



Employee–management trust and M&A activity☆

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ABSTRACT

We examine the relation between the trust that employees have in management and the M&A activity of firms. We measure this trust by using rankings compiled by the Great Place to Work Institute (GPWI) from 1998 to 2011. Although the volume of M&A activity is not significantly different for firms with strong cultures of trust (“SCT firms”) versus other firms, the relative size of acquisitions announced by SCT firms is significantly smaller than the size of acquisitions announced by other firms. Furthermore, when SCT firms announce relatively large acquisitions, bidder returns and the percent change in the combined values of bidders and targets are lower than the corresponding returns for other firms. Finally, when SCT firms make large acquisitions, they are significantly more likely to suffer a loss in their GPWI ranking as compared with other SCT firms. Overall, the results are consistent with the conclusion that the M&A policies of firms are influenced by a culture of trust between employees and management.

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1. Introduction

Despite an extensive literature on mergers and acquisitions, little is known about the relation between a firm's corporate culture and its merger and acquisition (“M&A”) activity. As a general matter, there is a widespread recognition that the success or failure of mergers and acquisitions often hinges on the integration of the two companies' assets, including their respective corporate cultures. This belief is reinforced by numerous anecdotes of high profile mergers that purportedly failed because of a clash of corporate cultures (e.g., AOL-Time Warner, Compaq Computer-Digital Equipment, Daimler Benz-Chrysler) and by surveys of corporate executives with extensive M&A experience (Schein (2001)). However, notwithstanding conventional wisdom, there is little academic literature on the role that corporate culture plays in the development and success of a firm's M&A strategy.¹

This paper attempts to provide systematic evidence on the relation between corporate culture and M&A activity. Following convention in the literature, we define culture in terms of a shared understanding among employees that governs their interactions with management and each other. We focus on a particular dimension of a firm's culture, namely, the degree of trust that employees

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¹ Ahern et al. (2011) examine the relation between national culture and cross-border M&A activity. They find that differences in the national culture of target and acquiring firms are associated with the volume and gains of cross-border merger activity. They also find that national culture is associated with the division of gains in mergers and various attributes of the merger agreement (e.g., termination fees, mode of payment). It is likely that national culture influences corporate culture, but the two concepts are distinct. For example, within the U.S., which has a given national culture, there is wide variation in the corporate cultures of U.S. firms. Cronqvist et al. (2009) examine the relation between corporate culture and various corporate policies, including the acquisition policies of firms. They find that spin-off firms “inherit” traits that are similar to their former parent firms, including a similar proclivity to engage in M&A activity.

have in management. Following precedent in the economics and finance literature, we take the perspective that trust can be a source of efficiency insofar that it economizes on transaction costs, including the costs associated with writing, monitoring, and enforcing detailed contracts and administrative procedures. By economizing on transaction costs, a culture of trust facilitates exchange among employees, including the exchange of specialized knowledge within firms.

Adopting the view that a strong culture of trust is a source of value for firms, we examine whether the M&A activities of firms with strong trust between employees and management differ significantly from the M&A activities of other firms. We argue that trust is an asset that is firm-specific and not easily transferred from one firm to another, given that trust evolves over time based on the historical experiences that individuals have with each other. Insofar that mergers and acquisitions, especially large mergers and acquisitions, pose a significant risk to the culture of trust within acquiring firms, then firms with strong cultures of trust have more value at risk in mergers and acquisitions. This observation leads us to several questions. Do firms with strong cultures of trust engage in less M&A activity than other firms? Does the relative size of acquisitions made by firms with strong cultures of trust (“SCT firms”) differ from that of other firms? Are bidder returns different for SCT firms than they are for other firms? Does trust between employees and management suffer after a firm makes a large acquisition?

To identify a sample of SCT firms, we collected data on annual rankings of the *Best Companies to Work For in America*, which is published by the Great Place to Work Institute (“GPWI”), a consulting firm based in San Francisco, over the period of 1998–2011. The GPWI states that its “annual research is based on data from more than 10 million employees in 45 countries representing over 5,500 organizations of varying sizes, industries and structures.”² In describing the criteria used to evaluate the workplace culture of firms, it states that “Trust is the defining principle of great work places—created through management’s *credibility*, the *respect* with which employees feel they are treated, and the extent to which employees expect to be treated *fairly*. The degree of pride and levels of authentic connection and camaraderie employees feel with one another are additional essential components.”³ GPWI bases its rankings on two factors: (i) a Trust Index Employee Survey that is administered randomly to employees of participating companies and (ii) a Culture Audit, which is administered to the management of participating companies.⁴ The GPWI’s emphasis on trust as a defining characteristic of corporate culture appears to comport well with economic models of corporate culture (e.g., [Kreps \(1990\)](#) and [Hermalin \(2001\)](#)) and GPWI data have been used previously in the literature as a proxy for employee satisfaction ([Edmans \(2011\)](#)) and the perception of management integrity by employees ([Guiso et al., 2015](#)). The GPWI annual rankings are publicized widely through various media outlets and firms often advertise their inclusion on the list as a marketing and recruiting tool.

The GPWI rankings over the period of 1998–2011 results in a sample of 183 firms that appear at least once on an annual ranking of the *Best Companies to Work For in America* and for which the necessary data are available. Although we use the entire sample for some of the empirical work that follows, our primary sample consists of 80 firms that appear on the GPWI top 100 list for a sustained period during 1998–2011. For each of the 80 firms, which we define as the SCT firms, we identify two matching firms—one from the same four-digit SIC code and the other from the same Global Industrial Classification Standard (“GICS”) sub-industry—that do not appear on the GPWI rankings and are closest in size, as measured by market value of assets, to the corresponding SCT firm.⁵ Most of the analyses that follow compare the M&A activities of the SCT firms with those of the two matched samples.

We find that SCT firms differ significantly from the two matched samples in several respects that are likely to be associated with some dimensions of the firms’ M&A activity. SCT firms have significantly higher market-to-book ratios, significantly higher ratios of operating income to assets, and significantly lower debt-to-asset ratios. These results prompt the question of whether causality runs from a strong culture of trust to strong performance or vice versa, whether causation runs in both directions, or whether other variables jointly determine cultures of trust and firm performance. Although it is beyond the scope of this paper to attempt to tease out this causality, we take these differences into consideration in the analyses of the firms’ M&A policies.

We test several predictions about the relation between a culture of trust and M&A activity.

First, we examine whether the number of acquisitions announced by SCT firms differs significantly from the number of acquisitions announced by other firms. Univariate analysis shows that the average annual number of acquisition announcements is significantly higher for the SCT firms (1.65) than it is for the SIC (1.14) and GICS (1.22) matched samples. Also, the percent of firm-years in which SCT firms announce an acquisition (53.6) is significantly higher than it is for the SIC (41.8) or GICS (45.7) matched samples. However, no significant relation generally exists between the average annual number of acquisition announcements and whether or not a firm has a strong culture of trust after controlling for other variables, including, most notably, the market value of assets, which is directly related to the volume of M&A activity. Although it is possible that trust between employees and management affects the volume of a firm’s M&A activity indirectly through its effect on the market value of assets, the evidence suggests that SCT firms generally do not engage in more or less M&A activity than other firms.

Second, we examine whether the relative size of acquisitions is different for SCT firms than it is for other firms. We expect that SCT firms make smaller acquisitions because these acquisitions are less likely to disrupt the acquiring firms’ corporate culture. Consistent with this prediction, we find the relative size of the acquisitions (i.e., the size of the acquisition divided by the market value of the acquiring firms’ assets) announced by SCT firms is significantly smaller than the relative size of acquisitions announced by other firms. This difference is significant in both economic and statistical terms. For example, the median relative size of acquisitions

² <http://www.greatplacetowork.com/our-approach/what-is-a-great-workplace>.

³ Ibid.

⁴ Companies voluntarily choose to participate in the GPWI surveys, which likely results in a selection bias of SCT firms participating disproportionately in the surveys. Given that we use the GPWI rankings to identify SCT firms, a selection bias of this sort is not troublesome for our purposes.

⁵ The Global Industry Classification Standard (GICS)SM is an industry classification system developed in 1999 by Morgan Stanley Capital International and Standard & Poor’s. [Bhojraj, Lee, and Oler \(2003\)](#) find evidence that the GICS classifications are significantly better than other industry classifications, including SIC codes, in explaining co-movements in stock returns, valuation multiples, forecasted growth rates, and various financial ratios.

announced by the SCT firms (0.006) is less than one-third the median relative size of acquisitions announced by both the SIC matches (0.020) and the GICS matches (0.016). Both differences are significant at the 0.01 level. Furthermore, only 34.6% of the SCT firms announced at least one acquisition with relative size of 0.05 or greater, as compared with 55.8% of the SIC matches and 61.0% of the GICS matches. These differences are significant at the 0.05 level. This result holds after controlling for other variables, including the market value of assets and market-to-book ratios.

Third, we test whether bidder returns are significantly different for SCT firms than they are for other firms. We find that bidder returns, measured from one day before through one day after the announcements of the acquisitions, are small on average (0.0002) and not statistically significant for the SCT firms. Similar results are found for the two matched samples and no significant difference exists in the average bidder returns for SCT firms versus other firms. This result is not surprising, given that most acquisitions made by both samples are relatively small and unlikely to significantly affect the acquiring firms' stock prices.

However, when bidder returns are estimated for relatively large acquisitions, defined as acquisitions with relative size of at least 0.05, the mean and median bidder returns for SCT firms are -0.021 and -0.030 , respectively, and not statistically significant. In contrast, the corresponding mean and median bidder returns are 0.011 and 0.007 , respectively, for the SIC matched sample. The difference between both the mean and median bidder returns for the SCT firms versus the SIC matches is significant at the 0.05 level. Although the mean and median bidder returns are greater for the GICS matches as compared with the SCT firms, these differences are not statistically significant. Similar results hold for the combined returns of targets and acquiring firms—these returns are negative for SCT firms and significantly lower than the corresponding returns for the SIC, but not the GICS, matched firms.

Finally, among the SCT firms, we find that firms completing relatively large acquisitions are significantly more likely to fall off the GPWI list in the 2 years following the takeover announcements (66.7%) than SCT firms that do not make relatively large acquisitions (35.7%). This result holds in a logistic analysis in which the likelihood of falling off the GPWI list is modeled as a function of several control variables, as well as an indicator variable for whether or not the firm made a relatively large acquisition in that year. This result also is consistent with the view that large acquisitions pose greater risks to SCT firms than they do for other firms, presumably, because there is more culture-related value at stake if the integration of the two companies fails.

