Downstream Offshoring and Firm-level Employment - Evidence for Belgian Manufacturing Firms

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Over the last couple of decades, there has been a large scale reorganisation of manufacturing production processes within global value chains. This has been achieved through fragmentation and offshoring. Fostered by the fall in coordination costs due to information and communication technology developments, offshoring implies that firms increasingly source intermediates from abroad. In developed economies, this has raised fears of massive job losses. Most academic work, in contrast, fails to find evidence that offshoring contributes to lowering employment.
In this paper, we investigate a channel through which offshoring may nonetheless affect employment, but which so far has been neglected by the literature. The basic idea is that offshoring may have important consequences not only for the firm that engages into offshoring but also for other domestic firms that are part of the same value chain. Indeed, when they engage into offshoring, firms import either intermediates they previously produced domestically in-house, or intermediates they previously sourced from domestic suppliers beyond the boundaries of the firm. While the former channel has received ample attention as a channel for potential decreases in employment, the latter channel has not yet been considered by the literature. A switch from domestic to foreign suppliers by firms in downstream industries clearly leads to a negative demand shock for domestic suppliers in upstream industries and may thereby depress domestic employment. We label this demand shock ‘downstream offshoring’ and develop a measure to capture its extent for a firm in a given upstream industry. The measure takes into account the relative size of purchases by downstream industries of the goods produced by the firm as well as the intensity of offshoring in downstream industries. It is computed based on supply-and-use tables.
We estimate the employment effect of downstream offshoring using a representative sample of Belgian manufacturing firms over the period 1997-2007. For this purpose, we introduce the measure into a standard labour demand framework. According to the results, downstream offshoring has a highly significant negative impact on firm level employment. We calculate that increases in downstream offshoring directly account for a loss of almost 7000 jobs over the sample period, which corresponds to 2.4% of in-sample employment in 1997. The negative employment effect of downstream offshoring is robust to the use of alternative estimation techniques and we are able to show that it is not driven by exit. It holds in various subperiods of the sample period. Sample splits by firm size class reveal that the effect is strongest for medium-sized firms followed by small firms, while large firms are not affected by downstream offshoring. This finding is consistent with an industry structure where a smaller number of large firms is surrounded by a set of small and medium-sized suppliers that are influenced by sourcing decisions of large firms.