Kevin Curry

When IT lifts **productivity**

Stephen J. Dorgan and John J. Dowdy

Companies should beef up their management practices before focusing on technology.

When European policy makers agonize over how to close the growing productivity gap with North America, they often propose to boost IT spending. Just adding more computing power, the reasoning goes, will surely help.

Yet in all likelihood, this approach won't have a substantial impact. Some economists have argued that good management—rather than more computing power—is the key to higher productivity, but they have lacked convincing proof.[1] Now, however, a new study of 100 manufacturing companies in France, Germany, the United Kingdom, and the United States supports the view that IT expenditures have little impact on productivity unless they are accompanied by first-rate management practices. Indeed, companies can significantly raise their productivity solely by improving the way they operate.

Our research, undertaken in partnership with the London School of Economics,[2] focused on the period from 1994 to 2002. It offers evidence that specific management practices foster higher productivity regardless of a company's location, size, sector, or historical performance.[3] In essence, the connection between better management practices and improved corporate productivity accounts for the gaps among the four countries in our study and holds true for all of the manufacturers we examined.[4]

The payoff from improved management is impressive. Our analysis rated 100 randomly selected companies on a scale of 0 to 5 to measure how well they used three important tools: lean manufacturing, which cuts waste in the production process; performance management, which sets clear goals and rewards employees who reach them; and talent management, which attracts and develops high-caliber people.

Our results indicate that a one-point improvement on the scale was correlated with a 25 percent increase in a company's total factor productivity (a measure that includes both labor and capital productivity). To put this into perspective, such an improvement has an effect comparable to that of raising capital investment by 70 percent, going from 10 manufacturing plants to 17, or increasing the workforce by 25 percent. What's more, companies got the same benefit from improved management regardless of where they ranked on our scale. In other words, even well-managed companies get a big bang from these efforts.

As you would expect from such a large jump in productivity, the impact of better management on the financial performance of individual companies was also impressive. The same one-point improvement on our scale was correlated with a five-percentage-point increase in a company's return on capital employed.

Since the average ROCE across all companies was 12 percent during the nine-year period, companies that raised their management-practices score by one point increased their financial returns by 42 percent.[5]

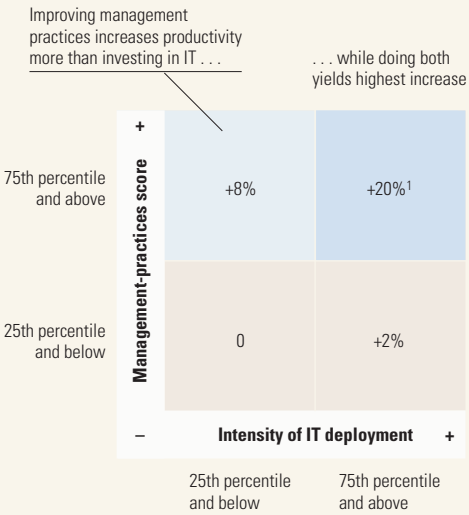
Compared with those results, how do IT investments stack up? We found that additional computing power[6] also translated into higher productivity—but the impact was modest. The top quartile of companies, as reckoned by the level of their IT deployment, had a total factor productivity just 4 percent higher, on average, than those in the bottom quartile—just one-sixth of the impact of a one-point improvement in management practices. Moreover, companies with more powerful IT didn't do better financially. That may seem odd, given the rise in productivity, but one likely explanation is that the cost of new IT investments balanced out the financial gain they generated. Again, these results held good regardless of a manufacturer's location, size, or industry.

Of course, managers shouldn't stop buying computers. Rather, the results show that companies can get the biggest benefit by combining IT investments with good management. For corporations scoring in the bottom quartile of management practices, the deployment of more powerful IT is associated with productivity improvements of just 2 percent. However, companies with increased computing power *and* improved management practices achieve 20 percent higher productivity (exhibit). This result shows that better management practices can raise productivity a good deal by themselves and increase the impact of IT investments on productivity as well. Companies should first

EXHIBIT

Management's big role

% increase in total factor productivity



[1]For 9 out of 10 companies whose management-practices scores and levels of IT deployment are both in top quartile.

Source: London School of Economics–McKinsey survey and analysis of 100 companies in France, Germany, United Kingdom, and United States

improve their management practices and *then* invest in IT.

Good management is essential to squeeze productivity benefits from new investments in computers and software. Companies should therefore focus on improving their management practices before they embark on IT spending sprees. And policy makers should champion the early adoption of measures that encourage better management rather than hand out tax credits to reward IT investment.

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[1] Researchers at the McKinsey Global Institute (MGI) are among those who have made that argument. See Diana Farrell, Heino Fassbender, Thomas Kneip, Stephan Kriesel, and Eric Labaye, "Reviving French and German productivity," *The McKinsey Quarterly*, 2003 Number 1, pp. 40–55 (www.mckinseyquarterly.com/links/14186).

[2] Dr. Nick Bloom (research fellow) and Professor John van Reenan (director) of LSE's Centre for Economic Performance collaborated with McKinsey on this study.

[3] The correlation between management practices and corporate productivity is significant at the 1 percent level.

[4] Stephen J. Dorgan and John Dowdy, "How good management raises productivity," *The McKinsey Quarterly*, 2002 Number 4, pp. 14–6 (www.mckinseyquarterly.com/links/14188).

[5] The average ROCE for 2002, the most recent year studied, was 6 percent, meaning that the benefit for corporate financial performance could be as high as 85 percent.

[6] The computing-power proxy we used was each company's total processing power per employee. While IT clearly has many other dimensions, such as software and communications, this measure was a simple, robust proxy.