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Globalization and labor market outcomes: Wage bargaining, search frictions, and firm heterogeneity ☆

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Abstract

We introduce search unemployment into Melitz's trade model. Firms' monopoly power on product markets leads to strategic wage bargaining. Solving for the symmetric equilibrium we show that the selection effect of trade influences labor market outcomes. Trade liberalization lowers unemployment and raises real wages as long as it improves average productivity. We show that this condition is likely to be met by a reduction in variable trade costs or by entry of new trading countries. Calibrating the model shows that the long-run impact of trade openness on the rate of unemployment is negative and quantitatively significant.

JEL classification: F12; F15; F16

Keywords: Trade liberalization; Unemployment; Search model; Firm heterogeneity

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1. Introduction

Public opinion meets globalization with mixed feelings. People agree that consumers benefit from trade but they are at the same time deeply concerned by its impact on job security. Fueled by numerous headlines about layoffs and outsourcing, many fear that globalization will worsen their prospects on the labor market.[2] To a certain extent, economic theory can rationalize this fear. Workers who lose their jobs due to trade liberalization have to go through a period of active search before finding new employment opportunities. During this transition period, job reallocations increase the amount of frictions in the labor market which mechanically pushes up the rate of unemployment. On the other hand, comparatively little is known about the long-run effect of trade liberalization on unemployment. This is largely because equilibrium theories of trade and labor are still poorly integrated. In this paper, we attempt to bridge the two literatures by proposing a framework which combines the currently dominant approaches in each field.

We integrate a version of Melitz's [36] trade model with Pissarides' [39] canonical model of equilibrium unemployment. Building on Hopenhayn [32] and Krugman [35], the Melitz-model shows how trade liberalization affects the productivity distribution of firms through selection of efficient firms into exporting and of inefficient firms into exit. That *selection effect* enjoys massive empirical support[3] and constitutes a tangible source of gains from trade that the earlier literature has paid little attention to. Our analysis suggests that it also matters for labor market outcomes. We find that, for reasonable parameter values, the cleansing effect of trade lowers search unemployment. As the cost of vacancy posting relative to the productivity of the average firm decreases, employers intensify their recruitment efforts. This raises the ratio of job vacancies to unemployed workers, which leads to lower unemployment and higher real wages.

Our framework modifies Melitz's and Pissarides' setups as follows. First, we neutralize the external scale effect that is inherent to the usual CES description of utility. This allows to concentrate on the selection effect that is novel to Melitz and avoids that the model features a negative correlation between country size and the equilibrium rate of unemployment, which would be at odds with empirical evidence. In Appendix B, we show that our results are robust to allowing for the existence of a scale effect.

We also need to adapt the search-matching framework, which builds on competitive product markets, so as to make it compatible with the assumption of monopolistic competition used in trade models of the Krugman [35] tradition. Allowing for monopoly power on product markets implies that we have to abandon matches as our unit of analysis and consider instead multiple-worker firms. Given the existence of search frictions, this introduces the complication of intra-firm bargaining. We focus on individual bargaining, where each worker is treated as the marginal worker and which is closest to competitive wage setting. However, in Appendix B to this article, we show that our main results continue to hold in a setting where management bargains with firm-level unions.

Although the model features firms with heterogeneous productivity, monopoly power on product markets, external economies of scale, and, due to search frictions, monopsony power on labor markets, we are able to characterize its equilibrium in closed-form. The aggregation procedure proposed by Melitz goes through with little modification because, regardless of the bargaining environment, firms with different productivity levels pay similar wages. We also obtain a useful

[2] Scheve and Slaughter [40] provide a detailed analysis of how American workers perceive globalization.

[3] See, among others, the surveys by Helpman [27] or Bernard et al. [11].