

# The International Politics of Austerity: The Puzzling Case of Public Sector Reforms

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Governments work to reduce expenditures during austerity drives. An obvious place to start is the public sector wage bill, which frequently makes up the single largest budget item. Although governments have domestic political incentives to protect public sector spending, they often face international pressures to cut the wage bill. Governments that borrow from institutions, like the International Monetary Fund (IMF) or World Bank, regularly accept funds on the condition that they will decrease expenditures. Despite three decades of fiscal conditions, however, efforts to shrink spending on the public sector have met with limited success. Using original data, we find that governments make short-term cuts to the wage bill only when the conditions attached to their IMF loans explicitly target the public sector. This novel finding contributes to understanding the viability of public sector reform and the power of international organizations to impose austerity on sovereign governments.

Austerity is once again at the center of discussions about economic policy. Many governments slashed expenditures following the 2008 global financial crisis. Cuts to the public sector proved to be especially contentious. In Greece, for example, public sector cuts resulted in a series of convulsive protests that shook the nation's political stability. The turmoil in Greece raises general questions about the political viability of public sector reform and the power of international organizations, such as the International Monetary Fund (IMF), to impose austerity on sovereign governments.

During austerity drives, governments work to reduce expenditures. An obvious place to start is the public sector wage bill, which frequently makes up the single largest item in government budgets. Although government spending on employee compensation is a tantalizing target for cuts, governments are often reluctant to prune spending in this area because powerful political incentives exist to protect the public wage bill. If governments turn to international institutions, such as the IMF, World Bank, or European Central Bank, however, they will likely come under pressure to reduce the wage bill. These international organizations may require governments to reduce total government expenditures. The IMF, for example, attaches fiscal conditions to most of its loan programs, and approval or continuation of financing requires governments to implement the prescribed reforms. Despite three decades of fiscal conditions, however, the IMF's efforts to shrink spending on the public sector have met with limited success (Operations Evaluation Department 1999; Independent Evaluation Office 2003). Why is public sector spending so resilient?

In the current study, we propose an explanation for the resilience of public sector spending that incorporates both domestic politics and international pressures. Original

data illustrate that significant variation exists in countries' IMF loan conditions. Some countries receive generic fiscal conditions that require only a reduction in aggregate government spending. Governments can decide themselves precisely where in the budget to make cuts. In these cases, governments will tend to protect public sector spending to avoid the political backlash that such cuts often provoke from concentrated interests. Instead, governments will cut spending in other budget areas to meet their loan conditions.

Not all governments are given such autonomy. Some IMF programs include conditions that specifically target public sector spending. For example, in 1988, Burundi's structural adjustment program included a condition that, in effect, required a reduction in the public wage bill. Governments that receive such conditions cannot shift spending cuts to other budget areas without risking delays or suspensions of subsequent disbursements of funds. Targeted conditions are therefore more likely to engender cuts to spending on the public sector wage bill, as compared to generic conditions. Given the political pressures driving spending on the public sector, however, governments that receive targeted conditions may reinstate former spending levels once the conditions expire. Backsliding is thus a further possible reason for the general finding that public sector reforms do not stick.

Using original data on the substantive content of IMF loan programs, we identify loans that require reductions or limits on public sector wages and/or that reduce the number of employees in the civil service and/or state-owned enterprises through downsizing, closures, and privatization. In a series of empirical tests, we find that loans with these conditions have different effects on governmental spending than loans without

such conditions. Specifically, governments make larger cuts to the wage bill when their loan programs contain explicit public sector conditions, as compared to when they receive only generic loan conditions.

These novel results have important implications for understanding both sovereign lending and public sector reform more generally. First, critics of the IMF frequently allege that it imposes one-size-fits-all programs on borrowing countries. Our original data, however, reveal significant variation in the number and stringency of loan conditions. Fewer than half of loan programs include conditions that relate specific to the public sector. It is therefore unsurprising that the previous studies that treat all IMF programs as identical find ambiguous evidence about the effect of IMF loans. The current study addresses this oversight by collecting and analyzing evidence on the substantive content of loan programs. Examining the precise reforms required of governments in exchange for a loan may also help to resolve other enduring puzzles, such as why only some IMF programs engender political crises.<sup>1</sup> Our results suggest that the economic -- and political -- effects of IMF loans depend crucially on the specific conditions included in loan program. Finally, our results illustrate that the domestic political dynamics that drive spending on public sector compensation prove to be more enduring than externally imposed austerity.

### **The Size of the Public Sector**

As ideas about the need to reduce the role of the state in the economy began to gain traction in the 1980s, the size of the public sector became an increasing focus of attention (Rapley 2002). The election of Ronald Reagan in the United States and

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<sup>1</sup> See, for example, Dreher and Gassebner (2012).

Margaret Thatcher in the United Kingdom and the emergence of the “Washington Consensus” in international financial institutions provided the political and institutional muscle for ideas about the optimal size of the public sector to influence policy design. Policymakers identified the size of the public sector as a problem that needed to be addressed both in OECD countries and in developing countries (Biersteker 1990; Nunberg and Nellis 1992; Stevenson 1992; Goldsmith 1999; Lee and Strang 2006).<sup>2</sup> The crushing fiscal crisis that beset many developing countries in the 1980s gave advocates of public sector downsizing increased leverage to advocate for these changes (Biersteker 1990). Shrinking "bloated bureaucracies" and pruning spending on public sector compensation became the means through which countries would get their fiscal houses in order and put themselves on the path to stronger economic performance (Nunberg and Nellis 1992; Rama 1999; Rodrik 2000).

