

# Why Exit from International Agreements? A Domestic Perspective\*

J. Melnick<sup>†</sup>

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## Abstract

Across developed democracies, electoral candidates increasingly promote platforms rejecting international cooperation or are willing to withdraw from international agreements. Voters too seem increasingly willing to support such candidates. What explains this backlash, and withdrawal from international agreements in particular? I argue that high costs of policymaking, or policy incompetence, lead to a status quo bias when designing transfers, generating redistributive frictions. Rather than maintain the globalized status quo with insufficient levels of redistribution, incompetent leaders can propose exit. Exit emerges in equilibrium because incompetent candidates cannot credibly promise to offset the damages incurred by globalization losers with redistributive policy. The inequality between globalization “winners” and “losers” serves as an important moderating variable: compensation becomes politically infeasible as inequality grows because greater redistribution from winners to losers is needed. Rising inequality increases the likelihood of exit and subsequently makes redistribution from winners to losers more politically costly.

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<sup>†</sup>Ph.D. Student, Department of Politics, New York University. Contact: [melnickj@nyu.edu](mailto:melnickj@nyu.edu).

Redistribution from globalization’s “winners” to its “losers” is central to the social compact that sustains international integration (Cameron 1978; Ruggie 1982; Katzenstein 1985; Rodrik 1998). While some adjustment has occurred (Kim and Pelc 2021*b*), redistributive policies have in general failed to sufficiently compensate the losers (Hays 2009; Bonica et al. 2013; Egger, Nigai and Strecker 2019). Concomitant rising inequality requires greater redistribution to offset greater losses, but no politically feasible coalition has developed in which winners are willing to finance larger transfers (Linardi and Rudra 2020) that losers are willing to accept (Bowen, Broz and Rosendorff 2022). Recent empirical work finds that globalization’s losers no longer find compensation sufficient, preferring anti-integration policies instead (Flaherty and Rogowski 2021; Milner 2021). Consequently, electoral challengers have emerged hoping to assuage losers through means other than domestic compensation, instead promoting modifications to or withdrawal from international institutions (Bornschieer 2017; Colantone and Stanig 2018; 2019).

These domestic redistributive frictions have contributed to a political “globalization backlash” (Mansfield, Milner and Rudra 2021; Walter 2021). In this paper, I provide a formal model to explain the empirical regularities of the backlash and to illustrate how, despite globalization’s aggregate welfare-enhancing properties, leaders can find it politically optimal to withdraw from international agreements. I identify a causal mechanism previously unexplored in this literature, namely the differential effects of policymaking that domestic leaders incur, that drives politicians’ preferences for redistribution. High costs of policymaking, or policy incompetence, generate a status quo bias when designing transfers, generating redistributive frictions. Rather than maintain the globalized status quo with insufficient levels of redistribution, incompetent leaders can propose exit. The introduction of anti-globalization candidates – who, because of their incompetence, can credibly commit to withdrawal – induces a realignment in political coalitions of whom winners and losers are likely to support electorally.

Domestic political consequences of globalization affect the propensity for withdrawal from international agreements. Consider the fate of the Trans-Pacific Partnership (TPP) in the 2016 United States presidential election. Hillary Clinton, a known supporter of pro-globalization policies and one of the architects of the agreement, advocated for the TPP as the new “gold standard” in crafting trade deals. Meanwhile, Donald Trump argued that “the TPP would be the death blow for American manufacturing. It would give up all of our economic leverage to an international commission that would put the interests of foreign countries above our own.”<sup>1</sup> Trump criticized Clinton’s support of the agreement and appealed to the anticipated losses of American workers and manufacturers, traditionally seen as globalization losers in the United States, and an

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<sup>1</sup><https://www.politico.com/story/2016/06/full-transcript-trump-job-plan-speech-224891>

integral component of the Democratic coalition. Moreover, Trump's lack of institutional and bureaucratic knowledge ostensibly rendered him less politically competent relative to Clinton, preferring exit instead. Ultimately, domestic electoral frictions compelled Clinton to revoke support of the TPP, quashing any prospects for its passage. Trump's embrace of withdrawal as a policy measure exemplifies that, through processes of domestic political competition, enterprising political candidates can seize on the opportunity to form an electoral coalition of globalization losers, forsaking gains from international cooperation for domestic political expedience.

## Main Results

I propose a formal model that studies a domestic political contest over globalization policy in a "Home" country. Home is party to an international agreement, which produces "winners" and "losers" domestically. Winners are different from losers insofar as they command a greater share of national income due to sectoral specialization. Leaders can propose a transfer of income from winners to losers to fund compensation programs that maintain the globalized status quo, or they can choose to withdraw from the international agreement. Withdrawal is inefficient and contracts the size of the pie.

Two candidates compete for office, the competent political "insider",  $L$ , and the incompetent "outsider,"  $C$ . Incompetent candidates face higher costs of policymaking relative to competent candidates, which generate discrepancies in the redistributive proposals that leaders advance. When designing transfer schemes, incompetent candidates are biased toward the status quo: this bias naturally ingratiate incompetent leaders with the globalization winners. Globalization losers, by contrast, prefer a competent candidate who can more efficiently redistribute away from the status quo. However, incompetence also generates a willingness to withdraw from international agreements. In so doing, incompetent candidates realign themselves with globalization losers; losers abandon their appetite for compensation in favor of a larger share of a smaller pie. Exit therefore emerges in equilibrium because incompetent candidates cannot credibly promise to offset the damages incurred by globalization losers with redistributive policy.

Inequality serves as an essential moderator in observing support for exit. Office-seeking politicians will move away from compensation-based policy responses and toward exit from international agreements as globalization-caused inequality increases. I show that increasing the number of globalization losers in the Home country makes compensation harder to sustain politically: as inequality grows, so too do the costs of redistributing from winners to losers. Leaders need to promise more to the losers to maintain the globalized status quo, thereby taxing winners more heavily. Additionally, rising inequality incentivizes politicians to

withdraw rather than continue globalization; voters subsequently select candidates who are willing to exit from international institutions rather than uphold the system of international liberalization.

The model highlights the delicate conditions under which embedded liberalism can be expected to subsist. When exit is not a credible policy option for either candidate, winners prefer incompetent leaders who redistribute less, while losers demand greater compensation by supporting competent candidates. If withdrawal becomes credible, for example by increasing the number of globalization losers, then losers break with their support of the competent, pro-redistribution candidate in favor of the incompetent candidate promising exit. Conversely, winners switch their political allegiances to the competent candidate because, despite redistribution, they would be better off under a system of globalization. Therefore, losers *ex ante* demand the compensation to sustain globalization yet winners support candidates less likely to supply it; once exit emerges as a plausible policy winners *ex post* would have preferred to compensate but losers no longer view redistribution as sufficient.

## Contribution

This paper provides two principal contributions. First, I introduce a simple theoretical model to explain how incompetence serves as a commitment device to credibly withdraw from international agreements. As conventional economic wisdom would consider policies like exit to be off the equilibrium path, since an optimal transfer from winners to losers could always exist in principle, it is imperative to elucidate the causal mechanism through which domestic politics shapes the feasibility of globalization policy. Incompetence introduces frictions into this ideal redistributive process and subsequently defines the scope of the political appetite for redistribution.

Two recent empirical papers highlight the domestic political tensions that the model describes. [Flaherty and Rogowski \(2021\)](#) demonstrate that “top-heavy inequality,” a distribution of earnings concentrated within a very small or “elite” faction of society, conditions support for anti-globalist or populist candidates. They document that rising inequality is necessary to elicit voter demand for leaders promising policies like exit. [Milner \(2021\)](#) shows that increased exposure to trade increases support for extreme right parties, a common finding in the globalization backlash literature ([Colantone and Stanig 2018; 2019; Autor et al. 2020](#)); the paper’s important insight is that social welfare programs appear not to dampen or reverse trends of far-right voting. Together, this work suggests that rising inequality due to globalization precipitates anti-integration preferences and that compensation fails to moderate these preferences. This presents a clear opportunity for theoretical work to clarify the underlying causal mechanism.

