Expenditure Conditionality in IMF-supported Programs[*]

Sanjeev Gupta[Ψ], Michela Schena[Ψ] and Seyed Reza Yousefi[‡]

Abstract

This paper studies the impact of expenditure conditionality in IMF programs on the composition of public spending. For the first time, a granular dataset on different government expenditure conditions in 115 countries during 1992-2016 period is compiled. The results support the view that while conditionality on specific elements of spending could help achieve a program's short-term objectives, it is structural conditionality which delivers lasting benefits. Structural public financial management conditionality (such as on budget execution and control) has proven to be effective in boosting the long-term level of education, health, and public investment expenditures. The results further indicate that conditionality on raising such spending may come at the expense of other expenditures. Finally, the successful implementation (and not mere existence) of the conditionality is crucial for improved outcomes. These findings are relevant for policy makers targeting achievement of the Sustainable Development Goals (SDGs) by 2030.

I. INTRODUCTION

The immediate goal of an IMF program in a country is to restore macroeconomic stability, create conditions for sustainable growth, and improve balance of payment viability, and in low-income countries to also reduce poverty. The policies underlying a program are designed in consultation with the authorities and fiscal adjustment often lies at their core, tailored to individual country needs.[1] To facilitate the achievement of desired fiscal adjustment, programs have included a range of conditions that countries seek to fulfil to receive support from the IMF. Program conditionality typically applies to macroeconomic or structural policies that influence the design of IMF programs, and may also include specific tools to monitor progress toward the program goals. Conditionality is made up of benchmarks and indicative targets reflecting the prevailing macroeconomic conditions in the country (see below) and are typically applied both on the revenue and expenditure side.[2] Revenue conditionality has been mainly on the implementation of structural tax measures in four areas, namely taxation of goods and services, value-added tax (VAT), and income and trade taxes (Crivelli and Gupta 2016). Meanwhile, expenditure conditionality spans a wide area and their utilization has increased in Fund programs in the last decade (Figure 1). Low-income developing countries (LIDCs) have the largest number of expenditure conditions on average, followed by the emerging market countries (EMs) and advanced economies (AEs) (Figure 2)[3].

Figure 1. Countries with IMF Programs and Expenditure Conditionality
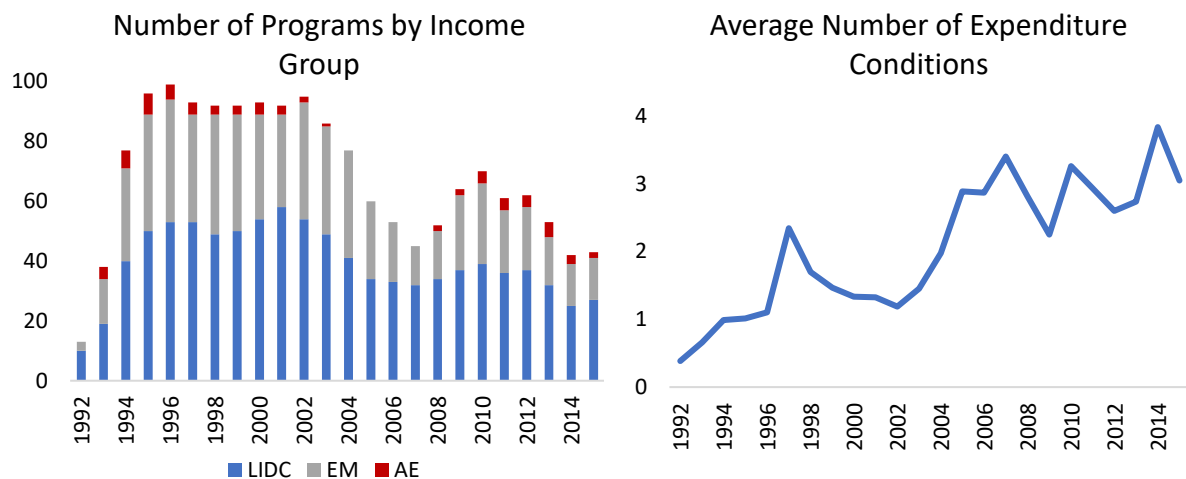
Source: Authors' calculations and MONA database.

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[1]IEO (2003) estimates that the average targeted fiscal balance improved by about 1.7 percent of GDP over two years in the IMF-supported programs during the 1993-2001 period.

[2]Please see the Data and Stylized Facts section for definitions of different types of IMF conditionality. See also https://www.imf.org/en/About/Factsheets/Sheets/2016/08/02/21/28/IMF-Conditionality.

[3] The focus on poverty reduction in LIDCs partly explains the higher number of conditions in LIDC programs (IMF, 2017).

Figure 2. Countries with Expenditure Conditionality in IMF Programs by Income Group

Number of expenditure conditions per program
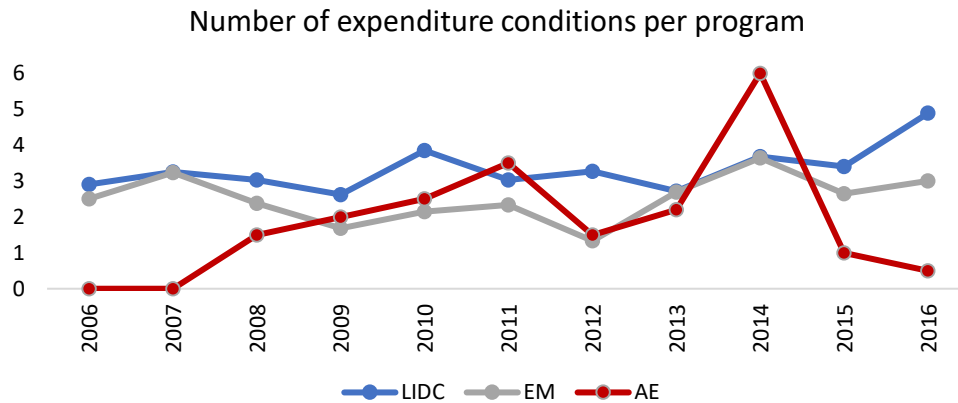
Expenditure conditions have comprised quantitative ceilings or floors on overall or specific government expenditures (including social spending, wages and public investment), and public financial management (such as strengthening public investment processes, fiscal transparency, budget preparation and minimizing fiscal risks) (see Appendices A and B for a full list of conditions and their incidence).

IMF program conditions, whether quantitative or not, may take various forms including quantitative performance criteria (QPC), indicative targets (IT), structural benchmarks (SB), or prior actions (PA). Quantitative performance criteria are conditions that are under the control of the government officials and could be measured by economic indicators. Examples of QPCs include a maximum level of domestic financing, a minimum level of international reserves, or a certain range for the fiscal balance. Indicative targets are also quantitative measures which could be set in addition to the QPCs to assess the progress in meeting the objectives and are sometimes set when QPCs cannot be met due to data unreliability. These targets might be converted into QPCs as uncertainty lessens with some modifications. Structural benchmarks, on the other hand, are not quantifiable and are used as critical markers to assess the implementation of the program. Examples of structural benchmarks include measures to strengthen public financial management and improve social safety nets. Finally, prior actions are actions that the authorities agree to take before the program approval of the IMF Executive board. Completion of pending public financial reforms such as bank reconciliation and elimination of price controls are examples of prior actions. Among different types of conditionality, unmet QPCs require formal waiver from the Executive Board to mark the review as complete, while IT and SBs are assessed in the context of the overall program and do not require a formal waiver if unmet.

The effects of IMF programs in general, and of specific conditionality on education and health spending have been widely debated in the literature. Critics claim that IMF programs have failed to deliver desired increases in social sector spending. Some studies argue that austerity measures and particularly conditionality on wage bill have lowered such spending (Ooms and Hammonds 2009, Rowden 2009, and MacDonald 2007). Others have contended that IMF programs are

influenced by political considerations, size of quota, and the share of a country's nationals among the professional staff at the Fund (Barro and Lee 2005). Kentikelenis, Stubbs and King (2015, 2016), Baker (2010), Benton and Dionne (2015), and Stubbs and others (2017) further contend that IMF conditionality has reduced fiscal space for health spending in African countries. This has been countered by Clements, Gupta and Nozaki (2013) who have argued that IMF-supported programs can potentially increase social spending through three channels: higher growth during the program period which raises domestic revenues, safeguards in programs that protect social spending from the austerity measures (Gupta and others 2000, Gupta 2010), and catalyzing foreign aid and investment during the program period that increases overall fiscal space. They find that spending in the education and health sectors increases at a faster pace in countries supported by an IMF program than in other developing economies without IMF programs. The study by Stubbs and others (2017) overlooks key channels in programs with a beneficial impact on fiscal space (such as the effect of revenue conditionality on revenue performance) and relies overly on a qualitative methodology (Gupta (2017)). Moreover, health and education spending have typically been protected in IMF-supported programs (IMF (2017)).

