Efficiency or Innovation: How Do Industry Environments Moderate the Effects of Firms’ IT Asset Portfolios?

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Abstract

Firms invest in a variety of information technologies and seek to align their IT asset portfolios with two key performance outcomes: efficiency and innovation. Existing research makes the universalistic assumption that both outcomes will always be realized through firms’ IT asset portfolios. There has been limited research on the conditions under which firms’ IT asset portfolios should be oriented more toward efficiency or innovation. Here, we argue that the nature of the industry where a firm competes will have a significant moderating effect on the link between firms’ IT asset portfolios and efficiency or innovation outcomes. Using panel data that covers a wide range of industry environments, we find that at lower levels of dynamism, munificence, and complexity, IT asset portfolios are associated with a greater increase in efficiency. In contrast, in environments with higher levels of complexity, IT asset portfolios are associated with a greater increase in innovation (i.e., development of new products and processes, and exploration of growth opportunities). These results provide insights about how firms could realize strategic alignment by tailoring their IT asset portfolios toward an efficiency or innovation focus.

Keywords: Efficiency, innovation, exploitation, exploration, IT asset portfolio, IT value, competitive environment, dynamism, munificence, complexity