

Conflicts’ Long Shadow*

The Decline of Local State Capacity in Burkina Faso

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Abstract

Conflicts in fragile states disrupt governance, resource mobilization, and service delivery, yet their effects on local state capacity remain poorly understood. This paper examines how violent conflict reshapes the fiscal capacity of local governments in Burkina Faso, an ethnolinguistically diverse country that has experienced a sharp rise in armed violence in recent years. We compile a novel commune-by-year dataset (2007–2021) that merges geo-coded conflict events with detailed local fiscal accounts, including both planned and executed budgets. Using event-study and re-centered instrumental-variables methods, we find that violent conflicts reduce own-source revenues – both planned and realized – by about 2 percentage points. Communes raise expectations of external reconstruction support by 5 percentage points rather than scaling back. The anticipated support does not materialize and forces affected communes to cut operational spending, to leave necessary reconstruction investments unfulfilled, and to underperform on revenue and expenditure targets. Private investment, local output, and outward migration are mostly unaffected, suggesting an institutional channel distinct from economic ones. Effects are sharpest where local governance has advanced the most, reversing gains from decentralization, and where jihadist organizations directly challenge the state. Unmet expectations of central support, together with declining own-source revenues and administrative contraction, lock communes into a low-capacity equilibrium and leave the local public sector vulnerable to lasting institutional fragility.

Keywords: Conflicts; Local Governments; State Capacity; Fiscal Capacity; Burkina Faso; Sub-Saharan Africa

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1 Introduction

Capable, resilient local governments are essential for development and for escaping institutional fragility. They serve on the frontline of public service and are tasked with addressing diverse and localized needs (Bardhan, 2002). Violent conflict threatens this capacity by weakening resource mobilization and disrupting the provision of essential services, particularly in resource-constrained states (Besley and Persson, 2009). These implications are increasingly evident in the Sahel region, where many countries have been grappling with heightened conflict in recent years (see Figure 1b). While a substantial body of literature explores the macro-level impacts of conflicts, relatively little is understood about their micro-level ramifications, particularly on local state capacity (Blattman et al., 2022; Pinotti, 2015).

In this paper, we examine Burkina Faso, where a sharp escalation in violent conflict in the last decade has strained an already fragile local governance structure. We investigate how violent conflicts affect local bureaucracy and decision-making in the short-run, and highlight how reliance on external financial support that fails to materialize further undermines local fiscal capacity in post-conflict settings. We construct a novel commune-by-year dataset linking local public finance, geo-coded conflict, and economic activity, and exploit spatial and temporal variation in conflict to identify its causal effects on local state capacity.

State capacity, or the ability of governments to enforce rules, mobilize resources, and provide public goods, is positioned as both a determinant and a casualty of conflict (Besley and Persson, 2009). Capable states are better able to prevent civil war. Conflict, in turn, erodes the fiscal and administrative foundations on which capacity rests, particularly those involving insurgent groups seeking to establish parallel governance systems (see for e.g. Blattman, 2022; Sánchez de la Sierra, 2020; Mampilly, 2012). Understanding the long-term implications of conflicts for state institutions is central to discussions on state rebuilding. We contribute by exploiting granular subnational data on fiscal outcomes and the spatio-temporal dynamics of conflicts in an ethno-linguistically and culturally diverse context. Our analysis aims to provide insights into the role of independent local bureaucracies in meeting constituents’ needs and building resilient institutions.

With more than 60 languages and ethnic groups, Burkina Faso embarked on an ambitious public-sector decentralization reform in the 1990s. The reform sought to grant local governments greater financial and administrative autonomy to better respond to the heterogeneous needs of their constituents (see for e.g. Ky, 2010). Recent findings show that these reforms disproportionately benefited wealthier communes, while failing to foster fiscal autonomy in others (Bargain et al., 2025). Since 2015, the escalation of violence has

profoundly altered bureaucratic and local governance. Jihadist groups have targeted local officials, disrupted administrative functions, and further exacerbated regional inequalities, eroding state legitimacy.¹ Communes in the Sahel and East regions, for instance, have experienced sharp declines in administrative effectiveness, raising concerns about the long-term viability of decentralized governance. The scale of the crisis is particularly pronounced in these regions, with over 1000 jihadist-related incidents reported in 2021 alone (see [Figure 1b](#)). This context makes Burkina Faso a particularly compelling setting for examining the interplay between internal conflicts and local state capacity.

The dataset covers all 351 communes of Burkina Faso from 2007 to 2021, linking realized and planned local public finances, geo-coded conflicts, and indicators of economic activity. The public finance data include detailed breakdowns of each commune’s revenues and expenditures, distinguishing between funds generated within the locality and transfers received from the central government. A unique feature is the inclusion of planned budgets alongside realized ones, for all revenue and expenditure categories. This lets us trace shifts in local authorities’ expectations, observe how they adjust fiscal targets after conflict, and quantify the resulting gaps between planned and realized budgets.

Our empirical strategy exploits geographic and temporal variation in conflict onset, controlling for socio-demographic and geographic characteristics that shape the tax base and service demand. We begin with an event-study design and, to guard against bias from staggered treatment timing, report estimates alongside stacked difference-in-differences ([Cengiz et al., 2019](#)), interaction-weighted estimators ([Sun and Abraham, 2021](#)) and local projection estimators ([Dube et al., 2025](#)). To address the potential endogeneity of conflict exposure, we employ a re-centered instrumental variable strategy that isolates the unexpected component of conflict incidence, purged of its predictable variation across communes ([Borusyak and Hull, 2023, 2025](#)).

