisitions were more likely to be followed by divestitures when targets were not in businesses highly related to those of the acquirer (Kaplan and Weisbach, 1992).

Studies that assess the capital markets' response to acquisition announcements find that, on average, target firms realized substantial benefits, while bidder firms experienced neutral or slightly negative returns (Bradley, Desai, and Kim, 1988; Jensen and Ruback, 1983; Roll, 1986). The bulk of these studies do not differentiate among types of acquisition, but some do, and they tend to find evidence that bidding firms in related acquisitions fared better than bidding firms in unrelated acquisitions, particularly in more recent years. Morck, Shleifer, and Vishny (1990) found that the mean returns in related and unrelated acquisitions were not statistically or substantively different in the 1970s, but were so in the 1980s. In the 1980s, they found that 45.6 percent of bidders in related acquisitions had positive returns, compared to 32.2 percent of the bidders in unrelated acquisitions.⁴

Jensen's (1986) notion of free cash flow (defined earlier as cash flow in excess of that required to fund all projects that have positive net present values) is difficult to operationalize, but some reasonable attempts have been made. Defining free cash flow as operating income before depreciation, less interest expense, taxes, and preferred and common dividends, Lang, Stulz and Walking (1991) found bidder returns in tender offers were negatively related to the acquirer's free cash flow. Consistent with Jensen's characterization of firms pursuing ill-founded diversification programs, this result was stronger for firms with low values of Tobin's q . Kaplan and Weisbach (1992) found corroborating evidence to this effect. In their sample, acquirers who were considered successful after the fact had lower free cash flows at the time of acquisition than did acquirers who were considered unsuccessful. Clearly, this evidence is at least consistent with the agency view of corporate diversification described earlier, and there is additional supporting evidence for this view from other research approaches.

Ravenscraft and Scherer (1987) attempted to examine the post-merger performance of diversified firms. Looking at manufacturing mergers from the 1960s and early 1970s, they observed a decline in pre-merger accounting profits for firms under new ownership. In interpreting this result, Ravenscraft and Scherer concluded (pp. 193–194),

Although some of the decline is attributable to the unsustainably high level of pre-merger profits, an appreciable fraction appears to be a scaled-down manifestation of the control loss problems that led to sell-off in more extreme cases. Not surprisingly, the problems were most serious following pure conglomerate acquisitions, in which the parent's managerial experience was least well-suited to crisis problem solving. Even for the "related business" and horizontal acquisitions, however, post acquisition

⁴Matsusaka (forthcoming) found that the market's response to unrelated acquisitions was positive in the 1960s, neutral in the 1970s, and negative in the 1980s. Singh and Montgomery (1987) found that the total dollar gains were higher in related than unrelated acquisitions, although the gains went to the target firms, not the bidding firms. Kaplan and Weisbach (1992), however, found no difference in the market's response to bidders in related and unrelated acquisitions between 1971–82.

profitability was depressed relative to the levels identified in our pre-merger analysis.

Ravenscraft and Scherer's results complement those of Mueller (1985) who found market share losses following horizontal and especially conglomerate mergers.

Rather than looking through the prism of free cash flow, other researchers have tackled these questions by comparing manager-controlled firms to those that are owner-controlled. Amihud and Lev (1981) found that manager-controlled firms engaged in more conglomerate acquisitions than owner-controlled firms, and in general were more diversified. Lewellen, Loderer and Rosenfeld (1985) and You et al. (1986) showed that low levels of managerial ownership in bidding firms correlated with lower returns. Consistent with the view that managers want to reduce total firm risk, Marshall, Yawitz and Greenberg (1984) found that firms pursue mergers with negatively correlated cash flows.

What Do These Results Tell Us?

In broad overview, this research clearly shows that diversification is not a guaranteed route to success. On average, firms with higher levels of diversification are less profitable than firms with lower levels of diversification; acquisitions in themselves often do not lead to increases in corporate wealth for bidding firms; and many are later reversed.

