

Fiscal Adjustments in Latin America: The Role of Composition and Public Debt

By Jose Ignacio Lopez and Jonathan Malagon



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Abstract

Fiscal consolidations are widely regarded as contractionary, yet whether the composition of adjustment matters remains an open question, particularly in emerging economies. We study the macroeconomic effects of fiscal consolidation in Latin America using a narrative dataset of 61 deficit-driven adjustment episodes identified from IMF Article IV reports for nine economies over 1989–2024, constructed with the assistance of large language models. A 1% of GDP consolidation reduces real GDP by approximately 0.9% on impact and by 0.5% after two years. In the unconditional sample, tax-based and spending-based plans have indistinguishable output costs. Once we condition on the initial level of public debt, however, a sharp asymmetry emerges: at elevated debt levels, the output cost of a tax-based consolidation is approximately 4.7 times that of a comparable spending-based plan. Spending-based consolidations also raise the probability of a durable improvement in the primary balance by 9 percentage points at the two-year horizon and 16 percentage points at the three-year horizon, while tax-based plans have no detectable effect. Our findings suggest that fiscal adjustment is fundamentally state dependent: the composition of consolidation becomes a first-order determinant of both its macroeconomic costs and its fiscal effectiveness precisely when public debt is high.

Keywords: Fiscal consolidation, fiscal multiplier, public debt, narrative identification, Latin America.

JEL Codes: E62, E32, H62, H63, F41.

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1 Introduction

The macroeconomic consequences of fiscal policy adjustments occupy a central place in Latin America's economic policy debates. The region has been characterized by recurrent episodes of macroeconomic instability that, in many cases, can be traced to fragile and unsustainable fiscal positions (Kehoe and Nicolini (2022)). Extended periods of fiscal expansion, marked by sustained increases in government spending that are not matched by stable sources of revenue, have repeatedly given way to rising public debt, widening sovereign risk premia, and, ultimately, balance-of-payments crises. The resulting costs—in terms of lost output, financial disruption, and welfare—have made fiscal consolidation one of the defining macroeconomic policy challenges confronting Latin American economies.

Despite the policy relevance of these issues, the empirical literature provides only limited guidance on two questions that are central for policymakers. Recent advances in narrative identification have substantially improved our understanding of the macroeconomic effects of fiscal consolidation (Romer and Romer (2010); Devries et al. (2011); Guajardo et al. (2014); Alesina et al. (2018); Cloyne et al. (2020)). For Latin America, Carrière-Swallow et al. (2021) show that a fiscal consolidation equivalent to one percent of GDP reduces output by approximately 0.9 percent within two years, an effect remarkably similar to that found for advanced economies. Yet two questions remain largely unresolved. First, do the macroeconomic effects of fiscal consolidation depend on the initial level of public indebtedness? Second, does the composition of adjustment become more important precisely when concerns about fiscal sustainability are greatest?

This paper addresses both questions. We construct a new narrative dataset covering 61 deficit-driven fiscal consolidation episodes across nine Latin American economies over the period 1989–2024, extending the work of Carrière-Swallow et al. (2021) to include the post-pandemic adjustment cycle, during which public debt ratios reached historically elevated levels throughout the region. Following the principles established by Romer and Romer (2010) and Devries et al. (2011), we identify discretionary fiscal policy actions from IMF Article IV consultation reports, complemented by national budget documents and central bank publications. As a methodological innovation, we employ large language models to assist the systematic classification of policy measures while preserving the logic and transparency of the narrative approach.

Our main finding is that fiscal adjustment is fundamentally state dependent. In the unconditional sample, tax-based and spending-based consolidations produce statistically indistinguishable output losses. Once initial public debt is taken into account, however, a sharp asymmetry emerges. At elevated debt levels, tax-based consolidations become substantially more contractionary than comparable spending-based adjustments, while spending-based consolidations are also significantly more likely to generate durable improvements in the primary balance. The evidence therefore suggests that the composition of fiscal consolidation becomes a first-order policy consideration precisely

when governments face the greatest fiscal constraints.

Our paper contributes to the literature in three ways. First, it extends the narrative evidence on fiscal consolidation in Latin America by incorporating the post-pandemic period, when fiscal adjustment occurred under historically high levels of public debt. Second, it identifies initial public debt as a key state variable governing both the macroeconomic costs and the fiscal effectiveness of consolidation, complementing the literature on state-dependent fiscal multipliers (Auerbach and Gorodnichenko (2012, 2013), 2013; Jordà and Taylor (2016); Ramey and Zubairy (2018)) by emphasizing fiscal rather than cyclical conditions. Third, it proposes a transparent and replicable procedure for using large language models to extend the construction of narrative fiscal datasets while remaining faithful to the identification principles developed by Romer and Romer (2010) and Devries et al. (2011).

The remainder of the paper is organized as follows. Section 2 describes the construction of the narrative data set, including the role of large language models in classifying fiscal policy actions, and presents summary statistics on the identified consolidation episodes. Section 3 discusses the identification strategy and tests the orthogonality of the narrative shocks to news regarding current and prospective economic conditions. Section 4 presents the baseline estimates of the output effects of fiscal consolidation and the state-dependent results conditional on the initial level of public debt. Section 5 analyzes the determinants of consolidation success.

2 Related Literature

The debate on whether fiscal consolidation can be expansionary in the short run dates to Giavazzi and Pagano (1990), who documented episodes in which fiscal contractions appeared to stimulate private demand through confidence and wealth effects. Alesina and Perotti (1997) and Alesina and Ardagna (2010) extended this evidence to OECD panels, finding that spending-based adjustments were particularly likely to avoid contractionary outcomes. However, these studies identified fiscal consolidations using changes in the cyclically adjusted primary balance (CAPB), a measure that conflates policy actions with non-policy developments—such as asset price booms—that simultaneously improve fiscal balances and boost output. As a result, CAPB-based estimates are biased toward overstating expansionary effects.

Guajardo, Leigh, and Pescatori (2014) provide the decisive methodological rebuttal. Using a narrative dataset of 173 deficit-driven fiscal actions for 17 OECD economies over 1978–2009, they show that the CAPB is correlated with real-time GDP forecast revisions while their narrative series is not, confirming the endogeneity of the conventional measure. Under narrative identification, fiscal consolidation is unambiguously contractionary: a 1 percent of GDP adjustment reduces output by approximately 0.9 percent within two years. Spending-based consolidations produce smaller output losses than tax-based ones, but the authors attribute this differential largely to greater mon-

etary accommodation following expenditure cuts rather than to inherently expansionary demand channels. Alesina, Favero, and Giavazzi (2015, 2018) refine this result by analyzing multi-year fiscal plans, finding some support for the composition hypothesis in advanced economies when the full adjustment episode is the unit of analysis. Ramey (2019) synthesizes these debates, highlighting that divergences across studies reflect differences in identification, multiplier definition, and sample composition rather than genuine disagreement about the direction of effects.