Some scholars have argued that IMF programs have lowered economic growth in countries borrowing from the IMF (Dreher 2006, Przeworski and Vreeland 2000), and geopolitical factors seem to affect not only the probability of obtaining an IMF loan but also the leniency of conditionality related to it (Dreher et al. 2009). Boockmann and Dreher (2003) find no clear relationship between IMF programs and their measure of economic freedom index. However, Marchesi and Sirtiri (2011) show that although World Bank and IMF programs alone do not boost growth, their joint participation is beneficial to economic growth. In this context, Bas and Stone (2014) study the long-term growth impact of programs and support the view that in countries participating in programs in general benefit from higher growth rates. They find that long-term users of IMF support benefit the most. Bal-Gunduz and others (2013) find support for this result and highlight advantages to LIDCs from a long-term engagement with the IMF in the context of programs. Newiak and Willems (2017) apply a synthetic control methodology on a handful of countries and find that even an IMF-monitored program with no financing helped promote growth and foreign direct investment, and lower inflation in these economies. Atoyan and Conway (2006) employ both instrumental variable and propensity score matching techniques and conclude that a country's economic growth does not benefit contemporaneously from participating in IMF programs but it picks up after the conclusion of program. They further observe that programs have other favorable contemporaneous effects such as improvements in fiscal and current account balances.

Despite numerous studies on the impact of IMF programs in general, research on the impact of specific IMF conditionality on the composition of public expenditure is limited. The literature has investigated the relationship between the composition of public spending and economic growth and emphasized that seemingly productive expenditures (i.e., capital expenditure), when used in excess, could become unproductive (Devarajan, Swaroop, and Zou (1996) and Paternostro, Rajaram and Tiongson (2007)). Gupta and others (2005) assess the expenditure composition and growth nexus and find that the composition of public outlays matter for growth: those countries with a higher share of capital and nonwage goods and services enjoy higher economic growth while others with a larger share of wage bill suffer from lower output growth. Cordella and Dell'Ariccia (2002) argue that IMF conditionality on specific expenditures - such as a spending

floor on social spending and public investment - needs to balance its benefits with costs arising from distorted resource allocation. On the revenue side, Crivelli and Gupta (2016) show that the strongest impact of conditionality is on taxes on goods and services, including the VAT.

Although expenditure conditionality provides a quantitative control on certain spending components, the quality of public spending is also of crucial importance. Higher expenditures do not necessarily mean better outcomes if sectoral inefficiencies continue to prevail, or if public investment is used for unproductive and inappropriate projects. Pritchett's (1996) white elephant hypothesis highlights the inefficiency of certain public sector expenditures, and concludes that especially in developing countries, a dollar's worth of public investment does not always create a dollar's worth of public capital.

In this paper, we investigate the impact of different types of expenditure conditions in IMF programs on key expenditure components such as health and education, public investment and wage bill. In doing so, we assemble a dataset on expenditure conditionality in IMF programs since 1992 disaggregated by the type of condition and its specific targets. The contribution of this study is twofold. First, it analyzes the short- and long-term impact of different types of expenditure conditionality on wage, health, education, public investment, and total general government expenditures. Second, it examines possible trade-offs associated with implementing conditionality.

The empirical analysis shows that structural conditionality[4] has been most effective over the longer term on the composition of government spending, by increasing the share of growth-friendly and poverty-reducing spending on health and education. While spending floors on health, education or public investment may help program countries achieve short-term objective of protecting such spending during the adjustment period, they might exert pressure on the rest of the budget and limit allocations to other expenditures.[5] This suggests that programs should combine short-term conditionality on specific expenditure components with the long-term structural conditionality covering public financial reforms. The analyses also emphasize that strong implementation of conditionality is crucial for achieving superior outcomes. The findings of this paper are of relevance to policy makers of countries targeting achievement of the Sustainable Development Goals (SDGs). In this context, structural reforms with a medium-term perspective can help achieve significant increases in social sector spending. The IMF has estimated that low-income countries would need additional resources totaling 15 percent of GDP by 2030 to achieve the SDGs in five areas - including education and health (Gaspar and others, 2019).

The rest of the paper is organized as follows. Section II provides an overview of data. Section III discusses the empirical methodology, its appropriateness in addressing the research questions, and our findings on the impact of IMF conditionality on macroeconomic performance of program countries. Finally, section IV concludes and provides policy recommendations.

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[4] Conditionality classified under Public Financial Management. Details are available in Appendix A.

[5] Dabla-Norris, Ho, and Kyobe (2016) find that productivity and economic growth in emerging markets could benefit substantially from tailored institutional and structural reforms.

II. DATA AND STYLIZED FACTS

We construct our expenditure conditionality based on the IMF's Monitoring of Fund Arrangements (MONA) database. The MONA database provides data on IMF programs and detailed information on expenditure conditionality in each program, and whether conditions were met or not. The categorization of the conditionality into different subgroups and the methodology for constructing the expenditure conditionality dataset can be found in Appendix A. The expenditure conditionality is divided into two broad groups covering quantitative spending and public financial management measures.

The public financial management conditionality is divided into seven subcategories, namely, accounting and financial reporting, budget execution and control, general public financial management reform, institutional design, legislative framework, macro-fiscal/budget preparation, and public investment. The spending measures are divided into general/central government expenditure, wage bill, social protection, public investment and public-private partnerships, arrears, pensions, subsidies, extra-budgetary expenditure, and other specific expenditures. We further distinguish conditionality on arrears designed to prevent accumulation of *further* arrears from that designed to seek *clearance* of already accumulated arrears. In the empirical analysis of spending measures, our focus is on five areas: government expenditures, wage bill, social spending and public investment. It should be noted that the conditionality on arrears can be found both in spending and public financial categories. Although often included as a quantitative condition (that is, clearance of existing arrears), it is closely related to the public financial management conditions in a program and can therefore appear in non-quantitative category as structural benchmarks. In this study, we consolidate the conditionality on arrears, whether quantitative or not, and study its long-run impact on different spending categories.

The dataset consists of annual data for an unbalanced panel of 106 emerging market and low-income countries over the period 1992-2016, countries that had at least one IMF program over the sample period[6].[7] We exclude the 9 advanced countries from the quantitative analysis because their number is small in our sample and because their economic conditions and institutions are qualitatively different from those in low-income developing and emerging market economies. Data on the composition of expenditure are sourced from the IMF's *World Economic Outlook* (WEO), the World Bank's World Development Indicators (WDI), IMF Investment and Capital Stock Dataset (2017), and IMF internal dataset on Government Compensation and Employment (2016). A full description of the dataset and its sources is provided in Appendix A.

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[6] For our purposes, it does not matter if IMF programs are consecutive or not as the study's focus is on exploring the long-run impact of conditionality.

[7] The data are unreliable prior to 1992, which then determined the study's starting point.

