Why Exit from International Agreements? A Domestic Perspective*

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Abstract

What explains withdrawal from international agreements? I develop a formal model that offers a novel explanation of exit in which leaders may find it politically optimal to withdraw from agreements if they fail to deliver on the redistribution needed to compensate globalization's "losers." In particular, as the gains from globalization are more unequally distributed between "winners" and "losers," redistribution becomes politically suboptimal, and exit more attractive. Leaders prefer to withdraw from agreements as it enhances their electoral odds. Rising inequality also entices leaders who traditionally supported globalization to prefer exit instead, ushering in political realignments in the composition of leaders' bases of political support. When globalization enjoys political consensus, losers prefer leaders who would redistribute more while winners vote for leaders who redistribute minimally. However, the introduction of anti-globalization leaders shuffles political support: winners now support the pro-redistribution leader to maintain globalization, but losers no longer view redistribution as sufficient, preferring the anti-globalization leader instead. The theory thus explicates political incentives to withdraw from agreements despite globalization being welfare-maximizing.

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Domestic backlash to globalization is increasingly commonplace in democratic states. Parties and leaders that traditionally embraced openness have begun to support withdrawal from international agreements (Bornschier 2017; Colantone and Stanig 2018; 2019). Simultaneously, rising inequality related to the distribution of globalization's gains has been cited as a reason for voters to reject integration, supporting anti-globalization leaders instead (Flaherty and Rogowski 2021). The embrace of exit by leaders and voters alike is especially puzzling given that globalization is welfare-enhancing. Why have governments failed to allocate globalization's surplus in a way that makes everyone better off? Why would leaders exit from international agreements, yielding inefficiencies for their electorates, and why would voters support them?

I develop a formal model to elucidate leaders' key political contemplations when determining to remain in or withdraw from international agreements. First, I provide a simple explanation for why leaders exit from international agreements that is grounded in the logic of domestic electoral competition. Leaders may find it politically optimal to withdraw from agreements if they fail to deliver on the redistribution needed to sustain globalization from within. This is because leaders vary in their ability to implement redistributive policy to compensate globalization's "losers," which determines their preferences for remaining in or exiting from international agreements. Leaders who cannot credibly promise redistribution may choose to support withdrawal instead. Exit thus serves as an opportunity to bolster leaders' electoral odds.

The paper's main result is that exit becomes a particularly attractive policy option when globalization's gains are more unequally distributed domestically. Increasing this inequality makes compensation harder to sustain politically, so leaders pursue alternative policies like exit that may be electorally maximizing. Growing inequality makes it costlier for leaders to implement policies that would generate a more equal distribution of benefits without delivering concomitant electoral returns. Thus, the marginal costs of implementing redistributive policy outweigh its potential electoral benefits, rendering redistribution politically suboptimal. Simultaneously, rising inequality incentivizes politicians to withdraw rather than continue globalization because exit from international institutions functions to recalibrate relative gains between winners and losers. Therefore, the electoral value of compensation relative to exit decreases for leaders hoping to accede to political office: redistribution exacerbates the domestic distributive conflict between winners and losers such that leaders have little choice but to forgo gains from international cooperation to cement a stable electoral coalition.

Second, I illustrate that greater globalization-related inequality entices leaders who traditionally supported integration to abandon it in favor of exit. This shift in leaders' stances on globalization policy has also ushered in a realignment in the composition of leaders' bases of political support. The theory demon-

strates that, in a world with low inequality and a broad embrace of integration across leaders, globalization losers support leaders who are willing to engage in higher levels of redistribution, but winners vote for leaders who would compensate losers minimally. When globalization enjoys political consensus, losers demand compensation but winners are unwilling to supply it (Linardi and Rudra 2020). However, rising inequality makes leaders more likely to withdraw from international agreements. When leaders are split on globalization policy (i.e., one leader upholds the globalized status quo but the other prefers to exit), voters shift their political allegiances. Winners now support the pro-globalization, pro-redistribution leader while losers vote for the anti-globalization, anti-redistribution leader. Thus, when exit is an option, winners would prefer to maintain globalization, even if it requires greater redistribution, but losers no longer view redistribution as sufficient compensation (Milner 2021; Bowen, Broz and Rosendorff 2022). I therefore highlight the delicate conditions under which the agenda of "embedded liberalism" (Cameron 1978; Ruggie 1982; Katzenstein 1985; Rodrik 1998) is politically palatable.

Even though it is welfare-enhancing, globalization need not be politically desirable. When redistribution is infeasible, exit offers the possibility for leaders to advance their electoral objectives. As the gains from globalization are more unequally distributed, redistribution becomes politically suboptimal, and exit more attractive. Indeed, even though it could destroy a large surplus, exit can be electorally favorable for political leaders in highly unequal societies. The failure to adequately provide compensation to globalization losers (Walter 2010; Autor, Dorn and Hanson 2013) can thus be explained as the outcome of office-seeking leaders hedging their electoral fortunes on disintegration rather than redistribution.

Contribution

This paper's contribution is twofold. First, I introduce a simple theoretical model to explain how domestic political competition incentivizes withdrawal from international agreements. To date, this analysis provides one of the first stories to rationalize leaders' decisions to withdraw from international agreements as a function of their domestic politics. Moreover, since conventional economic wisdom would hold that an optimal transfer from winners to losers should always exist, thus obviating the possibility of exit, it is imperative to elucidate the causal mechanism through which domestic politics shapes the feasibility of globalization policy.

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 small, "elite" faction of society, conditions support for anti-globalist or populist leaders. They document that rising inequality is necessary to elicit voter support for anti-integrationist leaders. Milner (2021) shows

that increased exposure to trade increases support for extreme right parties, and 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.

Additionally, while 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), we have yet to understand how domestic politics affects leaders' decision to exit from such agreements. The paper's second contribution relates specifically to the study of exit as an outcome, where I depart from extant "state-level" arguments. Three prevailing arguments exist to explain why states withdraw from 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 point to empirical differences in regime type or changes in ideal points across member states to justify a country's exit from an agreement.[1] Increased incidence of exit may also be due to contagion effects (e.g., Walter 2021*b*), whereby withdrawal by one state motivates others to follow suit, similar to a logic of unraveling from a previously-established cooperative equilibrium (Schelling 1960).[2] A final strand of literature has cast 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).