Scholars have extensively investigated the domestic forces that shape the creation of international agreements (e.g., [Putnam 1988](#); [Milner and Rosendorff 1997](#); [Buisseret and Bernhardt 2018](#); [Melnick and Smith 2022](#)), but we have yet to understand how domestic politics affects leaders' decision to exit from such agreements, particularly since they are thought to be welfare-enhancing. The paper's second contribution relates specifically to the study of withdrawal from international institutions, where I depart from "state-level" arguments present in the literature. Three prevailing arguments exist to explain why states absolve membership in international agreements, all of which treat nations as black boxes. Most prominent is a story about "composition effects," which argues that preference divergence among member states over time leads to withdrawal from agreements ([von Borzyskowski and Vabulas 2019](#); [Malis, Rosendorff and Smith 2022](#)). Scholars advancing this type of argument point to empirical differences in regime type or changes in ideal points across member states to justify a country's exit from an agreement.<sup>2</sup> Increased incidence of exit may also be due to contagion effects, in which withdrawal by one state motivates others to follow suit, in accordance with a simple logic of unraveling from a previously-established cooperative equilibrium. ([Schelling 1960](#)). However, advocates of contagion fail to identify the motives of the "first mover," or why one state exits in the first place. Finally, a strand of the literature has considered exit as a consequence of growing regime complexity and bounded rationality, in which exit from some international commitments becomes inevitable when they are superseded by less constricting forms of integration ([Haftel and Thompson 2018](#); [Ge 2022](#)).

To date, this paper provides one of the first microfounded accounts of exit from international agreements. Differential costs of policymaking explain variation in candidates' proposals of pro- and anti-globalization policies, and globalization-induced inequality plays a key role in shifting candidate preferences away from integration and toward exit. Politicians face a tradeoff when seeking to manage inequality, sustain the status quo of international integration, and ensure political gains through reelection. As inequality increases, the political costs of domestic distributional conflict outweigh benefits of international cooperation ([Rodrik 2018](#); [Flaherty and Rogowski 2021](#)), compelling leaders toward withdrawal in an attempt to preserve their electoral fortunes.

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<sup>2</sup>While it may be the case that withdrawing governments over time have become disgruntled with IO performance ([von Borzyskowski and Vabulas 2019](#)), ostensibly lending credence to a story based on composition effects, any "changes in state preferences" are endogenous to domestic political changes.

## Model Setup

I study the downstream, domestic consequences of membership in an international agreement in a “Home” nation. Within this country, the agreement fosters “winners” and “losers.” Broadly speaking, I refer to the number of losers as domestic “inequality” that globalization creates. Let the domestic public be comprised of  $n$  individuals where  $n_w$  of these individuals are globalization winners ( $w$ ) and  $n_\ell$  are losers ( $\ell$ ). We can interpret this cleavage such that a fraction  $\frac{n_w}{n_w+n_\ell}$  of the Home population is employed in sectors that benefit from the agreement, while a share  $\frac{n_\ell}{n_w+n_\ell}$  is adversely affected. The numbers of winners and losers are common knowledge.

What differentiates winners from losers is their income endowments, or the share of the national economy that each group commands. In the status quo, membership in the agreement, winners contribute a share  $\theta_R \in [0, 1]$  of the economy and losers contribute  $1 - \theta_R$ . The parameter  $\theta_R$  is an exogenous, status quo point for policy under globalization and represents the structural, macroeconomic factors that affect returns to income for winners and losers. We generally think of  $\theta_R \geq \frac{1}{2}$ , exemplifying the gains from integration that necessarily make some domestic groups better off than others (Stolper and Samuelson 1941).<sup>3</sup>

The game depicts a domestic political contest between two candidates,  $L$  (she) and  $C$  (he). Candidates seek to propose globalization policy that will maximize their prospects of winning office. Each candidate’s platform consists of two elements.  $L$  and  $C$  simultaneously decide whether to remain in the agreement or exit from the agreement, as well as how to transfer income between winners and losers under either international policy outcome. I assume that candidates make binding campaign policy choices so that we can study the electoral incentives of proposing to remain in or exit from an international agreement.

Under the agreement, normalize the size of the Home economy to unity. Exit, by contrast, is inefficient: if  $L$  or  $C$  abrogates the agreement, then national income contracts to  $\gamma < 1$ . In addition, the status quo point for policy contracts to  $\theta_E \leq \theta_R$  and serves as the new income distribution between winners and losers against which candidates propose any transfers. This assumption encodes the fact that, prior to any government intervention, income accruing to winners is greater when the Home country is party to the agreement.

Leaders propose policies that may redistribute income away from the exogenous macroeconomic shares  $\theta_R$  or  $\theta_E$ . To do so, they consider how the enactment of different policies affects their chances of winning the election, given what the other candidate would propose, as well as the cost of changing policy. Candidates vary in the extent to which they find it costly to change policy away from the status quo, which I refer to as their *competence*. We say that  $L$  is a competent politician, who substantively might represent a political

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<sup>3</sup>That  $\theta_R \geq \frac{1}{2}$  is not a necessary assumption for any of the results, it only eases substantive interpretation of the model.

“insider” or technocrat.  $L$ ’s costs of policymaking are normalized to unity. Conversely,  $C$  is an incompetent politician, perhaps a political “outsider” or populist candidate, who experiences a cost  $\kappa > 1$  to move policy away from the status quo. The parameter  $\kappa$  is common knowledge. Each candidate chooses  $\theta_{da}$  for  $d \in \{L, C\}$  and  $a \in \{remain, exit\}$ , which is the share of the income distribution that accrues to winners. Then, a strategy for each candidate is to propose whether to remain in or exit from the agreement, and, how to divide national income in each of these two possible international policy outcomes.

After  $L$  and  $C$  have announced their proposals, citizens go to the polls. Individuals face four possible policy combinations when casting their ballots for  $L$  or for  $C$ . These four cases are: 1.  $L$  and  $C$  both remain in the agreement; 2.  $L$  remains but  $C$  exits; 3.  $L$  exits but  $C$  remains; and 4.  $L$  and  $C$  both exit from the agreement. Let voters have concave payoffs over income, which we specify using a logarithmic utility function. The following table summarizes the per capita income distribution to winners and losers under the two possible international policy outcomes.

|               |                                |  |
|---------------|--------------------------------|--|
|               | Remain                         | Exit                                   |
| Winners $w$   | $\frac{\theta_{dR}}{n_w}$      | $\frac{\gamma\theta_{dE}}{n_w}$        |
| Losers $\ell$ | $\frac{1-\theta_{dR}}{n_\ell}$ | $\frac{\gamma(1-\theta_{dE})}{n_\ell}$ |

Table 1: Income Distribution across Winners and Losers

Voters compare the differences in their expected utilities under  $L$  versus under  $C$ , taking into account a voter-specific shock  $\mu_{ij}$  as well as an aggregate preference shock  $\beta$ . Let  $\mu_{ij} \sim U[-\frac{1}{2m_j}, \frac{1}{2m_j}]$  and let  $\beta \sim U[-\frac{1}{2b}, \frac{1}{2b}]$ . Without loss of generality, assume  $m_w = m_\ell = m$ .<sup>4</sup> The parameters  $m$  and  $b$  define the salience of globalization policy relative to other issues in the electoral landscape of the Home nation. Individuals vote sincerely on the basis of their payoffs between the two candidates; if  $D_j$  is the difference in expected utility after the election, then a voter  $i$  in group  $j$  will prefer  $L$  over  $C$  whenever

$$D_j + \mu_{ij} + \beta \geq 0.$$

Leaders care exclusively about their electoral prospects. When proposing policies,  $L$  and  $C$  maximize their chances of winning the election less the cost of policymaking. Denote  $\pi(D_w, D_\ell)$  as the probability that  $L$  wins the election given differences in expected utilities  $D_j$ . If elected, leaders enjoy a benefit  $\Psi > 0$  and receive a payoff of zero if they lose the election. Let  $\rho_d \in \{0, 1\}$  indicate whether candidate  $d$  commits