Most recently, Bianchi, Ottonello, and Presno (2023) show that, in the presence of endogenous sovereign default risk, optimal fiscal policy is non-monotonic in the level of public debt: governments should provide stimulus at low debt levels and austerity at intermediate levels, even during recessions, because the rise in sovereign spreads associated with additional borrowing constrains future fiscal space. Their model rationalizes the procyclical fiscal stance often observed in emerging economies with elevated debt, and provides a theoretical channel through which the macroeconomic effects of consolidation could depend asymmetrically on the initial debt position—a prediction we test directly in this paper.

A parallel literature documents that multiplier size depends critically on initial conditions. Auerbach and Gorodnichenko (2012) show that multipliers are substantially larger during recessions than expansions, while Ilzetzki, Mendoza, and Végh (2013) find that openness, exchange rate flexibility, and debt levels are key moderating factors. Jordà and Taylor (2016) confirm these state-dependent patterns using propensity-score methods that account for the predictability of consolidation episodes. These findings imply that the contractionary or expansionary character of fiscal adjustment cannot be assessed independently of the macroeconomic context—a consideration especially relevant for the LAC region, where commodity cycles, heterogeneous monetary frameworks, and recurring sovereign financing pressures create volatile and shifting initial conditions.

Despite this rich literature, evidence for Latin America and the Caribbean remains thin. Most studies that include emerging markets do so through aggregate panels using SVAR methods that cannot isolate region-specific dynamics. Carrière-Swallow, David, and Leigh (2021) provide the only narrative-based analysis of fiscal consolidation in LAC, constructing a dataset of 76 episodes for 14 economies over 1989–2016. Their headline finding—a cumulative output loss of 0.9 percent after two years per 1 percent of GDP adjustment—mirrors OECD estimates and confirms that narrative identification matters for emerging economies. However, the effect of fiscal composition remains unresolved: expenditure-based adjustments appear somewhat more contractionary than tax-based ones (–1.6 versus –0.8 percent), inverting the pattern found in advanced economies, but the difference is statistically insignificant. A key limitation is the severe imbalance in the sample—only 18 expenditure-based episodes versus 55 tax-based. Ardanaz, Cavallo, Izquierdo, and Puig (2021) complement this evidence by showing that protecting public investment during consolidation mitigates output losses in emerging economies, suggesting that the spending-versus-taxes binary is itself too coarse to capture the heterogeneity of adjustment in LAC.

More broadly, [Balasundharam, Basdevant, Benicio, Ceber, Kim, Mazzone, Selim, and Yang \(2023\)](#) conclude that consolidation success depends on institutional quality, the pace and credibility of adjustment, and macroeconomic conditions—not on composition alone. [Ando, Mishra, Patel, Peralta-Alva, and Presbitero \(2025\)](#) show that, on average, fiscal consolidations have minimal effects on debt-to-GDP ratios because output losses partially offset the primary balance improvement. Consolidations that do reduce debt occur during expansions, when crowding-in of private investment is large and monetary accommodation is available. Critically, in emerging markets, fiscal composition does not systematically predict whether consolidation succeeds in reducing debt ratios—consistent with the inconclusive composition evidence for LAC.

Narrative identification consistently yields contractionary multipliers for both advanced economies and LAC, and the macroeconomic context—especially the business cycle and monetary space—moderates these effects. What remains open is whether, and under what conditions, the composition of fiscal adjustment in LAC generates non-Keynesian responses. The absence of a definitive answer reflects genuine data constraints rather than theoretical ambiguity, and addressing this gap is the central contribution of the present paper.

3 Data sources

This section describes the construction of the data set used in the empirical analysis. We first present the country sample and the main data sources. We then describe the narrative procedure used to identify fiscal consolidation episodes, including the role of large language models in assisting the classification of policy documents. We close by detailing the construction of the variables used in our state-dependent analysis—the initial level of public debt and the success indicator—and by reporting summary statistics on the identified episodes.

3.1 Country Sample and Data Sources

Our sample comprises nine Latin American economies—Argentina (ARG), Brazil (BRA), Chile (CHL), Colombia (COL), Costa Rica (CRI), the Dominican Republic (DOM), Mexico (MEX), Peru (PER), and Uruguay (URY)—over the period 1989–2024¹. The selection reflects the availability of consistent historical data on public finances, the relevance of the countries for the regional debate

¹The nine economies in our sample jointly account for the bulk of aggregate output in Latin America and span the main sub-regional groupings, including the largest economies of South America (Argentina, Brazil, Chile, Colombia, Peru, Uruguay), the two largest economies of the northern part of the region (Mexico and Costa Rica), and the largest Caribbean economy with a consistent record of fiscal policy reporting (the Dominican Republic). Relative to the fourteen-country sample of [Carrière-Swallow, David, and Leigh \(2021\)](#), we exclude Bolivia, Ecuador, Guatemala, Jamaica, and Paraguay, for which historical fiscal series and IMF Article IV documentation are less continuous over the 1989–2024 window, particularly for the extended post-2016 period covered by our analysis. The remaining nine countries provide an uninterrupted coverage of primary balance, public debt, and macroeconomic series required for the local-projection estimation, as well as the policy documentation required for the narrative identification.

on fiscal sustainability, and the existence of contemporaneous policy documents that allow for the systematic identification of narrative fiscal shocks.

We combine several sources to construct the analytical sample. Long-run series on primary balances, government revenue, and government expenditure draw on the historical database compiled by Mauro, Romeu, Binder, and Zaman (2015), which we extend forward using national fiscal accounts and the IMF World Economic Outlook (WEO) database. Public debt-to-GDP ratios are taken from the IMF Historical Public Debt Database, complemented by national sources for the most recent years. Real GDP, inflation, and interest rate series are drawn from the WEO and from national accounts and central bank publications for each country, with cross-checks against the Global Macro Database. The commodity terms-of-trade variable is the country-specific commodity import price index constructed by the IMF, with individual commodity prices weighted by the ratio of each country's commodity imports to GDP. The narrative identification of fiscal consolidation episodes draws on the annual IMF Article IV consultation reports issued for each country and is supplemented by national budget documents and central bank annual reports.

3.2 Identifying Fiscal Consolidations: A Narrative Approach

Following Romer and Romer (2010) and Devries, Guajardo, Leigh, and Pescatori (2011), we adopt a narrative approach to identify discretionary fiscal policy actions motivated by a desire to reduce the budget deficit or to ensure long-term fiscal sustainability, rather than by an intention to respond to current or prospective cyclical conditions. The narrative approach addresses well-known concerns with conventional identification strategies. Measures based on the cyclically adjusted primary balance include shifts in fiscal variables that are unrelated to policy decisions—most notably commodity price swings, which are of first-order importance for the region—and may also reflect deliberate policy responses to current macroeconomic conditions. SVAR-based identification, in turn, relies on the assumption that, after controlling for lags of output growth, changes in government revenue and expenditure are uncorrelated with other short-run determinants of output, and abstracts from the issue of forward-looking policy responses. As Romer and Romer (2010) and Carrière-Swallow, David, and Leigh (2021) discuss, these issues are likely to bias conventional estimates toward understating the causal effects of fiscal policy.

