

Eastern Enlargement and Western Labor Demand

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1. Introduction

The closer integration with Central and Eastern Europe and the emergence of China and India as producers for the world market has created concerns about the consequences for the labor markets in the West. The most commonly expressed concern is that the increased competition from low-wage countries leads to job losses in the high-wage economies in Western Europe and North America. Whereas this concern is wide-spread among the public and often voiced by high-level politicians, it is rarely expressed by economists, especially those who work in the field of international economics. This paper will try to lay out the reason for why economists tend to be much less worried about the labor market consequences of competition from low-wage countries than the public at large and the policy makers in Western Europe.

To begin with, I will try to explain why economists find the question of how many jobs are lost to Central and Eastern Europe or China and India not only impossible to answer, but incorrectly specified as well. I will argue that the only meaningful way of posing the question of how competition from low-wage countries affect labor demand is to ask how it affects the structure of demand, not the level. I will then summarize the findings of studies of the impact of competition from low-wage countries on labor demand in high-wage countries.

2. Why the question about job losses is the wrong one

Very often we hear about Western European firms deciding to close plants in their home countries at the same time as they are expanding abroad. Sometimes these plant closures are explicitly motivated by the need to reduce costs by relocating activities to low-wage locations, but sometimes they are motivated by other factors, such as the need to concentrate production. It is understandable that this type of event becomes linked to the idea that jobs are being moved abroad and that the main question posed in connection with this is how many jobs are then being lost.

However, it is important to understand that there are two sides to international market integration between high-wage and low-wage economies. From the point of view of the high-wage economies, there is increased competition affecting labor intensive activities in particular at the same time as there are increased profit opportunities in export markets. Western firms not only locate production in Eastern Europe and Asia, they also sell their products there.

The main problem for the labor markets in high-wage economies is a temporary mismatch in terms of labor market characteristics between those who are laid-off because of foreign competition and the openings created in expanding exporting firms. Ultimately, international market integration will lead to international specialization leading to gains from trade. The way there however will be associated with structural adjustment with potential adjustment costs in terms of unemployment and retraining. Moreover, some groups may experience losses from this in the long run. Standard trade theory teaches us that factors used intensively in import-competing activities will experience lowered real returns and will lose out if not compensated. Hence, we would expect that low-skilled workers in particular would lose from increased competition from low-wage countries if they were not compensated in some ways. Arguably, one of the purposes served by the welfare system in the Western European countries is to compensate workers losing out from this type of structural changes of the economy.

Still, the question about jobs lost to international competition is the wrong one because at the same time as some jobs are lost, some are also gained. Those gained are likely to differ from the ones that are lost, and it is this phenomenon that creates adjustment costs for society on the short run and potential losses for certain groups in the long run.

3. Examining effects of low-wage competition on labor markets in the West

A valid question about the effect of competition from low-wage countries on the labor markets in Western Europe is to ask how this competition affects relative factor demand. This question could be stated in terms of the relative demand for labor versus capital or in terms of different types of labor.

Let us first consider the question how competition from low-wage countries affect the relative demand for labor versus capital. From theory we would expect a decrease, which would manifest itself in a downward pressure on real wages and on the wage share in value added. This effect might arise through a reduced bargaining power of trade unions in wage negotiations. This would lead the employers to capture a larger share of overall surplus compared to a situation with weaker competition from low-wage countries.

Very few studies have studied whether this prediction finds support in the data. There are some studies of the effect of offshoring of intermediate production and services on employment, but they do not explicitly analyze the relative demand between labor and capital into account (see e.g. Amiti and Wei, 2005, 2006).

Then we might also ask how competition from low-wage countries affects the composition of labor demand in high-wage countries. From theory we would expect a decrease in the relative demand for low-skilled workers and/or workers carrying out "offshorable" tasks. Whether it is easy to have someone carrying out a particular task abroad is not necessarily related to the skill requirements of carrying out the task. Whether it is easy to offshore the task depends on to what extent it is codifiable and to

what extent it requires personal interaction with the employees remaining at home. There is probably a negative correlation between the skill requirement of a task and the ease with which it is “offshorable”, but this correlation may be less than perfect. For instance, computer programming requires a high level of skills but seems to be relatively easily “offshorable”.

