VALUE CREATION AND DESTRUCTION IN CROSS-BORDER ACQUISITIONS: AN EMPIRICAL ANALYSIS OF FOREIGN ACQUISITIONS OF U.S. FIRMS

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We conduct an investigation of the sources of gains and losses in cross-border acquisitions in light of different motives for undertaking these transactions: synergy-seeking, managerialism and hubris. We find that the data are consistent with the expectation that multiple sources of value creation exist in synergistic cross-border acquisitions: asset sharing, reverse internalization of valuable intangible assets, and financial diversification. Gains accrue to bidder firm shareholders only for the least fungible of these sources of gains, i.e., reverse internalization. For value-destroying acquisitions that are expected to be driven by managerialism, we find that the data are consistent with only one of the sources of value destruction that we examine, i.e., risk reduction. In these acquisitions, the evidence also suggests that the relative size of the target to the bidder mitigates the negative effects of risk reduction. Our results underscore the importance of considering the implications of alternative behavioral assumptions in empirical strategy content research.

INTRODUCTION

The last decade has witnessed a surge of takeover activity by foreign firms of U.S. corporations. For example, W. T. Grimm’s 2000 Mergerstat Review reports that the number of these acquisitions (for brevity, we refer to these as cross-border acquisitions1) increased from 197 to 959 in the 15-year period between 1985 and 1999, and their value increased from $10.9 billion to $272.1 billion. Cross-border acquisitions accounted for 6 percent of takeover activity in the United States in 1985; by 1999, this share rose to 19 per cent.

In light of the burgeoning importance of the phenomenon, recent research in the strategy, international business, and finance fields has attempted to describe and explain various aspects of this activity. The research indicates that the average cross-border acquisition reflects an increase of about 7.5 percent in the value of the combined firms relative to their preacquisition value (see Eun, Kolodny, and Scheraga, 1996; Seth, Song, and Pettit, 2000). However, there is limited evidence on why these value increases characterize cross-border acquisitions, i.e., what sources of economic value underlie these transactions. Clearly, addressing these questions would entail a consideration of not only how and why acquisitions (in general) create value but also the unique characteristics

Key words: international acquisitions; cross-border acquisitions; value creation; value destruction; managerial motives.

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† Kean Song, our coauthor and friend, passed away at the age of 42 before this article was accepted for publication. Kean devoted enormous attention and ambition to his students at Prairie View A&M University. His energy and devotion will long be remembered by those exposed to his talents.

1 Cross-border acquisitions, in general, include all acquisitions of firms across two national boundaries. We use this term here to refer specifically to those cross-border acquisitions that involve foreign acquirers and U.S. targets.

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of cross-border acquisitions. In addition, there are significant complexities associated with the empirical examination of explanations for cross-border takeover activity.

In previous research, one common empirical approach involves estimating the excess returns that accrue to U.S. targets of cross-border acquisitions, or to the foreign bidders, and examining whether these returns are systematically associated with factors representing different theories of FDI. For example, Harris and Ravenscraft (1991) found that gains to targets in cross-border acquisitions are systematically associated with exchange rate effects, but not with marketing, R&D intensity or tax regime effects. Cebenoyan, Papaioannou, and Travlos (1992) found some evidence for exchange rates, tax regimes and high technology to explain target gains, but concluded that the intensity of foreign acquisition activity in the target’s industry is the most important explanation of the difference in wealth gains between foreign and domestic takeovers of U.S. firms. In their investigation of gains to foreign bidders, Cakici, Hessel, and Tandon (1996) found significant effects for a country factor. Other factors such as exchange rate effects, R&D intensity, and tax effects did not appear to be associated with bidder returns. However, as Cakici, Hessel, and Tandon indicated, this evidence is merely suggestive: to understand the sources of gains in cross-border acquisitions, it is necessary to examine the total wealth gains in these acquisitions, i.e., the combined gains to matched pairs of targets and acquirers (e.g., Bradley, Desai, and Kim, 1988; Seth, 1990b).

Following this approach, Eun et al. (1996) examined the association between variables that proxy for different sources of gains with the total gains to the combined firm. Contrary to their expectations, there was no effect for variables capturing relatedness, exchange rates, tax regimes, and prior experience of the acquirer in the United States. Although they characterized their overall findings as ‘limited,’ Eun et al. did find some evidence to suggest that ‘reverse internalization’ is an important source of synergy for their sample of cross-border acquisitions.

We note that the Eun et al. (1996) methodology contains the implicit assumption that the synergy hypothesis characterizes all acquisitions in the sample: managers are assumed to make decisions with the objective of building the economic value of the firm and to have the cognitive capability to create economic value. However, Seth et al. (2000) (henceforth referred to as SSP) explicitly consider whether or not this assumption is in fact supported by the empirical evidence. Specifically, SSP (2000) examine the extent to which cross-border acquisitions are characterized by the synergy hypothesis vs. the managerialism hypothesis and the hubris hypothesis. The managerialism motive suggests that managers of acquiring firms embark on acquisitions to maximize their own utility at the expense of the shareholders of the firm. The hubris hypothesis suggests that bidding firm managers make mistakes in evaluating target firms, but undertake acquisitions presuming that their valuations are correct. SSP (2000) find that the synergy hypothesis is the primary explanation for value-increasing acquisitions, although the hubris hypothesis appears to coexist with the synergy for this sample. Value-reducing acquisitions appear to be primarily driven by managerialism rather than hubris.

In light of the above, the motivation for this study is as follows. We conjecture that the assumption that the synergy hypothesis homogeneously characterizes all acquisitions in the sample may underlie the weak and mixed results of previous studies on the sources of gains in cross-border acquisitions. As Hatten and Schendel (1977) and Bass, Cattin, and Wittink (1978) point out, cross-sectional regression methodology assumes that the relationships of interest are homogeneous across all firms in the sample. However, if there are a variety of behavioral motives that underlie cross-border acquisition activity, this assumption is likely to be violated, and the empirical results from a regression analysis become difficult to interpret. For example, internalization in the presence of market frictions is an important theoretical explanation of synergistic gains in cross-border acquisitions (but one that has received surprisingly little empirical support). If an empirical test of this hypothesis is conducted by regressing a proxy for internalization on total gains for the full sample, it may well be that no systematic pattern is revealed if in fact a significant proportion of the sample is characterized by value destruction rather than value creation.

\footnote{The ‘managerialism’ motive originally described by Marris (1964) is called the ‘conflict-of-interest’ hypothesis by Seyhun (1990) and the ‘agency hypothesis’ by Berkovich and Narayanan (1993).}
This paper describes our investigation of the sources of gains in cross-border acquisitions wherein we consider different underlying behavioral assumptions regarding decision-making. Specifically, in light of the results reported by SSP (2000), we distinguish empirically among cross-border acquisitions that are likely to be characterized by the synergy hypothesis, the managerialism hypothesis, and the hubris hypothesis. For each of these types of acquisitions, we examine the relative importance of different sources of value creation and sources of value destruction. The specific research questions that we investigate are:

1. What is the role of various sources of economic gains in explaining value creation in synergistic cross-border acquisitions?
2. What is the role of various sources of economic losses in explaining value destruction in cross-border acquisitions that are driven by managerialism?
3. What is the relationship between returns to bidding firms and the various sources of economic gains/losses?

To answer these questions, our study examines a sample of 100 acquisitions by foreign firms of U.S. corporations that took place over the 10-year period between 1981 and 1990. In the next section of the paper, we describe the theoretical background of the study, explain the sources of gains and losses in cross-border acquisitions, and present testable hypotheses. The following sections contain our sample and methodology, and our results. The final section presents our conclusions, and suggestions for additional research.

