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CHARACTERISTICS OF MERGERS AND ACQUISITIONS BY SMALL MANUFACTURING FIRMS

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ABSTRACT

While acquisitions by large firms receive a great deal of media and researcher attention, acquisitions by small firms tend to be overlooked. This study compares a sample of M&As by small U.S. manufacturing firms that occurred between 1992 and 1999 with a sample of M&As conducted by large U.S. manufacturing firms that occurred during the same period. Characteristics examined include the type of transaction, the type of ownership of the target firm and the relationship between the target and acquirer's primary products and geographic locations. Results indicate that many small firms are active acquirers and are involved in a wide range of M&A activities that are often quite similar to that undertaken by large firms. There are, however, several important differences. Small firms are found to be more likely to purchase privately held targets and to make acquisitions of targets that were primarily involved in industries outside of manufacturing. Large acquirers are more likely to make acquisitions of partial interest in a target and to make cross-border transactions. Implications for researchers and practitioners are discussed.

INTRODUCTION

In the world of mergers and acquisitions (M&As), large firms are generally considered the hunters. Acquisitions by companies like Ford Motor Co., Dow Chemical and Exxon grab the lion's share of media attention and researcher interest. Small firms are rarely mentioned in the M&A press with the exception of being labeled as targets for large firms.

It is important to note, however, that many small firms are taking the role of acquirer in M&A transactions. One example of a small firm that has made an acquisition is injection plastics manufacturer, Compass Plastics (380 employees) of Gardena California. It purchased fellow plastics manufacturer, MOS Plastics Inc. (175 employees) of San Jose. Another example is Unifab International Inc. (414 employees) of New Iberia LA, a producer of fabricated metal for ships. It purchased Allen Tank Inc. (140 employees), also of New Iberia. Allen Tank Inc. is a producer of gas and oil field machinery.

This paper examines the types of M&A undertaken by small U.S. manufacturing firms and compares them to transactions undertaken by large U.S. manufacturing firms. This analysis highlights the M&A activity that is being conducted by small firms and provides important information that can help us better understand how small firm M&A activity compares to that undertaken by large firms. A data sample of 3,377 M&A transactions conducted by large manufacturing firms and 1,114 M&A transactions conducted by small manufacturing firms between 1992 and 1999 is examined.

Managers, policy makers and researchers should be interested in the characteristics of M&A transactions conducted by small manufacturing firms. Knowing the characteristics of small firm M&A activity will help these groups better assess the opportunities available and/or enable them to anticipate potential problems when executing/evaluating transactions. Knowledge of M&A activity by small manufacturing firms is also important to academics with an interest in small business strategy.

The first part of this paper provides a literature review of past work on M&As in large and small firms. The second part discusses the important characteristics of M&A transactions that are examined in this study. Part three outlines the methodology of this study. Part four reports the results. Finally, part five discusses the results and makes concluding comments with a special emphasis on suggestions for future research.

LITERATURE REVIEW

A great deal of scholarly research on M&A has focused on transactions undertaken by large firms and has generally found that these deals have not been beneficial to acquiring firms. Event studies, which examine the impact of an M&A announcement on the stock price of the target and acquirer have been quite common (see, for example, Elgers & Clark, 1980; Chatterjee, 1986; Singh & Montgomery, 1987; Morck, Shleifer & Vishny, 1990; Lubatkin, Srinivasan & Merchant, 1997; Jarrell & Poulsen, 1989)[1]. These studies have tended to conclude that, while stockholders of firms being acquired usually benefit, shareholders of acquiring firms often lose wealth. Studies of the long-term impact of M&As on acquirer financial performance have also found that acquiring firms do not typically benefit from M&As (Sirower, 1997; Hayward & Hambrick, 1997; Fowler & Schmidt, 1988).