In terms of the three theories introduced earlier, it would seem unwise to conclude that managerial motives or hubris play no role in corporate diversification. There are simply too many results that are consistent with the agency theory of diversification. There is also evidence that firms that diversify around specific resources are more profitable than firms that diversify more broadly. The evidence bears most strongly against the market-power view. There is little evidence that diversified firms attain the sort of market power that leads to increased profitability.

In interpreting the above research, it is also prudent to revisit some of the theoretical and methodological underpinnings of the work. While many of the facts about acquisitions are clear, their interpretation is not. In particular, it can be debated whether the evidence itself is sufficient to conclude that the diversification undertaken during the 1960s and 1970s was not in the interest of firm shareholders.

In interpreting the evidence, a key point of controversy is whether the real benefits of unrelated diversification changed between the 1960s and 1990s, or whether the activity from the start was flawed. After all, it is reasonable to expect that between 1960 and 1990, the value added by conglomerates changed. Professional management personnel and systems, which were critical features of

conglomerate firms of the 1960s, had become widely diffused by the 1980s, and thus no longer an important source of competitive advantage. In addition, capital markets were more fluid by the 1990s, and permissive antitrust practice had opened up a range of competitive possibilities that did not exist in the late 1960s (Baker, 1992).

Further, the majority of conclusions about the value implications of acquisitions have been drawn from event studies that treat acquisition announcements as isolated events. If capital markets are reasonably efficient, one would expect that a firm's share price on any given day would fully reflect the expansion value inherent in its resource base. When an acquisition is announced, one should see only marginal adjustments reflecting the "surprise" elements in the particular message (for example, the name of the target or the price of the assets). In this view, an expansion program could have a substantial impact on value (positive or negative) but register only minor changes up or down at the time of a specific announcement. Schipper and Thompson's (1983) work examining the market's response to the announcement of acquisition programs supports this point. Their work showed that the market responded significantly and positively to announcements of corporate acquisition programs.

Perhaps most bothersome of all, analyses of acquisitions cannot evaluate diversification that results from internal development. This is critical in relation to the resource view, because the latter suggests that the highest profits can be garnered by leveraging resources from existing businesses.

Care should also be taken in interpreting the generally negative relationship between diversification and corporate accounting returns. Diversification may be in the interest of a firm and still not result in higher accounting returns at the corporate level. To understand this point, imagine that firms face a queue of diversification opportunities that can be ranked from the most to the least profitable. Pursuing them in that order, firms should stop where marginal rents become subnormal, not average rents. As Penrose (1959, p. 67) observed, "as long as expansion can provide a way of using the services of its resources more profitably than they are being used, a firm has an incentive to expand." Thus, average accounting returns may decline even when diversification increases a firm's economic value.

Finally, despite the fact that there is little theoretical reason to expect a monotonic relationship between diversification and performance, most empirical studies have looked for this type of effect. Rumelt's (1982) results, showing a strong positive relationship between some types of diversification and firm performance, underscores this point.

The Direction of Diversified Expansion

In addition to examining the profit implications of diversification, it is also important to consider the patterns diversification takes.

Numerous empirical studies have shown that firms do not diversify in a random fashion; but neither do they do so in a completely predictable way. There appears to be a pattern and logic to the diversification choices of most firms that is related to their base of resources, even though the variety of configurations across firms is very large.

Working at the industry level, Lemelin (1982) found that similarities in distribution and marketing channels between origin and destination industries were significant predictors of the network of industries in which a firm would compete. MacDonald (1985) also found that similarity in the share of sales going to the consumer market was a strong predictor of industry diversification patterns, so too similarity in R&D intensity.

At the firm level, Montgomery and Hariharan (1991) showed that rapidly growing firms with extant resource bases in marketing and R&D were the most likely to pursue diversified expansion. In diversifying, these firms tended to enter markets where the (often high) resource requirements were similar to their own capability profiles. Similarly, Ravenscraft and Scherer (1987, p. 34) found strong evidence that internally generated diversification emanated from industries where the R&D to sales ratios were unusually high.