The size of the civil service increased rapidly in most developing countries in the 1960s and 1970s (Das 1998; Goldsmith 1999; Rodrik 2000). Several factors drove these increases. First, civil services were usually small at independence and needed to be larger to perform important state functions (Goldsmith 1999). Second, state-led development increased public sector employment in both the civil service and in state-owned enterprises (Rama 1999; Rodrik 2000). Third, expanding public sector employment also served important political functions. It helped to assure political stability by providing work to educated people in urban areas and was a valuable source of patronage (Gelb, Knight and Sabot 1991; Lindauer 1994; Das 1998; Goldsmith 1999; van de Walle 2001;

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<sup>2</sup> As Lee and Strang (2006) note, the perceived problem of oversized bureaucracies resulted in privatization and retrenchments in OECD countries and was not confined to just right-leaning governments.

Shepherd 2003). Lastly, government employment serves as a social insurance mechanism in small open economies vulnerable to shocks (Rodrik 2000) and as a means to compensate important constituencies negatively affected by globalization (Nooruddin and Rudra 2009). Despite these pressures to expand public employment, the size of the public sector in developing countries is relatively small in comparison to OECD countries (Schiavo-Campo, Tommaso and Mukherjee 1997).<sup>3</sup> But the perception of bloated bureaucracies and excessive spending on compensation had powerful ideological and institutional support, and policy prescriptions increasingly called for reforms in these areas.

Setting aside debates about the "right" size of the public sector, the fiscal crisis in developing countries put tremendous pressure on government budgets (Lindauer 1994; Goldsmith 1999). The fiscal burden of large wage bills caused particular concern (Nunberg and Nellis 1992; Stevenson 1992). The wage bill was usually the single largest item of government expenditure and constituted 35 to 50 per cent of current revenues in the 1980s (Das 1998, 16). If governments had access to additional revenue, they might have been able to sustain spending on public sector compensation. But increasing government revenues has proven challenging, so countries in IMF programs tend to rely on cutting expenditures to correct fiscal imbalances (Independent Evaluation Office 2003; Bulír and Moon 2006; Nooruddin and Simmons 2006). In the absence of new revenue, then, dealing with fiscal crises requires pruning expenditures.

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<sup>3</sup> Public sector employment, however, constitutes a larger share of the non-agricultural workforce in developing countries and is also a large share of formal sector employment (Nunberg and Nellis 1992). Goldsmith (1999) makes a persuasive case that despite not having particularly large employment in the public sector, fiscal pressures drove many African countries to downsize their small civil services.

## Variation in IMF Programs

The IMF has various tools at its disposal to encourage countries to reduce expenditures. Blunt tools, such as generic fiscal conditions, simply require governments to meet a specified level of aggregate spending. Governments decide themselves where in the budget to make cuts. In contrast, precise conditions prescribe cuts to specific areas of the budget, such as the public sector wage bill. Governments that receive precise conditions have much less flexibility in how to comply with the terms of their loan, as compared to those that receive generic conditions.

Fiscal conditions of one sort or another are virtually omnipresent in IMF programs (Bulír and Moon 2006). Between 1983 and 1990, 91 per cent of IMF loans came with binding fiscal conditions attached; in the 1990s, this percentage rose to 100 per cent (Gould 2006). As the IMF expanded the scope of conditionality in the late 1980s, it began to attach more targeted fiscal conditions to its lending, including conditions that directly affected the public sector wage bill.<sup>4</sup> Some IMF programs included, for example, a ceiling on the compensation of public sector employees (Clements, Gupta, Karpowicz and Tareq 2010, 6). Other public sector conditions include requirements to freeze or retrench civil service employment; and downsize, close, or privatize state-owned enterprises.

Although the use of targeted conditions increased during the period from 1980 to 2000, significant variation remained in the content of conditions included in countries' loan programs. Among loans between 1980 and 2000, only one-third included a public sector condition that restricted wage increases, or that affected public sector employment

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<sup>4</sup> On the expansion in scope, and increasing number, of conditions see Buirra (2003); Caraway, Rickard and Anner (2012); Gould (2006); and IMF(2001)

through controls on the size of the civil service or through closing or privatizing state-owned enterprises. Two-thirds of IMF loan programs included no public sector conditions at all.

Variation in the content of conditionality has important implications for assessing the effects of IMF loans. Such variation may help to explain the mixed results found to date regarding the effects of IMF loans. Surprisingly little agreement exists about the consequences of IMF programs. Critics of the Fund often claim that loan programs have negative consequences for labor. Some studies find evidence that IMF programs make workers worse off. Vreeland (2002), for example, finds that IMF programs reduce labor's share of income from manufacturing. Yet, others claim that critics' assertions about the detrimental effects of IMF programs are not borne out by empirical evidence (Martin and Segura-Ubiergo 2004). Nooruddin and Vreeland (2010), for example, find no evidence that IMF programs reduce wages or salaries, on average. Similarly, Nooruddin and Rudra (Nooruddin and Rudra 2009) find no evidence that IMF programs provoke layoffs in the public sector.

The current study offers a simple yet profound explanation for these mixed findings. We argue that loan conditions vary significantly across programs and heterogeneous loan conditions produce heterogeneous effects. Previous studies treat IMF loans as uniform programs and hypothesize an identical effect for all loans, regardless of the conditions actually included in a country's loan program. Yet different loans come with different conditions, and this variation is particularly acute with respect to public sector conditions.



Rather than treating all loans as being identical and anticipating uniform effects, we adopt a disaggregated approach to conditionality. To do this, we examine the universe of IMF loans between 1980 and 2000 and identify those with conditions that specifically targeted public sector compensation by requiring governments to limit or cut public sector employment or wages, or to privatize state-owned enterprises. Loan documents were acquired in the IMF's archive in Washington, DC. We coded Letters of Intent for the universe of loans from 1980 to 2000, which yielded over 1,100 cases where each case is a unique year/letter of intent.<sup>5</sup>

These original data make it possible to connect specific loan conditions to precise outcomes of interest, such as government spending on the public sector wage bill. Although Vreeland (2006) called for scholars to adopt such a disaggregated approach to IMF conditionality over half a decade ago, the current study is the first to take up this charge. The lacuna is arguably due to the difficulty of collecting data on the substantive content of loan conditions. Assembling these data is a time consuming and pain-staking process. We have taken a first step in this data collection marathon by identifying loans with explicit public sector conditions. By linking a specific condition to a specific outcome, and by comparing countries that received the condition to those that did not, we can make more confident assessments of the impact of IMF programs, which in turn contributes to a deeper understanding of the distributive consequences of international financial rescues.