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<sup>4</sup>The assumption states that the support of the valence shocks is the same for winners and losers. This removes an aspect of heterogeneity in how voters evaluate globalization policy if we believe that winners and losers systematically differ in their consideration of such policies with respect to other political issues when evaluating electoral candidates.

to remaining in the agreement. Then  $L$  and  $C$ 's expected utility functions can be written as follows:<sup>5</sup>

$$\begin{aligned}
EU_L(\rho_L, \theta_{LR}, \theta_{LE}; \rho_C, \theta_{CR}, \theta_{CE}) &= \max_{\rho_L, \theta_{LR}, \theta_{LE}} \rho_L \left[ \rho_C \Psi \pi_1 + (1 - \rho_C) \Psi \pi_2 - \frac{1}{2} (\theta_R - \theta_{LR})^2 \right] \\
&\quad + (1 - \rho_L) \left[ \rho_C \Psi \pi_3 + (1 - \rho_C) \Psi \pi_4 - \frac{1}{2} (\theta_E - \theta_{LE})^2 \right]. \\
EU_C(\rho_C, \theta_{CR}, \theta_{CE}; \rho_L, \theta_{LR}, \theta_{LE}) &= \max_{\rho_C, \theta_{CR}, \theta_{CE}} \rho_C \left[ \rho_L \Psi (1 - \pi_1) + (1 - \rho_L) \Psi (1 - \pi_3) - \frac{\kappa}{2} (\theta_R - \theta_{CR})^2 \right] \\
&\quad + (1 - \rho_C) \left[ \rho_L \Psi (1 - \pi_2) + (1 - \rho_L) \Psi (1 - \pi_4) - \frac{\kappa}{2} (\theta_E - \theta_{CE})^2 \right].
\end{aligned}$$

To recapitulate, the sequence of the game is as follows.

1. Candidates  $L$  and  $C$  simultaneously announce intentions to remain or exit the agreement, proposing divisions of national income  $\theta_{da}$ .
2. Valence shocks  $\mu_{ij}$  and  $\beta$  are realized. An election occurs in the Home country.
3. The election winner's policy outcome is implemented. Payoffs are realized. Game ends.

We solve for the subgame perfect equilibrium of the game via backward induction. A strategy for candidate  $d$  is a choice  $\rho_d \in \{0, 1\}$  to remain in or exit from the agreement with accompanying transfer proposals  $\theta_{da} \in [0, 1]^2$ . A strategy for the voters in each group  $j$  is a decision to vote for  $L$  or  $C$  given proposals and valence shocks,  $\sigma_j : \{0, 1\}^2 \times [0, 1]^4 \times [-\frac{1}{2m}, \frac{1}{2m}] \times [-\frac{1}{2b}, \frac{1}{2b}] \rightarrow \{L, C\}$ .

## Analysis

### Equilibrium Analysis

We first derive the probability that  $L$  wins the election  $\pi(D_w, D_\ell)$  based on voter behavior, and then consider how  $L$  and  $C$  divide national income and determine optimal globalization policy. We then state the equilibrium, in which candidates prefer to exit the agreement only when it is not too inefficient. All proofs are in the appendix.

As mentioned above, there are four scenarios that voters face. Both candidates could propose to remain, both could propose to exit, and one could propose remain while the other proposes exit. To determine the optimal retention rule, voters prospectively evaluate their differences in expected income between  $L$  and  $C$ .

<sup>5</sup>With slight abuse of notation, the probabilities  $\pi$  in the expected utility functions are indexed by the four possible proposal outcomes listed above.



This is a simple comparison of the utility proposed by each candidate, as in Table 1. A voter  $i$  in group  $j$  votes for  $L$  whenever  $u_i(L) + \mu_{ij} + \beta \geq u_i(C)$ , or when  $\underbrace{u_i(L) - u_i(C)}_{D_j} + \mu_{ij} + \beta \geq 0$ . For example, if both  $L$  and  $C$  commit to remaining in the agreement, then  $D_w = \log\left(\frac{\theta_{LR}}{n_w}\right) - \log\left(\frac{\theta_{CR}}{n_w}\right)$  and  $D_\ell = \log\left(\frac{1-\theta_{LR}}{n_\ell}\right) - \log\left(\frac{1-\theta_{CR}}{n_\ell}\right)$ . By standard arguments, given  $D_w$  and  $D_\ell$  at each of the four information sets, the probability that  $L$  wins the election can be expressed as

$$\pi(D_w, D_\ell) = \frac{1}{2} + b\left(\frac{n_w D_w + n_\ell D_\ell}{n_w + n_\ell}\right).$$

This probability exhibits intuitive properties. Leaders' choices of globalization policy factor into the chances of electoral success through a simple population-weighted average of the differences in voters' expected income. If voters' decision rules were completely insensitive to globalization policy, formally  $b \rightarrow 0$ , then the election would be decided on valence shocks alone, which in expectation have value zero. Hence,  $L$  would win the election with probability  $\frac{1}{2}$ .

$L$  and  $C$  simultaneously announce their intentions to remain in or exit from the agreement, as well as how they would divide national income among winners and losers in each case. The equilibrium policy proposals  $\theta_{da}^*$  maximize candidates' utility functions as written above.

Our first result concerns the characterization and rank ordering of equilibrium transfer proposals. The proposition below shows that candidates balance the ease with which redistribution can occur and the marginal benefit that redistribution has in advancing a candidate's electoral success.

**Proposition 1** *The equilibrium division of national income by candidate  $d$  in proposing outcome  $a$  solves*

$$(\theta_a - \theta_{da}^*)\kappa_d = \frac{b\Psi(n_\ell\theta_{da}^* - n_w(1 - \theta_{da}^*))}{(n_\ell + n_w)(1 - \theta_{da}^*)\theta_{da}^*}.$$

*Proposals can be ranked such that  $\theta_{LE}^* \leq \theta_{CE}^* \leq \theta_{LR}^* \leq \theta_{CR}^*$ .*

Incompetence induces redistributive frictions. Because it is more costly for an incompetent politician like  $C$  to change policy, his proposals are biased toward the status quo. Since globalization benefits the winners, there is a natural linkage between  $C$  and the globalization winners. By contrast, a more competent politician like  $L$  can redistribute income more efficiently, providing more income to the losers. It follows that  $\theta_{La}^* \leq \theta_{Ca}^*$ , or that  $C$  always proposes a greater share of income to remain with the winners than  $L$  does. In addition, since  $\theta_R \geq \theta_E$ , winners naturally hold greater income in a globalized world than in a deglobalized world; candidate proposals maintain this ordering so that  $\theta_{dR} \geq \theta_{dE}$ .

Figure 1 illustrates how candidates move income away from the status quo distribution in equilibrium. The right panel depicts income if the Home country were to exit the agreement, and the left panel shows income if the agreement remains intact. The status quo shares  $\theta_R$  and  $\theta_E$  are exogenous, represented by the purple bars under “SQ” in each panel, and the bars marked  $L$  and  $C$  represent how the two candidates would redistribute income away from these status quo points. The purple bars represent the share of national income given to winners, which are equilibrium choices  $\theta_{da}^*$ , and the grey bars are the shares to losers,  $1 - \theta_{da}^*$ . Notice that under both policy outcomes, both candidates redistribute income from winners to losers, but  $C$  maintains a greater share of income to the winners than  $L$ . This clearly generates an induced political preference among winners for  $C$ , while losers prefer  $L$ .