We find that conflicts inflict an immediate toll on local fiscal capacity along three dimensions. First, the share of own-source revenues falls by about 2 percentage points relative to unaffected communes, primarily driven by lower tax collection. Against an own-source

¹Illustrative cases include the abduction of the mayor of Markoye, Mamoudou Maïga, together with his driver by armed groups in March 2019, reflecting the direct targeting of local authorities in conflict-affected areas ([LeFaso.net, 22 March 2019](#); [Le Monde, 22 March 2019](#)). In the northern town of Djibo, siege conditions and repeated attacks have severely disrupted local governance and contributed to the withdrawal or killing of municipal officials, including the assassination of the mayor, Oumarou Dicko, in 2019 ([Courrier International, 13 April 2022](#)). More broadly, reports by European asylum authorities and international NGOs document how jihadist violence, blockades, and population displacement have undermined local administrative capacity in many communes across the Sahel and East regions ([CGRA, 2024](#); [International Crisis Group, 2017](#)). For an overview of life in besieged localities and the erosion of state authority in northern and eastern Burkina Faso, see also Amnesty International’s recent report on localities under siege ([Amnesty International, 2023](#)).

share of roughly 11 percent, this amounts to a decline of about one-fifth in the revenues communes raise themselves. Second, this shortfall induces communes to “plan upward”: they raise budgeted expectations of central government transfers by roughly 5 percentage points rather than scaling back. However, this anticipated support does not materialize. Third, communes respond to these pressures by cutting operational spending by 3-4 percentage points, including 2-3 percentage point reduction in staff compensation. Considering the share of personnel spending in unaffected communes (6 percent), conflicts lead to a 33 percent fall in these expenditures, contracting the administrative apparatus of local governments.

The disruptions in revenue generation and the administrative core, together with rising dependence on unfulfilled external support, harden into long-run failures. Communes budget ambitiously for reconstruction, planning to raise capital investment by 5–7 percentage points. Against a base of about 58 percent of communal budgets, this is a 9 percent increase in the planned share of capital investment expenditures. However, realized investment stays flat as the external support these plans depend on fails to arrive. Because local budgets are centrally approved before execution, the resulting gaps reflect commitments the central government itself sanctioned and then left unfunded, rather than forecasting errors by local authorities. These gaps persist well beyond the immediate crisis, reflecting a failure to translate budgets into tangible recovery projects. Ultimately, these gaps also lead to a durable loss of budget efficiency that undermines the prospects for recovery, as affected communes underperform their revenue and expenditure targets by 5–8 percentage points.

We show that this erosion is institutional rather than economic. Conflict has no discernible effect on local GDP or net migration, and only a modest, short-lived effect on private investment. In addition, accounting for past fiscal discipline and geographic spillovers from neighboring communes do not alter our estimates. Broad economic contraction and population loss therefore cannot explain the fiscal decline documented above. The damage instead runs through the institutional channels where communes plan their expenditures assuming the existence of support that never materializes, even as their own revenue base erodes.

To probe the channels behind these effects, we examine how they vary across communes and conflict types, and find two striking patterns. The damage hits hardest where local governance had advanced the most — regional capitals and communes that decentralized earliest. Own-source revenue losses there are larger, and despite receiving relatively more external support than peripheral communes, these communes still fail to fund necessary investment. Conflict thus reverses the institutional progress decentralization reforms were meant to foster. The damage is also sharpest where the state is most directly challenged: in

communes facing jihadist organizations, revenue-generating capacity falls further and realized investment contracts outright. Together, these dynamics leave communes unable to recover without sustained external intervention.

Taken together, conflict locks local governments into a low-capacity equilibrium through the erosion of institutional rather than economic channels. Communes lose the ability to raise their own revenue and are left dependent on central support that is promised, centrally approved, and then never delivered. This persistent shortfall between promised and realized transfers — rather than any collapse of the local economy — drives the contraction of bureaucratic operations and the failure to fund recovery. The damage falls hardest where decentralization had advanced most and where insurgent groups directly challenge the state, reversing the institutional gains those reforms were designed to secure.

Our contribution is threefold. First, we contribute to the literature on the development of local public institutions. Building a capable state that supports economic development requires mobilizing revenues through taxation, recruiting skilled personnel, and collecting information to deliver public goods (Acemoglu and Robinson, 2023; Besley et al., 2013; Dincecco et al., 2011; Dincecco, 2015; Dincecco and Katz, 2016; Jensen et al., 2024). While research on the public sector in low-income countries is expanding, local public finance and bureaucratic capacity remain understudied, largely because of limited access to reliable data and measurements (Bardhan, 2002; Crawford and Hartmann, 2008; Galiani et al., 2008; Grossman et al., 2017; Oates, 2005). We address this gap using subnational data that uniquely track both *planned* and *realized* budgets. This distinction lets us move beyond measuring fiscal outcomes to observing the *expectations* local governments form and whether those expectations are fulfilled. Thus, we can separate shifts in anticipated resources from realized shortfalls, and distinguish unmet commitments from local mismanagement or forecasting error. To our knowledge, this is the first study to measure local fiscal capacity in terms of both expectations and their realization.

Second, we add to research on the developmental costs of violence, particularly for state-building. Earlier work established conceptual links between capable states and violence, often through theoretical models and macro-level evidence (Besley and Persson, 2009, 2011; Dincecco and Prado, 2012; Gennaioli and Voth, 2015; Tilly, 1975). More recent studies examine empirically how conflict shapes state-building (Barrett, 2022; Blattman, 2022; Cassar et al., 2013; Ch et al., 2018; Jibao et al., 2017; Sánchez de la Sierra, 2020), yet subnational evidence remains limited, especially on how violence affects local tax bases and economic opportunities. We address this gap by combining fine-grained data on conflict types with local fiscal records and geospatial measures of economic activity. Beyond documenting that conflict

reduces local state capacity, we identify that this happens through an institutional channel that is distinct from the economic mechanism. Specifically, we document a breakdown in the fiscal compact between central and local government, as communes are left holding centrally-approved commitments that are unfulfilled. This shifts attention from the economic to the institutional costs of conflict for state-building.

Third, we contribute to the literature on public sector and state-building in Sub-Saharan Africa. Most existing studies rely on cross-country, macro-level indicators (see for e.g. Babajide et al., 2021; Chowdhury and Murshed, 2016). Growing strands of work have documented indirect effects on local government through economic activity or agricultural productivity (Béné et al., 2024; Blair et al., 2022; Kafando and Sakurai, 2024). Direct effects on local governance, particularly on own-source revenues and resource mobilization, are rarely examined. Combining our commune-level data with variation in the timing of decentralization, we show that conflict does not merely stall these reforms through direct channels but actively reverses them. The communes that had advanced furthest toward fiscal autonomy suffer the largest losses, while increasing their dependence on the central government. This offers new evidence on the fragility of decentralization gains in conflict-affected settings — a question of growing relevance across the Sahel.

