

Macroeconomic Structural Adjustment and Civic Cohesion: Effects of IMF Programs in the Global South

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Do externally imposed macroeconomic reforms damage civic cohesion? This paper examines how IMF Structural Adjustment Programs (SAPs) relate to civic cohesion in the Global South using a balanced panel of 25 countries over 1991–2018. The central finding is dimension-specific. The ethnic fractionalization channel operates through the *political* dimensions of cohesion: SAPs become significantly more damaging to political inclusion and equal rights protection in ethnically fragmented societies. The income buffering channel operates through the *institutional* dimensions: richer countries better preserve public service access and rule of law during adjustment. On average, SAP participation is associated with improving civic cohesion, but this conceals the dimension-specific patterns above, with adverse effects reversing sign above a break-even fractionalization threshold that varies with income level. Both findings survive propensity score matching, conflict controls, and alternative SAP intensity measures. The sociopolitical consequences of IMF programs depend on the intersection of social fragmentation and development level—a distinction with direct implications for conditionality design.

Keywords: IMF conditionality; structural adjustment programs; civic cohesion; ethnic fractionalization; income level; Global South; state-dependent effects; panel data

JEL Classifications: F33, F53, O19, D74, Z13, C23

1 Introduction

When governments run out of foreign exchange and can no longer service their external obligations, they often turn to the International Monetary Fund (IMF). The IMF was established in 1944 precisely for this purpose: to provide emergency financing and restore macroeconomic stability to countries facing balance of payments crises (Council on Foreign Relations, 2023). Over time, however, access to IMF financing has come with conditions. These conditions, bundled into what became known as Structural Adjustment Programs (SAPs), require governments to implement wide-ranging reforms: fiscal consolidation, monetary tightening, exchange rate adjustment, privatization, and deregulation (Babb, 2019; Kentikelenis et al., 2016). SAPs com-

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bined both quantitative targets (improving balance of payments, reserves, and borrowing levels) and structural reforms addressing fundamental economic characteristics (Stubbs and Kentikelenis, 2018; Kentikelenis et al., 2016). When including both SAPs and earlier IMF-sponsored structural reform initiatives, it is estimated that up to 135 countries participated in some form of IMF-backed structural adjustment between 1951 and 1990 (Vreeland, 2003). While the economic consequences of these programs have been extensively debated, their effects on the social and political fabric of recipient countries, what we call civic cohesion, remain largely unexplored. This paper addresses that gap.

Despite their stated goals of restoring growth and external balance, SAPs have attracted extensive criticism. Scholars argue that they have undermined national policy autonomy (Schlemmer-Schulte, 2014), increased socioeconomic inequality (Forster et al., 2019), worsened health outcomes (Kentikelenis et al., 2017), and failed to achieve sustained poverty reduction (Easterly, 2003). Their impact on economic growth remains contested: Ghana, one of the most cited SAP cases, experienced improvements in headline macroeconomic indicators following IMF engagement beginning in 1983, yet austerity policies and currency devaluation imposed long-term economic and social costs that aggregate indicators did not capture (Terry, 2019). Even the IMF has acknowledged shortcomings in some of its programs (International Monetary Fund, 2021). Yet despite this rich critical literature, virtually no systematic work examines whether SAPs strengthened or weakened the civic foundations (shared institutional allegiance, political inclusion, equitable public access) on which long-run stability depends.

Civic cohesion, as understood here, refers to the degree to which citizens across social divides share equal standing in, and identification with, the political community and its institutions. It encompasses political inclusion, equal protection of civil liberties across groups, the absence of polarizing social fragmentation, equitable access to public services, and confidence in the rule of law. These dimensions are not merely normative aspirations: civic cohesion underpins institutional legitimacy, state capacity, and the social conditions under which economic reform can be sustained (Putnam, 2000; Organisation for Economic Co-operation and Development, OECD; Brueckner, 2024). Understanding whether SAPs strengthen or erode civic cohesion therefore sheds light on a dimension of structural adjustment that growth and fiscal metrics cannot capture.

Two mechanisms suggest SAPs could affect civic cohesion, though the direction is not predetermined. First, conditionality may shift perceived authority over domestic policy toward external actors, weakening the identification of social groups with the national political order—a concern prominent in the neocolonialism literature (Stiglitz, 2002; Bond, 2006; Schlemmer-Schulte, 2014). A countervailing possibility runs in the opposite direction: where conditionality enforces governance benchmarks, anti-corruption provisions, or rule-of-law reforms, the same external pressure can strengthen civic institutions and broaden access to them (Dreher, 2006; Kentikelenis et al., 2016). This governance-upgrading channel, we argue, explains the positive

average effect documented below. Second, civic cohesion is closely linked to perceived equity in how adjustment costs are distributed. If SAPs impose disproportionate burdens on particular ethnic or socioeconomic groups, the resulting distributional asymmetry can fracture shared institutional allegiance and erode political inclusion, rights protections, and trust in public institutions simultaneously (Rodrik, 1998; Haggard and Kaufman, 1992; Forster et al., 2019). Whether either mechanism dominates depends critically on two conditioning states. Ethnically fragmented societies have fewer cross-cutting social bonds to absorb distributional shocks (Alesina et al., 2003; Easterly, 2001; Collier, 2000), while lower-income countries have weaker institutional buffers to maintain equitable service delivery during fiscal consolidation (Walle, 2022; Brueckner, 2024). The civic consequences of SAPs are therefore neither uniform nor unconditional—they should vary systematically with a country’s social structure and level of economic development.

This paper investigates the relationship between SAPs and civic cohesion in the Global South—a term broadly used to describe countries in Latin America, Africa, Asia, and Oceania that are less economically affluent and geopolitically influential than those in Europe and North America (Connell and Dados, 2012). These countries have historically been the primary recipients of IMF conditionality, making them particularly relevant for studying the sociopolitical consequences of structural adjustment. They are also, critically, the countries where the two conditioning states central to our argument—high ethnic fractionalization and low institutional capacity—co-occur most frequently, making this the scope within which the paper’s mechanisms should be most visible.

The research question is approached from two complementary angles. The first is theoretical: the paper develops a stylized model formalizing the channels linking SAPs to civic cohesion through both material and identity mechanisms. The second is empirical: using a balanced panel of 25 Global South countries from 1991 to 2018, we examine whether SAP participation is associated with changes in a Comprehensive Civic Cohesion Index (CCCI), our primary outcome variable constructed from aggregating five V-Dem dimensions spanning political inclusion, equal rights protection, social non-polarisation, equal access to public services, and rule of law; and how this relationship varies with ethnic fractionalization and income level. The empirical framework exploits within-country variation across years of SAP participation and non-participation, conditional on macroeconomic conditions and balance-of-payments controls that account for the economic selection process driving IMF program entry. While this design absorbs time-invariant heterogeneity and common global shocks, geopolitical determinants of program entry may not be fully captured. We therefore interpret our estimates as disciplined within-country associations rather than causally identified effects, given residual concerns about time-varying confounders. Although the IMF formally phased out SAPs in the late 1990s in favour of Enhanced Structural Adjustment Facilities (ESAFs), these programs share similar policy orientations (Syster, 2022); accordingly, ESAFs are treated here as

continuations of the SAP framework.

Our central finding is that the civic consequences of SAP participation are dimension-specific. The ethnic fractionalization channel concentrates in the *political* dimensions of cohesion (political inclusion and equal rights protection) where SAPs become significantly more damaging in ethnically fragmented societies. The income buffering channel operates on the *institutional* dimensions (public service access and rule of law) where richer countries better preserve civic continuity during fiscal consolidation. Political inclusion is the one dimension where both channels are simultaneously active. These two channels are independently identified, affect different civic dimensions, and together explain why the same adjustment program can strengthen cohesion in homogeneous middle-income societies while eroding it in fragmented lower-income ones. On average, SAP participation is associated with modest improvements in civic cohesion once country and year fixed effects absorb time-invariant heterogeneity and common global shocks but this average conceals the dimension-specific patterns above. Both channels survive across a range of robustness checks including propensity score matching, dynamic estimators, and alternative SAP intensity measures.

In light of recent global debates over sovereignty, distributional equity, and multilateral governance, it is increasingly important to understand the long-term sociopolitical consequences of IMF interventions. By demonstrating that adjustment programs affect distinct civic dimensions through distinct mechanisms—political exclusion in fragmented societies, institutional erosion in low-capacity states—this paper extends the evaluation of structural adjustment beyond growth and fiscal metrics into the social foundations of long-run institutional performance. The dimension-specific nature of these effects also carries a methodological implication: composite indices of civic cohesion, while useful for summary presentation, obscure the two moderating channels through which adjustment interacts with social structure. Both channels warrant separate monitoring in program design and evaluation.

The remainder of the paper is organized as follows: Section 2 reviews the relevant literature on SAPs, social cohesion, and the political economy of IMF conditionality. Section 3 develops the theoretical framework linking SAP participation to civic cohesion through material and identity channels. Section 4 describes the data, sample construction, and empirical strategy. Section 5 presents the main results, dynamic specifications, and robustness checks. Section 6 discusses policy implications. Section 7 concludes.

2 Literature Review

The relationship between IMF Structural Adjustment Programs and domestic economic and political outcomes in the Global South has attracted extensive scholarly attention. Existing research can be grouped into three broad strands: critiques of SAPs as instruments of neocolonial economic governance; empirical evaluations of their economic and distributional consequences; and studies of civic cohesion and identity formation in postcolonial and developing contexts.

Despite this rich literature, systematic analysis of how SAPs influence civic cohesion remains largely absent. This paper contributes to all three strands by providing the first large-scale panel evidence on how SAP participation shapes civic cohesion across the Global South, and by identifying the structural conditions (ethnic fractionalization and income level) that determine whether adjustment programs strengthen or erode it.

A substantial body of scholarship interprets SAPs through the lens of neocolonialism and dependency. Stiglitz (2002) argued that IMF policies reflected ideological continuities with colonial-era economic thought, particularly through the “Washington Consensus,” which promoted liberalization and foreign direct investment often at the expense of domestic industries. He criticized the disproportionate influence of advanced Western economies within IMF governance structures and characterized structural adjustment as rooted in a “colonial mentality.” Bond (2006) extended this argument to Africa, contending that IMF programs entrenched Western-sanctioned neoliberalism and reinforced historical patterns of external control. Oyetunde (2022) linked SAPs to dependency theory, which posits a global system divided between a dominant “core” and an exploited “periphery.” This perspective is reinforced by institutional features of IMF governance, including quota-based voting rights that privilege wealthier member states (Mayer and Napel, 2020). This paper takes the perceived loss of domestic policy sovereignty seriously as a theoretical mechanism: we model the shift of perceived authority over domestic policy toward external actors as a direct channel through which SAPs erode civic cohesion, formalizing the intuition in this literature in a testable welfare framework.

Empirical studies have frequently focused on poverty and inequality. Pan et al. (2026), using a difference-in-differences approach with panel data, found that IMF program participation increased poverty headcounts across multiple international poverty lines. Easterly (2003) similarly reported that growth associated with IMF and World Bank programs did not translate into proportional benefits for low-income populations, particularly in highly unequal societies. Oberdabernig (2013), examining 86 low- and middle-income countries between 1982 and 2009, concluded that SAP participation was associated with higher income inequality and poverty gaps. The relationship between SAPs and economic growth is more contested. Atsebi and Wojnilower (2021), analyzing 132 growth surges across 117 countries, found that many episodes of rapid growth coincided with IMF-supported programs. In contrast, Dreher (2006) identified negative correlations between IMF conditionality and GDP per capita growth, as well as reduced investment, while Collier and Dehn (2001) argued that fiscal austerity and aid withdrawal following stabilization could weaken domestic tax bases and public investment. This paper extends the distributional consequences literature in a direction it has not previously explored: rather than asking how SAPs affect income distribution, we ask how they affect the distribution of political power and civic standing across social groups, an outcome that is arguably more fundamental to long-run institutional stability than income inequality alone.