Clinical research also provides evidence of firms that have diversified from a core set of resources (for example, Collis, 1988; Collis and Stuart, 1991; Collis and Noda, 1993; Itami, 1987; Montgomery and Magnani, 1991). Japan's Sharp Corporation is a good case in point. Sharp's businesses are built around the firm's preeminent capabilities in opto-electronics. The firm manages by a "seeds and needs" rule, where its individual divisions are encouraged to use the corporation's key technologies ("seeds") to meet market needs. Dr. Atsushi Asada, a senior executive vice president, commented: "We invest in the technologies which will be the 'nucleus' of the company in the future. Like a nucleus, such technologies should have an explosive power to self-multiply across many products" (Collis and Noda, 1993, p. 14).

The evidence above provides substantial evidence that existing organizational capabilities, particularly in R&D and marketing, often guide diversified expansion. Other research suggests, however, that these resources, and the potential economies of scope they may confer, are broader in nature than the "neoclassical cost concepts of scale and scope, capacity, and natural monopoly" (Streitwieser, 1991, p. 503), which Panzar and Willig (1981) used to describe multiproduct production. Using Census bureau data to identify diversification patterns, Streitwieser (1991) and McGuckin, Nguyen, and Andrews (1991) found homogeneous patterns within firms, but heterogeneous patterns across firms located in the same primary industry. As Streitwieser (p. 524) put it: "When establishments are grouped by common ownership, it is apparent that establishments belonging to the same firm engage in similar sets of activities, although the particular groups of products differ across firms." These results complement those of Gollop and Monahan (1991). They found that diversification in the U.S. was decreasing at the establishment level (that is, the plant

level), while remaining relatively high at the enterprise level, a result which suggests that narrowly defined technical efficiencies are probably not the primary motive for diversified expansion.

Summary and Conclusions

The market power view of diversification has generated a lot of interest, but it has tended to emphasize blunt arguments, rather than subtle ones. Much of the associated empirical work was designed to detect gross impacts on performance, and much of it failed. While more refined tests may reveal circumstances where conglomerate power is a concern, the accumulated evidence suggests it is unlikely this motive plays a central role in firm diversification.

In contrast, both the resource and agency views are considerably more promising. Agency arguments help explain why firms may exceed the efficient level of diversification. However, it is extremely difficult to identify the efficient level of diversification for a given firm, and agency arguments do not help resolve this question. The resource view helps explain the direction of diversified expansion. In the absence of constraints (like antitrust enforcement), there is strong evidence that firms pursue strategies of diversifying into related industries. Like the agency view, however, the resource view suffers from difficulties in identifying the efficient level of diversification for a given firm.

While the resource view is consistent with profit maximization and the agency view is not, it is important to note that these stories are not wholly inconsistent. Agency theorists are likely to agree that, other things equal, firms maximizing growth or managerial prerogative will often do it in the way the resource view suggests. The critical question is: does diversification stop when its net present value equals zero, or does it go on from there? Existing research indicates that some firms at some times go beyond that level, but that fact should not obscure the point that the optimal level of diversification for most firms is unlikely to be zero.

If analysts are to make progress tackling this difficult subject, we will have to acknowledge that diversification is likely to elude simple conclusions. Whether or not diversification promotes efficiency, is guided by managerial motives, or both, is likely to differ within firms, across firms and across time. While some diversification moves may be easy to analyze, such as Ralston Purina's far-fetched entry into ski resorts, others are much more difficult to appraise.

Consider, for example, the expansion of the Walt Disney Company (Collis, 1988). From Disney's base in animated feature films, the firm expanded into theme parks, children's books and records, cable TV, and retail stores. Each of these businesses leveraged the company's cast of animated characters, while extending and building the company's brand names and reputation for wholesome family entertainment. Few would deny that much of this diversification,

which is still in place, substantially increased shareholder value. More recently, however, Disney has added a national hockey league franchise (the Mighty Ducks), and entertainment businesses like the rap-oriented record label Hollywood BASIC. These recent moves are based on an increasingly broad definition of the firm's core resources (the management of creativity versus children's animated characters). Whether or not these moves will ultimately increase the value of the firm is at this point a difficult question to answer.