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<sup>5</sup> This includes extended arrangements, standby arrangements, structural adjustment facilities, enhanced structural adjustment facilities, and poverty reduction and growth facilities

## **The Politics of Austerity**

Reducing the public sector wage bill is widely recognized as one of the most difficult austerity measures for governments to implement (Bienen and Gersovitz 1985; Shepherd 2003; Nooruddin and Vreeland 2010). Spending on public sector employees serves vital political functions. It helps to assure political stability by providing work to educated people in urban areas and is a valuable source of patronage (Gelb, Knight et al. 1991; Lindauer 1994; Das 1998; Goldsmith 1999; van de Walle 2001; Shepherd 2003). Public sector jobs comprise a large share of non-agricultural employees in most developing countries and serve as an important social insurance mechanism, particularly in small open economies vulnerable to shocks (Rodrik 2000). More generally, public sector employment can compensate important constituencies that are negatively affected by globalization (Nooruddin and Rudra 2009). The geographic concentration of public sector jobs in urban areas and the greater likelihood that these citizens belong to organizations that can facilitate mobilization increases the potential for disruptive protests, especially when there are few other attractive job opportunities in the formal sector. Public sector jobs are also a source of patronage used to buy the support of vital constituencies (Shepherd 2003; Chandra 2007; Nooruddin and Rudra 2009; Nooruddin and Vreeland 2010). In Lesotho, for example, the Basotho National Party, which ruled from 1966 to 1986, habitually awarded public sector jobs to party members and affiliates (Khabele 1990; Petersson 1993). Affiliation with the Basotho National Party was, in fact, the main criteria for employment in the public sector rather than merit (Petersson 1993). These political incentives drive government spending on the public sector, regardless of

regime type, although competitive elections generate some differences in the political logic in autocracies and democracies.

In autocracies, ruling regimes rely on a small coalition of loyal supporters -- not a plurality of voters -- for political survival (Bueno de Mesquita, Smith, Siverson and Morrow 2003). Patronage cements support for the regime, and public sector jobs are a particularly powerful means to purchase long-term support (Lust-Okar 2006; Greene 2007; Magaloni 2008; Aidi 2009; Gandhi 2010; Blaydes 2011).<sup>6</sup> Deep cuts to expenditures on public sector compensation may undercut this support and threaten the political survival of authoritarian regimes.

In democracies, by contrast, leaders must be elected, so they must win a plurality of voters rather than satisfy a small group of supporters. Although public sector employees are a small part of the electorate, democratic governments still tread carefully. As the recent protests in Greece illustrate, retrenchment can be politically costly because it imposes certain losses on concentrated interests. Voters that face certain reductions in pay, benefits, or job security will react more strongly than voters who may benefit from altering these policies in the long-term because the gains to possible beneficiaries are both indirect and uncertain (Kahneman and Tversky 1979; 1984; Bienen and Gersovitz 1985; Kahler 1993). For example, privatization entails immediate costs to state enterprise workers, but the potential benefits to other voters are indirect, uncertain and realized only in the medium to long term. In addition, since public sector employees are a concentrated

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<sup>6</sup> Montinola (2010) argues that autocracies are less likely to comply with fiscal conditions because, unlike democracies, they can stockpile aid. We are agnostic as to whether democracies will cut spending on public sector compensation more than autocracies, but we expect the effect of specific conditions to be a stronger predictor of cuts to spending on public sector compensation than regime type. In other words, autocracies that receive targeted conditions will cut more than democracies and autocracies that do not.

group that can better defend their material interests, they will respond vigorously to efforts to alter policies in ways that negatively affect them (Nooruddin and Simmons 2006).

Given these political dynamics, it is unsurprising that governments try to protect spending on wages and salaries, even when they face heavy debt burdens (Mahdavi 2004). But if economic circumstances compel them to borrow from institutions that habitually attach conditions to their loans, such as the IMF, the World Bank and the European Central Bank (ECB), then governments may come under intense international pressure to cut the wage bill. We hypothesize that governments with explicit public sector conditions in their loan programs are more likely to cut the wage bill than those that receive only generic fiscal conditions, all else equal. To test this expectation, new data is needed on the substantive content of loan conditions.

### **Public Sector Conditions**

We scrutinize IMF loan documents to identify those programs that include explicit public sector conditions. Specifically, we examine the conditions stipulated in the Letters of Intent for all IMF loans made during the period from 1980 to 2000.<sup>7</sup> Three categories of conditions are identified and coded.<sup>8</sup> First, conditions stipulating limits on

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<sup>7</sup> These loan documents are signed by governments' national executives, frequently the Minister for Finance and/or the Governor of the Central Bank, upon agreement between the borrowing government and the IMF on the terms of the loan.

