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Assessing the business performance effects of receiving publicly-funded science, research and innovation grants

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UK Research Councils spend around £1.7bn pa on supporting research. Here, we provide the first comprehensive assessment of these research grants on the performance of UK firms. Using data on funding and partnership from Gateway to Research on all funded projects by the UK Research Councils over the 2004 to 2016 period and business performance data from the Business Structures Database we have applied a difference-in-differences propensity score matching technique to evaluate the performance of UK firms who received publicly-funded research grants. Our analysis suggests five key conclusions. First, firms in receipt of grants from UK research councils grew their turnover and employment 5.8-6.0 per cent faster in the three years after the grant, and 22.5-28.0 per cent faster in the six years after the grant, than similar firms which did not receive support. Second, the impact of grant support is larger for firms in high-tech manufacturing and

knowledge intensive services. Third, we find evidence that the impact of research grants is larger for small firms and those with lower starting productivity (turnover per employee). Growth impacts on firms in the top quartile of the productivity (turnover per employee) distribution are small. Fourth, support for businesses is provided largely by EPSRC and Innovate UK. Support from both organisation increases both employment and turnover growth in the short and medium terms with only marginal differences in their impact. Fifth, the effects of grants vary depending on the size of the grant. Small and very large grants have smaller growth effects than medium-sized support packages. Our results have implications for the extent and targeting of future Research Council funding.

Our analysis is subject to a number of caveats. First, data limitations mean that we measure economic impacts using turnover and employment data rather than value added per worker or hour worked. Secondly, at this point we only consider the direct impacts on recipient firms. Spillovers or multiplier effects may significantly enlarge these effects; displacement may reduce them. Both will be considered in a future study. Thirdly, data linking and the timing of some grant awards in recent years mean we are able to consider growth effects for only around two-thirds of assisted firms.