

**Comment on Robert Feenstra:  
New technology and trade:  
a threat to low-skilled workers?**

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This paper deals with a very important and interesting question: To what extent can increasing international trade contribute to explaining the striking international pattern of increasing wage inequality during the last decades? I read the paper as having three main observations on this question. First, the literature in the area has largely focused on trade in final goods and has ignored the growing share of trade in intermediate inputs—*outsourcing*. Second, ignoring outsourcing may have had an effect of underestimating the effect of trade in empirical studies. Third, accounting for outsourcing would result in international trade as an important explanation for increasing wage inequality. In addition, the author concludes with a discussion of policy, a discussion I completely agree with. The argument is that even if international trade has a strong effect on wages, it is not clear that the restrictions on trade will improve the situation of workers in general.

Let me first comment on the three main observations mentioned in the preceding paragraph. The point that outsourcing is an important component of international trade is well taken. This has, of course, also implications for how we should go about trying to assess the impact of international trade on wages. I think that the author does a good job in explaining that some of the empirical evidence held against the trade mechanism is based on dubious assumptions. In particular, decomposing changes in wages and/or employment within and between industries may have very little to say about the effects of international trade when outsourcing is a major component in trade.

But the fact that the first two observations seem reasonable does not mean that I find the argument for the third observation is completely convincing. Even if outsourcing is empirically important and

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that this weakens previous empirical evidence, it does not necessarily follow that international trade is an important explanation for increasing wage inequality. This hypothesis may certainly be true, but I would like to see more evidence on this. For example, in the discussion of trends in international trade in intermediate inputs, we may be less interested in the long-run trends and more interested in whether the increase in trade has been particularly pronounced in countries and time periods when wage inequality has increased. The evidence reported in Tables 4 and 5 does not provide strong support for such a correlation.

My second comment concerns the use of occupational classifications (production versus non-production workers) as a measure of skills. The author is aware of this issue and admits that it is an imperfect measure. The skill measure is of minor importance in this particular paper, but the use of such skill measures seem to be rather wide spread in the literature on trade and wages. It is perfectly clear that the distinction between production and non-production workers is related to worker skills at a given point in time. The question, however, is to what extent this measure is a good approximation of changes in skills over time in a given country or differences across countries in skills.

To give an illustration of why I am a bit worried about the particular measure used, let us compare the picture given by the production/non-production distinction with another (also admittedly imperfect) measure of skills, namely education. Using the share of professional and technical workers in the labor force, Leamer and Lundborg (1997) find that Sweden had an extremely high share of skilled workers compared to most other countries (including the U.S.) in 1965. This advantage was gradually eroded up to 1988, when Sweden still was a high-skill country, but several countries were catching up. According to this measure, the relative share of skilled workers was higher in Sweden than in the U.S. in both years, and the gap between the two countries had not changed much.

Using educational attainment (for example, by the share of university graduates) as a measure of skill, one is left with a completely different picture. The share of university educated in the labor force is, and has been, much higher in the U.S. than in any other European country. In contrast, Sweden used to be a very low-skilled country in the 1960s, at least compared to the U.S.. During the 1970s and up to the mid-1980s, the growth rate of highly educated was higher in Swe-

den than in the U.S. and most other European countries (OECD, 1993, and Edin, Fredriksson, and Holmlund, 1994). Going one step further, trying to account for differences in skill levels across countries for a given level of education would probably complicate this picture even more (OECD, 1996). Suffice to say that I feel quite uncomfortable in using simple occupational classifications as measure of skill levels across countries and over time.

In general I think that this is an interesting paper that improved my understanding of the issues. The main points, that trade in intermediate inputs (outsourcing) is important and that this phenomenon must be accounted for in empirical studies of the effect of trade on wages, is well taken. But I would like to see more evidence before I would conclude that trade is an important determinant for increasing wage inequality.

### References

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