IMF Conditionality, Government Partisanship, and the Progress of Economic Reforms

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The International Monetary Fund (IMF) often seeks to influence countries' domestic public policy via varying levels of conditionality—linking financial support to borrowing governments' commitment to policy reforms. When does extensive conditionality encourage domestic economic reforms and when does it impede them? We argue that, rather than universally benefiting or harming reforms, the effects of stricter IMF conditionality depend on domestic partisan politics. More IMF conditions can pressure left-wing governments into undertaking more ambitious reforms with little resistance from partisan rivals on the right; under right governments, however, more conditions hinder reform implementation by heightening resistance from the left while simultaneously reducing leaders' ability to win their support through concessions or compromise. Using data on post-communist IMF programs for the period 1994–2010, we find robust evidence supporting these claims, even after addressing the endogeneity of IMF programs via instrumental variables analysis.

The International Monetary Fund (IMF) often seeks to influence countries' domestic public policy in order to foster economic stability. One increasingly exercised tool at the IMF's disposal is conditionality, or explicitly linking financial support to borrowing governments' commitment to policy reforms. The IMF and other international institutions use conditionality to encourage governments in crisis to adopt difficult yet ostensibly needed economic reforms that domestic leaders might otherwise avoid. Besides igniting normative debates, the spread of such practices means that scholars and policymakers must grapple with questions about program design and conditionality's effectiveness in generating meaningful policy changes at the domestic level. How does stricter IMF conditionality influence countries' reform progress? Can similarly designed programs have different effects?

Critics and advocates agree that IMF programs have enormous economic and social consequences for participating countries, but they disagree considerably about whether IMF involvement is a blessing or a curse (Stiglitz 2003; Peet 2009; Brau and McDonald 2009). Unfortunately, existing research provides no definitive answers, since researchers often report conflicting empirical evidence regarding IMF programs' economic and social effects (Stone 2002; Vreeland 2003; Nooruddin and Simmons 2006; Dreher and Rupprecht 2007; Biglaiser and DeRouen Jr. 2011; Woo 2013).[1] This article argues that scholars can move past the current deadlock by considering how IMF programs' design differences interact with domestic political conditions to shape reform outcomes. In doing so, this approach frames the question surrounding IMF conditionality's impact on economic reforms in a more productive and nuanced way: When does stricter IMF conditionality encourage reform progress and when does it impede reforms?

This article contributes to the study of the IMF and economic reforms by arguing that, rather than

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[1]For detailed reviews of the large body of IMF-related research, see Vreeland (2007), and Steinwand and Stone (2008).

universally benefiting or harming reforms, IMF conditionality's effects depend on participating governments' partisanship and the domestic support or resistance they face in implementing reform measures. Two theoretical insights anchor this argument. First, implementing a reform agenda requires building coalitions, which is easier when leaders can negotiate with stakeholders and make concessions. When IMF programs have more conditions, however, governments' policy space for building these pro-reform coalitions is more limited. Second, governments of the left and right encounter different political landscapes when attempting economic reform. While right-wing governments must placate left-leaning groups tied to the public sector, left-wing governments have an easier time with right-wing opposition groups that generally welcome market-oriented reforms. Together, these insights suggest that stricter IMF conditionality under right governments can stall reforms' implementation by heightening resistance from the left while simultaneously reducing leaders' ability to grant concessions or compromise over controversial measures. In contrast, IMF programs under left governments can employ conditionality more effectively to push governments to pursue, and ultimately achieve, more extensive reform goals. In the article's first two sections, we situate this argument within the existing research and develop the logic behind these theoretical claims.

Empirically, we test our argument using an original data set of IMF conditionality alongside data from the European Bank of Reconstruction and Development (EBRD) on post-communist countries' economic transitions. Given their shared economic challenges and repeated involvement with the IMF, these countries provide fertile ground for examining the conditional effects of IMF program design on public sector reforms. We analyze the universe of post-communist IMF programs for the period 1994–2010, using a multilevel modeling approach, and find evidence that IMF conditionality affects reform outcomes, depending on the type of government that implements the required conditions. Under left governments, more conditions are associated with more extensive reform progress; under right governments, however, additional conditions do not correspond with more reform progress. In fact, as IMF conditionality increases, right partisanship becomes negatively correlated with reform progress. Our results are robust to a host of empirical specifications and estimation techniques, including a Bayesian instrumental variables analysis to account for concerns about the potential endogeneity of IMF program design. In the article's conclusion, we highlight the implications of these findings for ongoing scholarly and policy debates about IMF reforms.

Conditionality, the IMF, and Economic Reforms

Although established to stabilize the international monetary system against balance of payment crises, the IMF is better known today for its loan activities—lending to countries in economic crisis and to poorer countries pursuing economic development. Motivated by the IMF's prominence and bolstered by increasingly available data, scholars have attempted to pinpoint the economic consequences of IMF involvement, studying its effects on economic growth (Przeworski and Vreeland 2000; Vreeland 2003), income redistribution (Vreeland 2002), FDI flows (Jensen 2004; Stone 2002), and currency crises (Dreher and Walter 2010), to name but a few. Concurrently, others have investigated how IMF programs shape political outcomes, such as social spending priorities (Nooruddin and Simmons 2006), civil service expenditures (Nooruddin and Vreeland 2010), or politicians' reelection prospects (Dreher 2004).

Given that the IMF explicitly recommends fiscal and economic reforms to its borrowers to help prevent future crises, scholars have also investigated how IMF programs affect economic reforms in participating countries. Taken together, however, these studies' findings paint an inconsistent picture. Stone (2002) argues that, conditional upon credible enforcement, IMF programs in post-communist countries did successfully encourage reforms that lowered inflation. In contrast, Dreher and Rupprecht (2007) find in a global sample that IMF participation has a negative relationship with economic reforms, while Boockmann and Dreher (2003) use similar data to conclude that IMF programs have no overall effect on "economic freedom" in participating countries. With Latin American data, Biglaiser and DeRouen Jr. (2011) find differential reform effects: IMF participation leads to more trade and capital account liberalization, but less privatization. We learn much from existing research, but the literature's conflicted findings suggest that we are still missing important pieces to the puzzle. This article contributes by highlighting under-appreciated sources of heterogeneity that, when addressed appropriately, may shed new light on IMF programs' influence on economic reforms.

One possible source of confusion is that, although researchers show a growing interest in explaining variation in IMF program design (Dreher and Jensen 2007; Stone 2008; Copelovitch 2010; Woo 2010; Caraway, Rickard, and Anner 2012), the potential consequences of this heterogeneity for reform outcomes has not attracted similar attention. Existing research overwhelmingly focuses on reforms' relationship to IMF program

FIGURE 1 Variation in IMF Conditionality: Post-communist Countries (1994–2010)
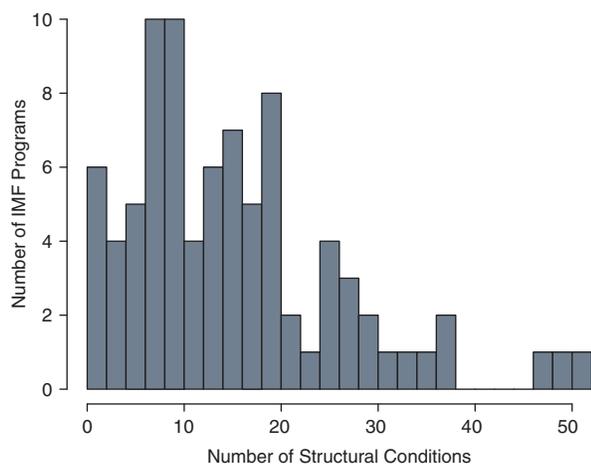
Note: Data collected by authors from IMF letters of intent. Mean = 15.5; standard deviation = 11.2.

participation, either comparing pre- and post-program outcomes or comparing participating countries with non-participating peers. Certainly, IMF participation warrants serious study; however, any study with IMF program participation—a dichotomous variable—as the main explanatory factor implicitly assumes that all IMF programs are designed similarly or else have homogeneous effects, regardless of design.

