

Non-technical summary for ‘Do Monetary Policy and Economic Conditions Impact Innovation? Evidence from Australian Administrative Data’

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Productivity growth is the key determinant of people’s living standards over the medium term. Many ‘structural’ factors can influence how quickly productivity grows, including technological change, competition, skills and regulation. But economists have traditionally assumed that productivity is unaffected by ‘cyclical’ factors, such as current economic conditions and monetary policy, at least over the medium term.

More recently, though, this assumption has come into question. Some have argued that economic downturns can lead to periods of slower innovation and technology adoption, and therefore to persistently lower productivity and living standards. For example, the global financial crisis was followed by persistent low spending on innovation in many countries, which may have contributed to slow productivity growth and a slow economic recovery. Because macroeconomic policy, such as monetary or fiscal policy, can influence economic conditions, it may play a very important role in limiting such scarring and, more generally, could have long-lasting economic effects.

To better understand these issues, we examine the effect of monetary policy on various measures of innovation and adoption, as well as the subsequent effects on productivity. Our key finding is that, as in other countries, monetary policy can affect innovation, in part by influencing economic conditions. These effects are likely to cancel out over an economic cycle. However, the findings reinforce the important role that monetary and other policies can play in stabilising the economy and thereby limiting medium-run productivity scarring. They also highlight the potential cost of having those policies constrained, for example, by the zero lower bound on interest rates.

Key findings

- Contractionary monetary policy is associated with lower research and development (R&D) spending, and lower R&D spending is associated with persistently lower productivity. The opposite applies for expansionary monetary policy, which is associated with higher R&D spending.
- Focusing on broader survey measures of innovation and technology adoption, rather than only R&D spending, responses differ somewhat across firms.
 - Smaller firms become less likely to innovate following contractionary monetary policy, while large firms are more likely to innovate. The opposite applies for expansionary monetary policy.
 - Exporting firms are less responsive than domestically focused firms, suggesting that monetary policy affects innovation in part by influencing domestic economic conditions.
- Contractionary monetary policy leads to a rise in the number of firms that are not innovating due to a lack of funds, while the opposite occurs for expansionary policy. This suggests that monetary policy affects innovation in part by influencing firms’ financing constraints.
 - The effects are more notable for smaller firms, which tend to be more financially constrained.
- US monetary policy also influences the amount of innovative activity undertaken by Australian firms, suggesting spillovers from overseas policy.