An empirical analysis of trade-related redistribution and the political viability of free trade☆

James Lake [a,*], Daniel L. Millimet [a,b,1]

[a] Southern Methodist University, USA
[b] IZA, Germany

ABSTRACT

Even if free trade creates net welfare gains for a country as a whole, the associated distributional implications can undermine the political viability of free trade. We show that trade-related redistribution—as presently constituted—modestly increases the political viability of free trade in the US. We do so by assessing the *causal* effect of expected redistribution associated with the US Trade Adjustment Assistance program on US Congressional voting behavior on eleven Free Trade Agreements (FTAs) between 2003 and 2011. We find that a one standard deviation *increase* in expected redistribution leads to an average increase in the probability of voting in favor of an FTA of 1.8 percentage points. Although this is a modest impact on average, we find significant heterogeneities; in particular, the effect is larger when a representative's constituents are more at risk or the representative faces greater re-election risk.

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1. Introduction

According to canonical models of international trade, free trade results in net welfare gains for all countries involved. This theoretical prediction has strong empirical belief as well. For example, in 2012 the Initiative on Global Markets at the University of Chicago asked roughly 50 leading economists to comment on two statements concerning free trade.[2] The first statement is: "Freer trade improves productive efficiency and offers consumers better choices, and in the long run these gains are much larger than any effects on employment." The second statement is: "On average, citizens of the U.S. have been better off with the North American Free Trade Agreement than they would have been if the trade rules for the U.S., Canada and Mexico prior to NAFTA had

remained in place." For each statement, 95% of the respondents either agreed or strongly agreed, with the remainder being uncertain.[3]

While the claim that free trade is welfare-enhancing *on average* may be relatively incontrovertible, it is also well recognized that free trade has important *distributional* implications. Indeed, Davidson and Matusz (2006, p. 123) state: "Two of the most generally accepted propositions in economics are that trade liberalization harms some groups but that it also generates aggregate net benefits." Put simply, there are winners and losers from free trade. Recently, the costs imposed on losers have been well-documented empirically by McLaren and Hakobyan (2012) and Autor et al. (2013).[4] That said, if the winners win by more than losers lose, appropriately designed transfers from the winners to the losers can ensure free trade is Pareto improving. Theoretical papers demonstrating this include Dixit and Norman (1986) (using a traditional full employment model) and Feenstra and Lewis

[3] Going back to Viner (1950), it is well known that standard trade models predict *free trade* will raise each country's welfare but *freer trade* in the form of Free Trade Agreements (FTAs) may lower each country's welfare. The source of this result is a tension between welfare-enhancing 'trade creation' and welfare-reducing 'trade diversion' with the latter vanishing under a move to free trade. Nevertheless, the quoted statements refer to freer trade rather than free trade and, for example, Romalis (2007) and Caliendo and Parro (2015) find non-negative welfare effects of NAFTA and CUSFTA.

[4] Other examples include Kletzer (1998), Hummels et al. (2001), Kletzer (2004) and Davidson and Matusz (2005).

(1994) (emphasizing the effects of immobile factors). More recently, Davidson et al. (2007) show this in a median voter model with unemployment and costly search and training.[5]

The possibility that winners from trade liberalization might compensate losers is more than a mere theoretical curiosity; it merits serious *empirical* investigation. Because the presence of losers can create political resistance to trade liberalization, trade-related redistribution has the potential to make free trade politically feasible in situations where it might otherwise be infeasible. Thus, improving our knowledge of the underlying political economy of trade policy in general, and the impact of redistribution on the adoption of trade liberalization in particular, is vital. To that end, the goal of this paper is to augment our understanding of such issues in the context of US trade policy.

The analysis undertaken here should also prove insightful in other policy contexts where distributional implications threaten to derail policies that generate net welfare gains. Government actions, whether they comprise international policies related to globalization or domestic public policies such as environmental or safety regulations, rarely yield gains for all affected parties. The resulting tension between winners and losers likely creates political resistance to reform. Our analysis sheds light on the ability of targeted redistribution to increase the political feasibility of such government actions. As such, our analysis can also be viewed as a test of Rodrik (1998) who argues that government social safety nets can reduce political resistance to globalization.

In the US, the main vehicle by which trade-related redistribution occurs is the Trade Adjustment Assistance (TAA) program.[6] Anecdotal evidence suggests that TAA does, in fact, improve the political feasibility of trade liberalization. For instance, Dolfin and Berk (2010, p. iv) state that TAA was "introduced in 1962 to facilitate the passage of free trade legislation." Scheve and Slaughter (2001) argue that anti-trade sentiment in the US declines when trade liberalization is linked with trade-related redistribution. Magee (2001) quotes Senator Orrin Hatch during the 1993 debate over NAFTA as stating that Congress uses TAA to gain the acquiescence of labor regarding the adoption of trade liberalization. While such anecdotes are noteworthy, formal evidence is needed to determine whether there exists a *causal* relationship between trade-related redistribution and the political viability of free trade.

