

Research projects using DMP data: September 2024

Live DMP team research projects

The effects of Brexit on UK firms: Assessing the effects of Brexit on investment, employment, productivity, exports, imports and prices and understanding the determinants of Brexit-related uncertainty. Updating earlier estimates published in a [2019 working paper](#) and looking for new insights from matching DMP to ONS micro datasets. Comparing evidence based on firm level data to macro results that contrast UK economic performance to other developed countries.

Firm price-setting: Assessing how firms adjust their prices in response to shocks. This includes looking at how firms change their prices in response to unexpected changes in both demand and costs using empirical evidence from a range of approaches to identify shocks: the Covid pandemic, firm forecast errors and hypothetical scenarios. Focusing on non-linearities in firms' responses and comparing to evidence from cross-country macro data. Developing a model to fit the empirical facts and understanding the circumstances under which the aggregate Phillips Curve can be non-linear. [Published working paper covering the evidence in relation to Covid](#). Examining the characteristics of firms who report using state versus time dependent price-setting strategies and looking at differences in how prices respond to shocks for these two groups ([summary of early results](#) on this strand).

What determines firms' inflation expectations? Examining how firms' inflation expectations respond to CPI inflation data releases and the extent to which firms put weight on forward or backward-looking indicators when forming their expectations. [Published working paper](#).

The effect of tax incentives on business investment: Using accounts data to estimate how investment responded to changes in the cost of capital following the introduction of the super-deduction in the 2021 Budget and 2023 Full Expensing measure. The approach taken is informed and validated by responses to DMP survey questions.

The effects of climate change on investment: Investigating how firms expect climate change to affect their future investment. Which types of firms will be more affected, will climate-related investment crowd out other forms of investment and how will it be financed?

The impact of higher interest rates on businesses: Using measures of exposure to higher interest rates from both the DMP survey and accounts data to assess the effects of rises in interest rates on investment and employment for UK businesses. [Blog on results so far](#). Comparing econometric based estimates to self-reported impacts. Assessing the importance of the credit channel of monetary policy versus other channels. Analysing the characteristics of firms who report being financially constrained and investigating whether changes in monetary policy have different effects on firms who are financially constrained versus those who are not.

How do firms make investment decisions?: To what extent do firms use hurdle rates (required rates of return) when they make investment decisions? What are those hurdle rates, how frequently do they change and how have they been affected by rising interest rates? What explains why some firms have higher hurdle rates than others? [Blog on hurdle rates work](#). How often do firms review their investment decisions, how long does it take for firms to implement their investment decisions and how does this affect how they respond to shocks?

Using hypothetical questions to assess how firms respond to shocks: A methodological piece to show how hypothetical questions can be used to help understand how firms respond to different types of shocks and investigate the reasons behind those responses. This includes looking at both how employment and prices respond to shocks to sales and comparing results from hypothetical questions to how firms are estimated to have responded to making errors in forecasting their sales. Assessing whether there are any signs of non-linearity in the observed responses. This research also involves making cross-country comparisons of similar questions asked to UK and US firms.

Insights from matching DMP with ONS business surveys: Linking DMP data to ONS surveys such as the Business Insights and Conditions Survey, Management and Expectations Survey and Annual Business Survey should offer new opportunities for research. Initial work using the ONS Secure Research Service will focus on assessing how well the DMP matches to various ONS surveys and on the consistency of responses for variables that are common across surveys. This will help to inform how best to make use of these matched datasets in future research.

Directors' characteristics and firm performance: Following directors as they move across companies, and assessing whether that has any impact on firm performance, the quality of predictions made or uncertainty surrounding expectations. If there is any impact on firm performance or forecast accuracy when directors move across companies, is it associated with any particular characteristics of those directors?

Other live research projects using DMP microdata

The impact of Brexit-associated tariffs on inflation in the UK: The study will develop a multi-sector open economy DSGE model in order to formulate theoretical predictions regarding the impact of sector-specific tariffs on sectoral inflation dynamics. Empirical work using DMP data will test the model predictions that price dynamics were linked to the anticipation of tariffs following Brexit.

Authors: Boromeus Wanengkirtyo (Bank of England), Mishel Ghassibe (Centre de Recerca en Economia Internacional), Ivan Yotzov (Bank of England).

Productivity, resilience and potential capital: Using growth accounting to work out the contributions of work from home, potential capital etc to productivity by firm type, sector. Estimate using panel methods, the substitutability of WFH and work at the workplace during Covid by firm type, sector etc to assess productivity and resilience to shocks. [Published working paper](#).

Authors: Stuart Campbell (King's College London), Janice Eberly (Northwestern University), Jonathan Haskel (Imperial College Business School), Paul Mizen (King's College London).

