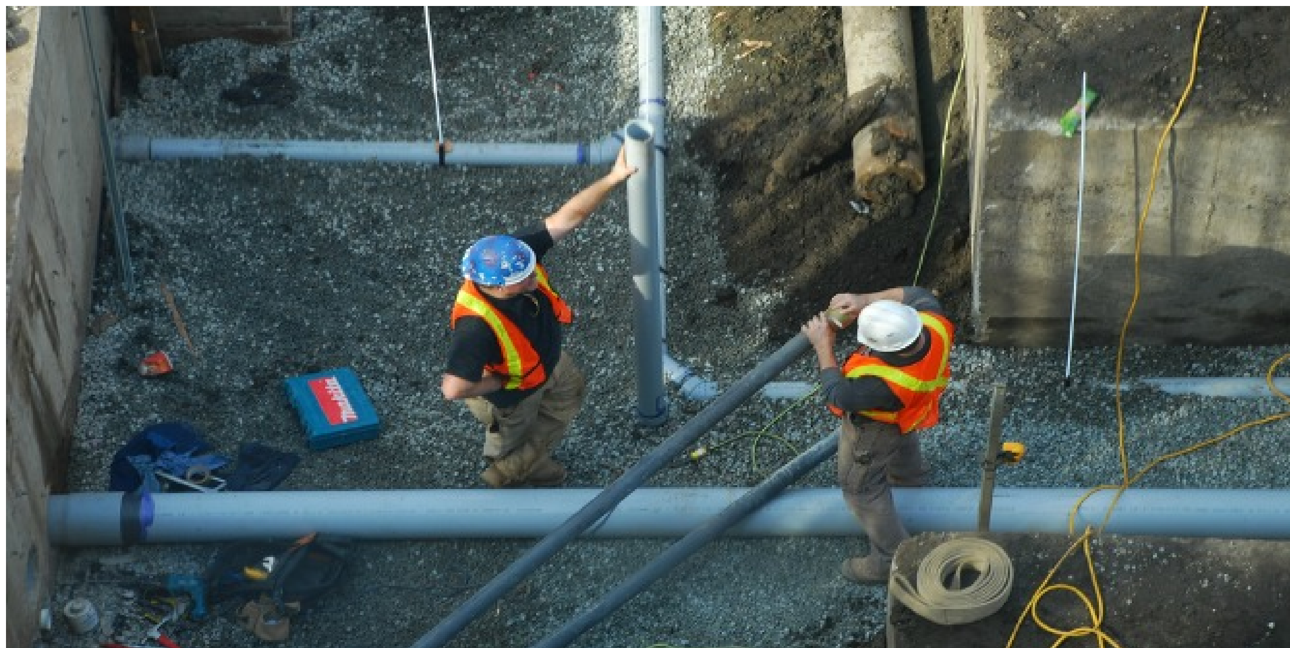
Some workers win, others lose from currency depreciation



"When the exchange rate rises, it gets more difficult for firms to export. The loss in international competitiveness forces firms to shed local jobs and move their activities abroad." This line of argument is probably a good summary of how the public (and policymakers) would assess the effects of exchange rates on the economy. Recent economic research, including our own, suggests that things are somewhat more subtle: an appreciation of the exchange rate may generate winners and losers, both across different types of firms as well as within firms. The same holds for a depreciation, as recently experienced by Britain after the Brexit vote. This article explains why.

In economic models, exchange rates may affect firms and their demand for labour in three different ways. First and most obvious, a stronger currency is painful for exports because the products that domestic firms sell abroad become more expensive relative to those of foreign competitors. As a result, firms may be forced to downsize their output and reduce staff numbers.

Second, an appreciation may also have adverse effects on firms who only sell to local customers because foreign competitors can now dump their products more cheaply on the domestic market. This effect depends on the so-called 'import penetration', that is, the degree to which foreign competitors are already established sellers on the domestic market or can gain access to it. In addition, consumers may find it more attractive to shop and take vacations abroad since their money has gained in purchasing power in other countries.

