

These data permit to look at some microeconomic characteristics of offshoring firms given that the database includes information on firms' imported intermediate inputs, which we use as a measure "offshoring". Specifically, we calculate offshoring as the percentage of imported material inputs in total supplies, and alternatively as the proportion of imported inputs to total sales. Using information on the roughly 1,100 manufacturing firms available and based in Germany, we run regressions of the form:

$$\ln(\text{labour productivity})_i = \beta_1 \text{offshoring}_i + \beta_2 \ln(\text{size}_i) + \varepsilon_i$$

where the dependent variable is labour productivity in firm i , calculated as sales per worker, and the variable $size$ is measured in terms of employment in order to control for size differences across manufacturing firms.

The regression results are reported in Table 11. They show that firms' offshoring activity, measured in terms of imported intermediate inputs, is positively and statistically significantly correlated with labour productivity, even when controlling for firm size. These results are, thus, in line with the above reported international evidence by Kurz (2006), Tomiura (2005) and Görg et al. (2008) and indicate that more productive firms are more likely to be intensively engaged in global value chains.

Table 11: Regressions on productivity and offshoring

	(1)	(2)
Imported inputs / total Inputs	0.005***	--
Imported inputs / sales	--	0.011***
Size	0.087**	0.078**

Table reports coefficient estimates from OLS regression. Dependent variable is log labour productivity. Regression also includes a constant, which is not reported. *** and ** denote statistical significance at 1 and 5 percent level, respectively.

Source: Own calculations based on BEEPS firm level data for Germany for the year 2004.

Consequences of global value chains

This section discusses the evidence on the implications of relocation activity / GVCs for German manufacturing firms and considers also their employment decisions. Here we will focus on productivity / competition / technology effects for firms, and labour market outcomes (employment levels, relative demand for skills and wages) for workers, relying on survey evidence and the existing relevant literature for Germany (e.g., Wagner 2009, Geishecker, 2009, Geishecker and Görg, 2008, Winkler, 2009).

As a first step, the survey evidence provided by the German Statistical Office can be used to gauge some of these effects. Table 12 shows that 85 percent of firms replied that the relocation contributed to improved their overall competitiveness. Three quarters of firms also indicated that it had positive implications for their labour costs, i.e., reduced labour costs in line with the expectations. These two facts can be interpreted together with a more formal econometric study of the effects of outsourcing on firm performance by Görg and Hanley (2010), based on Irish micro data. They argue that firms engage in outsourcing in order to locate some of their "non-core" labour intensive production stages abroad. This enables them to reduce labour costs for production at home, and use the increased profit to enhance their competitiveness through R&D and innovation. Their empirical analysis based on a large sample of Irish firms not only confirm this theoretical mechanism, but also might help