A separate literature examines the political economy of IMF program entry. Countries ap-

proach the IMF primarily when facing acute balance of payments difficulties—depleted foreign exchange reserves, unsustainable current account deficits, and mounting debt service obligations (Knight and Santaella, 1997; Conway, 1994). This selection process is consequential for empirical analysis: because countries enter SAP programs precisely when their macroeconomic conditions are deteriorating, studies that omit balance-of-payments controls risk attributing to SAPs outcomes that are partly driven by the underlying crisis. Dreher (2006) and Barro and Lee (2005) have both emphasized the importance of accounting for this selection when estimating SAP effects. This paper builds on this strand by treating balance-of-payments conditions not merely as controls but as theoretically motivated selection variables that determine which countries enter SAP programs and under what circumstances. By doing so, we separate the civic consequences of adjustment from the civic consequences of the underlying crises that precede it, a distinction that prior work on the sociopolitical effects of SAPs has largely overlooked.

Parallel to the economic literature, scholars have examined civic cohesion and its role in shaping political identity and institutional performance. Civic cohesion has been linked to social capital (Putnam, 2000), institutional legitimacy (Organisation for Economic Co-operation and Development, OECD), and economic development (Brueckner, 2024). Ariely (2014) showed that ethnic diversity can erode social cohesion under certain institutional conditions, while Laurence et al. (2019) found that the relationship depends on the quality of intergroup contact and the inclusiveness of political institutions. Walle (2022), in a cross-country analysis of social cohesion determinants, identified institutional quality and income level as the strongest structural predictors. The measurement of civic cohesion in cross-national panel settings presents well-documented challenges. Survey-based measures of interpersonal trust, institutional confidence, and national identity—available through the World Values Survey—are collected in waves every five to seven years and cover too few country-year observations for balanced panel estimation over a 25-country Global South sample (Statistics Canada, 2024). Cross-national panel research has therefore relied on institutional proxies from the Varieties of Democracy dataset, which provides annual expert-coded measures of political inclusion, rights protection, and social polarization (Coppedge et al., 2024a). We build on this measurement tradition by moving beyond single-variable proxies toward a multi-dimensional approach that captures civic cohesion as a composite of political inclusion, rights protection, social solidarity, service delivery, and institutional legitimacy. Prior studies of SAP consequences have relied on individual institutional indicators in isolation; this paper shows that the civic consequences of adjustment operate differently across dimensions (ethnic fractionalization damages political and rights dimensions while income level, proxied by GDP per capita, buffers institutional and service delivery dimensions), a finding that single-variable approaches cannot detect.

A smaller literature explores how IMF engagement interacts with political and social dynamics. Woods (2024) emphasized the IMF’s need to adapt to rising economic nationalism, particularly amid post-COVID debt crises in developing countries. Pryke (2012) found limited

evidence of sustained multilateral disengagement following IMF interventions in Asia, while Abouharb and Reinsberg (2023) showed that governments sometimes used IMF resources in ways that fueled political dissatisfaction and protest. The interaction between SAP conditionality and ethnic fractionalization has received comparatively little attention. Easterly (2001) documented that ethnic divisions amplify the negative economic consequences of poor policies generally, and Collier (2000) argued that ethnically fragmented societies are more vulnerable to distributional conflicts during periods of economic stress. This paper directly fills the gap these studies point toward. We provide the first systematic panel evidence that ethnic fractionalization moderates the civic consequences of SAP participation, and we identify a second moderating channel—income level—that prior work has not considered. The interaction of these two structural conditions with IMF conditionality is the paper’s central empirical contribution.

Despite these contributions, two key gaps remain. First, research on civic cohesion in the Global South has often been descriptive or theoretical, with limited large-scale empirical analysis using annual panel methods. Second, the sociopolitical consequences of IMF conditionality have rarely been examined through the lens of civic cohesion, and no study has systematically evaluated how ethnic fractionalization and income level jointly moderate the relationship between SAP participation and civic outcomes. This paper addresses both gaps.

3 Theoretical Framework

This section develops a stylized framework that clarifies the channels through which IMF Structural Adjustment Programs (SAPs) may affect civic cohesion in the Global South. The purpose of the model is not to provide a complete general-equilibrium account of adjustment, but rather to generate transparent, testable sign predictions and to discipline the empirical specification by mapping SAP exposure into two conceptually distinct components of individual welfare: (i) material welfare and (ii) civic cohesion. The model is then used to motivate the paper’s panel regressions and the role of heterogeneous, state-dependent effects.

3.1 Two-Domain Utility under Adjustment

Following a growing literature that extends economic preferences to include identity-related payoffs (Akerlof and Kranton, 2000) and that emphasizes institutional and state capacity as central to development outcomes (Besley and Persson, 2011), we assume that individuals derive utility from both material consumption C and civic cohesion N . We adopt a log-additive specification:

$$U(C, N) = (1 - \mu) \log C + \mu \log N, \quad \mu \in (0, 1), \quad (1)$$

where μ captures the relative importance of civic cohesion versus material welfare in overall utility. The logarithmic form is standard in macroeconomic applications: it delivers diminishing marginal utility in each domain and yields tractable, interpretable comparative statics. Because

$\log(\cdot)$ is strictly increasing, changes in C and N map directly into welfare changes.

3.2 SAP and Civic Cohesion

Civic cohesion is understood here as the degree to which all social groups share equal standing in the political community and equal access to its institutions. It encompasses political inclusion, the equal protection of civil liberties across groups, the absence of polarizing social fragmentation, equitable access to public services, and confidence in the rule of law.

SAPs can affect civic cohesion through two opposing channels. On the erosion side, conditionality may shift perceived authority over domestic policy away from national institutions, weakening the identification of social groups with the domestic political order; externally enforced reforms may be interpreted as a loss of sovereignty and political autonomy foundational to civic identity; and the distributional externalities of adjustment—including heightened inequality or reduced access to public goods—may erode civic solidarity, particularly where adjustment costs fall unevenly across ethnic or socioeconomic groups. On the upgrading side, where conditionality enforces governance benchmarks, anti-corruption provisions, or rule-of-law reforms, the same external pressure can strengthen civic institutions and broaden access to them.

We capture both channels by modelling civic cohesion N as:

$$N = \theta_0 + (\theta_+ - \theta_1)S - \theta_2 T(S), \quad \theta_+, \theta_1, \theta_2 > 0, \quad (2)$$

where $S \in \{0, 1\}$ denotes SAP participation. The term θ_0 is the baseline level of civic cohesion absent SAP participation. The net direct term $(\theta_+ - \theta_1)S$ reflects two opposing channels: θ_+ captures the governance-upgrading effect, where conditionality enforces institutional reforms and civic cohesion rises directly, while θ_1 captures the erosion of civic cohesion due to external conditionality and perceived loss of domestic agency. The net direct effect is positive when governance upgrading dominates ($\theta_+ > \theta_1$) and negative otherwise. The function $T(S)$ captures indirect channels operating through trust and legitimacy—perceived unfairness, social disruption, protest cycles, or institutional delegitimation—that can vary across countries and episodes. It suffices that T is weakly increasing in S and potentially modulated by country characteristics. Importantly, $T(S)$ allows the model to accommodate heterogeneity: SAPs are not uniform, and their sociopolitical repercussions may differ substantially across contexts.

3.3 SAP and Material Consumption

SAPs may also reduce material consumption through austerity and contractionary demand effects. Fiscal consolidation can lower disposable income and weaken safety nets; monetary tightening can raise borrowing costs and depress investment; and exchange-rate adjustment can increase import prices and reduce purchasing power. We represent the consumption channel as:

$$C = Y_0 - \alpha S, \quad \alpha > 0, \quad (3)$$

where Y_0 denotes baseline income absent SAP participation and α captures the net consumption loss associated with adjustment. We maintain $\alpha > 0$, reflecting the well-documented short-run contractionary effects of fiscal consolidation and demand compression (Dreher, 2006; Easterly, 2003); medium-run consumption gains through restored market access or unlocked aid flows, while possible, operate on horizons longer than the adjustment period captured by S_{it} .

3.4 Utility under SAP

Substituting (2) and (3) into (1) yields the reduced-form welfare representation under SAP participation:

$$U(S) = (1 - \mu) \log(Y_0 - \alpha S) + \mu \log(\theta_0 + (\theta_+ - \theta_1)S - \theta_2 T(S)). \quad (4)$$

Equation (4) formalizes how SAP exposure affects welfare through both economic and civic cohesion channels. When $\theta_+ > \theta_1$, the direct civic channel is positive and may offset the consumption loss; when $\theta_+ < \theta_1$, both channels reduce welfare.

3.5 Reduced-Form Variable Structure

To connect theory to data, we embed SAP participation within a broader macro-institutional environment. Let country i at time t be characterized by:

$$Z_{it} = (g_{it}, D_{it}, F_i, Y_{it}),$$

where g_{it} = real GDP per capita growth, D_{it} = regime type, F_i = ethnic fractionalization (time-invariant), and Y_{it} = standardized GDP per capita level capturing structural income differences across countries. SAP exposure is measured by $S_{it} \in [0, 1]$, where the binary case $S_{it} \in \{0, 1\}$ of Section 3.2 is nested as the baseline specification; the continuous intensity version is used in robustness analysis.

The four variables in Z_{it} map directly to the testable implications. GDP growth and regime type capture the macro-political conditions that mediate state dependence through the trust channel $T(S)$ in (2): buoyant growth and inclusive governance reduce the severity of the distributional conflicts that SAPs can trigger. Ethnic fractionalization captures the social structure dimension: fragmented societies have fewer cross-cutting bonds to absorb distributional shocks, so the same SAP package is expected to be more damaging in high-fractionalization contexts. Income level captures the institutional capacity dimension: richer countries have stronger administrative and fiscal buffers to maintain equitable service delivery and political inclusion during consolidation. The empirical specification additionally includes inflation, unemployment, and educational attainment as macroeconomic controls not modelled here for parsimony; their role is to absorb within-country variation in material conditions during SAP years rather than to discipline the interaction structure. Together, Z_{it} defines the state space within which SAPs operate.

3.6 From Structural to Reduced Form

The structural equations (2) and (3) are intentionally parsimonious: they isolate the core channels through which SAPs affect material welfare and civic cohesion without conditioning on country characteristics. To generate testable predictions for the panel regression, we enrich both equations in two steps.

First, the baseline consumption Y_0 and baseline cohesion θ_0 in the structural equations are country- and time-specific objects. They depend on the macro-institutional environment $Z_{it} = (g_{it}, D_{it}, F_i, Y_{it})$ that characterizes each country at each point in time. We assume a linear relationship between baselines and the state variables:

$$Y_0 \approx C_0 + \beta_g g_{it}, \quad (5)$$

$$\theta_0 \approx N_0 + \lambda_g g_{it} + \lambda_D D_{it} - \lambda_F F_i + \lambda_Y Y_{it}. \quad (6)$$

Equation (5) says that baseline consumption is higher in faster-growing economies ($\beta_g > 0$). Equation (6) says that baseline civic cohesion is higher in faster-growing economies ($\lambda_g > 0$), in more democratic societies ($\lambda_D > 0$), in more homogeneous societies ($\lambda_F > 0$, entering negatively because higher F_i reduces cohesion), and in richer countries ($\lambda_Y > 0$). These are standard assumptions in the social cohesion literature (Ariely, 2014; Walle, 2022; Brueckner, 2024).

Then, in the structural model, the SAP coefficient α on consumption and the net erosion term $(\theta_1 - \theta_+) + \theta_2 T(S)$ on civic cohesion are treated as constant. In practice, the depth of civic damage depends on the macro-institutional environment—adjustment is more painful in low-growth episodes and more divisive in fragmented societies. We allow for this heterogeneity by letting the SAP effect interact linearly with each element of Z_{it} :

$$\alpha \approx \alpha_c \quad (\text{constant for consumption}), \quad (7)$$

$$(\theta_1 - \theta_+) + \theta_2 T(S) \approx \chi_0 - \chi_g g_{it} - \chi_D D_{it} + \chi_F F_i - \chi_Y Y_{it}, \quad (8)$$

where $\tau_0 \equiv T(1)|_{\bar{Z}}$ is the average trust erosion under SAP participation evaluated at mean covariate values, and $\chi_0 \equiv (\theta_1 - \theta_+) + \theta_2 \tau_0$ is the average net direct effect of SAP participation on civic cohesion. Crucially, χ_0 can be negative when governance upgrading dominates both direct erosion and average trust erosion, that is, when $\theta_+ - \theta_1 > \theta_2 \tau_0$. The remaining χ terms capture how the macro-institutional environment modulates that net effect: $\chi_g > 0$ (growth mitigates); $\chi_D > 0$ (institutions buffer); $\chi_F > 0$ (fragmentation amplifies); $\chi_Y > 0$ (income buffers).