The paper proceeds as follows. Section 2 briefly reviews salient literature on corporate culture and describes the empirical predictions relating a culture of trust to M&A activity. Section 3 describes the sample, data, and summary statistics for the SCT firms and their corresponding matches. Section 4 describes the empirical results comparing various dimensions of the M&A activity of SCT firms and the matched firms. Section 5 presents empirical results on bidder and combined returns for the SCT firms versus the matched firms. Section 6 contains empirical results on the relation between relatively large acquisitions made by SCT firms and subsequent changes in their GPWI rankings. Section 7 provides concluding comments.

2. Relevant literature and predictions

Existing literature generally recognizes that corporate culture refers to the norms or shared understanding among employees that guides economic activity within organizations. In a seminal paper on corporate culture, Kreps (1990) defines corporate culture in terms of a reputation for dealing in specific ways with unforeseen contingencies. Hermalin (2001) refers to culture as “an unspoken language giving directives to the members of an organization.” Cremer (1993) defines culture as “a common stock of knowledge” within organizations. Lazear (1995) refers to culture as “shared beliefs, values and technology.”

The economics literature on culture generally, and on corporate culture in particular, focuses on how culture facilitates economic activity. North (1990) views culture “as rules of the game which provide the informal constraints on human interaction.” These constraints facilitate economic activity by reducing various transaction costs, including bargaining costs, agency costs, coordination costs, and the costs of communication. Corporate culture typically is viewed as a substitute for formal contracts that allows employees to form expectations about the likely behavior of others within an organization.

Kreps (1990) and Hermalin (2001) emphasize the role that trust plays in protecting employees from abuses of authority within organizations. Modeled in a repeated game setting, they show that trust facilitates coordination of production in a world of unforeseen contingencies. By enhancing confidence in the expected responses of other members of an organization in a world of unforeseen contingencies, corporate culture strengthens the *ex ante* incentives of members of an organization to engage in productive activity. Kreps (1990, p. 126) writes that “corporate culture...gives hierarchical inferiors an idea *ex ante* how the organization will react to circumstances as they arise; in a strong sense it gives identity to the organization.”

Mergers and acquisitions, especially large mergers and acquisitions, pose a threat to an acquiring firm's culture, as there is no assurance that the employees of the target firm subscribe to the same set of norms and expectations as do the employees of the acquiring company. This appears especially so for acquiring firms in which there is a high degree of trust between employees and management, given that trust develops over time based on the historical experiences that employees and management have with each other. Obviously, the employees of an acquired firm have no historical experience with the acquiring firm's management, which makes it unlikely that they can have the same level of trust in management as do the employees of the acquiring firm. Furthermore, insofar that eliminating redundancies is a potential source of value in mergers and acquisitions, employees of both the acquired and acquiring firms, wary of losing their positions, are likely to become less trustful of the acquiring firm's management.

The unique issues that mergers and acquisitions pose for acquiring firms in which a culture of trust between employees and management exists leads to two predictions.

First, we predict that SCT firms engage in less M&A activity than other firms. If M&A carries the risk of disrupting trust between employees and management, thereby diminishing the value of this asset, then, all else equal, SCT firms face a larger expected loss from acquisitions than do other firms. There are many highly publicized cases of acquisitions that purportedly were associated

with significant disruptions of the acquiring firms' cultures generally, including AOL's acquisition of Time Warner in 2001. Ryan (2010, p. 2) refers to the AOL Time Warner deal as "the most visible failure of corporate culture clashes to bring down a company." AOL, which was ranked No. 51 in 2000 by GPWI, fell off the GPWI list immediately after it acquired Time Warner and to date AOL has not re-appeared on the list. For this reason, all else equal, we predict that SCT firms engage in fewer mergers and acquisitions than other firms.

Second, we predict that the relative size of acquisitions is smaller for SCT firms than it is for other firms. As discussed above, the integration issues associated with mergers and acquisitions pose a risk to the acquiring firms' corporate culture and we presume this risk varies directly with the size of the acquisition. Harris Consulting states that "an acquisition of a significant size...will have a material impact on the culture of the acquiring company, whether or not it is intended."⁶ It further states that Cisco System uses a measure of 25% of its size to determine whether an acquisition is likely to have an effect on its culture. Until recently, Cisco was known for consistently making relatively small acquisitions involving companies with 70–100 employees, often referred to as "the Cisco Kids." Anecdotally, highly publicized mergers that supposedly disrupted the acquiring firms' culture typically involve large acquisitions (e.g., AOL-Time Warner, Daimler-Chrysler, Compaq-Digital Equipment). Hence, we predict that the relative size of acquisitions made by SCT firms is smaller than that of other firms.

3. Sample and data

To identify companies with "strong" cultures of trust, we collected data on the annual rankings of companies on GPWI's list of the *Best Companies to Work For in America* during the period of 1998–2011. As discussed earlier, the GPWI evaluates the quality of a company's work environment by conducting a Trust Index survey of a randomly selected group of employees and a Culture Audit based on discussions with management of the participating companies. The GPWI sporadically issued rankings of the "best companies to work for" from 1984 to 1997, and began issuing annual rankings every year in 1998. We identified all companies listed at least once on its annual list of the 100 *Best Companies to Work For in America* during 1998–2011, resulting in an initial sample of 278 firms, of which 183 have valid identifiers in CRSP and Compustat. The 183 firms appear on the list for a total of 698 firm-years. We use this entire sample for some of the analysis that follows.

Many of the firms in the initial sample appear only once or irregularly on the GPWI lists, suggesting that these firms did not have strong cultures of trust for sustained periods. Consequently, we defined a subsample of 80 firms that appeared on the GPWI annual rankings for a sustained period during 1998–2011. To qualify for the subsample, we first identified all firms that appeared on the annual rankings for at least 3 years within a 4 year period. We further require that the firms are incorporated in the U.S. and that CRSP and Compustat data are available. This resulted in a sample of 80 companies, including five companies that appeared on the list for each of the 14 years during the sample period—Cisco Systems, Goldman Sachs, Marriott Intl., Nordstrom, and Whole Foods.

For each of the 80 companies, we identified the period over which they were regularly on the GPWI list. In cases where companies were on the list for several consecutive years and otherwise did not appear on the list, we defined their sustained period as the years on the list. In other cases, companies were on the list for a certain number of consecutive years, fell off the list, and then returned to the list at a later date. For these companies, we defined the sustained period as the earliest year they were on the list through the last year they were on the list, as long as no more than 3 years elapsed from the times they appeared on the list. For example, Microsoft appeared on the list in 1998, it was off the list in 1999, and then it appeared on the list in every year between 2000 and 2011. Even though it was off the list in 1998, we define the sustained period on the list for Microsoft to be from 1998 through 2011. Because the GPWI list is released in January of each year, we denote the list year of the firm as the year prior to the January release. For example, the relevant period for Microsoft is converted to 1997 through 2010.

We confine much of the analysis that follows to this sub-sample of companies, on grounds that these companies sustained a strong culture of trust over several years, at least according to the criteria used by the GPWI. For each of these companies we identified two matched firms with CRSP and Compustat data over the relevant period, one within the same four-digit SIC code and the other within the same GICS sub-industry code.⁷ In both cases, we chose the firm within the same SIC or GICS code that was incorporated in the U.S. and closest in size, as measured by the market value of the firms' assets, to the respective SCT firm.⁸ We define market value of assets as the sum of (i) the book value of assets less the book value of equity and (ii) the market value of common equity. In most of the tables that follow, we separately report the results for the SCT firms versus each of the two matched samples.

Table 1 lists the 80 firms that appeared on the GPWI's annual rankings of *Best Companies to Work For in America* for sustained periods, along with the years they appeared on the lists and their corresponding matches. In addition to the five companies that appeared on the list in every year over the sample period, several companies appeared consistently on the list, including three that were on the list 13 times (AFLAC, J.M. Smucker, and Microsoft), four that were on the list 12 times (Adobe Systems, National Instruments, Qualcomm, and Starbucks), two that were on the list 11 times (American Express and Federal Express), and seven that were on the list 10 times (Genentech, Intel, Intuit, Men's Wearhouse, SRA International, Texas Instruments, and Timberland). We were unable to

⁶ "Cultural Integration Process for Mergers and Acquisitions," www.harrisconsult.com.

⁷ The GICS match for Harley-Davidson is drawn from the industry level.

⁸ Narrower industry definitions such as four-digit SIC codes increase the similarity between the strong culture and matching firms. A disadvantage of using the narrow definitions is that the pool of companies from which to draw a match firm is often small, which frequently results in matched firms that differ substantially in size from the strong culture firms. In a previous version of the paper, we also used two-digit SIC codes to identify matching firms. Based on comments received at the NBER Conference on Causes and Consequences of Corporate Culture we replaced the two-digit SIC code matches with matches based on the GICS classification, which, according to Bhojraj, Lee, and Oler (p. 749), "provides a better technique for identifying industrial peers." The results using two-digit SIC codes are similar to the results presented in the present paper.

Table 1

List of SCT firms and matching firms.

The first column lists the names of the 80 SCT firms in our sample. SCT firms are defined as firms in the annual rankings of *Best Companies to Work For in America* for at least 3 years in a 5 year period with no more than a 1 year gap in the rankings. The second column lists the period during which each of these firms was in the rankings with no more than a 2 year gap. The third and fourth columns list the matching firm based on four-digit SIC code and GICS sub-industry code matches, respectively. Each SCT is matched without replacement to the firm within the SIC or GICS industry that is closest in terms of market value of assets, defined as the book value of assets minus the book value of equity plus the market value of equity.