In practice, we observe substantial heterogeneity among IMF programs. Figure 1 demonstrates that the total number of structural conditions within the IMF programs of the post-communist region has varied widely. Rather than clustering tightly around the group average ($\bar{x}$ = 15), the distribution has a large spread (s.d. = 11.25), and ranges from zero conditions all the way up to fifty-one.[2] It is unlikely that such heterogeneous programs affect participating countries uniformly. Consequently, the literature's conventional empirical approach probably masks important facets of IMF programs' relationship to subsequent economic reforms.

Furthermore, although a large corpus of social science research maintains that support from domestic groups is critical to reforms' success or failure, IMF scholarship often assumes (implicitly or explicitly) that external constraints remove domestic opposition's abil-

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[2] Studies seeking to explain IMF program design have attributed this type of variation to factors such as donor countries' international interests, domestic political institutions, and the IMF's internal organizational incentives (Copelovitch 2010; Caraway, Rickard, and Anner 2012; Woo 2010; 2013).

ity to successfully resist reforms. For example, Vreeland (2003) argues that governments increase the costs of opposition by inviting in the IMF and then use this leverage to push contentious reforms past resisting domestic actors. Similarly, the IMF's own quarterly magazine, *Finance & Development*, writes that international organizations can use "loan conditionality to push through key reforms even if vested interests resist. This may be an important factor in whether or not the transition process advances or remains mired in the intermediate stage" (Havrylyshyn and Odling-Smee 2000).

Strangely, such arguments imply that domestic opposition to reform is strong enough to necessitate IMF involvement and conditionality, yet so weak that it cannot affect the implementation of IMF-mandated reforms. Skeptics, however, argue that the IMF's attempts to push through reforms without broader domestic support have produced some of the worst results for reforming countries (Stiglitz 2003; Rodrik 2009). According to critics, the IMF used conditionality during neoliberalism's heyday to aggressively promote reforms, but popular discontent caused many initiatives to backfire and eroded political support for further reform (Murrell 1993; Roland 2002; Desai 2005).

In sum, lingering theoretical and empirical inconsistencies suggest that we need more nuanced approaches to studying IMF programs' effect on economic reforms. Rather than asking whether or not IMF programs unconditionally help to advance economic reforms, researchers can gain additional insights by asking: *When does IMF conditionality encourage reform progress and when does it impede reforms?* By doing so, scholars gain an opportunity to theorize explicitly about how the degree of IMF conditionality affects governments' ability to implement reforms in the face of domestic opposition. The theoretical argument in the next section attempts exactly that: exploring the interaction of IMF conditionality with the domestic politics of economic reform.

Conditionality and Governments' Partisan Constraints on Economic Reform

In order to facilitate reform, IMF conditionality constrains—it prevents leaders from acting on their short-term political incentives and forces them to tackle painful reforms that their countries need for long-run economic stability. Yet, governments also have to build pro-reform coalitions and placate opposition if they are to successfully adopt and implement economic reforms (Shleifer and Treisman 2000). Problematically, the more

that conditionality confines policymakers to a specific menu of reforms, the less flexibility governments have to make the concessions and compromises that would help them build that coalition. We argue that these tighter constraints on policy undermine reform progress more seriously in some cases than in others because left and right governments confront different types of opposition to market-oriented reforms: Right-wing governments require more flexibility to secure cooperation from their market-skeptic opponents on the left than do left-wing governments, whose opponents on the right are ideologically more predisposed to the IMF's prescriptions. Consequently, the question of whether stricter IMF conditionality encourages or impedes reform progress depends heavily on IMF programs' partisan context. We develop this argument and its implications in greater detail below.

Countries participate in IMF programs out of economic necessity. As a lender of last resort, the IMF provides financing to member countries with destabilizing macroeconomic problems, such as debt or foreign reserve crises. When severe economic instability prevents borrowing on international capital markets, governments have few alternatives but to turn to the IMF for financial assistance.[3] To help correct borrowers' macroeconomic imbalances, the IMF places conditions on their loans requiring policy reform. The IMF and borrowing governments negotiate the terms of their agreements in a highly uncertain environment, creating room for bureaucratic incentives, political maneuvering and geopolitical factors to influence IMF program design (Vaubel 1991; Vreeland 2007; Stone 2008; Dreher and Jensen 2007; Caraway, Rickard, and Anner 2012).[4]

While IMF conditionality establishes general *quantitative* performance criteria, such as government spending caps or debt ceilings, it can also entail *structural* conditions that prescribe specific policy measures for meeting those quantitative targets. Examples of structural conditions include privatizing lists of particular state-owned enterprises, downsizing specific agencies, or reducing spending

by firing public employees. In a very real way, IMF negotiators intend structural conditions to limit governments' discretion and commit them to set actions and recommended policies. Our analysis focuses upon this second type of conditionality, analyzing structural conditions' effectiveness under varying political environments.

The 2002 Bulgarian IMF agreement provides examples of typical structural conditions. One condition requires the Council of Ministers to adopt policies limiting wage increases for employees of sixty state-owned enterprises. Another requirement specifically targets subsidies within Bulgaria's state-dominated energy sector, requiring new legislation to "bring household electricity prices to full cost-recovery levels" (p.14 Bulgaria 2002). Additional conditions mandate education cuts by reducing the number of teachers and merging schools to save operational costs. Besides these examples, the program includes structural conditions aimed at limiting budgets, shrinking social spending, reducing tariffs, creating new institutions, and completing a hospital accreditation process (Bulgaria 2002).

After an IMF program is signed, however, domestic political processes still control if and how reforms are realized. Existing research underscores that, even without the controversy of IMF involvement, domestic political opposition frequently stalls reform initiatives. For example, scholars have documented how painful reforms generate tremendous political resistance from adversely-affected voters (Przeworski 1991; Haggard and Kaufman 1995), "early winners" who seek to preserve privileged access to rents (Hellman 1998), and domestic political rivals who perceive reforms as disproportionately concentrating costs onto the opposition (Alesina and Drazen 1991; Frye 2010). In these and related arguments, important domestic groups determine reforms' success or failure by acting as "stakeholders," that is, actors with both an interest in the status quo and the ability to undermine reforms' successful adoption and implementation (Shleifer and Treisman 2000). Such arguments imply or maintain explicitly that would-be reformers often make the most progress by winning domestic stakeholders' support, even though it can require concessions and compromise.

The political reality that successful reform agendas require cooperation and coalition-building has straightforward implications for the design of IMF programs. By limiting leaders' discretion over what and how to reform, each additional structural condition reduces a government's ability to negotiate with objectors and reduces reformers' opportunity to arrange logrolls with reluctant stakeholders. Thus, when IMF programs require more extensive conditions, leaders can struggle to assemble a pro-reform coalition if the government's available policy

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[3] Some governments may have a secondary motive to seek IMF conditionality as "political cover" in order to pursue unpopular reforms and pass the blame on the IMF Vreeland (2003). We follow Vreeland (2003) in assuming that this strategy is not partisan-specific. Consistent with this assumption, left and right governments receive similar levels of conditionality in our data set of IMF programs. Nevertheless, the empirical section investigates further whether the data support an alternate explanation based on political cover logic that is partisan-specific.

[4] To simplify discussion, this section treats program design as exogenous to reform progress. We loosen that assumption in the article's penultimate section, adopting an instrumental variables approach to deal directly with the potential endogeneity of IMF conditionality.

space, or "room to move" (Mosley 2000), becomes too limited. Ultimately, far-reaching IMF programs can provoke political resistance that will hinder reformers and obstruct progress if domestic stakeholders deem conditionality too costly and too rigid to accommodate their concerns. Conversely, programs with fewer conditions may still be able to motivate leaders on key issues while granting them sufficient flexibility to maintain coalitions around top-priority reforms.

Taken seriously, the above logic implies that the strictness or leniency of IMF programs will not have a monolithic effect on countries' reform progress; instead, the effects of IMF programs will depend on how conditionality interacts with borrowing governments' domestic political pressures. We call attention to one aspect of domestic politics shaping conditionality's impact on economic reform: the partisanship of participating governments and their propensity to confront opposition as IMF demands increase. We theorize that, because governments of the left and right face different opposition to market-oriented reforms, leaders' partisanship can either ease or undercut governments' ability to implement an increasing number of controversial reforms.