<sup>8</sup> Three levels of conditionality are identified: performance criteria, benchmarks and indicative targets. Benchmarks are conditions that the IMF expects countries to meet, but failure to do so does not result in an automatic suspension of the loan. Indicative targets are similar to benchmarks, except that they are quantitative (e.g. a ceiling on the public wage bill). In contrast, failure to meet performance criteria results in the loan's suspension. Benchmarks, indicative targets, and performance criteria are collapsed into one single group referred to as measures supported by conditionality. This coding decision is due, in part, to the relatively small number of measures supported only by

or cuts to public sector wages are coded. Some IMF programs, for example, include a ceiling on the government compensation of employees (Clements, Gupta et al. 2010, 6). In order to stay below the ceiling stipulated by the IMF, governments may temporarily freeze public sector wages (Clements, Gupta et al. 2010, 6).<sup>9</sup> Alternatively, governments may cut nominal public sector wages, as the Irish government did, for example in 2010. Pay cuts of between 5% and 8% were announced for the majority of Irish public sector employees in order to fulfill the terms of their IMF/ECB loan program.<sup>10</sup>

Second, conditions stipulating limits on or cuts to public sector employment are identified and coded. Some IMF programs include, for example, mandatory hiring freezes. Hiring freezes combined with natural attrition can help to reduce the wage bill (Clements, Gupta et al. 2010, 7). Although an advantage of hiring freezes is that they avoid the short-run fiscal pressures associated with lay-offs and severance payments, some governments are asked to dismiss employees. For example, Ireland's loan program required a reduction in public service staff numbers by 24,750 over 2008 levels, back to

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performance criteria and would, if anything, bias against finding evidence that loan conditions matter for spending cuts. This coding criterion is identical to that employed by the IMF's Independent Evaluation Office (2003). We also identify and code prior actions, which stipulate reforms that must occur before any monies have been dispersed. We include prior actions as a control variable because they may reduce spending before other loan conditions but we fail to find any significant effect above and beyond other conditions.

<sup>9</sup> A temporary freeze on public sector wages should result in a reduction in the compensation of employees. It is possible, however, that a wage freeze may be offset by other policies that compensate for or circumvent it, especially over an extended period. For example, in Benin, the impact of the wage freeze on the government wage bill in 1988 was partly offset by an increase in promotions in the 1990s (Clements, Gupta et al. 2010, 6).

<sup>10</sup> <http://www.eurofound.europa.eu/eiro/2009/12/articles/IE0912029I.htm>

2005 levels.<sup>11</sup> Hiring freezes and dismissals both serve to reduce the number of people employed in the public sector and consequently the wage bill.

Third, we include privatization, closures, and liquidations of state-owned enterprises since they result in reductions in public employment and therefore in a lower wage bill. Privatization shifts workers on the government payroll to the private sector, and liquidations and closures have similar effects, albeit through mass terminations rather than via transfers of employees to new owners in the private sector. We only code conditions that require governments to sell state-owned enterprises via full asset transfers. Partial privatizations are excluded, as are steps prior to sale (e.g. "offer for sale" is not included since offering a firm for sale is not actually selling it -- a government could comply with the condition but end up not selling it).

### **Measuring the Public Sector**

The wage bill is measured by government spending on the compensation of employees (as a percentage of GDP per standard procedure (Clements, Gupta et al. 2010). Compensation of employees is the total remuneration, in cash or in kind, payable to a government employee in return for work done during the accounting period. It includes both wages and salaries and social contributions made on behalf of employees to social insurance schemes.<sup>12</sup> Compensation of employees is frequently used as a cross-nationally comparable measure of public sector spending (Clements, Gupta et al. 2010,

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<sup>11</sup> <http://www.europeaninstitute.org/April-2012/eu-austerity-and-reform-a-country-by-country-table-updated-may-3.html>

<sup>12</sup> Amounts payable to contractors, self-employed outworkers, and other workers who are not employees of general government units are excluded from this measure. Also excluded is work connected with own account capital formation.

1). These data are from the IMF's Government Finance Statistics.<sup>13</sup> On average, employee compensation represents 6.4 percent of GDP. The wage bill tends to be a higher ratio of GDP in high-and middle- income countries than in low-income countries (Clements, Gupta et al. 2010, 1). Average year-to-year changes in compensation spending are relatively small; the mean change equals -0.05 and the median equals -0.025.<sup>14</sup>

As an initial investigation, Figure 1 compares the mean year-to-year changes in compensation spending for three groups of country-years: 1) those without IMF loans, 2) those with loans that omit public sector conditions and, 3) those with loans that include public sector conditions. The comparison of averages provides an initial description of spending changes. As expected, the largest cuts occur when governments borrow from the IMF on the condition that they reduce the public sector wage bill. Compensation spending decreases by -0.33, on average, when countries' loan programs include public sector conditions. In contrast, spending falls by -0.07 when countries' loan programs include only generic fiscal conditions. In other words, cuts to employee compensation spending are nearly five times larger when loan programs include specific public sector conditions, as compared to when they do not.<sup>15</sup> Figure 1 provides preliminary evidence of the importance of conditionality.

[Figure 1 about here]

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<sup>13</sup> All data employ the same accounting method (i.e. cash rather than accrual). While this coding decision reduces the number of observations available, it ensures the data are consistent and comparable over time.

<sup>14</sup> The most dramatic year-to-year cut in *Compensation* occurred in Madagascar in 1990 (-15.3). The largest spending increase occurred in South Africa in 1992 (+5.68).

<sup>15</sup> In country-years without IMF loan programs, the average yearly change in compensation spending is only -0.01.

While illustrative, this type of comparison suffers from the obvious limitation that it attributes all the difference in spending to IMF programs. This is not an ideal counterfactual since there are other variables at work that affect spending and their effects must be netted out. For this reason, all estimating equations used to generate the results reported in Table 1 include country fixed effects and key control variables, as discussed below.