Strong culture firm	Time period	Matching firm (SIC)	Matching firm (GICS)
Acxiom	1997–2002	CSG Systems Intl.	Gartner
Adobe Systems	1997–2010	Sungard Data Systems	CA
AFLAC	1998–2010	CNO Financial Group	CNO Financial Group
Agilent Technologies	2000–2002	Teradyne	Checkpoint Systems
American Express	1999–2010	Citigroup	HSBC Finance
American Management Systems	1997–2000	Voyager Learning	Ciber
Amgen	1997–2006	Medimmune	Gilead Sciences
Arbitron	2001–2004	Gartner	Laureate Education
Build-a-Bear Workshop	2008–2010	A.C. Moore Arts & Crafts	Books-a-Million
Camden Property Trust	2007–2010	Alexandria Re Equities	UDR
Capital One Financial	1998–2001	Metris Companies	Provident Financial
Carmax	2004–2010	Sonic Automotive	Penske Automotive Group
CDW	1999–2006	NutriSystem	Tech Data
Chesapeake Energy	2007–2010	Noble Energy	Anadarko Petroleum
Cisco Systems	1997–2010	Emulex	Harris
Continental Airlines	1998–2003	USAirways Group	Alaska Air Group
Devon Energy	2007–2010	Apache	Apache
Dreamworks Animation	2008–2010	World Wrestling Entertainment	Regal Entertainment Group
Edwards (A.G.)	1997–2006	SWS Group	Jefferies Group
EOG Resources	2006–2010	Enterprise Prods Partners	Noble Energy
Factset Research Systems	2007–2010	WebMD Health	Cadence Design Systems
Federal National Mortgage Association	1997–2003	Federal Home Loan Mortgage	Federal Home Loan Mortgage
Federal Express	1997–2009	Air T	Expeditors Int'l of Washington
First Horizon National	2004–2006	TD Banknorth	Huntington Bancshares
Genentech	1999–2008	Wyeth	Biogen Idec
General Mills	2003–2010	Kellogg	Kellogg
Goldman Sachs	1999–2010	Morgan Stanley	Morgan Stanley
Google	2006–2008	Virtusa	Akamai Technologies
Granite Construction	2003–2007	Great Lakes Dredge & Dock	Quanta Services
Guidant	1999–2004	Becton Dickinson	Boston Scientific
Harley-Davidson	1997–2004	N/A	Winnipeg Industries
Hewlett-Packard	1997–2000	Scientific Games	NCR
Hot Topic	2003–2005	Eddie Bauer Holdings	Finish Line
Intel	1997–2005	Zilog	Maxim Integrated Products
Intuit	2001–2010	Citrix Systems	Citrix Systems
Johnson & Johnson	1997–2001	Bristol-Myers Squibb	Bristol-Myers Squibb
Lands End	1997–2001	Hanover Direct	Insight Enterprises
Lilly (Eli)	1999–2005	Abbott Laboratories	Abbott Laboratories
Marriott Intl.	1997–2010	Starwood Hotels & Resorts	Gaylord Entertainment
Mattel	2007–2010	Jakks Pacific	Brunswick
MBNA	1997–2004	BB&T	Student Loan
Medtronic	1997–2006	St. Jude Medical	Becton Dickinson
Mens Wearhouse	1999–2010	Childrens Place Retail Stores	AnnTaylor Stores
Merck	1997–2003	Schering-Plough	Watson Pharmaceuticals
Microsoft	1997–2010	Oracle	Oracle
Miller (Herman)	2007–2009	N/A	United Stationers
National Instruments	1999–2010	Parametric Technology	Flir Systems
Netapp	2002–2010	Sandisk	Sandisk
Nike	2005–2007	Lacrosse Footwear	K-Swiss
Nordstrom	1997–2010	Ross Stores	Dillard's
Nustar Energy	2008–2010	Tesoro	Tesoro
Parkway Properties	2007–2009	U-Store-It Trust	Mission West Properties
Paychex	2001–2009	Resources Connection	Computer Sciences
Pfizer	1999–2004	Forest Laboratories	Forest Laboratories
Principal Financial Group	2002–2008	Lincoln National	Lincoln National
Procter & Gamble	2001–2006	Church & Dwight	Clorox
Qualcomm	1999–2010	L-3 Communication Holdings	JDSS Uniphase
Republic Bancorp (Ky.)	1999–2005	IberiaBank	Old Second Bancorp
Salesforce.com	2008–2010	McAfee	Nuance Communications
Schwab (Charles)	1999–2002	E Trade Financial	SLM
SEI Investments	2000–2004	Nuveen Investments	Federated Investors
Sherwin-Williams	2004–2007	Valspar	Home Depot
Smucker (J.M.)	1997–2010	Seneca Foods	Flowers Foods
Southwest Airlines	1997–2000	Northwest Airlines	US Airways Group
SRA International	1999–2008	Incyte	CACI International

(continued on next page)

Table 1 (continued)

Strong culture firm	Time period	Matching firm (SIC)	Matching firm (GICS)
Starbucks	1997–2010	Yum Brands	Yum Brands
Station Casinos	2004–2007	Boyd Gaming	Penn National Gaming
Sterling Banks	2002–2004	Annapolis Bancorp	First West Virginia Bancorp
Sun Microsystems	1997–2002	Gateway	Apple
Synovus Financial	1997–2006	Compass Bancshares	Zions Bancorporation
Texas Instruments	1997–2008	Micron Technology	Micron Technology
Timberland	1997–2006	Wolverine World Wide	Wolverine World Wide
Ultimate Software Group	2004–2008	Deltek	Ulticom
Umpqua Holdings	2006–2010	United Community Banks	Old National Bancorp
Valassis Communications	1997–2005	Catalina Marketing	Harte Hanks
Wal-Mart Stores	1998–2001	Target	Target
Washington Mutual	2002–2005	Golden West Financial	Santander Holdings USA
Whole Foods Market	1997–2010	Great Atlantic & Pacific Tea	Great Atlantic & Pacific Tea
Xilinx	2000–2004	Linear Technology	Linear Technology
Yahoo	2005–2007	Electronic Data Systems	Verisign

identify a matched firm in the same four-digit SIC code for two firms, Harley Davidson, Inc. and Herman Miller, Inc. A GICS code match was identified for all 80 firms. In only 19 of the 80 cases, the four-digit SIC match and the GICS match were identical.

Table 2 contains summary statistics for the 80 SCT firms and the two match samples. All variables are measured as the median value over the respective periods that the SCT firms and their corresponding matches appeared on the GPWI lists. All variables denominated in dollars (as opposed to ratios) are indexed to 2010 prices.

The mean book and market values of assets for the SCT firms are approximately \$35.6 billion and \$63.5 billion, respectively, as compared to \$43.6 billion and \$52.8 billion, respectively, for the SIC matches, and \$25.3 billion and \$32.5 billion, respectively, for the GICS matches.⁹ The difference in the mean values of the two variables across the SCT sample and the two matched samples are not significant at the 0.05 level. However, the mean values of both variables are substantially different from the median values, due to the effects of a few outliers. The median book and market values of assets for the strong culture firms are \$5.0 billion and \$13.9 billion, respectively, versus \$3.0 billion and \$6.5 billion, respectively, for the SIC matches and \$3.6 billion and \$6.4 billion, respectively, for the GICS matches. The two median values are significantly larger for the SCT firms *vis-à-vis* the SIC matches. The median market value of assets, but not the median book value of assets, is significantly larger for the SCT firms versus the GICS matches.

A striking difference exists in the mean and median ratio of the market to book value of assets (i.e., “the market-to-book ratio”) between the SCT firms and the two matched samples. The mean and median market-to-book ratios for the SCT firms are 2.97 and 2.60, respectively, as compared with 2.25 and 1.64, respectively, for the SIC matches and 2.19 and 1.60, respectively for the GICS matches. The differences in the mean and median values across the SCT sample and the two matched samples are significant at the 0.05 level. This result prompts an interesting but thorny issue—do strong cultures of trust cause higher market-to-book ratios or do higher market-to-book ratios cause strong cultures of trust? Of course, causality also could run both ways, and it is possible that another variable or variables jointly determine both market-to-book ratios and cultures of trust. Although it is beyond the scope of this paper to address these causality issues, we are sensitive to them and attempt to deal with them at a high level in the tests that follow.

We also find that the mean and median ratios of operating income to the book value of assets (“operating income”) are significantly higher for the SCT firms versus the two matched samples. The mean and median values of this ratio for the SCT firms are 0.179 and 0.177, respectively, as compared with 0.127 and 0.117, respectively for the SIC matches and 0.133 and 0.124, respectively, for the GICS matches. The differences in the mean and median values are both economically and statistically significant across the SCT and two matched samples. The fact that the SCT firms are more profitable than the matched samples presumably accounts, at least in part, for the significant differences in the market-to-book ratios across the SCT and matched samples. It also raises a similar question—does a strong culture of trust increase profitability or do higher profits improve a firm’s culture of trust? Here, too, causality could run both ways, or another variable (or variables) might be leading to both higher profitability and a strong culture. As with market-to-book ratios, we do not attempt to tackle these causality issues in this paper, but we are sensitive to these issues in the interpretation of the empirical tests.

Table 2 also shows that the SCT firms are significantly less leveraged than the two matched samples. The mean and median ratios of debt, defined as the book value of short-term plus long-term debt, to the book value of assets are 0.181 and 0.116, respectively for the SCT firms, versus 0.266 and 0.190 for the SIC matches and 0.234 and 0.185, respectively for the GICS matches. The differences in the leverage of the SCT firms and the two matched samples appear to be economically as well as statistically significant. This finding also raises interesting questions about the relation between trust and capital structure. Does trust between employees and management affect the debt policies of companies or does a company’s leverage affect this trust? Perhaps trust between employees and management indirectly affects a company’s leverage in the following way. If a strong culture of trust causes higher profitability, then, under the pecking order theory, SCT firms would have less leverage. Similarly, we know that the market-to-book ratios of SCT firms are significantly higher than the corresponding market-to-book ratios of the two matched samples and that an inverse relation exists between leverage and market-to-book ratios (Smith and Watts (1992)). Perhaps firms with greater growth opportunities

⁹ Throughout the paper, we quote statistics for the SCT sample based on the 80 firms included in Panel B in Table 2.

Table 2

Attributes of SCT and matched firms.