RESEARCH BACKGROUND AND HYPOTHESES

In outlining our research perspective, the first question that we need to address is: are there indeed characteristic features that distinguish cross-border acquisitions from U.S. domestic acquisitions? Summary statistics of the extent of value creation in cross-border acquisitions vs. U.S. acquisitions reveal some striking similarities. For example, SSP (2000) report an average level of value creation of 7.5 percent for their sample of cross-border acquisitions, equivalent to the estimate (7.4%) in Bradley et al. (1988) for a similar event period but lower than the estimate of 10.7 percent reported in Seth (1990a) for a longer event period. The proportion of firms with positive total gains in the SSP (2000) sample (74%) is similar to those reported by Berkovitch and Narayanan (1993) (76%) and Bradley et al. (1988) (75%). Finally, SSP’s findings that the synergy hypothesis explains gains in the majority of cross-border acquisitions and that cross-border acquisitions characterized by value destruction appear to be driven by managerialism rather than by hubris are very similar to those reported by Berkovitch and Narayanan (1993) for domestic acquisitions.

However, these results need not imply that exactly the same set of underlying sources of value creation or destruction underlies domestic and cross-border acquisitions.3 In fact, the existing empirical research suggests that cross-border acquisitions possess some unique characteristics when compared with domestic acquisitions. For example, Shaked, Michel, and McClain (1991) and Harris and Ravenscraft (1991) find that targets receive higher returns from foreign merger announcements than domestic merger announcements. They conjecture that their results could be driven either by foreign acquirers being more susceptible to overpayment for targets than domestic acquirers or by the advantages of expansion into the U.S. market. As another example, the existing empirical evidence indicates that risk reduction may well be a source of value in international acquisitions (discussed more fully below) but not domestic acquisitions (see Seth, 1990b). Furthermore, some sources of value (e.g., deriving from exchange rate differences) are unique to international acquisitions.

In light of these considerations and consistent with the previous literature, our theoretical perspective views the sources of value in cross-border and domestic acquisitions as intersecting (but not...
identical) sets. At the same time, we note that our assumption of (some) systematic difference between cross-border and domestic acquisitions represents an important research question in its own right and warrants empirical examination.\(^4\)

To generate predictions about the source of value creation in cross-border acquisitions, we integrate insights from two rich research streams, i.e., foreign direct investment (FDI) theory and the literature on domestic acquisitions in the United States.

### Synergistic acquisitions

The synergy hypothesis proposes that acquisitions take place when the value of the combined firm is greater than the sum of the values of the individual firms (Bradley et al., 1988; Seth, 1990a). This increase in value is shared between the owners of the acquiring firm and the target, with the latter receiving an increasingly larger proportion as competition for ownership of the target increases among the acquiring firms. When all the benefits to an acquisition are captured by the owners of the target, the acquiring firm has no incentive to undertake the acquisition.

Underlying the synergy hypothesis is the general explanation for firm growth provided by Penrose (1959). Penrose described the firm as a collection of productive assets and proposed that the long-run profitability of the firm is closely associated with the growth in the productive opportunity of the firm (i.e., the opportunity to use its tangible and intangible assets more efficiently). This quest for productive opportunity leads the firm to seek new products and markets in which it can realize efficiencies and a high rate of growth without having to accept lower marginal revenues. The synergy hypothesis assumes that the firm’s unique and specialized resources are not costlessly appro-

riable by other firms, and also that there exist market frictions that prevent the firm from trading its stock of valuable ‘excess’ resources. Factors which prevent the costless diffusion or sale of specialized resources include impediments to information transfer, governmental regulatory constraints, differential levels of managerial skills not fully reflected in managerial compensation differentials, and other rigidities in the labor market, the market for real factors of production, or output markets.

In domestic acquisitions, the additional value, or synergistic gain in acquisitions has been shown to be derived from an increase in operational efficiency, an increase in market power, or some form of financial gain (Singh and Montgomery, 1987; Seth, 1990b). However, there exist different types and degrees of frictions across international markets compared with domestic markets, which implies that different sources of synergy underlie cross-border acquisitions relative to domestic acquisitions. The theory of foreign direct investment assumes that, in general, frictions in capital, goods, or factor markets across countries create opportunities for firms in one country to benefit by investing in another. Perfectly competitive markets will provide no incentive for firms in one country to relocate and produce in another country, as free movement of goods and factors of production among countries will ensure that supply meets demand in each country and prices are equalized.\(^5\)

Expanding this reasoning, the literature on corporate foreign investment describes various means by which international acquisitions may create value that are specifically associated with frictions in cross-border flows of goods and factors of production.\(^6\)

One important source of synergy in cross-border acquisitions derives from the potential to transfer valuable intangible assets such as know-how between the combining firms in the presence of transactions costs which lead to failure of factor markets (Caves, 1982). If a firm has know-how under its control that can be used in markets where the sale or lease of such knowledge is inherently ‘inefficient,’ then the firm will tend to exploit this

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\(^4\) We thank an anonymous referee for bringing this point to our attention.

\(^5\) That is, “if markets are operating efficiently, when there are no external economies of production and marketing; when information is costless and readily available, and there are no barriers to trade or competition, international trade is the only possible form of international involvement” (Calvet, 1981:43).

\(^6\) Consistent with this literature, we assume that acquiring an existing foreign facility provides a means for the rapid exploitation of the potential for synergistic gains compared with de novo entry. In this study, we do not explicitly consider the factors that influence whether a new entry into an international market is made via greenfield investment vs. acquisition or joint venture or licensing. We therefore assume that the various sources of gains from FDI discussed here may be realized by acquisition. If our results are inconsistent with our predictions, that could indicate either that there is no strong association between the source of gains and the incidence of FDI or that there is no strong association between the source of gains and the incidence of this particular mode of undertaking FDI.
knowledge advantage within its own organization. Although different versions of the theory of the multinational firm are developed in Buckley and Casson (1976), Rugman (1982), Kindleberger and Audretsch (1986), and Casson (1987), all assume that transacting in the international market entails substantial costs which will reduce the value of proprietary information. Faced with this cost, a firm will be likely to internalize the transaction and use the proprietary information within its expanded organization.7 Morck and Yeung (1992) provide empirical evidence to substantiate the relevance of this source of economic value for their sample of U.S. bidders acquiring foreign targets.

Gains may also be realized from ‘reverse internalization’: firms acquire skills and resources from cross-border acquisitions that are expected to be valuable in their home markets. In this case, the expertise of the target firm, when combined with that of the bidding firm, leads to valuable new production—investment opportunities for the combined firm. Although there are similarities between the internalization and reverse internalization hypotheses, an important difference relates to the direction of flow of knowledge. In the case of reverse internationalization, firms seek to gain new knowledge from specialized sources of knowledge, whereas in the case of asset sharing firms seek to reutilize their existing stock of valuable knowledge in new contexts.

Another source of synergistic gains in cross-border acquisitions focuses on demand characteristics in end-product markets rather than failures in input markets (Penrose, 1959). In order to efficiently utilize their ‘excess’ resources for long-run profitability, firms will invest abroad when growth at home is limited or restricted and in the presence of trade barriers which restrict exports, i.e., for market development opportunities (rather than internalization of markets for managerial and technological resources).

If national markets are segmented due to capital controls, information asymmetries and/or exchange controls, it may be possible for firms with multinational operations to realize diversification benefits which create shareholder value. These benefits arise from the reduced variability in the firm’s earnings resulting from less than perfect correlation between earnings in different markets (Rugman, 1976; Agmon and Lessard, 1977). There is general agreement among scholars that there are no such diversification benefits associated with domestic acquisitions, since individual investors can obtain the same risk reduction effect at lower cost by merely holding diversified investment portfolios. However, it has been argued that individual investors cannot duplicate (at the same or lower cost) the risk reduction benefit of multinationalism by homemade portfolio diversification. Multinational corporations may also have higher debt capacities than domestic firms as a result of financial diversification, with associated tax benefits. Thus, risk reduction activity may create shareholder value in the international setting.

Empirical evidence from the 1970s indicates that systematic risk and total risk vary inversely with international involvement (e.g., Hughes, Logue, and Sweeney, 1975; Agmon and Lessard, 1977; Aggarwal, Mikhail, and Shawky, 1980; Fatemi, 1984). Whether risk-adjusted returns are also systematically associated with multinationalism is more controversial.8 The extent to which gains characterize the international diversification efforts of multinational firms in the 1980s and 1990s is also a subject of some debate. It has been suggested that the increasing level of integration of financial markets allows individual investors to invest freely in overseas markets (e.g., Stulz, 1999), which would imply that the continuing risk-reduction benefit of international diversification by firms is limited.