The rest of the paper is structured as follows. Section 2 outlines the institutional context in Burkina Faso, focusing on local governance, fiscal arrangements at the commune level, and the recent escalation of conflict. Section 3 describes the data sources. Section 4 sets out the identification strategy. Results are presented in sections 5 and 6, with robustness checks and mechanisms explored in section 7. Section 8 concludes and discusses the broader implications.

2 Institutional Context

Burkina Faso is a francophone, landlocked country in the Sahel region of West Africa. Since gaining independence from France in 1960, it has faced persistent political and economic instability compounded by weak local governance structures (Englebert, 2018). Despite recent improvements in macroeconomic performance, it remains one of the poorest countries in the world.² Significant regional disparities persist, exacerbated by socio-economic inequalities and climatic variability across the country (Institut National de la Statistique et de la Démographie, 2022). In this section, we describe the structure of local governments

²Recent economic growth has been driven largely by the expansion of the mining sector. Gold mining alone accounted for nearly 20% of GDP and 80% of export revenues in 2021 (World Bank, 2023).

and provide an overview of the history of internal conflicts in Burkina Faso.

2.1 Decentralization Reform and the Local Government Structure

Decentralization efforts in Burkina Faso began in the 1990s. The legal basis was enshrined in the 1991 Constitution ([République du Burkina Faso, 1991](#)). The first democratically elected local governments took office in 1995 in 16 communes, followed by additional waves of reform in 2000 and 2005–2006 (see for e.g. [Ky, 2010](#); [Bargain et al., 2025](#)). A comprehensive legal framework governing multilevel governance, local elections, administration, and development planning was introduced in 2004 (*“Code Général des Collectivités Territoriales”*, or CGCT). The main impetus behind the decentralization reforms is to establish institutional structures capable of addressing the needs of the ethnically, linguistically, and culturally diverse local population. Through decentralization, Burkina Faso aimed to build an inclusive local government system capable of providing public services to the local population, promoting local economic development, and enhancing political stability.

The decentralized governance system is organized into two levels: regions and communes. The two levels of government operate independently. Both levels manage their own budgets and resources, recruit and manage their own staff, and exercise the responsibilities delegated to them by the central government. The country currently has 17 regions and 351 communes, each governed, as provided by law, by elected councils and executive bodies.³ The communal governments are considered closest to the citizens.

While local governments are legally granted autonomy, the central government retains supervisory roles over local government decisions. It reviews local executive decisions, approves budgets, and oversees matters requiring state authorization. Local authorities may appoint public servants under the salaries proposed by local financial services, but the final remuneration needs approval from centrally appointed financial controllers.⁴ Each central government ministry manages its affairs through deconcentrated units — such as the health districts for the Ministry of Health — supervised by centrally appointed officials and operating alongside local governments. Local governments are granted legal avenues to challenge central government decisions before administrative courts.

³Although the law calls for regional and municipal elections every five years, political instability has often caused delays. Councilors elect the heads of these bodies through indirect voting: regional council presidents for the regions and mayors for the communes. In 2024, a territorial reform reorganized the country from 13 into 17 regions. Since our data cover 2007 to 2021, all analyses rely on the pre-reform administrative divisions of 13 regions and 351 communes.

⁴The hiring process begins with a staffing needs assessment prepared by local executives, reviewed by the elected council, and then submitted to central authorities. Once the staffing budget is approved, recruitment proceeds. Salaries, allowances, and benefits are set according to national guidelines.

2.2 Local Fiscal Affairs

Local governments are responsible for ten key competencies or functions, including primary and pre-primary education, waste disposal, cultural activities, and local development, among others.⁵ While the central government consults the local governments at the planning stage, the actual execution of most of these budgets is meant to be carried out by local governments exclusively. However, certain functions – such as health and environment – require cooperation with neighboring communes or the regional authority and are therefore subject to joint consultation.

Communes are legally permitted to establish agencies for revenues such as user fees and charges, although revenues from most tax schemes are collected by the centralized tax authority (DGI).⁶ Communes' rights to shared taxes or other revenues are predetermined and included in the annual (planned) budget. Local governments also rely significantly on fiscal grants and transfers, including earmarked grants for specific decentralized functions such as education, water and sanitation, and recreational activities. General operating grants support local administration and cover expenses for intermediate consumption and staff salaries. Capital grants contribute to financing infrastructure projects mandated by central authorities or outlined in local or regional development plans.⁷

Local governments have some autonomy in expenditure decisions, but these are also subject to supervision by the central government. Planned annual budgets undergo review and approval by authorities representing central government agencies. Management and usage of public funds are executed by the local governments, subject to supervision by oversight committees affiliated with the central government.⁸ This includes investment decisions within the commune since borrowing for capital investments is allowed pending approval by local councils and central authorities. In addition, the transfers and grants contained in these approved budgets reflect commitments sanctioned by the central government rather than unilateral local expectations. These structures highlight the fiscal constraints encountered by local governments and the reliance on the central government for operational and development activities. This is reflected in [Figure 2](#), where the share of locally-sourced revenues has fallen since 2007.

⁵See the *Code Général des Collectivités Territoriales* or [OECD \(2019\)](#) for more details.

⁶The condition is that locally raised revenues are managed transparently and that the money is transferred to the accounts maintained under the name of each commune within the national treasury.

⁷The allocation and use of capital grants are subject to inter-sectoral regulations (i.e., specific ministries) and require approval from central government authorities. Mechanisms are also in place to ensure the maintenance of transferred assets.

⁸*Commission Technique Inter-Ministérielle (CTI)* and the *Commission Technique Régionale (CTR)* examine and approve the budgets of the communes.

2.3 Security Challenges in Burkina Faso

Since the mid-2010s, Burkina Faso has experienced a sharp break in its political stability due to inter-communal violence and the influx of insurgent groups seeking territorial control. Once considered one of the most stable countries in the region and seen as a model of religious tolerance, it descended into turmoil following the fall of long-time leader Blaise Compaoré in 2014. Two years of uncertainty followed, marked by a September 2015 coup attempt by his loyalists and concluding with the election of Roch Marc Christian Kaboré. The instability was compounded by the spillover of jihadist-led conflicts from the neighboring Sahelian countries. Beginning with the January 2016 attacks in Ouagadougou, insurgencies spread across the country, and by 2022 the central government had lost control of parts of its territory. The country now rivals Mali as an epicenter of the Sahel crisis. Ultimately, the rising violence has led to devastating consequences for households and local communities (see for e.g. [Tapsoba et al., 2024](#); [Büttner et al., 2022](#); [Druetz et al., 2020](#); [Okafor et al., 2023](#)).