Panel A reports summary statistics for the SCT firms and the matching firms based on the SIC code matched sample. Panel B reports the summary statistics based on the GICS matched sample. The values are calculated from yearly data in Compustat. First, we calculate the median value of the variable for each firm during the relevant strong culture time period. We then report the median values of these firm medians across all firms in the respective subsample. Assets is the book value of assets. MVA is the book value of assets minus the book value of equity plus the market value of equity. MVE is the market value of equity. All dollar values are inflation adjusted to 2010 dollars based on the Consumer Price Index. Market-to-book is the market value of assets divided by the book value of assets. R&D is the research and development expense divided by the book value of assets (zero is reported when R&D is missing from Compustat). Debt is the long term debt plus the short term debt divided by the book value of assets. Operating income is the operating income before depreciation divided by the book value of assets. The last two columns report *p*-values resulting from difference in means and Wilcoxon rank-sum tests between the two groups. *P*-values denoted by ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

Panel A: SIC matching					SIC match firms				Diff. means	
Strong trust firms									Ranksum	
Variable	N	Mean	Median	St. Dev.	N	Mean	Median	St. Dev.	<i>p</i> -Value	<i>p</i> -Value
Assets	78	36,456	6,694	107,660	78	43,647	2,957	191,643	0.773	0.020**
MVA	78	64,929	13,977	125,886	78	52,769	6,488	205,172	0.656	0.002***
MVE	78	34,743	10,125	57,135	78	13,305	2,461	31,126	0.004***	0.000***
Market-to-book	78	2.9597	2.5612	1.8031	78	2.2502	1.6445	1.6535	0.011**	0.003***
Operating income	76	0.1749	0.1700	0.1152	76	0.1265	0.1167	0.1035	0.007***	0.010***
Debt	78	0.1759	0.1079	0.2087	77	0.2660	0.1899	0.2552	0.017**	0.008***
R&D	78	0.0409	0.0000	0.0582	78	0.0322	0.0000	0.0580	0.350	0.143

Panel B: GICS matching					GICS match firms				Diff. means	
Strong trust firms									Ranksum	
Variable	N	Mean	Median	St. Dev.	N	Mean	Median	St. Dev.	<i>p</i> -Value	<i>p</i> -Value
Assets	80	35,554	4,989	106,434	80	25,341	3,570	95,088	0.523	0.142
MVA	80	63,458	13,940	124,620	80	32,495	6,376	96,828	0.081*	0.009***
MVE	80	34,040	10,125	56,586	80	11,027	3,457	21,046	0.001***	0.001***
Market-to-book	80	2.9717	2.5971	1.7852	80	2.1893	1.5984	1.5413	0.004***	0.001***
Operating income	78	0.1786	0.1766	0.1160	79	0.1331	0.1237	0.0893	0.007***	0.012**
Debt	80	0.1812	0.1156	0.2101	80	0.2338	0.1853	0.2244	0.128	0.042**
R&D	80	0.0409	0.0000	0.0575	80	0.0255	0.0000	0.0450	0.060*	0.072*

have both higher market-to-book ratios and strong cultures of trust because of the importance of human capital for high growth companies. If so, then the lower leverage of companies with strong cultures of trust might “simply” reflect these higher growth opportunities. Again, we do not directly address these issues in this paper, but we are sensitive to them in making inferences from the analysis that follows.

4. Empirical results on relation between trust and M&A policies

In this section we report results from empirical tests relating trust between employees and management to two dimensions of companies' M&A policies—(i) the volume of M&A activity and (ii) the relative size of acquisitions.

4.1. Trust and the volume of M&A activity

We first test whether the volume of M&A activity differs significantly for the SCT firms as compared with the matched firms. To measure the volume of M&A activity, we collected data from Securities Data Corporation's M&A Database (i.e., “SDC”) for each of the 80 firms in the SCT sample and the two corresponding matched samples over the periods that the SCT firms appeared regularly on the GPWI lists. Table 3 reports the data and the results from univariate tests of whether the volume of M&A activity is different for SCT firms versus the matched samples.

Table 3 shows that the SCT firms announced a total of 940 acquisitions during the period over which they appeared on the GPWI lists, which is substantially more than the 638 acquisitions announced by the SIC matched sample and the 696 acquisitions announced by the GICS matched sample during the corresponding period.¹⁰ The SDC database listed the value of the acquisitions in 45.0% of the cases for the SCT firms and in 48.3% and 46.8% of the cases for the SIC and GICS matched samples, respectively. For those acquisitions with deal values, the aggregate value of announced acquisitions was \$570.2 billion for the SCT firms as compared with \$339.4 billion and \$303.1 billion for the SIC and GICS matched samples, respectively.

The univariate tests reveal no significant differences in the mean and median deal values for the SCT firms versus the two matched samples. For example, the median total deal value for the SCT firms is \$156 million, versus \$186 million and \$129 million for the SIC and GICS matched samples, respectively. The mean total deal values are substantially higher for the three samples, indicating that some firms in all three samples made very large acquisitions.

Table 3 reveals that the average number of acquisition announcements per firm-year for the SCT firms, 1.65, is significantly higher than the corresponding number for both the SIC (1.14) and GICS matches (1.22). Similarly, a rank-sum test reveals that the average

¹⁰ We replicated the tests discussed in this section by including only completed mergers and acquisitions, as opposed to announced mergers and acquisitions. The results are similar to those reported in this section.

Table 3

Volume of M&A activity for SCT versus matching firms.

Panel A reports summary statistics on total deal activity for the SCT firms and the matching firms for both the SIC matching sample and the GICS matching sample. Number of deals is the total number of M&A transactions listed in the SDC database for all firms during the relevant strong culture time period. Number with deal value is the total number of deals for which SDC reports a deal value. Percentage of deals with value is the percentage of deals for which SDC reports a deal value. Total value of deals is the sum of the reported deal values denoted in \$millions. Panel B reports average deal activity for the strong culture firms and the matching firms for both the SIC matching sample and the GICS matching sample. Avg. deal value is the mean deal value, denoted in \$million, of all deals in the subsample. Avg. firm-year number of deals is the mean of the number of deals per firm-year. Avg. firm-year deal value is the mean of the mean deal value per firm-year, denoted in \$million. Percent of firms with a deal is the percentage of firms that announce at least one M&A deal during the relevant strong culture time period. Percent of firm-years with a deal is the percentage of firm-years in which a firm announces at least one M&A deal. All dollar values are inflation adjusted to 2010 dollars based on the Consumer Price Index. The last two columns of Panel B report *p*-values resulting from difference in means and Wilcoxon rank-sum tests between the two groups. *p*-Values denoted by ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

<i>Panel A: Total deal activity</i>		Strong trust firms		SIC match firms			
Variable		Total		Total			
Number of deals		936		638			
Number with deal value		423		308			
Percentage of deals with value		45.2%		48.3%			
Total value of deals (\$millions)		570,159		339,421			
		Strong trust firms		GICS match firms			
Variable		Total		Total			
Number of deals		940		696			
Number with deal value		423		326			
Percentage of deals with value		45.0%		46.8%			
Total value of deals (\$millions)		570,159		303,118			
<i>Panel B: Average deal activity</i>		Strong trust firms		SIC match firms		Diff. means	Ranksum
Variable		Mean	Median	Mean	Median	<i>p</i> -Value	<i>p</i> -Value
Avg. deal value (\$millions)		1,348	156	1,102	186	0.649	0.234
Avg. firm-year number of deals		1.6714	1	1.1393	0	0.001***	0.000***
Avg. firm-year deal value (\$millions)		2,781	296	2,082	352	0.512	0.565
Percent of firms with a deal		79.5%	100.0%	79.5%	100.0%	1.000	1.000
Percent of firm-years with a deal		53.9%	100.0%	41.8%	0.0%	0.000***	0.000***
		Strong trust firms		GICS match firms		Diff. means	Ranksum
Variable		Mean	Median	Mean	Median	<i>p</i> -Value	<i>p</i> -Value
Avg. deal value (\$millions)		1,348	156	930	129	0.371	0.186
Avg. firm-year number of deals		1.6462	1	1.2189	0	0.005***	0.014**
Avg. firm-year deal value (\$millions)		2,781	296	1,554	247	0.173	0.096*
Percent of firms with deal		80.0%	100.0%	77.5%	100.0%	0.701	0.700
Percent of firm-years with deal		53.6%	100.0%	45.7%	0.0%	0.008***	0.008***

number of acquisition announcements per firm-year for the SCT sample is significantly greater than the average number for both matched samples. No significant difference exists in the average total value of acquisition per firm-year announced by the SCT firms versus the two matched samples.

We also calculated the percentage of firms in each of the three samples that completed at least one acquisition during the relevant periods and the percentage of firm-years in which the three samples completed at least one acquisition. No significant difference exists in the percentage of firms completing at least one acquisition over the relevant period—this percentage is 80.0% for the SCT firms versus 79.5% and 77.5% for the SIC and GICS matched samples, respectively. However, the percentage of firm-years in which the SCT firms completed at least one acquisition, 53.6%, is significantly larger than the corresponding percentages for the SIC (41.8%) and GICS (45.7%) matched samples.

In summary, the data in Table 3 reveal that SCT firms announced significantly more acquisitions per annum than the two matched samples and that there was a significantly greater probability that they would announce an acquisition in a given firm-year than the two matched samples. Noting that the SCT firms differ significantly from the matched samples in several respects that might be associated with the volume of M&A activity (e.g., market-to-book ratios, operating income), we conducted multivariate analysis to test the relation between the volume of M&A activity and trust. The results from this analysis are contained in Table 4.

Table 4 contains two panels of results, Panel A in which the units of analysis are firms and Panel B in which the units of analysis are firm-years. In both panels for each matched sample we estimate three specifications with different dependent variables. In Panel A, we estimate (i) a tobit model in which the dependent variable is the natural log of the total number of acquisitions announced by the companies over their respective relevant periods; (ii) an OLS model in which the dependent variable is the natural log of the aggregate value of acquisitions announced by the companies over their relevant periods; and (iii) a logit model in which the dependent variable takes the value of one if the firm announced at least one acquisition over its respective period and 0 otherwise. As independent variables, we include a dummy variable that takes the value of one if the firm is an SCT firm and zero otherwise, as well as several

Table 4

Multivariate analysis of M&A activity.

Panel A analyzes deal activity per firm over the entire relevant time period and Panel B analyzes activity by firm-year. Each panel consists of three models for the SIC matches and three models for the GICS matches. Model (1) is a Tobit regression with the log of the number of M&A deals plus one as the dependent variable. Model (2) is an OLS regression with the log of the total dollar value of M&A deals as the dependent variable, excluding all observations with no M&A deals. Model (3) is a logistic regression with an indicator variable equal to one if the period included an M&A deal as the dependent variable. Time period years is the number of years the firm is in the sample. All continuous variables are winsorized at 0.01 and 0.99. The standard errors are clustered by firm. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