The specific question we seek to answer here is whether expected TAA-induced redistribution within a congressional district (CD) has a *causal* effect on the propensity of the CD's representative to vote in favor of an FTA in the US House of Representatives. To do this, we analyze over 4600 votes cast on the 11 FTAs brought before Congress since 1998 (all 11 bills passed) and investigate whether spatial and temporal variation in expected CD-level redistribution under TAA impacts the voting behavior of representatives. For trade-displaced workers in a CD, expected redistribution under the TAA depends on the *likelihood* of benefit receipt and the *generosity* of benefits conditional on receipt. The CD-level likelihood of receipt is based on the historical sector-level certification rate of TAA petitions weighted by the historical

industrial composition of the CD. In other words, if a given CD historically contains a large employment share in sectors with a history of successful TAA petitions, then our CD-level measure of expected TAA receipt is high. The generosity of benefits is captured by the state-level Unemployment Insurance (UI) replacement rate (i.e., the ratio of the average weekly UI benefit to the average weekly wage).

After controlling for a host of representative-specific attributes (such as lobbying and political contributions), CD-level characteristics (such as local tariff exposure and economic conditions), state-level attributes (such as union strength and economic conditions), representative and FTA-by-region fixed effects (FEs), and allowing for the potential endogeneity of several key variables in the model, we do indeed find support for the notion that expected transfers from winners to losers strengthens the political viability of policies with distributional implications. Specifically, expected redistribution to the losers from free trade administered through the TAA is a statistically significant determinant of voting behavior: a one standard deviation (SD) increase in expected redistribution raises the probability of voting in favor of an FTA by 1.8 percentage points on average.

The magnitude of this *average* effect indicates that TAA only influences extremely close votes. For CAFTA and the US-Oman FTA, for instance, the model predicts that a *ceteris paribus* 0.13 and 0.79 SD reduction in expected redistribution across all CDs, respectively, would have prevented their passage (in expectation) given the small margin by which each was ratified. However, the model predicts that, *ceteris paribus*, elimination of expected redistribution across all CDs could have occurred without impacting the passage of the remaining nine FTAs examined.

Even though we find the economic significance of trade-related redistribution on political viability to be modest on average, three important caveats apply. First, and perhaps most importantly, the effects of expected redistribution exhibit substantial heterogeneity across representatives. This heterogeneity falls along two dimensions. The first dimension is local economic conditions. We find that expected redistribution has stronger effects on the voting behavior of representatives from CDs that (i) stand to suffer greater reductions in tariff protection and (ii) are more economically disadvantaged (measured in terms of a higher unemployment rate or lower median household income). The second dimension is political conditions. We find that expected redistribution has stronger effects on the voting behavior of representatives with less political capital measured in terms of years of experience in the House of Representatives or electoral results in the preceding Congressional election. Thus, for certain representatives, TAA exerts a much more sizeable influence on voting behavior. This heterogeneity along the dimensions of local economic conditions and representative political capital are consistent with the underlying mechanism we believe to be operating: expected redistribution placates the constituents of representatives at-risk of suffering in the political arena from voting in favor of free trade.

The second caveat to the modest average effect of TAA comes from a recent study examining the cost effectiveness of TAA commissioned by the US Department of Labor (DoL; Dolfin and Schochet (2012)). Despite finding a negative net benefit of the program, the authors (p. ii) conclude that "if TAA made even a relatively modest contribution to the ease of enacting free trade policies, the program's total benefits would outweigh its costs." Thus, our results could indeed be the difference between TAA passing and failing a cost–benefit analysis.

The third and final caveat is the ample evidence pointing to aspects of TAA that are ripe for improvement. Such improvements could substantially magnify the average effect of expected redistribution on the political viability of free trade. For example, Park (2012) and Schochet et al. (2012) find that TAA participant outcomes are better for those who are "matched" with re-employment in the industry for which they receive TAA training. However, only 37.5% of trainees are currently "matched." Moreover, as discussed in Section 2.1, among eligible workers, the take-up rate for TAA benefits is quite low. This offers another mechanism by which the efficacy of TAA may be improved.

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[5] This idea goes back to earlier work including Stein (1982), Aho and Bayard (1984), Lawrence and Litan (1986) and Bhagwati (1989). In a different but related context, Furusawa and Lai (1999) show how such redistribution can increase the extent of trade liberalization in a two country, infinitely repeated game where workers incur adjustment costs when switching sectors.

[6] TAA is sometimes referred to as TAA for Workers to delineate it from three significantly smaller programs in the US. TAA for Firms is administered by the Department of Commerce and provides technical assistance to firms by "... developing business recovery plans and providing matching funds to implement the projects in the plans" (US Government Accountability Office (2012b, p. 4)). This program cost less than $16 million annually in 2009 through 2012. TAA for Farmers is administered by the Department of Agriculture and provides training and support to producers of agricultural commodities and fishermen (US Government Accountability Office (2012a, p. 11)). TAA for Communities provides funds administered through the Department of Labor to institutions of higher education for "... expanding and improving education and career training programs for persons eligible for training under the TAA for Workers program" and the Department of Commerce administers "... technical assistance to trade-affected communities" and "... awards and oversees strategic planning and implementation grants" (US Government Accountability Office (2012a, p. 11)).