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Adjustment, Transmission and the IMF in Mexico, 1980–2026: Monetary and Fiscal Transmission, Debt Sustainability and the Limits of Attribution

Dr. Muhmmad Muqeem Islam Muqeem PhD

muqeemz@gmail.com

National school of public policy https://orcid.org/0009-0004-2005-4951

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RESEARCH ARTICLE

Adjustment, Transmission and the IMF in Mexico, 1980–2026: Monetary and Fiscal Transmission, Debt Sustainability and the Limits of Attribution

Dr Muqeem ul Islam[1*]

[1] **PhD in Public Policy and Governance (NDU); MPhil in Economics.** Former Research Economist/Assistant Director Monetary & Fiscal Research Department of State Bank of Pakistan (Central Bank), Former Director General, NAVTTC; Former Director General, KIM; Head, Senior Management Wing, National Institute of Public Administration (NIPA), National School of Public Policy, Peshawar, Pakistan.

*** Corresponding author:** Dr Muqeem ul Islam | Email: muqeemz@gmail.com | Tel: +92 343 5090648

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Abstract

This paper asks three questions about Mexico: how monetary, fiscal and exchange-rate adjustment transmit to the economy; what the International Monetary Fund actually contributed to the country's adjustment episodes; and how fast and gradual fiscal consolidation would compare today. It combines a documentary attribution of every IMF arrangement since 1977 with local projections, recursive and sign-restricted VARs, Blanchard–Perotti fiscal shocks on budget-execution data, a debt-dynamics model with a measured currency-valuation term, and a synthetic control for 1995. Every number is labelled as observed, estimated, simulated, an IMF projection or illustrative.

Since 2001, a 100 basis-point monetary tightening lowers real GDP by 0.5–1.4% within a year under three identification schemes, while exchange-rate pass-through to consumer prices has fallen from 0.21 to about 0.01. United States manufacturing shocks account for 54% of the forecast-error variance of Mexican output at three years. Budget data give a spending multiplier of 0.4–0.6 on impact and a non-oil tax multiplier of about −0.3 on impact and zero thereafter; medium-run fiscal multipliers are not identified. IMF conditions on Mexico were quantitative ceilings, reforms were domestic, and the Fund supplied a minority of every rescue package. The 1995 episode cost about 10% of GDP per capita relative to a synthetic comparator, most of it recovered by 1997, but the evidence does not permit a clean causal attribution of outcomes to IMF conditionality.

Public debt is 61.8% of GDP and stable on the IMF baseline by a margin of only 0.1 percentage points. A consolidation of 1.5% of GDP lowers 2032 debt by 5.4–7.7 points under any timing; its composition matters more than its timing, with tax-based measures costing an estimated 2.0–4.4 %-years of output against 6.1–9.3 for spending-based ones. The scenarios are not ranked.

Keywords: Mexico; IMF conditionality; structural adjustment; monetary transmission; fiscal multipliers; exchange-rate pass-through; debt sustainability; synthetic control; local projections

1 Introduction

Mexico is the canonical case of IMF-supported adjustment in Latin America. It entered six arrangements with conditionality between 1977 and 2000, received the largest IMF package of its time

in 1995, and has since 2009 held a Flexible Credit Line that carries no ex-post conditions and has never been drawn. Over the same period it moved from a fixed exchange rate and triple-digit inflation to a free float, an autonomous central bank and inflation close to target. The temptation is to read this sequence as a story in which IMF programmes produced stabilisation. The paper argues that the evidence does not support that reading, and quantifies what can be said instead.

Three questions organise the analysis. The first is econometric: how do monetary tightening, fiscal consolidation and exchange-rate movements transmit to output, prices and public debt, and over what horizon? The second is historical and institutional: in each adjustment episode, which measures came from IMF conditionality, which from other official creditors, which from Mexican policy and which from markets? The third is forward-looking: given the estimated transmission, how do fast and gradual consolidation paths compare today?

The paper makes four contributions. It separates IMF financing, IMF conditionality, other official financing and domestic policy in a coded episode record and checks that record against the IMF Monitor conditionality database. It provides, to our knowledge, the first Mexico-specific fiscal multipliers identified from budget-execution data, and documents where identification fails. It measures the currency-valuation channel of public debt with reported currency composition rather than a residence-based proxy, which halves its estimated contribution. And it quantifies the output cost of the 1995 episode with a synthetic control whose donor pool is screened for contagion before estimation.

Three results stand out. Monetary tightening reliably lowers output, but its effects on prices and the exchange rate are not identified with quarterly timing restrictions. The United States, not domestic policy, drives most Mexican output variation. And the forward-looking fiscal question turns on composition: tax measures appear to cost far less output than spending cuts. Section 2 sets out the episode history, Section 3 the literature, Section 4 the data and methods, Sections 5–9 the results, Section 10 robustness, Section 11 policy implications and Sections 12–13 limitations and conclusions.

2 Mexico's adjustment episodes and the role of the IMF

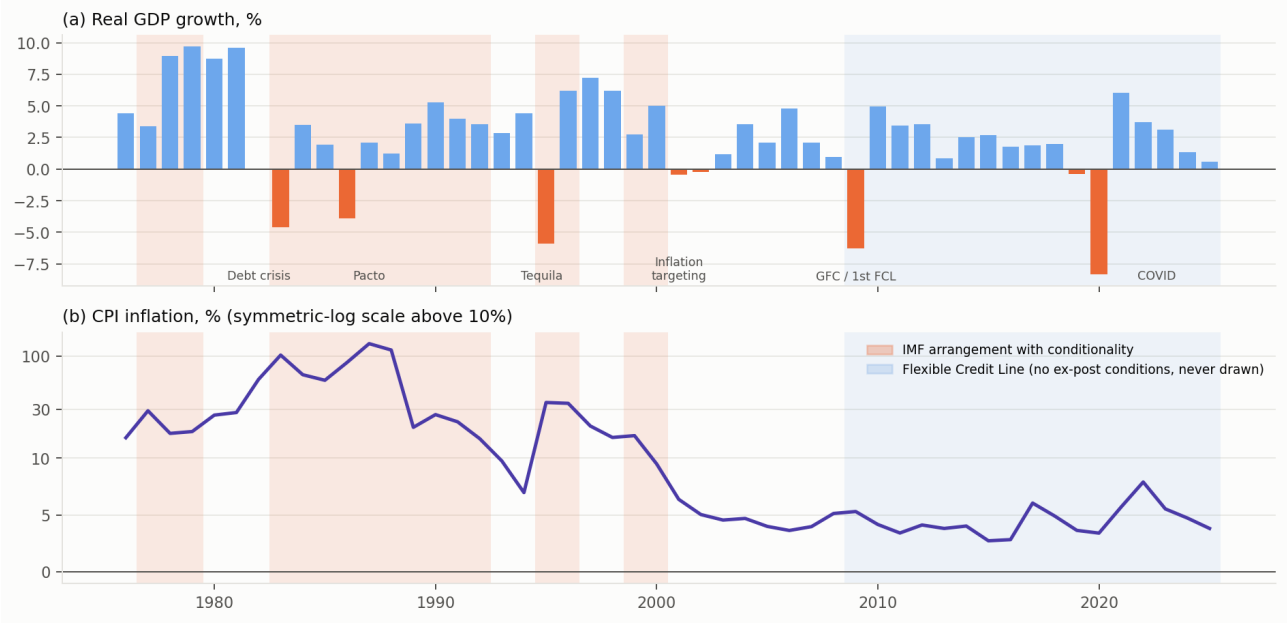


Figure 1. Real GDP growth and CPI inflation, 1976–2025, with years under IMF arrangements. Shaded orange: arrangements with conditionality; shaded blue: Flexible Credit Lines. Source: World Bank WDI; arrangement dates from the IMF lending record. OBSERVED. Every conditional arrangement except the precautionary 1999 Stand-By began after a crisis was under way, so programme years coincide with poor outcomes by construction; inflation fell to single digits only after 2000, when no programme was active.

Table 1 reports the lending record. Drawings were substantial in 1983, 1986, 1989 and 1995, and Mexico repaid all obligations by August 2000. The eleven Flexible Credit Lines approved since April 2009 have never been drawn; the latest, for SDR 17.8 billion, was approved on 13 November 2025.

Table 1. IMF arrangements with Mexico, 1977–2025 (SDR millions)

Arrangement	Approved	Agreed	Drawn	Share drawn	Conditionality
Extended Fund Facility	Jan 1977	518	100	19%	Yes
Extended Fund Facility	Dec 1982	3,411	2,503	73%	Yes
Stand-By Arrangement	Nov 1986	1,400	1,400	100%	Yes, with oil and growth contingencies
Extended Fund Facility	May 1989	3,730	3,263	88%	Yes, Brady-linked
Stand-By Arrangement	Feb 1995	12,070	8,758	73%	Yes, with contingencies
Stand-By Arrangement	Jul 1999	3,103	1,940	63%	Yes (pre-electoral)
Flexible Credit Lines (11)	Apr 2009–Nov 2025	17,825–62,389	0	0%	No ex-post conditionality

Source: IMF, History of Lending Commitments: Mexico; IMF press releases 2021–2025. OBSERVED.