Consider right governments trying to fulfill IMF conditionality while pitted against a left opposition. Here, stricter conditionality hampers rather than promotes economic reforms. First, IMF programs with more extensive conditions can galvanize support for the left's political agenda. Particularly with public sector reforms, each additional policy condition potentially expands the proportion of aggrieved citizens and makes the left's calls to moderate or halt reforms more appealing. Second, stricter conditionality generates more intense opposition while simultaneously limiting governments' ability to grant concessions or compromise over controversial measures. Thus, IMF conditionality under right governments is a two-edged sword: the same strictures that bind governments to a specific reform plan can also undermine leaders' chances of successfully implementing those reforms by making it harder to find common ground with stakeholders on the left.

By comparison, right governments with fewer policy conditions have extra degrees of freedom to bargain with their left opposition and adjust details to keep the overall reform program politically viable. Counterintuitively, leaders in this situation formally commit to less, yet their increased flexibility increases the possibility that economic reforms will take place as planned. The more room that IMF agreements leave for dealing with relevant stakeholders, be they angry voters or political opponents, the more opportunity they give for successfully implementing reforms. The argument closely parallels

the IMF literature about program "ownership" (Bird and Willett 2004). Using that language, fewer conditions means governments retain more ownership over reforms, allowing leaders to choose specific policy measures that can adjust for opposition better than when governments receive a micro-managed schedule of detailed policies.

Alternatively, consider left governments in charge of implementing IMF conditions while dealing with right-wing political opponents. Rightist parties generally endorse the types of market-oriented policies that the IMF recommends, giving them fewer reasons to oppose proposed reforms, even as conditionality grows more demanding. When left leaders accept a program with many policy conditions, the right opposition's inclination toward economic liberalism eases policy adoption and places additional pressure on left governments to deliver the promised reforms.

Naturally, left governments can also confront opposition from left-leaning societal groups, such as labor unions and other interests who oppose deep public sector reform. Unless they have a credible defection option, however, leftist groups may lack sufficient leverage to convince their own left-wing government to abandon IMF-required policies or pursue heterodox measures. When right governments push economic reforms, public sector beneficiaries can petition left opposition leaders to obstruct reforms politically. In contrast, when left governments advocate market-oriented reforms, their constituents have few political options because shifting their political support rightward is unlikely to help their anti-reform cause.

In sum, we argue that IMF programs with extensive conditions generate more reform progress when concluded by left governments. This is not because left-wing governments who enter IMF programs are more reform-oriented, but rather that they encounter a different domestic landscape than their right-wing counterparts. For right governments, stricter conditionality hinders progress by removing flexibility that leaders need to navigate reforms past skeptical stakeholders on the left; in contrast, left governments need less latitude to implement similar reforms since IMF conditions often mirror the opposition's underlying policy preferences. Empirically, this argument predicts that, under left governments, more IMF conditions should be associated with more progress in economic reforms while, under right governments, more IMF conditions should not be associated with more reform progress. In the next section, we test these hypotheses using data on IMF conditionality and the advancement of economic reforms in post-communist countries.

Data and Empirical Analysis

We test our argument in the context of the economic reforms of post-communist transition in Eastern Europe and the former Soviet Union, analyzing data on all available IMF programs in twenty-one post-communist countries for the period 1994–2010.[5] Methodologically, these countries' common history under communism provides compelling grounds for comparison: When these states abandoned central planning in the 1990s, they all required deep and systemic reforms to disentangle their economies from a massive state apparatus. Thus, the post-communist countries began transition with similar pressures for similar public sector reforms, such as freeing commodity prices, cutting subsidies, subjecting monopolies to competition, restructuring and privatizing state-owned enterprises, and reducing public employment. Under these dire circumstances, nearly all the post-communist countries in Eastern Europe and Eurasia turned to the IMF for help, often multiple times.[6] Consequently, the post-communist countries' near-universal and repeated IMF participation helps to both mitigate concerns about sample selection and provide plentiful variation in IMF conditionality.

Moreover, our sample also provides fertile ground for testing how conditionality interacts with partisanship since bitter political battles between pro-market reformers on the right and reform-resistant (former) communists on the left represent a major narrative of post-communist economic transition. Of course, to the extent that some partisan governments outside the region are not delineated so explicitly by pro- or anti-reform stances, then our sample's internal coherence and comparability entail a trade-off in generalizability. In our opinion, the loss in generalizability is minimal. Even outside the post-communist region, the neoliberal policy prescriptions embodied in the majority of IMF conditions regularly bring left and right parties into direct conflict. In fact, according to Pop-Eleches (2009), the severe economic distortions following communism's collapse made partisan battles over IMF conditionality *less* intense in post-communist countries than in Latin America, where traditional left-right partisan differences regarding IMF programs have at times been exceedingly sharp. From that viewpoint, this sample provides a test for our argument that is actually *more* conservative relative to other well-studied partisan conflicts over IMF requirements.

Our dependent variable—REFORM PROGRESS—derives from scores assigned by the European Bank of Reconstruction and Development (EBRD). For each year since communism's collapse, the EBRD has tracked reform progress on six different dimensions: large-scale privatization, small-scale privatization, competition policy, enterprise restructuring, price liberalization, and trade and currency liberalization. Experts at the EBRD assign an indicator of 1–4.3 to represent a country's cumulative level of reform on each dimension, with 1 meaning "little to no reform," and 4 indicating "performance typical of advanced industrial economies."[7] To mitigate concerns about raters' personal biases, the scores are checked for consistency by country experts outside the EBRD, include a wide range of different policies, and are guided by an explicit coding methodology.[8] The end result is a multidimensional set of standardized measures that can reasonably be compared across post-communist countries and over time. For descriptive purposes, Figure 2 depicts changes in these indicators from 1994 to 2010 for reforms relevant to the public sector: privatization of large state-owned companies, competition policy, and enterprise restructuring.[9]

We use the EBRD transition scores to build a single, composite measure of institutional and economic reform. In pairwise comparisons, the six dimensions of reform correlate positively and are statistically significant at p-values below 0.001. The Cronbach's α for these six items is 0.78, with an reliability coefficient of 0.95. Moreover, principal-components analysis shows that the different dimensions load mainly onto one factor. Given the empirical grounds for treating reform in a single dimension, we use factor analysis to construct a reform index to use as our dependent variable.[10] The reform index corroborates conventional wisdom: reformers such as Poland and

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[5]The Supporting Information lists all countries and programs in the data set.

[6]For extensive accounts of the IMF's involvement in the post-communist transition, see Stone (2002) or Pop-Eleches (2009).

[7]The measure moves from 1 to 4.3 in steps of $\frac{1}{3}$, creating eleven possible values in all.

[8]The EBRD makes the coding rubric available on its website: http://www.ebrd.com/pages/research/economics/data/macro/ti_methodology.shtml.

[9]Competition policy relates to public sector reforms since pricing policies, entry restrictions, and unequal market power have tended to favor large enterprises that are still owned or controlled by the state. More directly, privatization moves state-owned enterprises from the public sector into the private sector. Finally, enterprise reform scores partially capture the degree to which state and private businesses rely on soft budgets, loose credit, and government subsidies to compete.