Model Setup

I study the domestic consequences of membership in an international agreement. The agreement has three distinct effects. First, globalization produces aggregate welfare gains. In the agreement, the economy is of size $\gamma > 1$. Second, within this country, the agreement fosters "winners" and "losers." Let the domestic public be a continuum with each individual indexed by $i \in [0, 1]$ and let some share $\lambda \in [0, 1]$ of these individuals be globalization losers (ℓ) while a share $1 - \lambda$ are globalization winners (w). We can interpret this cleavage such that a fraction $1 - \lambda$ of society is employed in sectors that benefit from the agreement, while a share λ is adversely affected. The value of λ is common knowledge. Third, globalization determines

[1] 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.

[2] Advocates of contagion fail to identify the motives of the "first mover," or why one state exits in the first place.

the share of the economy that each of the two groups commands. In the status quo, winners own a share $\alpha_R \in [0,1]$ of the economy and losers own $1-\alpha_R$. The parameter α_R is exogenous and represents the structural, macroeconomic factors that affect returns to income for winners and losers in the agreement. Thus, globalization determines the size of the pie (γ), who benefits or does not benefit from these welfare gains (λ), and the distribution of these gains across society (α_R).

What makes the $1-\lambda$ individuals "winners" is that their *ex-ante* per capita income in the agreement is greater than the losers, or that globalization makes some domestic groups better off than others (Stolper and Samuelson 1941). We therefore restrict attention to the case where $\frac{\alpha_R}{1-\lambda} > \frac{1-\alpha_R}{\lambda}$ or $\alpha_R > 1-\lambda$.

Exit is inefficient. If the agreement is abrogated, then the economy contracts to size 1. In addition, the new income distribution between winners and losers contracts to $\alpha_E \leq \alpha_R$. This assumption reflects that, prior to any government intervention, income accruing to winners is greater when the country is party to the agreement. Put differently, winners lose some of their gains from specialization if exit occurs.

The quantity $\frac{\alpha_R}{1-\alpha_R}$ can be thought of as a measure of inequality between winners and losers because it is the income ratio between groups. Increasing the *ex-ante* gains to winners α_R clearly creates more inequality. In what follows, I will use "inequality" and "winners' gains from globalization" to refer to α_R interchangeably. Note that by definition, $\frac{\alpha_E}{1-\alpha_E} \leq \frac{\alpha_R}{1-\alpha_R}$, so exiting from the agreement necessarily makes society more equal.

The game depicts a domestic political contest between two possible leaders, L (she) and H (he). Leaders seek to propose globalization policy that will maximize their prospects of winning office. Each leader's platform consists of two elements. L and H simultaneously decide whether to remain in or exit from the agreement, as well as how to transfer income between winners and losers under either international policy outcome. I employ a common framework of electoral competition in which leaders make binding campaign policy choices (cf. Downs 1957) so that we can study the electoral incentives of proposing to remain in or exit from an international agreement.

Leaders propose policies that may redistribute income away from the status quo (α_R or α_E). To do so, they consider how the enactment of different policies affects their chances of winning the election, given what the other leader would propose, as well as the cost of changing policy. Leaders vary in the extent to which they find it costly to implement redistribution, which I refer to as their *policymaking costs*. We can think of these costs as features intrinsic to leaders, like their competence or ability to effectively manage government. Alternatively, policymaking costs may reflect that leaders from different parties appoint bureaucrats with distinct policy preferences (Halperin and Clapp 2006), so high policymaking costs could

stem from bureaucratic resistance to implementing redistributive policies. We suppose that L experiences "low" policymaking costs, which may imply that she is intrinsically a competent manager of government or technocrat, or is from a party with preferences for redistributive policies so she can staff an administration with pro-redistribution bureaucrats. L's costs of policymaking are normalized to 1. Conversely, H is a politician with "high" policymaking costs. H experiences a cost $\kappa > 1$ to move policy away from the status quo. The parameter κ is common knowledge.[3]

Each leader chooses a share of national income to be allocated to winners, θ_{da} for $d \in \{L, H\}$ and $a \in \{remain, exit\}$. A strategy for each leader is to propose whether to remain in or exit from the agreement, and how to divide the pie in each of these two possible international policy outcomes.

After L and H have announced their proposals, citizens go to the polls. Let voters have increasing, concave payoffs $v(\cdot)$ over income, which we specify using a logarithmic utility function, $v(x) = \log(x)$. The following table summarizes the per capita income to winners and losers for each leader's proposals under the two possible international policy outcomes.

	$d = L$		$d = H$	
	Remain	Exit	Remain	Exit
Winners w	$\frac{\gamma\theta_{LR}}{1-\lambda}$	$\frac{\theta_{LE}}{1-\lambda}$	$\frac{\gamma\theta_{HR}}{1-\lambda}$	$\frac{\theta_{HE}}{1-\lambda}$
Losers ℓ	$\frac{\gamma(1-\theta_{LR})}{\lambda}$	$\frac{1-\theta_{LE}}{\lambda}$	$\frac{\gamma(1-\theta_{HR})}{\lambda}$	$\frac{1-\theta_{HE}}{\lambda}$

Table 1: Income Distribution across Winners and Losers

Voting occurs according to a standard probabilistic voting model (Lindbeck and Weibull 1987). Individuals compare the differences in their expected income under L versus H, and also take into account individual-specific shocks μ_{ij} and a common preference shock β "in favor" of L.[4] Let $\mu_{ij} \sim U[-\frac{1}{2m_j}, \frac{1}{2m_j}]$ and let $\beta \sim U[-\frac{1}{2b}, \frac{1}{2b}]$. The parameters m_j and b define the salience of globalization policy relative to other issues in the electoral landscape. Let $v_{ij}(\theta_{da})$ be individual i in group j's utility from the proposal θ_{da}, as described in Table 1. Voter utility is therefore

$$u_{ij} = \begin{cases} v_{ij}(\theta_{La}) + \mu_{ij} + \beta & \text{vote for } L. \\ v_{ij}(\theta_{Ha}) & \text{vote for } H. \end{cases}$$

Leaders care exclusively about their electoral prospects. When proposing policies, L and H maximize

[3] We assume that voters do not derive direct benefits for electing leaders with low policymaking costs. That is, κ matters to voters only insofar as it affects the redistributive proposals that leaders advance and voters' subsequent material wellbeing.

[4] Valence shocks represent voters' valuations of L on all other electorally relevant issues besides globalization policy.

their chances of winning the election less policymaking costs. If elected, leaders enjoy a benefit $\Psi > 0$ and receive a payoff of zero if they lose the election. If $\pi(\theta_{La}, \theta_{Ha})$ is the probability that L wins the election (to be derived) given proposals θ_{da}, then leaders choose θ_{da} to maximize

$$EU_L(\theta_{La}, \theta_{Ha}) = \pi(\theta_{La}, \theta_{Ha})\Psi - \frac{1}{2}(\alpha_a - \theta_{La})^2.$$
$$EU_H(\theta_{La}, \theta_{Ha}) = (1 - \pi(\theta_{La}, \theta_{Ha}))\Psi - \frac{\kappa}{2}(\alpha_a - \theta_{Ha})^2.$$

Based on the optimal θ_{da}s, leaders subsequently determine whether to remain in or exit from the agreement.