Variables	SIC match			GICS match		
	(1)	(2)	(3)	(4)	(5)	(6)
	Tobit	OLS	Logit	Tobit	OLS	Logit
	Log num deals	Log deal value	Deal dummy	Log num deals	Log deal value	Deal dummy
<i>Panel A: Firm analysis</i>						
Strong trust	−0.145 [0.463]	−0.716** [0.021]	−0.380 [0.511]	−0.266 [0.202]	−0.801*** [0.007]	−0.164 [0.737]
Bidder log MVA	0.325*** [0.000]	0.875*** [0.000]	0.460*** [0.004]	0.323*** [0.000]	0.816*** [0.000]	0.437*** [0.003]
Bidder market-to-book	0.116 [0.120]	0.037 [0.701]	0.221 [0.356]	0.104 [0.181]	0.187** [0.028]	0.216 [0.369]
Bidder operating income	−0.417 [0.710]	1.690 [0.349]	−1.827 [0.539]	0.592 [0.600]	−0.142 [0.933]	−1.150 [0.680]
Bidder debt	−0.273 [0.553]	−0.360 [0.633]	0.454 [0.724]	−0.737 [0.189]	−0.751 [0.418]	−0.105 [0.944]
Time period years	0.154*** [0.000]	0.113*** [0.006]	0.292*** [0.000]	0.132*** [0.000]	0.127*** [0.002]	0.147*** [0.022]
Constant	−7.253*** [0.000]	−0.613 [0.770]	−11.006*** [0.002]	−6.978*** [0.000]	0.658 [0.766]	−9.808*** [0.003]
Observations	151	107	151	157	115	157
Pseudo R-squared	0.172		0.225	0.121		0.140
Adjusted R-squared		0.523			0.426	
<i>Panel B: Firm-year analysis</i>						
Strong trust	−0.047 [0.762]	−0.545*** [0.007]	0.002 [0.993]	−0.158 [0.293]	−0.338* [0.085]	−0.135 [0.569]
Bidder log MVA	0.274*** [0.000]	0.413*** [0.000]	0.362*** [0.000]	0.253*** [0.000]	0.445*** [0.000]	0.326*** [0.000]
Bidder market-to-book	0.040 [0.147]	0.064 [0.129]	0.090* [0.064]	0.047 [0.148]	0.072* [0.091]	0.089 [0.134]
Bidder operating income	0.557 [0.382]	−0.276 [0.760]	0.583 [0.539]	0.720 [0.302]	0.061 [0.950]	0.786 [0.471]
Bidder debt	−0.491 [0.172]	−0.245 [0.682]	−0.668 [0.237]	−0.716** [0.040]	−0.255 [0.701]	−0.878* [0.097]
Constant	−6.361*** [0.000]	9.901*** [0.000]	−8.691*** [0.000]	−5.788*** [0.000]	8.816*** [0.000]	−7.716*** [0.000]
Observations	1,078	364	1,078	1,109	396	1,109
Pseudo R-squared	0.0825		0.0953	0.0600		0.0647
Adjusted R-squared		0.171			0.160	

control variables, all measured as median values over the relevant period.¹¹ We estimate similar models in Panel B in which the relevant variables are measured at the firm-year level.

The table shows that the coefficient on the dummy variable for the SCT firms enters with a negative coefficient in all equations of Panel A and it is significant at the 0.05 level in two of the specifications.¹² The market value of assets enters all equations with a positive coefficient that is significant at the 0.01 level, indicating a direct relation between firm size and the volume of M&A activity. Similar results, albeit slightly weaker, are reported in Panel B. As expected, in Panel A, the number of years in the relevant period also enters with a positive and significant coefficient. In short, no robust relation exists between trust between employees and management and the volume of M&A activity after controlling for firm size.

¹¹ Malmendier and Tate (2008) estimate a logit model in which the dependent variable takes the value of 1 if a firm makes an acquisition in a given year. Although their research question is different than ours, they include similar independent variables, including Tobin's q, the ratio of earnings before extraordinary items plus depreciation to capital, and several corporate governance variables.

¹² We replicated the results reported in Table 4 by replacing the SCT dummy variable with the firms' GPWI rankings. Because rankings are available only for firms on the GPWI list, this analysis could be conducted only on the subset of SCT firms. The coefficient on the GPWI ranking was not significant in any of the equations. The results are consistent with comments we received from Marcus Erb of GPWI, who stated that the difference in corporate culture between firms on the GPWI list and those not on the list is greater than the difference in corporate culture among firms on the GPWI list. We also replicated the results reported below in Tables 6 and 9 by replacing the strong culture dummy variable with the firms' GPWI rankings and generally find similar results.

Table 5

Relative size analysis for SCT firms and matching firms.

The table reports summary statistics for the relative size of M&A deals for the SCT firms and the matching firms. Panels A, B, and C analyze the data at the firm level, firm-year level and deal level, respectively, for the SIC matches. Panels D, E, and F do the same analysis for the GICS matches. Relative size is defined as the deal value (from SDC) divided by the bidder MVA. Relative size > 0.05 dummy is an indicator variable equal to one if relative size is greater than 0.05 and zero otherwise. For the firm and firm-year analysis the value of the variable is the median value over the period. The last two columns report *p*-values resulting from difference in means and Wilcoxon rank-sum tests between the two groups. *p*-Values denoted by ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

Variable	Strong trust firms				SIC match firms				Diff. means	Ranksum
	N	Mean	Median	St. Dev	N	Mean	Median	St. Dev	<i>p</i> -Value	<i>p</i> -Value
<i>Panel A: Firms as unit of analysis</i>										
Relative size	55	0.0241	0.0063	0.0771	52	0.0700	0.0203	0.1636	0.064*	0.000***
Relative size > 0.05 dummy	55	0.3455	0	0.4799	52	0.5577	1	0.5015	0.027**	0.028**
<i>Panel B: Firm-years as unit of analysis</i>										
Relative size	203	0.0321	0.0040	0.1006	163	0.0457	0.0147	0.1105	0.221	0.000***
Relative size > 0.05 dummy	203	0.1527	0	0.3606	163	0.3252	0	0.4699	0.000***	0.000***
<i>Panel C: Deals as unit of analysis</i>										
Relative size	419	0.0201	0.0019	0.0733	306	0.0401	0.0087	0.1096	0.003***	0.000***
Relative size > 0.05 dummy	419	0.0764	0	0.2659	306	0.1863	0	0.3900	0.000***	0.000***
<i>Panel D: Firms as unit of analysis</i>										
Relative size	55	0.0241	0.0063	0.0771	59	0.0430	0.0163	0.0715	0.175	0.002***
Relative size > 0.05 dummy	55	0.3455	0	0.4799	59	0.6102	1	0.4919	0.004***	0.005***
<i>Panel E: Firm-years as unit of analysis</i>										
Relative size	203	0.0321	0.0040	0.1006	194	0.0540	0.0134	0.1449	0.080*	0.000***
Relative size > 0.05 dummy	203	0.1527	0	0.3606	194	0.3196	0	0.4675	0.000***	0.000***
<i>Panel F: Deals as unit of analysis</i>										
Relative size	419	0.0201	0.0019	0.0733	323	0.0538	0.0106	0.1887	0.001***	0.000***
Relative size > 0.05 dummy	419	0.0764	0	0.2659	323	0.2074	0	0.4061	0.000***	0.000***

4.2. Trust and the relative size of acquisitions

To test the prediction that SCT firms announce relatively small acquisitions as compared with other firms, we created a variable, relative size, which is the value of the acquisition, taken from the SDC database for deals in which SDC has a value, divided by the acquiring firm's market value of assets based on the most recent data in the Compustat database prior to the acquisition announcement.

Table 6

Multivariate analysis of the relative size of M&A transactions.

The table reports OLS regressions for SCT and matching firms. The dependent variable is log of deal value. Models (1) and (2) analyze firm medians, models (3) and (4) analyze firm-year medians, and models (5) and (6) analyze deals. Models (1), (3) and (5) use the SIC matched sample and models (2), (4) and (6) use the GICS matched sample. Foreign target is an indicator variable equal to one if the target firm in the M&A deal is not incorporated in the U.S. and zero otherwise. The remaining variables are as defined in prior tables. All continuous variables are winsorized at 0.01 and 0.99. The standard errors are clustered by firm. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

Variables	Firm analysis		Firm-year analysis		Deal analysis	
	SIC match	GICS match	SIC match	GICS match	SIC match	GICS match
	(1)	(2)	(3)	(4)	(5)	(6)
	Log median deal value	Log median deal value	Log median deal value	Log median deal value	Log deal value	Log deal value
Strong trust	−0.647** [0.019]	−0.363 [0.173]	−0.419** [0.039]	−0.306 [0.148]	−0.519*** [0.006]	−0.423** [0.034]
Foreign target	0.189 [0.773]	−0.968* [0.074]	−1.086*** [0.001]	−1.119*** [0.000]	−1.188*** [0.000]	−1.191*** [0.000]
Log bidder MVA	0.445*** [0.000]	0.511*** [0.000]	0.356*** [0.000]	0.376*** [0.000]	0.307*** [0.000]	0.318*** [0.000]
Bidder market-to-book	0.018 [0.858]	−0.028 [0.752]	0.054 [0.283]	0.045 [0.345]	0.035 [0.140]	0.034 [0.190]
Bidder operating income	−0.580 [0.727]	−0.501 [0.737]	−0.185 [0.850]	0.127 [0.902]	0.220 [0.769]	0.662 [0.380]
Bidder debt	−0.198 [0.756]	0.011 [0.986]	0.373 [0.550]	0.700 [0.293]	0.337 [0.619]	0.851 [0.255]
Constant	8.966*** [0.000]	7.444*** [0.000]	10.726*** [0.000]	10.042*** [0.000]	11.639*** [0.000]	11.116*** [0.000]
Observations	107	115	364	396	719	736
Adjusted R-squared	0.283	0.263	0.147	0.143	0.127	0.119

Table 5 reports univariate data on relative size for the SCT firms and the two matched samples. It also reports the percentage of firms in each sample that announced relatively large acquisitions, defined as acquisitions in which relative size is greater than or equal to 0.05.

The evidence reported in Table 5 supports the prediction that SCT firms announce relatively small acquisitions. In Panel A of Table 5, the mean and median values of relative size for the SCT firms are 0.024 and 0.006, respectively, as compared with 0.070 and 0.020, respectively for the SIC matches and 0.043 and 0.016, respectively, for the GICS matches. The difference in the median values of relative size for the SCT firms and the two matched samples are significant at the 0.01 level, whereas the differences in mean values are not significant at the 0.05 level. Furthermore, only 34.6% of the SCT firms announced at least one acquisition in which relative size was 0.05 or greater, as compared with 55.8% of the SIC matches and 61% of the GICS matches. These differences are significant at the 0.05 level.

Panel B of Table 5 presents similar results for relative size using firm-years as the unit of analysis. The mean and median values of relative size for the strong culture firms are 0.032 and 0.004, respectively, versus 0.046 and 0.015, respectively, for the SIC matches and 0.054 and 0.013, respectively, for the GICS matches. Here, too, the differences in median values are significant at the 0.01 level, although the differences in mean values are not. SCT firms announced acquisitions with relative size of 0.05 or greater in only 15.3% of the firm-years, versus 32.5% for the SIC matches and 32% for the GICS matches. These differences are significant at the 0.01 level.

The units of analysis in Panel C of Table 5 are the deals themselves. The mean and median values of relative size for the SCT firms are 0.020 and 0.002, respectively, as compared with 0.040 and 0.009, respectively, for the SIC matches and 0.054 and 0.011,

Table 7

Bidder CAR and combined returns.