Substituting Y_0 in (3) with (5) and replacing θ_0 and the net erosion term in (2) with (6) and

(8), and distributing S_{it} through (8), yields the reduced-form system:

$$C_{it} = C_0 + \beta_g g_{it} - \alpha_c S_{it}, \quad \alpha_c > 0, \beta_g > 0, \quad (9)$$

$$N_{it} = N_0 + \lambda_g g_{it} + \lambda_D D_{it} - \lambda_F F_i + \lambda_Y Y_{it} - \chi_0 S_{it} \\ + \chi_g(S_{it} \cdot g_{it}) + \chi_D(S_{it} \cdot D_{it}) - \chi_F(S_{it} \cdot F_i) + \chi_Y(S_{it} \cdot Y_{it}). \quad (10)$$

The reduced-form system (9)–(10) yields two marginal effects of SAP participation. Because the net erosion term enters (2) with a negative sign (it reduces N), the interaction terms in (10) reflect a double negation: growth and income interactions appear with positive signs, while fractionalization appears with a negative sign, even though all χ coefficients are defined as positive. For material consumption:

$$\frac{\partial C_{it}}{\partial S_{it}} = -\alpha_c < 0, \quad (11)$$

which is constant across countries and time, reflecting our assumption that the average material cost of adjustment does not vary with the macro-institutional environment. The marginal effect of SAP on civic cohesion is:

$$\frac{\partial N_{it}}{\partial S_{it}} = -\chi_0 + \chi_g g_{it} + \chi_D D_{it} - \chi_F F_i + \chi_Y Y_{it}. \quad (12)$$

This expression maps directly into the interaction terms estimated empirically. The sign of the marginal effect depends on the values of g_{it} , D_{it} , F_i , and Y_{it} : SAPs may improve civic cohesion in low-fractionalization, higher-income settings and damage it in high-fractionalization, lower-income settings. For the binary baseline specification, this derivative is interpreted as the discrete difference in N between SAP participation and non-participation, $N|_{S=1} - N|_{S=0}$; for the continuous intensity robustness specification, it is a standard marginal effect.

3.7 Theoretical Propositions

The model yields two propositions and one structural observation that guide the empirical analysis.

Proposition 1 (Average Civic Effect of SAP). *The average civic effect of SAP participation, $-\chi_0$, is determined by the balance of θ_+ and θ_1 : it is positive when the governance-upgrading channel dominates ($\theta_+ > \theta_1$) and negative when erosion dominates ($\theta_+ < \theta_1$). At any given set of covariate values, the sign of the marginal effect (12) also depends on the conditioning states F_i and Y_{it} through χ_F and χ_Y : richer and more homogeneous societies may experience improvements under adjustment while fragmented lower-income societies suffer civic costs. The average direction is an empirical question.*

Remark 1 (Trust Erosion and Welfare Loss). *Differentiating (4) with respect to both S and T yields $\partial^2 U / \partial S \partial T < 0$: greater trust erosion from SAP amplifies welfare loss through the civic*

cohesion channel. This cross-partial follows mechanically from the structure of (4)— T enters negatively inside a concave log function—and is stated here as a structural observation rather than an independent testable prediction. Societies with weaker baseline institutional trust are more exposed to this amplification mechanism.

The persistence of civic cohesion as an institutional stock, rather than a flow that resets immediately after program exit, implies that adjustment effects cumulate over time.

Proposition 2 (Fragmentation and Income as Conditioning States). *Let $T(S) = \gamma \cdot F_i \cdot S$ with $\gamma > 0$, reflecting the idea that trust erosion from adjustment is more severe in fragmented societies where distributional conflicts activate ethnic cleavages. Then:*

$$\frac{\partial}{\partial F_i} \left(\frac{\partial N_{it}}{\partial S_{it}} \right) < 0, \quad \frac{\partial}{\partial Y_{it}} \left(\frac{\partial N_{it}}{\partial S_{it}} \right) > 0.$$

Ethnic fractionalization amplifies the adverse civic effect of SAP; income level buffers it. Both conditioning states are independently identified in the empirical analysis. Note that under this functional form, the trust channel $\theta_2 T(S)$ is observationally equivalent to a fractionalization-dependent direct erosion coefficient; the distinction between the trust mechanism and direct erosion is therefore conceptual rather than empirically separable.

4 Empirical Strategy

4.1 Data and Sample Construction

The empirical analysis combines data from multiple international sources covering IMF program participation, macroeconomic conditions, balance of payments conditions, institutional characteristics, and social structure. The sample covers 25 Global South countries over 1991–2018, yielding a balanced panel of 700 country-year observations across five regions: Latin America and the Caribbean, Sub-Saharan Africa, the Middle East and North Africa, South and Southeast Asia, and Eastern Europe and Central Asia.

Countries are selected according to six criteria: at least eight years of active IMF conditionality during 1991–2018; variation in ethnic fractionalization within each region; income diversity within each region; genuine Global South status; data completeness of at least 20 of 28 years; and absence of prolonged civil conflict exceeding five years. The resulting panel spans LAC (Bolivia, Brazil, Colombia, El Salvador, Peru), SSA (Ghana, Zambia, Senegal, Kenya, Cameroon), MENA (Egypt, Yemen, Jordan, Mauritania, Tunisia), SSEA (Bangladesh, Pakistan, Philippines, Mongolia, Sri Lanka), and EECA (Albania, Moldova, Ukraine, Georgia, Kyrgyzstan). Yemen is included but truncated at 2014—the year before active civil conflict began—with post-2014 observations dropping from the working sample due to missing control variables.

To measure exposure to IMF structural adjustment programs, we construct a binary indicator SAP_{it} following the standard approach in the IMF political economy literature (Dreher, 2006).

Using the Dreher IMF program dataset, we identify country-year observations in which an IMF program with policy conditionality was active for at least five months, aggregating across eight program types: Standby Arrangements (IMF_SBA_5), Extended Fund Facility (IMF_EFF_5), Structural Adjustment Facility (IMF_SAF_5), Poverty Reduction and Growth Facility (IMF_PRGF_5), Precautionary and Liquidity Line (IMF_PLL_5), Precautionary Credit Line (IMF_PCL_5), Flexible Credit Line (IMF_FCL_5), and Exogenous Shocks Facility (IMF_ESF_5). We define $SAP_{it} = 1$ if any of these indicators equals 1 in a given country-year, and 0 otherwise. SAP participation occurs in 55.2% of country-year observations across the panel, reflecting the chronic engagement with IMF conditionality that characterizes much of the Global South over this period.

Our primary outcome variable is a Comprehensive Civic Cohesion Index (CCCI) constructed from five indicators drawn from Version 16 of the Varieties of Democracy dataset (Coppedge et al., 2024b). The five components are selected to span distinct dimensions of civic cohesion as identified in the comparative social cohesion literature (Statistics Canada, 2024; Walle, 2022), subject to the constraint that all components are available annually for all 25 countries and carry no convergence warnings in the V-Dem cautionary notes. The components are: (i) `v2pepwr``soc`, equality of political power across social groups, capturing the political inclusion dimension; (ii) `v2xeg_eqprotec`, equal protection of civil liberties across social groups, capturing the equal rights dimension; (iii) `v2cacamps` reversed, measuring the absence of political polarization into antagonistic social camps, capturing the social solidarity dimension; (iv) `v2peapssoc`, equal access to public services across social groups, capturing the service delivery dimension; and (v) `v2x_rule`, the rule of law index, capturing the institutional legitimacy dimension. Each component is standardized to a z-score across the full panel, and the CCCI is the equal-weighted average of the five z-scores so that higher values indicate greater civic cohesion.

Macroeconomic controls (X_{it}) include GDP per capita growth, CPI inflation, unemployment, regime type (Polity2), and educational attainment from the Barro–Lee dataset (Barro and Lee, 2013), interpolated to annual frequency. To address the selection process driving IMF program entry, we include five balance-of-payments controls: current account balance as a share of GDP, foreign exchange reserves in months of import cover, debt service as a share of exports, trade openness, and GDP per capita level in constant 2015 USD. Time-invariant ethnic fractionalization scores are drawn from the Ethnic Power Relations dataset compiled by ETH Zürich (Vogt et al., 2015). All datasets are harmonized using consistent country and year identifiers before merging into the final panel.

Two dimensions of civic cohesion that are conceptually important, which are the interpersonal trust and national identity, cannot be incorporated into an annual balanced panel for this sample. The World Values Survey, which best captures these dimensions, is collected in waves every 5-7 years and covers too few country-year observations for the countries and period under study. We acknowledge this as a limitation and note that it applies equally to all existing

cross-national panel studies of civic cohesion. Two V-Dem variables that might otherwise have been considered, `v2x_cspart` (civil society participation) and `v2xeg_eqaccess` (equal access index), are excluded because both carry explicit convergence warnings in V-Dem Version 16 (Coppedge et al., 2024b).

4.2 Design Motivation

Empirical work on the relationship between IMF Structural Adjustment Programs and civic cohesion is complicated by two important concerns. First, countries differ in persistent, time-invariant characteristics such as colonial legacies, geography, deep institutional histories, and social structure that are correlated with both IMF program participation and civic outcomes. Second, time-varying common shocks (global financial conditions, commodity cycles, IMF-wide policy retooling, and synchronized macroeconomic disruptions) can confound cross-country comparisons by inducing spurious comovement in outcomes and treatment.

Our empirical strategy addresses these concerns using fixed effects designs that (i) absorb all time-invariant heterogeneity via country fixed effects, and (ii) account for common shocks via year fixed effects. This delivers credible within-country estimates of how civic cohesion covaries with SAP participation, conditional on observed covariates and common shocks. We therefore avoid strong causal language and interpret the estimates as disciplined evidence on the state-contingent patterns emphasized by the theory. We now develop the specification progressively, beginning with the simplest model and adding elements sequentially; the preferred specification is previewed in §4.3 for reference.

4.3 Outcome, Treatment, and Controls

Let y_{it} denote civic cohesion in country i and year t , measured by the CCCI. Let SAP_{it} be an indicator equal to 1 if country i is under IMF conditionality for at least five months in year t , and 0 otherwise. Let g_{it} denote GDP per capita growth, D_{it} regime type, F_i ethnic fractionalization, and Y_{it} standardized GDP per capita level. The preferred interaction specification, derived from (10) by replacing N_{it} with the CCCI and adding country and year fixed effects, is:

$$y_{it} = \alpha_i + \lambda_t + \beta_1 SAP_{it} + \beta_2 g_{it} + \beta_3 D_{it} + \beta_5 Y_{it} + \beta_6 (SAP_{it} \times g_{it}) + \beta_7 (SAP_{it} \times D_{it}) + \beta_8 (SAP_{it} \times F_i) + \beta_9 (SAP_{it} \times Y_{it}) + \gamma' \tilde{X}_{it} + \varepsilon_{it}, \quad (13)$$

where α_i denotes country fixed effects, λ_t year fixed effects, and ε_{it} an idiosyncratic error term. The standalone F_i (with coefficient β_4) term is omitted from (13) because ethnic fractionalization is time-invariant and absorbed by α_i in all fixed-effects specifications; it enters exclusively through the interaction $SAP_{it} \times F_i$. Here $\tilde{X}_{it}$ denotes the remaining macroeconomic and balance-of-payments controls not already appearing as standalone regressors or in interactions—CPI inflation, unemployment, educational attainment, current account balance, foreign exchange

reserves, debt service, and trade openness. Standard errors are clustered at the country level throughout.