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

1. L and H simultaneously announce intentions to remain in or exit the agreement and propose redistributive policies θ_{da}.
2. Valence shocks μ_{ij} and β are realized. An election occurs.
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 more formal definition of the game is in the appendix.

Analysis

We first derive the probability that L wins the election $\pi(\theta_{La}, \theta_{Ha})$ based on voter behavior, and then consider how L and H divide national income and determine optimal globalization policy. We then state the equilibrium and find conditions under which leaders prefer to withdraw from the agreement. All proofs are in the appendix.

There are four scenarios that voters face. Both leaders could propose to remain in the agreement, 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 H. This is a simple comparison of the utility proposed by each leader, as in Table 1. Define D_j as the difference in income that a member of group j would incur when voting for L versus H. Voter i in group j votes for L whenever $v_{ij}(\theta_{La}) + \mu_{ij} + \beta \geq v_{ij}(\theta_{Ha})$, or when

$$\underbrace{v_{ij}(\theta_{La}) - v_{ij}(\theta_{Ha})}_{D_j} + \mu_{ij} + \beta \geq 0.$$

Then, for any values of D_w and D_ℓ, we obtain a general expression for the probability that L wins the election, stated in the following lemma.[5] 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.

Lemma 1 *The probability that L wins the election can be expressed as*

$$\pi\Big(D_w(\theta_{La},\theta_{Ha}),D_\ell(\theta_{La},\theta_{Ha})\Big)=\frac{1}{2}+b\Big((1-\lambda)D_w+\lambda D_\ell\Big).$$

Equilibrium Redistribution

Our first result concerns the characterization and ordering of equilibrium transfer proposals θ^*_{da}. Leaders balance the costs of implementing redistributive policy and the marginal electoral benefit of redistribution.

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

$$(\alpha_a-\theta^*_{da})\kappa_d=b\Psi\Big(\frac{\lambda}{1-\theta^*_{da}}-\frac{1-\lambda}{\theta^*_{da}}\Big).$$

Proposals can be ranked such that $\theta^*_{LE}\le\theta^*_{HE}\le\theta^*_{LR}\le\theta^*_{HR}$. *L always redistributes more than H* ($\theta^*_{La}\le\theta^*_{Ha}$), *and winners always retain more when party to the agreement* ($\theta^*_{dE}\le\theta^*_{dR}$).

Redistribution attempts to equalize the income distribution between winners and losers. By moving from α_a to θ^*_{da}, leaders find the optimal transfer of income from winners to losers that is electorally maximizing. However, redistributive policies come with two potential costs. First, since leaders have different policymaking costs, their policy proposals will differ. The proposition shows that the low policymaking cost leader L will always propose greater redistribution than the high-cost leader H. Second, redistribution is a political tool that has electoral consequences. On average, any support of the globalization losers bought with redistribution necessarily comes at the expense of support from the winners.

Policymaking costs induce redistributive frictions. Since it is more costly for H to change policy, his proposals are biased toward the status quo (i.e., closer to α_a). By contrast, low-cost L can redistribute income more efficiently, promising more to the losers. Because her costs of redistributing are lower, L always proposes greater redistribution than H, so conditional on both leaders upholding or exiting the agreement, there is an induced political preference among winners for H, while losers support L.

[5]Without loss of generality, we assume $m_w=m_\ell=m$. The assumption states that the support of the valence shocks is the same for winners and losers, or that the groups view globalization as equally salient. A more general expression is in the appendix.

Beyond policymaking costs, the returns to redistribution have electoral costs by pitting winners against losers. Transfers attempt to sway losers into remaining in a leader's political coalition, but risk alienating winners if they are too high. By increasing the share of losers λ in society, redistribution becomes more expensive since there are more losers who demand a greater share of the pie. Hence any compensation away from α_a must be paid for through declining political support among winners.

Counterintuitively, leaders propose less redistribution when the gains from globalization become more unequal. When α_R increases, the *ex-ante* distribution of income becomes more concentrated in the hands of the winners. We might expect that greater inequality calls for greater redistribution; however, the opposite obtains because increasing redistribution would require leaders to incur greater costs to move toward a more equal distribution of income while leaving the electoral benefits of redistribution unchanged. Leaders therefore expend less effort in cases where gains are already highly dispersed. Therefore, in a hyperglobalized world where the distribution of gains is highly unequal, compensation to losers decreases precisely when it is needed most.

Redistributing gains from winners to losers entails a difficult political balance. Overall, politicians with high policymaking costs fail to adequately redistribute and are biased toward providing greater shares of income to the beneficiaries of the status quo, the globalization winners. Additionally, when *ex-ante* inequality grows because winners command substantial gains, leaders provide less redistribution as its benefits are not commensurate with the costs to moving policy. The following corollary formalizes this discussion.

Corollary 1 *Equilibrium proposals θ^*_{da} are:*

- *increasing in the gains to winners α_a;*
- *decreasing in the share of losers λ;*
- *increasing in policymaking costs κ.*

When does Exit Occur?

Given the optimal divisions of national income, leaders determine whether it is politically profitable to remain in the agreement or to exit. The following proposition establishes that leaders exit if and only if globalization's aggregate gains are not too expansive.

Proposition 2 *There exist thresholds $\gamma_L \leq \gamma_H$ such that leader d exits the agreement whenever $\gamma \leq \gamma_d$ and remains otherwise.*

Globalization is welfare-enhancing and exit shrinks the size of the pie. If the aggregate gains from globalization γ are large, then exit cannot occur. This comports with conventional wisdom that celebrates globalization for creating surplus. However, if these aggregate gains are relatively meagre, then leaders may find it politically opportunistic to forsake a larger pie for the possible electoral benefits associated with exiting from the agreement. In this case, the "second-order" domestic distributive frictions that globalization creates outweigh the overall gains; this motivates the attractiveness of exit despite this outcome being welfare inferior (Rodrik 2018).

The thresholds described in the proposition are a function of the redistributive proposals that leaders advance. Exit emerges as a credible policy option if at least one domestic leader finds it to be electorally maximizing to propose their income distribution θ^*_{dE} rather than θ^*_{dR}.[6] By definition, exit reduces inequality between winners and losers because the *ex-ante* distribution shifts from α_R to α_E. Winners lose some of their gains when the agreement is abrogated. Indeed, this shift to α_E is in some sense costless redistribution as the relative standing between winners and losers shifts upon exiting the agreement.

