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# Pathways to efficiency, pathways to growth: Evidence from the UK Innovation Survey


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## ABSTRACT

Previous studies have suggested there is little correlation between efficiency – measured by sales per employee - and growth at firm level. Here, using data from successive waves of the UK innovation survey we consider two questions. First, do different types of innovation have different effects on efficiency and growth? Our analysis suggests that product or service innovation has a significant positive relationship to employment growth but a significant negative effect on efficiency growth two years after innovation is measured. Organisational innovation has a positive efficiency growth effect due to a negative employment effect. Process innovation raises both efficiency and sales growth. Furthermore, these short-term product and process innovation effects prove robust across our sample sub-groups. Over the longer term four years after innovation is measured, however, these significant positive and negative effects are not sustained, and some sign patterns change.

Secondly, we consider whether the source of firms' R&D finance matters. Is there a difference between the effects on innovation of publicly-supported and wholly-privately-funded R&D? We find that firms receiving public R&D support are no more likely to undertake process or organisational innovation than those paying for all of their own R&D costs. Additionality is greater in terms of product or service innovation. Again, these results prove robust across a range of sectors and firm sizebands. Our results suggest the dynamics of the relationship between innovation and firm performance and the importance of a medium to long-term perspective in evaluating the value of innovation support schemes.