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Policies to Facilitate Adjustment to Globalization

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The economic argument for globalization focuses on its *aggregate* economic gains. While economic models show that society benefits from trade integration overall, they also warn that there could be winners and losers. Economists have tended to assume that those left behind would be compensated or integrated in alternative productive activities. Yet, a vast empirical literature has established that in practice the benefits and costs of globalization have not been evenly shared across different groups of workers, industries, or locations.¹ This in turn points to the limited or potentially ineffective use of supportive polices, such as trade adjustment programs, social protection, and place-based (regional) schemes. Globally, the median spending on active labor market programs, for example, is merely 0.3% of GDP, and 90% of countries spend less than 0.7% of GDP annually on such programs. Emerging markets typify this underinvestment, with annual spending in the bottom percentile of the global distribution.

In this chapter, we zoom in on labor market policies as a tool to assist workers in their adjustment to globalization shocks. Specifically, we study the relationship between trade and technology shocks, labor market outcomes, and attitudes toward globalization. The underlying idea is that trade and technology shocks affect labor market outcomes and, in turn, these outcomes shape attitudes. Our interest is to better understand how labor market policies mediate these effects and can be leveraged to facilitate the adjustment to shocks and increase their political acceptability. To this end, we use a recent globalization and trade shock as case studies. The first is the large increase in imports from China in the 2000s across many countries (the so called "China shock"). We study the transmission of this trade shock to labor markets and in turn to trade attitudes; and how the sensitivity to labor outcomes differs depending on policy interventions. The second case study is the emergence of a new, less labor-intensive technology in vehicle production in the form of electric vehicles (EVs). We examine how the switch to producing electric vehicles impacted local labor markets across Europe, and how active labor market policies shaped the employment outcomes of affected workers.

This chapter falls at the intersection of three branches of the economic literature. t A large literature examines the effects of trade and technology on labor market outcomes (see, for example, Acemoglu and Restrepo (2020), Artuc et al. (2010), Autor et al. (2016), Dix Carneiro (2014), Dorn and Levell (2022) among others). A related strand of literature studies the backlash to globalization as reviewed in Colantone et al. (2022). Finally, there is a smaller literature on labor market policies and trade, including Bown and Freund (2019), Card et al. (2018), IMF, World Bank, WTO (2017), and OECD (2023). Our contribution is to analyse the role of policy interventions in particular, labor market interventions, in shaping the effects of possibly trade-induced labor market shifts on political attitudes in a cross-country setting.

¹ See, for example, Bown and Freund (2019); Card et al. (2018); IMF, World Bank, WTO (2017); OECD (2023).

Data and methodology

We develop a simple framework to motivate the empirical analysis, which is based on four key assumptions. First, the economy is subject to exogenous trade and technology shocks. Second, adjustment to these shocks requires worker relocation between sectors or activities. Third, the cost of relocation (or transition cost) depends on worker and country characteristics –certain types of workers are more mobile, say educated men in their prime age; or in countries, which provide greater labor market support, such as retraining, job search assistance and the like. The costs borne by workers are also lower in countries with more generous safety nets, for example, those with higher unemployment benefits. Finally, attitudes toward globalization and new technologies are a function of the cost of relocation. And the political sustainability of trade policy is ultimately a function of people's attitudes towards globalization.

There are two key implications from the framework. First, more politically palatable and sustainable globalization requires managing the "transition cost" of relocation. When transition costs become too high, the risk of political backlash rises. Consequently, if the objective is to reap the aggregate economic gains of globalization and technological progress, complementary policies that reduce these transition costs will be needed. One example of such policies are those centered on the labor market.