Clearly, it is possible that multiple sources of value coexist in synergistic acquisitions. At the same time, the relative importance of each source of gain or loss in explaining the value creation and value destruction respectively is an empirical question. If asset sharing, reverse internalization, market seeking, and financial diversification are indeed important means whereby value is created

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7 This theory of the multinational enterprise parallels the theory of the multiproduct firm described by Panzar and Willig (1981) and Teece (1980) based on the existence of economies of scope in the presence of factor market frictions.

8 For example, Hughes, Logue, and Sweeney (1975) and Mikhail and Shawky (1979) provided evidence that the average level of risk-adjusted returns of a group of U.S.-based multinational corporations is higher than a control group of domestic firms. Solnik (1974), Rugman (1976), Stapleton and Subrahmanyam (1977), and Errunza and Senbet (1981) also showed that substantial benefits accrue to firms that diversify into international markets. However, Brewer (1981) and Fatemi (1984) fail to reject the hypothesis of no differences in risk-adjusted returns for multinational vs. domestic firms.

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in cross-border acquisitions, we would expect to find a positive relationship between variables that proxy for the presence of these sources of value and total gains. Thus, we propose:

**Hypothesis 1:** In synergistic cross-border acquisitions, there will be a positive relationship between (a) asset sharing and the degree of value creation; (b) reverse internalization and the degree of value creation; (c) market seeking and the degree of value creation; (d) financial diversification and the degree of value creation.

We also consider how the different sources of gains are linked to wealth creation for bidding firm shareholders for synergistic acquisitions. First, we note that if there is a high level of competition for all targets in the sample, acquirer gains will be close to zero and there will be no relationship between the sources of synergy and acquirer gains. However, if the targets in our sample face differing levels of competition, and their bargaining power allows them to capture some (but not all) of the synergistic gains, acquiring firms will also realize gains. Conditional on there indeed being synergy, the level of competition is expected to be influenced by the extent to which the assets of each potential combination are uniquely co-specialized, i.e., whether the assets of the target firm contribute to synergistic gains in combination with few or many potential acquiring firms, and the magnitude of the synergistic gains that can be realized by each such combination (Barney, 1988; Seth, 1988). We expect that value creation based upon asset sharing and reverse internalization is more likely to be based on unique combinations of bidding and target firms than value creation based on market seeking or financial diversification. In the case of the former two sources of value, gains are fundamentally associated with the strategic characteristics and skills of the two combining firms, whereas the latter two sources of value are associated with characteristics of markets. The former two sources of value are less fungible than the latter two sources, and accordingly, competition in the market for corporate control is relatively limited. This predicts that variables that proxy for the former two sources of value are systematically associated with bidder gains, but variables that proxy for the latter two sources show a low or no association with bidder gains (and in the extreme case that all bidder gains are competed away, no association). Accordingly, we propose:

**Hypothesis 2:** In synergistic cross-border acquisitions, there will be a positive relationship between (a) asset sharing and bidder gains; (b) reverse internalization and bidder gains.

**Managerialist acquisitions**

The managerialism hypothesis suggests that managers will knowingly overpay in takeovers: managers embark on acquisitions to maximize their own utility at the expense of the shareholders of the acquiring firm. Berkovitch and Narayanan (1993) found evidence of managerialism in a subsample of U.S. takeovers that reflected negative gains. Mitchell and Lehn (1990) show that bidders in ‘bad’ U.S. acquisitions (as measured by negative returns at the announcement of the bid) are more likely to be taken over themselves. While the managerialism hypothesis has been proposed as a motive for takeovers in the United States, it may also be relevant for cross-border acquisitions if managers of foreign firms have the incentive and the discretion to engage in acquisitions aimed at empire building or risk reduction. Two types of managerial motives have received considerable attention in the literature: empire building and risk reduction.

Managerial models of the firm argue that managers pursue sales or growth maximization at the expense of shareholders’ welfare (Baumol, 1962; Marris, 1964). Since managerial compensation frequently is tied to the amount of assets under their control, managers are more likely to seek higher rates of growth in assets than profits. Applying these managerial models of the firm to the specific case of acquisitions, Mueller (1969) suggested that acquiring firms’ managers have discretionary control over decision-making and attempt to maximize the growth of the firm subject to a profit constraint.

In addition, managers may also have the incentive to engage in diversification activities in an effort to reduce the risk associated with their human capital (Amihud and Lev, 1981). We argued earlier that in an integrated capital market, firm-level diversification activities to reduce risk are generally considered non-value maximizing as individual shareholders may duplicate the benefit from such activities at lower
Cost. To the extent that international capital markets are integrated rather than segmented, the financial diversification benefit to shareholders ceases to exist. However, managers may still seek to stabilize the firm’s earnings stream by acquiring foreign (rather than domestic) firms, given low correlations between earnings in different countries. Foreign acquisitions may be more satisfactory vehicles for risk reduction than domestic acquisitions, and in the absence of strong governance mechanisms to control managerial discretion managers may overpay for these acquisitions.

We examine whether one or both of the two types of agency problems described above is systematically associated with value losses in managerialist cross-border acquisitions. The managerialism hypothesis predicts that as the wealth of shareholders of bidding firms falls, that of the target firms’ shareholders rises, and value is destroyed upon acquisition (since there is a transfer of value from the combined firm to the managers of the acquiring firm). To the extent that empire building and risk reduction both underlie value destruction, we expect to find a negative association between variables that proxy for each of these sources of value loss with total gains. We also expect that there will be a positive correlation between variables that proxy for the sources of value loss and losses to the acquirer. This association should be stronger than that with total gains, since under managerialism total losses arise from wealth transfers from bidders to targets. Our discussion suggests the following hypotheses:

**Hypothesis 3:** In managerialist cross-border acquisitions, there will be a positive association between (a) empire building and the degree of value destruction; (b) risk reduction and the degree of value destruction.

**Hypothesis 4:** In managerialist cross-border acquisitions, there will be a positive association between (a) empire building and bidder losses; (b) risk reduction and bidder losses.

**Acquisitions motivated by hubris**

The hubris hypothesis (Roll, 1986) suggests that acquisitions occur because managers make mistakes in evaluating target firms, and the takeover premium merely reflects a random error. Assume that the valuation of the target is a random variable whose mean is the current market price. Roll (1986) argues that although bidding managers can make errors of overvaluation or undervaluation, the *observed* error is typically in the same direction. The left tail of the distribution of valuations is truncated by the current market price. The extreme version of the hubris hypothesis predicts that there are no synergistic gains from takeover bids and the entire premium paid to the target firm is a transfer from the acquirer.

SSP (2000) present empirical evidence for a more moderate version of the hubris hypothesis in the context of cross-border acquisitions. This version of the hubris hypothesis is summarized as follows: if some corporate combinations do indeed result in synergistic gains, rational managers (who may, however, make valuation mistakes) are motivated to undertake acquisitions in seeking these gains. Although expected synergistic gains are positive (i.e., the value of the combined entity exceeds the preacquisition value of the combining firms on average), because the valuation of the target may be erroneous and the distribution of these valuations is truncated on the left, some such acquisitions may result in overpayment by the acquirer to the target and, therefore, in a loss to shareholders of the acquiring firm.

Note that conditional on the hubris hypothesis (the null hypothesis), there will be no systematic association between variables that proxy for the sources of gains and total gains. The hubris hypothesis predicts that the wealth of shareholders of acquiring firms declines, the wealth of target firms’ shareholders rises, and zero total gains are realized by the combined firm. Since the hubris hypothesis proposes that acquisitions entail nothing more than a transfer of value from the acquirer to the target, there should be no correlation between total gains and various sources of gains. Similarly, there should be no association between gains to bidders and various sources of gains.

**SAMPLE AND METHODOLOGY**

**Sample and data**

Our sample represents all cross-border acquisitions of U.S. industrial corporations reported in the
Mergers & Acquisitions Rosters on Foreign Investments in the United States and W. T. Grimm’s Mergerstat Review during 1981–90 for which stock price data for both the acquiring and target firms and announcement dates are available in published sources, subject to the condition that the acquiring firm held < 50 percent of the target at the time of the acquisition announcement and achieved a majority stakeholding in the target by virtue of the acquisition. This criterion was adopted in order to limit our sample to control transactions. In addition, in order to reduce noise in the data, we excluded transactions where the preacquisition value of the target was < 2 percent of the value of the acquirer. These criteria led to a total sample size of 100 cross-border acquisitions.