Three regularities emerge from the documentary record (Table 2). First, in every crisis package the IMF supplied a minority of the money: in 1995 the US Exchange Stabilization Fund committed US$20 billion against the IMF's US$17.8 billion. Second, the landmark reforms were not IMF conditionality. The 1982 bank nationalisation and exchange controls contradicted the Fund's position; GATT accession, the 1987 Pacto, privatisation, NAFTA and central-bank autonomy were Mexican initiatives. Third, the IMF frequently accepted designs that Mexico proposed: the 1986 oil-price contingency came from the Mexican team, and in 1989 staff accepted the programme "essentially as presented"

(Boughton, 2001). Conditionality in Mexico was a negotiated compromise rather than an externally imposed template.

Table 2. Attribution of adjustment measures by episode

Episode	IMF role	Other official money	Main domestic and market actions	Code
1982–85	EFF; concerted-lending requirement; deficit target a negotiated compromise	US oil prepayment, CCC credits, ESF; BIS bridge; US$5bn from 526 banks	Bank nationalisation and exchange controls, against the IMF's position	IC / ISD / D / OO
1986–88	SBA with oil and growth contingencies proposed by Mexico	Commercial banks, World Bank, BIS, Paris Club	GATT accession; Pacto de Solidaridad (Dec 1987)	ISD / D
1989–93	EFF accepted "essentially as presented"; Brady set-asides	US$48.9bn bank debt restructured; US Treasury collateral	Privatisation; NAFTA negotiation	ISD / OO / D
1994–95	SBA SDR 12.07bn; advised keeping the float	US ESF US$20bn, BIS, Bank of Canada	Float forced by markets; March 1995 fiscal package designed in Mexico	M / ISD / OO
1999–2000	Pre-electoral SBA	—	—	Precautionary
2009–2026	FCLs, undrawn, no conditions	Fed swap lines: US$30bn (2008), US$3.2bn lent on in April 2009; US$60bn (2020), partly used	All adjustment domestic, e.g. policy rate 4.00% → 11.25% in 2021–23	D / M

Codes: IC = IMF-conditioned; ISD = IMF-supported, domestically designed; D = domestic; M = market-driven; OO = other official actors. Sources: Boughton (2001, 2012); IMF lending record; Federal Reserve; Banco de México (Appendix A).

3 Related literature

Effects of IMF programmes. Selection-corrected studies find lower growth while programmes are active (Przeworski and Vreeland, 2000; Dreher, 2006) and mixed evidence of gains after exit (Atoyan and Conway, 2006; Bas and Stone, 2014). Hutchison and Noy (2003) show that the short-run output cost found in the cross-country literature is driven by Latin America, and a meta-analysis of 994 estimates finds the least favourable results in samples dominated by 1980s programmes (Balima and Sokolova, 2021) — precisely Mexico's programme era. Coded conditionality data (Kentikelenis, Stubbs and King, 2016) allow programme content, not just programme participation, to be examined.

Fiscal multipliers. Narrative evidence for Latin America and the Caribbean finds that a consolidation of 1% of GDP lowers output by about 0.9% after two years (Carrière-Swallow, David and Leigh, 2021), whereas panel VAR evidence finds multipliers close to zero under flexible exchange rates (Ilzetzki, Mendoza and Végh, 2013). The two priors disagree for post-1995 Mexico. Identification follows Blanchard and Perotti (2002) and the cumulative local-projection multiplier of Ramey and Zubairy (2018).

Monetary transmission and pass-through. Banco de México's multi-method assessment finds that a 100 basis-point rise lowers the output gap by 30–65 basis points and inflation by 15–22 basis points (Banco de México, 2025). Pass-through has been low since the adoption of inflation targeting (Kochen and Sámano, 2016; Angeles Galván, Cortés Espada and Sámano, 2019), consistent with the credibility mechanism of Carrière-Swallow et al. (2016). US shocks explain about three-quarters of Mexican output variance at three years (Carrillo, Elizondo and Hernández-Román, 2020). Methodologically, the paper uses local projections (Jordà, 2005), which estimate the same object as VARs (Plagborg-Møller and Wolf, 2021), sign restrictions (Uhlig, 2005), the Hamilton (2018) filter, break tests (Bai and Perron,

2003), ARDL bounds tests (Pesaran, Shin and Smith, 2001) and synthetic control (Abadie, Diamond and Hainmueller, 2010).

4 Data and empirical framework

4.1 Data

Table 3 lists the data. All series were retrieved from primary or official statistical interfaces on 28–29 September 2026 and every series is checked against its source title before use. The exchange rate is expressed in pesos per US dollar, so a rise is a depreciation; growth and inflation are 100 times log differences; ratios are percentages of GDP.

Table 3. Data sources

Block	Series	Source	Coverage
Output, prices, rates	Real and nominal GDP, CPI, policy rate, 10-year bond yield, unemployment	IMF IFS and OECD via FRED; BIS statistics	Quarterly, 1976–2026Q2
External	MXN/USD, REER, reserves, exports, imports	Federal Reserve H.10 via FRED; BIS	Quarterly
US block	Manufacturing production, federal funds rate, CPI; WTI oil; VIX	FRED	Quarterly
Annual macro	Growth, inflation, current account, remittances, FDI, investment	World Bank WDI	Annual, 1960–2025
Fiscal aggregates	Gross debt, overall and primary balance, projections to 2031	IMF WEO / Fiscal Monitor (April 2026)	Annual, 1990–2031
Budget execution	Central-government revenue, taxes, spending by economic type	IMF Quarterly Government Finance Statistics	Quarterly, 2008–2025Q3
Debt profile	Debt by currency, holder and maturity	World Bank/IMF Quarterly Public Sector Debt; World Bank IDS	Quarterly, 2008–2026Q1
Conditionality	IMF conditions by type and year	IMF Monitor v2 (Kentikelenis and Stubbs, 2023)	1980–2019
Capital account; cross-country	Chinn–Ito KAOPEN; GDP per capita for about 40 emerging economies	Chinn–Ito (2023); World Bank WDI	Annual

The econometric sample begins in 1996, after the float; monetary models begin in 2001Q1, following the structural break documented in Section 6.1. Pre-1995 evidence is used descriptively. To keep the evidentiary status of every number transparent, results are labelled OBSERVED (published data), ESTIMATED (computed from data with model and sample stated), SIMULATED (model output under stated assumptions), IMF PROJECTION or ILLUSTRATIVE (arithmetic under borrowed parameters).

4.2 Monetary reaction function and local projections

The monetary shock is the residual of an estimated reaction function for the short rate,

$$i_t = c + \rho_1 i_{t-1} + \rho_2 i_{t-2} + \beta_\pi \pi_t + \beta_x x_t + \beta_f \, i_t^{US} + \delta \, D_t^{covid} + \varepsilon_t^{mp} \tag{1}$$

where x is the Hamilton (2018) output gap and i^{US} the federal funds rate. Responses are estimated by local projections,

$$y_{t+h} - y_{t-1} = \alpha_h + \beta_h \, \hat{\varepsilon}_t^{mp} + \Gamma_h' W_t + u_{t+h}, \qquad h = 0, \ldots, 12 \tag{2}$$

with four lags each of GDP growth, inflation, the rate change, depreciation, US manufacturing, the federal funds change and oil in W_t, seasonal and COVID dummies, and HAC errors with h+1 lags. A recursive VAR ordered [US manufacturing, federal funds, y, p, i, e] and a sign-restricted VAR (tightening raises i and lowers p and e for two quarters, output unrestricted) provide cross-checks.

4.3 Fiscal multipliers

Following Blanchard and Perotti (2002), spending is assumed not to respond to output within the quarter. The spending shock is the residual of spending growth on its lags, lags of output and net taxes, and current and lagged US manufacturing, oil and the policy rate. Cumulative multipliers follow Ramey and Zubairy (2018):

$$\sum_{j=0}^{h} \frac{Y_{t+j} - Y_{t-1}}{Y_{t-1}} = \mu_h + m_h \sum_{j=0}^{h} \frac{F_{t+j} - F_{t-1}}{Y_{t-1}} + \Psi_h' Z_t + e_{t+h} \tag{3}$$

where F is the fiscal instrument, the right-hand cumulative change is instrumented by the shock, and m_h is measured in pesos of GDP per peso. Net-tax shocks use cyclically adjusted net taxes with an assumed within-quarter output elasticity of 1.0 (0.5 and 1.5 as sensitivities).