### **Control Variables**

All of the estimating equations include country fixed effects and as a result, time invariant country-level variables, whether observable (i.e. land area) or unobservable, are held constant. Therefore, the control group or counterfactual for each country is itself under a different treatment status (e.g. under an IMF program without public sector conditions). Only those variables that change meaningfully over time within countries and likely influence both public sector conditions and public sector spending are necessary control variables. Given this and the fact that our sample is relatively small, we estimate parsimonious equations that include as control variables:

- the log of *GDP per capita*. Previous studies report a correlation between economic development and the size of the public sector (Baumol 1993). As countries become wealthier, the state has to increase its supply of goods and services, which would otherwise be undersupplied by the market. In fact, the wage bill tends to be a higher ratio of GDP in high-and middle- income countries than in low-income countries (Clements, Gupta et al. 2010, 1). During the period under investigation, economic development also affects the likelihood that a country will borrow from the IMF (Martin and Segura-Ubiergo 2004). If



economic development influences both the size of the public sector and the probability of going under an IMF program, it is important to control for GDP per capita to minimize concerns about spurious correlations.

- Democracy is a dummy variable coded 1 if a country's Polity score is greater than or equal to 6 in a given year and zero otherwise.<sup>16</sup> A country's domestic institutions may influence both the size of their public sector and the likelihood that they enter into an IMF program.
- Negative growth is a simple dummy variable coded 1 if the annual change in economic growth is negative and zero otherwise. Negative economic growth may influence both the likelihood of entering an IMF program and the amount spent on the public sector. Governments may increase spending on the public sector to insulate the electorally vital middle class during bad economic times (Rudra 2008; Nooruddin and Rudra 2009). To minimize concerns about spurious correlations, *Negative Growth* is included as a control variable in all estimated models.

All control variables are lagged by one year because governments' budgets generally go through the legislative process and are approved prior to the year in which spending occurs (Bawn and Rosenbluth 2006, 257). For this reason, loan conditions are also lagged by one year in all estimating equations.<sup>17</sup>

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<sup>16</sup> Results are robust to alternative cut points and various measures of democracy.

<sup>17</sup> We use a static specification that does not include a lagged dependent variable due to the large number of dropped observations that this would entail in the dataset which necessarily contains many gaps. Also, a lagged dependent variable is an alternative to fixed effects with a similar identification framework. A lagged dependent variable essentially assumes that the omitted variable bias arises not from a time-invariant unit-level factor but from time-varying pre-treatment trends. Given this, it is generally not advisable to use both fixed effects and a lagged dependent variable at the same time.

## Results

Column 1 of Table 1 includes both countries under an IMF program and those who have not borrowed from the Fund. We construct a categorical variable where the base category (coded 0) includes only country-years with no loan program. The base category is compared against two other categories: country-years with IMF loans that omit public sector conditions (coded 1) and country-years with loans that include public sector conditions (coded 2). All estimated models in Table 1 include country fixed effects and consequently estimate within-country changes over time. The relevant coefficients in Column 1 therefore report the difference in compensation spending when countries go from having no loan program to having a one with (or without) public sector conditions.

[Table 1 about here]

Loans with generic fiscal conditions are not significantly correlated with reductions in the wage bill, all else equal. In fact, there is no statistically significant difference between a countries' spending on employee compensation before and after a loan that contains only generic fiscal conditions, as reported by the statistically insignificant coefficient on *Loan w/out public sector conditions* in Column 1.

In contrast, loans that include public sector conditions are correlated with reductions in spending on the wage bill. Entering a loan program with a public sector condition in year  $t$  after having no loan program in year  $t-1$ , reduces compensation spending by 0.5 percentage points in year  $t+1$ , all else constant. These results, illustrated graphically in Figure 2, suggest that conditionality matters; the IMF influences

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Doing so requires dynamic panel data models which are complex and require strong assumptions, which our data do not meet.

governmental spending not by lending per se but rather via the conditions attached to financing.

[Figure 2 about here]

Of course, IMF loans are not randomly assigned to countries. Governments select into IMF programs and they tend to do so when they are in trouble financially. For example, governments are more likely to borrow from the IMF when their levels of foreign reserves fall (Steinwand and Stone 2008). Although it is not clear how this dynamic would affect either public sector conditions, public sector spending or the correlation between the two, we take several steps to address potential selection bias.

First, we estimate a model using only countries under IMF programs. These results are reported in Column 2 of Table 1. Comparing countries that are all under an IMF program helps to minimize concerns about selection bias (Bulír and Moon 2006). As before, the estimating equation includes country-fixed effects. Given this, the control group or counterfactual for each country is itself under a different treatment status (e.g. under an IMF program without public sector conditions). This empirical specification sets up a difficult test of conditionality – one made possible by the fact that conditions change over the lifespan of countries' loan programs. Countries may have new conditions added to their loan and, at times, conditions expire before the end of the program. For example, in 1988 Burundi's structural adjustment program included a benchmark that limited increases in the public wage bill. In the 1989 review, however, the Letter of Intent indicated that although a general salary increase would not be granted by the government, there was no explicit conditionality attached to this commitment. Over time dynamics in

conditionality make it possible to identify the effects of within-country changes in the terms of IMF lending.

Adding a public sector condition to a country's loan program in year  $t$  reduces spending on the wage bill by nearly 1 percentage point in year  $t+1$ , as illustrated by the coefficient on *Public sector conditions* in Column 2. This reduction is substantively large given that the sample average year-to-year change in *Compensation* is  $-0.05$ . As before, the results suggest that governments respond to loan conditions; when a public sector condition is added to an IMF program, governments comply with the revised loan terms by reducing spending on the wage bill.

As an alternative means by which to address potential selection bias, we estimate a two-step process originally developed by the IMF to evaluate the effects of their loan programs on fiscal adjustment (IMF 2004).<sup>18</sup> First, a model of IMF program participation is estimated using a logit regression where the dependent variable equals 1 when a country is under an IMF program and zero otherwise. Variables identified in previous research as being robust predictors of IMF participation are included on the right-hand side of the equation, such as the presence of an IMF program in the previous year, the log of GDP per capita, total reserves in months of imports, negative economic growth and membership on the United Nations Security Council. The predicted probability of entering into an IMF program is estimated and then included in the second-stage equation to "correct" for the non-random selection into an IMF program. These results are reported in Column 3 of Table 1.