Stock price data for acquiring firms and data on market indices were obtained from the daily business press of the countries represented in the sample, and a return series constructed for these firms with appropriate adjustments for rights issues and stock splits. The corresponding data for U.S. target firms were obtained from Standard and Poor’s Daily Stock Guide. Additional data on variables of interest in the study such as the number of bidders were obtained from news reports in the U.S. and foreign business press and, wherever possible, cross-checked against SEC filings, Moody’s International Manual andPredicast. Exchange rate data were obtained from International Financial Statistics.

Research design

The discussion in the preceding section indicates that the synergy, managerialism, and hubris hypotheses may all be relevant explanations for cross-border acquisitions. We propose that it is important to take these different motives into account in an empirical examination of the importance of various sources of value creation or value destruction, since the evidence for the various sources of economic gains or losses will be conditional on which of these hypotheses characterizes the sample.\(^9\) Thus, for example, we would not want to examine a sample that we know to be characterized by the managerialism hypothesis for evidence of various sources of synergy. Similarly, if hubris is the dominant behavioral motive for acquisitions, any examination of whether or not there are empirical regularities with regard to sources of losses or gains in these acquisitions is flawed theoretically, since the phenomena that purportedly are being explained (i.e., ‘synergistic acquisition’ or ‘managerialist acquisition’) have no meaningful truth content. In other words, if an empirically measured value loss or gain is only another random ‘mistake,’ an association between this measured loss or gain and the hypothesized sources of value loss or gain cannot be interpreted as having any specific economic or strategic significance. Accordingly, it is important to construct a means of empirically discriminating among acquisitions characterized by the three motives. Our approach here assumes that there exist frictions that permit the existence of managerialist firms or firms driven by hubris, at least in the short run.

We examine the evidence for various sources of value gains and losses for the same sample of acquisitions described in SSP (2000). The sample acquisitions are divided into three groups—the synergy subsample, the managerialism subsample, and the hubris subsample—based on the tests and results reported therein. The SSP (2000) approach to examining acquisition motives builds on tests described in Malatesta (1983), Roll (1986), Bradley et al. (1988), and Berkovitch and Narayanan (1993), and is briefly summarized here. A similar approach is used in Gupta, LeCompte, and Misra (1997).

First, in the subsample with positive total gains, the managerialism hypothesis (which predicts negative total gains) can be assumed to be eliminated, and the problem is to examine the roles of the synergy and hubris hypotheses. Both hypotheses predict positive gains to targets in this subsample, but make differential predictions with regard to acquirer gains and the correlation between target and acquirer gains. Under the synergy hypothesis, if there is a high level of competition for all targets in the sample, acquirer gains will be close to zero and there will be a zero correlation between target gains and acquirer gains. If the targets in the sample face differing levels of competition and their bargaining power allows them to capture some (but not all) of the synergistic gains, acquiring firm shareholders will realize positive gains on average. Also, there will be a positive correlation between wealth gains to the acquirer and those to the target. In contrast, since the hubris hypothesis proposes

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\(^9\) Also, as we shall show after describing our empirical proxies for various sources of value creation and destruction, the motives make opposing predictions for some tests. Therefore, their effects may cancel each other out in the full sample.
that acquisitions entail nothing more than a transfer of value from the acquirer to the target, there should be a negative correlation between wealth gains to the acquirer and those to the target. The effect of competition is to increase the magnitude of the losses to acquiring firms and the gains to targets.

Following this reasoning, SSP (2000) examine the relationship between target and acquirer gains for two separate groups within the positive total gains subsample: those with positive acquirer gains and those with negative acquirer gains. For the group with positive acquirer gains, they find a strong positive correlation between acquirer gains and target gains, consistent with the predictions of the synergy hypothesis. For this group, a weak positive association that is not statistically different from zero would have indicated that the hubris hypothesis cannot be ruled out. For the group with negative acquirer gains, they find a strong negative association between target and acquirer gains, consistent with the predictions of the hubris hypothesis. For this group, a weak negative association that is not statistically different from zero would have indicated that the synergy hypothesis cannot be ruled out. Finally, they find a significant difference in the correlation between acquirer gains and target gains for the group of acquisitions with positive acquirer gains compared with the group with negative acquirer gains.

In the subsample with negative total gains, the synergy hypothesis can be assumed to be eliminated and the problem is to consider the managerialism and hubris hypotheses. Both predict that in this subsample there will be negative gains to acquirers on average, positive gains to targets, and a negative correlation between target gains and acquirer gains. To examine whether managerialism or hubris represents the dominant explanation for this subsample, the SSP (2000) tests focus on the correlation between target gains and total gains. Under the managerialism hypothesis, value is destroyed upon acquisition since there is a transfer of value from the combined firm to the managers of the acquiring firm. To the extent that the target firm has some bargaining power, it will seek to extract some of the gains to the managers of the bidding firm (which are equivalent to the losses to the shareholders of the bidding firm). This suggests that there will be a positive correlation between the total value loss to the combined firm and the wealth gains to the target or, equivalently, a negative correlation between total gains and wealth gains to the target. The effect of competition is to magnify these effects. Therefore, the managerialism hypothesis suggests that this relationship will be negative, since targets are expected to use their bargaining power to appropriate some of the value extracted from the bidding firm’s shareholders by its managers. However, the hubris hypothesis suggests that there is no such relationship. SSP (2000) find a strong negative relationship, suggesting that the negative total gains subsample is characterized by managerialism, not by hubris.

Since we rely on the same sample and, given the outcome of the hypothesis tests in SSP (2000), acquisitions with positive total gains and positive bidder gains are here classified as synergistic acquisitions, those with positive total gains and negative bidder gains as acquisitions characterized by hubris, and those with negative total gains as managerialist acquisitions. It is important to consider the effect of measurement errors. One possible reason why acquisitions may be classified as synergistic even if they are managerialist (or vice versa) is because gains are measured with error. Such errors may arise from the measurement model used to estimate abnormal returns, inability to accurately identify the event date, and numerous other sources. In order to develop tests for our hypotheses, we assume that the distribution of measurement errors is independent of true gains. Then, measured gains are likely to be high when true gains are high, and measured gains are likely to be low when true gains are low (see Berkovitch and Narayanan, 1993).

To examine the contribution of various sources of losses and gains for the three different types of acquisitions, we estimated the following equations for each subsample:10

\[
\text{TOTGAIN} = \beta_0 + \beta_1 \times \text{INTANG} \pm \beta_2 \times \text{RELSIZE} \\
\pm \beta_3 \times \text{GDPGROW} \pm \beta_4 \times \text{REDVAR} \\
\pm \beta_5 \times \text{GOVBANK} \pm \beta_6 \times \text{GOVGRP} \\
+ \beta_7 \times \text{MULBID}
\]  

10Morck and Yeung (1992) also consider the effects of managerial motives in their study of U.S. bidders acquiring foreign firms. However, their empirical approach assumes that the relationships between sources of gains and the magnitude of gains is the same for all firms in the sample, without regard to managerial motives. In contrast, our research approach considers that these relationships systematically differ according to the managerial motive.
and

\[ \text{CARBID} = \beta_0 + \beta_1 \cdot \text{INTANG} \pm \beta_2 \cdot \text{RELSIZE} \pm \beta_3 \cdot \text{GDGPROW} \pm \beta_4 \cdot \text{REDVAR} \pm \beta_5 \cdot \text{GOVBANK} \pm \beta_6 \cdot \text{GOVGRP} + \beta_7 \cdot \text{MULBID} \] (2)

The empirical models were estimated using OLS with White-corrected standard errors, since the assumption of homoskedasticity is likely to be violated.\(^{11}\) Explanatory variables and predictions are described below.