The coefficient β_1 corresponds to $-\chi_0$, the average direct effect of SAP participation on civic cohesion, which is positive when the governance-upgrading channel dominates erosion and negative otherwise. The interaction coefficients correspond to the χ terms that govern how the macro-institutional environment modulates that effect: $\beta_6 \leftrightarrow \chi_g, \beta_7 \leftrightarrow \chi_D, \beta_8 \leftrightarrow -\chi_F$, and $\beta_9 \leftrightarrow \chi_Y$. The theoretical predictions are therefore:

$$\beta_1 \leq 0, \quad \beta_6 > 0, \quad \beta_7 > 0, \quad \beta_8 < 0, \quad \beta_9 > 0,$$

and the marginal effect of SAP participation on civic cohesion at any point in the sample is:

$$\frac{\partial y_{it}}{\partial SAP_{it}} = \beta_1 + \beta_6 g_{it} + \beta_7 D_{it} + \beta_8 F_i + \beta_9 Y_{it}, \quad (14)$$

which is the empirical mapping of (12).

4.4 Baseline Fixed Effects Model

We estimate the within-country fixed effects specification:

$$y_{it} = \alpha_i + \beta SAP_{it} + \gamma' X_{it} + \varepsilon_{it}, \quad i = 1, \dots, N, \quad t = 1, \dots, T, \quad (15)$$

where α_i denotes country fixed effects and ε_{it} is an idiosyncratic error term. By absorbing α_i , (15) compares years within the same country with and without SAP participation, conditional on X_{it} .

4.5 State-Contingent Specification

To align the empirical design with the model's state dependence, we augment (15) with interaction terms:

$$y_{it} = \alpha_i + \beta_1 SAP_{it} + \beta_2 (SAP_{it} \cdot g_{it}) + \beta_3 (SAP_{it} \cdot D_{it}) + \beta_4 (SAP_{it} \cdot F_i) + \beta_5 (SAP_{it} \cdot Y_{it}) + \gamma' X_{it} + \varepsilon_{it}, \quad (16)$$

where g_{it} is GDP per capita growth, D_{it} is regime type, F_i is ethnic fractionalization, and Y_{it} is standardized GDP per capita level. Here X_{it} includes all macroeconomic and BOP controls—including g_{it} and D_{it} —which do not appear as standalone regressors in this specification and are therefore not double-counted. The marginal effect of SAP participation on civic cohesion is:

$$\frac{\partial y_{it}}{\partial SAP_{it}} = \beta_1 + \beta_2 g_{it} + \beta_3 D_{it} + \beta_4 F_i + \beta_5 Y_{it}. \quad (17)$$

4.6 Common-Shock Robustness: Two-Way Fixed Effects

To account for global and IMF-wide shifts common to all countries in a given year, we add year fixed effects:

$$y_{it} = \alpha_i + \lambda_t + \beta_1 SAP_{it} + \beta_2(SAP_{it} \cdot g_{it}) + \beta_3(SAP_{it} \cdot D_{it}) + \beta_4(SAP_{it} \cdot F_i) + \beta_5(SAP_{it} \cdot Y_{it}) + \gamma' X_{it} + \varepsilon_{it}, \quad (18)$$

where λ_t denotes year dummies. Whereas (16) relies on within-country variation, (18) identifies within-country, within-year relationships by netting out both country means and year means. This is our preferred baseline specification.

4.7 Dynamic Robustness and Nickell Bias

To capture persistence in civic cohesion and to guard against omitted past influences, we estimate a dynamic specification:

$$y_{it} = \alpha_i + \lambda_t + \rho y_{i,t-1} + \beta_1 SAP_{it} + \beta_2(SAP_{it} \cdot g_{it}) + \beta_3(SAP_{it} \cdot D_{it}) + \beta_4(SAP_{it} \cdot F_i) + \beta_5(SAP_{it} \cdot Y_{it}) + \gamma' X_{it} + \varepsilon_{it}. \quad (19)$$

Because the model includes a lagged dependent variable and country fixed effects, the dynamic FE estimator may suffer from Nickell bias due to the demeaning-induced correlation between $y_{i,t-1}$ and ε_{it} . With $T = 28$, the implied bias is approximately $1/T \approx 3.6$ percent of the true coefficient—small but non-negligible. We address this using the Anderson and Hsiao (1982) instrumental variables estimator, which first-differences the equation to eliminate fixed effects and instruments $\Delta y_{i,t-1}$ with $y_{i,t-2}$. We prefer Anderson–Hsiao over system GMM (?) because with $N = 25$ cross-sectional units, system GMM risks instrument proliferation—more instruments than cross-sectional units—which inflates the Hansen J -statistic and produces unreliable inference (?). With $\rho \approx 0.83$ across specifications, civic cohesion is highly persistent, and the long-run effect of a regressor with short-run coefficient β is $\beta/(1 - \rho)$. We report both short-run and long-run effects in the dynamic results. Pooled OLS estimates are also reported for comparison; as they do not absorb unobserved country heterogeneity, they are susceptible to omitted-variable bias and are presented as a benchmark rather than a preferred specification.

5 Empirical Results

5.1 Summary Statistics

Table 1 indicates substantial macroeconomic volatility across the sample. GDP per capita growth varies widely (std. dev. 4.191), consistent with crisis contractions and recovery episodes.

Table 1: Summary Statistics (1991–2018, 25 Countries)

Variable	Mean	Std. Dev.	Min	Max
<i>Panel A: Civic Cohesion Index and Components</i>				
CCCI	0.000	0.657	-2.082	1.429
Political power equality	0.693	0.875	-2.290	2.360
Equal rights protection	0.553	0.223	0.019	0.908
Social non-polarisation	0.104	0.984	-2.935	1.899
Equal public services	0.207	0.871	-2.156	2.258
Rule of law	0.442	0.220	0.056	0.827
<i>Panel B: Treatment and Social Structure</i>				
IMF SAP participation	0.552	0.498	0.000	1.000
Ethnic fractionalization	0.504	0.250	0.039	0.870
<i>Panel C: Macroeconomic Controls</i>				
GDP per capita growth (%)	1.756	5.355	-45.325	15.404
Inflation (%)	32.358	229.965	-3.207	4734.914
Regime type	3.791	5.128	-6.000	10.000
Unemployment rate (%)	7.740	5.005	0.398	30.007
Educational attainment, years	7.331	2.347	1.570	11.150
<i>Panel D: Balance-of-Payments Controls</i>				
Current account balance (% GDP)	-4.293	5.807	-43.771	12.128
FX reserves, months of imports	4.595	2.960	0.037	16.973
Debt service (% exports)	17.757	12.636	0.405	116.564
Trade openness (% GDP)	55.010	20.570	15.640	116.050
GDP per capita level, 2015 USD	5338.16	4656.23	480.67	20997.77

Notes: Balanced panel: 25 countries $\times$ 28 years = 700 observations spanning five Global South regions.

Inflation dispersion is extreme, reflecting the instability that typically precedes adjustment programs. SAP exposure occurs in 55.2% of country-year observations, indicating that IMF conditionality remains prevalent over the sample period. Civic cohesion (CCCI) has a mean of zero by construction and a standard deviation of 0.657, with sufficient within-country variation to motivate panel methods. Ethnic fractionalization ranges from 0.039 (Tunisia) to 0.870 (Cameroon), providing the cross-country variation needed to identify the interaction effects that are central to the paper's argument.

5.2 Correlation Structure

The CCCI is positively correlated with GDP per capita level (GDPpc), educational attainment, and regime type and negatively correlated with ethnic fractionalization and unemployment. The raw correlation between SAP participation and the CCCI is small and positive (0.031), suggesting that the negative association documented in some prior work largely reflects cross-country differences rather than within-country changes.

Table 2: Correlation Matrix

	CCCI	GDPgr	GDPpc	Educ	EF	Infl	Regime	SAP	Unemp
CCCI	1.000								
GDP growth	0.113	1.000							
GDP pc level	0.481	0.091	1.000						
Education	0.472	0.041	0.721	1.000					
Ethnic frac.	-0.248	-0.048	-0.312	-0.318	1.000				
Inflation	-0.072	-0.113	-0.189	-0.108	0.042	1.000			
Regime type	0.318	0.097	0.502	0.374	-0.189	-0.061	1.000		
SAP	0.031	-0.041	-0.264	-0.172	0.198	-0.022	-0.118	1.000	
Unemployment	-0.103	-0.089	0.118	0.098	-0.145	-0.027	-0.197	0.094	1.000

Notes: The balanced panel contains 700 country-year observations from 25 countries over 1991–2018.

5.3 Baseline Associations:

5.3.1 Pooled OLS

Pooled OLS suggests a weakly positive association between SAP participation and the CCCI without controls, which remains positive and grows in magnitude as controls are progressively added. Once the full set of macroeconomic and BOP controls is included, the SAP coefficient is positive and significant (0.092***).

Table 3: Effect of IMF SAPs on Civic Cohesion: Pooled OLS Estimates

	(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)
SAP _{ct}	0.085* (0.048)	0.081* (0.048)	0.090* (0.048)	0.112** (0.044)	0.116*** (0.044)	0.125*** (0.045)	0.074* (0.044)	0.050 (0.046)	0.092*** (0.034)
GDP growth		0.005 (0.005)	0.015** (0.007)	0.005 (0.005)	0.004 (0.005)	0.004 (0.005)	0.006 (0.005)	0.009 (0.006)	0.015*** (0.005)
Inflation			0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.001 (0.001)	0.004** (0.002)
Regime type				0.053*** (0.004)	0.053*** (0.004)	0.052*** (0.004)	0.061*** (0.004)	0.055*** (0.005)	0.036*** (0.004)
Ethnic fractionalization					-0.071 (0.090)	-0.049 (0.091)	0.258*** (0.089)	0.286*** (0.087)	0.297*** (0.069)
Income level						0.029 (0.020)	-0.022 (0.018)	-0.049*** (0.018)	0.059** (0.024)
Unemployment							0.040*** (0.005)	0.037*** (0.005)	0.032*** (0.004)
Education								0.060*** (0.016)	0.073*** (0.014)
BOP controls	No	No	No	No	No	No	No	No	Yes
Adjusted R ²	0.003	0.003	0.016	0.197	0.197	0.198	0.266	0.333	0.615
Observations	696	696	681	679	679	679	679	595	552

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

This pattern is consistent with the well-known selection problem running in the opposite direction for the CCCI: countries that enter SAP programs tend to have lower civic cohesion to begin with, yet once country characteristics are controlled for, the association turns more strongly positive which suggests that the raw positive correlation understates the within-country improvement associated with SAP participation. Ethnic fractionalization enters negatively without income controls but turns strongly positive once income level is included. Because pooled OLS does not absorb time-invariant country heterogeneity, these estimates likely reflect cross-country differences rather than within-country changes over time, and the fixed effects results below are the preferred specifications.

5.3.2 Country Fixed Effects

Once country fixed effects are introduced, the SAP coefficient is consistently positive across specifications and becomes highly significant with BOP controls (0.078***).

Table 4: Effect of IMF SAPs on Civic Cohesion: Country Fixed Effects

	(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)
SAP _{ct}	0.026 (0.021)	0.019 (0.020)	0.009 (0.020)	0.035** (0.016)	0.035** (0.016)	0.058*** (0.017)	0.056*** (0.017)	0.055*** (0.017)	0.078*** (0.019)
GDP growth		0.006** (0.003)	0.001 (0.003)	0.000 (0.003)	0.000 (0.003)	-0.000 (0.003)	0.001 (0.003)	0.004 (0.003)	0.003 (0.003)
Inflation			0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000* (0.000)	0.000*** (0.000)	0.001 (0.001)	0.001*** (0.000)
Regime type				0.042*** (0.004)	0.042*** (0.004)	0.038*** (0.004)	0.037*** (0.004)	0.040*** (0.005)	0.041*** (0.005)
Income level						0.111*** (0.025)	0.130*** (0.029)	0.192*** (0.033)	0.175*** (0.035)
Unemployment							0.012*** (0.005)	0.018*** (0.005)	0.014** (0.006)
Education								-0.090*** (0.019)	-0.105*** (0.023)
BOP controls	No	No	No	No	No	No	No	No	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	No	No	No	No	No	No	No	No	No
Within R ²	0.002	0.017	0.001	0.228	0.228	0.257	0.267	0.278	0.299
Observations	696	696	681	679	679	679	679	595	552

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Without controls, the FE estimate is smaller than its pooled OLS counterpart, consistent with the selection argument: countries that enter SAP programs tend to have lower baseline civic cohesion, which inflates the raw cross-country association in pooled OLS.