[Figure 1](#) illustrates the rapid and dramatic rise in violence in Burkina Faso and its neighboring countries. As shown, the number of violent conflicts across Burkina Faso's regions remained minimal until 2016. These events then escalated sharply, particularly in the Sahel and East regions, with concentrated clusters of violent conflicts (c.f. [Figure 1a](#)). In 2021, the Sahel region of Burkina Faso alone recorded over 600 incidents of violent conflict, marking it as one of the most affected regions. This increase reflects the expanding operations of jihadist groups and the weakening of state control over northern and eastern territories. [Figure 1b](#) further demonstrates the spatial spread of violence across the Sahel and West Africa. In 2007, incidents of violent conflict were limited to isolated areas, primarily in northern Mali. By 2017 and onwards, these events intensified across Burkina Faso, particularly in the north and eastern regions.

The escalation of conflict has further deepened existing inequalities, particularly in regions with high levels of poverty.⁹ Local governments in these conflict-affected areas, already constrained by limited resources and weak state support, are now facing additional pressures as first responders to an increasingly volatile crisis. This dynamic raises important questions about the impact of conflict on state-building processes at the local level and the long-term challenges of reconstructing governance structures in such fragile contexts.

⁹See [Institut National de la Statistique et de la Démographie \(2022\)](#) for the latest census and the mapping of poverty estimates at the regional and commune level of Burkina Faso.

3 Data and Sources

For this paper, we assemble a new commune-by-year panel dataset that links conflict exposure to local government public finances. We complement this with detailed information on local economic activity, environmental conditions, and natural resource endowments. This setup allows us to exploit both geographic and temporal variation in conflict incidence while mitigating concerns of omitted variable bias. This section outlines the data sources and the operationalization of key variables.

3.1 Local Public Finance

We draw on local public finance data collected from the Ministry of Economy and Finance (MEF) of Burkina Faso in collaboration with the World Bank. The dataset covers all 351 communes from 2007 to 2021 and provides annual information on detailed budget classifications across revenue and expenditure categories. This allows us to capture the structure of communal budgets, both in terms of revenue mobilization and spending on public services and administration, and to examine how these evolve over time in response to conflicts. The richness of the data and its time coverage also allow us to unveil the effects of conflicts with a high degree of granularity.

A distinctive feature of this dataset is the inclusion of both planned and realized amounts for all budget categories. Planned revenues and expenditures are recorded before the start of each fiscal year, typically the preceding December, and represent the targets set by local governments. Realized amounts, in contrast, are reported at the end of the fiscal year and capture what was actually carried out. As outlined in Section 2.2, planned budgets require approval by the central government representatives through oversight committees. Thus, planned figures not only reflect local governments' expectations, but also embody the approval of central authorities. With the planned estimates, we can capture the shifts in expectations about revenue mobilization, spending capacity, and anticipated constraints held by the local government after conflicts. Furthermore, the difference in timing between planned and realized budgets lets us disentangle adjustments driven by changes in expectations from implementation shortfalls. As planned budgets reflect formal approval rather than unguided internal forecasts, the deviation between planned and realized budgets is less likely to be the result of forecast error.

The granularity of the data also allows us to move beyond aggregate figures and examine the sub-budget structure of communes. In this paper, we focus primarily on the following revenue categories. Own-source revenues include local taxes (e.g., property and business

taxes), revenues from service provision (user charges), and income from commune-owned physical and financial assets. All other revenues—such as capital and current grants from the central government, donations, and borrowing—are classified as non-own-source.¹⁰ To minimize noise in the outcome variables, both planned and realized revenues are expressed as shares of planned total revenues.¹¹

Expenditures are grouped into current and capital expenditures. Current expenditures include compensation of employees, purchases of goods and services, subsidies, and current transfers. Capital expenditures cover the acquisition of fixed assets for investment purposes. We also classify expenditures by government function, following the Classification of the Functions of Government (COFOG). Our analysis focuses on General Public Services (GF1) and Economic Affairs (GF4).¹² GF1 covers the costs involved in the administrative functions of local governments. GF4 captures spending on local economic development, including labor, commerce, agriculture, energy, transportation infrastructure, and mining. As with revenues, planned and realized expenditures in these categories are expressed as shares of planned total expenditures to minimize noise in the outcome variables.¹³ Summary statistics and further details are provided in [Table A1](#) and Panels A and B of [Table 1](#).

3.2 Violent Conflicts

The conflict data for this paper are obtained from the *Armed Conflict Location and Event Data* (ACLED) project, which provides granular information on the nature, location, and actors of conflict events ([Raleigh et al., 2010](#)). We define conflicts as violent events resulting in casualties such as armed clashes, civil wars, religious violence, protests with fatalities, and targeted attacks on politicians or civilians. Non-violent events, such as peaceful protests or nonfatal crimes, are excluded. Based on the identity of the perpetrators, we further categorize

¹⁰Borrowing by local governments in Burkina Faso is very limited due to legal restrictions and the requirement of state approval. Subnational governments may borrow only to finance capital investments, and such loans must appear in the capital investment section of local budgets. Borrowing is regulated by Decree 2009-150/PRES/PM/MEF of 27 March 2009 on the general regulation of public debt and public debt management, and by Decree 98-296/MEF/SG/DGTCP/DDP of 18 December 1998 on procedures governing indebtedness of the state and its divisions.

¹¹Since realized total revenues are defined ex post, using them as the denominator may introduce additional noise into the measure. Results are, however, highly consistent, as shown in [Figure B1](#) and [Figure B2](#).

¹²Although COFOG is not formally adopted at the subnational level in Burkina Faso, the data used here were produced in collaboration with the Directorate of Local Government Affairs at the Ministry of Finance. Budget items were reclassified to align with the standards of the System of National Accounts and the COFOG categories, which form the basis of the estimates in this paper. For full details on the COFOG classification, see the UN Statistics Division [guidelines](#). Both GF1 and GF4 include current and capital components, as shown in [Table A1](#).