4.4 Debt dynamics and synthetic control

Public debt evolves according to

$$\Delta d_t = \frac{i_t - \gamma_t}{1 + \gamma_t} d_{t-1} + \frac{\alpha_t \varepsilon_t}{1 + \gamma_t} d_{t-1} - pb_t + sfa_t \tag{4}$$

where i is the effective interest rate, γ nominal growth, α the foreign-currency share of debt, ε the rate of depreciation and *sfa* the stock-flow residual (Escolano, 2010). The debt-stabilising primary balance is

$$pb^* = \frac{(i - \gamma) + \alpha\,\varepsilon}{1 + \gamma}\, d \tag{5}$$

The 1995 counterfactual uses a synthetic control (Abadie, Diamond and Hainmueller, 2010):

$$\hat{Y}^N_{MEX,t} = \sum_{j=1}^{J} w_j^* Y_{j,t}, \qquad w^* = \arg \min_{w_j \geq 0,\, \sum_j w_j = 1} \sum_{t<1995} \left(Y_{MEX,t} - \sum_j w_j Y_{j,t} \right)^2 \tag{6}$$

Table 4. Identification strategy and status

Question	Identification	Main threat	Status
Monetary transmission	Timing: rate responds within the quarter; output and prices with a lag. Cross-checked by recursive and sign-restricted VARs	Rule residual carries within-quarter exchange-rate news	Output identified; prices and exchange rate not
Pass-through	Distributed lag with controls; LP-IV	Weak instrument beyond one quarter (F = 4.1 at four quarters)	Identified at one year
US spillovers	US block ordered first (small open economy)	Common global shocks	Identified
Fiscal multipliers	Blanchard–Perotti timing on budget-execution data	Fiscal foresight; revenue-linked transfers to states	Identified on impact only

Question	Identification	Main threat	Status
IMF effect	None credible in Mexican time series	No treatment after 2000; selection into programmes	Answered from the documentary record
1995 episode	Synthetic control with placebo inference	Donor contamination; NAFTA; bundled treatment	Size estimated; IMF share not separable

5 Measuring adjustment: a Structural Adjustment Index

The Structural Adjustment Index counts dated policy actions only, across six areas: fiscal consolidation, trade liberalisation, capital-account opening, privatisation, exchange-rate regime and institutional reform. Realised deficits, rates and exchange-rate movements are excluded because they respond to the outcomes the index is meant to explain, and IMF conditions are kept as a separate series so that overlap can be shown rather than assumed. All dated actions were verified against primary or official sources (Appendix A).

Eighteen of 29 recorded actions (62%) fell in the 13 programme years, and trade opening (five of six actions) and privatisation (four of five) occurred almost entirely under programmes that did not require them. The right reading is coincidence in timing without conditionality: crisis years were when governments reformed, whether because crises made reform feasible or because reform signalled commitment to creditors. The equal-weight and theory-weighted indices correlate at 0.94; a principal-components version explains only 29% of the variance with wrong-signed loadings and is rejected. After 1995 only six action-years remain, so the index cannot serve as a regressor in the econometric sample.

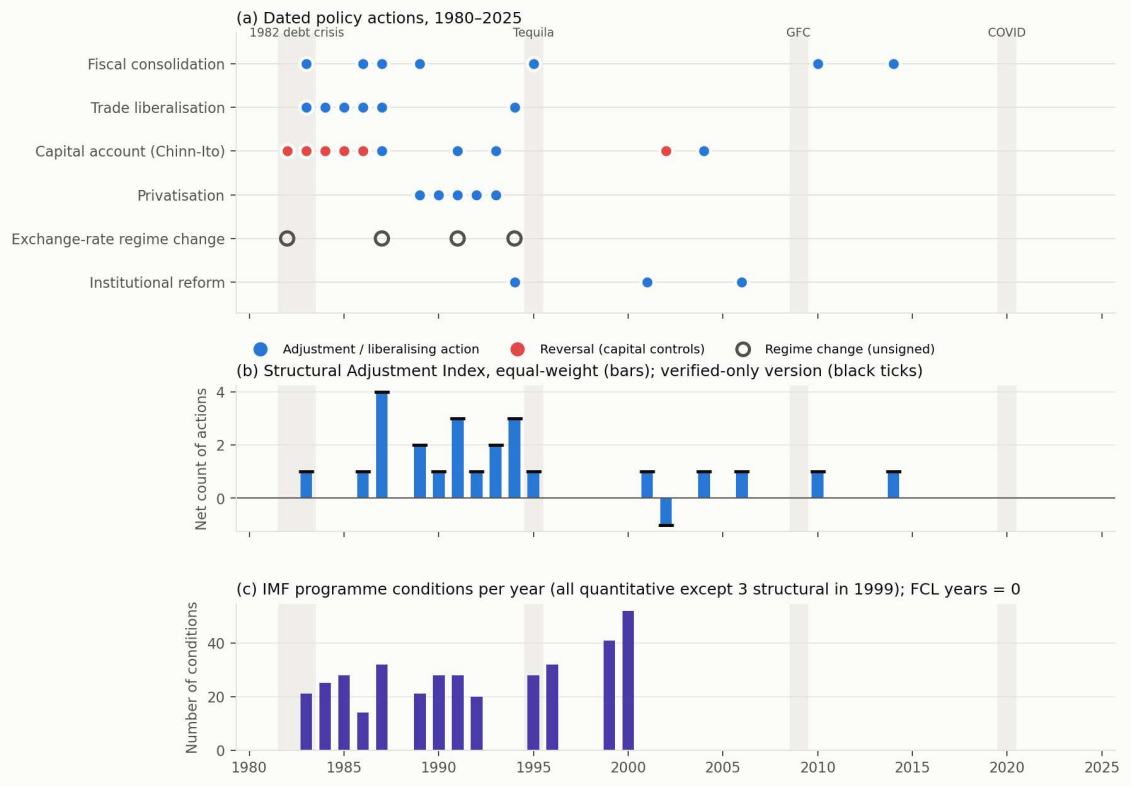


Figure 2. Dated policy actions, the equal-weight Structural Adjustment Index and IMF programme conditions per year, 1980–2025. Sources: action register compiled from Boughton (2001, 2012), Carrière-Swallow, David and Leigh (2021), Krueger and Tornell (1999), Chinn–Ito KAOPEN; IMF Monitor v2. ESTIMATED. Reforms cluster in 1983–1995, when conditional programmes were active, yet the conditions of those programmes were quantitative ceilings, with only three structural conditions in the whole period, all in 1999.

6 Transmission results

6.1 A single regime break and the reaction function

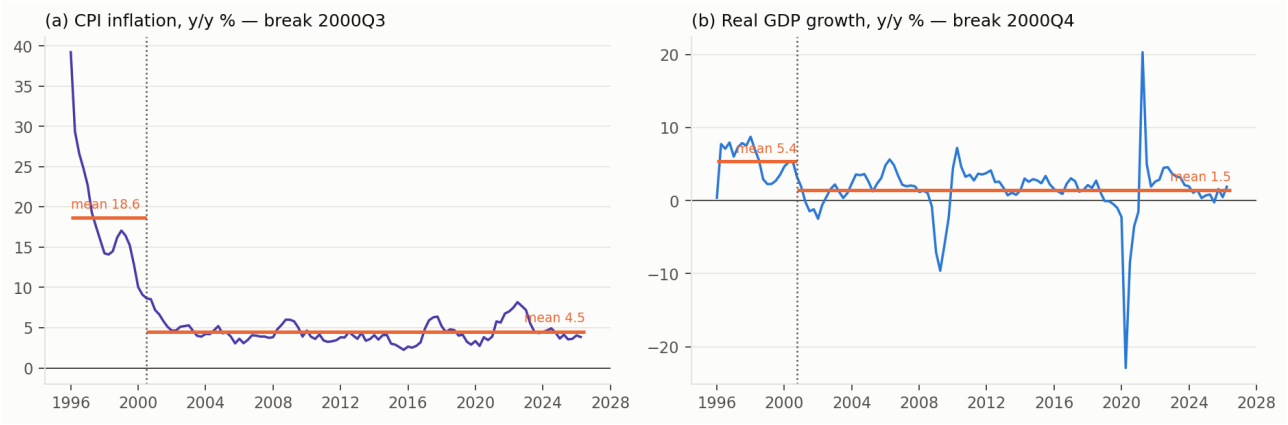


Figure 3. Structural breaks in mean year-on-year inflation and GDP growth, 1996–2026. Bai–Perron-type dynamic-programming search, BIC selection. Data: BIS long CPI series; IMF IFS real GDP. ESTIMATED. Mean inflation fell from 18.6% to 4.5% at 2000Q3 and mean growth from 5.4% to 1.5% at 2000Q4; monetary estimation therefore begins in 2001.

