Labor market effects of international outsourcing: How measurement matters

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1. Introduction

Since International Outsourcing moved into the focus of political and social discussion, it has been blamed to reduce relative demand for low skilled labor. Thus, beside skill-biased technological change, International Outsourcing is seen as one main culprit for labor market disruptions in industrialized countries. While outsourcing is defined as the procurement of inputs from an external supplier, it is the international component, namely the use of a production fragment produced abroad, that achieves most attention in public discussion as well as in economic research. Even if International Outsourcing is already seen as a world-wide phenomenon, Kierzkowski (2005, p. 235) correctly mentions that “it is only the beginning of what seems an inexorable process”.

In order to investigate labor market effects of International Outsourcing, a wide area of empirical research emerged.1 Since it is not possible to directly observe International Outsourcing on an aggregated macro level, there is a need to proxy it. Thus, several indices were developed and a few of them are very common in use. Within a descriptive analysis, Campa and Goldberg (1997) e.g. measure International Outsourcing using an index called vertical specialization. They show for the period 1974–1993, that International Outsourcing increased strongly in the US, Canada and the UK, but not in Japan. Hummels, Ishii, and Yi (2001) measure International Outsourcing as imported inputs used to produce products that are afterward exported. Based on OECD input-output tables they document several key aspects of International Outsourcing for various countries. Yeats (2001) uses the measure of imported inputs in total imports and mentions for a variety of countries that International Outsourcing is already at a quite high level.

Even though it is difficult to classify empirical contributions, they can be divided into two broad groups: some contributions show insignificant effects of International Outsourcing while others support the importance of International Outsourcing for changes on the labor market. Berman, Bound, and Griliches (1993) first estimate labor market effects of International Outsourcing using a narrow measure the parts and components purchased from abroad. Regressing the share of high skilled wages in total

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1 For an analysis of the determinants of International Outsourcing, see e.g. Jones, Kierzkowski, and Lurong (2005) who empirically test the model of Jones and Kierzkowski (1990), and Kimura and Ando (2005) who analyze International Outsourcing activities in East Asia using a huge micro economic dataset.

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wages on the components of a quasi-fixed cost function, including their International Outsourcing proxy, they show for the US manufacturing sector that International Outsourcing has only small effects while it is the labor saving technical change that turns out to be the main driving force. Amiti and Wei (2004) investigate the role of service outsourcing for the US and the UK showing that it is on a much lower level but increases at a faster pace than material outsourcing in both countries. Using imported inputs in total inputs, they estimate labor market adjustment effects with a standard labor demand equation. As a result they also present only insignificant effects of service outsourcing on job growth in the UK.2 Thus, they summarize that service outsourcing does not induce a fall in aggregate employment but could lead to overall positive effects since it increases the productivity within industries.

By contrast, Feenstra and Hanson (1996a,b, 1999) first present a positive, statistically significant effect of International Outsourcing on the change in the non production wage share of the US manufacturing industry. Using the index imported inputs in total inputs they highlight the importance of International Outsourcing for understanding changes in labor demand and first note that measurement differences can be one crucial point for achieving different results. Egger and Egger (2002) examine the effects of International Outsourcing within the involved low-wage countries. As proxy they use i.a. imported inputs in total imports and find a significant positive (negative) effect of imports (exports) on wages in the manufacturing industry. Focusing on the manufacturing sector in France, Strauss-Kahn (2003) shows that International Outsourcing contributes significantly to the decline of the share of unskilled workers in employment. She bases her calculations on an index called vertical specialization and, like Berman et al. (1993) and Feenstra and Hanson (1996b, 1997), estimates labor market effects using a cost share equation of a translog function. Hijzen, Görg, and Hine (2004) estimate the effects of International Outsourcing on labor demand in the manufacturing sector in the UK using a very narrow measure inputs in an industry imported from the same industry. As a result they note that International Outsourcing nevertheless has a strong negative effect on the demand of low skilled workers and thus, is an important component in explaining the changing skill structure. Geishecker and Görg (2005, 2008) show for the German economy that International Outsourcing may have different adjustment effects for different levels of industry aggregation. As index they use imported inputs in total output. While for the manufacturing sector as a whole, effects achieved by summarizing the existing literature.

As this literature review shows, empirical results differ strongly. Some of them support the importance of International Outsourcing for changes in factor prices, others refuse these effects and show that it is the skill biased technical progress that matters most. The use of different indices to proxy International Outsourcing activities adds to the puzzle. Basic presumptions made on the origin of different empirical results are that measurement differences may play a crucial role (Feenstra & Hanson, 1996b) and that the level of industry aggregation matters (Geishecker & Görg, 2005; Amiti & Wei, 2005). This contribution answers both of them. Investigating if measurement differences may be one reason for achieving different empirical results it turns out that

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2 In a companion paper Amiti and Wei (2005) show for the US economy that a negative effect occurs when looking at a more disaggregated industry level, but this effect disappears when considering the aggregate.
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