For each country and year in the sample, we examine the corresponding IMF Article IV staff report, paying particular attention to the descriptions of fiscal policy actions, the motivation cited by the authorities, and the contemporaneous estimates of the budgetary impact of the measures. We record as a narrative fiscal shock any policy action whose stated motivation in the historical record is consistent with deficit reduction or with longer-term considerations of fiscal sustainability, and we exclude actions undertaken in response to a contracting economy or to restrain abnormal demand. Following Romer and Romer (2010), we use the contemporaneous estimates of the budgetary impact

reported in the source documents and measure each policy change in percent of GDP. Only measures that were effectively implemented, according to the historical record, are included in the data set; announcements that did not materialize are excluded.

The volume of policy documents required to cover nine countries over thirty-six years exceeds what can be processed manually with reasonable consistency. To address this challenge, we assist the narrative classification with large language models. For each Article IV report, the model is prompted to extract structured information on fiscal policy measures—including their description, motivation, expected budgetary impact, timing, and whether they were implemented—following a coding protocol that mirrors the criteria proposed by [Romer and Romer \(2010\)](#) and [Devries et al. \(2011\)](#).

3.3 Composition: Tax-Based versus Spending-Based Adjustments

For each identified episode, we further classify the consolidation as tax-based or spending-based depending on whether revenue measures or expenditure measures account for the larger share of the budgetary impact. Episodes in which the two components contribute in approximately equal proportion are classified as mixed and treated separately in the empirical analysis. This classification is implemented at the level of the individual policy action when the source documents provide a sufficiently detailed decomposition, and at the aggregate package level otherwise.

3.4 Initial Public Debt and the High-Debt State

A central focus of our analysis is the role of the initial level of public indebtedness in shaping the macroeconomic effects of fiscal consolidation. We measure public debt as the general government debt-to-GDP ratio, drawn from the IMF Historical Public Debt Database and updated through 2024 with national fiscal accounts and WEO data. To classify consolidation episodes by the initial debt level, we adopt a country-specific definition that accounts for cross-country heterogeneity in steady-state debt levels and historical experience. For each country, we compute the empirical quintiles of the debt-to-GDP distribution over the full sample period and classify an episode as occurring in a high-debt state when the debt-to-GDP ratio in the year preceding the adjustment falls in the top two quintiles of the country's own distribution. This within-country approach prevents the high-debt classification from being mechanically dominated by countries with persistently elevated debt levels, and ensures that the state indicator captures meaningful deviations from each country's own historical experience.

3.5 Defining Successful Consolidations

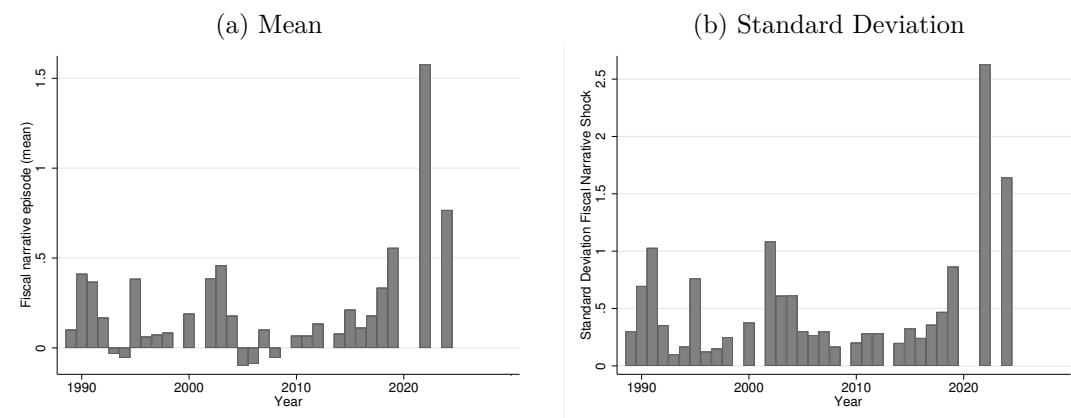
To investigate the determinants of consolidation success, we construct a binary indicator that captures the durability of the improvement in the fiscal position following a consolidation episode.

The indicator takes the value of one when the primary balance, measured in percent of GDP, improves by at least 1.5 percentage points relative to the year preceding the adjustment, with the improvement evaluated over a two-year window following the episode. This definition is in the tradition of [Alesina and Perotti \(1995\)](#) and subsequent contributions to the literature on the success of fiscal adjustments, and is intentionally agnostic as to whether the improvement is achieved through the cumulative effect of multiple measures or through a single dominant action. Primary balance series come from [Mauro, Romeu, Binder, and Zaman \(2015\)](#), updated with WEO data and with national fiscal accounts for the most recent years.

3.6 Summary of the Data Set

Across the nine countries and the 1989–2024 period, our procedure identifies 61 fiscal consolidation episodes. The unconditional mean of the fiscal narrative variable is 0.18% of GDP, with a standard deviation of 0.7 percentage points and a range running from -0.9% to 7% of GDP. The average fiscal consolidation episode is equal to 0.98% of GDP. We identify 48 tax-based and 28 spending-based adjustments. Of the 61 fiscal episodes, 62% are such that the tax-based measures explain most of the consolidation measure. About 26% of the episodes occur in a high-debt state as defined in Section 3.4. Table [1] in the online appendix reports the full list of episodes by country and year. Figure (1) displays the cross-country mean (Panel a) and standard deviation (Panel b) of the narrative fiscal shock for each year of the sample. Two patterns are visible. First, the magnitude of identified consolidations rises sharply in the post-2020 portion of the sample: the cross-country mean reaches approximately 1.5% of GDP in 2022—roughly three times the maximum value observed in any earlier year—and remains elevated through 2023. This pattern reflects the substantial fiscal adjustments undertaken across the region in response to the rapid accumulation of public debt during the COVID-19 crisis. Second, the cross-country dispersion of the narrative shock widens markedly in the same post-pandemic years, with the standard deviation reaching approximately 2.5% of GDP in 2022. This indicates that the post-COVID adjustment cycle has been characterized by considerable heterogeneity across countries, with some economies undertaking large consolidations while others continue to expand fiscal policy or implement only modest adjustments. This temporal expansion of both the level and the dispersion of fiscal adjustment efforts in Latin America provides additional identifying variation for our local-projection estimation, and is a central reason for extending the sample beyond the 1989–2016 window of [Carrière-Swallow, David, and Leigh \(2021\)](#).

Figure 1: **Fiscal Narrative Shocks**



3.7 Comparison with Changes in the Cyclically Adjusted Primary Balance

To assess how our narrative measure of fiscal policy changes compares with conventional indicators of the fiscal policy stance, we contrast each identified episode with the contemporaneous change in the cyclically adjusted primary balance (CAPB). The CAPB series come from the IMF World Economic Outlook database, supplemented for the country-year observations in which the series is not directly available with a measure constructed following the standard procedure described in the Online Appendix. We then plot, for each country-year observation in our sample, the magnitude of the narrative fiscal shock against the corresponding change in the CAPB.