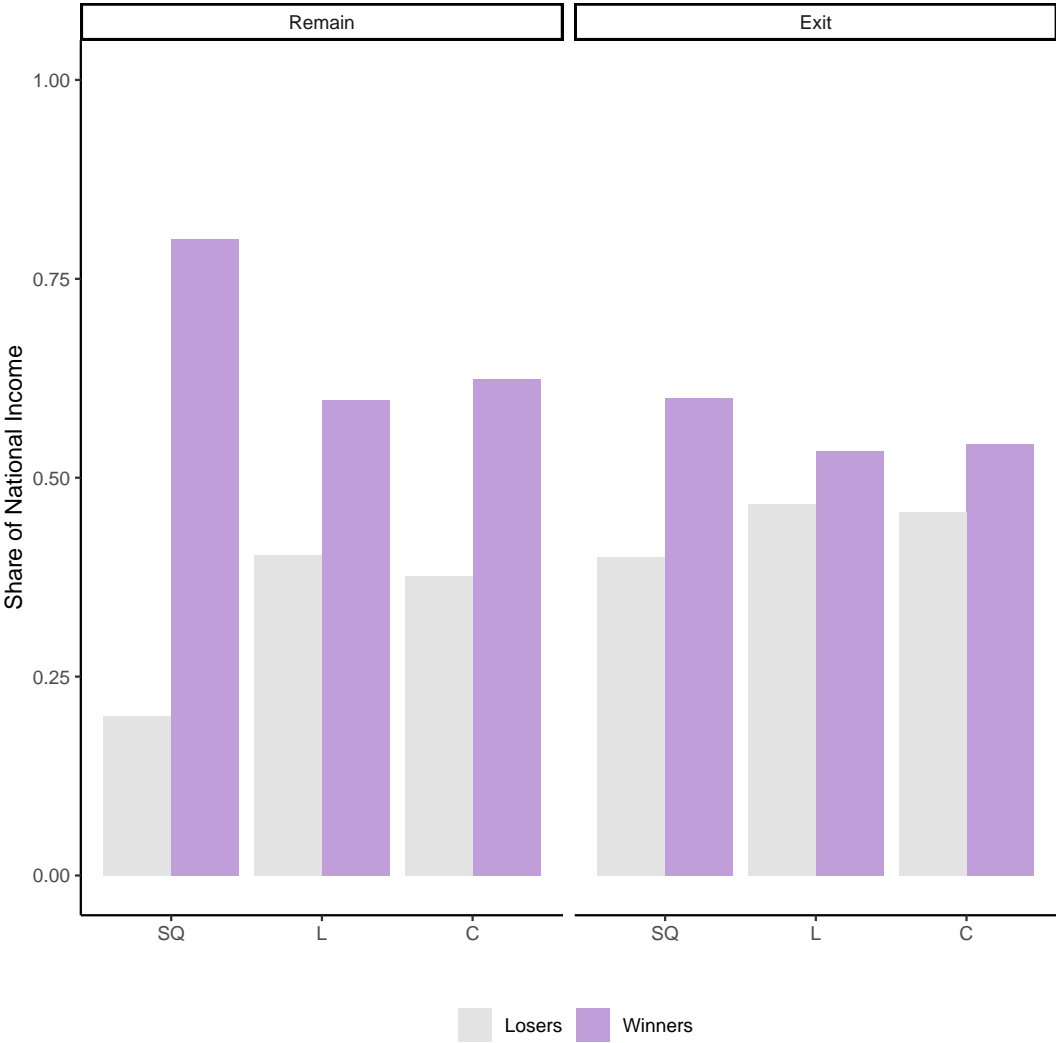


Figure 1: Equilibrium Distributions of Income

Candidates' proposals are also sensitive to group shifts, as summarized in the following corollary. Quite intuitively, increasing the number of winners restricts redistribution, and increasing the number of losers requires candidates to redistribute more. Therefore, holding the number of winners constant, increasing inequality by increasing the number of losers makes compensation more costly, as it detracts income away from the winners.

**Corollary 1** *Equilibrium proposals  $\theta_{da}^*$  are:*

- *increasing in the number of winners  $n_w$ ;*
- *decreasing in the number of losers  $n_\ell$ ;*
- *increasing in the status quo share to winners  $\theta_d$ ;*
- *increasing in incompetence  $\kappa$ .*

Corollary 1 also formalizes the idea that incompetent politicians fail to adequately redistribute and are biased toward providing greater shares of income to the beneficiaries of the status quo, the globalization winners. When the costs of policymaking are large, leaders can do little to shift away from the status quo. Finally, transfers are increasing in the status quo point, which simply means that if winners start out with a greater share of the pie, their post-transfer share is increasing as well.

Combining the insights of Proposition 1 and Corollary 1 allows us to uncover the political price of compensation. The first-order condition in the proposition shows that leaders equalize the marginal cost of policymaking with the marginal benefit of redistribution; the electoral returns to redistribution themselves have costs by pitting winners against losers. Transfers attempt to sway enough losers into remaining in a candidate's political coalition, but cannot be too high so as not to alienate the winners. Hence any compensation away from the point  $\theta_R$  must be paid for through declining political support among winners. Moreover, by increasing the number of losers in society, redistribution becomes more expensive since losers demand a greater share of the pie. Unfortunately for leaders, compensation may be politically inefficient as it redistributes away from a core base of supporters, the globalization winners, but may not buy the loyalty of globalization losers at the same rate.<sup>6</sup>

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<sup>6</sup>The "success rate" of buying losers versus alienating winners through redistribution depends on the size of the groups,  $n_w$  and  $n_\ell$ . Increasing either parameter decreases the per capita payoff of an individual in either group; redistribution is therefore most beneficial when  $n_w$  is large and  $n_\ell$  is small.

Given the optimal divisions of national income, candidates determine whether it is politically profitable to remain in the agreement or to exit. The following proposition establishes that leaders remain when exit is relatively inefficient.

**Proposition 2** *There exist thresholds  $\gamma_L \geq \gamma_C$  such that candidate  $d$  exits the agreement whenever  $\gamma \geq \gamma_d$  and remains otherwise.*

Globalization increases the size of the pie. If withdrawing from the agreement contracts the Home country's economy too much, then the gains from integration supersede any internal distributional conflicts and exit is not a credible policy option. But, if a withdrawal is not too damaging to the size of the pie, then office-seeking candidates may find it politically opportunistic to forsake the gains from international cooperation, despite exit being welfare inferior. Indeed, if  $\gamma$ , the size of the pie post-withdrawal, is large enough, then leaders have political incentives to de-globalize.

Importantly, incompetence implies both fewer transfers from winners to losers as well as an increased chance of exit. The cutpoint  $\gamma_C$  is less than  $\gamma_L$ , meaning the incompetent  $C$  is more likely to propose withdrawal than the competent  $L$ .  $C$ 's cost to policymaking renders him less able to make the requisite transfers under a globalized regime, and would rather abrogate the agreement. This benefits globalization losers, who may now have incentives to switch their political loyalties from  $L$  to  $C$ . To see why, consider a case where  $C$  is so constrained that he makes no transfers,  $\theta_{Ca}^* = \theta_a$ . By exiting the agreement, the income distribution falls from  $\theta_R$  to  $\theta_E$ , which shifts the distribution of income toward losers relative to the distribution of income while in the agreement.  $C$ 's incompetence generates credibility to pursue inefficient outcomes, which may be electorally desirable if it sways the political loyalty of globalization losers.

Inequality further threatens the stability of international liberalization. As the number of globalization losers increases, so too do the conditions under which domestic political candidates find it optimal to withdraw from the agreement. This comports with the empirical regularity that winners are increasingly unwilling to share their gains with losers (Linardi and Rudra 2020), or that no politically feasible transfer exists (Bowen, Broz and Rosendorff 2022).