Exit is thus a purely political endeavor that arises because leaders differ in their abilities to implement redistributive policy. Leaders with higher policymaking costs propose smaller transfers from winners to losers and are more likely to exit from agreements. Since redistribution is costly, these leaders have incentives to forego international cooperation in order to shape the domestic income distribution through measures like exit. In the model, high-cost H is less able to make the requisite transfers under a globalized regime, and would rather abrogate the agreement. By contrast, since L can redistribute more cheaply, she always has greater incentives to uphold liberalization through redistribution. As we shall see, this discrepancy will generate equilibrium outcomes in which low-cost L's hands are tied to compensation, but high-cost H can propose withdrawal.

Inequality further threatens the stability of international liberalization. As winners' gains increase, so too do the conditions under which domestic political leaders find it optimal to withdraw from the agreement. By making redistribution more difficult, greater inequality forces politicians to resort to policies like exit.

Corollary 2 *The thresholds γ_d are increasing in the gains to winners α_R.*

As inequality rises, aggregate gains from globalization have to increase in order for it to survive. We have seen that when the gains from globalization are unequally distributed domestically, redistribution becomes politically suboptimal. Greater domestic inequality pressures leaders to alter the income distribution across

[6] 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 politician 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*a*).

winners and losers. However, the costs of implementing redistributive policy impede the disbursement of sufficient transfers. Consequently, exit becomes more attractive because rejecting international integration serves as a means of generating a more equal income distribution. These distributive concerns become more prevalent when α_R increases and compensation is more difficult to enact. The connection between inequality and the proposal of exit is illustrated in Figure 1, which plots the thresholds γ_L (solid line) and γ_H (dotted line) as a function of *ex-ante* inequality under the agreement $\frac{\alpha_R}{1-\alpha_R}$, which are increasing in α_R. To the right of each line represents regions of the parameter space where leaders would be willing to exit the agreement. Clearly, the "first-order" welfare gains must increase concomitantly for globalization to survive if domestic inequality becomes more severe.

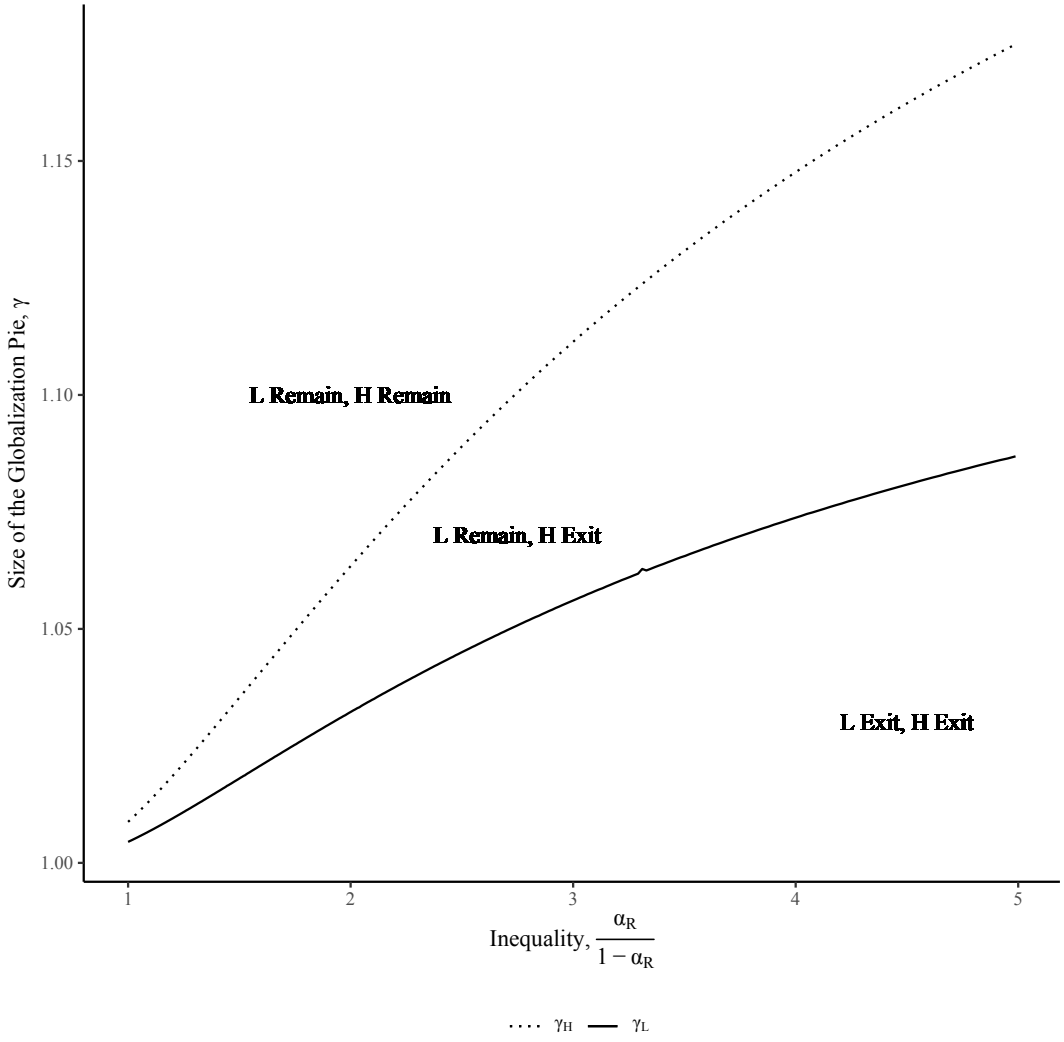

Figure 1: Inequality and Leaders' Thresholds for Exit

Propositions 1 and 2 characterize the game's equilibrium. Three possible outcomes obtain, each carrying different political implications. If $\gamma > \gamma_H$, both leaders would prefer to remain in the agreement and globalization continues. The aggregate welfare benefits from globalization are too great for either leader to credibly exit. Leaders propose θ^*_{LR} and θ^*_{HR} as transfers to compensate the losers. Since L can redistribute more cheaply, $\theta^*_{LR} \leq \theta^*_{HR}$, losers will in expectation vote for L. By contrast, globalization winners will support H, whose higher policymaking costs bind him to proposals closer to the status quo α_R.

Similar behavior occurs if $\gamma < \gamma_L$, when both L and H would exit the agreement, disbursing θ^*_{LE} and θ^*_{HE}. In this region of the parameter space, globalization's aggregate benefits on the economy are minimal enough 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.