Studies have also examined the impact of M&As by large firms on other organizational characteristics. M&As, for example, have been found to have a negative impact on the amount of R&D activity undertaken by the combined firm (Hitt, Hoskisson, Ireland, & Harrison, 1991). Research has also found that layoff announcements regularly accompany, or shortly follow, announcements of large M&As and tend to be more common when the combining firms are in the same or closely related lines of business (O'Shaughnessy & Flanagan, 1998). Additionally, research has found that target company top management turnover is higher than "normal" following an M&A (Walsh, 1988) and leads to lower performance for the combined firm (Cannella & Hambrick, 1993). Overall, research on M&As by large firms suggests that picking the right target, negotiating a price that does not consume all possible benefits, and properly combining the activities of the target and acquirer are all crucial, yet very difficult tasks.

While the scholarly studies listed above, and many more, have examined M&As by large companies, very few have focused on M&A activity by small firms. Characteristics of smaller company leveraged buyouts have been analyzed (Malone, 1989) and one article discussed implementation issues for small firms making acquisitions (Odell, 1977).

[1] Most of these studies did not explicitly state the size of the acquiring firms in their samples. Given, however, the data sources used and the size of the targets it is reasonable to assume that the samples used in these studies contained all or mostly acquisitions by large firms.

Publications in the popular press also tend to focus on acquisitions by large firms. A wide variety of books are available that give insights into the M&A process (see, for example, Marren, 1993; Gaughan, 1999; Galpin & Herndon, 2000; Morris, 1995; Clemente & Greenspan, 1998; Hooke, 1996; Reed & Lajoux, 1998). Even books that specifically mention small firms tend to cast them in the role of target rather than that of acquirer and/or do not provide specific characteristics of the types of transactions undertaken by small firms (see, for example, West & Jones, 1997; Sherman, 1998).

In sum, considerable energy has been devoted to understanding M&A activity by large firms. In contrast, virtually no research has focused on M&A activity by small firms. This is an important omission for research to address given the unique issues faced by small firms and the major impact that an M&A can have on an organization.

CHARACTERISTICS OF M&A TRANSACTIONS EXAMINED IN THIS STUDY

When studying M&A activity, researchers have been interested in a variety of transaction characteristics that can influence the acquisition process and/or its outcome. In this section we discuss several major characteristics of M&As. These are 1) the form of the transactions, 2) the public status of the target firms, and 3) the relationships between the primary products and primary geographic locations of the acquiring and target firms.

Form of Transaction

M&A transactions fall into three basic categories 1) asset acquisitions, 2) stock acquisitions, and 3) mergers. Each of these transactions has different consequences with respect to legal obligations, acquisition procedures, and tax liabilities. Exact M&A procedures depend on the incorporation laws of the states involved in the transaction as well as the individual corporate charters of the target and acquirer. Knowledge of the types of transactions that are undertaken by small firms gives practitioners and researchers a better idea of what to be prepared for when contemplating or analyzing an M&A. While we provide a general overview, interested readers are encouraged to see sources such as Marren (1993) or Morris (1995) for a more complete discussion.

In an asset acquisition an acquiring company purchases part or all of the assets of the target. The target remains legally in existence after the transaction, although it may be liquidated after a major asset sale to return money to the shareholders. The management of both the target and the acquiring firm normally execute the transaction. If the transaction is particularly large, it may have to be approved by the target and/or acquirer's board of directors or stockholders.

Asset acquisitions offer several advantages for acquiring firms. For instance, the acquiring company purchases only the assets it desires and does not have to take on all of the target's liabilities (there are some exceptions for liabilities like environmental clean up). An asset acquisition can also give the acquirer the opportunity to step up the value of acquired assets that have a depreciation basis that is lower than their true market value.

Asset acquisitions are not, however, always optimal for the acquiring firm. Since the seller retains any liabilities not specifically assumed by the buyer and because the seller in an asset transaction often incurs a large tax liability, the seller may demand a high purchase price or more restrictive sales terms. In addition, the acquiring firm may have difficulty maintaining the seller's customers or suppliers if contracts are invalidated by an asset sale (Fouts, 1997).