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<sup>18</sup> This two-step process has subsequently been used in related studies including, for example Nooruddin and Simmons (2006).

Correcting for the non-random selection of countries into IMF programs increases the magnitude of the negative coefficient on *Public Sector Condition(s)*, as compared to the results reported in Column 1. Public sector conditions are correlated with a 0.5 percentage point reduction in the wage bill, all else equal. Although correcting for the non-random selection of countries into IMF programs increases the reductive effect of public sector conditions on the wage bill, the increase is relatively small (-0.49 versus -0.53). This result suggests that the non-random selection of countries into IMF programs has relatively little effect on the correlation between public sector conditions and public sector spending.<sup>19</sup>

The results reported in Table 3 help to minimize concerns about the non-random selection of countries into IMF programs. However, they do not directly address the potential endogeneity of loan conditions. Since the terms of a loan are ultimately the outcome of bargaining between governments and the IMF, conditions are determined by country-specific characteristics (Conway 2003; Caraway, Rickard et al. 2012). The inclusion of country fixed effects in all estimated models helps to minimize concerns about the potential impact of endogeneity. Additionally, we find no evidence that countries with larger public sectors are more likely to receive public sector conditions. This non-finding is consistent with previous studies that show IMF loan conditions are set

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<sup>19</sup> The estimated coefficient on *Loan (predicted)* is negative and statistically significant at the 10% level. In contrast, the estimated coefficient on observed loans without public sector conditions is statistically insignificant, as reported in Column 1. This difference may be due to the fact that the predicted loan variable does not account for the loan conditions. In effect, the predicted loan variable “pools” together loans with and without public sector conditions. In contrast, the observed loans in Column 1 include only those with (or without) public sector conditions. These results demonstrate the importance of accounting for loan conditions as a failure to do so may result in imprecise estimates of the effects of IMF lending.

primarily in response to politics rather than economic realities (Caraway, Rickard et al. 2012). These findings help to minimize concerns about the potential effects of endogenous loan conditions.

### **Backsliding**

Conventional wisdom suggests that the implementation of IMF-mandated public sector reforms are rare (Nooruddin and Simmons 2006). Evaluative studies find spotty implementation and limited progress in implementing reforms (Nunberg and Nellis 1992; Lienert and Modi 1997; Operations Evaluation Department 1999; Independent Evaluation Office 2003). Our findings suggest that some of this spottiness may be due to the previously overlooked variation in loan conditions. By ignoring which countries get which conditions, earlier studies may be looking for the implementation of reforms that were never prescribed by the IMF in the first place. As a result, previous studies may systematically underestimate compliance with loan conditions.

The political logic of our argument also suggests that once the IMF leaves town governments have strong incentives to backslide (i.e. reinstate pre-loan spending and employment levels).<sup>20</sup> Indeed, backsliding on public sector reforms is a common finding in the literature (Haltiwanger and Singh 1999; Operations Evaluation Department 1999). Yet in our preceding empirical tests, no distinction is made between pre-loan years and post-loan years. Failing to differentiate between pre- and post-loan years may bias downwards the estimated effect of conditionality. In effect, we have set up a difficult test

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<sup>20</sup> As Nooruddin and Simmons (2006, 1010) note: "...while conditionality has imposed short-term quantitative targets to reduce public employment or limit public-sector wage increases, such measures are short-lived because they are easily reversed and the IMF has had little success getting countries to reform their civil services or public administration apparatuses. The vested interests of such groups are simply too well-organized and close to the halls of power to be subjected to deep cuts."

of conditionality. If governments permanently cut the public sector in response to IMF loan conditions, the post-loan years will look similar to the loan years. Only the pre-loan years will exhibit significantly higher spending. Permanent public sector cuts would therefore make it difficult to find significant effects of conditionality. However, if cuts are temporary, then the pre- and post-loan years will look similar to each other. Only the loan/condition years will exhibit lower levels of public sector spending and employment. Given the magnitude and strength of our results, it seems plausible that public sector cuts are reversed when the IMF leaves town or stops monitoring public sector spending.

[Table 2 about here]

A preliminary assessment of the extent of backsliding is made possible by our data. We summarize compensation spending for various years of interest including the year a public sector condition was introduced and the year the condition ended.<sup>21</sup> These values are reported in Table 2 and the mean values are displayed graphically in Figure 3. The shaded area in Figure 3 indicates the years during which countries are under an IMF program with specific public sector conditions. Spending on the wage bill is at its lowest levels for the duration of the public sector condition. On average, the largest cuts take place the year following the introduction of a public sector condition. This observation is consistent with the fact that fiscal adjustment is generally expected to be undertaken quickly by borrowing governments (Independent Evaluation Office 2003, 5).

[Figure 3 about here]

IMF-induced reductions in *Compensation* are not sustained after the relevant condition expires. Spending on employee compensation rises to near pre-condition levels

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<sup>21</sup> The relevant conditions include public sector employment, public sector wage conditions and some privatization conditions.

within a couple of years, as illustrated in Figure 3. This observation is consistent with the IMF's own analysis. In an evaluation of fiscal adjustment in IMF-support programs, the Independent Evaluation Office concludes that reductions in public employment or public-sector wages induced by IMF programs are short-lived because they are easily reversed (Independent Evaluation Office 2003, 10). Consistent with our argument, the IMF observes that short-term declines in public sector wages are usually followed by domestic pressures for reversals (Independent Evaluation Office 2003).

### **Conclusion and Implications**

Even during times of austerity, governments work to protect spending on public sector employees in order to avoid the domestic political backlash that such cuts provoke from concentrated interests. At the same time, however, governments may face international pressure to cut the wage bill. Governments that borrow from the IMF, the World Bank, and, more recently, the European Central Bank, often receive financing on the condition that they reduce government expenditures. In fact, virtually all loans made by the IMF come with fiscal conditions that require reductions in government spending. Yet most loans do not include conditions that specify cuts to spending on public sector employment. Loans with these types of conditions have systematically different effects on governmental spending than loans without such conditions. Cuts to the wage bill are larger in countries where IMF programs include specific public sector conditions, as compared to those with only generic fiscal conditions.