¹³Alternative outcomes using realized amounts as a share of realized totals are reported in [Figure B1](#) and [Figure B2](#). Results are consistent but display greater variation.

violent events into jihadist violent conflicts (perpetrators linked to jihadist or Islamic movements), religious violent conflicts (actors with religious ties but not jihadist/Islamic), and non-religious violent conflicts (violent protests, political violence, or civilian attacks without religious affiliation).

Using ACLED’s geographic coordinates, we map each event to the corresponding commune and year. This yields a commune-year measure of conflict incidence from 2007 to 2021, aligned with the coverage of the public finance dataset. [Figure 1a](#) shows the temporal and geographical distribution of the conflicts from 2007 to 2021. As discussed earlier, the incidence of violent conflicts sharply surged after 2016, with the regions bordering neighboring countries of Mali and Niger experiencing particularly high concentrations. Overall, there is sufficient variation in conflict incidence across communes and years to support our empirical identification. Summary statistics on violent conflicts at the commune-year level are reported in Panel C of [Table 1](#).

3.3 Other variables

Beyond conflict exposure, we also control for a range of commune-level characteristics. These include population, land use, climate, and proxies for economic activity. Total population and population density are obtained from WorldPop geospatial datasets. Land characteristics come from the ESA Landcover datasets and include variables such as the area of grassland, irrigated cropland, and urban land. Climatic conditions are captured by precipitation, temperature, and nighttime luminosity, using data from AidData ([Tierney et al., 2011](#)). Summary statistics for these variables are reported in Panel D of [Table 1](#).

To further account for economic potential, we compile data on 2G mobile network coverage, net migration, and local-level GDP. The 2G network coverage expanded in Burkina Faso during our study period through projects initiated by nongovernmental entities. Thus, the presence of 2G infrastructure reflects private investment decisions. We gather the data from the 1 km-by-1 km grid-level coverage maps provided by the Global System for Mobile Communications Association (GSMA).¹⁴ We estimate geographical and population coverage at commune level, following the approach in [Gurieva et al. \(2021\)](#).

Net migration captures population changes that affect both the tax base and the demand for public services. Migration patterns provide an important lens on spatial variation in economic pressures and local fiscal potential. We draw on data from [Niva et al. \(2023\)](#),

¹⁴GSMA is a global association representing mobile network operators. This data source has also been widely used in economics research, including [Manacorda and Tesei \(2020\)](#); [Aker and Mbiti \(2010\)](#); [Gurieva et al. \(2021\)](#). For further details, see Collins Bartholomew’s [website](#).

which documents global human migration between 2000 and 2019 at a 10km grid, covering 216 countries and territories. The dataset allows for detailed analysis of spatio-temporal migration dynamics, including the magnitude of net flows and the identification of net-sending and net-receiving areas.¹⁵

The local GDP estimates are obtained from [Rossi-Hansberg and Zhang \(2026\)](#) and combine nighttime lights, land use, population, and emissions data in a random forest model. It captures a holistic representation of local-level outputs. The grid-level GDP estimates are aggregated to a commune level and are available from 2012 onward.

[Figure 3](#) highlights the potential relationship among conflict, local tax revenue per capita, and net migration across communes in 2019. Conflicts are concentrated in the northern border regions, which also record relatively low tax revenues. Net migration varies widely across communes, reflecting heterogeneous demographic pressures.

3.4 Outcome Variables of Interest

Violent conflicts can undermine the fiscal foundations of local governments through a series of interrelated effects. To trace these effects, we construct a set of outcome variables from the detailed local public finance data, accounting for incidence of conflicts from the ACLED data and potential confounders using other commune-level characteristics.

Our analysis focuses on three dimensions, each measured through specific budget variables. First, own-source revenues – disaggregated into local taxes, user charges, income from assets – represent the revenue-generating capacity of local governments. Second, capital grants and investment revenues capture reliance on external support and the extent to which these are realized. Third, variables on recurrent spending, particularly general public services (GF1) and staff compensation, reflect administrative capacity. Together these track how conflict affects local fiscal capacity across the immediate and longer-run horizons examined in [sections 5 and 6](#).

4 Empirical Strategy

Our analysis exploits geographical and temporal variation in conflict incidence across communes and years. We begin with an event-study design with commune and year fixed

¹⁵The dataset is constructed using subnational birth and death rates from 2,555 and 2,067 administrative units, which are then downscaled to a 5 arcmin resolution. Rasterized socio-economic data are integrated and adjusted to match subnational records. See [Niva et al. \(2023\)](#) for details.

effects, as well as region-specific linear time trends, to account for unobserved heterogeneity. To guard against bias from staggered treatment timing, we employ the Stacked Differences-in-Differences (Cengiz et al., 2019), interaction-weighted estimators (Sun and Abraham, 2021), and the Local Projection method (Dube et al., 2025). To address potential endogeneity of conflict exposure, we employ a re-centered instrumental variable (IV) strategy (Borusyak and Hull, 2023, 2025). We present the dynamic estimates from event-study specifications together to demonstrate robustness to estimator choice, and report the IV results separately.

4.1 Baseline Event Study

To exploit the geographical and temporal variation in conflict incidence at the local level, we estimate the following event-study specification where y_{it} denotes the outcome for commune i in year t and c_i marks the year of the first conflict onset.

$$y_{it} = \alpha + \sum_{\substack{j=-4 \\ j \neq -1}}^4 \beta_j I[t - c_i = j]_{it} + \beta^- I[t - c_i \leq -5]_{it} + \beta^+ I[t - c_i \geq 5]_{it} + \gamma X_{it} + \phi_i + \delta_t + \psi_r t + \varepsilon_{it} \quad (1)$$

The regression controls for commune fixed effects (ϕ_i), year fixed effects (δ_t) and region-specific linear yearly trends ($\psi_r t$). X_{it} is the set of covariates, where each variable is interacted with year fixed effects to mitigate the bad-control concerns (Callaway and Sant’Anna, 2021). Control variables discussed in the previous sections are included. The standard errors are clustered at the commune level.