An alternative to an asset acquisition is a stock acquisition. In a stock acquisition, the acquiring company buys ownership shares in the target company. If the stock is privately held, the acquirer can deal with the stockholders individually. If the target is a wholly owned subsidiary of another company, the management of the acquiring firm and the target's parent conduct the transaction. If the stock of the target is publicly held, the acquiring firm may have to deal with a large group of disorganized shareholders. In these instances, a tender offer can be announced for the shares outstanding. While a tender offer is a transaction that is conducted between the acquiring firm and the target firm's shareholders, the acquiring firm normally negotiates the transaction with the target's board of directors and managers. Stock acquisitions can also be used to take a partial stake in a company. A company may purchase a minority or a majority of a target's stock. In some cases, acquirers start out purchasing a stake in a company and later acquire the remaining shares to take full ownership.

An advantage of stock acquisitions is that they tend to be easy to execute and can be accomplished quickly. The transaction involves an exchange of stock certificates for payment. Another advantage is that stock purchases can help shareholders of the acquired firm avoid the double taxation that is possible with an asset purchase (Morris, 1995).

Stock deals are not without drawbacks. One problem with stock deals is that the acquiring company assumes all liabilities of the target. Another problem is that it assumes the target's assets at their old, often undervalued, depreciation basis. Thus, it cannot step up the depreciation basis of old assets to reflect market conditions and hence reduce future tax liability. Additionally, with partial stake purchases, the acquirer has to contend with the problems faced with being a minority shareholder or, in cases where a majority of a target's shares are purchased, having to deal with a minority shareholder. Minority shareholders can often suffer from the "tyranny of the majority." The majority shareholder may pass policies through the board that are detrimental to minority shareholders (Newton, 1994; Feinberg, 2000). An example would be approval of a management fee paid to a company owned by the majority shareholders (Feinberg, 2000). On the other hand, minority shareholders, while unable to control the company, can cause majority shareholders a great deal of time, grief and money (How to protect against misuse of business ownership, 2001).

While the terms 100% stock acquisition and merger are often used synonymously, there are important differences. In a one hundred percent stock acquisition, the target company can remain intact as a wholly owned subsidiary of the acquiring firm. In a merger transaction, not only is 100% of a target's stock acquired, additionally, the target company is completely dissolved into the acquiring company. The target company ceases to exist as a separate legal entity. The procedures for executing a merger transaction tend to be fairly straightforward and are structurally similar to a stock purchase (see Morris, 1995; Marren, 1993). Mergers often require the approval of both the acquiring and target firms' shareholders. Whether a transaction is structured as a merger or a 100% stock acquisition can have important implications on factors such as tax treatment and the integration of the organizational cultures (Sherman, 1998).

Public Status of the Target

The public status of the target can have a large impact on an M&A transaction. The Securities and Exchange Commission imposes very high reporting requirements on publicly held companies (Goodman & Scanlon, 2001). The higher reporting standards for publicly held firms can lead to a greater amount of information for the acquirer for doing due diligence and negotiating an offer price. The stock price of a publicly traded target can also provide a benchmark for an acquirer making a valuation. Privately held companies are more difficult to value since there is no active market for their shares.

Targets in an acquisition may also be government owned, a subsidiary of a public or private parent company, or a joint venture of two or more companies. Purchases of government owned targets normally entail a careful bidding process (Brown & Ridley, 1994). Companies wishing to purchase a subsidiary of a company will typically have to negotiate with the managers of the parent firm. If the target is a joint venture, the acquiring company will have to deal with two or more parent firms.

Industry and Geographic Relationship Between the Target and Acquirer

The relationship between the industries of firms involved is also an important characteristic of an M&A. The rationale often cited for M&As is the realization of synergies (Singh & Montgomery, 1987; Lubatkin & Lane, 1996; Porter, 1987). Synergies occur when two activities are combined in such a way that they are worth more together than the sum of their values when they are kept apart. For instance, the combination of two cement firms might lead to synergies through things like the elimination of redundant activities, increases in batch size that bring about scale economies or pricing power due to the consolidation of previously competing firms. Combinations of firms in similar lines of business tend to be identified as those with the greatest potential for synergy.