When $\gamma_L \leq \gamma \leq \gamma_H$, globalization remains intact only if L wins the election because H would exit. Unlike the previous cases, voters confront the choice to uphold or reject international cooperation, depending on the election winner. Additionally, the "natural" political coalitions that formed previously no longer hold. Although L can redistribute more cheaply, her proposal θ^*_{LR} is not sufficient to buy the political support of the losers. Indeed, losers benefit from voting for H, $1 - \theta^*_{HE} \geq \gamma(1 - \theta^*_{LR})$. Losers forsake a smaller share of a larger, globalized pie for a larger share of the pie without the agreement. Winners, however, benefit most from maintaining the globalized status quo; although winners would support H if he upheld the agreement, they switch their political loyalty to L when confronted with the possibility of exit. Thus, in a case where H exits but L does not, the composition of the two leaders' political bases reverse from the "traditional" coalitions of support if both leaders were to uphold the agreement.

Political Realignments

We have seen that as the gains from globalization are more unequally distributed, redistribution becomes politically suboptimal, and exit more attractive. Corollary 1 demonstrated that, all else equal, a higher α_R only increases the marginal costs to implementing redistributive policy without delivering a concomitant electoral return. From Corollary 2, we learned that a more unequal distribution of globalization's gains at home encourages leaders to exit more frequently. To fully explore how globalization-caused inequality affects the tradeoff between compensation and exit, we now examine how political support and subsequent equilibrium outcomes change when α_R increases.[7]

[7]Formally, we are interested in comparing outcomes along the equilibrium path as α_R increases. Fix $\gamma > \gamma_H$ so that neither leader would exit. Increasing α_R increases both the proposals θ^*_{dR} and the thresholds γ_d, implying less redistribution as well as

All else equal, voters prefer the policy proposal that provides their group with the highest per capita income. Since leaders' redistributive proposals and willingness to support globalization are sensitive to rising inequality, so too is voter behavior. Consider a case exemplifying the globalized status quo, where $\gamma > \gamma_H$. Since both leaders favor integration to exit, winners benefit from H's policies because he redistributes less than L, $\theta^*_{HR} \geq \theta^*_{LR}$. However, with rising inequality, and subsequent changes in globalization policy, exit becomes a more attractive option for politicians since more potential voters are harmed by globalization. H's ability to exit under conditions where L cannot delivers him an entirely new group of political supporters, the globalization losers. Rather than supporting the pro-redistribution L, losers shift their political allegiance to H. For losers, exit delivers a larger share of a smaller pie, $1-\theta^*_{HE} \geq \gamma(1-\theta^*_{LR})$. Conversely, when H switches his optimal policy from remaining to exiting, winners no longer have a pro-globalization yet minimally redistributive leader. Their next best alternative is L who, despite proposing greater redistribution, allocates winners a larger share of the larger, globalized pie, $\gamma\theta^*_{LR} \geq \theta^*_{HE}$.

Proposition 3 *Increasing the winners' gains from globalization can create political realignments.*

The proposition establishes the existence of political realignments in the face of rising inequality. If liberalization with redistribution is the only credible policy outcome, losers support the pro-redistribution L who can compensate them more easily. However, if the gains from globalization are unequally distributed such that one domestic leader finds it optimal to deglobalize, previously established political alliances reverse. High-cost H, who finds it difficult to adequately compensate losers with redistribution, can gain the support of this highly salient, disgruntled political group by promising greater equality by exiting the agreement. Despite sacrificing aggregate gains, exit becomes attractive as a political tool for leaders because it shifts relative income between winners and losers when redistribution is infeasible.

Political realignments imply differences in levels of political support as a result of rising inequality. Recall that D^*_j is the difference in income for an individual in group j voting for L versus H given leaders' equilibrium policy proposals. 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 H. Changing the distribution of winners' gains α_R is required only to shift the conditions under which exit becomes optimal, holding γ constant. For example, for any γ such that $\gamma > \gamma_H$, where we are in an equilibrium where both leaders support globalization, losers in expectation support L, $D^*_\ell > 0$ and winners support H, $D^*_w < 0$. However, when we "move" into an equilibrium where H exits but L does not – which can be achieved by increasing α_R and subsequently changing the cutpoints

an expansion of the region of the parameter space in which exit is preferred to remaining in the agreement. Holding γ constant, it can now be the case that $\gamma_H \leq \gamma \leq \gamma_L$, so that H's optimal policy proposal now involves exiting from the agreement rather than remaining. This section compares voter behavior across these two equilibrium outcomes.

that define equilibrium choices to remain or to exit – we now have that $D_\ell^* < 0$ and $D_w^* > 0$, establishing shifts in political support.