$I[t - c_i = j]_{it}$ indicates the treatment status at year t for commune i , with c_i representing the year in which the first conflict within the years 2007-2021 occurred at commune i . We model treatment as absorbing: once a commune experiences conflict, it remains treated in all subsequent periods. The specification includes 4 lags and 4 leads, which provides sufficient periods for tracing dynamic effects while maintaining a balanced sample, given the sharp rise in conflict in the mid-to-late 2010s. The periods outside the 4-year lags and leads are captured by $I[t - c_i \leq -5]_{it}$ and $I[t - c_i \geq 5]_{it}$, respectively, as recommended by Schmidheiny and Siegloch (2023).¹⁶ In this setup, β_j measures the dynamic effect of conflict on fiscal outcomes relative to the baseline year ($j = -1$), while β^- and β^+ capture pre-trends and long-run post-treatment effects, respectively.

y_{it} denotes the outcome variables of interest, which are planned and realized revenue

¹⁶Schmidheiny and Siegloch (2023) recommends that effects of the event-study time window should be controlled using binned indicators in case the effects not within the time window differ drastically from the periods of interest.

and expenditure items divided by planned total revenues and expenditures. These capture shortfalls in revenues, reliance on external sources of funding, and capacity to provide essential services and make long-term investments for post-conflict recovery. In regressions testing for the existence of broader channels, we use proxies for local economic activities and demographic shifts as outcome variables.

To estimate the dynamic treatment effects, the outcome variables should be in parallel trends across treated and control communes before conflicts. We verify this using the pre-conflict period treatment indicators. Throughout all specifications used in this paper, we find that these indicators are statistically indistinguishable from zero.

4.2 Addressing Identification Concerns

A central challenge in estimating the causal impact of conflict on local fiscal outcomes lies in addressing two identification concerns with equation 1. First, it may mask heterogeneous treatment effects across cohorts and the timing of the conflicts. Second, biases may arise from systematic differences between affected and unaffected communes. Recent work highlights that two-way fixed effects estimators may incorrectly include previously treated units as a control group in staggered treatment settings and bias the estimates (Baker et al., 2022; Callaway and Sant’Anna, 2021; Schmidheiny and Siegloch, 2023). In addition, the incidence of conflicts may not be fully exogenous, even after conditioning on observables correlated with violence. We address these concerns as follows.

We employ several difference-in-difference estimators to address heterogeneity in treatment timing and cohorts. First, we use the stacked difference-in-differences estimator of Cengiz et al. (2019). This method constructs separate datasets by treatment year and estimates weighted treatment effects by comparing communes treated in a given year to those never treated or not-yet treated.¹⁷ While flexible, this estimator can be sensitive to the inclusion of time-varying controls and the choice of time window (see for e.g. Baker et al., 2022). To address this, we also adopt the interaction-weighted (IW) estimator of Sun and Abraham (2021). This approach models cohort-by-relative-time effects and aggregates them using non-negative weights, thereby producing unbiased dynamic treatment effect estimates without negative-weight contamination. As a third specification, we employ the local projection difference-in-differences approach of Dube et al. (2025). This method combines the clean control structure of Cengiz et al. (2019) with the local projection framework of Jordà

¹⁷Following Cengiz et al. (2019), we saturate the specification with commune-by-dataset, year-by-dataset, and region-by-dataset fixed effects.

(2005), widely used in applied macroeconomics to estimate dynamic impulse responses.¹⁸ In practice, the regression compares changes between $t - 1$ and $t + h$ to identify dynamic effects h periods relative to the event ($-4 \leq h \leq 4$).

$$y_{i,t+h} - y_{i,t-1} = \beta_h \Delta D_{i,t} + \gamma_h \Delta_h X_{i,t+h} + \delta_t^h + \phi_r(h+1) + \Delta_h \varepsilon_{i,t+h} \quad (2)$$

Here, $\Delta D_{i,t}$ is the difference in the treatment status between year t and $t - 1$. Since we assume absorbing treatments ($I[t - c_i = j] = 1$ for $j \geq 0$), the differences in the treatment status are 0 for all periods except between $t - 1$ and t . We also take long differences of other variables, which eliminates time-invariant terms such as commune fixed effects. Time effects are included, while region-specific linear trends enter scaled by the horizon length ($h + 1$), reflecting their cumulation over the long difference. β_h captures the effect h years after the conflict and is estimated separately for each time window.

Second, to further address endogeneity concerns and systematic differences between affected and unaffected communes, we employ the re-centered instrumental variable (IV) approach proposed by [Borusyak and Hull \(2023, 2025\)](#). This method corrects for non-random exposure to shocks that arise from differences in initial conditions. Specifically, we re-center the realized incidence of conflict by subtracting its expected value in each commune-year, thereby isolating the unexpected component of conflict risk. This unexpected component serves as the source of variation for identification and improves statistical power relative to alternative instruments ([Borusyak and Hull, 2025](#)). Formally, we use the following instrument z_{it} for the realized incidence of conflict c_{it} :

$$z_{it} = c_{it} - \mu_{it}$$

μ_{it} is the expected incidence of conflict at commune i in year t . We first use linear probability models to generate the probability of conflict incidence for each commune-year, controlling for pre-conflict characteristics as well as commune, year, and region-year fixed effects. Commune-years are grouped according to the predicted probabilities. Within each group, we simulate conflict incidence 1,000 times by permuting conflict status, and compute μ_{it} as the average exposure across simulations. [Figure C1](#) shows the distribution of z_{it} when commune-years are split into four 25%-width bins. Most values of z_{it} cluster around, though not exactly at, zero. The results are robust to alternative choices of bin numbers ([Appendix Table C2](#)).

¹⁸The local projection method is frequently used as an alternative to vector autoregression (VAR) for estimating dynamic responses (see for e.g. [Jordà, 2005](#)).

To confirm the validity of the instrument, we test if the re-centered incidence of conflicts z_{it} is uncorrelated with the baseline characteristics, following the approach used in [Landaud et al. \(2024\)](#). If z_{it} remained correlated with pre-conflict covariates, it would fail to isolate the unexpected component of conflict incidence ([Borusyak and Hull, 2025](#)). The diagnostics reported in Table C1 confirm that z_{it} is uncorrelated with pre-conflict characteristics relevant to conflict risk and local state capacity. These findings are robust across alternative bin specifications (Appendix Table C2).