Finally, M&As can be characterized by the geographic relationship between the combining companies' primary areas of operation. Firms that primarily operate in the same area may find it easier to implement mergers and take advantage of geographic proximity. These firms may be able to build market power in a certain area or find it easier to communicate and/or transport materials between the acquiring and target firm. Managers acquiring a company that is in close proximity may also be in a better position to truly understand the target's market and the potential of the deal. In contrast, managers that acquire firms located in different areas may not only have to overcome geographic distance when communicating or transporting materials but may also have to deal with a variety of unfamiliar laws regarding combinations. A U.S. manufacturing firm purchasing a target outside of the U.S. (a cross-border combination) can be particularly difficult due to geographic distance, regulatory environments, and differences in national cultures.

METHODOLOGY

Data for this study were drawn from Security Data Company's (SDC's) Worldwide M&A database, the most comprehensive M&A database available. SDC builds this database by scanning sources such as the Business Wire, Reuters, Dow Jones News Retrieval Service, company news releases, and the *Wall Street Journal* for M&A announcements. We examined completed M&A transactions that were announced between January of 1992 and December of 1999. We chose 1992 as our initial year because that was the year that SDC changed its inclusion criteria to cover all announced M&A transactions rather than using a lower bound size limit. We retrieved 4,491 transactions that had all the necessary information where the acquiring firm's primary business was manufacturing (Primary Standard Industrial Classification (SIC) codes from 2000 through 3999).

Manufacturing firms were chosen for this study for three reasons. First, the Small Business Administration provides a clear lower bound criterion for what it considers a small manufacturing firm (500 employees or less). This criterion has been used in past research on small manufacturing firms (Flanagan & Deshpande, 1996; Deshpande & Golhar, 1994; Cole & Wolken, 1995). Second, M&As in disparate industries may be driven by specific factors (Mitchell & Mulherin, 1996). Thus, it may be problematic to aggregate M&As across all industries. Third, despite growth in non-manufacturing occupations in the U.S., the manufacturing sector remains an important part of the country's economy that warrants attention (Panchak, 1999; Delano, 2000). Increases in productivity are fueling consistent increases in total output of the U.S. manufacturing sector (*Economic Report of the President*, 2000). The activities of small manufacturing firms continue to be of interest to researchers (Beal, 2000; Pelham, 2000).

We divided our sample of 4,491 M&As into sub-samples of 1,114 transactions by small acquirers and 3,377 transactions by large acquirers using the 500 employee cut-off point. Table 1 provides a more precise breakdown of our data sample by acquirer size.

Table 1 - Size Distribution of Sample Of M&A Transactions by Large and Small Manufacturing Firms

Acquirer Number of Employees	Number of Observations
1-100	383
101-200	245
201-300	224
301-400	153
401-500	109
501-600	108
601-700	68
701-800	52
801-900	70
901-1000	75
Above 1000	3004
Total	4491

Information on the form of the transaction, the public status of the target, the primary location (state and country) and the primary SIC code of the target and acquirer were drawn from the SDC database. In a single business firm, the primary SIC code represents the only product or service sold by the company. For a multi-business firm, the primary SIC code represents the product line that a firm reports as its largest. Primary SIC codes have been used in past research to classify M&As (Flanagan, D'Mello & O'Shaughnessy, 1998; Haunschild, 1994; Maquieira, Megginson & Nail, 1998). Firms operating in the same primary 4 digit SIC codes are those identified as being the most similar in terms of products/services. Firms that do not share the same four-digit primary SIC but do share the same SIC code at the three or two-digit level are classified as less similar. For a complete description of the SIC code classification system, see the *Standard Industrial Classification Manual* (1987).

We examined how similar the target and acquirer tend to be in M&A's by large and small firms by analyzing the relationships between the combining firms' primary lines of business. For instance, we examined whether large and small firms tend to purchase targets primarily operating in businesses that are the same, similar to or unrelated to their (the acquiring firm's) primary line of business. Additionally, in order to examine the specific lines of businesses that large and small manufacturing firms are targeting through acquisitions, we examine the primary industry of the target firms (agriculture vs. construction, for example). This provides more detailed information on the typical targets of large and small acquirers.