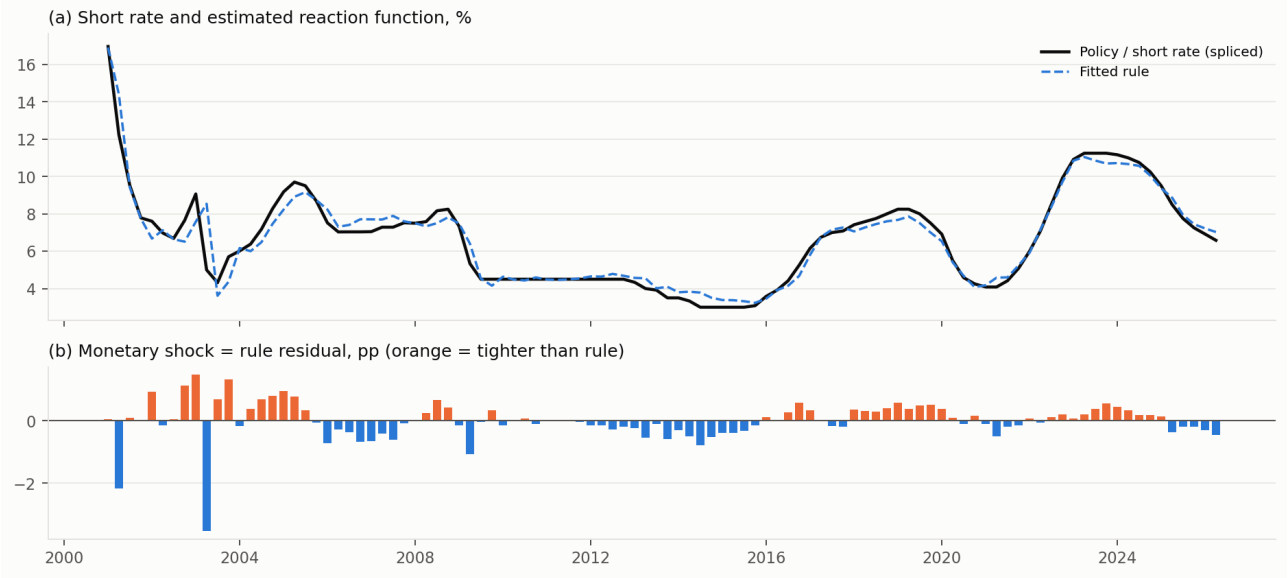


Figure 4. (a) Short rate and fitted reaction function; (b) monetary shock (rule residual), 2001Q1–2026Q2. OLS with HAC errors; two own lags, inflation, Hamilton gap, federal funds, COVID dummy. ESTIMATED. Long-run responses are 0.73 to inflation, 0.06 to the output gap and 0.80 to the federal funds rate (R^2 = 0.94; Breusch–Godfrey p = 0.07): Banxico tracks the Fed closely.

6.2 Monetary tightening lowers output

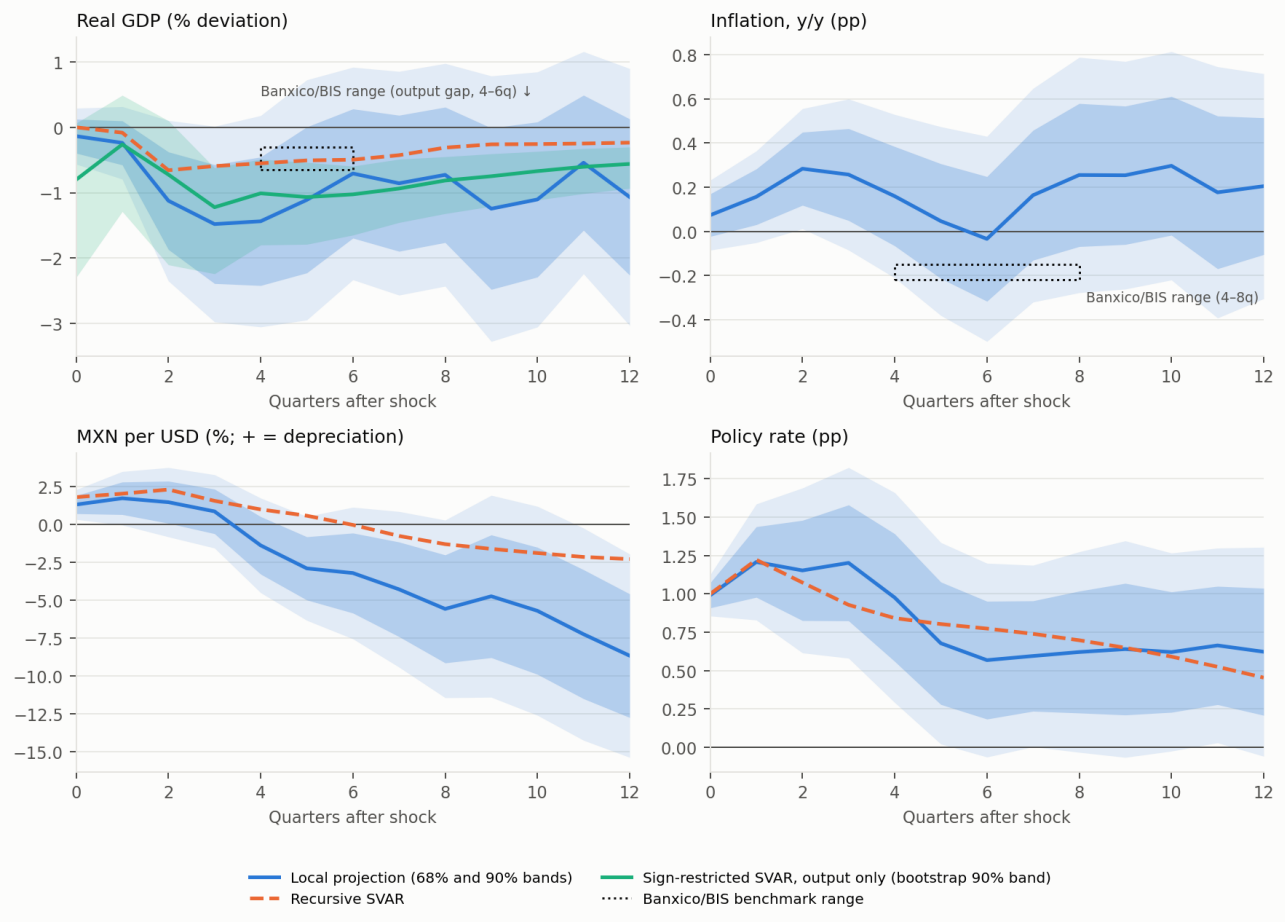


Figure 5. Responses to a 100 basis-point monetary tightening, 2001Q1–2026Q2: local projections with 68% and 90% bands, recursive SVAR and sign-restricted SVAR (bootstrap 90% band, output only); dotted boxes show the Banco de México/BIS benchmark ranges. ESTIMATED. Output falls by 0.5–1.4% within a year under all three schemes; the inflation and impact exchange-rate responses have the wrong sign and are not used for inference.

Output falls under every identification scheme: by 1.44% at four quarters in the local projection, 0.55% in the recursive SVAR (90% interval −0.90 to −0.01) and 1.01% in the sign-restricted SVAR (bootstrap interval −1.80 to −0.49), where output is left unrestricted and 98.6% of accepted rotations show a fall. The inflation and exchange-rate responses display the familiar price and exchange-rate puzzles: the rule residual still carries news about within-quarter peso pressure, to which Banxico responds. These responses are not identified with quarterly timing restrictions and require high-frequency surprises.

6.3 Exchange-rate pass-through has collapsed

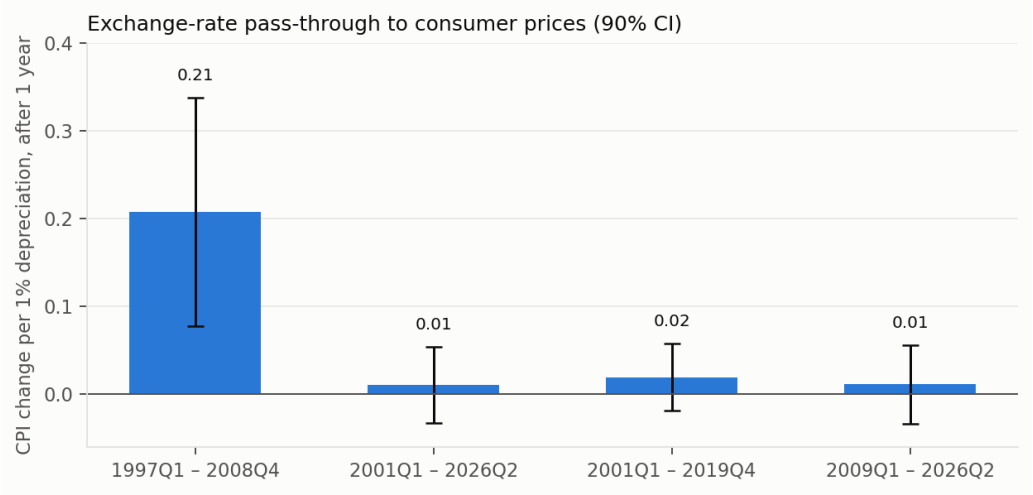


Figure 6. Cumulative one-year pass-through from depreciation to consumer prices by sample, with 90% intervals. Distributed-lag regressions with controls. ESTIMATED. About 21 cents per peso of depreciation reached consumer prices within a year in 1997–2008, against about one cent since 2001.