[10]The lack of publicly-available data on the fulfillment of specific IMF requirements is a common obstacle in the literature. This index, however, takes a different tack by measuring latent levels of reform to tap the long-term, broader changes in institutional and economic structure that ultimately interest the IMF and other economic actors. Additionally, we rerun analyses on individual

FIGURE 2 Postcommunist Countries' Progress in Economic Reforms (1994 vs. 2010)
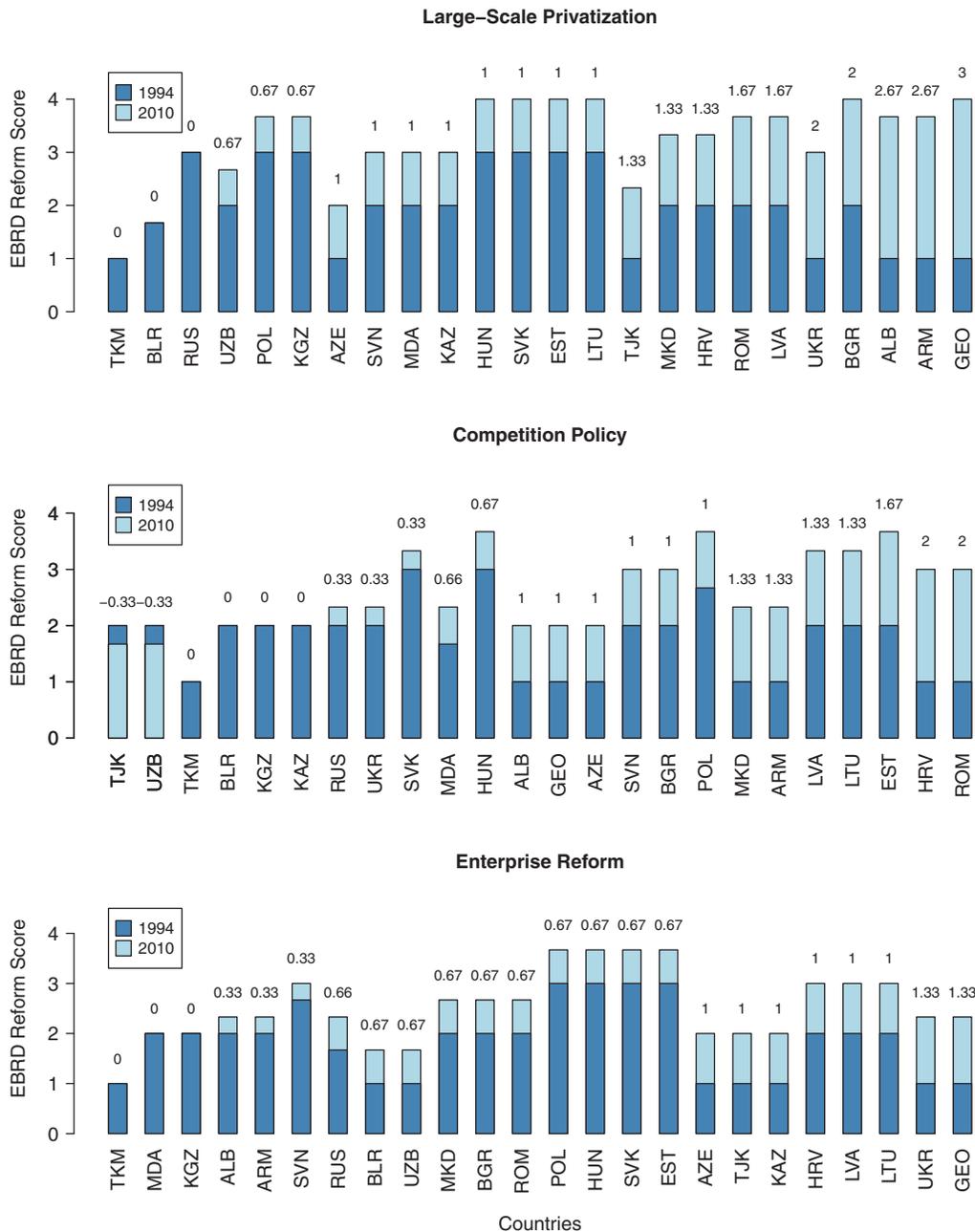
Note: Data from the European Bank of Reconstruction and Development (EBRD).

Hungary on the high end, laggards such as Turkmenistan and Tajikistan on the low end, and countries such as Russia and Romania in the middle. To capture *progress* in reform, we subtract the reform index value at an IMF program's start year from the index value two years later. This coding helps to account for the temporal lag between program enrollment and potential realization of reform plans.[11]

components to investigate whether the composite score obscures unexpected patterns within reform dimensions related to the public sector. Our findings are robust to using these alternate measures; see the Supporting Information for results.

[11]The two-year difference conservatively biases against finding results since it assumes that policy outcomes linked to IMF conditions will manifest themselves relatively quickly. Repeating our analyses with a longer time lag yields similar results.

Our first key independent variable counts the number of STRUCTURAL CONDITIONS—required prior actions, structural performance criteria, and structural benchmarks—within a given IMF program. Although they do not differentiate among individual conditions, count-based conditionality measures are most common in the literature because they do not require researchers to make subjective assessments about the difficulty of individual conditions (or combinations of conditions) in a given circumstance (Dreher and Jensen 2007; Caraway, Rickard, and Anner 2012; Independent Evaluation Office 2007; Pop-Eleches 2009). For our purposes, this count measure reflects our theoretical claims that each additional structural condition restricts reformers' degrees of freedom by providing a potential faultline for partisan conflict and expanding the proportion of affected citizens. Between 1994 and 2010, the IMF concluded more than eighty-five programs in the post-communist region, averaging 15.5 structural conditions per program (s.d. = 11.2).[12] Four programs have no structural public sector conditions at all, while six have thirty or more. Notably, Armenia signed an IMF program in 1995 with fifty total conditions, and Ukraine signed a 1998 IMF program containing fifty-one structural conditions.

To increase confidence in our results' robustness, we present empirical results for three different codings of STRUCTURAL CONDITIONS. The legacy of state control over the economy has meant that the most pressing and politically-contentious issues addressed by IMF programs—privatization, tightening budgets, curbing subsidies, breaking up monopolies—all involve the public sector. Consequently, for each program, we code the (logged) count of structural conditions specifically targeting public sector reforms.[13] We also use an ordinal measure of public sector conditions based on the sample distribution, coding each program's conditionality as *low* (two or fewer), *average* (three to five), or *high* (six or more). In addition to public sector reforms, IMF programs require additional measures that may be too technical to attract the scrutiny or potential opposition implied by our theory. As a harder test, then, we examine structural rigidity in the entire IMF program by measuring the (logged) count of the total number of structural conditions.

To measure PARTISANSHIP, we adopt coding from Frye (2010) that classifies executives in post-communist countries as belonging to one of three ordered categories.[14] According to Frye, left post-communist governments predominately represent the "old left," meaning communists, communist-successor parties, and executives who have held power continuously from the Soviet period. Their main constituents include pensioners, older workers, rural residents, state employees, and other groups that directly benefited from communist-era protections and policies. Alternately, right governments have executives who advocate limiting state power and giving the private sector a dominant role in economic decision-making. They cater to voters expecting to benefit from economic liberalism, including younger workers, the educated, urban dwellers, and those from growing industries such as services, finance, and retail. According to Frye, relatively few post-communist governments reside in the political center between these two camps.[15]

Our ordinal measure PARTISANSHIP is coded as 0 for IMF programs signed under left governments, 1 under centrist, and 2 under right governments. Although we present results from this coding, all results hold if the ordinal measure of partisanship is replaced by dummy variables representing the mutually-exclusive categories.[16] Disaggregating our data shows that right and left post-communist governments do not receive different levels of IMF conditionality: IMF programs under left governments average 17.1 conditions, while programs under right governments average 15.6 conditions ($p = 0.623$).[17]
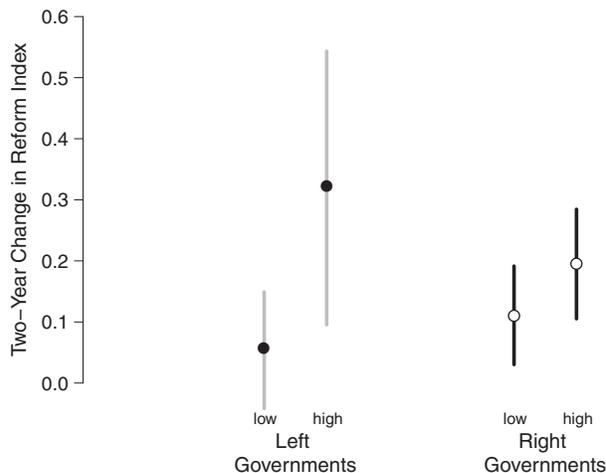
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[14] See Frye (2010) for coding details. The original data end in 2004, so we update PARTISANSHIP for the remaining five years. The Supporting Information lists our extensions and coding.

[15] Empirically, our sample contains 27 programs concluded under left governments (32%), 15 under centrist (18%), and 43 under right governments (50%).

[16] See Supporting Information for results.