RESULTS

Form of Transaction

The SDC database allows us to identify M&A transactions as 1) asset acquisitions [of certain assets of the firm or of all assets]; 2) stock acquisitions [for partial, majority or remaining interest in a target]; 3) mergers or 100% stock acquisitions. Our sample's breakdown into these categories is presented in Table 2.

Table 2 - Form of M&A Transactions by Large and Small Manufacturing Firms

Form of Transaction	M&A activity by small firms # of transactions (% by small firms)	M&A activity by large firms # of transactions (% by large firms)	Chi Square for Difference in Percent
Acquisitions of Certain Assets	18 (1.62%)	41 (1.21%)	1.04
Acquisitions of Assets	706 (63.38%)	2135 (63.22%)	.01
Acquisitions of Majority Stock Interest	40 (3.59%)	158 (4.68%)	2.35
Acquisitions of Partial Stock Interest	58 (5.21%)	366 (10.84%)	31.07***
Acquisitions of Remaining Stock Interest	15 (1.35%)	91 (2.69%)	6.61**
Mergers or 100% Stock Acquisitions	277 (24.87%)	586 (17.35%)	30.46***
Total Number of M&A Transactions	1114	3377	

** $p < .01$. *** $p < .001$

The data suggest that small firms, like large ones, are involved in many different forms of M&A activity. Asset acquisitions are the most prevalent transactions in our sample for both large and small firms. Asset acquisitions make up 63.38% of the transactions made by small firms and 63.22% of the transactions made by large firms. While mergers or 100% stock acquisitions are the second most common transaction form for both large and small firms, the proportion of small firms that made these transactions is significantly greater than the proportion of large firms that made these types of transactions (24.87% vs. 17.35% respectively, these percentages are significantly different at $p<.001$). Conversely, while acquisitions of partial interest are the third most prevalent transactions for both large and small firms, the percentage of these transactions in the large firm sub-sample (10.84%) was significantly greater than the percentage in the small firm sample (5.21%). These percentages are significantly different at $p<.001$. While acquisitions of remaining interest are infrequent for both large and small firms, they were a significantly higher percentage of the large firm transactions (1.35% vs. 2.69%, these percentages are significantly different at $p<.01$).

The percentage of transactions by large firms that are acquisitions of certain assets in a target (1.21%) is not statistically different than the corresponding percentage for small acquirers (1.62%). Likewise, the percentage of transactions by large firms that were acquisitions of majority stock interest in a target (4.68%) is not statistically different than the corresponding percentage for small acquirers (3.59%).

Public Status of the Target

Privately held firms are the most common targets for both large and small acquirers (see Table 3). They are, however, even more prevalent targets for small firms. Privately held targets make up a significantly greater percentage of the transactions conducted by small firms than they did for large firms. Small firms in our sample acquire privately held targets 63.64% of the time while large firms acquire privately held firms 48.39% of the time (these percentages are significantly different at $p<.001$).

Table 3 - Public Status of Target in M&A Transactions by Large and Small Manufacturing Firms

Status	**M&A activity by small firms** # of transactions (% by small firms)	**M&A activity by large firms** # of transactions (% by large firms)	**Chi Square for** Difference in Percent
Publicly Held	69 (6.19%)	480 (14.21%)	50.21***
Privately Held	709 (63.64%)	1634 (48.39%)	78.16***
Joint Venture	5 (.45%)	67 (1.98%)	12.52***
Government Organization	1 (.09%)	11 (.33%)	1.75
Subsidiary	330 (29.62%)	1183 (35.03%)	10.97***
Total # M&A Transactions	1114	3377	

***$p < .001$

Subsidiaries of other companies are the next most common targets for both large and small firms but, overall, are more common targets for large firms. Thirty five percent of the transactions conducted by large firms involve targets that were subsidiaries of other companies while 29.62% of the acquisitions made by small firms were of subsidiaries of other companies (these percentages are significantly different at $p<.001$).

Publicly held companies are the third most prevalent targets for both large and small acquirers but are more common targets for large firms. The large firms in our sample acquired publicly held firms 14.21% of the time while small firms acquired publicly held firms 6.19% of the time (these percentages are significantly different at $p<.01$).