6.4 The US cycle dominates

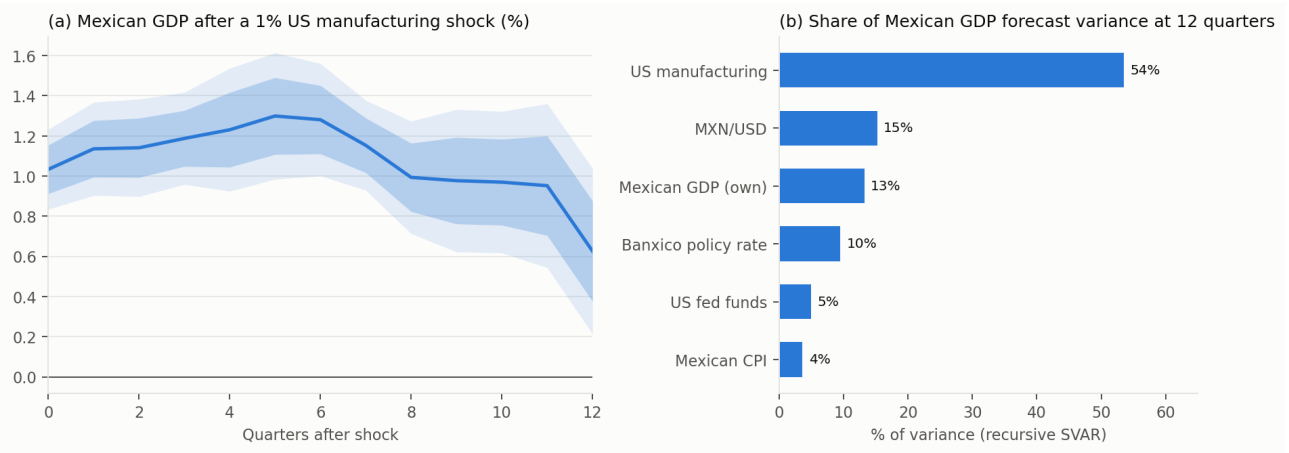


Figure 7. (a) Mexican GDP after a 1% surprise in US manufacturing output (local projection, 68% and 90% bands); (b) share of Mexican GDP forecast-error variance at 12 quarters by shock (recursive SVAR). ESTIMATED. The response exceeds one-for-one within a year and remains significant for three years.

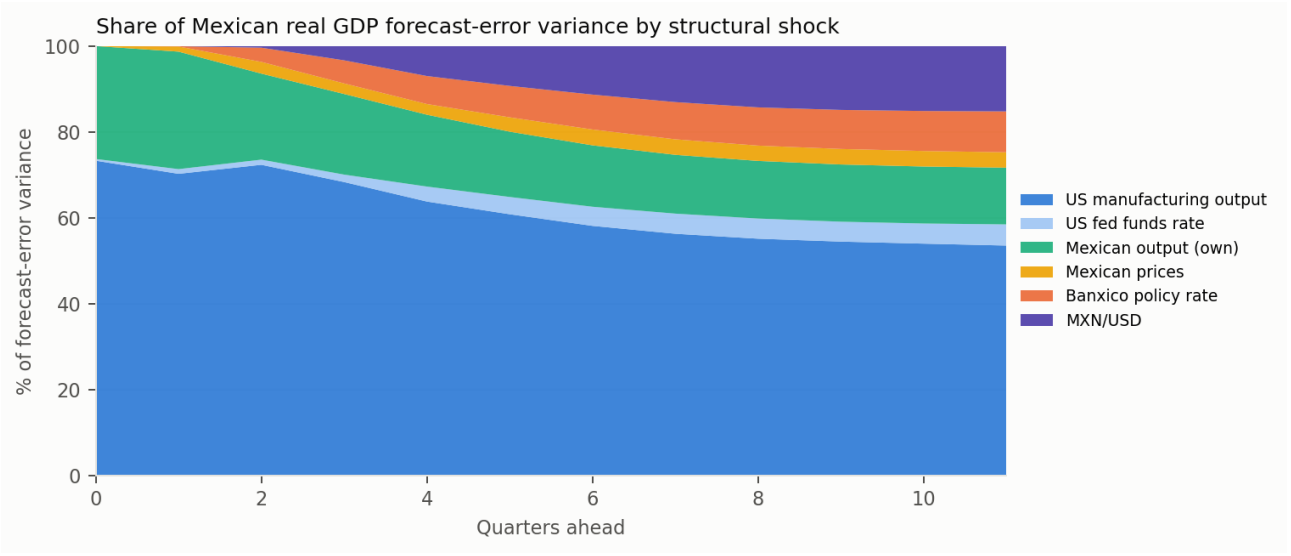


Figure 8. Forecast-error variance decomposition of Mexican real GDP by horizon, recursive SVAR 2001Q1–2026Q2. ESTIMATED. US manufacturing accounts for 54–73% of the variance at every horizon; the domestic policy-rate shock for at most 10%. Any attribution of Mexican downturns to domestic adjustment must net out the US cycle first.

6.5 Fiscal multipliers

A first attempt using national-accounts government consumption (1996–2019) produced cumulative multipliers of 3–6, far outside the 0–0.9 range in the literature; a 1% spending shock, worth only 0.11% of GDP, coincided with a 1% rise in GDP, which cannot be causal (Appendix Figure A1). The second attempt uses Mexico's budget-execution data reported to the IMF (central government including social security, 2008–2025). Broad spending — compensation, goods and services, investment and grants to states and municipalities — averages 13.4% of GDP.

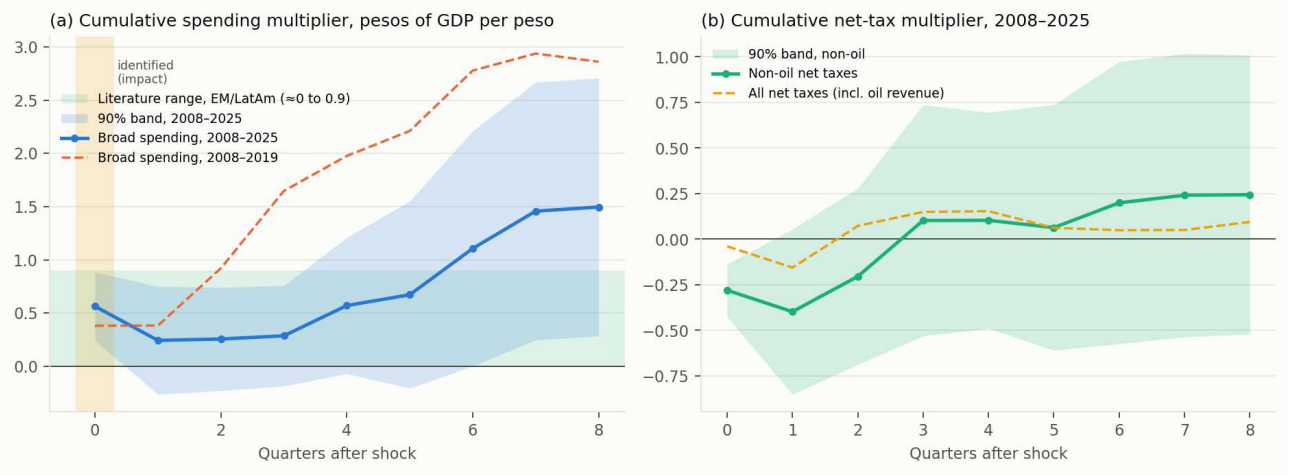


Figure 9. Cumulative spending and net-tax multipliers from budget-execution data, IMF QGFS 2008Q1–2025Q3, LP-IV with 90% bands; the green band marks the 0–0.9 literature range. ESTIMATED. A peso of spending moves output by 0.4–0.6 pesos on impact; a peso of non-oil tax increase lowers output by about 0.3 on impact, with no detectable effect after a year. Beyond the impact quarter the spending path drifts upward and is not treated as identified.

The impact spending multiplier is 0.56 (90% interval 0.24–0.89) in the full sample and 0.38 (0.18–0.58) before COVID — the first credible Mexico-specific estimate and inside the literature range. The non-oil net-tax multiplier is −0.28 (−0.42 to −0.14) on impact and indistinguishable from zero after a year, a result that holds for output elasticities of 0.5, 1.0 and 1.5. Beyond the impact quarter, however, cumulative spending multipliers rise steadily to 1.5–2.9, and before COVID the spending shock predicts US manufacturing four quarters ahead (t = 3.6). Revenue-linked transfers to the states and

spending planned against expected revenue mean that spending innovations carry news about future activity. Medium-run spending multipliers are therefore not identified.

6.6 The external block

ARDL bounds tests reject a long-run relation for both exports ($F = 1.75$) and imports ($F = 2.99$), so trade price elasticities and the Marshall–Lerner condition are not identified; the likely causes are China's WTO entry, post-2018 nearshoring and the use of dollar values rather than volumes. Table 5 summarises the transmission results.