Figure 3. Average Number of Program Conditionality by Type
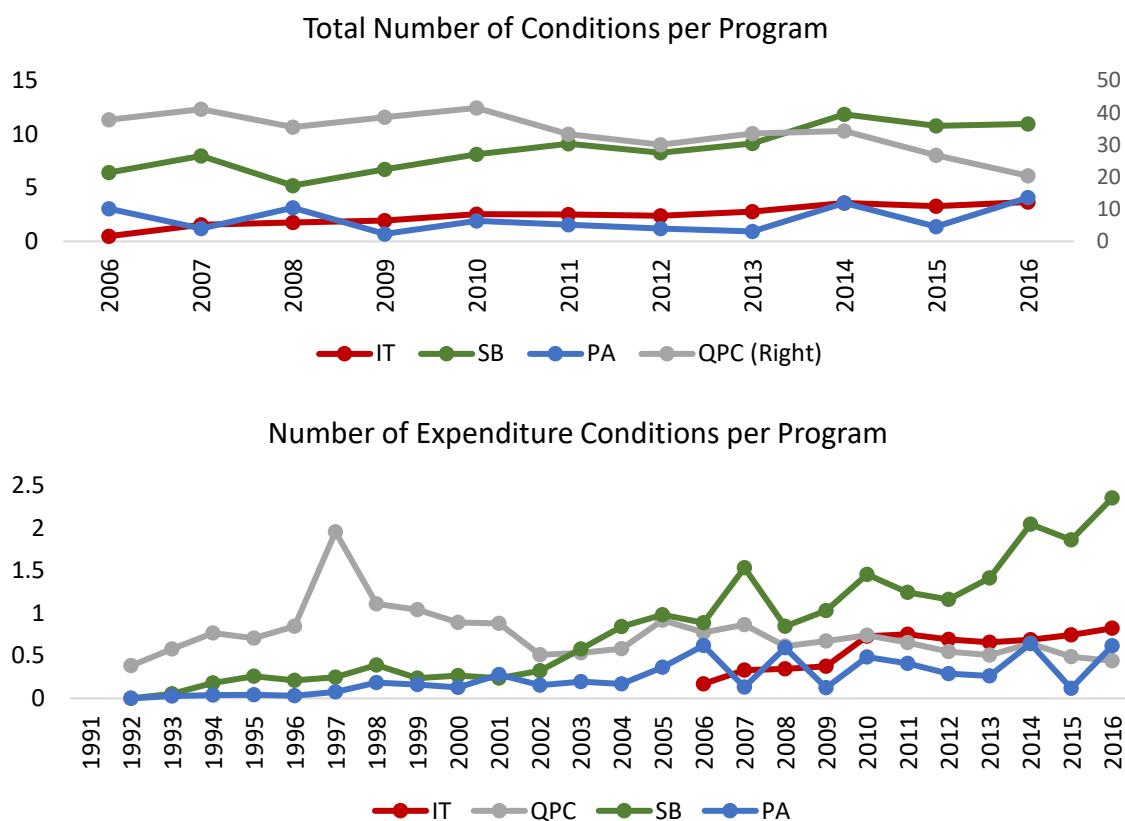
Total Number of Conditions per Program

Number of Expenditure Conditions per Program

Note: IT, QPC, SB, and PA denote Indicative Target, Quantitative Performance Criteria, Structural Benchmark, and Prior Action, respectively.

During the 1992-2016 period, conditionality primarily took the form of quantitative performance criteria (such as the minimum level of international reserves, maximum recourse to central bank financing) and structural benchmarks (such as measures pertaining to public financial management, strengthening the financial system), which on average comprised 46 percent and 31 percent of total conditions, respectively (Figure 3). However, over the past 10 years, the proportion of structural benchmarks has overtaken the proportion of quantitative performance criteria; on average over 2005-2015, 42 percent of all conditions were structural benchmarks, while 22 percent were quantitative performance criteria. Since 2010, indicative targets and prior actions have remained stable or increased slightly.

The increased usage of expenditure conditions is attributable to a greater reliance on structural benchmarks. On average during the full sample period, more than 80 percent of expenditure conditions were met,[8] with structural benchmarks and indicative targets being met with a higher frequency (Figure 4). The focus of conditionality has shifted from broader conditions such as

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[8] Our data suggests that expenditure conditionality is met at a higher rate compared with other types of conditionality.

those on general government spending to improving budget execution and control, public investment, and social and priority spending (Appendix Figure 1).

Figure 4. Success Rate of Implementing Expenditure Conditions by Category

Met Expenditure Conditionality

Note: IT, QPC, SB, and PA denote indicative target, quantitative performance criteria, structural benchmark, and prior action, respectively.

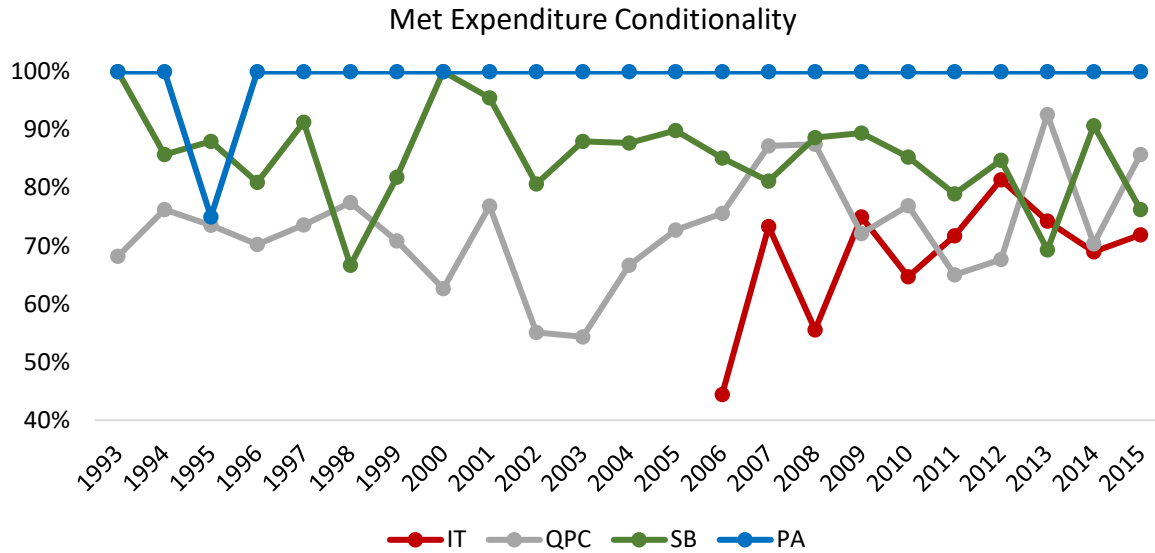## III. EMPIRICAL SPECIFICATIONS AND MAIN FINDINGS

We investigate the long-run impact of different types of IMF expenditure conditions on the components of public spending. Estimation techniques should be able to control for short term dynamics, endogeneity, sample selection bias, reverse causality, omitted common effects, and dependence of the error terms.

The use of ARDL (autoregressive distributed lag) specifications should be sufficient to resolve the above-noted econometric issues afflicting the long-run estimation under certain conditions. The long-run effect is identified regardless of whether the order of integration is zero or one, irrespective of whether the regressors are exogeneous, and is robust to reverse causality (Pesaran 1997, Pesaran and Shin 1998, and Pesaran and Smith 1995). However, the ARDL specifications assume that the errors are distributed independently, which may lead to incorrect inferences and inconsistent estimates in the presence of cross-sectional dependence. This assumption is problematic in our case, as suggested by high p-values of cross-sectional dependence tests - the null hypothesis that the specification contains cross sectional dependence could not be rejected. Global factors, whether observed or unobserved - such as oil price shocks, occurrence of financial crises – could significantly bias the estimates if correlated with the regressors. Similarly, we could not use other techniques, namely the mean group estimation which would allow the coefficients to be heterogeneous and vary across countries. Pesaran and Smith (1995) show that the mean-group coefficients are consistent if the time dimension is sufficiently large and if cross-sectional

dependence across the error terms is absent; these conditions are not met in our case given the moderate time dimension of the data and the persistence of cross-sectional dependence.

To tackle these drawbacks of ARDL, the cross sectionally augmented autoregressive distributed lag (CS-ARDL) and cross-sectionally augmented distributed lag (CS-DL) were developed, both of which are an upgraded version of the traditional ARDL approach, introduced by Chudik and others (2016) and Chudik and Pesaran (2015), respectively. CS-ARDL and CS-DL overcome these problems - which is crucial for our study - by incorporating cross-sectional averages of the dependent variable, regressors, and their lags, p. [9]

The baseline CS-DL specification includes cross-country analysis using mean group estimation:

$$\Delta y_{it} = c_i + \theta_i X_{it} + \sum_{l=0}^{p-1} \delta_{il} \Delta X_{i,t-l} + \omega_{iy} \overline{y}_t + \sum_{l=0}^{2} \omega_{i,xl} \overline{X}_{t-l} + \varepsilon_{it}, \qquad (1)$$

where i, t are indices for country and time, respectively, and y_{it} is the dependent variable. The main variable of interest is X_{it} which denotes whether a certain expenditure conditionality was met, and θ_i captures the long-run effect, or level relationship, of meeting the conditionality. To also explore the impact of mere existence of expenditure conditionality, we also try the empirical regressions under two scenarios: i) X_{it} denoting whether a certain expenditure conditionality existed in the IMF program, and ii) X_{it} denoting two dummy variables, first, the existence of expenditure conditionality, and second, whether the conditionality was met or not. The mean group of the θ_i coefficients are denoted by $\hat{\theta}$, which represents the average long run impact across the full sample. $\overline{y}_t$ and $\overline{X}_t$, respectively denote the cross-sectional averages of the dependent variable and if the conditionality was met, and ε_{it} is the error term.