**Corollary 2** *The thresholds  $\gamma_d$  are decreasing in the number of losers  $n_\ell$  if  $\theta_{dR} \geq \frac{1}{2}$ .*

The incentives to exit increase for both candidates when inequality rises. From Corollary 1, redistribution is more costly when there are more globalization losers. By the assumption that  $\theta_R \geq \theta_E$ , the *ex ante* distribution of income under exit is more favorable to losers than under remain. This means that, prior to transfers, losers can expect to enjoy a greater share of income if the agreement were abrogated, and

Proposition 1 confirms that candidates propose smaller shares to winners if they exit compared to if they remain. Therefore, increasing the number of losers renders them more politically salient, incentivizing candidates to allocate a greater share of the economy to them, which can be more easily achieved by withdrawing from the agreement. International cooperation thus falls victim to electoral expedience. The connection between inequality and the proposal of exit is illustrated in Figure 2, which plots the thresholds  $\gamma_L$  (solid line) and  $\gamma_C$  (dotted line) as a function of the number of globalization losers, both of which are decreasing in  $n_L$ . To the right of each line represents regions of the parameter space where candidates would be willing to exit the agreement.

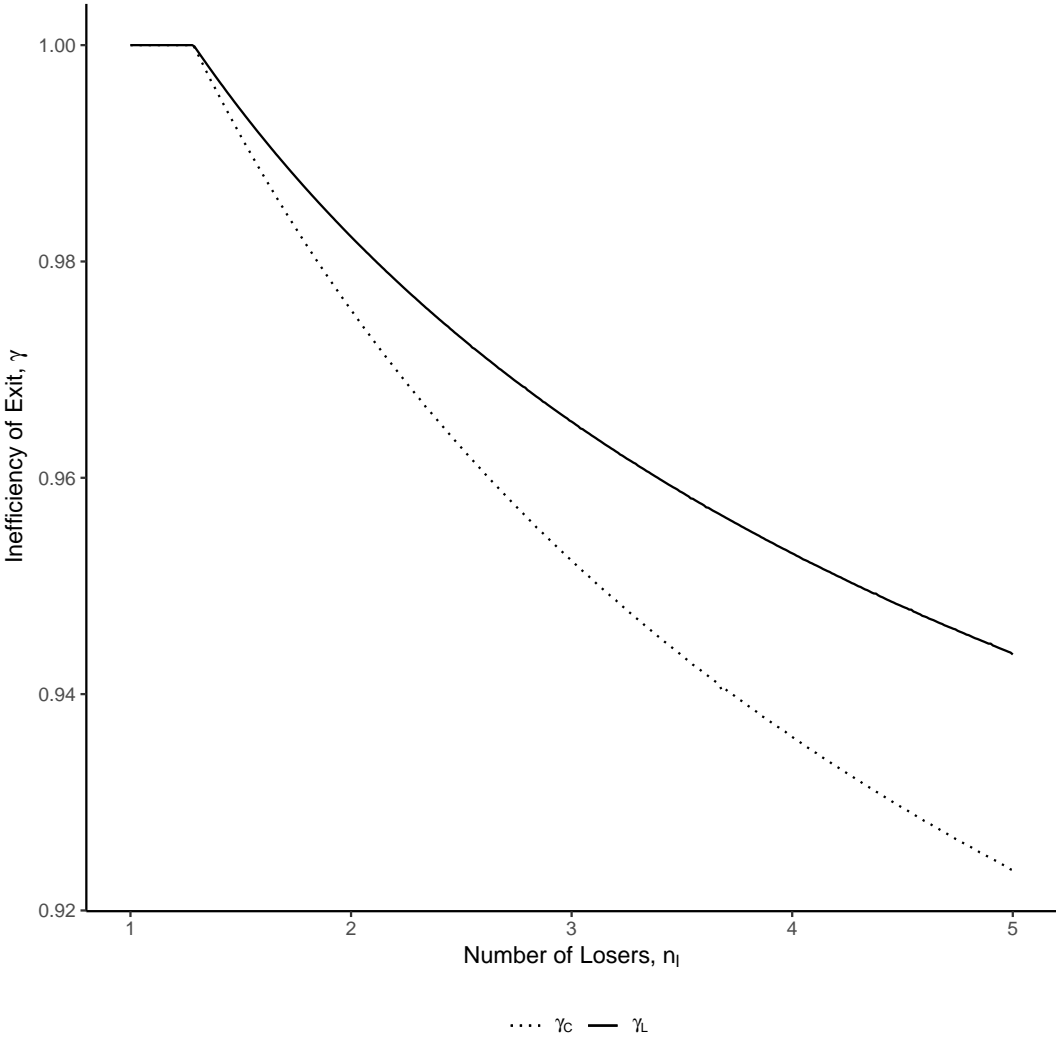


Figure 2: Inequality and Thresholds for Exit by Candidate

Propositions 1 and 2 characterize the game’s equilibrium. Three possible outcomes obtain, each carrying

differing political implications. When candidates choose the same international action, to stay or to remain, their competence-based redistributive frictions create natural political alliances. When  $\gamma < \gamma_C$ , both candidates would prefer to remain in the agreement and globalization continues. International cooperation faces no threat, and leaders propose  $\theta_{LR}^*$  and  $\theta_{CR}^*$  as transfers to deal with any globalization-related inequality.  $C$ 's higher costs to policymaking bind him to policy proposals closer to the status quo  $\theta_R$ , so in expectation the winners break for  $C$  and the losers rally behind  $L$ . Similar behavior occurs when  $\gamma > \gamma_L$ , and both  $L$  and  $C$  would exit the agreement, disbursing  $\theta_{LE}^*$  and  $\theta_{CE}^*$ . In this region of the parameter space, exit's disturbance costs on the economy are relatively minimal that both politicians would abandon globalization. Despite being empirically unlikely, this outcome may characterize a scenario in which inequality is so extreme that it is no longer politically feasible to uphold the agreement.

Electoral coalitions shift when  $\gamma_C \leq \gamma \leq \gamma_L$ . In this substantively interesting case, globalization remains intact only if  $L$  wins the election because  $C$  would exit.  $L$  proposes  $\theta_{LR}^*$ , while winners would receive  $\gamma\theta_{CE}^*$ , since exit is inefficient. When voting, losers must decide whether to accept a smaller share of a larger pie by supporting  $L$ , or a share close to  $\theta_E$  of a smaller pie by supporting  $C$ . Winners consider that  $C$  can provide a larger share than  $L$  albeit of a smaller pie.

The equilibrium analysis demonstrates that incompetence leads to a status quo bias, which implies both fewer transfers and greater willingness to exit on the part of incompetent candidates. Factors like rising inequality further pressure politicians to implement alternative policies to redistribution, which becomes costlier. However, exit is a rare event (von Borzyskowski and Vabulas 2019); political support for exit may be observed for equilibrium, but its implementation need not occur if an anti-globalization candidate loses the election. Rather, exit enters the national electoral discourse if it is a politically profitable and credible policy proposal, generating a “backlash” to globalization (Walter 2021).

## The Effects of Globalization-Caused Inequality

We now wish to further investigate how globalization-caused inequality exacerbates the tradeoff between remaining in the agreement and exit, particularly insofar as it relates to the electoral success of political candidates and the welfare of domestic voters. In particular, we focus on how equilibrium outcomes change if the number of globalization losers increases, and how voters respond to this rising inequality through changes in their political support.