5.3.3 Country and Year Fixed Effects

Controlling for common global shocks through year fixed effects, the SAP coefficient remains positive and significant across all specifications, ranging from 0.026** to 0.057***. The positive average effect is robust to the progressive addition of macroeconomic controls and BOP variables, and strengthens when BOP controls are included, consistent with the argument that omitting them understates the within-country association. These results establish the average effect: conditional on country characteristics and global shocks, SAP participation years are associated with higher civic cohesion on average. As the interaction results below demonstrate, however, this average conceals substantial heterogeneity across countries that differ in ethnic fractionalization and income level. Ethnic fractionalization is time-invariant and absorbed by country fixed effects.

Table 5: Effect of IMF SAPs on Civic Cohesion: Two-Way Fixed Effects

	(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)
SAP _{ct}	0.040 (0.024)	0.035 (0.024)	0.031 (0.023)	0.026 (0.019)	0.026 (0.019)	0.032* (0.017)	0.031* (0.017)	0.036** (0.018)	0.057*** (0.020)
GDP growth		0.003 (0.003)	−0.002 (0.003)	−0.001 (0.003)	−0.001 (0.003)	0.000 (0.003)	0.001 (0.003)	0.004 (0.003)	0.003 (0.003)
Inflation			0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000* (0.000)	0.000*** (0.000)	0.001 (0.001)	0.001*** (0.000)
Regime type				0.042*** (0.004)	0.042*** (0.004)	0.044*** (0.004)	0.043*** (0.004)	0.044*** (0.005)	0.048*** (0.006)
Income level						0.287*** (0.032)	0.305*** (0.033)	0.310*** (0.038)	0.304*** (0.038)
Unemployment							0.012*** (0.004)	0.018*** (0.005)	0.014** (0.006)
Education								−0.027 (0.027)	−0.011 (0.033)
BOP controls	No	No	No	No	No	No	No	No	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Within R ²	0.002	0.013	−0.004	0.228	0.228	0.144	0.157	0.158	0.086
Observations	696	696	681	679	679	679	679	595	552

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Ethnic fractionalization is time-invariant and is therefore absorbed by the country fixed effects.

5.4 Dimension-by-Dimension Results

Table 6 contains the paper’s most precise finding. The two moderating channels operate on entirely distinct civic dimensions: ethnic fractionalization damages the *political* dimensions of cohesion (political inclusion and equal rights protection), while income level buffers the *institutional* dimensions (public service access and rule of law).

The ethnic fractionalization channel is concentrated in the political dimensions of civic cohesion: SAP×EF is negative and significant for political inclusion (−0.339***) and equal rights protection (−0.056***), but statistically indistinguishable from zero for social non-polarisation,

public service access, and rule of law. This pattern is consistent with the theoretical mechanism proposed: in fragmented societies, the distributional costs of adjustment concentrate political power and erode rights protections for the most affected groups, while broader institutional dimensions remain insulated.

The income channel operates differently as $SAP \times Income$ is positive and significant for public service access (0.041***) and rule of law (0.024**), reflecting the capacity of richer countries to maintain administrative continuity and legal predictability during fiscal consolidation. The channel is also positive and significant for political inclusion (0.073***) suggesting that institutional capacity shapes not only service delivery but also the political standing of social groups during adjustment. Equal rights protection and social non-polarisation show no significant income buffering.

Table 6: SAP Effects by Civic Cohesion Dimension

	Political Inclusion	Equal Rights Protection	Social Non-Polarisation	Public Services	Rule of Law	CCCI (Composite)
SAP_{ct}	0.246*** (0.054)	0.043*** (0.012)	0.207 (0.136)	0.016 (0.031)	0.063** (0.024)	0.199*** (0.054)
$SAP \times GDP$	0.005 (0.007)	0.002 (0.001)	-0.059*** (0.018)	-0.004 (0.004)	0.003 (0.003)	-0.008 (0.006)
$SAP \times EF$	-0.339*** (0.083)	-0.056*** (0.016)	-0.260 (0.177)	-0.007 (0.052)	-0.059 (0.037)	-0.237*** (0.075)
$SAP \times Income$	0.073*** (0.022)	0.007 (0.006)	0.018 (0.049)	0.041*** (0.012)	0.024** (0.009)	0.057*** (0.020)
$SAP \times Regime$	-0.008 (0.005)	-0.003*** (0.001)	0.020** (0.010)	-0.006*** (0.002)	-0.002 (0.002)	-0.003 (0.004)
N	552	552	552	552	552	552
Within R^2	0.228	0.163	-0.560	0.324	0.441	0.001

Notes: Each column is a separate TWFE regression with country and year fixed effects, the full interaction structure (SAP_{ct} , $SAP \times GDP$, $SAP \times EF$, $SAP \times Income$, $SAP \times Regime$), and BOP controls (current account, reserves, debt service, trade openness). Robust standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

The fractionalization finding is fundamentally about political exclusion and rights erosion; the income buffering finding is fundamentally about institutional capacity to maintain service delivery and legal order.

5.5 State-Contingent Interaction Results

Table 7 uses the CCCI composite to quantify how ethnic fractionalization and income level jointly moderate the net civic effect of adjustment. Adding $SAP \times EF$ in Column (III) yields

a coefficient of -0.366^{***} , indicating that ethnic fractionalization amplifies the adverse civic consequences of adjustment. This implies that though SAP participation is associated with improving cohesion in homogeneous societies, this positive effect erodes as fragmentation rises, eventually reversing sign. Adding $SAP \times Income$ in Column (IV) yields a coefficient of 0.039^{**} , meaning richer countries absorb SAP shocks better. $SAP \times Regime$ enters small and insignificant (-0.003), leaving the two core interactions essentially unchanged at -0.237^* and 0.057^* respectively.

Table 7: State-Contingent Effects of IMF SAPs on Civic Cohesion

	(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)
SAP_{ct}	0.036 (0.034)	0.053 (0.034)	0.240** (0.105)	0.221** (0.101)	0.231** (0.103)	0.219** (0.103)	0.190** (0.091)	0.199** (0.099)	0.057 (0.036)
$SAP \times GDP$		-0.007 (0.008)	-0.011 (0.008)	-0.010 (0.007)	-0.009 (0.008)	-0.010 (0.008)	-0.009 (0.008)	-0.008 (0.008)	
$SAP \times EF$			-0.366^{***} (0.168)	-0.339^{**} (0.164)	-0.330^{**} (0.154)	-0.291^* (0.157)	-0.244^* (0.141)	-0.237^* (0.131)	
$SAP \times Income$				0.039 (0.030)	0.042 (0.031)		0.054 (0.035)	0.057* (0.034)	
$SAP \times Regime$					-0.004 (0.008)			-0.003 (0.009)	
Base controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BOP controls	No	No	No	No	No	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	595	595	595	595	595	552	552	552	552

Notes: $***p < 0.01$, $**p < 0.05$, $*p < 0.10$. Base controls include GDP growth, inflation, regime type, standardized income level, unemployment, and education. BOP controls include current account balance, foreign exchange reserves, debt service, trade openness, and GDP per capita level.

The preferred marginal effect of SAP participation on civic cohesion as seen in column (VIII) is therefore:

$$\frac{\partial CCCI_{it}}{\partial SAP_{it}} = 0.199 - 0.237 \times F_i + 0.057 \times Y_{it}, \quad (20)$$

where F_i is ethnic fractionalization and Y_{it} is standardized GDP per capita level. At the sample mean EF of 0.504 and mean income, this expression evaluates to 0.080—a modest positive average effect. The break-even fractionalization threshold, above which SAPs are associated with declining civic cohesion, is $0.199/0.237 \approx 0.84$ at mean income, and varies from approximately 0.66 for low-income countries (25th income percentile) to 0.95 for upper-middle income countries (75th percentile).

Figure 1 plots the marginal effect of SAP participation on civic cohesion as a function of ethnic fractionalization, evaluated at three income levels corresponding to low-income (25th percentile, red dash-dot), middle-income (median, blue solid), and upper-middle income (75th percentile, green dash).

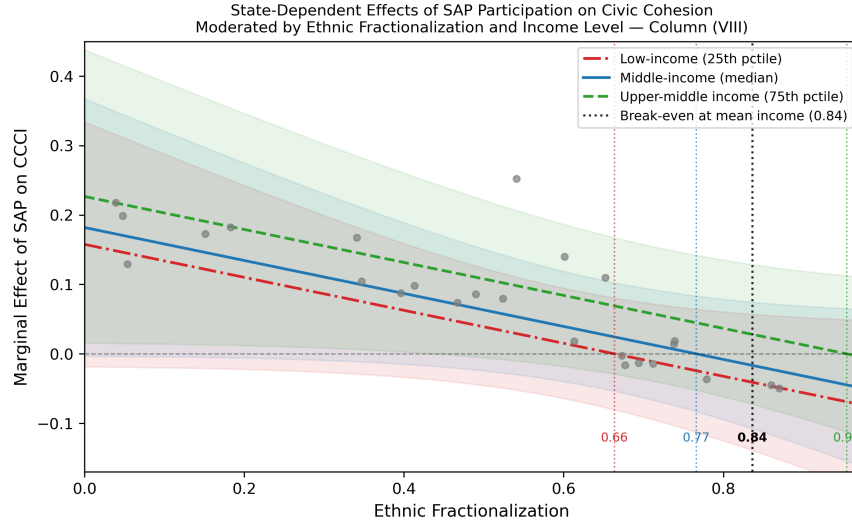


Figure 1: Marginal Effect of SAP Participation on Civic Cohesion

Notes: Shaded bands are 95% confidence intervals constructed via the delta method. Vertical dotted lines indicate break-even EF values for each income scenario. Grey dots represent sample countries positioned at their actual EF and income levels.

The figure makes clear that the state-dependence of SAP effects on civic cohesion operates along two dimensions simultaneously. Moving rightward along the horizontal axis (toward more fragmented societies), the marginal effect declines regardless of income level. Moving upward across the income scenarios (from low to upper-middle income), the entire marginal effect schedule shifts upward, meaning that richer countries benefit more (or suffer less) from adjustment at every level of fractionalization. The three break-even thresholds partition the sample in a policy-relevant way: countries to the right of their respective threshold are those for which SAP participation is associated with declining civic cohesion.

5.6 Timing: Entry, Ongoing, and Exit

Table 8 decomposes the SAP effect into three stages: program entry, ongoing program years, and the first post-program exit year. We do this to examine whether the civic consequences of adjustment vary across the program lifecycle.

The estimates indicate that the positive association between SAP participation and civic cohesion is concentrated most strongly in ongoing program years. In column II, the estimated coefficient is 0.085 for SAP entry and 0.222 for ongoing SAP years. In the fully interacted specification in column III, these estimates rise to 0.112 and 0.269, respectively. The ongoing coefficient is statistically significant at the 5% level in all specifications, while the entry coefficient is positive but not statistically distinguishable from zero. This pattern suggests that

the civic effects of adjustment are not primarily an immediate entry-year response, but instead appear more pronounced once programs are underway.

Table 8: SAP Effects by Program Lifecycle Stage: Entry, Ongoing, and Exit

	Dependent variable: CCCI		
	(I)	(II)	(III)
SAP entry	0.116 (0.110) 0.279**	0.085 (0.096) 0.222**	0.112 (0.105) 0.269**
SAP ongoing	(0.124) 0.189*	(0.113) 0.167*	(0.114) 0.162*
SAP exit	(0.101) -0.221 (0.183)	(0.099) -0.097 (0.156)	(0.094) -0.120 (0.148)
SAP × EF		0.066 (0.040)	0.054 (0.039)
SAP × Income			-0.013** (0.006)
SAP × GDP			0.002 (0.007)
SAP × Regime			
Controls	Yes	Yes	Yes
BOP controls	No	Yes	Yes
Country FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	597	554	554
<i>Wald test:</i>			
Entry = Ongoing		p = 0.040	p = 0.030
Ongoing = Exit		p = 0.404	p = 0.027
Entry = Exit		p = 0.384	p = 0.637

Notes: Standard errors clustered at the country level in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. SAP entry is the first year of a new program; ongoing refers to subsequent program years; exit is the first post-program year.