**Gains to acquiring firms and total gains**

We use the event study methodology to estimate abnormal returns to the acquirers and targets. The market model is assumed to be a valid representation of the stochastic process generating security returns, and market model parameters are estimated over using return data from day \(-70\) to day \(-11\). For single-bid transactions, abnormal returns (ARs) for both bidders and targets are cumulated from day \(-10\) to day \(+10\) to measure cumulative abnormal returns (CARs). For multiple-bid transactions, we assume that the identity of the successful bidder is not known with certainty until the day of announcement of the winning bid (called day \(t^*\)). CARs of target firms are computed over the time period from day \(-10\) until 10 days after the successful final bid (i.e., day \(t^* + 10\)). CARs of acquirers (CARBID) are computed over day \(t^* - 10\) to day \(t^* + 10\), where day \(t^*\) is the day of the first bid by the ultimately successful bidder.

The total gain associated with the announcement to acquire the target is the difference between the value of the combined firm given the acquisition announcement and the sum of the value of the individual firms if the announcement had not been made (see Seth, 1990a). To compute percentage total gain (TOTGAIN), the following procedure is adopted. Let \(\text{PREVAL} = \) value of acquirer and target firms on day \(-11\), i.e.,

\[ \text{PREVAL} = S_{-11}^a P_{-11}^a + \left( \frac{1}{e} \right) S_{-11}^b P_{-11}^b \]

where \(S_{-11} = \) number of shares outstanding on day \(-11\); \(P_{-11} = \) share price on day \(-11\); \(a, b = \) target and acquirer firm respectively; and \(e = \) exchange rate at time \(t\) defined as the foreign currency equivalent of the U.S. dollar.

The difference between the value of the combined firm at day \(t^* + 10\) and its value in the absence of a takeover is measured as

\[ \text{TOTGAIN} = \frac{k S_{-11}^a P_{-11}^a \sum_{t^*-10}^{t^*+10} AR_t^a + \frac{1}{e} S_{-11}^b P_{-11}^b \sum_{t^*-10}^{t^*+10} AR_t^b}{\text{PREVAL}} \]

where \(k\) is the proportion of the target’s shares purchased by the acquirer, and \(t^*\) represents the day the acquirer makes the initial bid.

**Measures: Sources of gains and losses**

The variable INTANG is a proxy for the reverse internalization hypothesis and is expected to capture the presence and magnitude of intangible assets in the target firm that are of value in combination with the assets of the bidding firm. It is measured as

\[ \text{INTANG} = \frac{\text{Annual R&D, advertising and marketing expenditures of target}}{\text{Annual sales revenue of target}} \]

We expect INTANG to have a positive association with both total gains as well as bidder gains in synergistic acquisitions, and to have no association with total gains or bidder gains in managerialist acquisitions or those characterized by hubris.\(^{12}\)

The relative size of the target to the bidder is often used as a proxy for gains from economies of scale and scope (see Seth, 1990b) and in the synergistic acquisitions regression acts as our measure of the potential to realize gains from asset sharing. This measure is defined as

\[ \text{RELSIZE} = \frac{\text{Annual sales of target firm in US $}}{\text{Annual sales of acquiring firm in US $}} \]

\(^{11}\) We also estimated Equations 1 and 2 using seemingly unrelated regression (Zellner, 1962), since the errors associated with the two equations may be correlated. The results are very similar to those reported here.

\(^{12}\) Clearly, it would be desirable to construct a similar variable measuring the endowment of intangible assets for our foreign bidders; however, data limitations preclude this for our sample of acquisitions.
The annual sales of the firms are as reported for the last full financial year prior to the announcement of the acquisition. The logic of value creation from transferring valuable intangible assets predicts a positive association between total gains/bidder gains and RELSIZE for the synergy subsample. However, RELSIZE also could represent managerial preferences for empire building. In the managerialism subsample, we expect to find a negative relationship between RELSIZE and both total gains and bidder gains.

Acquiring firms that undertake cross-border acquisitions for market-seeking motives are expected to consider targets in markets that are growing faster than their home markets, thereby representing higher growth potential. GDPGROW is used as our proxy for the market seeking motive. We first compute

\[
\text{RELGDP} = \frac{(\text{Average 5-year growth rate in real GDP})_{US}}{(\text{Average 5-year growth rate in real GDP})_f}
\]

The subscripts US and f denote United States and the home country of the acquiring firm respectively.

Then,

\[
\text{GDPGROW} = \text{RELGDP} \text{ if RELGDP } \geq 1
\]

\[
= 0 \text{ if RELGDP } < 1
\]

When the real GDP growth rate in the United States is lower than that in the acquirer’s home country, market seeking as defined here is not relevant in explaining total gains. The variable GDPGROW is constructed to allow a slope shift for values of RELGDP < 1 (i.e., when the real GDP growth rate in the United States is lower than that in the acquirer’s home country) vs. values of RELGDP > 1 (i.e., when the real GDP growth rate in the United States is higher than that in the acquirer’s home country and market development may be relevant as a source of value creation). For the synergy subsample, the market development hypothesis leads us to expect a positive association between GDPGROW and total gains. However, the managerialism hypothesis suggests that managers may pursue growth at the expense of profits. Therefore, for the managerialism subsample, we expect a negative relationship between GDPGROW and total gains. We do not expect to find any relationship between this variable and bidder gains.

The financial diversification benefit arises from the reduced variability in the firm’s earnings resulting from less than perfect correlation between earnings in different markets, i.e., assuming that financial markets are not integrated. REDVAR, our measure of the financial diversification benefit, is constructed as follows. If \( \sigma^a, \sigma^b \) are the standard deviations of the stock returns of the U.S. target and foreign bidder, and \( w^a, w^b \) represent the weight fractions of the market value of equity of the two firms respectively (computed as a proportion of the market value of the combined firm), then the variance of the firm after the merger is given by

\[
\sigma'^2 = w^a \sigma^a + w^b \sigma^b + 2 \rho w^a w^b \sigma^a \sigma^b
\]

where \( \rho \) is the correlation coefficient between the returns of the bidder and the target. But if such a merger does not lead to any reduction in variance, that is \( \rho = 1 \), the variance of the combined firm is

\[
\sigma'^2 = w^a \sigma^a + w^b \sigma^b + 2 w^a w^b \sigma^a \sigma^b
\]

The diversification benefit is the reduction in the variability of the returns given by the difference between the above two variances. Therefore,

\[
\text{REDVAR} = \sigma'^2 - \sigma'^2 = -2(1 - \rho)w^a w^b \sigma^a \sigma^b
\]

We predict a positive relationship between total gains and the absolute value of REDVAR for the synergy subsample. We expect no relationship between bidder gains and REDVAR for the synergy subsample, since this potential source of value is relatively fungible.

As previously noted in our discussion of managerialism, managers may desire risk reduction without regard to shareholder welfare, since this reduces the risk of their human capital. If value-destroying acquisitions are motivated by the desire to stabilize earnings in spite of the possibility that this risk reduction is detrimental to shareholders, we would observe a negative relationship between total gains and the absolute value of REDVAR for the managerialism subsample. We also expect a negative relationship between bidder gains and REDVAR for the managerialism subsample, since these acquisitions essentially involve a wealth transfer from the bidder to the target.
Note that, in making these predictions, we do not suggest that financial markets are differentially integrated depending upon the motive for the acquisition. Clearly, if financial markets are integrated, then diversification will not create value in either the synergy subsample or the managerialist subsample. Conversely, if financial markets are not integrated, then there is the possibility that diversification will create value in both subsamples. A negative coefficient for REDVAR in the managerialism subsample implies that although this possibility exists, capital markets downgrade managerialist acquisitions to a greater extent when income streams are relatively more uncorrelated: the marginal effect of REDVAR on total gains (and bidder gains) is to destroy value.