Increasing the number of losers in society has three distinct effects on the domestic political competition surrounding globalization policy. Recall that the probability that  $L$  wins the election,  $\pi(D_w, D_\ell)$  is a function

of how winners' and losers' incomes change as a function of the divisions of national income that  $L$  and  $C$  propose. In equilibrium, this is a piecewise function in three parts, corresponding to the three possible policy outcomes, which can be written as

$$\pi^* = \begin{cases} \frac{1}{2} + \frac{b}{n_w + n_\ell} \left( n_w \log\left(\frac{\theta_{LR}^*}{\theta_{CR}^*}\right) + n_\ell \log\left(\frac{1 - \theta_{LR}^*}{1 - \theta_{CR}^*}\right) \right) & \gamma < \gamma_C \\ \frac{1}{2} + \frac{b}{n_w + n_\ell} \left( n_w \log\left(\frac{\theta_{LR}^*}{\gamma \theta_{CE}^*}\right) + n_\ell \log\left(\frac{1 - \theta_{LR}^*}{\gamma(1 - \theta_{CE}^*)}\right) \right) & \gamma_C \leq \gamma \leq \gamma_L \\ \frac{1}{2} + \frac{b}{n_w + n_\ell} \left( n_w \log\left(\frac{\theta_{LE}^*}{\theta_{CE}^*}\right) + n_\ell \log\left(\frac{1 - \theta_{LE}^*}{1 - \theta_{CE}^*}\right) \right) & \gamma > \gamma_L. \end{cases}$$

What happens when the number of losers  $n_\ell$  increases? Differentiating each piece of the function yields the following decomposition:

$$\frac{d\pi^*}{dn_\ell} = \underbrace{\frac{\partial \pi^*}{\partial n_\ell}}_{\text{direct effect}} + \underbrace{\frac{\partial \pi^*}{\partial \theta_{La}^*} \frac{\partial \theta_{La}^*}{\partial n_\ell} + \frac{\partial \pi^*}{\partial \theta_{Ca}^*} \frac{\partial \theta_{Ca}^*}{\partial n_\ell}}_{\text{strategic effect}}.$$

The direct effect of increasing the number of globalization losers implies a shift in the composition of the Home country's population. Since the probability that  $L$  wins the election is a weighted average of the incomes of winners and losers, there is a mechanical, direct effect of increasing the number of losers. The direction of this effect is in line with the discussion of equilibrium electoral coalitions described above. Recall that  $C$ 's incompetence constrains the ability to change policy from the status quo, which benefits globalization winners. Therefore, when  $L$  and  $C$  would both remain or both exit the agreement, winners are inclined to support  $C$  and losers will support  $L$ . In these cases, the direct effect of increasing the number of losers benefits  $L$ , because she can more freely transfer income away from the status quo shares and provide losers with greater redistribution. By contrast, the direct effect harms  $L$  when she would remain in the agreement but  $C$  would exit, which follows from the fact that  $\theta_{LR}^* \leq \theta_{CE}^*$ . When  $C$  can credibly exit but  $L$  cannot, political loyalties switch as losers benefit from a share of income closer to the status quo distribution under exit rather than what  $L$  would promise under remaining.

In addition to the direct effect, increasing the number of losers in the Home country also affects how candidates propose to divide national income. Recall that from Corollary 1, candidates must compensate more when the number of losers goes up, i.e.,  $\frac{\partial \theta_{aa}^*}{\partial n_\ell} < 0$ . The strategic effect implies greater apportionment of national income to losers, which is moderated by candidate incompetence. If  $n_w \geq n_\ell$ , this indirect effect aids  $C$  electorally because winners are *ex ante* more willing to support  $C$ , and because this smooths out the per capita burden on winners required to compensate the losers. By contrast,  $L$  benefits from the strategic

effect if  $n_\ell \geq n_w$  because  $L$  can more freely redistribute from winners to losers, benefiting the voting bloc that prefers her.

The final effect of rising inequality shifts the cutpoints  $\gamma_C$  and  $\gamma_L$  themselves, defining the equilibrium actions of each candidate. From Corollary 2, increasing  $n_\ell$  renders exit a more attractive option for politicians, since more potential voters are harmed by globalization.  $C$ 's ability to exit under conditions where  $L$  cannot delivers him an entirely new group of political supporters, the globalization losers. The winners, preferring to maintain a larger share of income in an integrated economy, now support  $L$ . By shifting the bounds on the parameter space defining each equilibrium outcome, rising inequality redefines candidate responses to globalization and subsequently creates political realignments.

**Proposition 3** *Increasing the number of losers can create political realignments.*

The proposition establishes existence of the realignments shown in the right panel of Figure 3, which plots  $D_w^*$  (solid line) and  $D_\ell^*$  (dashed line), the differences in income that winners and losers expect when voting for  $L$  versus  $C$ . Again, each segment represents how  $D_w^*$  and  $D_\ell^*$  change conditional on the policy outcomes that the candidates propose. Any value  $D_j^* > 0$  implies that an individual in group  $j$  would vote for  $L$  in expectation, while  $D_j^* < 0$  is an expected vote for  $C$ . When  $n_\ell$  is low, both candidates prefer to remain in the agreement, which produces the linkage between  $C$  and the winners and  $L$  and the losers. Increasing the number of losers to a point where  $C$  now prefers to leave the agreement induces a drastic reversal of political support. The losers have a slight preference for  $C$ , but the magnitude of the winners' gains from maintaining the globalized status quo by voting for  $L$  are substantially larger. That the winners incur such losses from shifting the status quo distribution from  $\theta_R$  to  $\theta_E$  props up  $L$ 's electoral fortunes. Finally, when  $n_\ell$  is large, both candidates would exit the agreement, and political support switches again. Similar to the first case, winners support  $C$  because he can promise them a greater share of the new status quo distribution,  $\theta_{CE}^* \geq \theta_{LE}^*$ .

The mechanics behind Figure 3 reveal that an incompetent candidate  $C$  has incentives to credibly reject globalization when the number of globalization losers is increasing and does so in accordance with equilibrium behavior. Moreover, losers support such a candidate. Despite this, the model predicts that the competent, pro-globalization candidate  $L$  retains an electoral advantage. The left panel of Figure 3 shows that  $L$  always wins the election in expectation. This is because of the enormous shift in political support of the winners, who incur a large opportunity cost if the Home country were to exit the agreement. Notwithstanding the fact that winners would maintain a sizable share of the economy even if exit were to occur, they would be better off in a globalized world making requisite transfers to losers.