The exit-year coefficient is smaller than the ongoing coefficient but remains positive and marginally significant across specifications. In column III, the estimated exit-year effect is 0.162, compared with 0.269 for ongoing SAP years. This suggests that some positive association with civic cohesion may persist into the first post-program year, although the magnitude is more modest than during active program implementation.

Wald tests reinforce this lifecycle interpretation. In column III, equality between the entry and ongoing coefficients is rejected ($p = 0.030$), indicating that ongoing program years are associated with significantly larger civic-cohesion gains than entry years. Equality between ongoing and exit years is also rejected ($p = 0.027$), consistent with the effect declining after program completion. By contrast, the test fails to reject equality between entry and exit years ($p = 0.637$).

Taken together, the results suggest that SAP-related changes in civic cohesion are strongest during the implementation phase rather than being driven solely by either a short-lived entry effect or a post-program rebound.

5.7 Event Study and Pre-Trend Test

The timing decomposition in Section 5.6 conditions on program phase but does not address whether pre-existing trends in civic cohesion confound the within-country comparison. Figure 2 presents an event study tracing the evolution of the CCCI in the three years before and four years after SAP entry, demeaned to the year immediately preceding entry.

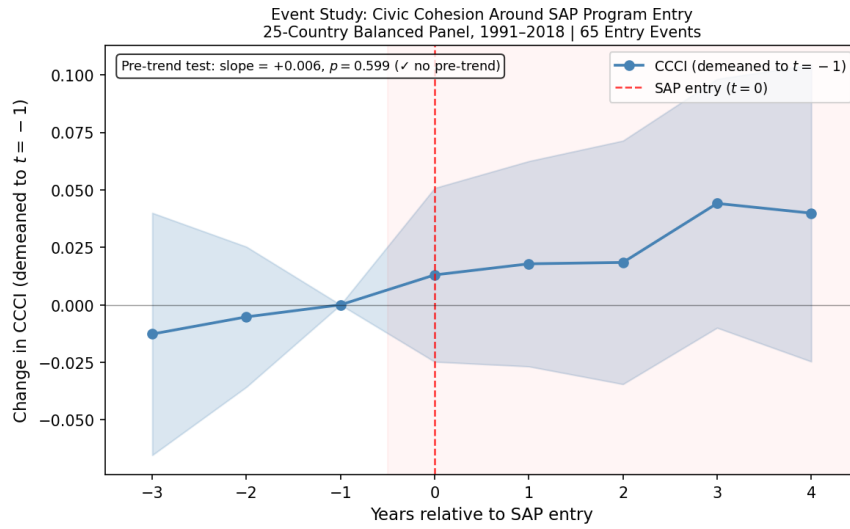


Figure 2: Event Study: Civic Cohesion Around SAP Entry

The pre-entry path is flat: civic cohesion shows no systematic trend in the three years before a program begins. A pre-trend test regressing demeaned CCCI on a linear time trend within $t \in \{-3, -2, -1\}$ yields a slope of 0.006 ($p = 0.599$), providing no evidence of a pre-existing trend. The absence of a pre-trend means that the within-country variation we exploit is not driven by deteriorating civic conditions that happen to precede IMF engagement. After program entry, cohesion is broadly flat with modest positive movement in years one and three, consistent with the positive average effect documented in the regression tables.

5.8 Dynamic Specifications

Civic cohesion is a slow-moving institutional outcome, and the static TWFE estimates in previous sections do not account for persistence in the dependent variable. Table 9 introduces a

lagged dependent variable to capture this persistence and examines whether the fractionalization and income channels survive in a dynamic framework. Civic cohesion is highly persistent ($\hat{\rho} \approx 0.83$), implying long-run effects of approximately $0.055/(1 - 0.833) \approx 0.33$ for the SAP direct effect and $-0.085/(1 - 0.833) \approx -0.51$ for SAP×EF. With $T = 28$, Nickell bias is approximately 3.6%—small but non-negligible. The Anderson–Hsiao IV estimates confirm that the fractionalization channel survives bias correction with increased magnitude (-0.143 vs. -0.085), suggesting Nickell bias attenuates rather than inflates the interaction. The income channel, while robust in TWFE, exhibits sign instability under first-differencing and is therefore less robustly identified than the fractionalization channel.

Table 9: Dynamic Robustness: Persistence, Nickell Bias, and Anderson–Hsiao IV Estimates

	Dynamic TWFE			Anderson–Hsiao IV		
	(I)	(II)	(III)	(IV)	(V)	(VI)
SAP_{ct}	0.002	0.033**	0.055*	−0.010	0.054	0.070
$CCCI_{t-1}$	0.843***	0.835***	0.833***	0.898**	0.840**	0.827**
$SAP \times GDP$			−0.006			−0.013***
$SAP \times EF$		−0.071**	−0.085**		−0.137*	−0.143**
$SAP \times Income$		0.018*	0.016*		−0.037**	−0.042**
$SAP \times Regime$			0.000			0.003
Base controls	Yes	Yes	Yes	Yes	Yes	Yes
BOP controls	No	Yes	Yes	No	Yes	Yes
Country FE	Yes	Yes	Yes	Removed by first-differencing		
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
$\hat{\rho}$	0.843	0.835	0.833	0.898	0.840	0.827
Within R^2	0.785	0.777	0.778	—	—	—
Observations	595	552	552	570	527	527

Notes: Dependent variable: CCCI. Dynamic TWFE standard errors clustered at the country level. Anderson–Hsiao IV uses robust standard errors (first-differenced data; entity dimension eliminated). *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

5.9 Robustness

Table 10 reports SAP×EF and SAP×Income coefficients across ten alternative specifications for all five civic cohesion dimensions and the CCCI composite. The fractionalization channel is the most stable finding: SAP×EF is negative and significant for the CCCI in 9 of 10 specifications, and for political inclusion and equal rights protection in 8 of 10 each, holding across both concessional and standard program types and surviving PSM, crisis exclusion, conflict controls, lagged RHS, and continuous SAP intensity. The income buffering channel is moderately robust: SAP×Income is positive and significant for the CCCI, political inclusion, public services, and rule of law in 7 of 10 specifications each, but insignificant for equal rights in 9 of 10, confirming that the two channels operate on distinct dimensions throughout.

The facility-type decomposition reveals an asymmetry consistent with the buffering mechanism: $SAP \times Income$ is significant under standard programs targeting middle-income countries (CCCI: 0.063**; political inclusion: 0.113***) but largely absent under concessional programs targeting low-income countries, where compressed income variation limits institutional buffering capacity. Armed conflict independently depresses civic cohesion (political inclusion: -0.454^{**} ; rule of law: -0.100^{***}) but leaves both channels unchanged, and crisis exclusion produces no material difference, ruling out acute economic contractions as a confound.

Table 10: Robustness: $SAP \times EF$ and $SAP \times Income$ across outcomes

Specification	SAP $\times$ Ethnic Fractionalization					SAP $\times$ Income				
	CCCI	Pol. Incl.	Eq. Rights	Pub. Serv.	Rule/Law	CCCI	Pol. Incl.	Eq. Rights	Pub. Serv.	Rule/Law
Main TWFE BOP (preferred)	-0.237***	-0.339***	-0.056***	-0.007	-0.059	0.057***	0.073***	0.007	0.041***	0.024**
Lagged RHS ($t - 1$)	-0.203***	-0.297***	-0.050***	-0.018	-0.072*	0.080***	0.086***	0.010*	0.053***	0.016*
PSM (BOP-matched sample)	-0.263***	-0.356***	-0.060***	-0.031	-0.047	0.038	0.048*	-0.002	0.019	0.031***
Anderson–Hsiao IV	-0.143**	0.058	0.000	-0.055	-0.017	-0.042**	-0.037	-0.009	-0.007	-0.008
Dynamic FE	-0.085**	-0.038	-0.004	-0.013	-0.016	0.016	0.008	0.002	0.016**	-0.001
Crisis exclusion (GDP $< -5\%$)	-0.229***	-0.336***	-0.059***	0.030	-0.067*	0.058***	0.077***	0.007	0.045***	0.023**
Armed conflict control	-0.241***	-0.346***	-0.056***	-0.003	-0.060	0.055***	0.068***	0.007	0.043***	0.023**
Alt. SAP intensity (continuous)	-0.112	-0.192**	-0.040***	0.056	-0.008	0.059***	0.077***	0.004	0.049***	0.022**
Concessional programs only	-0.186**	-0.356***	-0.057***	-0.021	-0.031	-0.021	-0.100	-0.002	0.002	0.062*
Standard programs only	-0.189*	-0.247*	-0.061**	0.143**	-0.068	0.063**	0.113***	0.004	0.057***	0.021*

Notes: Entries are coefficients on $SAP \times EF$ and $SAP \times Income$ from 10 robustness specifications.

6 Policy Implications

Our findings imply that IMF Structural Adjustment Programs (SAPs) should be designed with explicit attention to their sociopolitical consequences. Although SAPs are intended to restore macroeconomic stability, our theoretical framework and panel evidence show that adjustment policies are associated with institutional legitimacy, civic cohesion, and the social foundations of long-run development. Reform efforts should therefore extend beyond stabilization targets to include cohesion-enhancing components.

First, the income buffering results indicate that richer countries better preserve public service access and rule of law during adjustment, while lower-income countries are more exposed to institutional erosion. For low-capacity program countries, protecting essential social spending on health, education, and basic safety nets is not merely a humanitarian consideration but a condition for civic stability. Our dimension-by-dimension evidence shows the income channel is most visible precisely in public service access and rule of law, the two dimensions most vulnerable to fiscal contraction. Capacity-building initiatives, such as scaled technical assistance and institutional modernization, can further strengthen public-sector performance, though their effectiveness is necessarily conditioned by deep country-specific constraints and histories.

Second, preserving domestic policy autonomy is central. A plausible channel through which SAP participation may erode cohesion is the perception of externally imposed policymaking. Incorporating domestic stakeholders into program design and monitoring through structured consultation with legislatures, national policy councils, and civil society can reduce legitimacy costs and increase compliance. In parallel, systematic tracking of civic cohesion indicators alongside macroeconomic targets would allow international financial institutions to evaluate societal reception and adjust program components in real time.

Third, the strongest adverse relationship in our analysis concerns ethnic fractionalization and civic cohesion, and the interaction results indicate that fragmentation amplifies SAP-related civic costs. SAP frameworks in heterogeneous societies should therefore include measures that strengthen inclusive governance: protections for minority political participation, equitable representation, and credible constraints against discrimination. Such measures can help foster civic identities grounded in shared institutions rather than demographic divisions.

Finally, the dynamic evidence emphasizes persistence and delayed effects, implying that adjustment outcomes depend on policy continuity and medium-run institutional trajectories. SAPs should therefore emphasize credible transition paths: gradual fiscal withdrawals, sustained technical oversight, and protection of essential social spending. These reforms improve the likelihood that stabilization translates into durable welfare gains without eroding the civic foundations that sustain long-run institutional performance.

7 Conclusion

This paper examines how IMF Structural Adjustment Programs (SAPs) relate to civic cohesion in the Global South. We develop a stylized framework in which adjustment policies affect welfare through both material consumption and civic-identity channels, and evaluate these predictions using a balanced panel of 25 countries across five regions over 1991–2018. Civic cohesion is measured by a Comprehensive Civic Cohesion Index aggregating five distinct V-Dem dimensions: political inclusion, equal rights protection, social non-polarisation, equal access to public services, and rule of law.

Across preferred specifications that absorb country heterogeneity and common shocks, SAP participation is on average associated with modest improvements in civic cohesion once BOP controls are included. The interaction structure provides clear evidence of state dependence along two distinct channels. The ethnic fractionalization channel concentrates in the political dimensions of cohesion: fragmentation amplifies SAP-related civic costs, with adverse effects reversing sign above a break-even threshold that varies with income level. The income buffering channel operates through the institutional dimensions: richer countries better preserve public service access and rule of law during adjustment, reflecting stronger administrative capacity to absorb fiscal consolidation. Specifically, the fractionalization channel loads onto political inclusion and equal rights protection, while the income buffering channel loads onto public ser-

vice access and rule of law—two distinct mechanisms that a composite index cannot separately identify. These two channels are independently identified, affect different civic dimensions, and together explain why the same adjustment program can strengthen cohesion in homogeneous middle-income societies while eroding it in fragmented lower-income ones.