Following Pesaran and Smith (2014) and Mohaddes and Raissi (2014), we do not include control variables. As they argue, parsimonious specifications without control variables are preferred when the objective is not to capture the "ceteris paribus" impact of regressor. Furthermore, the econometric model captures long-run impact of conditionality on the dependent variables. It captures the direction of causality by controlling for the unobserved effects and the dynamic relationship between the dependent and independent variables. The inclusion of further controls or multiple conditions has no qualitative impact on the estimation of the direction of the causality, although the quantitative estimates should be treated with caution.

To study the impact of IMF expenditure conditionality on key components of spending and their composition, the dependent variables are spending on education, health, public investment, and wage outlays. Health and education expenditures are scaled by both GDP to observe the absolute impact of conditionality on them and by total government expenditure to measure the conditionality impact on relative shares in the budget – to investigate whether the composition of the budget has been shifted towards more social spending in the lung-run for the program countries. Wage outlays are expressed as a share of GDP to investigate whether conditionality in IMF programs contain them in the long run, and public investment is expressed in log per capita

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[9] To be consistent across different estimations, we set the number of lags to 2. Incorporating more lags would not be possible for the CS-ARDL approach as the time series dimension of our data is not large enough.

terms to investigate whether it has been impacted by the conditionality in the long term. Furthermore, we study the impact of each conditionality on total government expenditure as share of GDP since IMF programs often include fiscal tightening objectives.

Chudik and others (2016) show that CS-DL is equivalent to the CS_ARDL specification. The latter could be represented as:

$$\Delta y_{it} = c_i + \sum_{l=1}^{p} \phi_{il} y_{it-1} + \sum_{l=0}^{p} \beta_{il} X_{i,t-l} + \sum_{l=0}^{2} \psi_{il} \overline{Z}_{i,t-l} + \varepsilon_{it}, \qquad (2)$$

where $\overline{Z}_t$ consists of two sets of variables, $\overline{y}_t$ and $\overline{X}_t$, and the rest of the variables are defined the same way as in the CS-DL specification. We are able to capture the short-run (within year) impact of expenditure conditionality using the CS-ARDL specification, and the long run coefficients in a CS-ARDL model could be calculated from the short-run coefficients, β_{il} and ϕ_{il}, as:

$$\theta_i = \frac{\sum_{l=0}^{p} \beta_{il}}{1 - \sum_{l=1}^{p} \phi_{il}} \qquad (3)$$

We follow these specifications and explore heterogeneity in country groupings by running regressions for each income group, i.e., emerging markets versus low-income developing countries. Furthermore, repeating the regressions for three different samples—full sample, emerging markets, and low -income countries—we find differences in how effective each conditionality has been in each country group.

CS-ARDL and CS-DL are shown to be robust to endogeneity, structural break, reverse causality and omitted common effects bias (Chudik and others 2016). In addition, CS-DL does not suffer from the selection bias in the estimation of the long-run coefficient as it is based on a mean-group estimation, where each coefficient is estimated individually.

One should note that although the CS-DL approach is robust to different lag orders, possibility of unit roots in variables, serial correlation in the errors, and cross-sectional dependence, it is consistent only when there is no feedback effect from the lagged dependent variable onto the regressors. Therefore, CS-DL approach could suffer from simultaneity bias and endogeneity. However, as discussed in Chudik and others (2016) over a set of Monte-Carlo experiments, the endogeneity bias is more than compensated by its overperformance in the small samples. CS-DL has better small sample performance when time dimension is not large or when the performance of the estimates in ARDL depend on the lag orders. Therefore, the methodology could be a good fit for our case where we have up to 25 years of observations per country. Furthermore, unlike other empirical methodologies that compare the outcome variables in the presence of IMF conditionality compared with those that did not, this methodology does not have to deal with sample selection bias. The CS-DL methodology is based on a mean-group estimation where the long-run coefficients are estimated separately for each country and then averaged. Therefore, the sample is not divided into the treatment and control (or comparison) groups. Hence, sample selection issue would be irrelevant in this case.

Main Results

This study finds that the focus of expenditure conditionality has evolved in the IMF-supported programs in the past decade. The use of conditionality on social protection, budget execution, and public investment has risen, while broader conditionality such as ceiling on general government spending has become less prevalent. Tables 1-6 report our findings on how different types of expenditure conditionality impact key public spending components, namely public investment, wage outlays and social spending which include health and education expenditures. For each dependent variable, we investigate the impact of all public financial management conditions and conditions on wage outlays, education and health spending, and capital spending. However, we only report a selective set of estimates, spending conditionality that are closely related to the questions in this paper, and PFM conditions that have robust and statistically significant coefficients.[10] The tables on health and education spending report these expenditures both as share of GDP and as share of total public expenditures.

We further explored whether the benefits from expenditure conditionality arise simply because of the participation in an IMF program, regardless of whether conditionality is met. To explore this, we added expenditure conditionality to the right hand side variables, thereby making X_{it} a vector of two measures (the existence of conditionality, and whether it was met), and reran the estimations under two scenarios: i) replacing the dummy for a conditionality being "met" by a dummy indicator that would represent the "existence" of expenditure conditionality in the program as explanatory variable, ii) having both the existence of conditionality and whether it was met. The findings suggest that the coefficients attached to the existence of expenditure conditionality under both scenarios are not statistically significant. From this, we conclude that a mere existence of expenditure conditionality in a program would not improve outcomes, and that its implementation is crucial[11].

Impact on health and education spending. Table 1 presents the long-term effects of major expenditure conditionality on health and education spending. We examine the impact of quantitative conditionality (such as a ceiling on government spending or a floor on social spending and public investments) as well the effect of structural benchmarks (such as on arrears payment, or accounting and financial reporting). The empirical exercise shows that the structural

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[10] Regarding the quantitative spending categories, we explore only those spending conditions that could have potential impact on the spending category of interest. For instance, for wage outlays as dependent variable, we have explored the impact of conditionality on wage expenditures, or for health and education spending, we have investigated the impact of spending floor on social spending.

[11] Estimations are available upon request and excluded for brevity of the paper.

conditionality covering the budget process has the lasting impact on social spending[12]. As reported in the table, the coefficient for social expenditure conditionality is statistically insignificant while improvements in accounting and financial reporting and containing expenditure arrears have statistically significant impact on enhancing health and education expenditures over the long run. Conditionality on general government expenditure – conditionality not used often in the past decade – had long run benefits on health spending, an observation that needs further investigation of the underlying channels. On the other hand, conditionality on public investment might exert pressure on other expenditures as suggested by the negative and statistically significant coefficient attached to the share of health spending in the budget, implying that there is a tradeoff between the spending categories as resources are often constrained in allocations to different growth-enhancing sectors. Quantitatively, improving accounting and financial reporting, and containing the accumulation of arrears through IMF programs have helped countries improve education share of government expenditures by about 0.9-2 percent in the long run, and conditions on enhancing public investment has reduced the budget share of health spending by between 1.5-2.8 percent.

The benefit of IMF conditionality in health and education sectors is found mainly in low-income countries. Table 2 reports the impact of a broad set of measures on social spending disaggregated by income groups. The findings suggest that while condition on preventing further accumulation of arrears helped both low-income and emerging economies in enhancing health and education spending, the long-run benefits of conditions on budget execution and control, accounting and financial reporting, are mainly felt in low-income countries. These are in line with the hypothesis that low-income countries, which often lack strong institutional capacity, benefit from structural reforms and controls on how the budget is prepared, reported and executed (Filmer and others, 2000).[13]

Impact on wage spending. An assessment of the impact of expenditure conditions on wage spending reveals similar patterns, that is, it is not always the direct conditionality on the wage bill but also structural reforms which play a significant role in helping to contain it (Table 3). These findings are in line with IMF (2016) which highlights that ceilings on wage bill and employment do not appear to be as effective as structural reforms in the long run. While the impact of an explicit ceiling on wage spending is statistically insignificant (except in some regressions for the

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[12] As explained subsequently, one should note that reported social expenditures are not necessarily uniformly defined across countries. In addition, other expenditures may have been classified as social expenditures because of the IMF program conditionality.