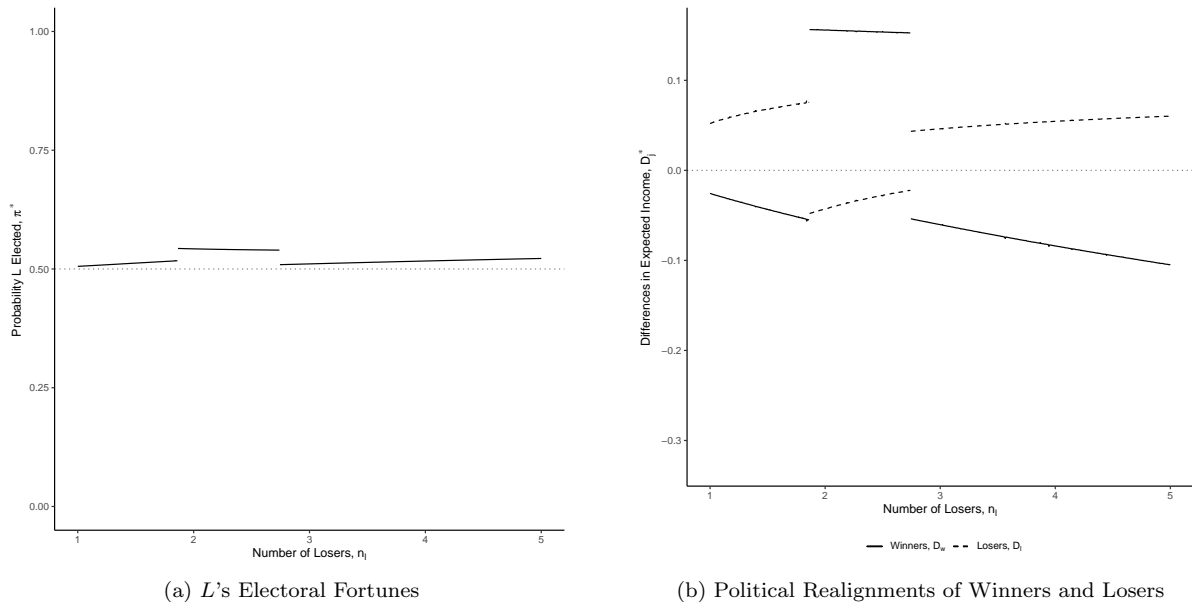


Figure 3: Effects of Inequality on Electoral Success

Rising inequality unambiguously pressures the system of domestic policies upon which the survival of globalization is predicated. When embedded liberalism is needed most, its promises are not credible. When  $n_\ell$  is low and neither  $L$  nor  $C$  would exit the agreement, winners support incompetent  $C$  who will allocate a greater share of the economy to them than  $L$ . This fact is consistent with the idea that winners are increasingly unwilling to share their gains from specialization with globalization losers (Linardi and Rudra 2020). However, a growing  $n_\ell$  renders exit a credible option for  $C$ , who finds new political support from the losers. With alternative policies on the table, losers find compensation offered by pro-globalization  $L$  to be insufficient (Bowen, Broz and Rosendorff 2022). Subsequently, they prefer to support an anti-integrationist candidate instead. By contrast, winners now *ex post* would have preferred to maintain a system of embedded liberalism, but the demand for redistribution from the losers no longer exists. These tensions exacerbate further with continued inequality, because political candidates find it even more favorable to withdraw from the agreement rather than uphold it. Ultimately, concerns for domestic political survival trump international integration when inequality rises because leaders have incentives to sacrifice liberalization for political expedience.

## Discussion

Central to the analysis is the notion of incompetence, which serves as a commitment device to credibly execute a welfare inferior policy like exit. Incompetence raises the costs of policymaking, which stifles leaders' abilities to undertake the domestic policies, like redistribution, that are required in order to sustain globalization. This generates friction in an incompetent candidate's ability to transfer income between winners and losers; consequently, these types of candidates pursue other policy measures like exit to recalibrate the economic standing of winners and losers.

In addition, incompetence generates a bias toward the status quo distribution of income across winners and losers. When an incompetent candidate cannot credibly exit from an agreement, he finds political support with the globalization winners. This status quo bias can help to explain the variation in policy support and subsequent composition in the winning coalition of the Republican Party in the United States. Since the mid-twentieth century, Republicans have traditionally supported globalization winners and elites, preferring fewer tariffs and lower levels of redistribution and social welfare programs than Democrats (Irwin 2017). By promoting views of globalization winners, Republicans upheld the status quo and continued the United States' commitment to international integration, while simultaneously advancing domestic policies to cut rather than expand redistribution to the globalization losers. Such policies have increased inequality in large part due to globalization (Ravallion 2018). Moreover, places exposed most heavily to globalization saw some of the greatest decline in compensation (Autor, Dorn and Hanson 2013).

The growing number of globalization losers in the United States not only meant that the number of individuals requiring compensation increased, but it also shifted the willingness of Republican political candidates to continue to uphold pro-globalization policies. The rise of right-wing, anti-globalization candidates, even predating the presidency of Donald Trump, confirms this trend (Cerrato, Ferrara and Ruggieri 2018; Kuk, Seligsohn and Zhang 2022). These candidates found it too costly to maintain a system of international liberalization and domestic redistribution: with rising inequality, incompetent candidates abandoned their support of globalization and ran instead on a platform promoting anti-globalization measures which include withdrawals from international agreements. Consequently, the locus of their political support transitioned from winners to losers, ushering a realignment both in supply and demand for globalization policy in American politics across parties (Schonfeld 2021).

When initially laying the foundations for the contemporary system of international integration, it was assumed that distributional tensions would be assuaged through domestic policies of adjustment; governments simply had to spend more to compensate globalization losers (Cameron 1978; Ruggie 1982; Rodrik 1998).

However, embedded liberalism relies on a social compact that is *ex ante* undesirable for winners, but *ex post* insufficient for losers. Under the globalized status quo, losers' support for *L* establishes the demand for social programs to compensate those disaffected by globalization (Walter 2010; Rickard 2015). Several analyses of the Trade Adjustment Assistance program in the United States have shown that exposure to compensation mitigates demand for protection, both in the form of submitting antidumping petitions (Kim and Pelc 2021a) and supporting Donald Trump's 2016 presidential campaign (Ritchie and You 2021). However, the emergence of anti-globalization candidates undermines the credibility of the demand for redistribution. Milner (2021) shows that once anti-globalization measures like exit become credible, viable policy options, even individuals who receive welfare benefits within areas shocked by international competition vote for anti-integrationist candidates, demonstrating how adjustment is no longer viewed as enough to compensate damages to losers (cf. Bowen, Broz and Rosendorff 2022). Conversely, winners find themselves wishing they had supplied requisite transfers to sustain liberalization: while winners initially supported candidates who would redistribute less, they would receive a smaller share of a smaller pie should exit occur.

Institutions like elections endow candidates with a platform to promote policies alternative to the embedded liberalism program. The contemporary "globalization backlash" has amply demonstrated that candidates need not treat international integration immutably. Rather, leaders may supply anti-globalization policies when they are credible and politically expedient. The failure to adequately provide compensation to globalization losers (Walter 2010; Autor, Dorn and Hanson 2013) can then be explained as the outcome of office-seeking politicians hedging their electoral fortunes on disintegration rather than redistribution.

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## Appendix

**Proof of Proposition 1:** Each share  $\theta_{da}$  maximizes candidate  $d$ 's utility of taking action  $a$  as a best response to the other candidate's behavior. All four choice variables –  $\theta_{LR}$ ,  $\theta_{LE}$ ,  $\theta_{CR}$ , and  $\theta_{CE}$  – solve the same type of problem, so it suffices to derive the first-order condition for one choice and generalize accordingly. Consider  $C$ 's proposal of national income when remaining in the agreement,  $\theta_{CR}$ . This solves

$$\theta_{CR}^* = \operatorname{argmax} (1 - p_L)(1 - \pi_1) + p_L(1 - \pi_3) - \frac{\kappa}{2}(\theta_R - \theta_{CR})^2.$$

Differentiating with respect to  $\theta_{CR}$  yields

$$(\theta_R - \theta_{CR})\kappa - \frac{b\Psi(n_\ell\theta_{CR} - n_w(1 - \theta_{CR}))}{(n_\ell + n_w)(1 - \theta_{CR})\theta_{CR}} = 0.$$

Rearranging and generalizing notation yields the equation in the proposition. The point that satisfies this equation at equality,  $\theta_{CR}^*$ , is guaranteed to be a maximum, as candidates' utility functions are globally concave. The second-order condition confirms this:

$$-\kappa - \frac{b\Psi(n_\ell\theta_{CR}^2 + n_w(1 - \theta_{CR})^2)}{(n_\ell + n_w)(1 - \theta_{CR})^2\theta_{CR}^2} < 0.$$

To rank the shares, note that the cross partials  $\frac{\partial^2 u}{\partial\theta_{CR}\partial\kappa} = \theta_R - \theta_{CR} \geq 0$  and  $\frac{\partial^2 u}{\partial\theta_{CR}\partial\theta_R} = \kappa > 0$ . Therefore by the implicit function theorem,  $\frac{\partial\theta_{CR}^*}{\partial\kappa} \geq 0$  and  $\frac{\partial\theta_{CR}^*}{\partial\theta_R} > 0$ . Since  $\theta_E \leq \theta_R$ , it must be that  $\theta_{dE} \leq \theta_{dR}$ . Further, since  $\kappa > 1$ , we have that  $\theta_{La} < \theta_{Ca}$ . Combining these yields  $\theta_{LE}^* \leq \theta_{CE}^* \leq \theta_{LR}^* \leq \theta_{CR}^*$ . ■