We also document strong persistence in civic cohesion over time, consistent with the view that civic identity is shaped by deep institutional and social structures rather than short-lived macroeconomic fluctuations. Taken together, our results suggest that SAPs are unlikely to be adequately evaluated using only short-run macroeconomic outcomes. Adjustment programs are associated with legitimacy, inclusion, and social cohesion channels that matter for long-run stability and policy effectiveness.

The findings open several promising directions for further inquiry. Richer identification strategies such as matched event studies or regression-discontinuity designs around program-approval thresholds could provide sharper identification than panel fixed effects. Extending the analysis to broader country samples and incorporating micro-level survey measures would allow deeper exploration of the mechanisms linking macroeconomic reform to civic identity. On the theoretical side, embedding reform decisions within a political-economy environment in which governments endogenously choose adjustment intensity under social fragmentation may generate sharper comparative statics. Understanding how economic reform interacts with the social fabric of developing societies is essential for designing adjustment programs that support not only stabilization, but also the long-run civic foundations on which sustained development depends.

References

- Abouharb, M. R. and Reinsberg, B. (2023), *IMF Lending: Partisanship, Punishment, and Protest*, Cambridge University Press.
- Akerlof, G. A. and Kranton, R. E. (2000), Economics and Identity, *The Quarterly Journal of Economics* **115**(3), 715–753.
- Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S. and Wacziarg, R. (2003), Fractionalization, *Journal of Economic Growth* **8**(2), 155–194.
- Anderson, T. W. and Hsiao, C. (1982), Formulation and Estimation of Dynamic Models Using Panel Data, *Journal of Econometrics* **18**(1), 47–82.
- Ariely, G. (2014), Does Diversity Erode Social Cohesion? Conceptual and Methodological Insights, *Political Studies* **62**(3), 573–595.
- Atsebi, J.-M. B. and Wojnilower, J. (2021), Initiating Growth Surges: The Role of IMF-Supported Programs, *IEO Background Paper BP/21-01/02. Independent Evaluation Office of the International Monetary Fund, Washington, DC*.
- Babb, S. (2019), *Behind the Development Banks: Washington Politics, World Poverty, and the Wealth of Nations*, University of Chicago Press, Chicago.

- Barro, R. J. and Lee, J.-W. (2005), IMF Programs: Who Is Chosen and What Are the Effects?, *Journal of Monetary Economics* **52**(7), 1245–1269.
- Barro, R. J. and Lee, J.-W. (2013), A New Data Set of Educational Attainment in the World, 1950–2010, *Journal of Development Economics* **104**, 184–198.
- Besley, T. and Persson, T. (2011), *Pillars of Prosperity: The Political Economics of Development Clusters*, Princeton University Press, Princeton.
- Bond, P. (2006), *Looting Africa: The Economics of Exploitation*, Zed Books, London.
- Brueckner, M. (2024), How Economic Prosperity Is Important for Social Cohesion, CEDA Opinion. Committee for Economic Development of Australia.
- Collier, P. (2000), Ethnicity, Politics and Economic Performance, *Economics and Politics* **12**(3), 225–245.
- Collier, P. and Dehn, J. (2001), Aid, Shocks, and Growth, *World Bank Economic Review*.
- Connell, R. and Dados, N. (2012), Where in the World Does Neoliberalism Come From? The Market Agenda in Southern Perspective, *Theory and Society* **43**(2), 117–138.
- Conway, P. (1994), IMF Lending Programs: Participation and Impact, *Journal of Development Economics* **45**(2), 365–391.
- Coppedge, M., Gerring, J., Knutsen, C. H., Lindberg, S. I. et al. (2024a), V-Dem Dataset v16.
- Coppedge, M., Gerring, J., Knutsen, C. H., Lindberg, S. I., Teorell, J., Altman, D., Bernhard, M., Cornell, A., Fish, M. S., Gjerløw, H., Glynn, A., Godøy, A., Grahn, S., Hicken, A., Kinzelbach, K., Krusell, J., Marquardt, K. L., McMann, K., Mechkova, V., Medzihorsky, J., Natsika, N., Neundorff, A., Pernes, P., Pemstein, D., Ryden, J., von Römer, J., Seim, B., Sigman, R., Skaaning, S.-E., Staton, J., Sundström, A., Tzelgov, E., Wang, Y.-t., Wig, T., Wilson, S. and Ziblatt, D. (2024b), V-Dem Dataset v16, Varieties of Democracy (V-Dem) Project.
- Council on Foreign Relations (2023), What Is the IMF?, <https://www.cfr.org/background/what-imf>.
- Dreher, A. (2006), IMF and Economic Growth: The Effects of Programs, Loans, and Compliance with Conditionality, *World Development* **34**(5), 769–788.
- Easterly, W. (2001), Can Institutions Resolve Ethnic Conflict?, *Economic Development and Cultural Change* **49**(4), 687–706.
- Easterly, W. (2003), Can Foreign Aid Buy Growth?, *Journal of Economic Perspectives* **17**(3), 23–48.
- Forster, T., Kentikelenis, A. E., Reinsberg, B., Stubbs, T. H. and King, L. P. (2019), How Structural Adjustment Programs Affect Inequality: A Disaggregated Analysis of IMF Conditionality, 1980–2014, *Social Science Research* **80**, 83–113.
- Haggard, S. and Kaufman, R. R. (1992), *The Politics of Economic Adjustment: International Constraints, Distributive Conflicts, and the State*, Princeton University Press, Princeton, NJ.

- International Monetary Fund (2021), IMF Executive Board Discusses the Ex-Post Evaluation of Argentina's 2018 Stand-By Arrangement.
- Kentikelenis, A. E., Stubbs, T. H. and King, L. P. (2016), IMF Conditionality and Development Policy Space, 1985–2014, *Review of International Political Economy* **23**(4), 543–582.
- Kentikelenis, A. E., Stubbs, T. H. and King, L. P. (2017), Structural Adjustment and Public Spending on Health: Evidence from IMF Programs in Low-Income Countries, *Social Science & Medicine* **126**, 169–176.
- Knight, M. and Santaella, J. A. (1997), Economic Determinants of IMF Financial Arrangements, *Journal of Development Economics* **54**(2), 405–436.
- Laurence, J., Schmid, K. and Hewstone, M. (2019), Ethnic Diversity, Ethnic Threat, and Social Cohesion: (Re)-Evaluating the Role of Perceived Out-Group Threat and Prejudice in the Relationship Between Community Ethnic Diversity and Intra-Community Cohesion, *Journal of Ethnic and Migration Studies* **45**(3), 395–418.
- Mayer, A. and Napel, S. (2020), Weighted voting on the IMF Managing Director, *Economics of Governance* **21**(3), 237–244.
- Oberdabernig, D. A. (2013), Revisiting the Effects of IMF Programs on Poverty and Inequality, *World Development* **46**, 113–142.
- Organisation for Economic Co-operation and Development (OECD) Staff (2017), *Trust and Public Policy: How Better Governance Help Rebuild Public Trust*, OECD.
- Oyetunde, O. S. (2022), Is dependency theory relevant in the twenty-first century.
- Pan, S.-Y., King, L. P. and Nosrati, E. (2026), The IMF, Structural Adjustment, and Poverty: A Cross-National Difference-in-Differences Analysis, 1980-2019, *The Journal of Development Studies* pp. 1–25.
- Pryke, S. (2012), Economic Nationalism: Theory, History, and Prospects, *Global Policy* **3**(3), 281–291.
- Putnam, R. D. (2000), *Bowling Alone: The Collapse and Revival of American Community*, Simon & Schuster, New York.
- Rodrik, D. (1998), *Has Globalization Gone Too Far?*, Institute for International Economics, Washington, DC.
- Schlemmer-Schulte, S. (2014), International Monetary Fund, Structural Adjustment Programme (SAP), *Max Planck Encyclopedia of Public International Law*, Oxford University Press.
- Statistics Canada (2024), Measuring Social Cohesion, *Conference of European Statisticians, Meeting of the 2023/2025 Bureau ECE/CES/BUR/2024/OCT/7*, United Nations Economic Commission for Europe (UNECE), Warsaw, Poland. Report prepared by Samuel MacIsaac, Grant Schellenberg, Rubab Arim, and David Wavrock.
- Stiglitz, J. E. (2002), *Globalization and Its Discontents*, W. W. Norton & Company, New York.
- Stubbs, T. H. and Kentikelenis, A. E. (2018), Conditionality and sovereign debt: An overview

- of human rights implications, in I. Bantekas and C. Lumina (eds), *Research Handbook on Sovereign Debt and Human Rights*, Edward Elgar Publishing, Cheltenham, UK, pp. 90–108.
- Syster, E. (2022), SAPs in Disguise: Modern IMF Programs Have Similar Negative Effects to Their Criticized Predecessors.
- Terry, S. (2019), *International Monetary Fund Structural Adjustment Policy and Loan Conditionality in Ghana: Economic, Cultural, and Political Impacts*, Honors college senior thesis, University of Vermont.
- Varieties of Democracy Institute (2021), Democracy Facilitates Social Cohesion, V-Dem Policy Brief 28.
- Vogt, M., Bormann, N.-C., R  gger, S., Cederman, L.-E., Hunziker, P. and Girardin, L. (2015), Integrating Data on Ethnicity, Geography, and Conflict: The Ethnic Power Relations Data Set Family, *Journal of Conflict Resolution* **59**(7), 1327–1342.
- Vreeland, J. R. (2003), *The IMF and Economic Development*, Cambridge University Press, Cambridge.
- Walle, Y. M. (2022), Determinants of Social Cohesion: Cross-Country Evidence, *IDOS Discussion Paper*. German Institute of Development and Sustainability.
- Woods, N. (2024), The IMF and Rising Economic Nationalism, *Finance & Development*.

Appendix

A Model, Functional Forms, and Proofs

A.1 Utility and Functional-Form Justification

To motivate log-separable preferences, recall the Cobb–Douglas form

$$U(L, K) = AL^\alpha K^\beta, \quad A > 0, \alpha > 0, \beta > 0, \quad (21)$$

whose logarithm is $\log U = \log A + \alpha \log L + \beta \log K$. Log preferences deliver diminishing marginal utility, constant expenditure shares, and closed-form marginal rates of substitution. The marginal utilities and MRS are

$$\frac{\partial U}{\partial L} = \alpha AL^{\alpha-1} K^\beta, \quad \frac{\partial U}{\partial K} = \beta AL^\alpha K^{\beta-1}, \quad \text{MRS}_{L,K} = -\frac{\alpha}{\beta} \frac{K}{L}.$$

The paper’s welfare index combines material consumption and civic cohesion:

$$U(C, N) = (1 - \mu) \log C + \mu \log N, \quad \mu \in (0, 1), \quad (22)$$

with marginal utilities and MRS:

$$\frac{\partial U}{\partial C} = \frac{1 - \mu}{C} > 0, \quad \frac{\partial U}{\partial N} = \frac{\mu}{N} > 0, \quad \text{MRS}_{C,N} = -\frac{1 - \mu}{\mu} \frac{N}{C}. \quad (23)$$

A.2 Model Specification

Here $s \geq 0$ denotes SAP intensity, corresponding to S_{it} in the main text. For expositional clarity, the proofs in this appendix present the erosion-only case ($\theta_+ = 0$); the full model with governance upgrading is recovered by replacing θ_1 with $(\theta_1 - \theta_+)$ throughout. All proofs go through under this substitution, with Appendix Proposition A1 additionally requiring $(\theta_1 - \theta_+) + \theta_2 T'(s) > 0$ (net erosion dominates) for the welfare-reduction result.

The two structural channels are:

$$C(s) = Y_0 - \alpha s, \quad \alpha > 0, \quad (24)$$

$$N(s, T) = \theta_0 - \theta_1 s - \theta_2 T(s), \quad \theta_1 > 0, \theta_2 > 0. \quad (25)$$

The sign of $T'(s)$ is left open a priori in the theory so the model can capture “trust erodes under externally imposed austerity” ($T'(s) < 0$) as well as “SAP accompanied by credible reforms can rebuild trust” ($T'(s) > 0$). The empirical section then disciplines which case is more consistent with the data.