These findings have implications for understanding the consequences of sovereign lending and the viability of public sector reforms. First, loan conditions matter. Loans made by institutions, such as the IMF, the World Bank and the European Central



Bank almost always come with conditions attached that require the implementation of certain reforms in exchange for the approval or continuation of financing. In this study, we demonstrate that such conditions are the mechanism by which international sovereign lending affects governments' behavior. Previous studies assert that conditionality is the mechanism linking lending to reform yet they fail to measure the content of loan conditions. The current study is the first to demonstrate empirically that it is the conditions, rather than the loan per se, that influence government behavior.

Some studies question the extent to which governments comply with loan conditions. If threats to suspend loan disbursements for non-compliance with the terms of the loan are not credible, then governments may have few compelling reasons to enact politically difficult reforms, even when such reforms are explicitly prescribed as part of their loan package. Our study provides suggestive evidence that governments do comply with at least some IMF conditions. Governments with public sector conditions in their IMF programs make deeper cuts to the wage bill than governments without such conditions. Linking specific conditions to specific outcomes is an innovation that we believe accounts for our novel results. Failing to account for the exact conditions included in loan programs likely underestimates compliance. For example, failure to find a correlation between IMF programs and public sector reforms cannot be interpreted as evidence of "non-compliance" because only a minority of IMF loans actually mandate changes to the public sector.

Second, conditions vary across loan programs and heterogeneous conditions produce heterogeneous effects. To accurately assess the effects of IMF loans on borrowing countries, it is essential to account for the precise conditions included in loan

programs. Many previous studies have simply identified countries under an IMF program and compared them to countries not under IMF programs, which means that they treat all IMF loan programs as being identical. Failure to account for the variance in conditions may lead to inaccurate and inconsistent inferences about compliance and the effects of loan programs on borrowing countries.

Examining the specific reforms required of governments in exchange for an IMF loan may help to resolve various puzzles about IMF lending, such as the varied effects of IMF programs on poverty. The fact that different loan programs provoke different types of spending cuts may also help to explain the varied political responses to IMF programs. In Greece, for example, citizens responded to the loan package that required the government to make deep cuts to public sector employment and wages with strident and sometimes violent protests. In May 2012, Greek voters punished the two dominant governing parties by handing them their worst performance ever at the polls. However, not all IMF loan programs meet with such vociferous opposition. In fact, Dreher and Gassenbner (2012) find no consistently robust effect of IMF loans on government crises.<sup>22</sup> One reason for the varied political responses to IMF programs may be differences in loan conditions, which engender different types of spending cuts. An improved understanding of the political consequences of international sovereign lending may come from a disaggregate approach to conditionality, as adopted in the current study.

Finally, our results have thought-provoking policy implications. Over the past decades, the IMF aimed to provide governments with greater “ownership” of their loan

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<sup>22</sup> In contrast, however, Smith and Vreeland (2006) find evidence that IMF loans affect leaders’ survival in office.

programs. To this end, the IMF targeted only aggregate spending levels and left governments to decide for themselves precisely where to make the necessary budget cuts. Our results suggest that politically difficult cuts are unlikely to happen when governments have this type of ownership over their loan programs. Reforms in contentious areas, such as the public sector, will only occur when they are an explicit condition. By requiring difficult reforms in exchange for financing, the IMF can provide political cover for the government (Vreeland 2003; Vreeland 2007). Paradoxically, then, the IMF's efforts to give governments greater autonomy in deciding where to make budget cuts may increase the political costs of reform for governments at home.

Even when explicit cuts are specified as a condition of a country's loan programs, our results suggest that governments will not stick with the cuts after the conditions expire. After conditionality vanishes, governments may reinstate previous levels of spending in response to domestic political pressures. The implication is that international organizations have limited capabilities to impose austerity on sovereign governments. International organizations can leverage conditionality to impose austerity but once this leverage is gone, austerity does not stick. The domestic political dynamics that drive spending on public sector compensation prove to be more enduring than externally imposed austerity.

**Table 1:** Estimated effect of IMF loan conditions

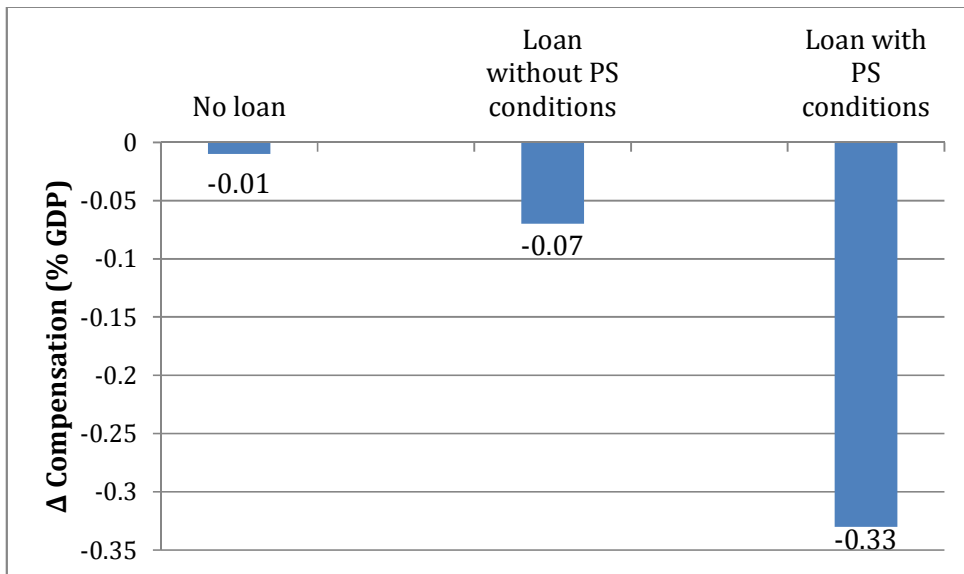
	(1) Full sample	(2) Only IMF borrowers	(3) Two-stage model
L.Loan with public sector conditions	-0.488** (0.231)		
L.Public sector condition		-0.948*** (0.303)	-0.525** (0.239)
L.Loan w/out public sector conditions	-0.066 (0.139)		
L.Loan (predicted)			-0.353* (0.195)
L.GDP per capita (log)	-1.368*** (0.295)	-1.653* (0.853)	-1.406*** (0.333)
L.Negative growth	0.226* (0.120)	0.284 (0.243)	0.312** (0.133)
L.Democracy	-0.629*** (0.208)	0.103 (0.402)	-0.706*** (0.230)
Constant	17.81*** (2.45)	17.89*** (6.15)	18.18*** (2.74)
Observations	1,114	288	947
R-squared	0.047	0.069	0.059
Number of countries	89	53	80