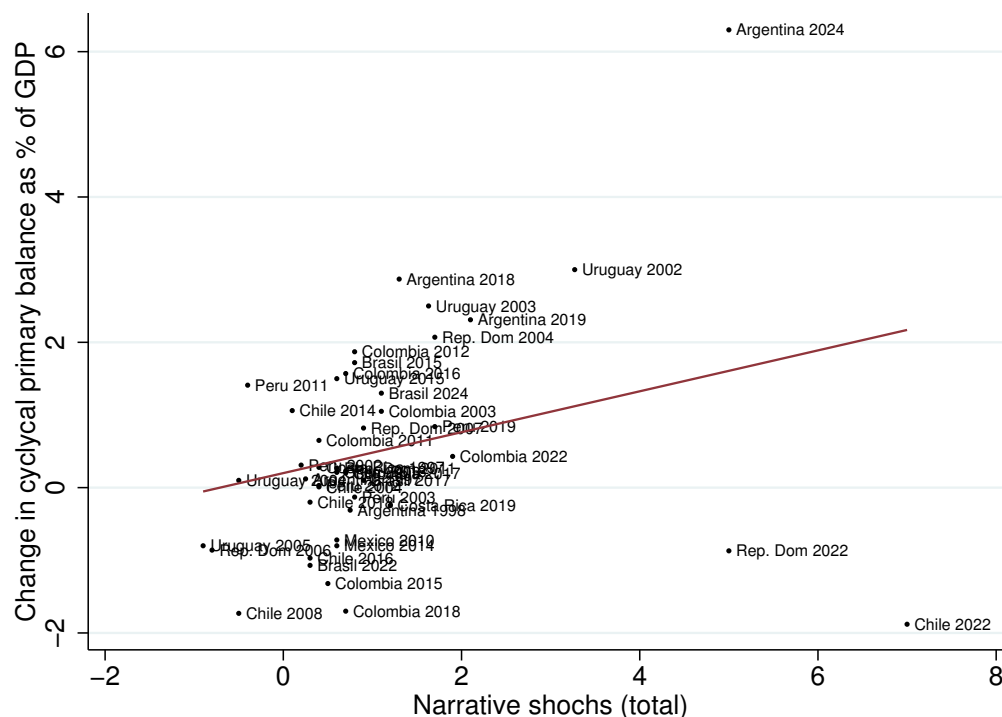
The unconditional correlation between the two measures across the full set of country-year observations is 0.16. This figure rises to 0.28 when the comparison is restricted to country-years for which our narrative procedure identifies a non-zero discretionary fiscal action, indicating that a sizable share of the apparently weak correlation in the full sample is driven by years in which the CAPB moves for reasons unrelated to discretionary policy. Figure 1 displays the relationship between the two measures for the 61 fiscal consolidation episodes identified through our narrative procedure. The positive association between the narrative shocks and the change in the CAPB is visually apparent: years in which our procedure identifies a sizable deficit-driven adjustment tend to be years in which the CAPB also tightens, and the linear fit broadly aligns with the 45-degree benchmark over much of the support of the data.

At the same time, the figure makes clear that the two measures disagree in non-trivial ways about both the existence and the magnitude of fiscal adjustment in a meaningful number of country-year

observations. Consistent with the evidence documented by Carrière-Swallow, David, and Leigh (2021) for their broader Latin American sample, these gaps are typically the product of specific economic or budgetary circumstances that lead the CAPB-based measure to misrepresent the size of policy-driven fiscal adjustment. The CAPB incorporates shifts in fiscal variables that are unrelated to discretionary policy decisions—most notably swings in commodity prices, which are of first-order importance for the public finances of the region’s commodity-exporting economies—and may also reflect deliberate policy responses to current macroeconomic conditions, including the onset of recession, rather than autonomous deficit-reduction efforts. Our review of the historical record for the largest discrepancies in our sample, detailed in the Online Appendix, supports this interpretation and reinforces the case for the narrative approach as a more accurate measurement of discretionary, deficit-driven fiscal adjustment in Latin American economies than the CAPB.

Figure 1 also illustrates the value added of extending the sample period studied by Carrière-Swallow, David, and Leigh (2021). A non-trivial fraction of the consolidation episodes identified in our data set takes place after the onset of the COVID-19 pandemic, when public debt ratios in the region rose to historically elevated levels and a substantial number of countries undertook efforts to consolidate the fiscal position. This extension makes it possible to assess the heterogeneous effects of fiscal adjustment—differentiated by size, composition, and initial fiscal conditions—on the post-pandemic recovery of Latin American economies, as well as the effectiveness of these programs in delivering durable corrections to the fiscal imbalances accumulated during the pandemic

Figure 2: Narrative Shocks and Changes in the Cyclical Primary Balance as % of GDP



3.8 Orthogonality to News About the State of the Economy

A central premise of the narrative identification strategy is that the fiscal policy actions captured by our measure are orthogonal to current economic developments. As [Romer and Romer \(2010\)](#) and [Devries, Guajardo, Leigh, and Pescatori \(2011\)](#) emphasize, only fiscal actions that are unrelated to short-run output movements can be used to estimate the causal effect of fiscal policy on activity; actions undertaken in response to a contracting or overheating economy would, in principle, bias the estimated fiscal multiplier toward smaller values. While the narrative procedure described in Section 3.2 explicitly excludes from the data set fiscal actions whose stated motivation is the management of cyclical conditions, it remains an empirical question whether the resulting series of identified shocks is, in practice, uncorrelated with unexpected movements in output.

We assess orthogonality in two steps. First, we construct a measure of economic news as the component of real GDP growth that cannot be anticipated on the basis of conditioning information available at the start of the period. Specifically, we estimate the following predictive model for the

real GDP growth rate of country i in year t :

$$\Delta y_{i,t} = \gamma_i + \varphi_1 \Delta y_{i,t-1} + \varphi_2 \Delta \bar{y}_{-i,t-1} + \varphi_3 \Delta tot_{i,t-1} + \varphi_4 i_{i,t-1} + u_{i,t} \quad (1)$$

where $\Delta y_{i,t}$ is the real GDP growth rate, $\Delta y_{i,t-1}$ is the lagged country-specific growth rate, $\Delta \bar{y}_{-i,t-1}$ is the lagged average growth rate of the eight other Latin American economies in the sample (constructed in a leave-one-out fashion to avoid mechanical correlation with the country's own growth), $\Delta tot_{i,t-1}$ is the lagged change in the country-specific commodity terms-of-trade index, $i_{i,t-1}$ is the lagged short-term nominal interest rate, and γ_i is a country fixed effect. The residual $\hat{u}_{i,t}$ captures the component of growth that cannot be predicted from the conditioning information and is interpreted as the news, or unexpected growth innovation, in country i during year t .

Second, we regress our narrative fiscal shocks on this news variable, allowing for country and time fixed effects:

$$\Delta F_{i,t} = \alpha_i + \delta_t + \beta \hat{u}_{i,t} + \varepsilon_{i,t} \quad (2)$$

where $\Delta F_{i,t}$ denotes the narrative fiscal shock in country i and year t expressed in percent of GDP, $\hat{u}_{i,t}$ is the news variable obtained from estimation of equation (1), and α_i and δ_t are country and time fixed effects, respectively. Under the identifying assumption, β should not be statistically distinguishable from zero.