Productivity and persistence of remote work after Covid: Exploring the extent to which working from home and use of potential capital will persist after Covid. Examining the extent to which employees and employers wish to continue with home working and support it by investing in potential capital, intangible assets and support services.

Authors: Stuart Campbell (King's College London), Janice Eberly (Northwestern University), Jonathan Haskel (Imperial College Business School), Paul Mizen (King's College London).

New research and improving research capability on economic growth and productivity: Studying productivity, economic growth, profits, pay and the labour share of income, and how these relate to the characteristics of businesses and the wider economy, such as working practices, innovation, investment, skills, and how businesses navigate macroeconomic shocks/uncertainty.

Authors: Ioannis Galanakis (King's College London), Jakob Schneebacher (Competition and Markets Authority), Thomas Wickersham (Office for National Statistics), Russell Black (Office for National Statistics), Rabiya Nasir (Office for National Statistics), Christina Palmou (Office for National Statistics), Kyle Jones (Office for National Statistics), Oluwatobiloba Ayodele (Office for National Statistics), John Van Reenen (London School of Economics), Agnes Norris Keiller (London School of Economics), Takafumi Kawakubo (London School of Economics), Charlotte Meng (QMUL), Aureo De Paula (University College London), Anthony Savagar (University of Kent), Paul Mizen (King's College London), Nicholas Bloom (Stanford University).

Beliefs in production networks: Assessing how firms form their beliefs about future costs, prices, and production and how those are updated in response to changing supply chain risks. This project will first empirically characterize how much and how quickly supply chain conditions pass through to firms' beliefs. The second part will be to formulate an economic model that explains these empirical patterns.

Authors: Robert Minton (Harvard University), Hugo Monnery (Harvard University).

Firms' sales expectations and marginal propensities to invest: The goal of this project is to estimate firms' marginal propensities to invest (MPI). MPIs can be estimated from DMP survey data in a novel way: the survey questions allow us to construct surprises to expectations in sales growth and match this with firms' investment intentions and changes. The project will explore the channels that can determine MPIs to provide further insight into firms' investment behaviour and how this and financial constraints could give rise to state-dependence of the monetary transmission mechanism to firm investment. [Published working paper](#).

Authors: Andrea Alati (Bank of England), Johannes Fischer (Deutsche Bundesbank), Maren Froemel (Bank of England), Ozgen Ozturk (Oxford University).

Analysis of distributional consequences and considerations for Monetary Policy: Using microdata to assess the distributional consequence of monetary policy and the granular channels through which monetary policy propagates through the economy. Analysing the response of firm investment and hiring to monetary policy shocks and how that varies by firm characteristics.

Authors: Andrea Alati (Bank of England), Daniel Albuquerque (Bank of England), Jamie Lenney (Bank of England), Alberto Polo (Bank of England), May Rostom (Bank of England).

Inflation expectations and firms' financing decisions: The aim of this project is to investigate the impact of idiosyncratic shocks to firms' inflation expectations on their credit demand and cash management decisions. This involves matching data on firms' inflation expectations from the DMP to data on UK SMEs cash and credit balances from Experian and data on firms' investment from Bureau van Dijk. DMP data will be used to construct measures of firm-specific shocks to inflation expectations and therefore perceived real rates. The project will then study the effects of these shocks on firms' borrowing and investment.

Authors: Matthieu Chavaz (Bank of England), Alba Patozi (Bank of England).

Granular Expectation Shocks: The goal of this project is to estimate the effect of expectations shocks on aggregate outcomes. Typically, this effect cannot be estimated because movements in expectations reflect changes in aggregate conditions. Using data from the DMP survey the project will involve constructing idiosyncratic expectations shocks to large firms' own prices and sales and using them as instruments for the expectation shocks. Given these "granular expectation shocks" it should then be able to consistently estimate the effect of expectation shocks on aggregate outcomes.

Authors: Andrea Alati (Bank of England), Johannes Fischer (Deutsche Bundesbank), Maren Froemel (Bank of England), Ozgen Ozturk (Oxford University).

Brexit and the labour market: This project aims to evaluate the impact of Brexit from a labour market perspective. The authors are interested in how the tariffs and nontariff barriers impacted firm performance and the consequences for workers' outcomes. The outcomes of interest will be wages, employment and occupation quality found in the Annual Survey of Hours and Earnings. DMP data will be used to control for uncertainty and the anticipation effects of Brexit at the industry level.

Authors: Matthew Nibloe (University College London), Jan Knuf (University College London), Aaron Tang (University College London).