Joint ventures and government organizations are infrequent targets for both large and small acquirers. Only .45% of the acquisitions made by small firms are of targets that were joint ventures. The percentage of large acquirer targets that were joint ventures (1.98%) is still fairly small but significantly larger than the figure for small acquirers (the percentages are significantly different at $p<.001$). Only 1 (.09%) of the transactions made by small firms is for a government target while only 11 (.33%) of the transactions made by large firms involve government owned targets (these percentages are not significantly different).

Industry and Geographic Relationship Between the Target and Acquirer

Looking at the primary relationship between target and acquirer in M&As conducted by manufacturing firms (Table 4), small firms are more likely to make transactions involving targets that have their primary area of operation *outside* of manufacturing. Over 38% of the transactions made by small acquirers involve targets whose primary SIC code is not in manufacturing whereas only 27.84% of the large firms purchased targets outside of manufacturing (these percentages are significantly different at $p<.001$).

Table 4: Primary Product Relationship between Target and Acquirer in Acquisitions by Large and Small Firms

Primary Product Relationship	**M&A activity by small firms** # of transactions (% by small firms)	**M&A activity by large firms** # of transactions (% by large firms)	**Chi Square for** Difference in Percent
Target and Acquirer's primary areas of operations are the same (same 4 digit primary SIC codes)	289 (25.94%)	798 (23.63%)	2.44
Target and Acquirer's primary areas of operations are similar but not the same (same 3 digit primary SIC codes but different four digit codes)	107 (9.61%)	289 (8.56%)	1.14
Targets primary area of operation is not in the same or similar categories but is in Manufacturing (between SICs1999 and 4000)	293 (26.30%)	1350 (39.98%)	67.52***
Target's primary area of operation is not in manufacturing.	425 (38.15%)	940 (27.84%)	42.13***
Total Number of M&A Transactions	1114	3377	

***$p < .001$

This is not to say, that large firms do not use M&As to diversify their operations. Large firms do make more purchases than small firms in manufacturing, but not in the acquiring firm's industry group (both target and acquirer had SIC codes between 2000 and 4000, but their 3 digit SIC codes are different). Over 39% of the acquisitions made by large firms involve manufacturing targets that do not share the acquirers three digit SIC code while only 26.30%

of small firms' acquisitions are firms that do not share the same 3 digit SIC code (these percentages are significantly different at $p<.001$). There is no difference in the percentage of targets in the same four digit or same three digit SIC code for small vs. large acquirers.

The data in Table 5 provides more detail on the target industries of M&As by large and small manufacturing firms. Both large and small manufacturing firms execute transactions involving targets in a variety of industries but there are some differences in the primary industries of their targets. In accordance with the information displayed in Table 4, large manufacturing firms are more likely than small manufacturing firms to make transactions involving targets that are also in manufacturing. Over seventy-two percent of the transactions made by large firms involved manufacturing targets while only 61.85% of the targets of small manufacturing firms are also in manufacturing (these percentages are significantly different at $p<.001$). Small firms make up for their smaller proportion of acquisitions in manufacturing by purchasing relatively more service sector targets. The percentage of acquisitions of firms primarily in the service sector by small firms (24.24%) is significantly greater than the percentage of such transactions undertaken by large acquirers (13.90%). These percentages are significantly different at $p<.001$. Mining is not a terribly common target industry for large or small firms but the percentage of large acquirers that purchased mining firms (1.42%) is significantly larger than the percentage of small firms that purchased mining firms (.27%). These percentages are significantly different at $p<.001$.

Table 5 - Primary Industry of Target firm in M&A Transactions by Large and Small Manufacturing Firms

Primary Industry	**M&A activity by small firms** # of transactions (% by small firms)	**M&A activity by large firms** # of transactions (% by large firms)	**Chi Square for** Difference in Percent
Agriculture	1 (.09%)	17 (.50%)	3.59
Mining	3 (.27%)	48 (1.42%)	9.90**
Construction	11 .99%	31 (.92%)	.04
Manufacturing	689 (61.85%)	2437 (72.16%)	42.13***
Transportation, communications, electric, gas and sanitary services	26 (2.33%)	90 (2.67%)	.37
Wholesale and retail trade	98 (8.80%)	257 (7.61%)	1.62
Finance Insurance and Real Estate	16 (1.44%)	30 (.89%)	2.48
Services	270 (24.24%)	468 (13.90%)	68.88***
Total Number of M&A Transactions	1114	3371	

$^{**}p<.01$. $^{***}p<.001$

The percentages of transactions by large firms that involved targets in: agriculture; construction; transportation, communications, electric, gas and sanitary services; wholesale and retail trade; and finance, insurance and real estate are not statistically different than the corresponding percentages for small acquirers.