Table 5. Summary of transmission estimates

Variable	Short run (0–4q)	Medium run (1–3 yr)	90% interval (key horizon)	Interpretation	Label
GDP after 100 bp tightening	−0.55% (SVAR) to −1.44% (LP) at 4q; sign-restricted −1.01%	−0.2 to −1.1%	Sign-restricted: −1.80, −0.49; SVAR: −0.90, −0.01	Tightening costs output; at or above Banxico's range	ESTIMATED
Inflation after 100 bp tightening	+0.16 pp at 4q	+0.26 pp at 8q	−0.21, +0.53	Price puzzle; not identified	ESTIMATED (unreliable)
MXN/USD after 100 bp tightening	+1.3% on impact	−5.6% (8q), −8.7% (12q)	12q: −15.4, −2.0	Impact sign reflects reverse causality	ESTIMATED
Unemployment after 100 bp tightening	+0.06 pp at 4q	+0.17 to +0.22 pp	8q: −0.16, +0.49	No labour-market effect detected	ESTIMATED
CPI pass-through per 1% depreciation	0.01 at one year (2001–2026)	0.02 long run	−0.03, 0.05; 1997–2008: 0.08, 0.34	Collapsed after inflation targeting	ESTIMATED
GDP after 1% US manufacturing shock	+1.03% impact; +1.23% at 4q	+1.28% (6q); +0.63% (12q)	4q: 0.93, 1.54	US cycle dominates	ESTIMATED
Spending multiplier (broad)	0.56 on impact	Not identified	0.24, 0.89	Credible on impact only	ESTIMATED
Non-oil net-tax multiplier	−0.28 on impact	≈0	−0.42, −0.14	Small output cost of tax measures	ESTIMATED
Trade price elasticities	—	Not identified	—	No cointegration	ESTIMATED (null)

7 Debt sustainability

General-government gross debt rose from 38.5% of GDP in 2000 to 61.8% in 2025 (OBSERVED). A key input to Equation (4) is α, the foreign-currency share. Mexico's reporting to the Quarterly Public Sector Debt database puts it at 16.2% in 2026Q1 and 15–23% over 2008–2025; a residence-based proxy (external public debt over total debt) would have put it at 27–47%, because it counts peso bonds held by non-residents, who hold 25.9% of the debt, as foreign-currency debt.

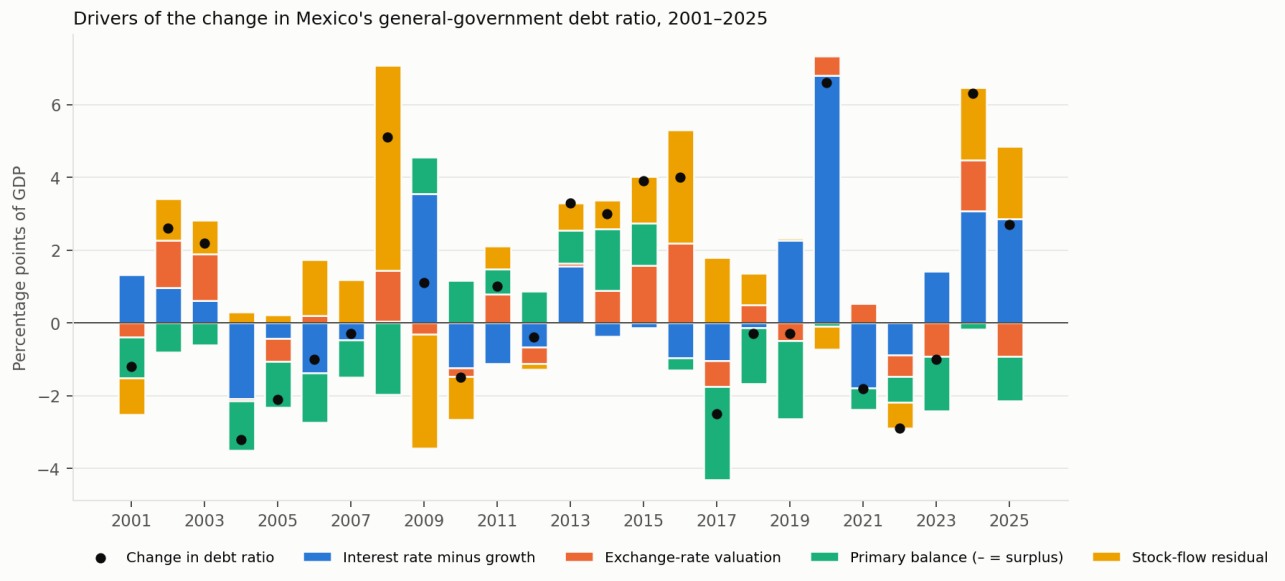


Figure 10. Contributions to the annual change in general-government debt, 2001–2025, percentage points of GDP. Debt and balances: IMF WEO/Fiscal Monitor (April 2026); MXN/USD: Federal Reserve H.10; foreign-currency share: QPSD from 2008, residence proxy before. OBSERVED data; decomposition ESTIMATED by identity.

Table 6. Decomposition of the change in public debt (percentage points of GDP)

Period	Δ debt	Interest–growth	FX valuation	Primary balance	Stock-flow residual
2001–2007	−3.0	−1.4	+1.7	−7.6	+4.3
2008–2016	+19.5	+0.7	+5.9	+5.2	+7.7
2017–2019	−3.1	+1.1	−0.7	−6.2	+2.7
2020–2025	+9.9	+11.5	0.0	−4.3	+2.7
2001–2025	**+23.3**	**+11.8**	**+7.0**	**−12.9**	**+17.4**

A negative primary-balance entry means surpluses reduced debt. The stock-flow residual includes below-the-line operations, inflation-indexed debt and perimeter differences and is not attributed to any single policy. ESTIMATED.

The two run-ups had different drivers. In 2008–2016 depreciation, primary deficits and the stock-flow residual all pushed debt up; in 2020–2025 the dominant force was an interest rate high relative to growth (+11.5 points). With the IMF baseline for 2026–2031, the debt-stabilising primary balance is 1.95% of GDP against a projected 2.05%: debt is stable, but only by 0.1 points.

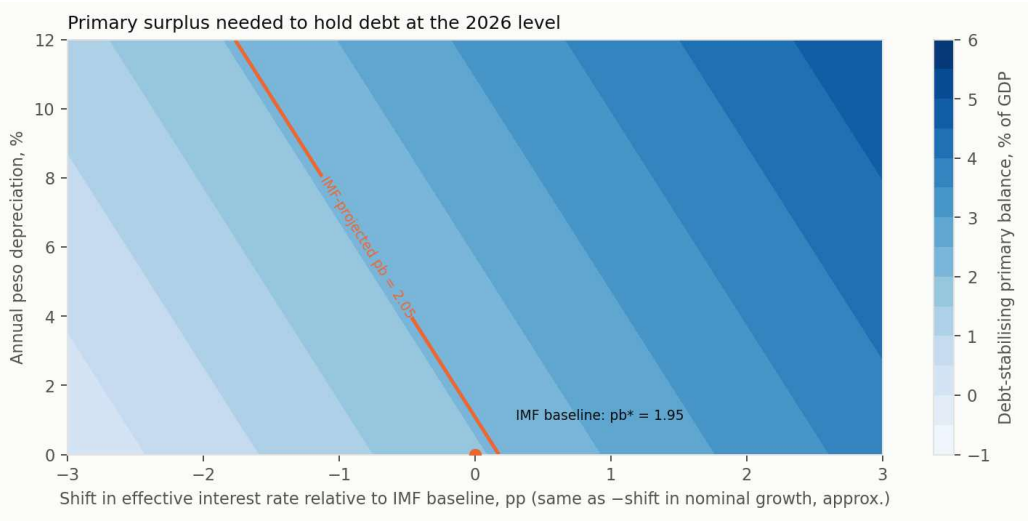


Figure 11. Debt-stabilising primary balance under shifts in the effective interest rate and annual depreciation, with α = 0.16. The orange line marks the IMF-projected primary balance (2.05% of GDP). ESTIMATED/SIMULATED. The margin disappears with one point more interest, one point less growth or about 1.1% a year of depreciation; each 10% a year of depreciation adds 0.96 points to the required surplus.

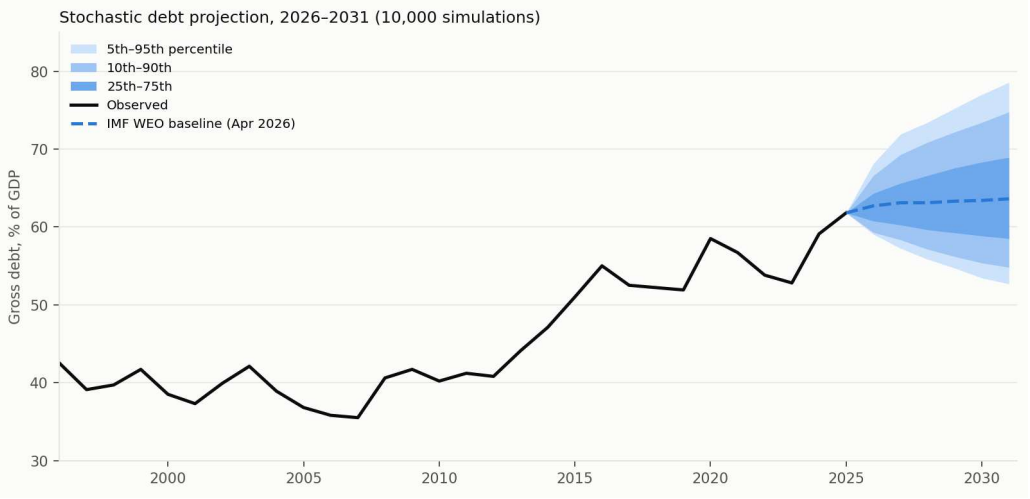


Figure 12. Stochastic debt projection, 2026–2031: 10,000 draws of joint 2001–2025 deviations in growth, inflation, interest, depreciation and the primary balance added to the IMF baseline, with no fiscal reaction. SIMULATED. Median 2031 debt is 63.5% of GDP (5th–95th percentile 52.7–78.6%); the probabilities of exceeding 60, 70 and 80% are 0.68, 0.22 and 0.04.