A few assumptions help us test the predictions of our framework in cross-country data. First, we assume that exogenous shocks (e.g. a sudden increase in imports or the adoption of new technologies) can affect labor market outcomes such as job finding and separation rates. Second, both separation and job finding rates vary across countries and over time due to labor market policies, institutional features (e.g. regulations to hire and fire), or other factors. Empirically, we document an important distinction in the job findings vs job separation rates. While the majority of the variation in job finding rates is explained by variation across countries, separation rates vary both across countries and over time. We thus use job separation rates as a proxy for the relocation costs faced by workers, and the key labor market outcome in our case study of the China shock. In a first step, we examine the effect of the rapid increase in imports due to the China shock on separation rates in a regression framework. We then study whether the variation in separation rates is correlated with political attitudes towards globalization. Crucially, we examine whether country's spending on labor market policies shapes the relationship between political attitudes and separation rates (our proxy for the relocation cost).

To implement this empirical strategy, we use data on labor market outcomes, namely separation rates computed from OECD employment data across 44 countries, attitudes on globalization, as captured in the 2003 and 2013 rounds of the ISSP survey, trade shocks, measured as imports from China, and spending on labor market policies in percent of GDP, as reported by the OECD.

The "China Shock", attitudes towards trade and labor market policies

The starting point is the well-known and documented increase in imports from China in the 2000s which impacted many countries. Figure 1 reports the evolution of the common global component of imports from China as a percent of world GDP (what we call the "China shock"), which increased three-fold over 1990-2020, with a distinct break around China's accession to the WTO in 2001.



Figure 1. Imports of goods from China (percent of GDP)

Source: Direction of Trade Statistics (DOTS) and IMF staff calculations.

Our empirical analysis reveals that the China shock significantly raised separation rates of prime-age men (relative to prime-age women) as demonstrated in Figure 2.² On average, across the 42 countries in our sample, the rise in imports from China led to a significant and long-lasting rise in the separation rate of prime-age men.

² Our analysis focuses predominantly on the labor market outcomes of prime-aged men who are more likely to be employed in the manufacturing sector, where the China shock is the most relevant.

Figure 2. Impulse response to China Shock: Separation Rates of Men Relative to Women



Source: OECD and IMF staff calculations.

Notes: The figure plots the estimated coefficient on the interaction between annual changes in the common component (across countries) of China goods imports as a share of GDP and a gender dummy from linear projection regressions in which the dependent variable is the change in separation rates between time t and t+h estimated on a sample of prime age (25-54) men and women over 2000-2007 including 42 countries. Each observation is a country-gender-year cell. Regressions control for country, gender and year fixed effects.

We analyze next attitudes towards globalization, where the latter are measured by the share of respondents who say "Yes" to the question on whether the government should limit imports. We examine how attitudes towards trade correlate with separation rates on average, and whether the strength of this association is attenuated for countries with higher labor market support.

We focus on two types of labor market policies, "Active labor market policies" (ALMP) such as training programs, skill development initiatives, employment subsidies, job creation and entrepreneurship support, and "Passive labor market policies" (PLMP) such as unemployment insurance and benefits.

Our analysis reveals that higher separation rates are indeed associated with lower support for globalization. For almost all countries in the sample, the change in attitudes towards trade is associated with the separation rates over the China shock period. However, the sensitivity of antitrade sentiment to separation rates depends on the degree of labor market support (Figure 3).³ The positive correlation between

³ We consider the following age groups in the OECD data on separation rates as of 2013: 24-34, 35-64, 65-74, and 75 or older. The data are set up for a cohort analysis: for the 24-34 group in 2013, the share variable used as dependent variable has the value of the 16-23 cohort in 2003. The same applies to the other groups (the 24-34 group in 2003 is matched with the larger 35-64 group in 2013). The separation rates are averaged over 2000-2007 by age group, gender and country.

separation rates and antitrade sentiments is smaller for countries which provide greater labor market support.





Notes: The y-axis shows the estimated coefficients on the triple interaction between separation rates over 2000-2007, a dummy for middle aged (25-54) men in 2013, and a country dummy. The dependent variable is the 2003-2013 change in the share of individuals within a gender-age-country cell saying that their country should limit imports. Each observation is a country-gender-age group-period cell. The regressions control for country and gender-age group fixed effects.