[13] We also re-ran our regressions for the sub-sample of countries classified as fragile. Given the small sample size, only few results are found to be statistically robust. They show that general PFM conditionality (such as developing a PFM strategy, monitoring operations and financial operations of public enterprises) has a positive impact on enhancing public investment; a reduction in expenditure arrears creates fiscal space for productive spending in the long term; and improved budget preparation systems help increase the share of education sector in total budget outlays. This shows that a long-term institutional development helps improve expenditure outcomes in fragile states.

LIDCs sample), other conditions including some structural ones are statistically significant in containing it. Those conditions include legislative framework, preventing the accumulation of arrears, and budget execution and control in emerging markets. However, we note that although structural conditionality appears to contain wage spending in LIDCs (negative coefficient), the estimates appear to be insignificant. These results suggest that institutional improvements in LIDCs will not be able to control wage spending in the long-run, an area that requires further investigation in future research.[14]

Impact on public investment. We further explored the long-term impact of different conditions on public investment. Table 4 indicates that structural reforms have been effective in boosting public investment in the long-run. Successful implementation of conditionality related to the accounting and financial reporting, budget execution and control, and budget preparation have played a crucial role in enhancing public investment. Quantitatively, results show that the implementation of IMF structural conditionality could help an emerging market country to increase its public investment by between 10 and 19 percent[15].

Impact on government expenditure. We further investigated whether overall government expenditure is restrained because of compliance with IMF conditionality. The results are reported in Table 5 and they indicate that measures on preventing further accumulation of arrears, accounting and financial reporting, budgetary execution and control, and legislative framework have a long-lasting impact on budget spending, observed more significantly in the emerging market countries. However, similar to other types of conditionality, merely limiting overall government spending without accompanying structural reforms did not prove to be as effective.

Short-term effects of floors. To complement our study of the long-run effects of expenditure conditionality in the IMF programs, we further explore their short-run impact using the CS-ARDL approach. The empirical estimations suggest that although the long-run impact of direct conditionality is not statistically significant, they have helped countries achieve short-term objectives. As presented in Table 6, health spending and public investment increase in the short term when countries comply with conditions, while as discussed earlier, their impact is not as durable. One could therefore argue that minimum floors for certain types of spending is helpful

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[14] We repeat the regressions for wage spending in real per capita terms and find that a minimum floor on social spending, especially in low-income countries, lowers them in the long-run, suggesting that social spending floors lead governments to have a better mix of wage and non-wage costs in social sectors (results not reported in the paper and are available upon request). One should note that the definition of social spending varies across countries and may include spending on social safety nets and health and education sectors. The precise coverage of social sector spending depends on the agreement between the authorities and IMF staff for each program. A thorough investigation of the evolution of each component is necessary to understand how floors on social spending have impacted other budget components such as overall wage outlays.

[15] The range is obtained based on the size of the statistically significant coefficients.

in ensuring adequate allocations for poverty and growth-enhancing programs in the short term in an environment of tight budgetary position.

IV. CONCLUDING REMARKS

There is renewed interest among researchers on the effectiveness and macroeconomic impact of IMF programs in general and program conditionality in particular. This study presents a granular dataset on different types of expenditure conditions in the IMF programs and studies their short- and long-run effects on key components of government expenditure.

We find that expenditure conditions have become more focused on key government expenditures and structural issues, such as protecting growth-friendly and pro-poor spending. They have included spending floors on social spending and public investment, improving budget execution and control, and preventing domestic arrears.

We find that structural conditionality has been most effective over the longer term. Conditions on the accumulation of arrears, and accounting and financial reporting have the highest long run impact on health and education spending. Moreover, these structural conditions together with those on budget execution and control, and containing extra budgetary expenditures have proven to be more effective in low-income countries. They have improved the composition of government spending by increasing the share of growth-friendly and poverty reducing spending on health and education.

Notwithstanding the above result, policy makers need to be aware of policy trade-offs they face. Although floors on specific spending such as public investment could boost such expenditures in the short term and potentially in long run, they tend to exert pressure on the rest of the budget and could limit the expansion of budget allocations to areas such as health. Binding constraints on one type of expenditure may distort resource allocation in the short term as countries meet certain budgetary conditions with limited fiscal space. Therefore, policy makers should weigh in the short- and long-term benefits of each type of conditionality before choosing the optimal mix. Finally, our analyses suggest that the mere existence of expenditure conditionality does not lead to improved outcomes, and that its implementation is crucial for achieving superior outcomes.

Future research could study the impact of conditionality on outcomes in education and health sectors. Higher expenditures in relation to GDP or expenditure shares do not necessarily mean better outcomes if sectoral inefficiencies continue to prevail. Furthermore, one could investigate whether different types of conditionality (structural, revenue, or expenditure) conditions are complements or substitutes in helping countries achieve long-term improvement in their macroeconomic conditions.

Table 1. Impact of IMF Expenditure Conditionality on Health and Education Spending

		Gov. Exp.	Gov. Exp.	Social Spen.	Social Spen.	Public Inv. Exp	Public Inv. Exp	Arrears Acc.	Arrears Acc.	Arrears Pay	Arrears Pay	Accounting	Accounting
	lags	1	2	1	2	1	2	1	2	1	2	1	2
Education share of GDP	$\hat{\theta}$	-0.002	-0.001	0.000	0.001	0.000	0.000	0.000	0.001	**0.003***	0.003	**0.005***	**0.004**
	Observations	1427	1380	1427	1380	1427	1380	1427	1380	1427	1380	1427	1380
	Number of countries	86	86	86	86	86	86	86	86	86	86	86	86
Share of total expenditure	$\hat{\theta}$	-0.013	0.001	0.001	0.001	-0.005	-0.005	**0.010***	**0.017***	**0.009***	**0.015**	**0.020***	**0.020***
	Observations	1266	1233	1266	1233	1266	1233	1266	1233	1266	1233	1266	1233
	Number of countries	79	79	79	79	79	79	79	79	79	79	79	79
Health share of GDP	$\hat{\theta}$	**0.003***	**0.004**	-0.001	-0.001	0.000	-0.001	0.001	0.002	**-0.002**	**-0.004**	0.000	0.000
	Observations	1987	1889	1987	1889	1987	1889	1987	1889	1987	1889	1987	1889
	Number of countries	100	100	100	100	100	100	100	100	100	100	100	100
Share of total expenditure	$\hat{\theta}$	0.009	0.009	0.006	0.009	**-0.015***	**-0.028***	0.011	**0.020***	0.000	-0.001	**0.012***	0.013
	Observations	1770	1704	1770	1704	1770	1704	1770	1704	1770	1704	1770	1704
	Number of countries	95	95	95	95	95	95	95	95	95	95	95	95

Note: The dependent variables are health and education spending as share of GDP and total government expenditure. The explanatory variable is a dummy variable indicating whether certain conditionality was met and $\hat{\theta}$ denotes its estimated coefficient. Gov. Exp., Social Spen., Public Inv. Exp., Arrears Acc., Arrears Pay, and Accounting, stand for conditionality on general/central government expenditure, social spending public investment expenditure, arrears accumulation, payment of arrears, and accounting and financial reporting, respectively. P is the number of lag order, either 1 or 2, in the CS-DL specification in equation (1). *, **, and *** represent statistical significance at 10, 5, and 1 percent respectively.