Looking ahead, it would be very useful to have empirical tests that would help us discriminate between and evaluate the relative importance of the resource-base and agency theory views of diversification. Devising such a test may await a deeper understanding of the resources that can be beneficially leveraged across markets, and the critical differences between deploying these in a firm or market setting.

These questions are of more than academic interest. Many diversified companies have revenues in excess of the gross domestic products of some smaller countries. While economists have spent considerable effort understanding the working of economies, they have given much less attention to understanding the scope or internal workings of firms. Until economists have a better understanding about why diversified companies look the way they do, and whether that fact should be encouraged or not, we cannot be confident that we understand the fundamentals of resource allocation.

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References

- Amihud, Yakov, and Baruch Lev**, "Risk Reduction as a Managerial Motive for Conglomerate Mergers," *Bell Journal of Economics*, Autumn 1981, 12, 605–17.
- Baker, George P.**, "Beatrice: A Study in the Creation and Destruction of Value," *Journal of Finance*, July 1992, 47, 1081–119.
- Berle, Adolf A., and Gardiner C. Means**, *The Modern Corporation and Private Property*. New York: Macmillan, 1932.
- Bernheim, B. Douglas, and Michael D. Whinston**, "Multimarket Contact and Collusive Behavior," *RAND Journal of Economics*, Spring 1990, 21, 1–26.
- Berry, Charles H.**, "Corporate Diversification and Market Structure," *Bell Journal of Economics and Management Science*, Spring 1974, 5 196–204.
- Bhagat, Sanjai, Andrei Shleifer, and Robert W. Vishny**, "Hostile Takeovers in the 1980's: The Return to Corporate Specialization," *Brookings Papers on Economic Activity: Microeconomics*, 1990, special issue, 1–84.
- Bradley, Michael, Anand Desai, and E. Han Kim**, "Synergistic Gains from Corporate Acquisitions and Their Division Between the Stockholders of Target and Acquiring Firms," *Journal of Financial Economics*, May 1988, 21, 3–40.
- Caves, Richard E., et al.**, *Competition in the Open Economy: A Model Applied to Canada*. Cambridge: Harvard University Press, 1980.
- Caves, Richard E.**, "Diversification and Seller Concentration: Evidence from Changes, 1963–72," *Review of Economics and Statistics*, May 1981, 63, 289–93.
- Caves Richard E.**, *Multinational Enterprise and Economic Analysis*. Cambridge: Cambridge University Press, 1982.

Christensen, H. Kurt, and Cynthia A. Montgomery, "Corporate Economic Performance: Diversification Strategy Versus Market Structure," *Strategic Management Journal*, October-December 1981, 2, 327-43.

Collis, David J., "The Walt Disney Company: Corporate Strategy." Boston: Harvard Business School Publishing, 1988.

Collis, David J., and Tomo Noda, "Sharp Corporation: Corporate Strategy." Boston: Harvard Business School Publishing, 1993.

Collis, David J., and Toby Stuart, "Cooper Industries: Corporate Strategy." Boston: Harvard Business School Publishing, 1991.

Edwards, Corwin D., "Conglomerate Business as a Source of Power." In National Bureau Committee for Economic Research, *Business Concentration and Price Policy*. Princeton: Princeton University Press, 1955, 331-60.

Feinberg, Robert M., "'Sales-at-Risk': A Test of the Mutual Forbearance Theory of Conglomerate Behavior," *Journal of Business*, April 1985, 58, 225-41.

Gollop, Frank M., and James L. Monahan, "A Generalized Index of Diversification: Trends in U.S. Manufacturing," *Review of Economics and Statistics*, May 1991, 73, 318-30.

Goto, Akria, "Statistical Evidence on the Diversification of Japanese Large Firms," *Journal of Industrial Economics*, March 1981, 29, 271-78.

Goudie, A. W., and G. Meeks, "Diversification by Merger," *Economica*, November 1982, 49, 447-59.

Gribbin, J. D., "The Conglomerate Merger," *Applied Economics*, March 1976, 8, 19-35.

Hill, Charles W. L., "Diversified Growth and Competition: The Experience of Twelve Large UK Firms," *Applied Economics*, October 1985, 17, 827-47.