Labor market policies could be quite significant in shaping outcomes. According to the correlations in the cross-country data, a 1 percentage point increase in China's import share is associated with a 2 percentage points increase in separation rates on average. Such an increase in separation rates would be associated with a 10 percentage points higher share of respondents who are against trade (among middle-age men relative to other groups) in countries with total labor market policy spending (on active and passive policies) equal to 0.5% of GDP (such as the UK). The same increase in separation rates would lead to a 6 percentage points increase in the share of respondents who are against trade in Denmark, where labor market policy spending is 3.5% of GDP during the sample period (2000-2007).

The differences are economically large. A 3 percentage point additional spending on labor market policies saves 4 out of the 10 percentage point increase in anti-trade sentiment (i.e. an increase in 6 instead of 10 percentage points in anti-trade attitudes). This more muted reaction in anti-globalization sentiment could be associated with the ability of labor market policies to reduce the pain of adjustment to globalization shocks by promoting workers' relocation from sectors and activities that are negatively impacted to the ones that gain from trade.

Similar findings for technology shock

Our second empirical evidence draws on a study by Celasun et al (2023) who examine the labor market impact of a technology shock in the auto sector, namely the very rapid switch from producing internal combustion engine (ICE) to electric vehicles (EVs) in Europe. Between 2017-2019, EV car production by some

European countries took off very rapidly in response to ambitious climate mitigation goals and associated regulations. This is a technology shock to the auto industry since producing EVs requires fewer parts, and significantly less labor input than producing ICEs.

In Europe, there is large variation in car production across countries and regions. Celasun et al (2023) exploit this geographical variation and implement a shift-share approach at the regional level to estimate the effect of the switch to EV production on employment. They find that regions within a country that were more exposed to EV activity through their employment mix prior to the EV take-off experienced relative employment losses (or smaller employment gains) in countries where EV exports grew relatively faster.

However, policies can help mitigate the potentially adverse employment effects of the shift to EVs. Following Celasun et al (2023), we analyze whether countries that had higher spending on training were able to attenuate the link between electrification in the automotive sector and unemployment rates in the labor markets where the auto industry is concentrated. Indeed, the empirical estimates suggest that higher spending or more participation in training programs attenuate the impact of the new technology on unemployment.

Conclusions and policy implications

The empirical evidence indicates a consistent pattern. Trade and technology shocks—such as a sudden surge in imports, or shift towards a new, capital-intensive technology—can have adverse effects on labor market outcomes. Specifically, these shocks are associated with higher job separation rates, suggesting disruptions in affected labor markets and underscoring the existence of significant "transition costs" for workers. However, the magnitude of these negative effects varies across countries, with countries that have more robust labor market support systems experiencing less severe consequences. Importantly, in countries with stronger labor market policies, including both active measures (like job training and search assistance) and passive support (such as unemployment benefits), increased separation rates are less likely to translate into rising anti-trade sentiment among the public.

The implications of these findings are important for policymakers. They suggest that well-designed labor market support mechanisms can be effective tools in reducing both the economic disruption and the political backlash associated with globalization. By lowering the costs of transitions between jobs or sectors, these policies help preserve public support for open trade and technological innovation. Yet, the unevenness in outcomes across countries also implies that such policies may have been underutilized in many contexts.

Two key takeaways emerge from this analysis. First, if globalization is to remain politically viable, it is necessary to manage the transition costs for affected workers. High transition costs not only create economic hardship but also fuel discontent that can erode support for openness and reform. The political sustainability of

globalization—and even sector-specific industrial policies—requires effectively managing resistance to change and addressing transition costs. Second, a central policy priority should be the reduction of these costs. Investing in active and passive labor market policies is a tangible way to achieve this goal—ensuring that the benefits of globalization are more equitably shared and its challenges more effectively managed.

Authors' note: The views expressed in this chapter are those of the authors and do not reflect the views of the International Monetary Fund, its Executive Board or its Management.

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