Table 2. Impact of IMF Expenditure Conditionality on Health and Education Spending in EMs and LIDCs

		Arrears Acc EM	Arrears_Acc EM	Extbudg Exp EM	Extbudg Exp EM	Accounting EM	Accounting EM	Budget Exe EM	Budget Exe EM	Arrears Acc LIDC	arrears_acc LIDC	extbudg_exp LIDC	extbudg_exp LIDC	accounting LIDC	accounting LIDC	budget_exe LIDC	budget_exe LIDC
	Lags	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
Education — share of GDP	$\hat{\theta}$	0.002*	0.002*	0.001	0.003	-0.001	-0.001	-0.002	-0.01	0.000	0.001	0.002*	0.003**	0.012***	0.011***	0.001	0.001
	Observations	706	678	706	678	706	678	706	678	721	702	721	702	721	702	721	702
	Number of countries	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
Education — share of Total Expenditure	$\hat{\theta}$	0.011**	0.018**	-0.002	-0.005	0.002	0.002	-0.004	-0.005	0.020**	0.035*	0.010**	0.004	0.023**	0.030***	0.008	0.021*
	Observations	640	620	640	620	640	620	640	620	626	613	626	613	626	613	626	613
	Number of countries	40	40	40	40	40	40	40	40	39	39	39	39	39	39	39	39
Health — share of GDP	$\hat{\theta}$	-0.002**	-0.001	0.000	-0.001	0.001	0.001	-0.001	-0.003	0.004*	0.004*	0.001	0.001	-0.002	-0.003	0.000	0.000
	Observations	1052	1000	1052	1000	1052	1000	1052	1000	935	889	935	889	935	889	935	889
	Number of countries	53	53	53	53	53	53	53	53	47	47	47	47	47	47	47	47
Health — share of Total Expenditure	$\hat{\theta}$	0.004	0.006	-0.001	-0.002	0.016	0.014	0.00	-0.009	0.028*	0.047*	0.002	-0.006	-0.012	-0.012	0.027**	0.033**
	Observations	973	936	973	936	973	936	973	936	797	768	797	768	797	768	797	768
	Number of countries	52	52	52	52	52	52	52	52	43	43	43	43	43	43	43	43

Note: The dependent variables are health and education spending as share of GDP and total government expenditure. The explanatory variable is a dummy variable indicating whether certain conditionality was met and $\hat{\theta}$ denotes its estimated coefficient. Arrears Acc., Extbudg Exp, Accounting, and Budget Exe stand for conditionality on arrears accumulation, extra-budgetary expenditure, accounting and financial reporting, and budget execution and control, respectively. -EM and -LIDC mean that the sample is restricted to the emerging markets or low-income developing countries respectively P is the number of lag order, either 1 or 2, in the CS-DL specification in equation (1). *, **, and *** represent statistical significance at 10, 5, and 1 percent respectively.

Table 3. Impact of IMF Expenditure Conditionality on Wage Bill

Lags	1	2	1	2	1	2	1	2	1	2
Emerging Markets (EM)	Gov. Exp.	Gov. Exp.	Wage	Wage	Arrears Acc.	Arrears Acc.	Leg. Framework	Leg. Framework	Budget Exe.	Budget Exe.
$\hat{\theta}$	0.002	-0.001	-0.003	-0.001	**-0.004***	**-0.005***	**-0.009****	**-0.011****	**-0.005****	-0.005
Observations	930	899	930	899	930	899	930	899	930	899
Number of countries	50	50	50	50	50	50	50	50	50	50
Low-income Developing Countries (LIDC)	Gov. Exp.	Gov. Exp.	Wage	Wage	Arrears Acc.	Arrears Acc.	Leg. Framework	Leg. Framework	Budget Exe.	Budget Exe.
$\hat{\theta}$	0.000	-0.001	-0.004	-0.005	-0.002	-0.002	-0.000	-0.001	-0.001	-0.001
Observations	794	776	794	776	794	776	794	776	794	776
Number of countries	45	45	45	45	45	45	45	45	45	45

(Row group label at left: Wage as share of GDP)

Note: The dependent variable is wage spending as share of GDP. The explanatory variable is a dummy variable indicating whether certain conditionality was met and $\hat{\theta}$ denotes its estimated coefficient. Gov. Exp., Wage, Arrear Acc., Leg. Framework, and Budget Exe. stand for conditionality on government expenditure, wage bill, arrears accumulation, legislative framework, and budget execution and control respectively. P is the number of lag order, either 1 or 2, in the CS-DL specification in equation (1). *, **, and *** represent statistical significance at 10, 5, and 1 percent respectively.

Table 4. Impact of IMF Expenditure Conditionality on Public Investment

All Countries	Public Inv.	Public Inv.	Public Inv.	Account.	Account.	Account.	Budg. Exe.	Budg. Exe.	Budg. Exe.	Budg. Prep.	Budg. Prep.	Budg. Prep.
$\hat{\theta}$	0.039	**0.059***	**0.089***	0.009	0.032	0.021	0.048	**0.108****	**0.192*****	0.031	0.015	0.005
Lags	1	2	3	1	2	3	1	2	3	1	2	3
Observations	2,010	2,010	1,917	2,010	2,010	1,917	2,010	2,010	1,917	2,010	2,010	1,917
Number of countries	99	99	99	99	99	99	99	99	99	99	99	99

Emerging Markets (EM)	Public Inv.	Public Inv.	Public Inv.	Account.	Account.	Account.	Budg. Exe.	Budg. Exe.	Budg. Exe.	Budg. Prep.	Budg. Prep.	Budg. Prep.
$\hat{\theta}$	0.021	0.043	0.043	**0.102****	**0.141****	0.060	0.027	**0.122****	**0.192****	**0.076****	0.045	**0.097***
Lags	1	2	3	1	2	3	1	2	3	1	2	3
Observations	1,053	1,053	1,006	1,053	1,053	1,006	1,053	1,053	1,006	1,053	1,053	1,006
Number of countries	52	52	52	52	52	52	52	52	52	52	52	52

Low-income Developing Countries (LIDC)	Public Inv.	Public Inv.	Public Inv.	Account.	Account.	Account.	Budg. Exe.	Budg. Exe.	Budg. Exe.	Budg. Prep.	Budg. Prep.	Budg. Prep.
$\hat{\theta}$	0.007	0.038	0.090	-0.004	-0.010	-0.055	0.025	0.047	**0.133***	-0.098	-0.070	-0.113
Lags	1	2	3	1	2	3	1	2	3	1	2	3
Observations	957	957	911	957	957	911	957	957	911	957	957	911
Number of countries	47	47	47	47	47	47	47	47	47	47	47	47

Note: The dependent variable is the change in logarithm of real per public investment. Dependent variable is a dummy variable indicating whether conditionality was met and $\hat{\theta}$ denotes its estimated coefficient. Public Inv. Account., Budg. Exe., and Budg. Prep. stand for conditionality on public investment expenditures, accounting and financial reporting, budget execution and control, and budget preparation respectively. P is the number of lag order, either 1 or 2, in the CS-DL specification in equation (1). *, **, and *** represent statistical significance at 10, 5, and 1 percent respectively.

Table 5. Impact of IMF Expenditure Conditionality on Government Spending

|	Gov. Exp.	Gov. Exp.	Arrears Acc.	Arrears Acc.	Account.	Account.	Budg. Exe.	Budg. Exe.	Leg. Frame.	Leg. Frame.
Lags	1	2	1	2	1	2	1	2	1	2
Full Sample										
$\hat{\theta}$	0.007*	0.008	**-0.014***	**-0.017***	-0.004	-0.006	**-0.008***	**-0.017***	-0.003	-0.006
Observations	1,960	1,960	1,960	1,894	1,960	1,960	1,960	1,960	1,960	1,960
Number of countries	101	101	101	101	101	101	101	101	101	101
Emerging Markets										
$\hat{\theta}$	-0.002	0.001	-0.007	**-0.017***	-0.010*	-0.015*	-0.010*	**-0.021***	-0.009*	**-0.021***
Observations	1,060	1,060	1,060	1,060	1,060	1,060	1,060	1,060	1,060	1,060
Number of countries	54	54	54	54	54	54	54	54	54	54
Low Income Countries										
$\hat{\theta}$	0.006*	0.006	-0.005	**-0.015***	0.001	-0.001	-0.009	**-0.018****	0.010	0.010
Observations	900	900	900	900	900	900	900	900	900	900
Number of countries	47	47	47	47	47	47	47	47	47	47

Expenditures as share of GDP

Note: The dependent variable is total government spending as share of GDP. The explanatory variable is a dummy variable indicating whether certain conditionality was met and $\hat{\theta}$ denotes its estimated coefficient. Gov Exp, Arrears Acc., Account., Budg. Exe., and Leg. Frame. stand for conditionality on general/central government expenditure, arrears accumulation, accounting and financial reporting, budget execution and control, and legislative framework respectively. P is the number of lag order, either 1 or 2, in the CS-DL specification in equation (1). *, **, and *** represent statistical significance at 10, 5, and 1 percent respectively.