The table reports summary statistics on bidder CARs and combined CARs for the SCT firms and (i) the SIC matched sample in Panel A and (ii) the GICS matched sample in Panel B. Statistics are reported for the entire matched sample, the subsample of deals with relative size greater than 0.05, and the subsample of deals that are diversifying out of the two-digit SIC code. Bidder CAR is the market model cumulative abnormal return for the 3-day window around the announcement of the deal. Bidder CAR negative is an indicator variable equal to one if Bidder CAR is negative and zero otherwise. Combined CAR is the average of the bidder CAR and the target CAR weighted by the market value of equity of the bidder and target, respectively. Combined CAR negative is an indicator variable equal to one if Combined CAR is negative and zero otherwise. The last two columns report *p*-values resulting from difference in means and Wilcoxon rank-sum tests between the two groups. *p*-Values denoted by ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

Panel A: Four-digit matching					SIC match firms				Diff. means	Ranksum
Variable	N	Mean	Median	St. Dev.	N	Mean	Median	St. Dev.	<i>p</i> -Value	<i>p</i> -Value
<i>Entire sample</i>										
Bidder CAR	925	0.0002	−0.0003	0.0430	631	0.0015	−0.0014	0.0479	0.588	0.969
Bidder CAR negative	925	0.5059	1	0.5002	631	0.5182	1	0.5001	0.635	0.634
Combined CAR	81	−0.0050	−0.0015	0.0478	71	0.0090	0.0019	0.0578	0.104	0.259
Combined CAR negative	81	0.5185	1	0.5028	71	0.4930	0	0.5035	0.755	0.754
<i>Acquisitions with relative size > 0.05</i>										
Bidder CAR	32	−0.0215	−0.0303	0.0829	56	0.0111	0.0066	0.0654	0.045**	0.015**
Bidder CAR negative	32	0.6875	1	0.4709	56	0.4643	0	0.5032	0.044**	0.044**
Combined CAR	20	−0.0167	−0.0267	0.0630	19	0.0426	0.0334	0.0766	0.012**	0.010***
Combined CAR negative	20	0.7000	1	0.4702	19	0.2632	0	0.4524	0.005***	0.007***
<i>Acquisitions diversifying out of two-digit SIC</i>										
Bidder CAR	450	−0.0009	−0.0019	0.0419	248	0.0033	0.0033	0.0461	0.224	0.215
Bidder CAR negative	450	0.5222	1	0.5001	248	0.4758	0	0.5004	0.241	0.241
Combined CAR	30	−0.0022	0.0044	0.0517	16	0.0238	0.0200	0.0778	0.180	0.394
Combined CAR negative	30	0.4333	0	0.5040	16	0.3125	0	0.4787	0.435	0.429
Panel B: GICS matching					GICS match firms				Diff. means	Ranksum
Variable	N	Mean	Median	St. Dev.	N	Mean	Median	St. Dev.	<i>p</i> -Value	<i>p</i> -Value
<i>Entire sample</i>										
Bidder CAR	929	0.0005	−0.0003	0.0432	693	0.0020	0.0005	0.0506	0.523	0.460
Bidder CAR negative	929	0.5048	1	0.5002	693	0.4935	0	0.5003	0.652	0.652
Combined CAR	81	−0.0050	−0.0015	0.0478	66	0.0048	0.0012	0.0514	0.231	0.326
Combined CAR negative	81	0.5185	1	0.5028	66	0.4848	0	0.5036	0.687	0.686
<i>Acquisitions with relative size > 0.05</i>										
Bidder CAR	32	−0.0215	−0.0303	0.0829	67	−0.0050	−0.0012	0.0784	0.340	0.125
Bidder CAR negative	32	0.6875	1	0.4709	67	0.5224	1	0.5033	0.122	0.122
Combined CAR	20	−0.0167	−0.0267	0.0630	27	0.0053	0.0019	0.0657	0.255	0.149
Combined CAR negative	20	0.7000	1	0.4702	27	0.4444	0	0.5064	0.085*	0.085*
<i>Acquisitions diversifying out of two-digit SIC</i>										
Bidder CAR	453	−0.0005	−0.0018	0.0423	236	0.0038	0.0034	0.0563	0.259	0.229
Bidder CAR negative	453	0.5210	1	0.5001	236	0.4576	0	0.4993	0.115	0.115
Combined CAR	30	−0.0022	0.0044	0.0517	16	0.0139	0.0178	0.0503	0.314	0.394
Combined CAR negative	30	0.4333	0	0.5040	16	0.3125	0	0.4787	0.435	0.429

respectively, for the GICS matches. All differences in both the mean and median values between the SCT firms and the matched firms are significant at the 0.01 level. Furthermore, of the 419 acquisitions announced by the SCT firms for which SDC has a value, relative size was greater than or equal to 0.05 in only 7.64% of the cases. The corresponding percentages for the SIC and GICS matches are 18.6% and 20.7%, respectively.

Table 8

Multivariate analysis of bidder CAR and combined CAR.

The table reports OLS regressions for the sample of SCT firms and matching firms. Models (1) and (2) use the SIC match sample and models (3) and (4) use the GICS match sample. The dependent variable in models (1) and (3) is Bidder CAR and the dependent variable in models (2) and (4) is the Combined CAR. Relative size > 0.05 is an indicator variable equal to one if the value of the deal is at least 5% of the MVA of the bidding firm. Strong culture & relative size > 0.05 is the interaction of strong culture and relative size > 0.05. Asset liquidity is the liquidity of the market for corporate control for the target firm's industry and is defined as the value of all corporate control transactions for \$1 million or more reported by SDC for each year and two-digit SIC code divided by the total book value of assets of all Compustat firms in the same two-digit SIC code and year. The last 10 control variables in the table are based on SDC data. Hostile, Tender offer, Target termination fee, Bidder lockup, and Toehold, are indicator variables equal to one if the deal is categorized as hostile, includes a tender offer, includes a target termination fee, and includes a bidder lockup option, respectively. Cash only indicates that the consideration offered in the deal is all cash. Percentage cash is the portion of the consideration that is cash. Multiple bidders is an indicator variable equal to one if a competing bidder was involved. Private target and Subsidiary target are indicator variables equal to one if the target was private and a subsidiary, respectively. The remaining variables are as defined in prior tables. All continuous variables are winsorized at 0.01 and 0.99. The standard errors are clustered by firm. ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

Variables	SIC match		GICS match	
	(1) Bidder CAR	(2) Combined CAR	(3) Bidder CAR	(4) Combined CAR
Strong trust	0.001 [0.875]	0.020* [0.083]	−0.000 [0.959]	0.009 [0.511]
Relative size > 0.05	0.011 [0.296]	0.035* [0.075]	−0.003 [0.753]	0.015 [0.311]
Strong trust & relative size > 0.05	−0.032** [0.029]	−0.075*** [0.001]	−0.018 [0.200]	−0.039** [0.034]
Foreign target	−0.007* [0.082]		−0.005 [0.207]	
Log bidder MVA	−0.003** [0.033]	−0.008 [0.121]	−0.002* [0.092]	−0.003 [0.528]
Bidder market-to-book	0.001 [0.176]	0.003 [0.396]	0.000 [0.780]	0.005* [0.058]
Bidder R&D	−0.015 [0.797]	−0.006 [0.971]	−0.001 [0.981]	−0.032 [0.763]
Bidder debt	0.008 [0.553]	0.148** [0.033]	0.003 [0.799]	0.083* [0.057]
Bidder operating income	−0.044* [0.072]	−0.019 [0.845]	−0.029 [0.162]	−0.121* [0.088]
Asset liquidity	0.027 [0.324]	0.004 [0.962]	−0.004 [0.883]	−0.083 [0.154]
Diversifying	−0.004 [0.234]	−0.014 [0.109]	−0.002 [0.533]	0.004 [0.687]
Hostile	−0.099*** [0.000]	−0.045* [0.068]	−0.095*** [0.000]	−0.068** [0.014]
Tender offer	0.024** [0.012]	0.023 [0.117]	0.028** [0.020]	0.022 [0.122]
Target termination fee	0.001 [0.802]	0.007 [0.541]	0.003 [0.728]	0.002 [0.847]
Bidder lockup	−0.012 [0.151]	−0.004 [0.744]	−0.009 [0.435]	−0.008 [0.672]
Toehold	−0.006 [0.499]	−0.028 [0.397]	−0.009 [0.313]	−0.048 [0.137]
Cash only	0.004 [0.651]	−0.019 [0.480]	−0.014 [0.137]	−0.052** [0.041]
Percentage cash	0.000 [0.812]	0.000 [0.343]	0.000* [0.075]	0.001** [0.010]
Multiple bidders	0.041** [0.022]	0.036 [0.180]	0.021 [0.104]	0.049* [0.074]
Private target	0.015** [0.011]		0.016*** [0.003]	
Subsidiary target	0.013** [0.029]		0.011* [0.051]	
Constant	0.021 [0.207]	0.042 [0.428]	0.018 [0.175]	0.016 [0.757]
Year indicators	Yes	Yes	Yes	Yes
Observations	708	133	728	130
Adjusted R-squared	0.052	0.183	0.044	0.054

In summary, the evidence in Table 5 shows that SCT firms announce acquisitions that are generally less than one-third the relative size of acquisitions announced by other firms, indicating that these differences are economically as well as statistically significant. Furthermore, depending on the unit of analysis, the percentage of firms announcing acquisitions with relative size of 0.05 or greater is 11 to 27 percentage points lower for SCT firms as compared with the matched firms.

To control for other variables that might be associated with the relative size of acquisitions, we estimate several regressions in which the dependent variable is the natural log of the value of acquisitions. As independent variables, we include the natural log of the acquiring firm's market value of assets, the acquiring firm's market-to-book ratio, the ratio of the acquiring firm's operating income to the book value of assets, and the ratio of the book value of the acquiring firm's debt to the book value of its assets. We also include a dummy variable that takes the value of one for SCT firms and zero otherwise. The regression is estimated for the sample of SCT firms and both the SIC and GICS code matches (in separate regressions). It also is estimated using firms, firm-years, and deals as the units of analysis.

The regression results are reported in Table 6. The coefficient on the natural log of the market value of assets is positive and highly significant in all regressions, indicating that larger firms make larger acquisitions. The coefficients on the dummy variable for SCT firms are negative in all regressions and statistically significant in four of the six equations. The coefficients are large, ranging from -0.647 to -0.306 , indicating that after controlling for the acquiring firm's size, the value of acquisitions announced by strong culture firms is 30.6% to 64.7% smaller than the value of acquisitions announced by other firms. These results further support the prediction that the relative size of acquisitions announced by SCT firms is smaller than the relative size of acquisitions announced by other firms.