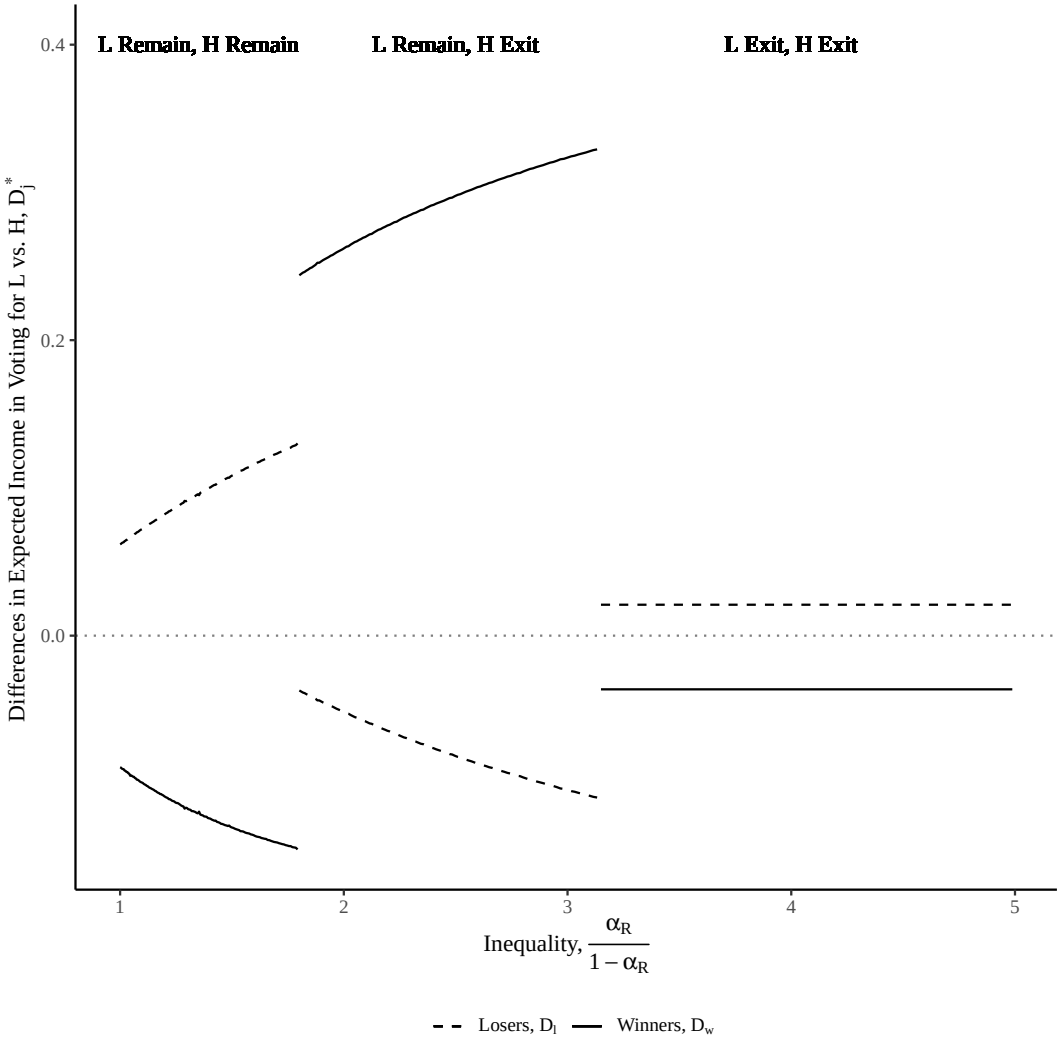

Figure 2: Inequality and Political Realignments

Political realignments can be seen in Figure 2, which plots D_w^* (solid line) and D_ℓ^* (dashed line), the differences in income that winners and losers expect when voting for L versus H as a function of *ex-ante* inequality in the agreement. Each segment represents how D_w^* and D_ℓ^* change conditional on the policy outcomes that the leaders propose.[8] Consider how the sign of D_j^* changes at the discontinuities between the segments. In the leftmost case, α_R is low and the aggregate gains from globalization are high; both leaders

[8]Notice that in the first two segments of the figure, the slopes of D_ℓ^* and D_w^* are not constant in α_R, representing direct, mechanical effects of increasing the *ex-ante* scope for redistribution (cf. Meltzer and Richard 1981). In the third segment of the figure, both leaders would exit from the agreement proposing θ_{LE}^* and θ_{HE}^*, neither of which are functions of α_R.

would remain in the agreement. Political coalitions arise from the fact that H's policymaking frictions limit his ability to redistribute away from α_R, leaving winners with greater income with H in power rather than L. L's support comes from losers, to whom she can more easily redistribute. At the first discontinuity, inequality has grown such that H's optimal action is now to exit rather than remain, which induces a reversal of political support. Now, winners coalesce behind L because they incur a large opportunity cost of abandoning the globalized status quo. This cost stems from two sources. If exit occurs, the winners' share of income prior to redistribution moves from α_R to α_E, decreasing their share of the economy. Exit is also inefficient, so winners are allocated a smaller share within a smaller pie. By contrast, losers rally behind H, who, despite an inefficient foreign policy, ultimately promises them greater income than L would. Finally, when α_R is very large, reflecting an incredibly unequal distribution of gains between winners and losers, a second discontinuity occurs. L too would now withdraw from the agreement, and political support switches again. Similar to the first case, winners support H because he can promise them a greater share of the new status quo distribution, $\theta^*_{HE} \geq \theta^*_{LE}$. Losers support L because she can apportion them a greater share of an albeit smaller, deglobalized pie.

Political realignments have stark consequences for the types of policies that leaders propose and the bases of electoral support that they seek to attract. With rising inequality, losers are at a greater disadvantage in the globalized status quo; exit can recalibrate relative gains domestically. While L serves as the "traditional" politician representing losers, she finds herself in a difficult position when H can exit but she cannot (when $\gamma_L \leq \gamma \leq \gamma_H$). For L, the gains from globalization in the aggregate are too large to sacrifice, especially since she can redistribute more cheaply. Unfortunately, compensation proves to be insufficient to maintain the political loyalties of the losers when H campaigns on exit. Instead, her policies attract the support of the globalization winners, who have lost the favor of their preferred leader H.

Rising inequality unambiguously pressures the system of domestic policies upon which the survival of globalization is predicated. Embedded liberalism relies on a social compact that is *ex-ante* undesirable for winners, but *ex-post* insufficient for losers. When neither L nor H would exit the agreement, winners support H who will redistribute less 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). Additionally, losers' support for pro-redistribution politicians establishes the demand for social programs to compensate those disaffected by globalization (Walter 2010; Rickard 2015). Indeed, 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 2021) and supporting

Donald Trump's 2016 presidential campaign (Ritchie and You 2021). However, we have seen that increasing inequality decreases leaders' propensities to redistribute and the emergence of politicians proposing exit undermines redistribution's credibility. Milner (2021) shows that once anti-globalization measures like exit become credible, even individuals who receive welfare benefits within areas shocked by international competition vote for anti-integrationist politicians, demonstrating how adjustment is no longer viewed as enough to compensate damages to losers (cf. Bowen, Broz and Rosendorff 2022). Thus, winners *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 politicians find it even more favorable to withdraw from the agreement rather than uphold it. Ultimately, concerns for domestic political survival trump support for globalization when inequality rises because leaders have incentives to sacrifice liberalization for political expedience.

Discussion

Leaders vary in their preferences to implement redistributive policies. The costs associated with redistribution stifle the pursuit of domestic policies that are thought to be necessary in order to sustain globalization. Notably, leaders with particular distaste for or difficulty in enacting redistribution may pursue other measures like exit to recalibrate the economic standing of winners and losers and enhance their electoral odds.

To briefly conclude, let us consider how the model can help to explain some contemporary patterns of rising inequality and globalization policy in the United States. When a leader with high policymaking costs cannot credibly exit from an agreement, he finds political support with the globalization winners because of his status quo bias. This finding 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 than Democrats (Irwin 2017). By promoting views of globalization winners, Republicans 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).

Growing inequality in the United States shifted the willingness of Republican political leaders to continue to support pro-globalization policies. The rise of right-wing, anti-globalization politicians, even predating

the presidency of Donald Trump, confirms this trend (Cerrato, Ferrara and Ruggieri 2018; Kuk, Seligsohn and Zhang 2022). These politicians found it too costly to maintain a system of international liberalization and domestic redistribution: with rising inequality, many Republican politicians 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 in globalization policy in American politics across parties (cf. Schonfeld 2021). Overall, this study helps us to make sense of how political behavior and globalization policy evolve with concomitant rising inequality and furthers our understanding of how domestic leaders integrate domestic and foreign policy to enhance their electoral prospects.