The estimated coefficient is $\beta = -0.04$, with a standard error of 0.02 and a t-statistic of 1.86. The relationship between our narrative fiscal shocks and unexpected movements in output is therefore marginally significant at the 10% level but small in absolute magnitude. The point estimate is identical in sign and magnitude to the value of -0.04 reported by [Carrière-Swallow, David, and Leigh \(2021\)](#) for their fourteen-country Latin American sample, and broadly comparable to the value of -0.07 (SE 0.07) reported by [Guajardo, Leigh, and Pescatori \(2014\)](#) for the analogous test applied to a sample of seventeen advanced economies. Both the small magnitude of the coefficient and its consistency with prior evidence across distinct samples provide reassurance that our narrative procedure—including the use of large language models to assist in the classification of policy actions reported in Article IV documents—does not introduce systematic correlation with unexpected economic developments. We interpret this result as supporting the validity of the narrative measure as a basis for the causal estimation of fiscal multipliers in our sample.

The approach we adopt—using the residual from a panel regression of real GDP growth on a parsimonious set of lagged macroeconomic predictors—differs from the approach typically employed in the narrative-shock literature, which constructs the news measure from real-time revisions to professional forecasts of GDP growth, as in [Carrière-Swallow, David, and Leigh \(2021\)](#) and [Guajardo, Leigh, and Pescatori \(2014\)](#). Both procedures aim to capture the unanticipated component of output movements, but they differ in their data requirements. Forecast-revision approaches require access to historical vintages of forecasts from the IMF World Economic Outlook or analogous pub-

lications, which are not always readily available across the full historical span and country coverage required for cross-country analyses of emerging market economies, and whose reconstruction is itself a non-trivial data exercise. The residual-based approach we adopt, by contrast, requires only standard macroeconomic series available in widely-used public databases and is therefore directly replicable and straightforward to extend to alternative samples or time periods. The closeness of the coefficient estimates obtained under the two approaches—both within our sample and across the comparator studies of [Carrière-Swallow, David, and Leigh \(2021\)](#) and [Guajardo, Leigh, and Pescatori \(2014\)](#))—suggests that the choice between them does not materially affect the conclusions drawn about the validity of the narrative identification strategy.

It is worth emphasizing, following [Carrière-Swallow, David, and Leigh \(2021\)](#), that the finding of orthogonality to current economic developments does not imply that the narrative shocks are unrelated to past developments. Since the fiscal consolidations we identify are typically motivated by the desire to reduce inherited budget deficits, they are likely to be correlated with past macroeconomic and fiscal outcomes, and to be predictable to some extent on the basis of pre-determined information. This pattern of predictability is consistent with the original motivation of [Romer and Romer \(2010\)](#) and does not invalidate the use of the narrative shocks for causal inference, provided that the identifying assumption of orthogonality to current developments holds—as is the case in our sample

3.9 Estimation Framework

We estimate the macroeconomic effects of fiscal consolidation using the local projection (LP) method of [Jordà \(2005\)](#). The LP framework is preferable to structural vector autoregression in this context because it does not constrain the shape of the impulse response function and is less sensitive to dynamic misspecification, particularly in panel settings with limited time-series coverage per country. Our baseline specification is:

$$\Delta y_{i,t+h} = \alpha_i + \beta F_{i,t} + \Gamma^h X_t + \varepsilon_{i,t+h} \quad (3)$$

for $h = 0, 1, 2$, where $y_{i,t}$ denotes the growth of real GDP, $F_{i,t}$ is the narrative fiscal shock in country i in year t expressed in percent of GDP, α_i^h is a country fixed effect specific to horizon h , $X_{i,t}$ is a vector of macroeconomic controls, and $\varepsilon_{i,t+h}$ is the error term. The coefficient of interest, β^h , captures the cumulative percentage response of real GDP at horizon h to a one percentage point of GDP fiscal consolidation in year t . We define the fiscal multiplier as the response of the level of real GDP to the narrative shock at each horizon, consistent with the conventions adopted by [Ramey and Zubairy \(2018\)](#) and [Carrière-Swallow, David, and Leigh \(2021\)](#).

The control vector $X_{i,t}$ includes the contemporaneous average growth rate of the eight other Latin American economies in the sample (constructed in a leave-one-out fashion to avoid mechanical

correlation with the country's own growth), the lagged country-specific growth rate, the contemporaneous change in the country-specific commodity terms-of-trade index, the domestic short-term nominal interest rate, and the inflation rate. The inclusion of the regional growth average serves to absorb common business-cycle factors affecting Latin America, while preserving the cross-sectional variation within each year that is essential for identifying country-specific multipliers; this design is preferred to the alternative of time fixed effects, which would also absorb the regionally-correlated component of the narrative shocks themselves. The lagged country growth rate captures persistent country-specific dynamics; the commodity terms-of-trade variable absorbs the direct effect of commodity-price movements on activity, which is of first-order importance in our sample of largely commodity-exporting economies; the inclusion of the interest rate addresses the monetary–fiscal interaction issue discussed in Section 3.1; and the inflation rate accounts for the broader macroeconomic environment surrounding the adjustment. Equation (3) is estimated by ordinary least squares with heteroskedasticity-robust standard errors clustered at the country level, allowing for arbitrary serial correlation in the error term within each country.

4 Baseline Results

Table 1 reports the estimates of equation (3) for horizons $h = 0, 1, 2$. The narrative fiscal shock enters with a negative and statistically significant coefficient at all three horizons, confirming that fiscal consolidation has contractionary effects on output in our sample of Latin American economies. A 1% of GDP consolidation reduces real GDP by 0.92 percentage points on impact, by 0.89 percentage points after one year, and by 0.52 percentage points after two years, with all three estimates significant at the 5% level. The contractionary effect peaks at impact and gradually attenuates by the second horizon, consistent with a temporary disruption of economic activity that fades as the economy adjusts to the new fiscal stance. The estimated magnitudes are broadly consistent with—and somewhat larger than—the cumulative multiplier of approximately 0.9% reported by Carrière-Swallow, David, and Leigh (2021) for their fourteen-country Latin American sample, indicating that the contractionary character of fiscal consolidation in the region has remained stable across the extended sample period and the alternative procedure used here to construct the narrative measure.

Regarding the control variables, the change in the country-specific commodity terms-of-trade index enters strongly and positively at the first two horizons (1.52, significant at 1%, and 0.70, significant at 5%, at $h = 0$ and $h = 1$ respectively), confirming the first-order importance of commodity-price dynamics for output in our sample of largely commodity-exporting economies. This result reinforces the methodological argument advanced in Section 3.2: failing to control for terms-of-trade movements would conflate the effects of commodity cycles with those of discretionary fiscal policy, and is one of the principal reasons the cyclically adjusted primary balance is

a problematic indicator of the fiscal stance in this region. The lagged country growth rate enters positively and significantly only at impact (0.14, significant at 10%), with the persistence dissipating at longer horizons. The short-term interest rate enters with a small, negative and persistently significant coefficient, consistent with the standard monetary transmission channel. The inflation rate is statistically significant only at impact and economically very small in magnitude. In its turn, the lagged regional growth average is not statistically significant.