5. Empirical results on bidder returns and combined returns of targets and bidders

To test whether the returns to acquiring firms with strong cultures of trust differ significantly from the corresponding returns for other acquiring firms, we estimate bidder returns for the sample of SCT firms and the two matched samples. We employ event study methodology in which we estimate the market model for acquiring firms over a period of 270 trading days through 21 trading days prior to the first announcement of the acquisitions, which we collect from the SDC database. We use stock return data from CRSP in the estimation of the market model. We then estimate the announcement returns for the subset of target firms for which we have stock return data. Returns for acquiring and target firms are estimated as the cumulative abnormal returns ("CARs") over the three day window spanning one trading day before through one trading day after the acquisition announcements.

Table 7 contains the results of this analysis. The mean and median bidder CARs for the SCT firms are 0.0005 and -0.0003 , respectively, as compared with 0.0015 and -0.0014 , respectively, for the SIC matches and 0.0020 and 0.0005, respectively, for the GICS matches. The bidder CARs for the SCT firms are not significantly different than zero, nor are they significantly different than the bidder CARs for the matched samples. Furthermore, the percentage of bidder CARs that are negative is not significantly different than 50% for any of the three samples nor are they significantly different from each other. Similar results hold for the percent changes in the combined values of target and acquiring companies—they are not significantly different from zero for any of the three samples, and they are not significantly different from the corresponding numbers for the matched samples.

These results are not surprising given that the relative size of acquisitions for all three samples is fairly small. To test whether there are significant differences in bidder CARs and combined returns for relatively large acquisitions, we replicated the analysis for the subset of acquisitions in which relative size is greater than or equal to 0.05. The results of this analysis, which also are reported in Table 7, show significant differences in both bidder CARs and combined returns for acquisitions announced by SCT firms versus acquisitions announced by the two matched samples. For the 32 acquisitions announced by SCT firms with relative size of 0.05 or greater, the mean and median bidder CARs are -0.022 and -0.030 , respectively. Furthermore, in 68.8% of these cases, bidder CARs are negative. In contrast, the mean and median bidder CARs for the SIC matches are 0.011 and 0.007, respectively, which are significantly greater than the corresponding bidder CARs for the SCT firms. In addition, only 46.4% of the bidder CARs are negative for the SIC matches, which is significantly lower than the corresponding percentage for the SCT firms. The corresponding mean and median bidder CARs for the GICS matches are -0.005 and -0.001 , respectively, and 52.2% of the bidder CARs for the GICS matches are negative. None of these values is significantly different from the corresponding value for the SCT firms.

Similar results hold for the combined returns to target and acquiring firms. Notwithstanding the small sample size, the mean and median change in combined value is -0.017 and -0.027 , respectively for the SCT sample, as compared with 0.043 and 0.033, respectively, for the SIC matches and 0.005 and 0.002, respectively, for the GICS matches. Furthermore, the percent change in combined value is negative in 70% of the cases in which the acquiring firm is an SCT firm, versus only 26.3% and 44.4% of the cases in which the acquiring firms are the SIC and GICS matches, respectively. The differences in these variables between the SCT firms and the SIC, but not the GICS, matched samples are significant at the 0.05 level.

To control for other factors known to be associated with bidder CARs and combined returns, we estimated several regressions in which bidder CARs and combined returns serve as the dependent variables. As independent variables, we include a dummy variable for the SCT firms, a dummy variable if relative size is greater than or equal to 0.05, and an interaction term consisting of the product of the two variables. In addition, we include a number of control variables that have been used in other papers in which bidder CARs and/or combined returns are estimated. The results from the regression estimates are contained in Table 8. The negative coefficients on the interaction term indicate that the average difference in announcement returns between a small and large acquisition for SCT firms is greater than the average difference for the matching firms. The results further indicate that bidder CARs and combined returns are lower for the SCT firms than the matching firms when they announce a deal with relative size greater than 0.05. The sum of the coefficients on the strong culture dummy variable and the interaction of this dummy variable and Relative size > 0.05 are significantly different from zero at the 0.05 level in models (1) and (2) and significantly different from zero at the 0.10 level in model (4).

Table 9

Large deals and changes in rankings.

The table lists all firms ranked in the GPWI annual rankings of the *Best Companies to Work For in America* in the year before they announce an M&A deal with Relative size greater than 0.05 that is eventually completed. The first three columns list the bidder name, the target name, and the announcement year, respectively. Ranking before the announcement is the bidder's ranking in the year prior to the M&A announcement. Ranking after the announcement is the bidder's ranking in the year after the M&A announcement. Ranking second year after announcement is the bidder's ranking in the second year after the M&A announcement. Ranking after completion is the bidder's ranking in the year after the completion of the deal. Ranking second year after completion is the bidder's ranking in the second year after the completion of the deal.

Acquirer name	Target name	Announce year	Ranking before announcement	Ranking after announcement	Ranking second year after announcement	Ranking after completion	Ranking second year after completion
Acxiom	May & Speh Inc.	1998	38				
Adobe Systems	Macromedia Inc.	2005	13		31		31
Adobe Systems	Omniure Inc.	2009	11	42	65	42	65
AlliedSignal	Honeywell Inc.	1999	80				
America Online	Time Warner	2000	51				
Amgen	Immunex Corp.	2001	57				33
BMC Software	New Dimension Software Ltd.	1999	46	56		56	
Cisco Systems	Scientific Atlanta Inc.	2005	27	25	11	11	6
Compaq Computer	Digital Equipment Corp.	1998	55				
Finova Group	Fremont Financial Corp.	1999	12	16		16	
General Mills	Pillsbury Co. (Diageo PLC)	2000	90				
Great Plains Software	Solomon Software	2000	15				
Hewlett-Packard	Compaq Computer Corp.	2001	63				
Intuit	Digital Insight Corp.	2006	43	33	43	43	49
J.M. Smucker	Procter & Gamble–Jif & Crisco	2001	23	24	8	8	1
J.M. Smucker	International Multifoods Corp.	2004	1	6	8	6	8
J.M. Smucker	Eagle Family Foods Hldgs Inc.	2007	39	47		47	
J.M. Smucker	Folgers Coffee Co.	2008	47		47		47
Lowe's Companies	Eagle Hardware & Garden Inc.	1998	80				
Lucent Technologies	Ascend Communications Inc.	1999	62	44		44	
Mattel	Learning Co Inc.	1998	64				
Medtronic	Arterial Vascular Engineering	1998	47	67			83
Medtronic	MiniMed Inc.	2001	83	73	65	73	65
Medtronic	Kyphon Inc.	2007	72				
Men's Wearhouse	Dimensions Clothing Ltd.	2010	68	87		87	
Monsanto	Seminis Inc.	2005	83				
Moog	Raytheon Aircraft Montek	1998	13				
Network Appliance/NetApp	Spinnaker Networks Inc.	2003	39	48	24	24	27
PeopleSoft	Vantive Corp.	1999	6				
Pfizer	Pharmacia Corp.	2002	57	21			76
Procter & Gamble Company	Gillette Co.	2005	66		68		68
SRA International	Adroit Systems Inc.	2003	37	40	44	40	44
Stanley	Oberon Associates Inc.	2008	84	70		70	
Tellabs	Ocular Networks	2001	81				
UNUM	Provident Cos	1998	33				
Valassis Communications	ADVO Inc.	2006	69				
Whole Foods	Wild Oats Markets Inc.	2007	5	16	22	16	22
Worthington Industries	Unimast Inc. (WHX Corp.)	2002	99				

Table 10

Falling out of rankings after SCT firms make a large acquisition.

The sample includes all years for firms ranked at any time in the top 100 of the GPWI annual rankings of the *Best Companies to Work For in America*. The table reports statistics on falling out of the rankings for firms that do not announce and complete an M&A deal with relative size greater than 0.05 and firms that do announce and complete an M&A deal with relative size greater than 0.05. In Panel A, Fall off (0,1) is an indicator variable equal to one if the firm was ranked but fell out of the rankings in the following year. Fall off (0,2) is an indicator variable equal to one if the firm was ranked but fell out of the rankings 2 years later. In Panel B, Fall off (0,1) is the same as in Panel A for the firms without a 5% M&A deal, but for the firm-years with a 5% M&A deal is equal to one if the firm was ranked in the rankings before the announcement of the deal but unranked in the rankings after the completion of the deal. Similarly, for the firm-years with a 5% M&A deal Fall off (0,2) is equal to one if the firm was ranked in the rankings before the announcement of the deal but unranked in the second ranking after the completion of the deal. The last two columns report *p*-values resulting from difference in means and Wilcoxon rank-sum tests between the two groups. *p*-Values denoted by ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

Variable	No 5% M&A Deal			5% M&A Deal			Diff. means	Ranksum
	N	Mean	Median	N	Mean	Median	<i>p</i> -Value	<i>p</i> -Value
<i>Panel A: Announcement year</i>								
Fall off (0,1)	617	0.2788	0	38	0.5526	1	0.000***	0.000***
Fall off (0,2)	563	0.3570	0	36	0.6667	1	0.000***	0.000***
<i>Panel B: Completion year</i>								
Fall off (0,1)	617	0.2788	0	38	0.6053	1	0.000***	0.000***
Fall off (0,2)	563	0.3570	0	36	0.5833	1	0.006***	0.006***

The evidence on bidder returns is consistent with the view that when SCT firms make relatively large acquisitions, which they do less frequently than other firms, the market generally expects value destruction because it sees the acquisition as a threat to the acquiring company's culture, which is a valuable asset.¹³ In the next section, we examine whether large acquisitions are associated with a measurable change in the acquiring firms' cultures of trust.

6. Empirical results on relation between large acquisitions and changes in organizational trust

To examine the relation between large acquisitions and subsequent changes in the GPWI rankings of acquiring firms, we first identified all companies that appeared on the GPWI list in the year prior to an announcement that the companies were making acquisitions. We then identified the subset of these announcements in which the acquisitions were completed and in which relative size was greater than or equal to 0.05.¹⁴ This resulted in a sample of 38 acquisitions completed by ranked firms in which relative size was 0.05 or greater. Table 9 contains data on the 38 acquisitions, including the names of the acquiring and target companies, the year of the acquisition announcement, and the acquiring firms' GPWI rankings in the years before, after, and 2 years after the acquisition announcements. It also lists the rankings after completion of the deal and 2 years after completion.¹⁵

The sample of acquisitions listed in Table 9 contains many high profile acquisitions that purportedly failed because of, among other factors, clashes of the two firms' corporate cultures, including Compaq Computer/Digital Equipment, AOL/Time Warner, Hewlett-Packard/Compaq Computer, and Mattel/Learning Co. In each of these cases, the acquiring company was on the GPWI list before announcing its acquisition and then fell off the list in the next two rankings after the announcements. Compaq Computer had been ranked at no. 55 and immediately fell off the list after announcing its acquisition of Digital Equipment. Similarly, AOL, Hewlett-Packard, and Mattel fell off the list from pre-announcement rankings of 51, 63, and 64, respectively, after announcing their acquisitions.