Itami, Hiroyuki with Thomas W. Roehl, *Mobilizing Invisible Assets*. Cambridge: Harvard University Press, 1987.

Jensen, Michael C., "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers," *American Economic Review*, May 1986, 76, 323-29.

Jensen, Michael C., and Richard S. Ruback, "The Market for Corporate Control: Scientific Evidence," *Journal of Financial Economics*, April 1983, 11, 5-50.

Kaplan, Steven N., and Michael S. Weisbach, "The Success of Acquisitions: Evidence from Divestitures," *Journal of Finance*, March 1992, 47, 107-38.

Lang, Larry H. P., René M. Stulz, and Ralph A. Walkling, "A Test of the Free Cash

Flow Hypothesis: The Case of Bidder Returns," *Journal of Financial Economics*, October 1991, 29, 315-36.

Lecraw, Donald J., "Diversification Strategy and Performance," *Journal of Industrial Economics*, December 1984, 33, 179-98.

Lemelin, André, "Relatedness in the Patterns of Interindustry Diversification," *Review of Economics and Statistics*, November 1982, 64, 646-57.

Lewellen, Wilbur G., "A Pure Financial Rationale for the Conglomerate Merger," *Journal of Finance*, May 1971, 26, 527-37.

Lewellen, Wilbur G., Claudio Loderer, and Ahron Rosenfeld, "Merger Decisions and Executive Stock Ownership in Acquiring Firms," *Journal of Accounting and Economics*, April 1985, 7, 209-31.

Lichtenberg, Frank R., "Industrial Diversification and its Consequences for Productivity," *Journal of Economic Behavior and Organization*, August 1992, 18, 427-38.

Lippman, Steven A., and Richard P. Rumelt, "Uncertain Imitability: An Analysis of Interfirm Differences in Efficiency Under Competition," *Bell Journal of Economics*, Autumn 1982, 13, 418-38.

MacDonald, James M., "R&D and the Directions of Diversification," *Review of Economics and Statistics*, November 1985, 67, 583-90.

Marshall, William J., Jess B. Yawitz, and Edward Greenberg, "Incentives for Diversification and the Structure of the Conglomerate Firm," *Southern Economic Journal*, July 1984, 51, 1-23.

Matsusaka, John G., "Takeover Motives During the Conglomerate Merger Wave," *Rand Journal Of Economics*, forthcoming.

McGuckin, Robert H., Sang V. Nguyen, and Stephen H. Andrews, "The Relationships Among Acquiring and Acquired Firms Product Lines," *Journal of Law & Economics*, October 1991, 34, 477-502.

Montgomery, Cynthia A., "Product-Market Diversification and Market Power," *Academy of Management Journal*, December 1985, 28, 789-98.

Montgomery, Cynthia A., and S. Hariharan, "Diversified Expansion in Large Established Firms," *Journal of Economic Behavior and Organization*, January 1991, 15, 71-89.

Montgomery, Cynthia A., and Dianna Magnani, "ISS-International Service System A/S." Boston: Harvard Business School Publishing, 1991.

Montgomery, Cynthia A., and Birger Wernerfelt, "Diversification, Ricardian Rents,

and Tobin's q ," *RAND Journal of Economics*, Winter 1988, 19, 623–32.

Montgomery, Cynthia A., and Birger Wernerfelt, "Risk Reduction and Umbrella Branding," *Journal of Business*, January 1992, 65, 31–50.

Morck, Randall, Andrei Shleifer, and Robert W. Vishny, "Management Ownership and Market Valuation: An Empirical Analysis," *Journal of Financial Economics*, January–March 1988, 20, 293–315.

Morck, Randall, Andrei Shleifer, and Robert W. Vishny, "Do Managerial Objectives Drive Bad Acquisitions?" *Journal of Finance*, March 1990, 45, 31–48.

Mueller, Dennis C., "A Theory of Conglomerate Mergers," *Quarterly Journal of Economics*, November 1969, 83, 643–59.

Mueller, Dennis C., "A Life Cycle Theory of the Firm," *Journal of Industrial Economics*, July 1972, 20, 199–219.

