

Does Changing Decision Rights Really Matter?

The Impact on the Productivity Effects of IT

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Abstract

The effect of information technology (IT) on the decision-making structure of firms has been a topic of debate for decades. On the one hand, IT increases the information available to top management, and the coordination advantages that it provides may lead firms to centralize decision making. On the other hand, IT makes it possible to disseminate global information of the firm to line workers enabling them to make better decisions, as well as enhancing management's monitoring capability, favoring decentralization. In order to understand the economy wide effects of centralization and decentralization of decision rights on the productivity effect of IT, we conduct an empirical analysis to examine the change in the effects of IT performance in firms that changed their decision-making structure, using a panel data set for 2,300 Japanese firms over 4 years. Our results indicate that both centralization and decentralization have a substantial productivity effect on IT for firms that changed their decision-making structure and that the productivity effects are more marked for firms that conducted radical changes of decision rights. Moreover, we find evidence that changes in decision rights have a more pronounced productivity effect on large firms. Finally, our results show that productivity effects due to changes in decision rights are realized only in the non-manufacturing sectors. This paper sheds some light on the effects of changing decision rights on firms' IT performance and underscores the importance of organizational redesign accompanying IT investment.

Keywords: Information Technology (IT), Decision rights, Productivity, Panel data

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