Table 1: **The Effect of a 1% of GDP Fiscal Consolidation on Real GDP**

Equation estimated: $\Delta y_{i,t+h} = \alpha_i + \beta F_{i,t} + \Gamma^h X_t + \varepsilon_{i,t+h}$			
Variables	Horizon (h)		
	h=0	h=1	h=2
Narrative Fiscal Shock	-0.92** (0.30)	-0.89** (0.29)	-0.52** (0.21)
Lagged country growth	0.14* (0.07)	0.07 (0.08)	0.05 (0.06)
Terms-of-trade change	1.52*** (0.31)	0.70** (0.23)	0.32 (0.14)
Interest rate	-0.02** (0.01)	-0.02* (0.01)	-0.02* (0.01)
Lagged regional growth	-0.04 (0.11)	-0.05 (0.09)	-0.02 (0.07)
Inflation	-0.001*** (0.0002)	-0.0004 (0.0003)	-0.0003 (0.0003)
Observations	312	306	297
R^2 within	0.15	0.09	0.05
Country fixed effects	yes	yes	yes

Notes: The table reports estimates of equation (3), in which the dependent variable is the cumulative change in the log of real GDP between $t - 1$ and $t + h$, multiplied by 100 so that coefficients can be interpreted as percentage responses. The narrative fiscal shock is expressed in percent of GDP and is constructed as described in Sections 3.2 and 3.3. The regional growth average is the contemporaneous mean growth rate of real GDP across the nine Latin American economies in the sample. Heteroskedasticity-robust standard errors clustered at the country level are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. The sample comprises nine Latin American economies over 1989–2024.

Table 2 reports the estimates of allowing the response of output to fiscal consolidation to vary by composition (Panel A) and by the joint composition–initial debt state (Panel B), according to

the following equation:

$$\Delta y_{i,t+h} = \alpha_i + \beta_h^{spend} F_{i,t}^{spend} + \beta_h^{tax} F_{i,t}^{tax} + \Gamma^h X_t + \varepsilon_{i,t+h} \quad (4)$$

Panel A reports the estimates of equation (4), which decomposes the narrative fiscal shock into tax-based and spending-based components. As in the broader [Carrière-Swallow, David, and Leigh \(2021\)](#) sample, the average-sample evidence on the role of composition is inconclusive. The spending-based coefficient is consistently negative and statistically significant at all three horizons (-0.86 , -0.88 , and -0.75 at $h = 0, 1$, and 2 , respectively, all significant at the 5% level or better), while the tax-based coefficient is larger in absolute value at the early horizons but estimated with substantially less precision (-1.08 , -0.93 , and 0.01), and is not statistically distinguishable from zero at any horizon. The Wald test of equality between the two coefficients fails to reject the null at all horizons, with p-values of 0.68, 0.87, and 0.11. This result, taken at face value, would suggest that the composition of fiscal adjustment is irrelevant for its short-run output costs in our sample. Panel B, however, shows that this conclusion is misleading: the average response masks a sharply heterogeneous pattern once we condition on the level of public indebtedness at which the consolidation is undertaken.

Panel B reports the estimates of equation (5), which augments the composition specification with interaction terms between each composition-specific shock and an indicator for an episode occurring in a high-debt state. In this specification, the coefficient on the level term of each composition (β_h^{tax} and β_h^{spend}) captures the response of output to a 1% of GDP consolidation undertaken in the low-debt state, while the coefficient on the corresponding interaction term $\beta_{h,HD}^{tax}$ and $\beta_{h,HD}^{spend}$ captures the additional response when the adjustment is undertaken at elevated levels of public debt. The implied response in the high-debt state is therefore the sum of the base coefficient and the corresponding interaction.

The results reveal a striking asymmetry between tax-based and spending-based consolidations once the initial debt position is taken into account. In the low-debt state, tax-based adjustments have small and statistically insignificant effects on output at all horizons (-0.42 , -0.51 , and 0.24 , respectively), while spending-based adjustments are sharply contractionary, with coefficients of -1.30 (significant at 5%) on impact, -1.89 (significant at 5%) at $h = 1$, and -2.49 (significant at 5%) at $h = 2$. The interaction terms then deliver an asymmetric and economically meaningful amplification pattern. For tax-based consolidations, the interaction with the high-debt state is negative and large in magnitude, and statistically significant at the 1% level on impact (-2.67 , significant at 1%; -1.55 at $h = 1$; -0.56 at $h = 2$), implying that the contractionary effect of tax-based adjustments is substantially amplified when public debt is elevated. The total output response to a 1% of GDP tax-based consolidation in the high-debt state reaches approximately -3.09% on impact and -2.06% at $h = 1$, an order of magnitude larger than the corresponding low-

debt response. For spending-based consolidations, by contrast, the interaction with the high-debt state goes in the opposite direction—it is positive at all horizons (0.64, 1.13 significant at 10%, and 1.89 significant at 10%)—so that the contractionary effect of spending-based adjustments is muted in the high-debt state: the implied total response reaches approximately -0.66% at $h = 0$, -0.76% at $h = 1$, and -0.60% at $h = 2$, less than one-fourth of the low-debt response at the longer horizons and consistently below 1% in absolute value.

The Wald tests reported in the lower portion of Panel B test the null of equality between the total output responses to tax-based and spending-based consolidations in the high-debt state $H_0 : \beta_h^{tax} + \beta_{h,HD}^{tax} = \beta_h^{spend} + \beta_{h,HD}^{spend}$. The null is decisively rejected at the impact horizon ($F = 27.25$, $p = 0.0008$) and rejected at the 10% level at $h = 1$ ($F = 4.45$, $p = 0.07$). At $h = 2$ the test fails to reject ($F = 0.18$, $p = 0.68$), reflecting the substantial uncertainty in the dynamic responses at the longer horizon, where standard errors widen and the point estimates lose precision. The pattern of statistical significance closely tracks the economic content of the result: the asymmetric amplification is most pronounced and most precisely estimated in the short run, when the output cost of tax-based consolidation in the high-debt state reaches its peak and exceeds that of spending-based consolidation by a factor of approximately 4.7.

Table 2: The Effect of Fiscal Consolidation by Composition and Initial Debt Level

Equation estimated: $\Delta y_{i,t+h} = \alpha_i + \beta_h^{spend} F_{i,t}^{spend} + \beta_h^{tax} F_{i,t}^{tax} + \Gamma^h X_t + \varepsilon_{i,t+h}$			
	Horizon (h)		
Variables	h=0	h=1	h=2
Tax-based (β_h^{tax})	-1.08 (0.63)	-0.93 (0.59)	0.01 (0.39)
Spending-base (β_h^{spend})	-0.86*** (0.21)	-0.88** (0.30)	-0.75** (0.24)
Wald test, $H_0 : \beta_h^{tax} = \beta_h^{spend}$			
F-statistic	0.19	0.01	3.23
P-value	0.68	0.87	0.11
Observations	3142	306	297
R^2	0.15	0.09	0.05
Country fixed effects	yes	yes	yes
Controls	yes	yes	yes