Notes: All models include country fixed effects. Standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

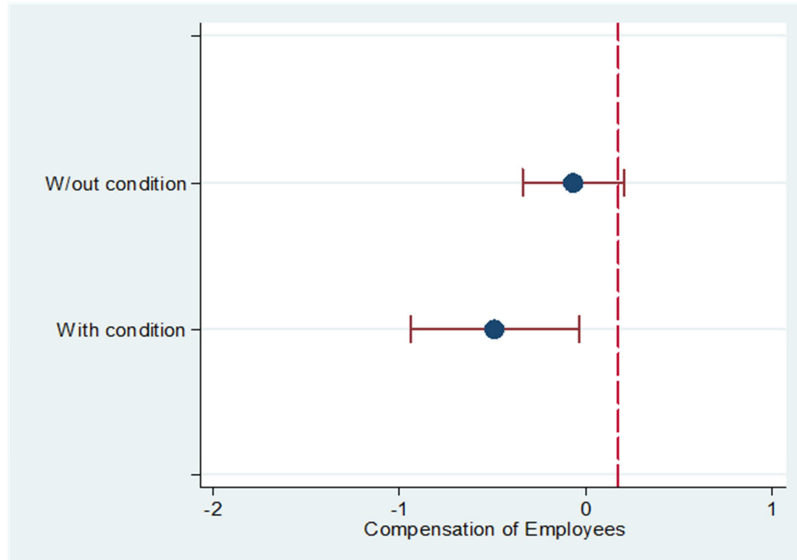
**Table 2:** *Compensation spending*

<b>Time Period</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
t-2	6.15	4.07	0.01	13.32
t-1	6.10	5.16	0.01	21.08
Condition Entry	5.47	4.58	0.01	19.49
t+1	4.86	3.51	0.84	13.28
t+2	4.09	2.63	0.69	8.90
Condition Exit	5.39	4.02	1.25	15.08
x+1	5.64	4.08	1.27	15.43
x+2	5.01	3.08	2.30	10.11

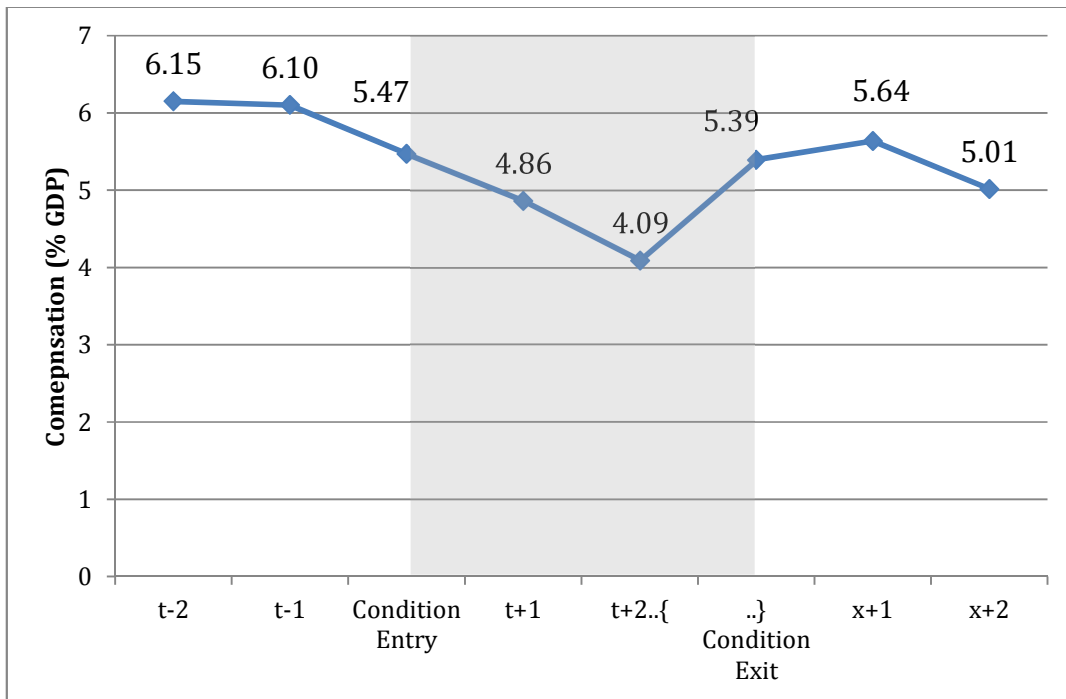
**Figure 1:** Year-to-year change in *Compensation* (mean)



**Figure 2:** Estimated effects of IMF loans



**Figure 3:** *Compensation spending over time (mean)*





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