We assume $C(s) > 0$ and $N(s, T(s)) > 0$ throughout so that $\log C$ and $\log N$ are well-defined. Substituting into (22):

$$U(s) = (1 - \mu) \log(Y_0 - \alpha s) + \mu \log(\theta_0 - \theta_1 s - \theta_2 T(s)). \quad (26)$$

A.3 Proposition A1: SAP Reduces Welfare

Appendix Proposition A1 formalizes the welfare-reduction result underlying main text Proposition 1 under the erosion-only case ($\theta_+ = 0$); in the full model, the result holds whenever net erosion dominates governance upgrading.

Proposition 1. *Suppose $dC/ds < 0$ and $dN/ds < 0$. Then $dU/ds < 0$.*

Proof. By the chain rule:

$$\frac{dU}{ds} = \underbrace{\frac{\partial U}{\partial C}}_{>0} \underbrace{\frac{dC}{ds}}_{<0} + \underbrace{\frac{\partial U}{\partial N}}_{>0} \underbrace{\frac{dN}{ds}}_{<0} < 0.$$

□

Using $dC/ds = -\alpha$ and $dN/ds = -(\theta_1 + \theta_2 T'(s))$:

$$\frac{dU}{ds} = -\frac{(1 - \mu)\alpha}{C(s)} - \frac{\mu(\theta_1 + \theta_2 T'(s))}{N(s, T(s))} < 0 \quad \text{when} \quad \theta_1 + \theta_2 T'(s) > 0. \quad (27)$$

A.4 Remark A1: Trust Attenuates the Marginal Welfare Loss from SAP

Remark 1. Let U , $C(s, T)$, $N(s, T)$ be twice differentiable with $U_C, U_N > 0$, $C_s, N_s < 0$, $C_T, N_T > 0$, $U_{CC}, U_{NN} < 0$, and

$$U_C C_{sT} + U_N N_{sT} > -(U_{CC} C_T C_s + U_{NN} N_T N_s). \quad (28)$$

Then $\partial^2 U / (\partial s \partial T) > 0$: higher trust makes SAP less harmful at the margin.

Proof. Differentiating $\partial U / \partial s = U_C C_s + U_N N_s$ with respect to T , and using $U_{CN} = U_{NC} = 0$ (log-separability):

$$\frac{\partial^2 U}{\partial s \partial T} = \underbrace{U_{CC} C_T C_s}_{>0} + U_C C_{sT} + \underbrace{U_{NN} N_T N_s}_{>0} + U_N N_{sT}. \quad (29)$$

Under (28), (29) is strictly positive. When $C_T = C_{sT} = 0$, the condition reduces to $N_T > 0$ and $N_{sT} \geq 0$. $\square$

A.5 Proposition A2: Fragmentation Amplifies the SAP Welfare Loss

Let trust follow $T(s) = T_0 + \gamma \cdot \text{Fragility} \cdot s$, so $dT/ds = \gamma \cdot \text{Fragility}$.

Proposition 2. If $C_T \geq 0$ and $N_T \geq 0$, then

$$\frac{\partial}{\partial \text{Fragility}} \left(\frac{dU}{ds} \right) = \gamma (U_C C_T + U_N N_T). \quad (30)$$

Proof. From (27) with $T = T(s)$:

$$\frac{dU}{ds} = U_C \left(C_s + C_T \frac{dT}{ds} \right) + U_N \left(N_s + N_T \frac{dT}{ds} \right).$$

Differentiating with respect to Fragility and substituting $\partial(dT/ds)/\partial \text{Fragility} = \gamma$:

$$\frac{\partial}{\partial \text{Fragility}} \left(\frac{dU}{ds} \right) = \gamma (U_C C_T + U_N N_T).$$

Since $U_C, U_N > 0$ and $C_T, N_T \geq 0$, the sign equals the sign of γ : when $\gamma < 0$, fragility magnifies the welfare loss from SAP through trust erosion. $\square$

A.6 Summary of Key Derivatives

Under (22)–(25) with $T = T(s)$:

$$\begin{aligned} U_C &= \frac{1-\mu}{C}, & U_N &= \frac{\mu}{N}, & \frac{dC}{ds} &= -\alpha, & \frac{dN}{ds} &= -\theta_1 - \theta_2 T'(s), \\ \frac{dU}{ds} &= -\frac{(1-\mu)\alpha}{C} - \frac{\mu(\theta_1 + \theta_2 T'(s))}{N}. \end{aligned}$$

A.7 Linearizing Baseline Consumption and Civic Cohesion

Let $Y_0 = f(g_{it})$ and $\theta_0 = h(g_{it}, D_{it}, F_i, Y_{it})$ be twice continuously differentiable. First-order Taylor expansions around sample means $(\bar{g}, \bar{D}, \bar{F}, \bar{Y})$ give:

$$f(g_{it}) \approx \underbrace{f(\bar{g}) - f'(\bar{g})\bar{g}}_{\equiv C_0} + \underbrace{f'(\bar{g})}_{\equiv \beta_g} g_{it}, \quad (31)$$

$$h(g_{it}, D_{it}, F_i, Y_{it}) \approx \underbrace{h(\bar{g}, \bar{D}, \bar{F}, \bar{Y}) - h_g \bar{g} - h_D \bar{D} + h_F \bar{F} - h_Y \bar{Y}}_{\equiv N_0} + \underbrace{h_g}_{\equiv \lambda_g} g_{it} + \underbrace{h_D}_{\equiv \lambda_D} D_{it} - \underbrace{(-h_F)}_{\equiv \lambda_F} F_i + \underbrace{h_Y}_{\equiv \lambda_Y} Y_{it}, \quad (32)$$

where $h_g, h_D, h_Y > 0$ and $h_F < 0$ so that $\lambda_F = -h_F > 0$, consistent with Ariely (2014), Brueckner (2024), Varieties of Democracy Institute (2021), and Walle (2022). Higher-order terms are absorbed into ε_{it} .

A.8 Justification for $\alpha \approx \alpha_c$

We treat α as constant because: (i) the paper's empirical focus is on civic cohesion rather than heterogeneous consumption effects (Dreher, 2006; Oberdabernig, 2013); and (ii) GDP growth, inflation, and unemployment in X_{it} absorb within-country variation in material conditions during SAP years, making a heterogeneous α redundant for the civic cohesion equation.

A.9 Linearizing the Trust Function $T(S)$

Because $T(S)$ is unobserved, we model it as linear in Z_{it} :

$$T(S_{it}) = \tau_0 - \tau_g g_{it} - \tau_D D_{it} + \tau_F F_i - \tau_Y Y_{it}, \quad \tau_0, \tau_g, \tau_D, \tau_F, \tau_Y > 0. \quad (33)$$

A.10 Deriving the Reduced-Form SAP Coefficients

Substituting (33) into $(\theta_1 - \theta_+) + \theta_2 T(S_{it})$ (using the full model with governance-upgrading channel θ_+):

$$\begin{aligned} (\theta_1 - \theta_+) + \theta_2 T(S_{it}) &= (\theta_1 - \theta_+) + \theta_2(\tau_0 - \tau_g g_{it} - \tau_D D_{it} + \tau_F F_i - \tau_Y Y_{it}) \\ &= \underbrace{(\theta_1 - \theta_+ + \theta_2 \tau_0)}_{\equiv \chi_0} - \underbrace{\theta_2 \tau_g}_{\equiv \chi_g} g_{it} - \underbrace{\theta_2 \tau_D}_{\equiv \chi_D} D_{it} + \underbrace{\theta_2 \tau_F}_{\equiv \chi_F} F_i - \underbrace{\theta_2 \tau_Y}_{\equiv \chi_Y} Y_{it}, \end{aligned} \quad (34)$$

where $\chi_g, \chi_D, \chi_F, \chi_Y > 0$ since $\theta_2 > 0$ and all τ 's are positive. Crucially, $\chi_0 \equiv (\theta_1 - \theta_+) + \theta_2 \tau_0$ can be negative when the governance-upgrading channel dominates ($\theta_+ - \theta_1 > \theta_2 \tau_0$), consistent with the positive average SAP effect documented empirically.

A.11 Recovering the Reduced-Form Civic Cohesion Equation

Since (34) enters (25) multiplied by $-S_{it}$:

$$-((\theta_1 - \theta_+) + \theta_2 T(S_{it})) \cdot S_{it} = -\chi_0 S_{it} + \chi_g (S_{it} \cdot g_{it}) + \chi_D (S_{it} \cdot D_{it}) - \chi_F (S_{it} \cdot F_{it}) + \chi_Y (S_{it} \cdot Y_{it}). \quad (35)$$

Adding the linearized baseline (32) recovers the full reduced-form equation (10). The four interaction terms follow necessarily from linearizing the unobserved $T(S)$; they are not added ad hoc.

A.12 CCCI Construction

Each V-Dem component $v_{j,it}$ is standardized:

$$z_{j,it} = \frac{v_{j,it} - \bar{v}_j}{\sigma_{v_j}}, \quad (36)$$

and the CCCI is the equal-weighted average:

$$\text{CCCI}_{it} = \frac{1}{5} \sum_{j=1}^5 z_{j,it}. \quad (37)$$

Table 11: CCCI Components

Dimension	V-Dem Variable	Direction	r with CCCI
Political inclusion	v2pepwrSOC	Higher = more equal	0.583
Equal rights protection	v2xeg_eqprotec	Higher = more equal	0.770
Social non-polarisation	v2cacamps_rev	Higher = less polar	0.473
Equal public service access	v2peapssoc	Higher = more equal	0.728
Rule of law	v2x_rule	Higher = stronger	0.705

Notes: v2cacamps_rev = $-1 \times$ v2cacamps. r = Pearson correlation with CCCI, $N = 700$. Excluded due to V-Dem v16 convergence issues: v2x_cspart, v2xeg_eqaccess.

A.13 Sample Country List

Table 12: Sample Countries and Key Characteristics

Country	ISO3	Ethnic frac.	Income group	SAP years
<i>Latin America and the Caribbean (LAC)</i>				
Bolivia	BOL	0.739	Lower-middle	15
Brazil	BRA	0.541	Upper-middle	8
Colombia	COL	0.601	Upper-middle	17
El Salvador	SLV	0.183	Lower-middle	13
Peru	PER	0.652	Upper-middle	16
<i>Sub-Saharan Africa (SSA)</i>				
Cameroon	CMR	0.870	Lower-middle	16
Ghana	GHA	0.673	Low	20
Kenya	KEN	0.860	Lower-middle	19
Senegal	SEN	0.694	Low	14
Zambia	ZMB	0.779	Lower-middle	15
<i>Middle East and North Africa (MENA)</i>				
Egypt	EGY	0.151	Lower-middle	10
Jordan	JOR	0.341	Lower-middle	18
Mauritania	MRT	0.613	Lower-middle	23
Tunisia	TUN	0.039	Lower-middle	8
Yemen ^a	YEM	0.396	Low	12
<i>South and Southeast Asia (SSEA)</i>				
Bangladesh	BGD	0.054	Low	11
Mongolia	MNG	0.413	Lower-middle	17
Pakistan	PAK	0.712	Lower-middle	17
Philippines	PHL	0.738	Lower-middle	9
Sri Lanka	LKA	0.524	Lower-middle	16
<i>Eastern Europe and Central Asia (EECA)</i>				
Albania	ALB	0.048	Upper-middle	16
Georgia	GEO	0.490	Lower-middle	22
Kyrgyzstan	KGZ	0.677	Low	21
Moldova	MDA	0.347	Lower-middle	17
Ukraine	UKR	0.467	Lower-middle	17

Notes: Ethnic fractionalization is from the Ethnic Power Relations dataset (Vogt et al., 2015). Income group follows World Bank classification at the end of the sample period (2018). SAP years denote the number of country-years with active IMF conditionality during 1991–2018, based on the Dreher IMF program dataset (Dreher, 2006).

^a Yemen is observed through 2014 because active civil conflict begins in 2015; SAP years reflect the truncated 1991–2014 window.