5 Immediate Effects on Local Fiscal Capacity

This section presents the effects of violent conflict on local fiscal capacity, with a focus on revenue mobilization and expenditure allocation. Our findings show that conflicts impose a severe and persistent toll on local governments. The immediate shortfalls stem from three interrelated dynamics: (i) sharp declines in own-source revenues, (ii) overly optimistic expectations of central government transfers that fail to materialize, and (iii) subsequent cuts to administrative spending, particularly staff wages and compensation. Investment in capital projects – crucial for reconstruction – is likewise deferred or downsized, as communes lack borrowing authority and anticipated grants do not arrive, further deepening vertical fiscal imbalances. The net result is a marked deterioration in local state capacity that persists long after the initial onset of violence. In what follows, we first examine own-source revenues, then turn to expectations of external support, and finally to administrative contraction. The next section considers the medium-term fallout and the implications for longer-run recovery.

5.1 Decline in Own-source Revenues

When violence erupts, it generates an immediate shock to local economic activity and, by extension, to local revenue mobilization. Market closures, disruptions to transport networks, and the flight of traders and producers shrink the local revenue base and undermine the efficiency of collection efforts. Empirical evidence from Colombia and Mexico shows that exposure to armed group activity or political violence leads to sharp declines in locally raised revenues, particularly those tied to market transactions and direct administrative presence ([Lee, 2026](#); [Pulido-Velázquez and Earnhart, 2024](#); [Cárdenas et al., 2016](#)). In Burkina Faso, the most immediate impacts are likely to fall on own-source revenues – local taxes, user charges, and fees – closely linked to prevailing economic conditions.¹⁹

¹⁹Larger tax schemes, such as personal or corporate income taxes, are collected by the centralized tax administration. While they may also be affected by conflict, they are less immediately responsive and often

We find that local governments revise their own-source revenue expectations following conflicts. Panel A of [Figure 4](#) shows that the share of planned own-source revenues in total revenues falls by about 2 percentage points in the first budget drawn up after conflict begins. This effect is abrupt, with little evidence of a gradual lead-up in the three years preceding the onset. The decline persists over time, reflecting a durable forward-looking adjustment to worsening economic conditions.

Disaggregated results confirm that this revision is broad-based. Panel C of [Figure 4](#) shows that planned tax revenues drop by roughly 1 percentage point in the first post-conflict year and continue to fall over the subsequent four years. Expectations for user charges and income from communal assets (e.g., rents, concessions, property income) follow a similar, though milder, downward path (See [Figure B4](#)).

Realized figures confirm that these adjustments are not simply conservative forecasts. Panel B of [Figure 4](#) indicates that the decline in actual own-source revenue collections closely tracks planned amounts, falling by at least 2 percentage points on the same timeline. Sub-components such as taxes (Panel D in [Figure 4](#)), user charges, and fees also show consistent declines ([Figure B4](#)). The close alignment between planned and realized outcomes suggests that local officials anticipate the fiscal damage caused by market closures, potential population displacement, and reduced administrative reach. In sum, violent conflict leads to an immediate and lasting contraction in own-source revenues, both planned and realized – setting the stage for heightened reliance on central government support examined in the next subsection.

5.2 Increased Reliance on External Support

The sharp decline in own-source revenues is mirrored by a clear shift in fiscal planning toward anticipated central government support. Faced with an erosion of their own-source revenue base and borrowing constraints, local governments enter the planning stage under acute fiscal duress. The common response is to “plan upward”: instead of scaling back plans in line with lost revenues, local governments raise budgeted expectations for external support and expand planned investment allocations for reconstruction. This behavior is consistent with soft budget constraint dynamics in fiscally dependent intergovernmental systems, where subnational governments anticipating central assistance after adverse shocks adopt more optimistic budgets ([Baskaran, 2012](#); [Breuillé and Vigneault, 2010](#); [Rodden, 2002](#)).²⁰

assessed on a lagged basis compared to local charges and fees.

²⁰The fiscal federalism literature underscores that vertical fiscal imbalances — where expenditure responsibilities substantially exceed local revenue-raising capacity — exacerbate such optimism, particularly

We expect such behavior to manifest in post-conflict Burkina Faso as well. Communes carry substantial development responsibilities but raise little of their own revenue, reflected in rising vertical fiscal imbalances (see [Figure A1](#) and [Figure A2](#)). These upward revisions are not unilateral, as all components of the budget plan are subject to approval from central authorities (see [subsection 2.2](#)). Empirically, this should surface in planned capital grants and investment revenues tied to reconstruction and donor-funded projects.

To test this, we examine changes in both the level and composition of planned capital revenues and grants, expressed as shares of expected revenues and in per capita terms. Results in [Figure 5](#) show that the share of expected capital revenues rises by about 5 percentage points within two years of conflict onset, driven by anticipated transfers from the central government.²¹ Importantly, our most conservative specification (LP-DID in eq. 2) also reports similar estimates, albeit less precisely estimated. These findings highlight that expectations of external support play a decisive role in post-conflict budget adjustments, consistent with a reconstruction-oriented planning approach in the absence of borrowing possibilities.

The realized side, however, tells a different story. Despite upward revisions in planned budgets, there is no statistically significant increase in actual capital revenues or grants received by conflict-affected communes. Realized amounts remain flat, and the share of realized capital grants or investment revenues does not change meaningfully. Notably, planned and realized figures diverge only for externally-funded items, not those raised locally. This pattern is difficult to reconcile with forecasting error. The mismatch sets the stage for the long-run investment shortfalls and budget execution gaps that we document in [section 6](#).

In sum, these findings reveal a structural vulnerability in post-conflict recovery. As own-source revenues collapse, local governments raise their expectations of external transfers for rebuilding. However, that anticipated support fails to materialize. These unmet expectations leave communes fiscally constrained and dependent on external funding that remains out of reach.

5.3 Administrative contraction

We next examine how conflicts affect the capacity of local governments to sustain core operations and deliver services. Local governments face severe constraints in financing their

when own-source revenues decline sharply. Vertical fiscal imbalance here refers to the share of subnational expenditure financed by own-source revenues (taxes, user charges and fees, and income from assets). See [Bargain et al. \(2025\)](#) and [Ky \(2010\)](#) on the decentralization waves in Burkina Faso.