Table 6. Short-Run Impact of Direct Expenditure Conditionality (CS-ARDL)

Dependent Variable as percent of GDP, Conditionality: Direct measure

	Education Spending	Health Spending	Wage	Public Investment
Short Run	0.000	**0.002***	-0.001	**0.003****
Long Run	-0.000	-0.002	0.008	0.003
Observations	965	1862	1017	1869

Note: Short-run effect would refer to the immediate impact in the same year - as we use annual data - and long-run effect is interpreted as the permanent effect or level relationship. Direct conditionality refers to the conditionality directly related to the dependent variable. For instance, direct conditionality for wage expenditures is condition on wage spending. *, **, and *** represent statistical significance at 10, 5, and 1 percent respectively.

Appendix Figure 1. Average Number of Expenditure Conditionality by Category
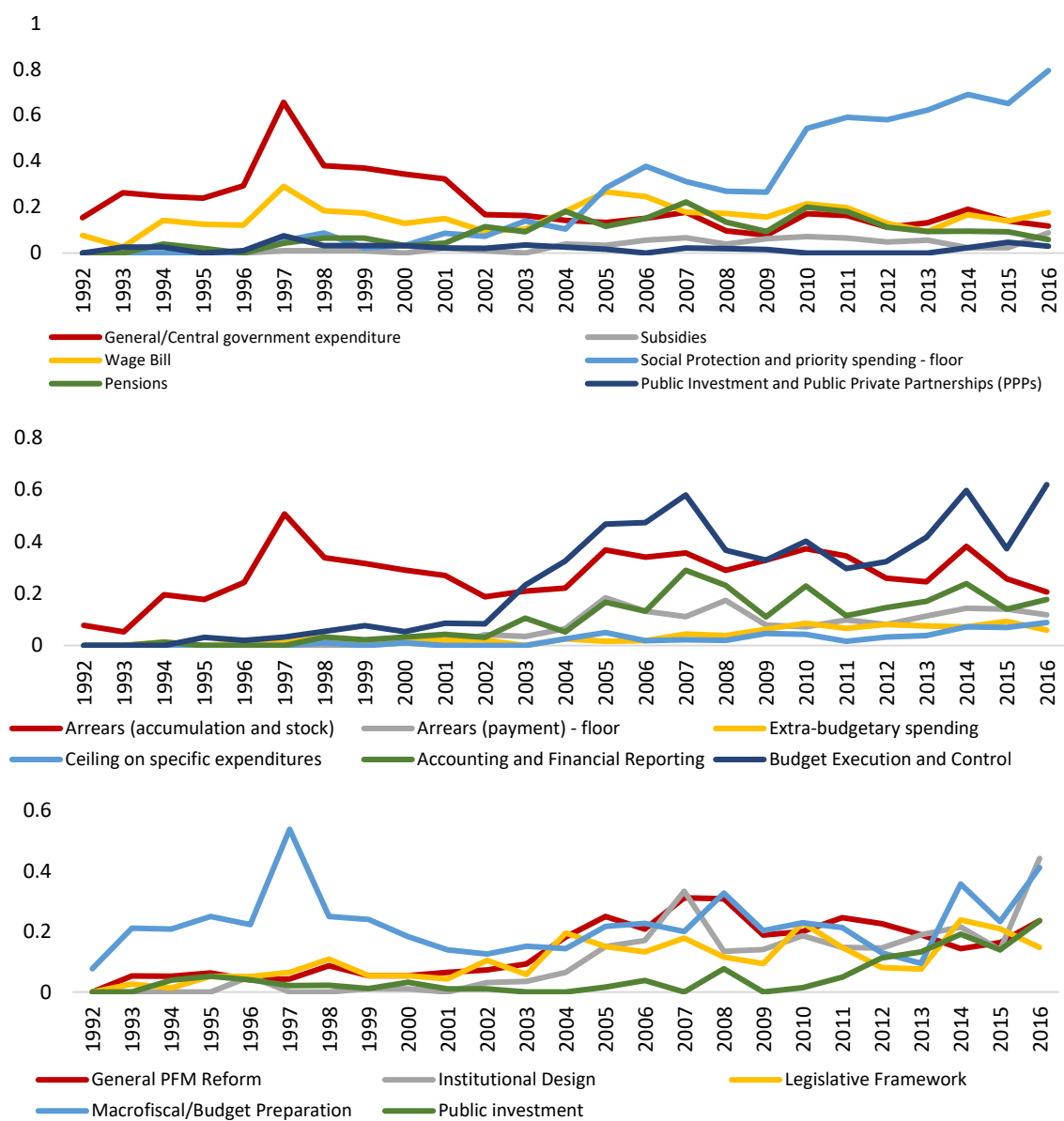
Appendix A. Data

The IMF-supported program countries in the sample include:

<u>Low-income developing countries</u>[16]: Afghanistan, Bangladesh, Benin, Bolivia, Burkina Faso, Burundi, Cambodia, Cameroon, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Republic of Congo, Cote d'Ivoire, Djibouti, Ethiopia, The Gambia, Ghana, Guinea, Guinea-Bissau, Haiti, Honduras, Kenya, Kyrgyz Republic, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Moldova, Mongolia, Mozambique, Nepal, Nicaragua, Niger, Nigeria, Papua New Guinea, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Tajikistan, Tanzania, Togo, Uganda, Uzbekistan, Vietnam, Republic of Yemen, Zambia, Zimbabwe

<u>Emerging marking economies</u>: Albania, Algeria, Angola, Antigua and Barbuda, Argentina, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Brazil, Bulgaria, Cape Verde, Colombia, Costa Rica, Croatia, Dominica, Dominican Republic, Ecuador, Egypt, Equatorial Guinea, Gabon, Georgia, Grenada, Guatemala, Guyana, Hungary, Indonesia, Iraq, Jamaica, Joran, Kazakhstan, Republic of Kosovo, Macedonia, Maldives, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Romania, Russian Federation, Montenegro, Republic of Serbia, Seychelles, Sri Lanka, St. Kitts and Nevis, Suriname, Tunisia, Turkey, Ukraine, Uruguay, Venezuela

<u>Advanced economies</u>: Cyprus, Estonia, Greece, Iceland, Ireland, Latvia, Lithuania, Portugal, Slovak Republic

The IMF's Monitoring of Fund Arrangements (MONA) database provides data for the construction of the dummy variables on IMF-supported programs and on expenditure conditionality. The economic descriptors for conditionality in the MONA database considered in this paper are those related to expenditure conditionality, which includes expenditure measures; expenditure auditing, accounting, and financial controls; domestic arrears; and expenditure and social sector reform. For IMF-supported programs, the starting year of a program is defined as the year in which it was approved. The end year is the year in which the program expired. For expenditure conditionality, the dummy takes the value 1 if the country has a program that contains expenditure conditionality for a given expenditure type in year t (where the year is determined by the test date of the condition or, if unavailable, the board date of the program) and the expenditure conditionality is met, and zero otherwise.

In order to maintain the differences between quantitative and structural conditions, expenditure conditions are categorized as a quantitative measure (either a floor or ceiling[17]) on government

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[16] As of October 2016 IMF World Economic Outlook.

[17] All quantitative measures are ceilings except for social protection (social spending) and payment of arrears.

spending or a general public financial management (PFM) measure. The conditions are then separated into one of nine spending categories or one of seven PFM categories based on areas of specialization within the IMF.