[17] As a sidenote, although existing studies indicate that IMF programs can influence domestic elections, our data provide no support for concerns that stricter conditionality might promote changes in government partisanship that would indirectly affect reform outcomes. First, the vast majority of IMF programs in our data (75%) did not witness any change in government partisanship during the program's duration. Second, the average number of conditions is statistically indistinguishable across IMF programs associated with partisan turnover and those without (13.5 versus 15.8, $p = 0.521$). Finally, where changes did occur, we see ideological turns toward the left and right in roughly equal numbers (9 versus 12, respectively), with no significant design differences in programs that preceded leftward versus rightward changes (13.4 conditions versus 17.4 conditions, $p = 0.416$). As a precaution, however, analyses in the Supporting Information verify that our results are robust to dropping those programs associated with subsequent changes in government partisanship.

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[12] Since the details of their agreements have not yet been made public, at least two IMF programs (Latvia 2008, Poland 2009) during this time period are not in the data set.

[13] Starting from broad IMF categorizations, we code structural conditions as belonging to one of four types: public sector, fiscal, financial, or other. See Appendix for a detailed description of how programs are collected and coded.

FIGURE 3 Partisan Governments' Reform Progress, Under Low and High Structural Conditions

Note: Reform data taken from the EBRD; PARTISANSHIP coded based on Frye (2010); IMF program data collected by authors. "High" and "low" conditionality indicates IMF programs within the sample's top/bottom third in terms of numbers of public sector structural conditions. Bands represent 95% confidence intervals.

Even before adding statistical controls, we see suggestive evidence that the relationship between stricter conditionality and reform progress depends on borrowing governments' partisanship. Figure 3 plots averages of RE-FORM PROGRESS by government type for programs with low versus high numbers of public sector conditions. Under left governments, IMF programs with higher public sector conditionality averaged a two-year change in their country's reform index that was 0.23 points *above* programs with lower public sector conditionality ($p = 0.054$). Substantively, this difference is 25% larger in size than one complete standard deviation in the dependent variable. In comparison, the difference in average reform progress between higher versus lower conditionality programs under right governments is one-third that size and statistically indistinguishable from zero ($\Delta = 0.08$; $p = 0.184$). Although the literature often casts IMF programs as universally good or bad for reforms, the data tell a more nuanced story. As our argument predicts, extensive structural conditions are associated with higher reform progress under left governments, yet produce little to no appreciable gains under right governments. Taking these basic patterns as a starting point, we proceed with more rigorous analyses.

All models include programs' REFORM BASELINE, the country's reform index value when the IMF program commences to control for concerns that stricter conditionality reflects IMF perceptions about weak com-

mitment to reform or that large gains are difficult for highly-reformed countries.[18] Some specifications also control for 1992 REFORM CONDITIONS since the severity of distortions at transition's beginning might influence countries' reform trajectories and their subsequent IMF interactions. To control for countries' wealth, all models also include GDP PER CAPITA (logged) in constant 2005 international dollars (PPP).

In some specifications, we include a count variable for IMF PROGRAM HISTORY since repeated IMF participation may shape both the current program and reform outcomes. Similarly, we include IMF PROGRAM DURATION to control for number of years a country spends under a given IMF program. Various arguments link democratic institutions to both the extensiveness of economic reforms and IMF conditionality (Przeworski 1991). We

[18]Given our conditional argument, ceiling effects would be particularly misleading if right-wing governments under demanding IMF programs had systematically higher reform baselines because we could misinterpret the corresponding lack of progress to political obstacles rather than practical limitations. In actuality, the data reveal wide variation within partisan subsets in terms of both baseline reform and IMF program design (see Supporting Information for corresponding plot). In fact, the data challenge the general premise that highly-reformed countries make less progress; despite concerns otherwise, programs in the top 10% by their baseline reform score actually improved their scores over the next two years by an average of 0.12 points, compared to the data set's median of 0.10.

include DEMOCRACY as a dichotomous measure and follow convention in assigning a value of 1 to all countries receiving a Polity score of 7 through 10 (Marshall, Jaggers, and Gurr 2002).

We also include macroeconomic indicators to proxy for the severity of the crises prompting IMF involvement. As hyperinflation was a main symptom of post-communist economic collapse, we control for INFLATION (logged). Similarly, low or negative GDP GROWTH could influence both reform trajectories and IMF loan agreements; accordingly, we control for year-on-year growth in GDP. We include a proxy for the GLOBAL ECONOMY using the average price of crude oil per barrel in constant U.S. dollars. Some models also include a TIME TREND to account for broader changes over time in the IMF's approach to guiding reforms via conditionality. The Supporting Information displays summary statistics for all included variables.

Taking individual IMF programs as the unit of analysis, we use a multilevel modeling strategy to examine how the relationship between IMF conditionality and reform progress is affected by the partisanship of the governments presiding over implementation.[19] Considering the cross-nesting of IMF programs within countries and years, multilevel modeling's flexibility in addressing hierarchical relationships is a natural choice that allows us to weight relative amounts of information about individual countries and years, on one hand; with averages from the entire sample of IMF programs, on the other (Gelman and Hill 2007). All main analyses include random intercepts for country and years to help account for group-level heterogeneity that might affect the design of IMF programs and the progress in implementing economic reforms.[20] The resulting empirical model takes the following form:

$$y_i = \beta_0 + \beta_1 C_i + \beta_2 P_i + \beta_3 C_i P_i$$
$$+ \mathbf{X}_i \theta + \alpha_{j[i]} + \eta_{t[i]} + \varepsilon_i$$
$$\alpha_j \sim N(0, \sigma_\alpha^2), \quad \eta_t \sim N(0, \sigma_\eta^2) \qquad (1)$$

where i indexes individual IMF programs, j indexes countries, and t indexes years; y_i is REFORM PROGRESS; C_i is one of several measures of STRUCTURAL CONDITIONS in a given IMF program; P_i measures the PARTISANSHIP of the

borrowing country's government at the program's initiation; $\mathbf{X}$ is vector of control variables; β and θ are parameters to be estimated; α_j and η_t are group-level random intercepts for countries and years assumed to come from normal distributions with mean zero and group-specific variances, σ_α^2 and σ_η^2; and ε_i is the error term. Results from these analyses appear in Table 1.

Results

Table 1 provides evidence consistent with our argument that IMF program design affects reform outcomes differently, depending on the implementing governments' partisanship. Because our factored dependent variable places coefficient estimates on an arbitrary scale, we focus our discussion on substantive interpretations, rather than numerical outcomes. Under left governments, more conditions are associated with increased economic reform, as indicated by the positive and statistically significant coefficient estimates for STRUCTURAL CONDITIONS.[21] As predicted, the CONDITIONS × PARTISANSHIP interaction displays coefficient estimates that are negative and statistically significant across the entire table. Substantively, as government partisanship moves rightward, more structural conditions in a given IMF program correlate with diminishing advancements in actual reform, even after controlling for factors such as the depth of crisis and the program's reform baseline. Under right governments, the marginal effect of additional structural conditions is estimated to be approximately zero. Figure 4 presents the results graphically.

Using the estimates from column 1, Figure 4 plots the estimated marginal effects on a country's subsequent reform progress of imposing additional structural conditions within an IMF program, conditional on the partisanship of that country's executive. Under leftist post-communist governments, conditionality functions as the IMF intends; additional structural conditions appear to push left-wing governments to adopt pro-reform policies and make further progress than their peers with fewer conditions. Here, increasing the (logged) number of public sector conditions by one standard deviation corresponds with positive change in the dependent variable equal to 66% of one standard deviation ($sd = 0.233$, $\Delta = 0.156$). In contrast, right-leaning governments do not make reform progress under increasingly rigid IMF agreements. Statistically, the estimated

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[19]In our case, analyzing the program level has two benefits: first, it focuses on the outcome of interest—reform progress associated with specific IMF programs' conditionality; second, comparing observations that are all under IMF agreement helps to mitigate concerns about selection bias (Bulir and Moon 2006).

[20]Findings do not change substantively if we use OLS models that cluster on country or year instead. Results available in the Appendix.

[21]Depending on the measure, a one-unit increase in structural conditions under left governments corresponds with a positive increase that is between 66% to 82% of the dependent variable's standard deviation.