Heterogeneity in firm's perceptions and expectations for CPI inflation: This project plans to provide a detailed analysis of CPI inflation perception and expectation errors, together with their firm-level determinants and how they interact with the macro environment. It also includes trying to understand the role of firms' sophistication in shaping firms' expectation formation using proxies such as size and age.

Authors: Maren Froemel (Bank of England), Federico Pessina (Bank of England), Ivan Yotzov (Bank of England).

All you need is cash: Corporate Cash Holdings and Investment after the Global Financial Crisis: This paper shows that firms who had higher cash holdings before the financial crisis, managed to invest more and outcompete their cash-poor rivals during the crisis and this effect amplified during the subsequent recovery period. The analysis mostly uses data from firm accounts and focuses on the financial crisis, but also uses DMP data to investigate whether planned investment and investment opportunities are related to (changes in) cash holdings more recently.

Authors: Andreas Joseph (Bank of England), Christiane Kneer (Bank of England) and Neeltje van Horen (Bank of England).

Completed DMP team research projects

Brexit and uncertainty: Insights from the Decision Maker Panel: Examining the nature of the uncertainty created by the UK's decision to leave the EU and which types of firms were particularly affected. Published in [Fiscal Studies \(2018\)](#).

Authors: Nicholas Bloom (Stanford University), Philip Bunn (Bank of England), Scarlet Chen (Stanford University), Paul Mizen (University of Nottingham), Pawel Smietanka (Bank of England), Greg Thwaites (LSE Centre for Macroeconomics), Garry Young (National Institute of Economic and Social Research).

Economic uncertainty before and during the Covid-19 pandemic: This paper reviews how a range of economic uncertainty indicators for the US and UK evolved before and during the Covid-19 pandemic. Published in [The Journal of Public Economics \(2020\)](#).

Authors: Dave Altig (Atlanta Fed), Scott Baker (Northwestern University), Jose Maria Barrero (ITAM), Nicholas Bloom (Stanford University), Philip Bunn (Bank of England), Scarlet Chen (Stanford University), Steven J. Davis (University of Chicago), Julia Leather (University of Nottingham), Brent Meyer (Atlanta Fed), Emil Mihaylov (Atlanta Fed), Paul Mizen (University of Nottingham), Nicholas Parker (Atlanta Fed), Thomas Renault (University of Paris 1), Pawel Smietanka (Bank of England), Gregory Thwaites (University of Nottingham).

Covid-19 uncertainty: A Tale of Two Tails: Examining how the distribution of expectations changed during the Covid pandemic. Comparing trends for UK and US firms. [Published working paper \(2021\)](#).

Authors: Philip Bunn (Bank of England), David Altig (Atlanta Fed), Lena Anayi (Bank of England), Jose Maria Barrero (ITAM), Nicholas Bloom (Stanford University), Steven J. Davis (University of Chicago), Brent Meyer (Atlanta Fed), Emil Mihaylov (Atlanta Fed), Paul Mizen (University of Nottingham), Greg Thwaites (University of Nottingham).

The impact of Covid-19 on productivity: An analysis of the impact of Covid-19 on productivity using DMP data on the quantitative impacts of Covid-19 on inputs and outputs. It shows how TFP within firms fell sharply during the pandemic, but with offsetting positive between-firm effects. There was also significant heterogeneity over firms and sectors. Despite these large pandemic effects, the results imply surprisingly little lasting impact on aggregate TFP. Published in [The Review of Economics and Statistics \(2023\)](#).

Authors: Nicholas Bloom (Stanford University), Philip Bunn (Bank of England), Paul Mizen (University of Nottingham), Pawel Smietanka (Deutsche Bundesbank), Gregory Thwaites (University of Nottingham).

Firm inflation uncertainty: This paper introduces a new measure of own-price inflation uncertainty based on firm-level data from the DMP. It discusses how inflation uncertainty has evolved over time, how it varies between different types of firms and examines the implications for firm performance. Published in [AEA Papers and Proceedings \(2023\)](#).

Authors: Ivan Yotzov (Bank of England), Lena Anayi (Bank of England), Nicholas Bloom (Stanford University), Philip Bunn (Bank of England), Paul Mizen (University of Nottingham), Özgen Öztürk (Bank of England), Gregory Thwaites (University of Nottingham).

Other completed research projects

Do firm expectations respond to monetary policy? Examining how firm expectations, and particularly price expectations, respond to both monetary policy shocks and monetary policy announcements. Published in [Journal of Monetary Economics \(2024\)](#).

Authors: Federico Di Pace (Bank of England), Giacomo Mangiante (Bank of Italy), Riccardo Masolo (Università Cattolica del Sacro Cuore).