The role of international governance systems and bidding contests

Advantages from cross-border acquisitions may be associated with variations across countries in the effectiveness in the market for corporate control (Conn and Connell, 1990), or more generally, variations in the effectiveness of governance systems. The potential for acquirers to realize gains from taking over firms with high levels of agency problems and taking action to resolve these problems is a motive for acquisitions in general. However, a possible source of gains in cross-border acquisitions arises if agency costs vary systematically across countries (as a result of variations in the effectiveness of governance systems) and foreign acquirers have specialized expertise (relative to domestic acquirers) in reducing agency costs in domestic targets. Some scholars have recently argued that there are indeed systematic differences in the effectiveness of governance systems across countries. For example, Roe (1993) and Gilson (1993) observe that the period of the 1980s and 1990s was marked by the decline of the hostile takeover movement, primarily as a result of managers exerting political pressure for the enactment of state anti-takeover laws. Gilson also points out that the monitoring role of takeovers is substituted in Germany and Japan by continuous monitoring by the company’s main bank. However, ‘Rather than emulating the Japanese and German system of continuous monitoring, American management seeks to create the only major economic system in which management is not monitored at all’ (Gilson, 1993: 361). In contrast, others have argued that the governance system prevalent in the United States is superior to others: the relatively low concentration of ownership facilitates risk-taking and innovation (see Easterbrook, 1997).

In summary, the relative efficiency of different national governance systems continues to be an issue of considerable debate. In particular, it is unclear whether one national governance system is indeed superior to others in providing incentives for value creation, or in creating disincentives for value destruction. Although we cannot make directional predictions, we control for the influence of national governance systems on value creation. Bishop (1994) suggests that national governance systems may be classified into two types. The first type emphasizes stock market liquidity and relatively complete disclosure of financial information and is exemplified by the U.S. and British systems. In such systems (we call these market-oriented systems), capital markets and the market for corporate control are comparatively important monitoring devices. The second type that Bishop (1994) identifies is characterized by monitoring by shareholders themselves or by their intermediaries (such as banks). Here, however, we consider it important to make a finer distinction among systems than suggested by Bishop, and distinguish between ‘bank-oriented systems’ where banks play a critical monitoring role vs. ‘group-oriented systems’ where ownership concentration is high, business and/or family groups have relatively high ownership stakes and control over corporations, there is a high incidence of corporate cross-holdings but relatively low institutional share ownership (see OECD Economic Surveys, 1996–97; Fukao, 1995). Thus, we construct three dummy variables as follows:

\[
\text{GOVMKT} = 1 \text{ for acquiring firms from countries with market-oriented systems} \\
= 0 \text{ for acquiring firms from other countries}
\]

\[
\text{GOVGRP} = 1 \text{ for acquiring firms from countries with group-oriented systems} \\
= 0 \text{ for acquiring firms from other countries}
\]

\[
\text{GOVBANK} = 1 \text{ for acquiring firms from countries with bank-oriented systems} \\
= 0 \text{ for acquiring firms from other countries}
\]
Eleven countries are represented in our sample. Of these, Britain and Sweden are characterized as having market-oriented systems; Australia, Belgium, Canada, France, and Italy as having group-oriented systems,13 and Japan, the Netherlands, Germany, and Switzerland as having bank-oriented systems.

As previously discussed, there is considerable controversy about the relative effectiveness of different governance systems. Accordingly, it is difficult to predict the sign of the coefficient on the dummy variables. Nonetheless, we include them in our analyses to allow for differences among the systems in their potential to provide effective monitoring and incentives for value-creating investments. The coefficients on the two dummy variables indicate the influence of GOVBANK and GOVGRP on the dependent variable relative to the omitted dummy variable, i.e., GOVMKT. We also caution that the variables that we use to capture different governance systems may represent systematic differences in tax treatments of acquisitions. For example, in both Germany and Japan (examples of bank-oriented systems) goodwill is treated as a tax-deductible expense. Thus, the coefficient on GOVBANK could reflect either governance system or tax effects or both. However, the data do not appear to be consistent with the conjecture that value creation is merely an artifact of accounting rules. Britain, Germany, Switzerland, and France, representing all three of the governance groups that we consider here, charge goodwill against equity and not against profits: if this accounting treatment were driving the results, no differences would be likely to be noted among the groups.

Finally, the dummy variable MULBID, indicating the presence of a multiple bidding contest, is included as a control variable in both regressions. MULBID is expected to have a negative sign in the regressions on CARBID, in particular for the managerialism subsample.14

RESULTS AND DISCUSSION

Table 1 presents descriptive statistics for the sample. The average increase in the value of the combined firm associated with the acquisition over the pre-offer value of the combined firm (TOTGAIN) is 7.57 percent, which is statistically significant at the 1 percent level (z = 10.04). This corresponds to average dollar gains of $249.5 million for the combined firms in the sample. We also note that positive total gains take place in 74 acquisitions: 54 acquisitions are characterized by synergy, whereas in 20 acquisitions the presence of hubris cannot be ruled out. Negative total gains characterize 26 acquisitions.

Table 2 indicates variations in value creation by country. The table indicates that stockholders of Australian, Canadian, French, and Japanese firms experience positive abnormal returns at the time of the acquisition announcement. The French and Japanese acquisitions in our sample generated the highest average total gains ($901 m and $643.5 m). All 10 Japanese acquisitions in the sample created positive wealth gains. Of the eight French acquisitions, seven resulted in positive total gains; six of the eight Australian acquisitions had positive total gains; and seven of the 10 Canadian acquisitions resulted in positive total gains.

However, there seem to be some differences in how total gains are shared between acquiring firms from these countries and their targets. French and Japanese acquirers appropriated the highest percentage of total gains on average (54.1% and

---

13 While in general we agree with the typology proposed by Gedajlovic and Shapiro (1998), we do not consider the Canadian system, with high levels of concentrated shareholdings, to be characterized by both strong internal and external monitoring. Highly concentrated shareholdings are perhaps the most effective deterrent to takeovers, and therefore significantly limit external monitoring by the market for corporate control.

14 The question might arise: would it be useful to include a ‘relatedness’ variable? We suggest not, for two reasons. First, we concur with the reasoning in Seth (1990a) and Capron (1999) that more useful insights might be uncovered by consideration of sources of value in acquisitions relative to a consideration of broad strategic types. Second, as would be predicted by this reasoning, previous research that has considered relatedness to explain gains in cross-border acquisitions has indeed uncovered no systematic performance differences (e.g., Eun et al., 1996).
Table 2. Total gains in combined firm and wealth gains of acquirers and targets by country from day −10 to 10 days after the final successful bid

<table>
<thead>
<tr>
<th>Country</th>
<th>N</th>
<th>Range of total gains ($ m)</th>
<th>Average total gains ($ m)</th>
<th>Gains ($ m, and as % of average $ total gains)</th>
<th>Acquirer</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>8</td>
<td>−271 to 369</td>
<td>83.6</td>
<td>6.16%</td>
<td>19.3</td>
<td>64.3</td>
</tr>
<tr>
<td>Canada</td>
<td>10</td>
<td>−130 to 2844</td>
<td>356.5</td>
<td>12.46%</td>
<td>1.4</td>
<td>355.2</td>
</tr>
<tr>
<td>France</td>
<td>8</td>
<td>−21 to 4959</td>
<td>901.0</td>
<td>18.38%</td>
<td>487.3</td>
<td>413.7</td>
</tr>
<tr>
<td>Great Britain</td>
<td>52</td>
<td>−291 to 1674</td>
<td>90.0</td>
<td>5.59%</td>
<td>−27.9</td>
<td>117.9</td>
</tr>
<tr>
<td>Japan</td>
<td>10</td>
<td>135 to 2532</td>
<td>643.5</td>
<td>10.74%</td>
<td>381.7</td>
<td>261.8</td>
</tr>
<tr>
<td>Switzerland</td>
<td>2</td>
<td>−9 to 462</td>
<td>226.7</td>
<td>1.50%</td>
<td>−45.9</td>
<td>272.6</td>
</tr>
<tr>
<td>West Germany</td>
<td>3</td>
<td>−48 to 400</td>
<td>129.4</td>
<td>2.94%</td>
<td>−27.4</td>
<td>156.8</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>−46 to 1128</td>
<td>221.8</td>
<td>3.81%</td>
<td>58.8</td>
<td>163.0</td>
</tr>
<tr>
<td>All countries</td>
<td>100</td>
<td>−291 to 4959</td>
<td>249.5</td>
<td>7.60%</td>
<td>66.7</td>
<td>182.8</td>
</tr>
</tbody>
</table>