With regard to geographic location, small firms tend to acquire targets primarily located in their home state more often than large acquirers do (see Table 6). Over 24% of the acquisitions made by small firms involve targets that had the same home state as the acquiring firm while, for large firms, target and acquirer share the same state for their primary operations only 12.91% of the time (these percentages are significantly different at $p<.001$). Larger firms are more likely than small firms to make acquisitions outside of the United States (cross-border transactions). Cross-border transactions make up 29.79% of the M&As conducted by large firms but only 15.44% percent of the M&As conducted by small firms (these percentages are significantly different at $p<.001$). The percentage of transactions by large firms that are acquisitions of U.S. targets that had their primary operations in different states than the acquiring firm (57.30%) is not statistically different than the corresponding percentage for small acquirers (59.96%).

Table 6 - Geographic Relationship between Target and Acquirer in Acquisitions by Large and Small Manufacturing Firms

Geographic Relationship	**M&A activity by small firms** # of transactions (% by small firms)	**M&A activity by large firms** # of transactions (% by large firms)	**Chi Square** for Difference in Percent
Target and Acquirer's Primary Area of Operations are in the Same State	274 (24.60%)	436 (12.91%)	85.93***
Target and Acquirer's Primary Area of Operations are both in the U.S. but in different States	668 (59.96%)	1935 (57.30%)	2.44
Target is not headquartered in the United States	172 (15.44%)	1006 (29.79%)	89.14**
Total Number of M&A Transactions	1114	3377	

$^{***}p < .001$

DISCUSSION/CONCLUSIONS

Results of this study show that many small firms are indeed active acquirers, involved in a wide range of M&A activity. Small firm activity includes asset purchases, mergers and partial interest stock transactions. Small firms also purchase targets that have varying public status. Private companies, publicly held companies and subsidiaries of other companies are all prevalent targets for small as well as large firms. Joint ventures and government organizations are much less frequently acquisition targets for both large and small acquirers. Like large firms, small manufacturing firms make purchases of companies in a variety of industries as well as make purchases of companies outside of the acquiring firm's primary state of operations or even outside of the United States.

M&A activity by small U.S. manufacturing firms bears many similarities to activity by large U.S. manufacturing firms. No differences are found between large and small acquirer acquisition activity in the percentages of transactions that are asset acquisitions, acquisitions for a majority stock interest in a target, or for targets that are government organizations. M&A's by small firm are found to be just as likely as those undertaken by large firms to involve combinations of firms that operate primarily in the same or very similar industries. Small firm activity is just as likely as large firm activity to involve targets in: agriculture; construction; transportation, communications, electric gas and sanitary services; wholesale and retail trade; and finance, insurance and real estate. Finally, small acquirers' transactions are just as likely as large acquirers transactions to involve targets that operate in the United States, but outside the primary state of business of the acquiring firm.

This study does, however, reveal important differences between M&A activity by small, as compared to large manufacturing firms. A greater percentage of M&As by small firms are found to be Mergers or 100% stock acquisitions. Small firm transactions are less likely to involve acquisitions of partial or remaining interest in a target. Thus, small firms are less likely than large firms to be involved in transactions that result in shared ownership of the target. This can have benefits and drawbacks for small firms. The primary benefit is that small firms making 100% stock acquisitions or mergers will not have to deal with potential conflicts with a co-owner. The drawbacks include that the small firms making such transactions will have higher capital outlays and may lose profit sharing motivation on the part of the owner(s) of the target firm if the previous owner(s) are kept on as employees.

