

# Economics in Brief



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## Falling sales expectations curb SME innovation activity in Germany

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Innovation is vital for long-term economic growth. A continuous supply of new products and services (product innovations) as well as improved processes and production flows (process innovations) are crucially important, especially for the efficient use of resources and for greater competitiveness. The effects of innovation on the development of an economy are not only one-sided. But, particularly in the short term, the economic situation can also be expected to affect the implementation of innovation plans at companies.<sup>1</sup>

### Willingness to innovate heavily reliant on economic activity

Using a multivariate analysis based on the KfW SME Panel we can quantify the influence of economic expectations on innovation.<sup>2</sup> To this end, the impact of an industry's sales expectations<sup>3</sup> was isolated from other factors influencing innovation. The calculations reveal a distinct

influence. The probability that an average small or medium-sized company will produce at least one innovation during a three-year period in the event of weak sales expectations, similarly to those seen in the crisis year of 2009, is 24.4 % (cf. figure). This means the likelihood of innovation is some 38 percentage points lower than the much improved economic expectations of 2011 following the economic recovery (62.1 %).

### Less economic influence on process innovations

The economic effect is much less pronounced for process innovations than it is for product innovations. The effect on process innovations is a mere 21 percentage points, while the corresponding figure for product innovations is 37 percentage points. The reason for this is that product innovations tend to be more successful in a positive economic environment, and are therefore placed ac-

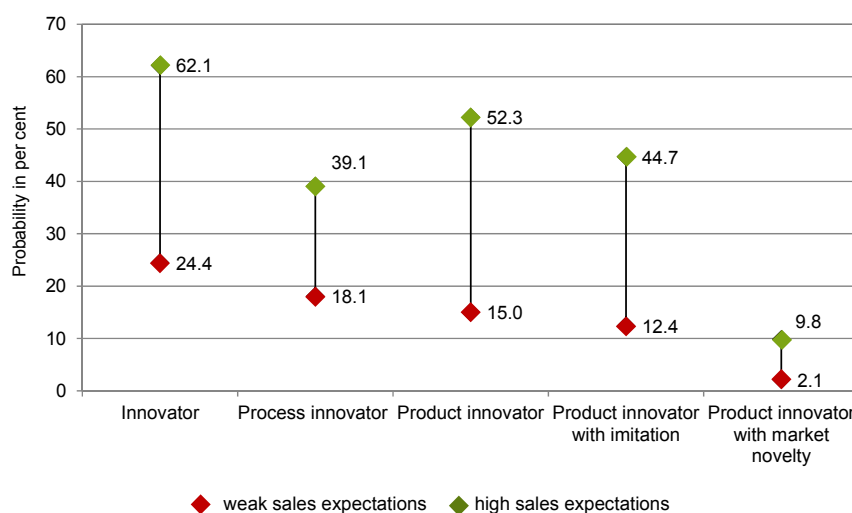
ordingly. By contrast, there is a need to design processes in a way that minimises costs especially in times of weak economic activity.

The strong response of product innovations to fluctuating sales expectations is primarily down to imitation projects. These have relatively short development phases and offer the chance of a quick market entry, which means they can be managed very flexibly. By contrast, market novelties that often require a high level of innovation are usually planned for the long term, and more frequently from a strategic angle. Their introduction fluctuates only by a few percentage points during economic cycles.

### Conclusion

Against the backdrop of the marked downturn in business expectations in Germany as seen in the KfW-ifo SME Barometer, there is a risk that SME innovation, which is so strongly reliant on economic activity, will continue to fall. This may well have a negative impact on competitiveness throughout the German SME sector and impact on overall long-term economic growth. ■

Figure: Innovation depends on sales expectations



Note: Model calculations based on regression analyses

Source: KfW SME Panel, authors' calculations.

<sup>1</sup> Similarly to investments. Cf. Gerstenberger, J. and M. Schwartz (2014): SME investments fall victim to uncertainty: reliable general conditions required. KfW Economic Research. Focus on Economics No. 66, 4<sup>th</sup> August 2014

<sup>2</sup> The probit analyses are based on roughly 11,700 observations from approximately 5,500 companies. The following factors influencing innovation were taken into consideration: size and age of company, employment of graduates, regional reach of sales market, return on sales, equity ratio, legal form, region company is based in, any group affiliations, support status and year survey was conducted.

<sup>3</sup> Calculated as balance of "positive" and "negative" responses for each sector.