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Firms’ Sales Expectations and Marginal Propensity to Invest

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Understanding firms’ investment dynamics and their responses to income shocks is crucial for effective economic analysis. Our paper focuses on quantifying the effects of income shocks on capital investment by estimating firms’ marginal propensity to invest (MPI). Estimating MPI is not straightforward, as it is difficult to distinguish between sales-driven investment and investment-driven sales. To overcome this identification issue, we propose a novel approach leveraging firms’ income expectations. Using data from the Decision Maker Panel (DMP), a UK firm survey, we construct forecast errors on sales growth at the firm level. This unexpected component of sales growth serves as a proxy for income shocks, enabling us to estimate firms’ responses to income realizations. Our analysis reveals a robust positive relationship between unexpected sales growth and capital expenditure, with a 1 percentage point unexpected increase in sales growth leading to a 0.31 percentage point rise in investment. This finding aligns with a standard model of firm decision-making, where firms adjust their investment in response to changes in perceived demand levels. We corroborate this interpretation by showing that more attentive firms are notably more responsive to sales growth surprises, where we define attentive firms as those who adjust their prices based on current economic conditions rather than a fixed time-frame, or those who demonstrating greater learning. Additionally, we estimate the elasticity of price changes to sales forecast errors, revealing a modest but significant increase in prices following unexpected changes in sales growth. We find that a one percentage point higher than expected sales growth is associated with a 0.03 percentage point increase in prices over the subsequent 12 months. This lends further support to our interpretation that income shocks primarily reflect changes in demand. We explore four alternative explanations for our results. First, we examine the potential role of financial frictions as a driving force behind the observed response. Second, we analyse the impact of (idiosyncratic) productivity shocks. Third, we assess whether firms exhibit heterogeneous reactions to micro and macro shocks as sources of sales growth surprises. Finally, we investigate uncertainty dynamics as a fundamental determinant of firms’ forecast errors. We do not find support for these channels in the data. Taken together, our results suggest that firms’ investment responses are primarily driven by a behavioural mechanism, where income surprises facilitate learning about demand conditions.