A fair number of empirical studies of the effect of international competition on labor demand have been carried out the last decade. Some of them have studied the effect of import competition or foreign direct investment (FDI) or offshoring of intermediate inputs on the relative demand for skilled and unskilled workers. Some studies find that import competition and production transfers within multinationals contribute to an increased relative demand for skilled workers (e.g. Feenstra and Hanson, 1996, 1999, Head and Ries, 2003). However, the overall impression of the results from this literature is that effects are relatively small. It seems as if globalization is less important than technological change in explaining increased relative demand for skilled workers.

Another type of study carried out is studying the effect of FDI on overall labor demand at the level of the firm. If foreign and domestic labor do not substitute for one another at the level of the firm, FDI unlikely to give rise to any adjustment costs. Hence, these studies try to establish whether foreign and domestic labor are substitutes, complements or simply unrelated to one another.

Most studies estimating the relationship between foreign and domestic workers within multinational firms find that foreign and domestic workers are indeed substitutes, but only weakly so if the foreign affiliates are located in low-wage countries (see Braconier and Ekholm, 2000, Brainard and Riker, 2001, Konings and Murphy, 2001, Becker et al., 2005). For instance, Konings and Murphy find much weaker effects of an expansion into CEE compared into other Western European countries. A study based on German and Swedish data find that a 10 percent increase in wages in CEE would increase demand at German and Swedish parents with about 0.5-1 percent (Becker et al. 2005). The overall conclusion from this literature is that multinationals seem to contribute to making labor

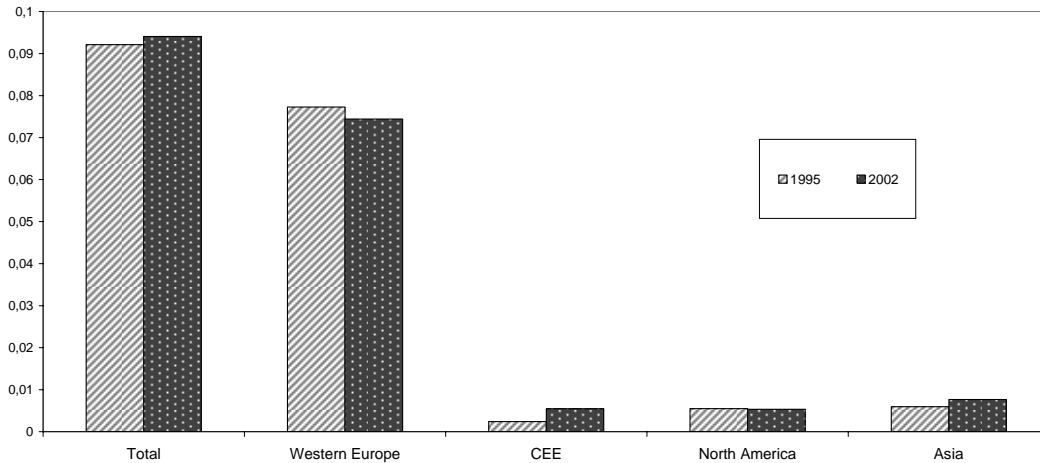
markets integrated in the sense that changes in relative wages between countries lead these firms to adjust their employment levels accordingly. However, the degree of responsiveness to wage differentials still seems fairly limited.

4. Offshoring and relative demand for skilled workers

Recently, there has been a strong interest in finding out the labour market effects of *offshoring* of intermediate inputs and services (e.g. Amiti and Wei, 2005, 2006. Strauss-Kahn, 2002, Hijzen et al., 2005). Offshoring of intermediate inputs and services should here be taken to mean the decision on the part of a firm to source intermediate inputs or services from abroad rather from at home. A few recent studies have tried to estimate the impact of offshoring on the relative demand for skilled workers. Generally speaking, the effects reported tend to be small. An obvious reason for this is that offshoring to low-income countries is still small in magnitude. For instance, in Sweden, about 10 percent of all inputs (goods and services) were imported in 2000, and only a small share of this originated in low-income countries.