Privately held firms tend to be more common targets for small acquirers than for large acquirers. Therefore, small firms will tend to be more likely to encounter problems obtaining information and determining offering prices on targets. Various valuation methods such as comparable worth, asset evaluation or discounted cash flow can be used to determine an appropriate purchase price for a privately held target (see sources such as Sherman (1998) or Clemente and Greenspan (1998) for additional information on valuation methods). Small firm managers may also want to employ the services of a professional business appraiser to provide input on valuing a target. West and Jones (1997) provide a discussion on the roles of outside professionals when conducting an M&A.

Interestingly, small manufacturing firms, as opposed to large firms, are found to be more likely to purchase targets with primary areas of business outside of manufacturing. This is surprising since one would reasonably expect that larger firms would be more diversified and thus more likely to purchase firms outside of their primary manufacturing areas. Acquisitions of firms in the service sector are particularly prevalent targets for small manufacturing firms. It may be that owners of small firms use M&As as a way to diversify their personal asset base. That is, they diversify the firm's portfolio of businesses in order to diversify their personal wealth. On the other hand, small firms may also see opportunities for synergies between their traditional manufacturing businesses and service businesses that large firms overlook. Large firms may become rigid and bureaucratic and therefore unable to see creative opportunities for synergy. Future research that explores the motivations for M&As by small firms would be useful.

Small firms tend to purchase targets that are geographically closer to their primary area of operation than larger firms do. This may be because the larger companies have a variety of locations before the acquisitions in question, resulting in the new acquisition being close to some part of the acquirer's operations but not necessarily the acquirer's primary place of business. It may also be that the large acquirers have already exhausted opportunities for expansion within their home state/country and are now looking other places for growth through acquisition. Another possible reason for this difference is that the resources needed to execute and manage an M&A across states and across country borders may be so large that these transactions tend to be undertaken by larger firms. Policy makers should be particularly interested in the large number of small acquisitions that occur between firms that primarily operate in the same state. If these firms are in fragmented industries, such as concrete or printing services, they may be able to develop a large amount of monopoly pricing power in a concentrated geographic region. Small firms may view these types of combinations as an opportunity if they are able to avoid antitrust scrutiny.

While the SDC database certainly provides a large sample of acquisitions by small firms for analysis and research, future studies may benefit from also using other sources to obtain information on the M&A activity of small firms. This study examines only a sample of M&A activity by large and small firms rather than an exhaustive list of all transactions that have been conducted. While it is the most comprehensive database available, the SDC merger database is based on merger announcements in public sources. Many transactions, especially those in small and/or privately held firms might never be publicly announced. Sherman (1998) estimates that 60% of completed M&A transactions are never announced. Thus, an even more complete view of M&A activity by small firms may be developed through the use of multiple data sources

Research on M&A activity in small firms may provide a variety of insights that can help us explain and understand M&A activity in general. While large firms do tend to have more secondary financial information available for study, top managers of large firms are often very inaccessible to scholars. Researchers have, however, had success in surveying CEOs of small firms (see, for example, Flanagan & Deshpande, 1996; Thong, 1999; Kathawala, Judd, Monipallil, & Weinrich, 1989; Silverman & Castaldi, 1992). Since M&A decisions tend to be made at the highest managerial levels of an organization, access to small firms' CEOs may be a crucial source of information on M&A motivation and success factors. Additionally, isolating the impact of an M&A or determining a target's relationship with an acquirer can be very difficult in a large, diverse, firm. Since small firms tend to be less complex than large firms, they may provided a useful laboratory for answering important questions about M&As, such as the role of synergy or market governance.

In summary, this study's examination of the characteristics of M&As by small firms reveals that small firms are actively engaged in a broad range of M&A activity. This is noteworthy because past research has focused almost exclusively on the M&A activities of large firms. Researchers are advised that small firm M&A activity is an important area for future research. The implication for small businesses is that M&As should not be viewed as a strategy reserved for large firms. Small firm managers are, however, advised to proceed cautiously with any M&A plans. As discussed earlier, research on large firm M&A's indicates that, while they are popular, M&A transactions are not always beneficial to acquiring firm.

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