We categorize the conditionality based on a two-step algorithm. First, we specified keywords for each category that would be specific to that class, keywords that one would expect to see mostly in the text of the conditionality in each specific area. Then, we performed an automatic classification based on keyword search. Second, we performed a thorough and manual check to see whether the classification was done properly, that is to check if each condition is assigned to the correct category. Of course, some judgement calls were made in the categorization process as there are often conditionality that are relevant to more than one category. In such instances, the conditionality was assigned to the category that matched its content the most. The Appendix Table A1 provides the list of categories with few samples from our dataset:

Appendix Table A1. Categories of Expenditure Conditionality

Spending	
Category	**Description**
General/central government expenditure	Conditions related to minimizing the total amount of government spending
Subsidies	Conditions related to minimizing government spending on subsidies
Wage bill	Conditions related to minimizing the government's wage bill
Social protection	Conditions related to increasing spending on or transfers to health, education, or pro-poverty sectors
Pensions	Conditions related to minimizing civil service pensions and social security spending
Public investment and public private partnerships	Conditions related to increasing government spending on public investment
Arrears	Conditions related to increasing arrears payments or decreasing the stock of arrears
Extra-budgetary expenditure	Conditions related to the limiting level of extra-budgetary spending
Specific expenditure	Conditions related to country-specific spending measures

Public Financial Management	
Category	**Description**
Accounting and financial reporting	Conditions related to budget classification, chart of accounts, or conceptual design *Examples:*

	Adopt accounting standards for the government and a comprehensive chart of accounts. *Ministry of Finance to publish quarterly reports on the stock of unpaid bills of all government entities contained in the central government votes.*
Budget execution and control	Conditions related to commitment controls, internal control standards, guidelines for public expenditure management, or treasury single accounts *Examples:* *Ceiling on the amount of the budgetary float.* *Complete an external audit by a reputable international audit company.*
General public financial management reform	Conditions related to budget system reform, fiscal transparency, performance measurement, and budget institution reform *Examples:* *Develop a PFM strategy covering the next three years, to be attached to the budget.* *Adoption by the Government of a strategy for a better monitoring of operations and financial performance of public enterprises.*
Institutional design	Conditions related to extra-budgetary funds, fiscal decentralization and government guarantees *Examples:* *Centralization of all public revenues and execution of all public payments by the Treasury.* *Establish a Public Procurement Authority.* *Adopt, in consultation with donors, a new budget nomenclature, including a functional classification.*
Legislative framework	Conditions related to fiscal federalism and legislation in the budget process *Example:* *Adoption by the Parliament and promulgation of the law on government finance.*
Macrofiscal/budget preparation	Conditions related to budget preparation and fiscal risks *Examples:* *Submission of government budget.* *Approval of government budget.*
Public investment	Conditions related to efficient public investment and implementing public investment programs *Examples:* *Submit revised National Investment Policy to Cabinet.* *Complete a three-year public investment plan, fully integrated with the budget process, to be submitted with the budget.*

Sources for this paper's independent variables and other control variables are listed in the Appendix Table A2 and Appendix Table A3 provides summary statistics of key variables used as

dependent variables in the regressions. Where applicable, all variables refer to the general government budget.

Appendix Table A2. Sources of Data

Variable	Source
Health expenditure (percent of GDP)[18]	World Development Indicators (World Bank)
Education expenditure (percent of GDP)[19]	World Development Indicators (World Bank)
Investment expenditure (constant 2011 international dollars)	IMF Investment and Capital Stock Dataset (2017)[20]
Nominal GDP (LCU)	*World Economic Outlook*, October 2016
Population	*World Economic Outlook*, October 2016
Social expenditure (LCU)[21]	*World Economic Outlook*, October 2016
Social expenditure (percent of GDP)	The Atlas of Social Protection Indicators of Resilience and Equity (World Bank)
Total expenditure (percent of GDP)	*World Economic Outlook*, October 2016
Expenditure on compensation of government employees (percent of GDP)	IMF Government Compensation and Employment Dataset, 2016
Expenditure on compensation of government employees (percent of total expenditure)	IMF Government Compensation and Employment Dataset (2016)

Appendix Table A3. Summary Statistics

	Observations	Mean	Std. Dev.	Min	Max
Health spending as share of GDP	2,547	5.5%	1.9%	1.4%	13.7%
Health as share of government expenditures	2,315	21.6%	9.2%	4.2%	58.5%
Education spending as share of government expenditures	1,895	4.3%	2.8%	0.0%	44.3%
Education spending as share of GDP	1,717	16.3%	5.8%	4.1%	39.8%
Wage outlays as share of GDP	2,344	7.3%	3.1%	1.5%	17.0%
Public Investment per capita (international $)	2841	645	1433	2	17089
Total government spending as share of GDP	2,681	27.6%	9.6%	4.3%	67.4%

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[18] Public health expenditure consists of recurrent and capital spending from government (central and local) budgets, external borrowings and grants (including donations from international agencies and nongovernmental organizations), and social (or compulsory) health insurance funds.

[19] General government expenditure on education (current, capital, and transfers) is expressed as a percentage of GDP. It includes expenditure funded by transfers from international sources to government. General government usually refers to local, regional and central governments.

[20] Gupta and others (2014) and Kamps (2006).

[21] Social expenditure is defined as transfers in cash or in kind to protect the entire population or specific segments of it against certain social risks. They are classified according to the type of scheme governing their payment, and consist of social security benefits, social assistance benefits, and employer social benefits (GFSM 2001, paragraphs 6.67-6.72). The payment of pensions and other retirement benefits through employer social insurance schemes are not expense; they are treated as reductions in liabilities.

Appendix B. Frequency and Trends in the Application and Conformity to Expenditure Conditionality

QPCs encompass conditions on general or central government expenditure, wage outlays, public investment and other current or capital expenditures. The second most common type of condition is indicative targets (IT). ITs, along with structural benchmarks (SB), tend to be imposed on social protection, priority spending and wage bill conditions. ITs, QPCs, and SBs, have relatively high success rates in implementation, with 76 percent of the conditions met on average across all spending categories. Prior actions (PAs), on the other hand, are actions that the authorities agree to take before the approval of the IMF Executive board, when IMF provides financing or completes a review; thus, as expected nearly all of those conditions are met. SBs are mostly in the form of PFM conditions. PFM conditionality is largely concerned with the accumulation and stock of arrears, accounting and budgeting, and institutional and legislative frameworks. PFM conditions experience a slightly higher rate of success, with approximately 82 percent of the conditions met on average across all PFM categories. Appendix Tables B1 (B2) show a heat map of the frequency of each spending (PFM) conditionality and their rates of successful implementation.

Appendix Table B1. Frequency and Implementation Rates – Spending Conditionality

Total number	General/Central government expenditure	Subsidies	Wage Bill	Social Protection and priority spending - floor	Pensions	Public Investment and Public Private Partnerships (PPPs)
IT	29	0	19	231	0	0
QPC	381	20	178	25	14	34
SB	3	14	58	97	86	4
PA	0	6	30	29	29	0

Percent met	General/Central government expenditure	Subsidies	Wage Bill	Social Protection and priority spending - floor	Pensions	Public Investment and Public Private Partnerships (PPPs)
IT	69		63	61		
QPC	70	90	70	56	64	65
SB	100	86	88	81	78	100
PA		100	97	100	100	

Number of countries	106
Number of programs	212

Note: Upper table shows heat map of the frequency of each type of conditionality, those with greater frequency appear in darker red. The lower table illustrates the heat map of success rate of implementing conditionality with dark blue denoting the highest, and red for the lowest rate.

Appendix Table B2. Frequency and Implementation Rates – PFM Conditionality

Total number	Arrears (accumulation and stock)	Arrears (payment) - floor	Extra-budgetary spending	Ceiling on specific expenditures	Accounting and Financial Reporting	Budget Execution and Control	General PFM Reform	Institutional Design	Legislative Framework	Macrofiscal/Budget Preparation	Public investment	Total
IT	7	7	7	5	0	17	12	0	0	0	0	334
QPC	444	24	16	9	0	13	1	0	0	193	0	1352
SB	26	33	25	12	100	229	144	108	102	105	58	1204
PA	12	16	4	2	24	65	43	13	37	60	7	377

Percent met	Arrears (accumulation and stock)	Arrears (payment) - floor	Extra-budgetary spending	Ceiling on specific expenditures	Accounting and Financial Reporting	Budget Execution and Control	General PFM Reform	Institutional Design	Legislative Framework	Macrofiscal/Budget Preparation	Public investment	Total
IT	71	86	86	80		82	75					65
QPC	72	79	81	78		85	100			75		72
SB	85	91	88	75	81	79	82	75	88	84	78	82
PA	100	100	100	100	100	100	100	100	100	100	100	100

Number of countries	106
Number of programs	212

Note: Upper table shows heat map of the frequency of each type of conditionality, those with greater frequency appear in darker red. The lower table illustrates the heat map of success rate of implementing conditionality with dark blue denoting the highest, and red for the lowest rate.

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