Does Management Matter?

Featured faculty: Nick Bloom and Aprajit Mahajan

A pervasive feature of manufacturing and other industries is that there are large productivity differences across firms and countries. Different firms, and different plants within the same firm, turn similar amounts of measured capital and labor into very different amounts of output. Because productivity is the ultimate driver of long-run economic growth, this puzzle has attracted the attention of many economists.

One explanation is that productivity differences partly reflect the quality of management. Management quality is notoriously hard to measure. Research by Stanford faculty member Nick Bloom has made an important start by constructing measures of management practices across thousands of firms world-wide. This research has highlighted, for example, the "management gap" between the US and countries such as India. This gap mirrors cross-country differences in productivity that have been illuminated by researchers such as Stanford's Pete Klenow.

The gold standard for establishing causality, however, is the randomized experiment. Can management be studied by randomized trial? Bloom and department faculty member Aprajit Mahajan recently teamed up with other economists and a major consulting firm to give it a try.

A Randomized Trial in the Management "Heart of Darkness"

The Stanford team selected 20 large Indian textile plants. Fourteen were randomly assigned to receive intensive guidance on management practices, while the remainder were designated as a control group.

One of the first things they observed was the chaotic nature of many of the Indian factories. Many firms had dirt and garbage on the factory floors. Inventories and spare parts were scattered all around the site, and there was typically no systematic quality control (see pictures of the factories below).

Garbage piled on the factory floor.

Yarn stored without labelling or order.

The consultants introduced operational practices that are standard in US and Japanese factories. They persuaded firms to measure inventories, quality defects, and production efficiency, and to organize daily meetings to assess the data. With these basic steps in place, repeated defects were swiftly identified and eliminated. Inventories were trimmed from several months to a few weeks. Machine breakdowns were analysed to understand and then fix their root cause. Productivity at the treated plants rapidly rose by 20% and profits by about $350,000.

Questions and Implications of the Study

The study raises some obvious questions. Why hadn't these practices been adopted before? The researchers believe that informational constraints are an important factor. The Indian firms were not aware of modern management practices. This may not be very surprising. Management practices evolve over time, with innovations such as Taylor's Scientific Management, Sloan's M-form corporation and Toyota's lean production spreading slowly across firms and countries.

A related question is why product market competition didn't drive the badly managed firms out of business? Pete Klenow's research has shown that the persistence of low-productivity firms is a big difference between the US and India. A variety of factors may be at work. In the Bloom/Mahajan study, the senior management positions in all the firms are held by the owning family. The owner of one of the best-managed firms offered a simple explanation for why he could not expand: "no sons, no brothers." If the expansion of well-managed firms is limited, and entry into the market restricted by credit constraints, import tariffs or other factors, low productivity firms may persist.

The research supports some of the common recommendations to improve national productivity, such as increasing competition and lowering entry barriers. More novel is the idea that firms lack crucial information about management practices. This suggests that training programs in basic operations management, including inventory and quality control, could be helpful. Finally, the study also shows the value of introducing randomized trials into the study of management, an approach that is being actively pursued by Bloom and other Stanford economists in current work.

Further reading

Nick Bloom and John Van Reenen: "Why Do Management Practices Differ Across Firms and Countries?" Available at www.stanford.edu/~nbloom/JEP.pdf

Nick Bloom, Benn Eifert, David McKenzie, Aprajit Mahajan, and John Roberts: "Does Management Matter: Evidence from India." Available at www.stanford.edu/~nbloom/DMM.pdf

Pete Klenow and Chang-Tai Hsieh: "Misallocation and Manufacturing TFP in China and India." Available at www.klenow.com/MMTFP.pdf

World Management Survey: www.worldmanagementsurvey.org