59.3% respectively). Australian acquirers appropriated about 23 percent of total gains on average, but Canadian acquirers retained only 0.4 percent of the total gains on average. The evidence suggests that French, Canadian, and Japanese acquirers all appear to have the ability to identify targets with potential for value creation, but whereas the French and the Japanese benefit from this ability, the Canadians ‘bid away’ all potential gains from the merger to target shareholders. Somewhat less successful are the Australians, whose interests are primarily directed at smaller targets. The results for the Japanese firms in our sample are similar to those reported by Eun et al. (1996); Cakici et al. (1996), and Kang (1993). However, Cakici et al. report that the Australian acquirers in their sample create more wealth for their shareholders than do French acquirers. Acquirers from other countries experience negative wealth effects with sizeable wealth losses borne by stockholders of British firms. One-third of the British acquisitions in the sample were characterized by negative total gains, with more than one-half of the British acquirers bearing wealth losses. These results are similar to those of Eun et al. (1996), who also report that the British firms in their sample accounted for the largest negative total gains and negative gains to acquirers in their sample of cross-border acquisitions. However, Cakici et al. find that British acquirers gain significantly from their acquisitions of U.S. firms. Unfortunately, statistical testing is difficult because of small country samples, and therefore our discussion here is merely suggestive.

Table 3 contains a correlation matrix. We had suggested earlier that multiple bidding contests should be relatively more limited when value creation in the acquisition is associated with a unique combination of skills from the bidder and target. We expected the variables INTANG and RELSIZE to represent a more unique combination of skills than the other explanatory variables. This would predict a negative correlation between MULBID vs. both INTANG and RELSIZE. However, the correlation matrix indicates a negative association between MULBID and INTANG (as we would expect), but a positive association between MULBID and RELSIZE. It therefore appears that, for the firms in our sample, economies from asset sharing represent a fairly fungible source of value: these economies may be realized by multiple
Table 3. Correlation matrix

<table>
<thead>
<tr>
<th>Variable</th>
<th>INTANG</th>
<th>RELSIZE</th>
<th>GDPGROW</th>
<th>REDVAR</th>
<th>GOVMKT</th>
<th>GOVGRP</th>
<th>GOVBANK</th>
<th>MULBID</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTANG</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RELSIZE</td>
<td>-0.08</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDPGROW</td>
<td>-0.01</td>
<td>-0.16</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REDVAR</td>
<td>-0.00</td>
<td>0.05</td>
<td>0.10</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GOVMKT</td>
<td>-0.05</td>
<td>-0.03</td>
<td>0.29</td>
<td>-0.01</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GOVGRP</td>
<td>-0.16</td>
<td>0.10</td>
<td>-0.21</td>
<td>-0.11</td>
<td>-0.69</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GOVBANK</td>
<td>0.27</td>
<td>-0.08</td>
<td>-0.14</td>
<td>-0.12</td>
<td>-0.50</td>
<td>-0.28</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>MULBID</td>
<td>-0.24</td>
<td>0.23</td>
<td>-0.08</td>
<td>0.32</td>
<td>-0.04</td>
<td>0.16</td>
<td>-0.15</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Table 4. Regressions to explain percent total gain (White’s heteroskedasticity-consistent \( t \)-statistics in parentheses)

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Synergy subsample</td>
</tr>
<tr>
<td>( N )</td>
<td>54</td>
</tr>
<tr>
<td>INTANG</td>
<td>0.51*</td>
</tr>
<tr>
<td></td>
<td>(2.13)</td>
</tr>
<tr>
<td>RELSIZE</td>
<td>10.52*</td>
</tr>
<tr>
<td></td>
<td>(2.09)</td>
</tr>
<tr>
<td>GDPGROW</td>
<td>-0.78</td>
</tr>
<tr>
<td></td>
<td>(-0.58)</td>
</tr>
<tr>
<td>REDVAR</td>
<td>5.19**</td>
</tr>
<tr>
<td></td>
<td>(2.40)</td>
</tr>
<tr>
<td>GOVBANK</td>
<td>4.87</td>
</tr>
<tr>
<td></td>
<td>(1.86)</td>
</tr>
<tr>
<td>GOVGRP</td>
<td>4.16</td>
</tr>
<tr>
<td></td>
<td>(1.34)</td>
</tr>
<tr>
<td>MULBID</td>
<td>3.67</td>
</tr>
<tr>
<td></td>
<td>(1.19)</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.38</td>
</tr>
<tr>
<td></td>
<td>(-0.15)</td>
</tr>
<tr>
<td>( F )</td>
<td>4.12**</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.54</td>
</tr>
</tbody>
</table>

*Significant at 5% (one-tailed test); **significant at 1% (one-tailed test); †significant at 5% (two-tailed test); ††significant at 1% (two-tailed test).

potential suitors for a target in combination with the target. In spite of these correlations, there is no evidence of multicollinearity vis-à-vis these variables (as reflected by the variance inflation factors).

Table 4 contains the regression results to explain total gains, and reports estimated coefficients and \( t \)-values based on robust standard errors. Although our focus is on interpreting the subsample regressions, for purposes of comparison we also include the full sample results. The first column of Table 4 contains results for the synergy subsample. We find that there is a positive and statistically significant relationship between INTANG, our proxy for reverse internalization and TOT-GAIN, our measure of the degree of value creation in the acquisition. Similarly, RELSIZE, our proxy for asset transfer as a source of value creation and REDVAR, our proxy for financial diversification, also demonstrate a positive and
statistically significant association with total gains. However, market seeking as represented by GDPGROW is not associated with value creation. It may be that growth in the bidder’s industry is also relevant to consider, besides GDP growth; however, data limitations preclude us from examining this effect. Finally, both governance variables have a positive sign but neither are statistically significant at conventional levels (two-tailed tests).

Our results for the diversification benefits of acquisitions are consistent with those in Kwok and Reeb (2000). In developing their ‘upstream–downstream hypothesis’ of internationalization and firm risk, they argue that the relative business risk of different countries influences the risk impact of foreign direct investment. Firms that invest ‘upstream’ (i.e., in more stable economies) decrease their risk, whereas those that invest ‘downstream’ increase their risk. Kwok and Reeb characterize the United States as ‘among the most stable in the world,’ with the implication that investments by foreign firms into the United States should act to reduce risk. They document a negative association between firm internationalization and systematic risk for non-U.S. firms.

Turning now to the managerialism subsample, consistent with our expectations the data indicate a negative and statistically significant association between REDVAR, our proxy for risk reduction in this sample, and the degree of value creation. Thus, for acquisitions characterized as driven by managerialism, the data are consistent with the hypothesis that risk reduction is an important source of value loss. In this subsample, GDPGROW again is not statistically significant. At the same time, contrary to our expectations, there is a statistically significant positive association between RELSIZE and the degree of value creation. In this sample, RELSIZE acts as a proxy for growth-seeking (at the expense of profits) and empire-building, and we had expected a negative relationship between this variable and value creation. However, our data seem to indicate that the negative effects of risk reduction are mitigated, not enhanced, by the relative size of the target to the bidder, and the effect of this variable is similar to that found in the synergy subsample. Bank-oriented governance systems appear to facilitate value creation (or reduce the degree of value destruction) to a greater extent than market-oriented systems in this subsample.

In the hubris subsample, we expected no systematic association between any of the explanatory variables and total gains or bidder gains, and in general this is the case. One exception is that there is a positive association between RELSIZE and TOTGAIN in this subsample, as was also noted for both other subsamples. Surprisingly, the coefficient on GOVBANK is negative and statistically significant for the hubris subsample, in contrast to both other subsamples. We note, however, that the statistical significance of the coefficient on GOVBANK is considerably lower for the seemingly unrelated regression estimates; accordingly, we have less confidence in these results than those for the other variables we consider.

We also conduct Wald tests to examine whether the coefficients of the subsample regressions are equal.15 The null hypothesis of no difference is rejected for all comparisons at the 0.01 level of significance. These results clearly indicate that it is appropriate to separately examine each of the subsamples in empirical analyses.