Table 7. Debt profile against IMF (2013) benchmarks for emerging markets

Indicator	Value	Benchmark bands	Reading
Gross debt, % of GDP (2025)	61.8	70 (high scrutiny)	Below; 90th percentile exceeds 70 by 2031
Foreign-currency share (2026Q1)	16.2%	<20 low; 20–60 moderate; >60 high	Low
Held by non-residents (2026Q1)	25.9%	<15 low; 15–45 moderate; >45 high	Moderate
Annual change in short-term share	−0.8 pp	<0.5 low; 0.5–1 moderate; >1 high	Low
Gross financing need, 2026	13.6–15.5%	15% of GDP	At the benchmark (range reflects debt perimeter)

Sources: IMF WEO; World Bank/IMF QPSD; IMF (2013) Staff Guidance Note. OBSERVED and ESTIMATED.

8 Consolidation scenarios

Three paths are compared over 2027–2032: (A) the IMF baseline; (B) a consolidation of 1.5% of GDP front-loaded in 2027 together with a 100 basis-point monetary tightening; and (C) the same consolidation spread evenly over three years. Output effects of fiscal measures use a central multiplier path (0.45 in the first year, 0.9 thereafter, after Carrière-Swallow, David and Leigh, 2021), a low path (0.15, then 0.3, after Ilzetzki, Mendoza and Végh, 2013) and a decaying path; monetary output effects come from Section 6.2 and inflation effects from Banco de México (2025).

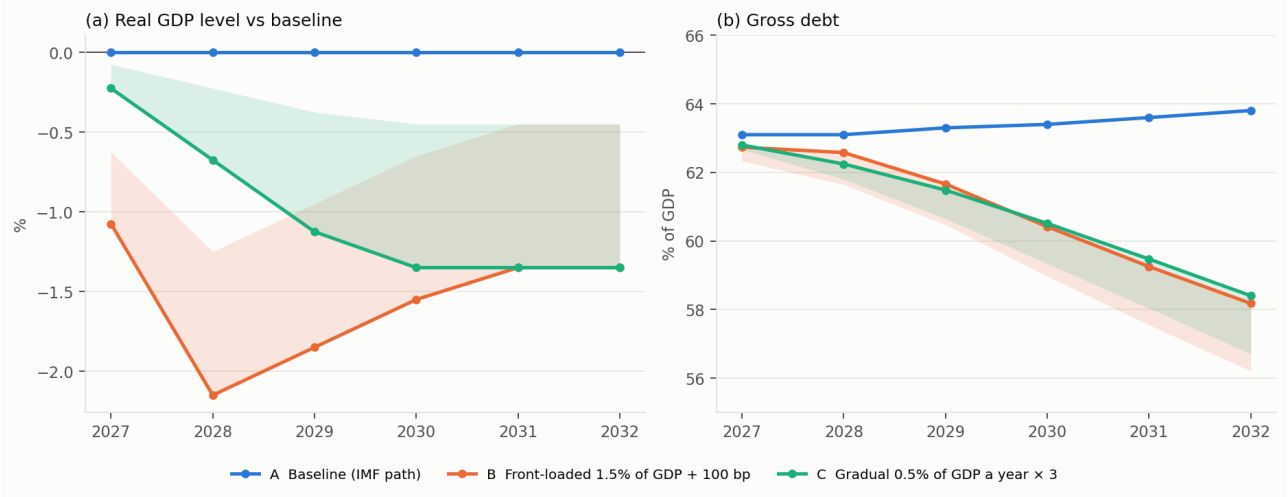


Figure 13. Real GDP level relative to baseline and gross debt under scenarios A–C, 2027–2032; shading shows the low-multiplier case. SIMULATED. Debt falls by about the same amount under B and C; front-loading costs more output and costs it earlier.

Table 8. Scenario outcomes in 2032

Scenario	Multiplier path	Debt (% GDP)	vs baseline (pp)	Trough GDP vs baseline	Cumulative output loss (%-years)
A: IMF baseline	—	63.8	0.0	0.00%	0.0
B: front-loaded + 100 bp	central	58.2	−5.6	−2.15%	−9.3
C: gradual, 0.5 × 3	central	58.4	−5.4	−1.35%	−6.1
B	low	56.2	−7.6	−1.25%	−4.4
C	low	56.7	−7.1	−0.45%	−2.0
B	decaying	56.1	−7.7	−2.15%	−4.6
C	decaying	56.7	−7.1	−0.90%	−2.7

SIMULATED. Assumptions: repricing share 0.30 (using the measured 17.7% of debt due within 12 months changes 2032 debt by under 0.1 pp); cyclical semi-elasticity 0.25; baseline depreciation zero. Unemployment, the exchange rate and the current account are not simulated because their responses were not identified.

The Mexican budget evidence of Section 6.5 lets consolidation types be mapped to multiplier paths. Tax measures, with a small impact effect and none thereafter, correspond to the low path; spending measures, with an impact multiplier of 0.4–0.6, match the first year of the central path. On that mapping, a tax-based consolidation costs 2.0–4.4 %-years of output and lowers 2032 debt to 56.2–56.7% of GDP, whereas a spending-based one costs 6.1–9.3 %-years and lowers it to 58.2–58.4%. Composition moves the output cost more than timing. Tax measures carry distributional and efficiency consequences that are not measured here, so the comparison is not a ranking.

9 The 1995 episode: a synthetic-control estimate

Before estimation, 38 candidate donors were screened for contagion and their own crises. Six were excluded for 1995–1997 (Argentina, Uruguay, Panama, Morocco, Jamaica and Thailand); twelve would have to be excluded for 1998–2000, so that window is treated as inconclusive. The main specification fits 1986–1994 on a cleaned pool of 32 donors.

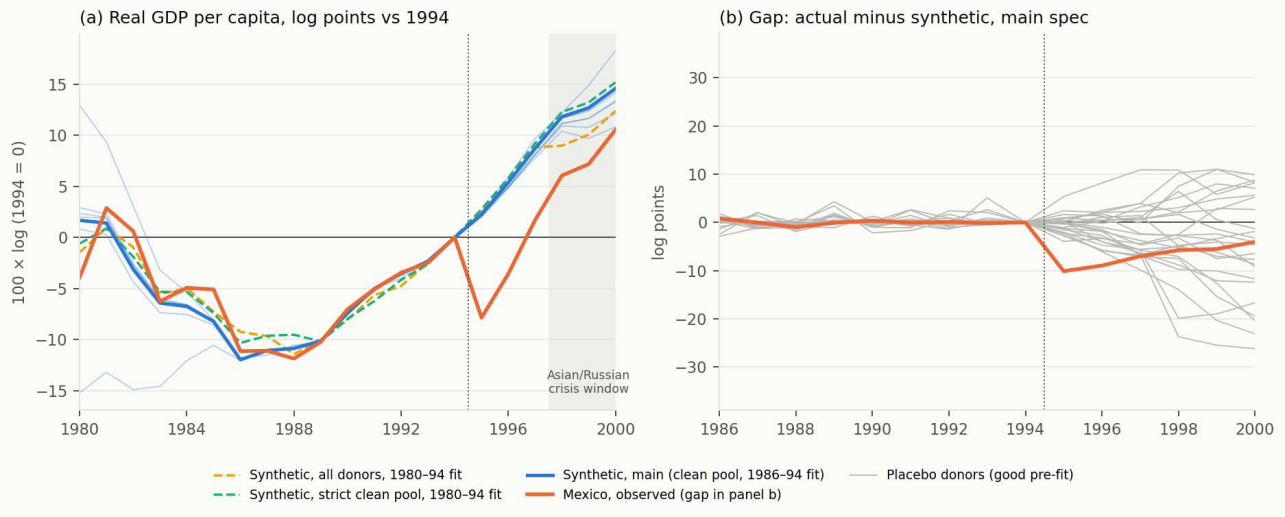


Figure 14. (a) Real GDP per capita, log points relative to 1994: Mexico and synthetic comparators; faint lines are leave-one-out synthetics; (b) gaps for Mexico and well-fitting placebo donors. Data: World Bank WDI. ESTIMATED. The 1995 shortfall of about 10% is larger than any well-fitting placebo and narrowed to about 7% by 1997.

Mexico's GDP per capita was 10.1 log points below its synthetic comparator in 1995 and 7.0 below in 1997. The 1995 gap is the most negative among well-fitting placebos in every cleaned specification (rank 1 of 25 in the main specification, permutation $p \approx 0.04$), although the ratio of post- to pre-period fit is less decisive ($p = 0.21$) because the gap closes quickly. Across donor pools, pre-periods and leave-one-out donors the 1995 gap lies between −9.8 and −10.6 points. The gap measures the combined episode — crisis, domestic response, IMF and US financing, and NAFTA — and not an IMF effect. Applying borrowed multipliers to the observed 2.1-point tightening of the primary balance puts the fiscal contribution at 0.3–1.9% of GDP in 1995, at most about a fifth of the shortfall (ILLUSTRATIVE).