To examine the relation between announcements of large acquisitions and subsequent changes in GPWI rankings more systematically, we computed the frequency with which the acquirers fell off the GPWI list or experienced an increase, decrease, or

¹³ Insofar that one source of value creation in mergers and acquisitions is cost savings associated with reductions in employment, an alternative explanation is that SCT firms are less willing than other acquiring firms to reduce employment following acquisitions. To test whether this conjecture holds, we examined changes in employment following acquisitions made by SCT versus other firms. For the sample of acquisitions with relative size of 0.05 or greater, we calculated the combined employment in the target and acquiring firm the year before the acquisitions and compared this with the total number of employees in the acquiring firm 2 years after the corresponding acquisitions. For the sample of acquiring firms with strong cultures of trust, total employment changed by 22.3% from before to 3 years after the acquisitions. The corresponding change for other acquiring firms is 29.9% for SIC matching firms and 15.5% for GICS matching firms. The difference between this percentage for the strong culture firms versus that for other firms is not statistically significant in either case. Hence, we find no evidence that on average strong culture firms are less willing to reduce employment after acquisitions than other firms.

¹⁴ Throughout this section we include all firms that appear on the GPWI list, not just the 80 strong culture firms in the prior analysis.

¹⁵ Jennifer Robin, who is on the faculty at Bradley University and is a research fellow at the GPWI, informed us that the GPWI does not allow companies to apply for inclusion on the list for 1 year following an acquisition in which the number of employees at the acquired company is 25% or more of the number of employees at the acquiring firm because the GPWI believes that acquisitions of this size are likely to disrupt the acquiring firm's culture. This policy rule is consistent with the prediction that firms with strong cultures of trust shy away from large acquisitions because of possible adverse effects to their cultures. Because data on the number of employees of the target and acquiring firms is scant, we do not know how many of the 38 acquiring firms listed in Table 10 were not eligible to apply for the GPWI ranking the year after they completed their respective acquisitions. As a rough check, we identified that relative size was 25% or greater in 14 of the 38 acquisitions listed in Table 10. We then replicated the analysis in this section on the sub-sample of acquisitions in which relative size was less than 25%. The results that we report in this section are largely unaffected when we exclude acquisitions in which relative size is 25% or greater, suggesting that the results are not an artifact of the GPWI rule.

Table 11

Multivariate analysis of falling out of rankings.

This table reports logistic regressions for firms that are ranked in the GPWI annual rankings of the *Best Companies to Work For in America* in a given year. The dependent variable in models (1) and (2) is an indicator variable equal to one if the firm fell out of the rankings in the following year and zero otherwise. The dependent variable in models (3) and (4) is an indicator variable equal to one if the firm fell out of the rankings 2 years later and zero otherwise. The dependent variable in model (5) and model (6) is an indicator variable equal to one if the firm fell out of the rankings in the following year, or, in cases in which an M&A deal with Relative size greater than 5% was announced during the year, if the firm fell out of the rankings in the year following the *completion* the deal and zero otherwise. The dependent variable in models (7) and (8) is an indicator variable equal to one if the firm fell out of the rankings 2 years later, or, if an M&A deal with relative size greater than 5% was announced during the year, 2 years after the *completion* the deal and zero otherwise. Relative size > 0.05 dummy is an indicator variable equal to one if the firm announced a deal in which the target MVA was at least 5% of the firms MVA in the year after the given ranking and the deal was completed. Excess return for the year is the market adjusted return for the firm in the year after the given ranking. Excess return prior year is the market adjusted return for the firm in the year before the given ranking. Excess return 2 years prior is the market adjusted return for the firm 2 years prior to the given ranking. Change market-to-book is the market-to-book ratio in the year after the given ranking minus the market-to-book in the year before the given ranking. Change market-to-book prior year is the market-to-book ratio in the year before the given ranking minus the market-to-book 2 years before the given ranking. Change in operating income is the operating income in the year after the given ranking minus the operating income the year before the given ranking. Change in debt is debt in the year after the given ranking minus the debt the year before the given ranking. The remaining variables are as defined in prior tables. All continuous variables are winsorized at 0.01 and 0.99. The standard errors are clustered by firm and ***, **, * indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

Variables	Fall off–Announcement year				Fall off–Completion year			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Fall off the list (year 0 to 1)	Fall off the list (year 0 to 1)	Fall off the list (year 0 to 2)	Fall off the list (year 0 to 2)	Fall off the list (year 0 to 1)	Fall off the list (year 0 to 1)	Fall off the list (year 0 to 2)	Fall off the list (year 0 to 2)
Relative size > 0.05 dummy	1.325*** [0.000]	1.522*** [0.000]	1.483*** [0.001]	1.495*** [0.001]	1.577*** [0.000]	1.802*** [0.000]	1.483*** [0.001]	1.065*** [0.009]
Excess return for the year	–0.696** [0.017]	–0.992*** [0.002]	–1.323*** [0.000]	–1.519*** [0.000]	–0.710** [0.015]	–1.007*** [0.002]	–1.323*** [0.000]	–1.516*** [0.000]
Excess return prior year	–0.995*** [0.001]	–1.216*** [0.000]	–0.580* [0.060]	–0.795** [0.016]	–1.019*** [0.001]	–1.227*** [0.000]	–0.580* [0.060]	–0.819** [0.012]
Excess return 2 years prior	0.099 [0.672]		–0.127 [0.586]		0.086 [0.716]		–0.127 [0.586]	
Market-to-book	0.045 [0.510]		–0.062 [0.481]		0.059 [0.391]		–0.062 [0.481]	
Operating income	–0.517 [0.689]		–0.200 [0.894]		–0.403 [0.754]		–0.200 [0.894]	
Debt	0.984* [0.061]		0.852 [0.219]		1.017* [0.054]		0.852 [0.219]	
Change market-to-book		0.229** [0.026]		0.110 [0.185]		0.240** [0.023]		0.120 [0.122]
Change market-to-book prior year		0.118 [0.254]		0.043 [0.555]		0.120 [0.262]		0.061 [0.417]
Change in operating income		–2.634 [0.220]		–1.667 [0.408]		–2.564 [0.231]		–1.964 [0.329]
Change in debt		–3.434* [0.068]		–1.158 [0.509]		–3.512* [0.062]		–1.070 [0.532]
Constant	–1.143*** [0.000]	–0.838*** [0.000]	–0.452 [0.173]	–0.498*** [0.001]	–1.205*** [0.000]	–0.835*** [0.000]	–0.452 [0.173]	–0.493*** [0.001]
Observations	580	578	534	532	580	578	534	532
Pseudo R-squared	0.0572	0.0674	0.0772	0.0715	0.0645	0.0751	0.0772	0.0640

no change in their GPWI ranking in the ranking after (“Year 1”) and two rankings after (“Year 2”) the acquisition announcements. The results show a dramatic decline in the GPWI rankings following large acquisitions:

	Year 1	Year 2
Number falling off list	21 (55%)	24 (67%)
Number w/decline in ranking	11 (29%)	6 (17%)
Number w/increase in ranking	6 (16%)	4 (11%)
Number w/no change	0 (0%)	2 (5%)

Approximately 84% of the acquiring firms either fall off the GPWI list or suffer a decline in their ranking by 2 years after the announcement of large acquisitions. The evidence is consistent with the prediction that SCT firms face a serious risk of degrading their corporate culture when they make relatively large acquisitions.

Table 10 contains additional data on the relation between large acquisitions and changes in GPWI rankings. It compares the frequency with which firms fall off the GPWI list for two groups of firms—those that did and did not make large acquisitions, i.e., acquisitions in which relative size is greater than or equal to 0.05.

Panel A of Table 10 shows that 55.3% of the firms making large acquisitions fall off the GPWI list from the ranking before to the ranking after the acquisition announcements, as compared with only 27.9% of the firms that did not make large acquisitions. The difference in means is highly significant. Similar results hold when measuring the frequency with which firms fall off the list from the ranking before to the second ranking after the acquisition announcements—66.7% of the firms making large acquisitions fall off the list versus only 35.7% of firms not making large acquisitions, a difference that also is highly significant. Panel B shows similar findings when we examine the percentage of acquiring firms that fall off the GPWI list from before the acquisition announcement to the first and second rankings after completion of the deal.

Table 11 extends the analysis of falling off the GPWI list to a multivariate setting using logistic analysis. The sample includes all firm-years for which a firm was on the GPWI list. The dependent variable in the first two specifications is an indicator variable equal to one if the firm fell off the list in the next rankings and zero otherwise. In specifications (3) and (4) the dependent variable is an indicator variable equal to one if the firm is not on the list two rankings later and zero otherwise. In the last four specifications the dependent variable is the same except for firms-years in which a firm announced a large M&A deal in the next year. For these firm-years the indicator variable is equal to one if the firm fell off the list in the ranking after the completion of the deal for specifications (5) and (6) and two rankings after the completion of the deal for specifications (7) and (8). Alternate models control for levels of accounting variables and changes in accounting variables. The coefficient on the variable indicating a firm announced a large M&A transaction in the next year that was eventually completed, relative size > 0.05, is positive and significant in all eight models. Consistent with the univariate analysis, the results suggest firms on the list that make large acquisitions are more likely to fall out of the GPWI rankings.

7. Conclusion

In conclusion, this paper identifies a channel through which corporate culture, specifically trust within a firm, interacts with corporate investment policy, specifically mergers and acquisitions. Existing economics literature posits that trust within a firm is a potentially valuable asset that can reduce transaction costs, increase cooperation among employees, and enhance the exchange of specialized knowledge. We apply the lens of corporate mergers and acquisitions to examine this hypothesis. Viewing trust as a valuable corporate asset, firms with strong cultures of trust are expected, all else equal, to develop M&A policies that preserve (or enhance) the value of their cultures. Our results support this hypothesis and suggest that high trust firms recognize the potential risks to this valuable asset when forming their acquisition strategies.

First, we find that the relative size of acquisitions made by SCT firms is approximately one-third that of acquisitions made by other firms, a difference that is both economically and statistically significant. Second, we find that bidder returns and the percent changes in the combined values of bidders and targets are significantly lower in large acquisitions made by SCT firms than they are in large acquisitions made by other firms, suggesting that the market anticipates greater value destruction when SCT firms make large acquisitions as compared with other firms. Finally, we find that SCT firms that make large acquisitions are significantly more likely to suffer a deterioration of trust than SCT firms that do not make large acquisitions.

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