TABLE 1 Post-communist Economic Reform and IMF Program Design, Conditional on Executive Partisanship (1994–2010)

| DV: Reform Progress $\Delta_{t+2,t} Economic\ Reform\ Index$	IMF Structural Conditions					
	Public Sector (logged)		Public Sector (ordinal: low, med, high)		Total Conditions (logged)	
Structural Conditions	0.188^{**}	0.191^{**}	0.153^{**}	0.157^{**}	0.177^{**}	0.159^{**}
measure varies by column	(0.043)	(0.043)	(0.036)	(0.038)	(0.035)	(0.038)
Executive Partisanship	0.196^{**}	0.253^{**}	0.056^{**}	0.086^{**}	0.264^{**}	0.314^{**}
ordinal; 0=left, 2=right	(0.046)	(0.049)	(0.026)	(0.027)	(0.065)	(0.072)
Conditions	-0.092^{**}	-0.107^{**}	-0.079^{**}	-0.089^{**}	-0.081^{**}	-0.088^{**}
$\times$**Partisanship**	(0.025)	(0.026)	(0.022)	(0.024)	(0.023)	(0.025)
Reform Baseline	-0.593^{**}	-0.774^{**}	-0.541^{**}	-0.755^{**}	-0.638^{**}	-0.787^{**}
EBRD score at start of IMF program	(0.060)	(0.091)	(0.060)	(0.093)	(0.061)	(0.094)
GDP per capita	0.256^{**}	0.133	0.223^{**}	0.127	0.301^{**}	0.151
constant USD per capita (logged)	(0.066)	(0.093)	(0.062)	(0.088)	(0.068)	(0.095)
IMF Program History		0.032		0.043		0.033
count of past IMF programs		(0.027)		(0.028)		(0.029)
IMF Program Duration		-0.026^{*}		-0.026		-0.026^{*}
duration of current program, in years		(0.015)		(0.016)		(0.015)
Democracy		0.026		0.024		0.044
dummy; $1 = 7$ or greater on Polity scale		(0.056)		(0.057)		(0.055)
Inflation		-0.001		-0.012		-0.002
annual inflation rate, in % (logged)		(0.021)		(0.023)		(0.022)
GDP growth		0.001		0.001		0.003
year-on-year GDP change, in %		(0.003)		(0.003)		(0.003)
1992 Reform Conditions		0.273^{*}		0.239^{*}		0.250^{*}
EBRD score at communism's collapse		(0.141)		(0.129)		(0.142)
Global Economy		-0.003^{*}		-0.002		-0.002
avg. price of oil per barrel, constant USD		(0.002)		(0.002)		(0.002)
Time Trend		0.017		0.009		0.012
		(0.012)		(0.012)		(0.013)
Number of Observations	83	79	83	79	83	79

Notes: Reform data and economic data from the EBRD. IMF program data collected by authors; partisanship data from Frye (2010), extended by authors. Coefficients represent estimates from multilevel linear regressions with random intercepts for 21 countries and 15 years; standard errors in parentheses. **indicates $p < 0.05$; *indicates $p < 0.10$.

marginal effects of structural conditions under right executives is indistinguishable from zero; whereas, more conditions seem to spur reform under left governments, increasing conditionality under a right government yields very little, if any, additional momentum for reform.

Turning briefly to the control variables, we see that the model provides results that we would expect. Unsurprisingly, the coefficient estimates for REFORM BASELINE display a negative and statistically significant relationship with REFORM PROGRESS; IMF programs in countries with already high EBRD scores have less room to improve. At the same time, programs in countries with better 1992 REFORM CONDITIONS have tended to make more headway in reforms. Additionally, some models indicate that there is a negative correlation between IMF PROGRAM DURATION and reform progress, but the result is inconsistent. Similarly, the variable GDP PER CAPITA has a positive coefficient in sparsely-controlled models, but controlling for additional economic factors makes this relationship statistically insignificant. In these data, IMF programs' reform progress is uncorrelated with factors such as inflation, economic growth, democracy, and past programs with the IMF.

FIGURE 4 **Conditional Effects of IMF Structural Conditions on Reform Progress**
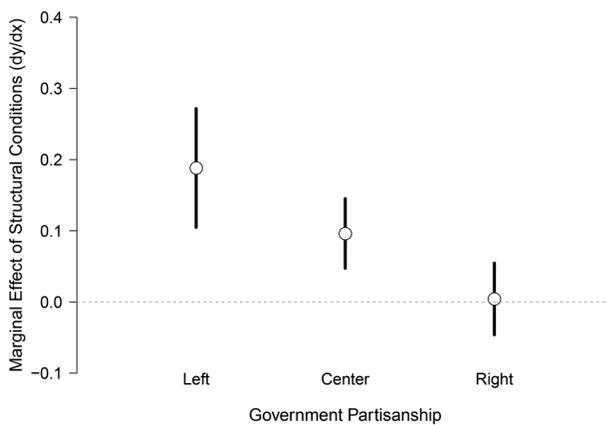
FIGURE 5 **Conditional Effects of Right Partisanship on Reform Progress**

Note: Plot generated using coefficient estimates from column 1 in Table 1. Bands represent 95% confidence intervals.

Note: Plot generated using coefficient estimates from column 1 in Table 1. Bands represent 95% confidence intervals.

Is Conditionality a Roadblock for Right Governments?. The data support our predictions that more structural conditions should be associated with reform progress under left governments, but not under right governments. Our theoretical framework attributes conditionality's differential effects under left and right governments to leaders' room for cooperation: while left governments have less trouble finding support for additional IMF-mandated policies from their market-oriented rivals on the right, each additional structural condition reduces right governments' ability to compromise with a potentially recalcitrant left-wing opposition. But, a rival interpretation exists—the differences might lie in partisan governments' underlying commitment to economic reform. Perhaps, by ideological proclivity or electoral mandate, right governments always and openly pursue extensive reform regardless of IMF conditionality, while left governments only reform under duress or when they can use IMF conditionality as political cover. Then, Figure 4 would look the exact same—left governments responding to enhanced IMF conditionality and right governments' efforts seemingly unrelated to IMF demands. Fortunately, the data can help us adjudicate between the two plausible, competing explanations.

Figure 5 plots the estimated marginal effects of rightward movement on our ordinal PARTISANSHIP measure. The right-governments-always-reform argument predicts that ideological shifts to the right *at all levels of IMF conditionality* should positively influence IMF programs' reform outcomes. Instead, Figure 5 shows that as the number of conditions goes from low to high within
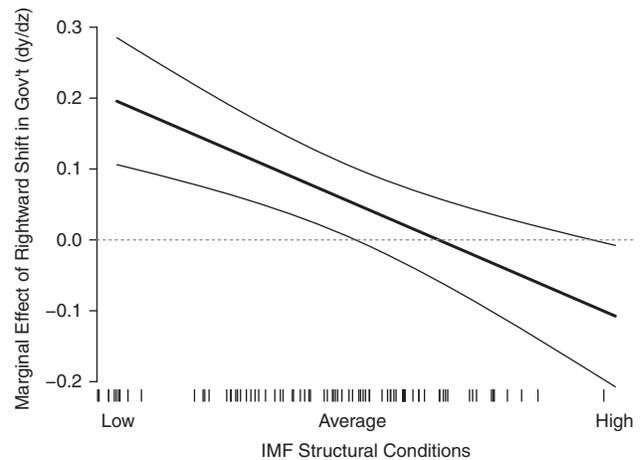
an IMF program, right-leaning partisanship flips from having a positive relationship to a *negative* relationship with reform progress. By contrast, our theoretical argument posits that extensive conditionality hinders right leaders by heightening opposition and decreasing their ability to strike the political compromises needed to ensure that reforms are implemented smoothly. Consistent with that argument's observable implications, the data demonstrate that under increasingly restrictive IMF agreements, right governments appear to actually get *less* done.