10 Robustness

Table 9. Robustness checks

Check	Result
Identification of the monetary shock	Output falls under local projections, recursive SVAR and sign restrictions; 98.6% of accepted rotations negative at four quarters
Pre-COVID sample (to 2019Q4)	GDP −1.33% at four quarters (−1.44% in the full sample)
Exchange rate added to the reaction function	Output response unchanged; price puzzle persists (+0.22 at four quarters)
Reaction-function lag length	One lag: serially correlated residuals (BG $p = 0.002$); two lags: BG $p = 0.07$ (baseline)
Pass-through sub-samples	2001–2019: 0.02; 2009–2026: 0.01; asymmetry and boom-state terms insignificant
Net-tax output elasticity	Tax multipliers unchanged for elasticities of 0.5, 1.0 and 1.5

Check	Result
Index weighting	Equal and theory-weighted indices correlate at 0.94; principal components rejected
Debt baseline	Identity with the IMF residual reproduces the IMF 2026–2031 path within 0.1 pp
Foreign-currency share	Measured share halves the FX-valuation contribution (+7.0 vs +10.9 pp) relative to the residence proxy
Synthetic control	Cleaned pools × two pre-periods × leave-one-out: 1995 gap −9.8 to −10.6; uncleaned pool with short pre-period −7.1 (overfitted)

11 Policy implications

The options below are traceable to specific results and are listed, not ranked; choosing among them involves trade-offs that the estimates describe but cannot settle.

Table 10. Policy options and trade-offs

Problem	Finding	Instrument	Expected effect	Risk
Thin fiscal margin	Projected primary balance 2.05% vs debt-stabilising 1.95% (§7)	Consolidation path: gradual or front-loaded; tax- or spending-based	1.5% of GDP lowers 2032 debt by 5.4–7.7 pp; output cost 2–9 %-years depending on composition and timing (§8)	Medium-run multipliers unknown; tax measures have unmeasured distributional effects
Interest bill since 2020	Interest–growth term +11.5 pp in 2020–25 (§7)	Coordination of monetary easing with the fiscal path	100 bp lower rates cut the required surplus by about 0.2 pp within a year (ILLUSTRATIVE)	Inflation response to rates not identified; price stability is Banxico's mandate
Stacked tightening	100 bp costs 0.5–1.4% of GDP at four quarters (§6.2)	Sequencing monetary and fiscal tightening	Smaller output trough (−1.35% vs −2.15%) for the same 2032 debt	Credibility if inflation expectations drift
Imported cycles	US explains 54% of output variance (§6.4)	Automatic stabilisers; cyclically adjusted fiscal targets	Avoids pro-cyclical tightening in US-driven downturns	Structural slippage labelled cyclical
Currency exposure of debt	FX valuation +7.0 pp in 2001–25; share already 16% (§7)	Debt management: peso issuance, longer maturities	Each 5 pp cut in the FX share lowers the cost of a 10% depreciation by about 0.3 pp (ILLUSTRATIVE)	Peso debt may carry higher rates

12 Limitations

1. The IMF's contribution is assessed from the documentary record rather than regressions: no conditional programme was active in the econometric sample, and earlier programmes are few and selected on crisis.
2. Inflation and exchange-rate responses to monetary policy are not identified with quarterly timing restrictions; high-frequency policy surprises are needed.
3. Fiscal multipliers are identified only on impact; later-year values in the scenarios are borrowed from the literature.
4. The foreign-currency share is measured from 2008 and proxied before; the stock-flow residual (17.4 pp over 2001–2025) is large and unattributed.

5. The IMF general-government perimeter differs from Mexico's broader public-sector borrowing requirement measures.
6. The synthetic control relies on economically dissimilar donors (chiefly Bolivia, Tunisia and Greece) and a short pre-period.
7. Distributional effects are not analysed.

13 Conclusion

Mexico's adjustment history divides at 2000. Before then, adjustment was crisis-driven; IMF money was a minority of each rescue, and IMF conditions were macroeconomic ceilings negotiated with Mexican authorities who designed the structural reforms themselves. Reforms clustered in programme years without being required by them, and the evidence does not permit a clean causal attribution of Mexico's output or inflation outcomes to IMF conditionality. Since 2001, adjustment has been domestic and rule-based, and the IMF relationship has been an undrawn insurance line.

For this second period the transmission estimates are clear on three points: monetary tightening costs output; depreciation barely reaches consumer prices but does reach the public-debt ratio; and most output variation originates in the United States. The forward-looking question is fiscal. With debt at 61.8% of GDP and a stabilising margin of 0.1 points, consolidation can lower the debt ratio under any timing; the evidence from Mexico's own budget data suggests that its composition, more than its timing, determines how much output is lost. Identifying medium-run multipliers — from narrative measures or from the gap between approved and executed budgets — is the step that would most sharpen these forward-looking conclusions.

Data and code availability

All estimates, simulations and figures are produced by a Python replication package that runs end to end from the saved data in under a minute (*mx_adjustment_replication.zip*). Stata and EViews translations of the core estimations are included but have not been run. API tokens are read only from environment variables.

Declaration on the use of AI tools

Data retrieval, estimation code and drafting for this paper were carried out with the assistance of an AI system (Claude, Anthropic) under the author's direction.

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Data sources: BIS statistics (stats.bis.org); Federal Reserve Economic Data (fred.stlouisfed.org); IMF DataMapper and Quarterly Government Finance Statistics (data.imf.org); World Bank World Development Indicators, International Debt Statistics and Quarterly Public Sector Debt (data.worldbank.org).

Appendix

A. Verification of dated events

Table A1. Primary-source verification

Item	Finding	Source
1991 exchange-rate band	Crawling peg replaced by a band in November 1991; ceiling raised daily, floor fixed at 3.0512 new pesos per dollar	Lustig (1995)
Banco de México autonomy	1993 reform of constitutional Article 28; in force 1 April 1994	Banco de México
2006 fiscal rule	Ley Federal de Presupuesto y Responsabilidad Hacendaria published 30 March 2006; article 17 sets the balance target	Cámara de Diputados
2008 Fed swap line	US$30bn, announced 29 October 2008	Federal Reserve
2009 swap-line use	US$3.2bn lent on of US$4bn offered, 21 April 2009	Banco de México
2020 swap line	US$60bn, announced 19 March 2020; partly used in dollar auctions	Press reports

B. Diagnostics

Reaction function: $R^2 = 0.94$; Breusch–Godfrey (4) $p = 0.07$; ARCH (4) $p = 0.17$; CUSUM $p = 0.50$; residuals non-normal (Jarque–Bera $p < 0.001$). Recursive SVAR: three lags (AIC), stable, portmanteau (8) $p = 0.016$. Sign restrictions: 5.3% of rotations accepted; 200 bootstrap replications. Fiscal LP-IV: first-stage F above 12 at all reported horizons; spending shock fails a placebo on US manufacturing four quarters ahead before COVID ($t = 3.6$).

C. Rejected specification

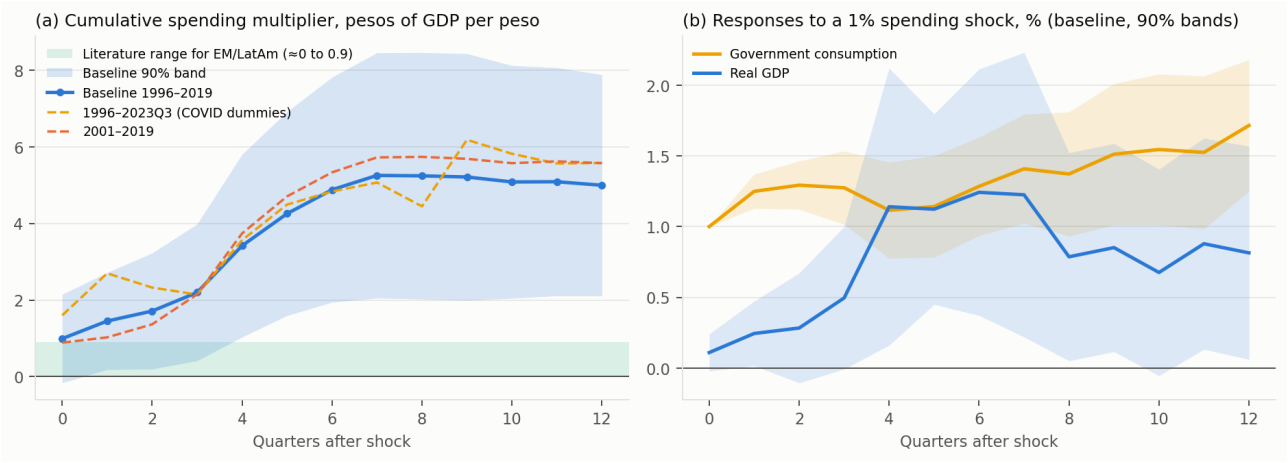


Figure A1. Cumulative spending multiplier from national-accounts government consumption (OECD via FRED, 1996–2023Q3), LP-IV with 90% bands, and responses to a 1% spending shock. ESTIMATED, rejected. Multipliers of 3–6 lie far above any credible range, which indicates failed identification rather than a large multiplier.