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The legacy of public subsidies for innovation: input, output and behavioural additionality effects

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- In many countries significant amounts of public funding are devoted to supporting private firms' R&D and innovation projects through subsidies or grants, loans, and other instruments such as loan guarantees or R&D tax credits.
- Evaluations of the effectiveness of these various forms of public support for private R&D and innovation have generally demonstrated positive results in terms of the scale of private R&D investments and innovation outputs – positive 'additionality'.
- Our interest here is in exploring the mechanisms through which these positive effects occur and in evaluating the legacy effects of public subsidies for private innovation.
- We also consider separately the potentially different legacy effects of public support for R&D and that for new product development (NPD). Our analysis is based on

panel data on Irish manufacturing firms, and we focus on the legacy effects of public innovation subsidies at the level of the plant.

- Our study suggests the significance of the legacy effects of innovation subsidies, reinforcing other international evidence of the positive short-term effects of such public support for innovation.
- Legacy effects from NPD subsidies appear largely behavioural, with subsidies generating longer-term benefits through increases in the innovation benefits of plants' human capital and network relationships.
- For R&D subsidies the key legacy effect operates through a process of product quality improvement rather than through a legacy of improved innovation capabilities. R&D support contributes in the longer-term to the quality of firms' product portfolio through a quality ladder effect and hence to the longer term success of firms' innovation and exporting.
- The implication is that any assessment of the benefits of innovation support based solely on its short-term impacts is likely to under-estimate the total benefits of such support to recipient firms.
- The potential for such legacy effects suggests that implementing measures to help firms capture the potential longer-term benefits of publicly supported innovation projects may be helpful. In terms of business finance, for example, there has recently been considerable discussion of intelligent finance or intelligent capital and the notion that venture capital firms often provide both finance and managerial expertise to their client companies. In terms of NPD or R&D support the analogue – intelligent innovation policy – might provide technology or innovation management support to firms alongside any subsidy support to help firms capture and embed potential strategic lessons.