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Appendix

Formalization of the Game

Leaders L and H choose to remain in or exit from an international agreement, $\rho_d \in \{0,1\}$ where $\rho_d = 1$ signifies remain for $d = L, H$. Leaders also choose redistributive policies $\theta_{da} \in [0,1]$ for $a = \{remain, exit\}$. Share θ_{da} represents the amount of the economy allocated to winners: leaders decide whether to stay or leave and how much they want to redistribute. A strategy for leader d is a choice $\rho_d \in \{0,1\}$ and proposals $\theta_{da} \in [0,1]^2$.

Voters observe leaders' proposals and decide whether to vote for L or H. Voters are a continuum $i \in [0,1]$ and are either winners or losers. There are $1-\lambda$ winners and λ losers, $\lambda \in [0,1]$. Voters receive per capita payoffs based on the income allocated to their group by leader d. Voters have increasing and concave payoffs $v(\cdot)$ over income. For simplicity, use logarithmic utility, $v(x) = \log(x)$. Then, for example, if L were to win the election having proposed to remain in the agreement, the income payoff to winners would be $\log(\frac{\gamma\theta_{LR}}{1-\lambda})$ and would be $\log(\frac{\gamma(1-\theta_{LR})}{\lambda})$ to losers. Payoffs are more thoroughly defined in Table 1 of the text.

Voter i in group j also receives a common shock $\beta \sim U[-\frac{1}{2b}, \frac{1}{2b}]$ and an individual shock $\mu_{ij} \sim U[-\frac{1}{2m_j}, \frac{1}{2m_j}]$ "in favor" of L. Therefore, given L's proposal θ_{La} and H's proposal θ_{Ha}, voter i votes for L if and only if $v_{ij}(\theta_{La}) + \beta + \mu_{ij} \geq v_{ij}(\theta_{Ha})$. A voter's strategy is a choice to vote for L or H given leaders' choices to remain or exit and accompanying proposals θ_{da}, as well as the realized valence shocks. Formally, $\sigma_{ij} : \{0,1\}^2 \times [0,1]^4 \times [-\frac{1}{2m_j}, \frac{1}{2m_j}] \times [-\frac{1}{2b}, \frac{1}{2b}] \to \{L, H\}$.

Leaders choose θ_{da} to maximize their electoral success. Define $D_j = v_{ij}(\theta_{La}) - v_{ij}(\theta_{Ha})$. We construct $\pi(D_w, D_\ell)$ as the probability that L wins the election as a function of proposals θ_{da} in four different scenarios: 1. L and H both remain in the agreement, 2. L stays, H exits, 3. L exits, H stays, 4. L and H both exit. With some abuse of notation, index $\pi(\cdot,\cdot)$ by these four scenarios. Then we can express expected utilities as

$$\begin{aligned} EU_L(\rho_L, \theta_{LR}, \theta_{LE}; \rho_H, \theta_{HR}, \theta_{HE}) = \; & \rho_L \Big[\underbrace{\rho_H \Psi \pi_1}_{L \text{ in, } H \text{ in}} + \underbrace{(1-\rho_H)\Psi\pi_2}_{L \text{ in, } H \text{ out}} - \frac{1}{2}(\alpha_R - \theta_{LR})^2 \Big] \\ & + (1-\rho_L) \Big[\underbrace{\rho_H \Psi \pi_3}_{L \text{ out, } H \text{ in}} + \underbrace{(1-\rho_H)\Psi\pi_4}_{L \text{ out, } H \text{ out}} - \frac{1}{2}(\alpha_E - \theta_{LE})^2 \Big]. \end{aligned}$$

$$EU_H(\rho_H, \theta_{HR}, \theta_{HE}; \rho_L, \theta_{LR}, \theta_{LE}) = \rho_H\Big[\underbrace{\rho_L\Psi(1-\pi_1)}_{L \text{ in, } H \text{ in}} + \underbrace{(1-\rho_L)\Psi(1-\pi_3)}_{L \text{ out, } H \text{ in}} - \frac{\kappa}{2}(\alpha_R - \theta_{HR})^2\Big]$$
$$+ (1-\rho_H)\Big[\underbrace{\rho_L\Psi(1-\pi_2)}_{L \text{ in, } H \text{ out}} + \underbrace{(1-\rho_L)\Psi(1-\pi_4)}_{L \text{ out, } H \text{ out}} - \frac{\kappa}{2}(\alpha_E - \theta_{HE})^2\Big].$$

The solution concept is subgame perfect equilibrium. At each of four information sets, voters determine when they would vote for L versus H. Given these retention rules, leaders optimally select redistributive proposals θ_{da} and whether to remain in or exit the agreement.

Proofs

Proof of Lemma 1: Voter i in group j votes for L whenever $D_j + \mu_{ij} + \beta \geq 0$, where D_j is the difference in income from what L proposes versus what H proposes. Alternatively, voter i votes for L if $\mu_{ij} \geq -D_j - \beta$. Then, $P(\mu_{ij} \geq -D_j - \beta) = \frac{1}{2} + m_j(D_j + \beta)$. Hence the fraction of winners supporting L is $(1-\lambda)\Big(\frac{1}{2} + m_w(D_w + \beta)\Big)$ and the fraction of losers supporting L is $\lambda\Big(\frac{1}{2} + m_\ell(D_\ell + \beta)\Big)$. To win the election, L must have support satisfying $(1-\lambda)\Big(\frac{1}{2} + m_w(D_w + \beta)\Big) + \lambda\Big(\frac{1}{2} + m_\ell(D_\ell + \beta)\Big) \geq \frac{1}{2}$. This occurs when $\beta \geq -\frac{(1-\lambda)m_w D_w + \lambda m_\ell D_\ell}{m_w(1-\lambda) + m_\ell \lambda}$. Finally, $P(\beta \geq -\frac{(1-\lambda)m_w D_w + \lambda m_\ell D_\ell}{m_w(1-\lambda) + m_\ell \lambda}) = \frac{1}{2} + b\Big(\frac{(1-\lambda)m_w D_w + \lambda m_\ell D_\ell}{m_w(1-\lambda) + m_\ell \lambda}\Big)$. If $m_w = m_\ell = m$, we have $\pi = \frac{1}{2} + b\Big((1-\lambda)D_w + \lambda D_\ell\Big)$ as in the lemma. ■