**Proof of Corollary 1:** Proposition 1 establishes that  $\frac{\partial\theta_{da}^*}{\partial\kappa_d} \geq 0$  and  $\frac{\partial\theta_{da}^*}{\partial\theta_a} > 0$ . The cross partial  $\frac{\partial^2 u}{\partial\theta_{da}\partial n_w} = \frac{b\Psi n_\ell}{(n_\ell + n_w)^2\theta_{da}(1 - \theta_{da})} > 0$  and  $\frac{\partial^2 u}{\partial\theta_{da}\partial n_\ell} = -\frac{b\Psi n_w}{(n_\ell + n_w)^2\theta_{da}(1 - \theta_{da})} < 0$ . Therefore by the implicit function theorem  $\frac{\partial\theta_{da}^*}{\partial n_w} > 0$  and  $\frac{\partial\theta_{da}^*}{\partial n_\ell} < 0$ . ■

**Proof of Proposition 2:** We will establish existence of  $\gamma_L$ , the proof for  $\gamma_C$  is analogous.  $L$ 's indirect utility functions for remaining and exiting are

$$\begin{aligned} EU_L(\text{remain}) &= \frac{1}{2(n_\ell + n_w)} \left( 2b\Psi(n_\ell \log(1 - \theta_{LR}^*) - n_\ell(1 - p_C) \log(1 - \theta_{CR}^*) + n_w(\log(\theta_{LR}^*) - (1 - p_C) \log(\theta_{CR}^*))) \right. \\ &\quad \left. - 2bn_\ell p_C \Psi \log(\gamma - \gamma\theta_{CE}^*) - 2bn_w p_C \Psi \log(\gamma\theta_{CE}^*) + (n_\ell + n_w) (\Psi - (\theta_R - \theta_{LR}^*)^2) \right) \\ EU_L(\text{exit}) &= \frac{1}{2(n_w + n_\ell)} \left( 2b\Psi(n_\ell \log(\gamma - \gamma\theta_{LE}^*) - n_\ell(1 - p_C) \log(1 - \theta_{CR}^*) + n_w(\log(\gamma) + \log(\theta_{LE}^*) - (1 - p_C) \log(\theta_{CR}^*))) \right. \\ &\quad \left. - 2bn_\ell p_C \Psi \log(\gamma - \gamma\theta_{CE}^*) - 2bn_w p_C \Psi \log(\gamma\theta_{CE}^*) + (n_\ell + n_w) (\Psi - (\theta_E - \theta_{LE}^*)^2) \right) \end{aligned}$$

Therefore,  $L$  prefers to remain whenever

$$\frac{1}{n_\ell + n_w} \left( b\Psi(-n_\ell \log(\gamma - \gamma\theta_{LE}^*) + n_\ell \log(1 - \theta_{LR}^*) - n_w \log(\gamma\theta_{LE}^*) + n_w \log(\theta_{LR}^*)) \right) + \frac{1}{2} (-\theta_{LE}^* - \theta_{LR}^* + \theta_E + \theta_R) (-\theta_{LE}^* + \theta_{LR}^* + \theta_E - \theta_R) > 0.$$

Existence of  $\gamma_L$  is given by the fact that  $\frac{\partial EU_L(\text{remain})}{\partial\gamma} = -\frac{bp_C}{\gamma} < 0$  and  $\frac{\partial EU_L(\text{exit})}{\partial\gamma} = \frac{b(1-p_C)}{\gamma} > 0$ . Then by the intermediate value theorem there is a point  $\gamma_L$  where  $EU_L(\text{remain}) = EU_L(\text{exit})$  with  $EU_L(\text{exit}) >$

$EU_L(\text{remain})$  whenever  $\gamma > \gamma_L$ .

To rank, we want to demonstrate that  $\frac{\partial \gamma_C}{\partial \kappa} \leq 0$ . Because  $\kappa_L$  is normalized to 1, we know that increasing  $\kappa$  above 1 means that exit is more likely. We know that  $\gamma_C$  solves  $H(\gamma) = EU_C(\text{remain}) - EU_C(\text{exit}) = 0$  at equality. Differentiating yields  $\frac{\partial H}{\partial \gamma} = -\frac{b\Psi}{\gamma} < 0$  and  $\frac{\partial H}{\partial \kappa} = \frac{1}{2} \left( \theta_E^2 - \theta_R^2 - 2\theta_E\theta_{CE} + \theta_{CE}^2 + 2\theta_R\theta_{CR} - \theta_{CR}^2 \right) \leq 0$ . Therefore by the implicit function theorem,  $\frac{\partial \gamma_C}{\partial \kappa} \leq 0$ . ■

**Proof of Corollary 2:** We want to compute  $\frac{\partial \gamma_d}{\partial n_\ell} = -\frac{\partial H / \partial n_\ell}{\partial H / \partial \gamma}$ . From Proposition 2,  $\frac{\partial H}{\partial \gamma} < 0$ . By the envelope theorem, the first term of  $\frac{dH}{dn_\ell} = \frac{\partial H}{\partial \theta_{da}} \frac{\partial \theta_{da}}{\partial n_\ell} + \frac{\partial H}{\partial n_\ell}$  is zero. Differentiating,  $\frac{\partial H}{\partial n_\ell} = \frac{2bn_w\Psi}{(n_\ell + n_w)^2} \left( \text{ArcTanh}(1 - 2\theta_{dR}) - \text{ArcTanh}(1 - 2\theta_{dE}) \right)$ . By Proposition 1,  $\theta_{dE} \leq \theta_{dR}$ . Therefore a sufficient condition for  $\frac{\partial H}{\partial n_\ell} \leq 0$  is  $\theta_{dR} \geq \frac{1}{2}$ . Then, by the implicit function theorem,  $\frac{\partial \gamma_d}{\partial n_\ell} \leq 0$ . ■

**Proof of Proposition 3:** It is sufficient to demonstrate that there exist cases where increasing  $n_\ell$  such that the equilibrium outcome moves from both  $L$  and  $C$  remaining to  $L$  remaining and  $C$  exiting implies that  $D_w^*$  and  $D_\ell^*$  change sign. Consider, for instance, a case where  $\theta_R = 0.8$ ,  $\theta_E = 0.6$ ,  $b = 1$ ,  $\Psi = 1$ , and  $\kappa = 1.5$  as primitives. Let  $n_w = 1.5$  and  $n_\ell = 1.2$ . Equilibrium shares then are  $\theta_{LR}^* = 0.63$ ,  $\theta_{LE}^* = 0.57$ ,  $\theta_{CR}^* = 0.65$ , and  $\theta_{CE}^* = 0.57$ . With these shares, we calculate  $\gamma_C = 0.965$  and  $\gamma_L = 0.975$ . Pick  $\gamma = 0.94$  so that neither  $C$  nor  $L$  can credibly exit. Then  $D_w^* = -0.03$ , so winners support  $C$ , and  $D_\ell^* = 0.06$ , so losers support  $L$ .

Now increase  $n_\ell = 1.9$ . This leads to new proposals  $\theta_{LR}^* = 0.56$ ,  $\theta_{LE}^* = 0.49$ ,  $\theta_{CR}^* = 0.59$ , and  $\theta_{CE}^* = 0.51$ . With these shares,  $\gamma_C = 0.939$  and  $\gamma_L = 0.955$ , so  $C$  prefers to exit but  $L$  does not. Then  $D_w^* = 0.16$ , so winners support  $L$ , and  $D_\ell^* = -0.05$ , so losers support  $C$ , establishing existence. ■