

similar firms which differ only because some outsource abroad while other comparable, *matched* firms do not. He finds, firstly, that, in line with the literature surveyed above, firms that relocated activities tend to be larger and more productive before their relocation takes place compared to other firms that never relocated activities abroad. Secondly and more importantly concerning the employment effect resulting from relocations abroad, he finds that there are no statistically discernible effects on employment from the relocation decision.

A similar question is addressed by Bachmann and Braun (2010) and Geishecker (2008), but from another perspective using large samples of data on individual workers. They estimate whether offshoring (measured in terms of imported inputs constructed with input-output tables) has any noticeable effect on workers' movement into unemployment or/and into non-participation in the labour market. Both papers use different datasets but apply similar methodologies which nevertheless lead to slightly different results. While Geishecker (2008) finds that offshoring significantly increases the risk of becoming unemployed, Bachmann and Braun (2010) find for workers in the manufacturing industry that only the risk of moving out of the labour force is affected, but not the risk of moving into unemployment. Both studies, however, find that their main effects do not differ strongly among skill groups. The jury is, thus, still out on judging the possible effects of offshoring on employment when using such worker-level data.

In related research, a number of studies have also tried to estimate the possible effects of international outsourcing on wages. Here, Geishecker (2006) and Winkler (2009) investigate how outsourcing affects the relative wage of skilled and unskilled workers using industry level data. Their main findings are in line with the international literature (e.g., Feenstra and Hanson, 2003; Hijzen et al., 2005): outsourcing indeed raises the relative wage of skilled workers. Geishecker (2006) finds that in particular outsourcing to Central and Eastern European Countries has contributed to increase the skill intensity of German production at home, in line with the idea that low skill intensive activities are more likely to be relocated to (low wage) Central and Eastern European Countries.

More recent studies dig deeper into the relationship between outsourcing and wages using worker level data with even more precise information on workers' employment profiles and activities. Here, Geishecker and Görg (2008) find that a one percentage point increase in outsourcing reduced the wage for workers in the lowest skill categories by up to 1.5 percent while it increased wages for high-skilled workers by up to 2.6 percent. These results are statistically significant, but economically small (mirroring those found for the US in Liu and Trefler, 2008).

Baumgarten et al. (2009) expand on this analysis by adding to the picture the tasks workers carry out in addition to information on workers' skill levels. They rely on a different estimation approach and thus find economically much stronger effects of outsourcing on workers. For example, their estimations suggest that low-skilled workers that carry out mainly non-interactive tasks that can be easily outsourced (c.f. Blinder, 2006) experience cumulated wage cuts of 8.85 percent per hour (equivalent to 1.31 euros). For low-skilled workers with medium degrees of interactive tasks, the cumulated wage cut is 0.77 euros while low-skilled workers with the highest degree of interactive tasks only experience wage cuts of 0.29 euros. An additional important finding is that there are no discernible wage effects for high skilled workers, irrespective of the tasks they carry out.

To sum up, recent empirical evidence suggests that relocating production abroad does have some implications for firms and workers, as one would expect, but that the magnitude of these effects appears to be far less adverse, than is generally expected.