Mueller, Dennis C., "Mergers and Market Share," *Review of Economics and Statistics*, May 1985, 67, 259–67.

Nelson, Richard R., and Sidney G. Winter, *An Evolutionary Theory of Economic Change*. Cambridge: The Belknap Press of Harvard University Press, 1982.

Palepu, Krishna, "Diversification Strategy, Profit Performance and the Entropy Measure," *Strategic Management Journal*, July–September 1985, 6, 239–55.

Panzar, John C., and Robert D. Willig, "Economies of Scope," *American Economic Review*, May 1981, 71, 268–72.

Penrose, Edith T., *The Theory of the Growth of the Firm*: Oxford: Basil Blackwell, 1959.

Ravenscraft, David J., and F. M. Scherer, *Mergers, Sell-offs, and Economic Efficiency*. Washington, D.C.: The Brookings Institution, 1987.

Rhoades, Stephen A., "A Further Evaluation of the Effect of Diversification on Industry Profit Performance," *Review of Economics and Statistics*, November 1974, 56, 557–59.

Roll, Richard, "The Hubris Hypothesis of Corporate Takeovers," *Journal of Business*, April 1986, 59, 197–216.

Rumelt, Richard P., "Diversification Strategy and Profitability," *Strategic Management Journal*, October–December 1982, 3, 359–69.

Schmalensee, Richard, "Do Markets Differ Much?" *American Economic Review*, June 1985, 75, 341–51.

Scott, John T., "Multimarket Contact and Economic Performance," *Review of Economics and Statistics*, August 1982, 64, 368–75.

Schipper, Katherine, and Rex Thompson, "Evidence on the Capitalized Value of Merger Activity for Acquiring Firms," *Journal of Financial Economics*, April 1983, 11, 85–119.

Shleifer, Andrei, and Robert W. Vishny, "Management Entrenchment: The Case of Manager-Specific Investments," *Journal of Financial Economics*, November 1989, 25, 123–39.

Shleifer, Andrei, and Robert W. Vishny, "Takeovers in the '60s and the '80s: Evidence and Implications," *Strategic Management Journal*, Winter 1991, 12, 51–59.

Singh, Harbir, and Cynthia A. Montgomery, "Corporate Acquisition Strategies and Economic Performance," *Strategic Management Journal*, July–August 1987, 8, 377–86.

Smith, Clifford W., Jr., and René M. Stulz, "The Determinants of Firms' Hedging Policies," *Journal of Financial and Quantitative Analysis*, December 1985, 20, 391–405.

Streitwieser, Mary L., "The Extent and Nature of Establishment-Level Diversification in Sixteen U.S. Manufacturing Industries," *Journal of Law & Economics*, October 1991, 34, 503–34.

Teece, David J., "Economics of Scope and the Scope of the Enterprise," *Journal of Economic Behavior and Organization*, September 1980, 1, 223–47.

Teece, David J., "Towards an Economic Theory of the Multiproduct Firm," *Journal of Economic Behavior and Organization*, March 1982, 3, 39–63.

Utton, M. A., "Large Firm Diversification in British Manufacturing Industry," *Economic Journal*, March 1977, 87, 96–113.

Wernerfelt, Birger, "Umbrella Branding as a Signal of New Product Quality: An Example of Signalling by Posting a Bond," *RAND Journal of Economics*, Autumn 1988, 19, 458–66.

Wernerfelt, Birger, and Cynthia A. Montgomery, "Tobin's q and the Importance of Focus in Firm Performance," *American Economic Review*, March 1988, 78, 246–50.

Varadarajan, P. Rajan, and Vasudevan Ramanujam, "Diversification and Performance: A Reexamination Using a New Two-dimensional Conceptualization of Diversity in Firms," *Academy of Management Journal*, June 1987, 30, 380–93.

You, Victor L., et al., "Mergers and Bidders' Wealth: Managerial and Strategic Factors." In Thomas, L. G., ed., *The Economics of Strategic Planning*. Boston: Lexington Books, 1986, 201–20.