Third, and arguably more subtle, firms typically require a variety of intermediate inputs (materials, machines, services etc.) to produce their final goods and services. To the extent that these inputs are imported, a higher exchange rate lowers their prices, and therefore, pushes down firms' costs of production. This mechanism is typically termed 'natural hedging' because losses on the revenue side are (at least partly) offset by gains on the cost side of businesses' income statement.

Economic theory therefore tells us that firms are affected depending on their *net exposure* to changes in the exchange rate. Businesses that face strong international competition, either at home or abroad, are likely to reduce staff numbers (or wages) in response to a hike in the exchange rate. Conversely, those businesses that make intensive use of imported intermediate inputs will find themselves better off and may hire additional workers to

expand production. In sum, workers at some firms may benefit while workers at other firms may lose out from a stronger domestic currency.

To put these theories to practice, we analyse data on the Swiss manufacturing sector from 1998 to 2012 that are collected by the KOF Swiss Economic Institute. Switzerland is an interesting case because the Swiss franc traditionally acts as a safe haven currency. Thus, the country's exchange rate sometimes changes substantially within a short period of time. In January 2015, for example, the exchange rate appreciated more than 10 per cent within just one day after the central bank lifted its previously established ceiling of the Swiss franc against the euro.

In our study, we find that the impact of an appreciation of the Swiss franc on staff numbers varies strongly from company to company. Not surprisingly, companies that generate the majority of their turnover abroad shed the highest number of jobs. In contrast, the winners of exchange rate appreciations are firms that purchase the majority of their inputs abroad and don't export much. Some of these companies actually create new jobs. Rather surprisingly, the *average* impact of a rise in the exchange rate on employment across all firms is close to zero.

The novelty of our research is that we also study the impacts on different types of workers within firms. The results show that the close-to-zero effect of exchange rates on total staff numbers hides the fact that firms adjust the *skill structure* of their staff. An exchange rate appreciation tends to wipe out low- and medium-qualified jobs while actually creating new jobs for highly qualified employees. In other words, there can be winners and losers of exchange rate movements even within a single company.

Our economic model offers a simple but compelling explanation for this result: Compared to their high-skilled counterparts, low-skilled workers are more easily replaced by imported capital goods (machines and equipment) and workers abroad. Put differently, highly routinized and repetitive tasks in manufacturing are easier to outsource to other firms abroad where these tasks can be performed more cheaply. Also, such tasks are easier to automatize using modern technology. If businesses are faced with a stronger domestic currency, the costs of foreign workers and imported equipment fall *relative* to the wage costs for domestic low-skilled workers. As a result, firms respond by cutting low- and medium-skilled jobs.

For highly qualified workers, such as managers, engineers and computer scientists, the story is quite different, however. More outsourcing and more intensive use of capital goods (machinery, computers etc.) in manufacturing tend to *raise* the demand for their skills. The reason for this is intuitive. First, more sophisticated production techniques require more specialized personnel. Second, a higher degree of outsourcing requires more coordination and larger managerial capacities.

Overall, depreciations and appreciations of the exchange rate shouldn't be uniformly considered a good or bad thing for all types of businesses and workers. Following a depreciation, firms with a strong exposure to international competition will find it easier compete against foreign competitors, while others, who rely heavily on imported inputs, will suffer from higher costs of production. Despite this, our research suggests that a depreciation is probably good news for low-skilled workers.

Notes:

- *This article is based on The Skill-Biased Effects of Exchange Rate Fluctuation, The Economic Journal, Volume 126, Issue 592, pages 756–780, May 2016*

- *The post gives the views of its authors, not the position of LSE Business Review or the London School of Economics.*

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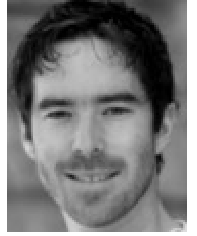

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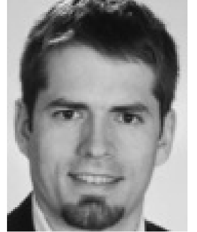

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