Robustness. Our statistical findings' consistency across multiple measures of conditionality and various model specifications is persuasive evidence that the effects of IMF program design on reform outcomes depend on the partisanship of borrowing governments. These findings are robust to a variety of additional modeling strategies and techniques. To avoid undue influence from "one-shot" economic reforms that most post-communist countries completed very early in transition, such as liberalizing trade or prices, we explore versions of the dependent variable focused exclusively on the incremental, public sector-oriented reforms surrounding competition policy and large-scale privatization; analyzing these more selective measures (separately or indexing them together) does not substantively change our findings. Similarly, results hold if we abandon the EBRD scores and analyze growth in the PRIVATE SECTOR'S SHARE OF GDP instead as a more "objective"—but cruder—measure of economic reform. We find similar results if PARTISANSHIP is treated as

a categorical variable via dummies for LEFT and RIGHT with CENTER as the excluded reference category. Controlling for other crisis-related variables that may have affected both reform opportunities and IMF conditionality, such as debt pressures (proxied by countries' DEBT-TO-EXPORTS ratio) and UNEMPLOYMENT rates, has no meaningful effect on findings either. Although we favor analyzing the program level, our results are similar if we use time-series cross-section data (TSCS) with country fixed effects to model countries' REFORM PROGRESS over time as a function of time-varying covariates, including PARTISANSHIP and STRUCTURAL CONDITIONS (controlling for IMF participation). Results for all robustness analyses appear in the Supporting Information.

Additional Analyses: Small Samples and Endogeneity Concerns

The findings from the previous section yield new insights about the IMF and economic reforms: IMF conditionality—not just participation—can positively influence countries' reform progress, but only under certain circumstances that depend on government partisanship. In this section, we conduct additional analyses to bolster these findings' credibility, using Bayesian estimation to 1) address methodological concerns about small sample sizes, and 2) accommodate instrumental variables for dealing directly with potential sources of endogeneity.

The focus on IMF program design and reform in post-communist countries has many benefits, but it limits our sample size such that one might worry whether we have enough country- or program-level observations to ensure the desirable asymptotic properties of maximum likelihood estimation (MLE). Indeed, Monte Carlo simulations suggest that, MLE may produce standard errors that are too small in multilevel models with small samples (Maas and Hox 2004; Hox, van de Schoot, and Matthijsse 2012), implying that our results might be overconfident due to artificially small confidence intervals. Therefore, we reestimate the multilevel models using Bayesian estimation, which recent studies indicate shows surprisingly little bias in simulated data with smaller sizes at both group and individual levels. Furthermore, when they do have small-sample problems, Bayesian multilevel models tend to *overestimate* uncertainty, creating a more conservative test for our data (Hox, van de Schoot, and Matthijsse 2012; Stegmueller 2013).[22]

The empirical model for our Bayesian analysis remains the same as before, but we must now also specify prior distributions for each parameter to be estimated. We select diffuse priors because we want the data to dictate parameter estimates.[23] As is common, we center all nonbinary variables at their means to help the Markov chains converge more quickly.

Table 2's left side presents the multilevel Bayesian results using (logged) public sector conditions to measure STRUCTURAL CONDITIONS.[24] In direction and magnitude, the parameters' posterior means resemble closely Table 1's MLE-based coefficients, suggesting that sample sizes did not unduly bias our previous findings. The estimate on STRUCTURAL CONDITIONS is slightly larger (0.223), but the interaction term's estimate approximates the previous models' (−0.116). Turning to marginal effects, the 95% credible interval on STRUCTURAL CONDITIONS does not overlap zero ($CI_{95} = [0.134, 0.306]$), indicating that under left governments public sector conditions are associated with positive reform progress with a probability of 0.95 or greater.[25] Echoing Figure 4, however, the relationship between public sector conditions and reform under right governments is much more uncertain—the marginal effects huddle around zero on both sides of the number line ($CI_{95} = [−0.060, 0.045]$). Even under this entirely different estimation method and logic of inference, the data continue to support our theoretical predictions about when stricter IMF conditionality helps reforms and when it does not.

We now address a second, important concern. Although post-communist countries' near-universal participation in IMF programs blunts concerns about selection issues, one might still worry about endogeneity between economic reform and IMF conditionality. For instance, conditionality might depend on IMF

"credible intervals" are drawn from parameters' full posterior distribution Gill (2008).

[23]To estimate the model in `WinBUGS`, we use inverse-variances (τ) for the variance parameters: $\tau_j = 1/\sigma_j^2$, $\tau_t = 1/\sigma_t^2$, and $\tau_i = 1/\sigma_i^2$. We then impose diffuse priors, as specified below.

$$\beta_k \sim N(0, 1 \times 10^4), \quad k = 1, \ldots, k$$
$$\sigma_{year} \sim U(0, 100)$$
$$\sigma_{country} \sim U(0, 100)$$
$$\sigma_\varepsilon \sim U(0, 100)$$

[24]Although withheld to conserve space, the Bayesian replications look similar for all combinations of codings and model specifications presented in Table 1. See Appendix.

[25]As one additional advantage, Bayesian inference allows people to interpret estimates' uncertainty directly using probability terms.

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[22]Bayesian methods' small-sample advantage derives from not relying on estimators' asymptotic properties or hypothetical sampling distributions to construct confidence intervals; instead, Bayesian

TABLE 2 Post-communist Economic Reform and IMF Program Design (1994–2010), Bayesian Multilevel Analyses

DV: Reform Progress $\Delta_{t+2,t}$ *Economic Reform Index*	Public Sector			Instrumental Variables		
	Estimate	**St. Dev.**	**95% CI**	**Estimate**	**St. Dev.**	**95% CI**
Structural Conditions	0.223	0.044	[0.134, 0.306]			
number of public sector conditions (logged)						
Structural Conditions (IV)				0.221	0.080	[0.062, 0.385]
IV1: yrs to IMF governors' review						
IV2: total IMF annual dispersement						
Executive Partisanship	0.111	0.028	[0.055, 0.168]	0.110	0.030	[0.050, 0.169]
ordinal; 0 = left, 2 = right						
Conditions	−0.116	0.026	[−0.166, −0.063]			
×**Partisanship**						
Conditions (IV)				−0.117	0.027	[−0.170, −0.065]
×**Partisanship**						
Reform Baseline	−0.702	0.088	[−0.869, −0.527]	−0.694	0.099	[−0.883, −0.494]
EBRD score at start of IMF program						
GDP per capita	0.237	0.084	[0.079, 0.404]	0.227	0.093	[0.051, 0.415]
constant USD per capita (logged)						
Inflation	−0.016	0.017	[−0.050, 0.018]	−0.017	0.018	[−0.050, 0.018]
annual inflation rate, in % (logged)						
1992 Reform Conditions	0.184	0.125	[−0.067, 0.429]	0.183	0.130	[−0.069, 0.443]
EBRD score at communism's collapse						
Number of Observations		79			79	

Notes: Reform and economic data from the EBRD. Partisanship data from Frye (2010), extended by authors. IMF program-specific data collected by authors. Estimates represent posterior means from Bayesian multilevel linear regressions. 95% credible intervals report posterior distributions' 25th and 97.5th percentiles, respectively. To conserve space, random intercepts for countries and years not presented. Analyses use three MCMC chains at 100,000 iterations each; 3,000 samples remain after discarding the first 40,000 of each chain, then keeping every sixtieth sample. To speed MCMC convergence, all nondummy variables mean-centered.

expectations about reforms' implementation; thus, our findings might be confounded by the IMF giving more structural conditions to left-wing governments that are expected to push reforms forward, but few conditions to left-wing governments that are likely to resist extensive reforms. Alternatively, there could still be some omitted variable that, depending on government partisanship, affects both the number of conditions and reform progress. To alleviate concerns about possible endogeneity bias, we re-estimate the analyses using Bayesian instrumental variables (IV) estimation.