Equation estimated: $\Delta y_{i,t+h} = \alpha_i + \beta_{h,}^{spend} F_{i,t}^{spend} + \beta_{h,HD}^{spend} F_{i,t,HD}^{spend} + \beta_h^{tax} F_{i,t}^{tax} + \beta_{h,HD}^{tax} F_{i,t,HD}^{tax} + \Gamma^h X_t + \varepsilon_{i,t+h}$			
Tax-based (β_h^{tax})	-0.42 (0.30)	-0.51 (0.75)	0.24 (0.51)
Tax-based-High-Debt ($\beta_{h,HD}^{tax}$)	-2.67*** (0.32)	-1.55 (1.17)	-0.56 (1.02)
Spend-based (β_h^{spend})	-1.30** (0.46)	-1.89** (0.79)	-2.49** (1.08)
Spend-based-High-Debt ($\beta_{h,HD}^{spend}$)	0.64 (0.52)	1.13* (0.62)	1.89* (0.98)
Wald test			
$H_0 : \beta_h^{tax} + \beta_{h,HD}^{tax} = \beta_h^{spend} + \beta_{h,HD}^{spend}$			
F-statistic	27.25	4.45	0.18
P-value	0.0008***	0.07*	0.68
Observations	314	306	297
R^2	0.15	0.10	0.12
Country fixed effects	yes	yes	yes
Controls	yes	yes	yes

Notes: Heteroskedasticity-robust standard errors clustered at the country level are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

The economic content of these findings is twofold. First, in normal times—when public debt is unremarkable by the country’s own historical standards—spending-based consolidations are more contractionary than tax-based ones in our sample. This pattern reverses the standard finding from advanced economies and may reflect the structure of public expenditure in Latin America, where a sizable share of spending is devoted to current transfers and public investment with multipliers on aggregate demand that are large in the short run. Second, and central to our contribution, when public debt is elevated this pattern reverses sharply: tax-based consolidation becomes substantially more contractionary, while spending-based consolidation becomes substantially less so.

This asymmetric amplification is consistent with the long-standing prediction of [Blanchard \(1990\)](#) and [Giavazzi and Pagano \(1990\)](#) that fiscal adjustment can be less costly—or even close to non-Keynesian—when it credibly addresses concerns regarding fiscal sustainability. More recently, [Bianchi, Ottonello, and Presno \(2023\)](#) have formalized this intuition within a small open economy model with endogenous sovereign default risk, showing that the optimal fiscal stance is non-monotone in the level of public debt and that the elevated sovereign risk premium that accompanies high debt levels fundamentally alters the calculus of fiscal adjustment. In their framework, incremental borrowing in a high-debt state widens spreads and compresses future fiscal space, while credible fiscal retrenchment reduces the risk premium and partially offsets the contractionary impulse on output. The empirical regularity that sovereign spreads rise sharply with public indebtedness in our sample of Latin American economies is well-documented ([Eichengreen and Mody \(2000\)](#); [Borensztein and Panizza \(2009\)](#)) and provides a direct mapping from their theoretical mechanism to our setting.

Although [Bianchi, Ottonello, and Presno \(2023\)](#) focus on the level of the fiscal stance rather than its composition, the mechanism extends naturally to our finding. Tax-based adjustments undertaken from a position of elevated debt—and hence elevated sovereign risk premia—likely reinforce the disincentive effects on private investment and consumption that are already weighed down by debt overhang, without delivering a sufficiently credible signal of fiscal sustainability to compress spreads materially. Spending-based adjustments, by contrast, appear to operate through the expectational channel emphasized by [Bianchi, Ottonello, and Presno \(2023\)](#): by signaling a durable reduction in the government’s future financing needs, they compress the sovereign risk premium and partially offset the negative demand impulse, mitigating the output cost of consolidation precisely when the perception of fiscal risk is most salient.

4.1 Alternative definitions of high indebtedness

The baseline specification employs a country-specific threshold set at the sixtieth percentile of each country’s own debt-to-GDP distribution, so that an episode is classified as high-debt when the debt ratio in the year preceding the adjustment falls in the top two quintiles of the country’s own

historical experience. This within-country design has the virtue of accommodating cross-country heterogeneity in steady-state debt levels, but it may also raise the concern that our results depend on the particular quintile threshold selected or on the country-specific nature of the definition itself. To assess robustness on these dimensions, we re-estimate the state-dependent specification using three alternative pooled thresholds: the 50th, 60th, and 70th percentiles of the debt-to-GDP distribution across all country-year observations in the sample. Under each alternative, the high-debt state is defined uniformly across countries as an episode in which the pre-adjustment debt ratio exceeds the corresponding pooled cutoff.

Table 3: **The Effect of Fiscal Consolidation by Composition and Initial Debt with alternative definitions of high indebtedness**

Variables	Alternative definitions of debt threshold		
	50th percentile pooled	60th percentile pooled	70th percentile pooled
Tax-based (β_0^{tax})	-0.36 (0.37)	-0.29 (0.36)	-0.39 (0.33)
Tax-based-High-Debt ($\beta_{0,HD}^{tax}$)	-2.42*** (0.37)	-3.01*** (0.42)	-3.23*** (0.60)
Spend-based (β_0^{spend})	-0.93*** (0.28)	-0.94*** (0.28)	-0.92*** (0.28)
Spend-based-High-Debt ($\beta_{h,HD}^{spend}$)	0.30 (0.28)	0.37 (0.30)	0.39 (0.31)
Wald test			
$H_0 : \beta_0^{tax} + \beta_{0,HD}^{tax} = \beta_0^{spend} + \beta_{0,HD}^{spend}$			
F-statistic	21.27	41.91	25.43
P-value	0.002***	0.0002***	0.001***

Notes: Heteroskedasticity-robust standard errors clustered at the country level are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

The results, reported in Table 3, show that the central asymmetric composition–debt finding is preserved under all three pooled definitions. The interaction term for the tax-based shock in the high-debt state remains negative, large in magnitude, and significant at the 1% level throughout (−2.42 at the 50th percentile, −3.01 at the 60th, and −3.23 at the 70th), while the interaction for the spending-based shock remains positive and small at every threshold (0.30, 0.37, and 0.39, respectively) and is not statistically distinguishable from zero in any specification. The implied total high-debt effect for tax-based consolidations therefore widens as the threshold becomes more restrictive (−2.78, −3.30, and −3.62 at the 50th, 60th, and 70th percentiles, respectively), while

the corresponding spending-based effect remains stable and small in absolute value (-0.63 , -0.57 , and -0.53). The Wald test of equality between the total high-debt effects continues to reject the null at conventional levels of significance at the impact horizon in every column ($p = 0.002$, 0.0002 , and 0.001 , respectively).

Taken together, these results indicate that the central asymmetric composition–debt result of Section 4 is not a product of the country-specific formulation of the high-debt state: replacing it with a uniform, pooled threshold — evaluated at three different cutoffs spanning the median to the 70th percentile of the pooled distribution — leaves the qualitative pattern, and in every case the statistical significance, intact. In every specification considered, the output cost of a tax-based consolidation undertaken at elevated debt levels significantly exceeds that of a comparable spending-based plan.