Proof of Proposition 1: Each share θ_{da} maximizes leader d's utility of taking action a as a best response to the other leader's behavior. All four choice variables – θ_{LR}, θ_{LE}, θ_{HR}, and θ_{HE} – solve the same type of problem, so it suffices to derive the first-order condition for one choice and generalize accordingly. Let p_d be the probability that leader d exits. Consider H's proposal of national income when remaining in the agreement, θ_{HR}. This solves

$$\theta^*_{HR} = \text{argmax}_{\theta_{HR}}\ (1-p_L)(1-\pi_1) + p_L(1-\pi_3) - \frac{\kappa}{2}(\alpha_R - \theta_{HR})^2.$$

Differentiating with respect to θ_{HR} yields

$$(\alpha_R - \theta_{HR})\kappa - b\Psi\Big(\frac{\lambda}{1-\theta_{HR}} - \frac{1-\lambda}{\theta_{HR}}\Big) = 0.$$

Generalizing notation yields the equation in the proposition. The point that satisfies this equation at equality, θ^*_{HR}, is guaranteed to be a maximum, as leaders' utility functions are globally concave. The second-order

condition confirms this:

$$-\kappa - \frac{b\Psi(\theta_{HR}^2 + (1-2\theta_{HR})(1-\lambda))}{(1-\theta_{HR})^2\theta_{HR}^2} < 0.$$

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

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

Proof of Proposition 2: We will establish existence of γ_H, the proof for γ_L is analogous. Let p_d be the probability that leader d exits. H's indirect utility functions for remaining and exiting are

$$\begin{aligned}
EU_H(remain) = \frac{1}{2}(\Psi - \kappa(\alpha_R - \theta^*_{HR})^2) + b\Psi\Big(p_L\lambda\log(\frac{\theta^*_{LE}(1-\theta^*_{LR})}{\theta^*_{LR}(1-\theta^*_{LE})}) + p_L\log(\frac{\gamma\theta^*_{LR}}{\theta^*_{LE}}) \\
+ \log(\frac{\theta^*_{HR}}{\theta^*_{LR}}) + \lambda\log(\frac{\theta^*_{LR}(1-\theta^*_{HR})}{\theta^*_{HR}(1-\theta^*_{LR})})\Big). \\
EU_H(exit) = \frac{1}{2}(\Psi - \kappa(\alpha_E - \theta^*_{HE})^2) + b\Psi\Big(p_L\lambda\log(\frac{\theta^*_{LE}(1-\theta^*_{LR})}{\theta^*_{LR}(1-\theta^*_{LE})}) + p_L\log(\frac{\gamma\theta^*_{LR}}{\theta^*_{LE}}) \\
+ \log(\frac{\theta^*_{HE}}{\gamma\theta^*_{LR}}) + \lambda\log(\frac{\theta^*_{LR}(1-\theta^*_{HE})}{(1-\theta^*_{LR})\theta^*_{HE}})\Big).
\end{aligned}$$

Therefore, H prefers to remain whenever

$$\Phi_H(\gamma) := \frac{\kappa}{2}(\alpha_E + \alpha_R - \theta^*_{HE} - \theta^*_{HR})(\alpha_E - \alpha_R - \theta^*_{HE} + \theta^*_{HR}) + b\Psi\Big(\log(\frac{\gamma\theta^*_{HR}}{\theta^*_{HE}}) + \lambda\log(\frac{\theta^*_{HE}(1-\theta^*_{HR})}{\theta^*_{HR}(1-\theta^*_{HE})})\Big) > 0.$$

Since $\Phi_d(\gamma)$ is strictly increasing in γ, $\frac{\partial \Phi_d}{\partial \gamma} = \frac{b\Psi}{\gamma} > 0$, by the intermediate value theorem there is a point γ_d where $EU_d(remain) = EU_d(exit)$ with $EU_d(exit) > EU_d(remain)$ whenever $\gamma < \gamma_d$.

To rank, we demonstrate that $\frac{\partial \gamma_H}{\partial \kappa} \geq 0$. Differentiating yields $\frac{\partial \Phi_H}{\partial \kappa} = \frac{1}{2}\Big(\alpha_E^2 - \alpha_R^2 - 2\alpha_E\theta^*_{HE} + \theta^{*^2}_{HE} + 2\alpha_R\theta^*_{HR} - \theta^{*^2}_{HR}\Big) \leq 0$. Therefore by the implicit function theorem, $\frac{\partial \gamma_H}{\partial \kappa} \geq 0$. Since $\kappa > 1$, $\gamma_H > \gamma_L$. ■

Proof of Corollary 2: We compute $\frac{\partial \gamma_d}{\partial \alpha_R} = -\frac{\partial \Phi_d/\partial \alpha_R}{\partial \Phi_d/\partial \gamma}$. From Proposition 2, $\frac{\partial \Phi_d}{\partial \gamma} < 0$. By the envelope theorem, the first term of $\frac{d\Phi_d}{d\alpha_R} = \frac{\partial \Phi_d}{\partial \theta_{da}}\frac{\partial \theta_{da}}{\partial \alpha_R} + \frac{\partial \Phi_d}{\partial \alpha_R}$ is zero. Differentiating, $\frac{\partial \Phi_d}{\partial \alpha_R} = (\theta_{dR} - \alpha_R)\kappa_d < 0$. Then, by the implicit function theorem, $\frac{\partial \gamma_d}{\partial \alpha_R} \geq 0$. ■

Proof of Proposition 3: It is sufficient to demonstrate that there exist cases in which increasing α_R moves the equilibrium outcome from both L and H remaining to L remaining and H exiting, and that D_w^* and D_ℓ^* change sign. Consider a case where $\lambda = 0.66$, $\alpha_E = 0.4$, $b = 1$, $\Psi = 1$, and $\kappa = 2.5$. Let $\alpha_R = 0.64$. Computed equilibrium shares are $\theta_{LR}^* = 0.439$, $\theta_{LE}^* = 0.359$, $\theta_{HE}^* = 0.372$, and $\theta_{HR}^* = 0.507$. We then calculate $\gamma_H = 1.078$ and $\gamma_L = 1.04$. Pick $\gamma = 1.08$ so that neither H nor L exit. Then $D_w^* = -0.143$, so winners support H, and $D_\ell^* = 0.129$, so losers support L.

Now increase $\alpha_R = 0.65$. Equilibrium proposals are $\theta_{LR}^* = 0.442$, $\theta_{LE}^* = 0.359$, $\theta_{HE}^* = 0.372$, and $\theta_{HR}^* = 0.512$. With these shares, $\gamma_H = 1.084$ and $\gamma_L = 1.043$, so H prefers to exit but L does not. Then $D_w^* = 0.249$, so winners support L, and $D_\ell^* = -0.041$, so losers support H, establishing existence. ■