Table 5 contains our regression results for bidder gains. We had anticipated that for the synergy subsample there should be a stronger association between RELSIZE and INTANG with CARBID compared to the association between GDPGROW and REDVAR with CARBID. We find that while INTANG is positively and significantly associated with CARBID, this is not the case with RELSIZE. Thus, the evidence provides support for the role of reverse internalization in contributing to bidder gains in cross-border acquisitions, but not for asset sharing. We had previously noted a positive correlation between the incidence of bidding contests and RELSIZE, and had conjectured that this suggests that gains from asset sharing appear to be somewhat fungible. The multivariate results suggest the same interpretation. The effect of relative size for our sample differs from that reported by Markides and Ittner (1994) for their sample of U.S. bidders who acquire foreign firms. They found that bidder gains were strongly and positively associated with the relative size of the target to the bidder. One explanation for these different results is that the U.S. market for corporate control is more competitive than overseas markets, so

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15 The Wald test is appropriate in the case of regression with robust variance matrix estimation, and is equivalent to the Chow test, which would be used for a conventionally estimated variance–covariance matrix.
Table 5. Regressions to explain bidder CAR (White’s heteroskedasticity-consistent t-statistics in parentheses)

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Sample</th>
<th>Synergy subsample</th>
<th>Managerialism subsample</th>
<th>Hubris subsample</th>
<th>Full sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTANG</td>
<td></td>
<td>54</td>
<td>26</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>RELSIZE</td>
<td></td>
<td>(2.63)</td>
<td>(−0.16)</td>
<td>(0.68)</td>
<td>(0.15)</td>
</tr>
<tr>
<td>GDPGROW</td>
<td></td>
<td>(−0.66)</td>
<td>(2.96)</td>
<td>(−1.48)</td>
<td>(−3.76)</td>
</tr>
<tr>
<td>REDV AR</td>
<td></td>
<td>(−1.45)</td>
<td>(2.23)</td>
<td>(−0.01)</td>
<td>(0.66)</td>
</tr>
<tr>
<td>GOVBANK</td>
<td></td>
<td>2.44</td>
<td>(2.26)</td>
<td>4.62†</td>
<td>7.65††</td>
</tr>
<tr>
<td>GOVGRP</td>
<td></td>
<td>(1.16)</td>
<td>(0.62)</td>
<td>(3.11)</td>
<td>(1.97)</td>
</tr>
<tr>
<td>MULBID</td>
<td></td>
<td>3.67</td>
<td>1.85</td>
<td>11.16††</td>
<td>5.54†</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td>(1.57)</td>
<td>(0.62)</td>
<td>(3.11)</td>
<td>(1.97)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.70</td>
<td>(1.32)</td>
<td>(−1.84)</td>
<td>(1.03)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.98)</td>
<td>(−2.68)</td>
<td>(−2.67)</td>
<td>(−1.79)</td>
</tr>
<tr>
<td>$ F $</td>
<td></td>
<td>2.17†</td>
<td>4.89**</td>
<td>3.49*</td>
<td>10.82**</td>
</tr>
<tr>
<td>$ R^2 $</td>
<td></td>
<td>0.18</td>
<td>0.52</td>
<td>0.59</td>
<td>0.11</td>
</tr>
</tbody>
</table>

*Significant at 5% (one-tailed test); **significant at 1% (one-tailed test); †significant at 5% (two-tailed test); ††significant at 1% (two-tailed test).

that bidder gains are more likely to be competed away in the former. Consistent with this explanation, the mean CAR of our sample of foreign bidders is 0.11 percent compared with a mean CAR of 0.29 percent for the Markides and Ittner sample.

The results for the managerialism subsample are very similar to those reported for the total gains regression, and the reported effects are in general stronger than for the total gains regression. REDV AR once again appears to be the major underlying source of bidder losses. Also, RELSIZE and GOVBANK appear to mitigate the value-destroying effects of REDV AR. It is also interesting to note that while MULBID has a strong negative association with CARBID for both the managerialism and hubris subsamples, this is not the case with the synergy subsample. Multiple bidding contests do not appear to have an influence on gains to bidders in the latter, but drive down gains to bidders in the former two subsamples. When viewed in conjunction with the results described above for INTANG, it appears that in synergistic acquisitions there are indeed some unique characteristics of the bidder and target in combination that reduce the probability of competition in the market for corporate control eroding gains to bidders.

As a robustness check in light of the possibility of measurement error in our estimate of value creation (and the resulting possibility of misclassification of acquisitions into different types), we reestimated the equations after omitting acquisitions with total gains between $-$1 and 1 percent. We also estimated Tobit models on the data. The results remained unchanged.

CONCLUSION

In this paper, we explore alternative reasons for why cross-border acquisitions might create value or destroy value. We propose that a possible reason to explain why previous studies have not found
strong empirical evidence regarding the sources of value creation in cross-border acquisitions is that they do not take into account that different motives may exist for undertaking these acquisitions. In effect, they test the joint hypothesis that the acquisitions in their sample are characterized by synergy and that some underlying source of this synergy is relevant for explaining value creation. However, as shown by Berkovitch and Narayanan (1993) for domestic acquisitions and Seth et al. (2000) for cross-border acquisitions, there is evidence of multiple motives in these transactions: synergy, managerialism, and hubris. Accordingly, we examine the empirical evidence for various sources of value creation and value destruction for groups of acquisitions which we expect to be differentially characterized by these motives. Our results show that such a research approach does indeed have the potential to increase the power of empirical tests in the specific context that we consider. We furthermore suggest that in the broader context of strategy research it is useful to explicitly consider the assumptions embedded in our research vis-à-vis managerial motives and equilibrium conditions for additional insights into the phenomena we are interested in.

We find that the data are consistent with the expectation that multiple sources of value creation exist in synergistic cross-border acquisitions: asset sharing, reverse internalization of valuable intangible assets, and financial diversification. Our data thus provide corroborative evidence for multiple theories of FDI, suggesting that a multifunctional approach to understanding performance differences such as that used in this paper is important. For value-destroying acquisitions that are expected to be driven by managerialism, however, we find that the data are consistent with only one of the sources of value destruction that we examine, i.e., risk reduction. In these acquisitions, the evidence also suggests that large relative size of the target to the bidder mitigates the negative effects of risk reduction.

Some major challenges in conducting this study arose from its data requirements, since it involved the hand collection of stock price data for the foreign bidder firms and data from numerous secondary sources regarding characteristics of these firms. These challenges influenced the size of our sample as well as the construction of variables to measure the constructs of importance. Although our robustness checks indicate that our results are strong in spite of a relatively small sample, for the future, clearly it would be helpful to investigate the issues described here with a larger sample. Additional insights would also be possible with the use of triangulated methods. For example, a survey-based study (as reported in Capron, 1999) could allow the development of more fine-tuned measures of some of the variables.

The relative efficiency of different governance systems is an issue of considerable debate, and in the absence of strong theoretical priors we did not propose directional predictions vis-à-vis the relative impact of governance systems. Our results in this regard therefore are best viewed as exploratory. There appears to be some association between value creation and the national governance systems that prevail in the home country of the bidder: bidding firms from group-oriented governance systems (such as Germany and Japan) appear to participate in acquisitions with higher levels of value creation than do bidders from market-oriented governance systems (such as Great Britain), after controlling for the influence of other variables. This result is consistent with that described in Thomsen and Pedersen (2000), who find that bank ownership is associated with higher shareholder value for their sample of large European companies. Clearly, however, our evidence can only be characterized as equivocal. Nonetheless, these findings suggest that understanding the role of governance systems in value creation and destruction is a fruitful area for future research.

Finally, our study’s focus on cross-border acquisitions assumes that these transactions are dissimilar to domestic acquisitions vis-à-vis the sources of value that underlie the two types of transactions. Although we present arguments to defend this assumption, we do not undertake a systematic empirical comparison of these differences here. A valuable extension of this work would attempt to assess these differences empirically, ideally using a matched sample of U.S. domestic acquisitions and cross-border acquisitions. Such a study has the potential to reveal how and why international acquisition activity has distinctive characteristics and value consequences relative to domestic acquisitions. Clearly, answers to these questions have the potential to make an important contribution not only to our understanding of acquisition activity and its value consequences, but also to further explaining idiosyncrasies associated with doing business internationally.
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