Latin American economies typically face the choice between tax-based and spending-based adjustment precisely in periods of elevated debt and constrained fiscal space. In these circumstances, our evidence indicates that the choice of composition carries substantial consequences for the output costs of the adjustment: at the impact horizon, a 1% of GDP consolidation pursued through expenditure restraint costs the economy roughly one-fifth of what an equivalent tax-based plan does. The complementary question of whether spending-based and tax-based consolidations also differ in their ability to deliver a durable improvement in the fiscal position is the subject of Section 5

5 Determinants of Consolidation Success

The analysis in Section 4 has established that the composition of fiscal adjustment carries substantial consequences for its output costs, particularly when the consolidation is undertaken at elevated levels of public debt. A natural complementary question is whether composition also matters for the fiscal effectiveness of the adjustment: that is, whether the consolidation episode ultimately succeeds in delivering a durable improvement in the primary balance. The answer is not obvious a priori. A more contractionary consolidation may, by depressing output, erode the very revenue base it seeks to expand and thereby undermine the fiscal improvement it aims to deliver. Conversely, a less contractionary consolidation may translate more directly into fiscal gains if the adjustment compositionally addresses structural sources of imbalance. The relative importance of these channels for tax-based versus spending-based plans is an empirical question, and one that has remained largely unanswered for Latin American economies in particular.

To address this question, we estimate a linear probability model relating the binary success indicator defined in Section 3.5 to the composition of the narrative fiscal shock and the same vector of macroeconomic controls used in Section 4. The specification mirrors the local-projection structure of the output-effects estimation, with the dependent variable now being a forward-looking indicator

that takes the value of one when the primary balance improves by at least 1.5 percentage points of GDP one, two, or three years after the consolidation episode:

$$\phi_{i,t+1+h} = \alpha_i + \beta_h^{spend} F_{i,t}^{spend} + \beta_h^{tax} F_{i,t}^{tax} + \Gamma^h X_t + \varepsilon_{i,t+h} \quad (5)$$

for $h = 0, 1, 2$, where $\phi_{i,t+1+h}$ is a dummy variable, the binary success indicator, $F_{i,t}^{spend}$ and $F_{i,t}^{tax}$ are the spending-based and tax-based components of the narrative shock expressed in percent of GDP, $X_{i,t}$ is the vector of macroeconomic controls described in Section 3.9, and α_i is a country fixed effect. The coefficients of interest, β_h^{spend} and β_h^{tax} , can be interpreted as the marginal change in the probability of a successful consolidation per percentage point of GDP of adjustment by each composition type. Equation (6) is estimated by ordinary least squares with heteroskedasticity-robust standard errors clustered at the country level.

Table 4 reports the results. The pattern that emerges is striking and complements the output-cost findings of Section 4. Tax-based consolidations have point estimates that are small, negative, and statistically indistinguishable from zero at all three horizons (-0.01 , -0.02 , and -0.03 at $h = 0, 1$, and 2 , respectively). Spending-based consolidations, by contrast, deliver a markedly different pattern. One year after the policy package, the coefficient is positive (0.06) but not statistically significant. Two years after, a 1% of GDP spending-based adjustment is associated with an increase of approximately 9 percentage points in the probability of a durable primary balance improvement, significant at the 5% level. Three years after, the effect grows to 16 percentage points and is significant at the 1% level. The Wald test of equality between the two composition-specific coefficients fails to reject the null at the one-year horizon ($F = 1.98$, $p = 0.197$), but rejects equality at the 5% level at the two-year horizon ($F = 5.76$, $p = 0.043$) and at the 1% level at the three-year horizon ($F = 25.41$, $p = 0.001$).

Table 4: **Success of Fiscal Consolidation by Composition**

Equation estimated: $\phi_{i,t+h} = \alpha_i + \beta_h^{spend} F_{i,t}^{spend} + \beta_h^{tax} F_{i,t}^{tax} + \Gamma^h X_t + \varepsilon_{i,t+h}$			
Variables	Horizon (h)		
	h=0	h=1	h=2
Tax-based (β_h^{tax})	-0.01 (0.04)	-0.02 (0.04)	-0.03 (0.03)
Spending-base (β_h^{spend})	0.06 (0.03)	0.09** (0.03)	0.16*** (0.02)
Wald test, $H_0 : \beta_h^{tax} = \beta_h^{spend}$			
F-statistic	1.98	5.76	25.41
P-value	0.197	0.043**	0.001***
Country fixed effects	yes	yes	yes
Controls	yes	yes	yes

Notes: Heteroskedasticity-robust standard errors clustered at the country level are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Three features of this pattern deserve emphasis. First, the effect of spending-based consolidations on the probability of success builds up gradually, reaching its peak three years after the package is implemented. This dynamic is consistent with the view that spending cuts—particularly those affecting the structural composition of the budget, such as reductions in subsidies, current transfers, or operating expenditures—deliver durable improvements in the fiscal position that compound across subsequent budget cycles. Second, tax-based consolidations exhibit no such cumulative effect; their contribution to the probability of a successful outcome is statistically indistinguishable from zero at every horizon we consider. This pattern is consistent with the well-documented tendency of tax-based fiscal measures to erode over time through behavioral responses, shifts toward less-taxed activities, legislative reversal, or the proliferation of subsequent exemptions—mechanisms that have been particularly salient in the Latin American context. Third, the magnitudes are economically substantial: at the three-year horizon, a 1% of GDP spending-based adjustment raises the probability of a durable fiscal improvement by 16 percentage points relative to the same-size tax-based plan, a differential that exceeds two-thirds of the standard deviation of the success indicator in our sample.

These results extend the tradition initiated by [Alesina and Perotti \(1995\)](#) and [Alesina and Ardagna \(2010\)](#) on the determinants of fiscal adjustment success, and connect with the more recent surveys of [Balasundharam, Basdevant, Benicio, Ceber, Kim, Mazzone, Selim, and Yang \(2023\)](#) and [Ando, Mishra, Patel, Peralta-Alva, and Presbitero \(2025\)](#), which emphasize that the durability of consolidation is shaped by the credibility and structural quality of the adjustment rather than by its headline size alone. Our evidence complements this literature in two specific ways: by

applying the analysis to a sample of Latin American economies—a region for which systematic evidence on the determinants of consolidation success has been particularly scarce—and by using narrative identification of policy actions, which addresses the endogeneity concerns associated with CAPB-based measures of the fiscal stance. The result is also consistent with the broader theoretical message of [Bianchi, Ottonello, and Presno \(2023\)](#), in the sense that credibility of fiscal adjustment is a central determinant of its outcome: spending cuts appear to deliver a more credible commitment to fiscal sustainability than tax increases, both in terms of their effect on sovereign spreads—as captured in Section 4—and in terms of their cumulative effect on the primary balance reported here.

Taken together with the output-effect findings of Section IV, our two sets of results deliver a single, internally consistent policy implication. In highly indebted Latin American economies, spending-based consolidations entail substantially lower output costs than tax-based plans of comparable size, and they are substantially more likely to deliver a durable improvement in the primary balance over a three-year horizon. The two findings reinforce each other along the same dimension: when fiscal space is constrained—as it typically is when adjustment is most needed—the composition of consolidation is not a secondary design question, but a first-order determinant of both the macroeconomic cost and the fiscal effectiveness of the adjustment.

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