Figure 1 shows a measure of offshoring of intermediate inputs by Swedish manufacturing firms in 1995 and 2002. The measure used is the average ratio between imported inputs and sales (see Ekholm and Hakkala, 2006). The imported inputs are only those stemming from within the same industry; e.g. if we look at the transport equipment industry the relevant imported intermediates are car manufacturing components and other inputs produced within the the transport equipment industry itself..

Figure 1. Swedish offshoring of intermediate input production in 1995 and 2002



Source: Hakkala (2005)

From Figure 1 we see that our measure of offshoring increased between 1995 and 2002, but not by much. We also see that the main part of this increase is due to offshoring to Central and Eastern Europe (CEE). Offshoring also increased to Asia, but the increase was smaller than to CEE. Offshoring to Western Europe, on the other hand, decreased between 1995 and 2002.

Ekholm and Hakkala (2006) estimate the effect of offshoring of intermediate input production on demand for manufacturing workers with different educational attainment. They use a translog cost function approach and distinguish between workers with lower secondary, upper secondary and tertiary education. They find evidence of offshoring being associated with a labour demand shift away from workers with upper secondary education, i.e. workers with *intermediate skills*. This effect is mainly driven by offshoring to CEE. It supports the idea that it is mainly middle-skilled jobs that are affected (services that can be codified and impersonally delivered).

Table 1 shows some of the estimated elasticities that they present. It shows the estimated effect on the demand for workers with different educational attainment in percent from an increase in offshoring to different regions by one percentage point. An increasing in the measure of offshoring by one percentage point is a very large increase (compare with the levels in Figure 1). For instance, an increase in offshoring to CEE by one percentage

point -- which is estimated to be associated with a decrease in demand for workers with upper secondary education by 7.7 percent and an increase in demand for workers with tertiary education by 19 percent -- would imply a 200 percent increase from its 2000 level (an increase from 0.5 percent to 1.5 percent).

Table 1. Elasticities calculated from estimations of translog cost functions. Narrow measure of offshoring

Demand for labor with the following educational attainment:	Offshoring				
	R&D	WE	CEE	NA	AS
Lower secondary	-0,88	-0,35	-2,46	2,88	4,44
Upper secondary	-0,05	-0,02	-7,71	-3,72	0,89
Tertiary	1,16	0,45	19,13	4,38	-7,16

Note: Figures in bold represent elasticities significantly different from zero at the 5 percent level. Source: Ekholm and Hakkala (2006).

This means that the elasticities presented in Table 1 imply relatively small effects. According to these estimated elasticities, the actual increase in offshoring to CEE 1995-2002, which was around 0.3 percentage points, would be associated with a reduction in the demand for workers with upper secondary education by 2.3 percent and an increase in the demand for workers with tertiary education by 5,9 percent. These estimates however take as given that the relative demand for labor versus capital remains unchanged.

It is clear from Table 1 is that the shift in labor demand associated with an increase in offshoring is very different from the shift associated with technological change, as measured by R&D. According to the estimated elasticities, a one percent increase in the R&D intensity (R&D expenditures over sales) was associated with a 0,9 percent reduction in the demand for workers with the lowest level of educational attainment and a 1.1 percent increase in the demand for workers with tertiary education.

5. Concluding remarks

Standard theory predicts that Eastern enlargement put downward pressure on wages for workers with low-intermediate levels of skills. The empirical research conducted so far has found some evidence in this direction, but quantitatively the effects seem very small. Why is that? Here, we can only speculate. One possible reason is that any effects of globalization are swamped by effects of technological change. Perhaps workers in Western Europe are more affected by the rapid computerization of both manufacturing activities and services than by competition from low-wage countries.

On the other hand, technological change may very well be driven by globalization, implying an indirect channel affecting labor demand. The ever faster race to design new products and to let computers run complicated processes seems to be at least partly fuelled by the intensified competition that many Western firms face today. The nexus of globalization and technological change and its impact on labor demand is not fully understood and an important area for future research.

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