



N° 2010 – 06

March

## THE HETEROGENEOUS EFFECT OF INTERNATIONAL OUTSOURCING ON FIRM PRODUCTIVITY

Fergal McCann

### NON-TECHNICAL SUMMARY

International outsourcing, treated here as trade of an intermediate input between two non-affiliated parties, has grown rapidly in importance over the previous two decades. Indeed, Grossman and Helpman (2005) have gone as far as to say that "we live in an age of outsourcing". Yeats (1998) reports that for 1995 trade in parts and components in the Machinery and Transportation (SITC 7) sector totaled roughly \$550bn. Kimura et al (2007) show global exports of machinery parts and components to have reached \$1.3trillion by 2003, which was 45% of all machinery exports and 20% of all global commodity exports. The majority of the academic and policy focus has been on the effect that this change in origin of intermediate inputs has had on the domestic labour market of the outsourcing country. Less attention has been paid to the potential benefits of international outsourcing in terms of increases in total factor productivity (TFP). Görg et al (2004), Görg and Hanley (2005), Gorzig and Stephan (2002) have all found international material outsourcing to be associated with increased labour productivity. Halpern et al (2005), Amiti and Konings (2007) and Kasahara and Rodrigue (2008) have all found importers to be more productive than non-importers using structural estimation frameworks. The aim of this paper is to address two questions: firstly, whether firms that outsource internationally are more productive than firms that source inputs only at home, and secondly whether more intensive outsourcing is associated with higher TFP. A major contribution of the paper to the literature's understanding of the link between international trade and productivity is to ask both of these questions while splitting the sample into three sub-groups: indigenous non-exporters, indigenous exporters and foreign-owned affiliates. The results are striking, and point to a very interesting policy conclusion regarding firms' internationalisation. When the effect of outsourcing intensity (measured as total international outsourcing of materials divided by total wage bill) is examined, extremely robust evidence is found to show that foreign affiliates' TFP is increased by more intense outsourcing. Less robust but still compelling evidence is found for the productivity-enhancing effect for indigenous exporters. For indigenous non-exporters, however, there is more or less no effect of outsourcing intensity on TFP. On the other hand, when the firm's international outsourcing status, i.e. whether or not a firm outsources internationally, is analysed, a different picture emerges. Now we see that indigenous non-exporters increase TFP due to the fact that they are an international

outsourcer. Exporters and affiliates, on the contrary, experience limited, insignificant and in some cases negative productivity effects from being an international outsourcer. In dynamic analysis in which the effects of becoming an international outsourcer are viewed for four years after entry, we again see that indigenous non-exporters increase their TFP, while there is a negligible impact for exporters and no effect for affiliates. The policy message of this research is stark: for firms that are already internationalized in some way, higher volume of outsourcing leads to TFP increases. On the other hand, the fact that these internationalised firms also source inputs abroad does not matter. The "learning effect" from international outsourcing is only felt by firms for whom international outsourcing is their first venture into international markets, for whom the greater variety and quality of input available on the international market leads to an embedded purchase of knowledge and technology previously unavailable.

*J.E.L. Classification:* F23, L23.

*Keywords:* International Outsourcing. Heterogeneous Firms. Productivity. Firm Structure.