Sales Numbers Are Up? It May Only Be Inflation

Managers need proper information systems to decipher the real causes of any bump in sales revenue and decide whether investments are required.

In early 2021, people had already started commenting that inflation might be coming back. But few people could predict just how high it would go. In January, year-on-year inflation in the OECD area rose to **7.2 percent**. Consumer price inflation in the United States hit a 40-year high of 7.5 percent that same month. The ongoing war in Ukraine is now **adding** to these inflationary pressures.

This raises the question, how do managers deal with such macroeconomic shocks? As professors of economics and accounting, we are naturally interested in examining how managers decipher macroeconomic signals. Are they able to understand the drivers of these signals and split them up into relevant components? And what can firms do to help their managers make the best decisions?

In a new **working paper**, we start by establishing a baseline fact: When there is an inflation shock, firms in aggregate react by increasing investments. By investments, we mean traditional capital investments or capital expenditures, e.g. machines, plants and trucks that appear on the balance sheet.

In other words, when the inflation rate goes up – basically a number that reflects nominal information – firms react by increasing real, actual investments.

Nominal isn't synonym with real

This goes against economics theory that says nominal variables should not affect real variables. But in practice, due to imperfect information, managers often struggle to interpret and react correctly to macroeconomic signals.

When managers observe that sales numbers are up, they need to remember that it could be for two reasons, broadly speaking. The boost in sales revenues could be because consumers love their products or services. It could also simply be that prices have gone up in general.

If the higher sales numbers are based on real consumer demand, managers are then right to propose investments to ensure their firm can continue catering to demand. However, if the cause is inflation, the opposite holds. Aside from creating uncertainty, inflation could lead to a drop – not an increase – in real demand. Investments should not follow automatically in this case – except we find that they do.

Managers need proper information systems

We then figuratively looked under the hood to see which firms were better at filtering real, firm-level data, from aggregate-level, nominal data. To do this, we relied on data from the World Management Survey, a project developed with the purpose of measuring various management practices, thereby allowing researchers to identify the impact of those practices on corporate outcomes.

Our sample includes over 3,500 medium-sized firms from 21 countries that participated in the survey from 2004 to 2015. The United Kingdom, Italy, Greece and China provided about half of the contributions.

Specifically, we looked at a subset of the survey questions that measure how organisations monitor what goes on inside the firm, and how this information is used by managers for decision making. These include open-ended questions related to how well the firm documents information flows. How good is the tracking? How much dialogue is there about the information?

We found that when the quality of the internal information system is higher, the relation between inflation shocks and investments is attenuated, as it should be.

In other words, the higher the quality of the internal information system, the more managers seem able to tease out real information from just nominal information. That helps them to make better investment decisions.

New regulation that helped

To further test the validity of our results, we also looked at the introduction of new regulation in the EU that prompted specific firms to improve their information systems. Enacted in 2006, the 8th EU Company Law Directive required public firms to put in place effective controls to monitor critical risks and to ensure that their board of directors and audit committee received appropriate reports.

In European countries that did adopt the Directive, public firms subject to the regulation increased the quality of their internal information systems more than private firms did – or public firms in countries that didn't adopt the Directive.

Supporting our argument, we found that this increase in the quality of internal information systems mitigated the positive relation between inflation and investment.

Implications

Better internal information systems help managers figure out whether revenue boosts are due to actual consumer demand or mere inflationary pressure. This enables them to make smarter investment decisions.

Why aren't all managers benefitting from high-quality information systems? One obvious reason is that it is not costless to set up good information systems. Such systems are a function of costs and a function of potential outputs that management wants to achieve in terms of decision making.

It is also possible that firms weren't necessarily able to measure the quality of their internal information system. The **questionnaire** of the World Management Survey, especially the part about performance monitoring, could help steer a firm in the right direction.

While previous research gives much attention to the relation between the quality of a firm's external corporate reporting and its investments, our contribution is to highlight the importance of internal information systems for improved investment decision making.

__Oliver Binz__ is an Assistant Professor of Accounting and Control at INSEAD.

__Elia Ferracuti__ is an Assistant Professor of Accounting at the Fuqua School of Business.

__Peter Joos__ is an Associate Professor of Accounting and Control, holder of The Barons Janssen Endowed Professorship, and current Chair of the Accounting and Control Area at INSEAD.