For our study, a valid instrument should be correlated with the number of structural conditions in an IMF program, yet otherwise be plausibly exogenous with regards to reform outcomes. We present two candidate measures: the amount that the IMF loans in a given year and the number of years until a scheduled quota review by IMF governors. Scholars have noted that bureaucratic factors within the IMF often influence conditionality, indepen-

dent of countries' economic situation (Bird and Willett 2004). As loan agreements, IMF programs partially reflect the tightness of internal IMF budget constraints, with conditionality acting as a premium that countries must pay to access scarce IMF credit. When the IMF faces many requests for help, countries must agree to more structured programs in order to receive IMF funds; during lulls in IMF lending, conditionality relaxes as lending capacity increases. Likewise, the IMF undergoes an internal quota review every four years by its board of governors. Scholars have argued that, as the review date approaches, IMF bureaucrats supply credit more readily, hoping to exhaust their resources so as to obtain larger quota increases in the next funding cycle (Vaubel 1991; Dreher and Vaubel 2004). By this logic, the closer to a review year, the fewer structural conditions attached to a given program. As instruments, then, both TOTAL IMF DISBURSEMENT in a given year and YEARS TO GOVERNORS' REVIEW provide plausible theoretical grounds for predicting STRUCTURAL

CONDITIONS. As with all IV estimations, the exclusion restriction cannot be determined directly by statistical tests, but must rather be argued theoretically. Outside the theorized pathway of IMF program design, we cannot provide any reasonable explanations linking countries' economic reform progress to global IMF disbursements or the IMF's scheduled quota reviews. If valid, these instruments also allow us to interpret the conditional relationship between IMF program design and economic reforms in terms of causation, rather than causation (Dunning 2012).

Bayesian multilevel modeling makes it straightforward to add to the previous model an additional first-stage equation regressing the potentially endogenous STRUCTURAL CONDITIONS on the instruments and control variables. Although traditional IV estimators require large sample sizes and strong relationships between instruments and endogenous regressors (Angrist and Pischke 2009; Sovey and Green 2011), recent studies show that Bayesian IV models are robust to small sample sizes and the inclusion of so-called "weak" instruments (Kleibergen and Zivot 2003; Crespo-Tenorio and Montgomery 2013). Thanks to the iterative Markov chain Monte Carlo (MCMC) algorithm, any uncertainty involved in estimating the first-stage relationship between the instruments and STRUCTURAL CONDITIONS will be correctly incorporated into the model's second-stage estimates regarding REFORM PROGRESS.[26] The model's second-stage results appear on the right side of Table 2 and their associated plots appear in Figures 6 and 7.[27]

Our findings hold up well under this alternate IV estimation strategy. As anticipated, STRUCTURAL CONDITIONS has a positive posterior mean (0.221; $CI_{95} =$ [0.062, 0.385]) and the interaction term's estimate remains negative (-0.117; $CI_{95} = [-0.170, -0.065]$). The IV model's 95% credible intervals are slightly wider than before, yet not enough to raise doubts about our hypotheses' empirical support. Notably, the effect sizes from the IV analysis are comparable to the partial correlations in the original MLE models, implying that our previous results are not biased perniciously by endogeneity in the design of IMF programs. In sum, the IV analysis yields findings that by now look familiar: Although more conditions appear to encourage reform progress under left governments, those beneficial effects on reform diminish (and possibly reverse) under right governments.

[26] Additionally, modeling outcome and endogenous regressor jointly via Bayesian estimation also means that the MCMC iterations borrow information from the first stage to correct second-stage estimates, then use information from previous iterations' second stage to improve subsequent first-stage estimates (Crespo-Tenorio and Montgomery 2013).

[27] To save space, presentation of model specification and first-stage results appear in the Appendix.

FIGURE 6 Conditional Effects of IMF Structural Conditions on Reform Progress (Bayesian IV Estimates)
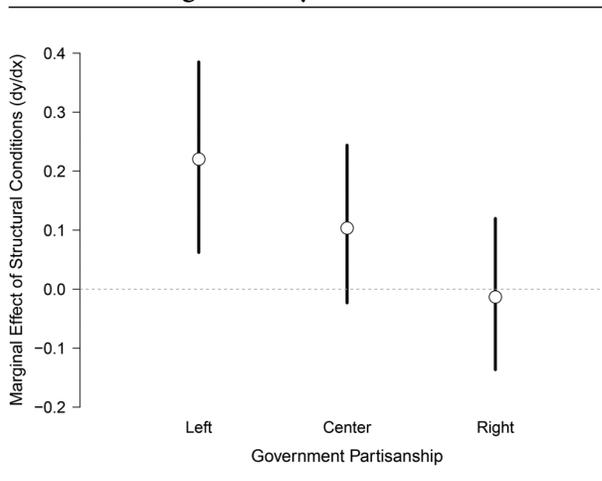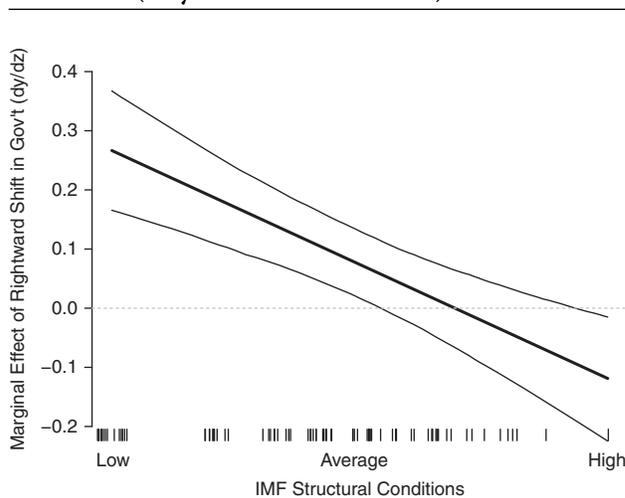

FIGURE 7 Conditional Effects of Right Partisanship on Reform Progress (Bayesian IV Estimates)

Note: Plot generated using coefficient estimates from IV estimates in Table 2. Bands represent 95% credible intervals.

Conclusion

What determines whether IMF conditionality helps or hurts the progress of economic reforms? This article argues that, although the IMF and other international institutions often use conditionality to push controversial reforms, those reform goals' realization depends heavily on domestic politics and the partisan environment surrounding conditional agreements. Specifically, we argue that extensive IMF conditions can effectively pressure left-wing governments into undertaking more

ambitious reforms without mobilizing the governments' partisan rivals, since the right-leaning opposition themselves typically advocate market-oriented reforms. For right governments, however, stricter IMF conditionality can stall reforms' implementation by heightening resistance from the left while simultaneously reducing leaders' ability to grant concessions or compromise over controversial measures.

Using data on post-communist IMF programs, we find that, under left governments, IMF programs with more structural conditions have been followed by significant progress in economic and institutional reforms, while reform progress has stalled following high-conditionality programs under right governments. Consistent with our argument's proposed mechanisms, reform progress actually becomes negatively correlated with right partisanship as the number of structural conditions increase. These findings survive alternate empirical specifications and estimation techniques, including a Bayesian instrumental variables analysis to account for concerns about the potential endogeneity of IMF program design.

This research makes several useful contributions. To the IMF literature, it emphasizes that the heterogeneity across IMF programs is often crucial to understanding programs' effects. More broadly, this article underscores that the impact of international actors on domestic policy cannot readily be separated from domestic political factors. Together, these observations provide one explanation for the IMF literature's conflicting empirical findings: Because they fail to account for design differences across IMF programs and/or treat all political environments as equally conducive (or adverse) to IMF policies, standard practices have tended to obscure rather than clarify the dynamics that follow IMF lending. Due to the post-communist countries' relatively homogeneous circumstances leading into their IMF programs, this article does not explore conditionality's interactive relationship with reform under different types of crises, but accounts of Latin America's IMF programs in the 1980s report partisan differences in how governments reacted to some crises (fiscal deficits and foreign debt service), but not others (foreign reserves shortages) (Pop-Eleches 2009). This suggests that one potentially fruitful step for researchers would be to investigate how reform under IMF conditionality progresses given different crisis contexts.

Finally, to those who study the IMF and other international donors following the IMF's mode of conditionality, our findings help to identify the scope of conditionality's usefulness in spurring reform. For example, if IMF conditionality provides political cover to reformers (Vreeland 2003), our results suggest that the cover only works for left governments since extensive structural conditions do not improve right governments' ability to reform. Similarly, if fewer structural demands translate to increased country ownership (Bird and Willett 2004), then our findings suggest that ownership may best benefit pro-reform governments that face stiff domestic opposition; for reform-skeptic governments, however, greater ownership may, in fact, undermine reforms by weakening the pressure to take needed measures. This paints an odd portrait of conditionality as a tool for changing domestic policy: Stricter conditionality provides the most political cover to those least expected to seek it, and it binds the hands of those who need the most flexibility to see reforms through.

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Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's website:

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