"Management Practices and Mergers and Acquisitions," by John (Jianqiu) Bai, Wang Jin, and Matthew Serfling

Link to the working paper: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3208988

A fundamental question in corporate finance is how mergers and acquisitions create value? Value creation could arise from many sources, including economies of scale or scope, increases in managerial efficiency, improvements in production techniques, or increases in market power. However, while synergies are the leading motive behind mergers, direct empirical evidence on the sources of these gains is limited. In a new study, we investigate one proposed potential source of synergies—improvements in management practices. The popular press, business schools, and research have long stressed the importance of good management practices for firm performance. Yet, there is little empirical evidence on whether and to what extent improvements in management practices are a source of gains from mergers and acquisitions. A major challenge in addressing these questions has been the absence of high-quality data on management practices.

To overcome this limitation, we utilize a novel survey dataset of plant-level management practices from the U.S. Census Bureau. Specifically, we use the 2010 Management and Organizational Practices Survey, which is the first large-scale management practices survey of manufacturing plants in the U.S. This survey asks respondents, such as plant or divisional managers, 16 questions about the management practices of their plants. There are six questions about monitoring practices, two questions about production target practices, and eight questions about incentive practices. The questions on monitoring ask the extent to which performance is tracked and reviewed and whether these data are used to improve performance. For example, one question is "how many key performance indicators were monitored at this establishment?" The questions on production targets attempt to assess how well production goals are set. For instance, respondents are asked "what best describes the time frame of production targets at this establishment?" The questions on incentives examine how employees are promoted, rewarded, and retained, or alternately reprimanded and dismissed. For example, one question is "what were non-managers' performance bonuses usually based on?" In our analyses, we create a plant-level, aggregate, normalized management score that reflects all three of these categories.

We match this survey data to the Census' Longitudinal Business Database to identify if and when a particular plant is acquired by another firm. Compared to traditional data sources, a major advantage of using Census data is that it allows us to track changes in the management practices and performance of targets and acquirers separately before and after each merger event, even after a plant owned by a public firm is acquired by a private firm. Our final sample includes about 14,000 unique plants with data on management practices in 2005 and 2010. Of these 14,000 plants, 14% are acquired at some point during our sample period.

Overall, our analyses can be broken down into three parts. First, we examine whether there is a relation between management practices and the likelihood that a firm becomes an acquirer and a plant becomes a target. We find that firms with better management practices are more likely to become acquirers and that plants with worse management practices are

more likely to be acquired. Moreover, we are able to show that firms with better management practices tend to acquire plants with relatively worse management practices.

Second, we document economically and statistically significant improvements in the management practices of acquired plants relative to a control group of plants that did not get acquired during the same time period. These improvements are not concentrated in one particular category of management practices, as we find improvements in monitoring, production target, and incentive practices separately. Further, we show that management practices not only improve at acquired plants on average, but also the target's management practices converge to those of the acquirer's incumbent plants. We also show that post-merger improvements in the management practices of acquired plants are greater in situations in which acquirers have a greater incentive and ability to make these improvements. Specifically, we document larger improvements in the management practices of acquired plants when acquirers are endowed with better management practices, managers have greater decision-control, plants are in more competitive industries, and acquirers and targets have complementary operations.

Third, we examine whether improvements in the management practices of acquired plants translate into better performance. We gauge plant performance using several measures, including total factor productivity, return on capital, and value added per employee. Consistent with the notion that improvements in management practices are a source of gains from mergers and acquisitions, we find that larger improvements in post-merger management practices are associated with larger improvements in performance.

Taken together, the results of our analyses suggest that firms with better management practices tend to acquire plants with relatively worse management practices. Then, following the acquisition, the acquirers improve the management practices of the target plants, and these improvements lead to better performance. Thus, we conclude that our findings imply that spillovers of good management practices constitute an important source of synergies from mergers and acquisitions.

Authors' titles and affiliations:

John (Jianqiu) Bai: Assistant Professor of Finance and Gary Gregg Fellow, D'Amore-McKim School of Business, Northeastern University

Wang Jin: Research Associate, Initiative for Digital Economy (IDE), Sloan School of Management, MIT

Matthew Serfling: Assistant Professor of Finance and Kinney Family Faculty Research Fellow, Haslam College of Business, University of Tennessee Knoxville.