²¹Planned current revenues decline, while total revenue remains largely unchanged (see [Figure B3](#)).

day-to-day functions due to falling own-source revenues and unmet expectations of external support following conflicts. They may choose to downsize recurrent expenditures to balance the budget under such pressure. This may appear in the form of delaying salary payments or reducing wage expenditures and directly impact the staff compensation line that underpins the administrative machinery of local government.

Therefore, we focus on staff compensation that is central to service delivery and accounts for a substantial share of expenditures.²² While such adjustments provide short-term fiscal relief, they weaken the institutional core that enables local governments to mobilize revenue, provide essential services, and oversee development projects. If sustained, this erosion can weaken institutional resilience required for post-conflict recovery. Such institutional consequences have been documented in other conflict-affected municipalities (Lee, 2026; Pulido-Velázquez and Earnhart, 2024).

Estimates in Figure 6 indicate that current expenditures, general public services (GF1) from the COFOG classification, and staff payments decline by 2–5 percentage points in both planned and realized budgets, with effects persisting well beyond the initial shock. The adjustment is even stronger in planned budgets, suggesting that communes anticipate a sustained reduction in the size of government. Staff compensation falls by up to 2 percentage points in both planned and realized terms, with effects lasting up to four years after conflict onset. Similarly, GF1 spending declines by 2–3 percentage points, remaining depressed for at least three years.

These findings suggest that local governments in conflict-affected communes significantly scale back operations in the aftermath of violence, primarily by cutting administrative costs and staff-related expenditures.²³ The persistence of these contractions indicates that conflict not only disrupts service provision in the short run but also weakens administrative capacity over the longer term, with adverse implications for reconstruction and local development.

²²As shown in Table 1, staff payments represent about 21% of current expenditures ($= 0.060/0.284$), and nearly 29% ($= 0.060/0.208$) within GF1, which broadly captures the expenditures and activities related to the overall management of the local governments.

²³Because we lack data on the internal composition of communal administrations, we cannot determine whether these cuts result from hiring freezes, dismissals, or reductions in temporary staff. It is unlikely, however, that nominal wages of permanent civil servants are reduced, as these are centrally determined and largely inflexible. We therefore conclude that cuts to staff compensation primarily affect non-civil servants and project-based staff, alongside broader reductions in project budgets. See subsection 2.1 for a discussion of wage-setting rules for local public servants.

5.4 Takeaway

Conflict hampers both the fiscal base and the institutional foundations of local governance in Burkina Faso. Violent conflicts erode own-source revenues, foster unmet expectations of external support, and force cutbacks in the administrative apparatus. The dynamic effect estimates suggest that these are not temporary adjustments but persistent shifts that can lock communes into a low-capacity equilibrium. This increases the fragility of institutions, stifles recovery efforts, and makes communes more dependent on external factors beyond local control. As the next section shows, these dynamics extend into the medium term and shape the prospects for long-run reconstruction. These findings are robust across complementary identification strategies addressing treatment heterogeneity and endogeneity.

6 The Long-run Fallout

The findings in the previous section show that violent conflict triggers an immediate decline in local fiscal and institutional capacity in Burkina Faso. We now turn to the longer-run implications. First, we show that conflict-affected communes are unable to sustain the level of investment necessary for reconstruction, due to the combined impact of lower own-source revenues, unmet expectations of external support, and administrative contraction. Second, we examine how these communes continue to fall short of revenue and expenditure targets long after the initial onset of conflict, further undermining their prospects for recovery and long-term development. These patterns reflect a lasting erosion of local state capacity rather than forecasting error (section 5) or pre-existing differences across communes (section 7).

6.1 Failure to Achieve Investment Targets

In the context of potential post-conflict recovery, we examine three categories of spending: total capital expenditure, direct investments, and COFOG GF4 (economic affairs) expenditures. These capture fixed capital outlays for reconstruction, rebuilding costs, and sectoral investments – such as local roads, markets, and commercial activities – that are essential for restoring and expanding the local tax base. In principle, post-conflict recovery should drive planned allocations in these categories upward. However, since the capacity of local governments to finance and operate key public services decreases and expected support has not materialized, as discussed above, the realized expenditure on these categories may not catch up to the planned target.

The results, reported in [Figure 7](#), show that planned allocations to capital, direct

investments, and economic affairs rise by 5–7 percentage points in the aftermath of conflict. These plans, approved by the central government, reflect sustained expectations of reconstruction. Yet realized expenditures tell a different story: they remain statistically indistinguishable from zero – or negative in some cases – up to four years after conflict onset. This pattern is consistent with our earlier findings on capital transfers: investment depends heavily on grants, which fail to materialize. Affected communes thus systematically underperform in investment, with persistent gaps between planned and realized spending.

These results indicate that conflicts not only erode immediate fiscal capacity but also severely constrain the ability of communes to undertake the investments necessary for recovery. The long-lasting shortfall in actual investment expenditure relative to the plan acknowledged by both the local and central governments reflects this pattern.

6.2 Failure to Meet Expenditure and Revenue Targets

We next evaluate budget efficiency – the ability of local governments to meet their revenue and expenditure targets. Conflict disrupts local economies, weakening revenue collection. At the same time, persistent uncertainty about central transfers or donor support leads to overly ambitious forecasts. On the expenditure side, insecurity and administrative disruption delay procurement and divert resources toward urgent needs, resulting in under-spending on planned projects.

Figure 8 shows the results on budget efficiency and suggests that treated local governments are less likely to meet their targets. In Panel (A) of Figure 8, regression results with the ratio of realized revenue over planned values from Equations (1)–(2) are presented along with 95% confidence intervals. There is a significant decline in the ability of treated local governments to meet their revenue targets. Within one to three years of conflict, treated communes underperform their revenue targets by at least 6–8 percentage points relative to controls. They also undershoot expenditure targets by about 5 percentage points, as shown in Panel (B) of Figure 8.

These findings are consistent across specifications, confirming robustness to treatment heterogeneity. The budget efficiency shortfall reflects a mismatch between reconstruction-oriented planning and the lack of resources and capacity to deliver. Persistent gaps between planned and realized budgets emerge as a key channel through which conflict undermines local state capacity over the long run.

6.3 Takeaway

The results demonstrate that the long-run fallout from conflict is driven by two interrelated dynamics. First, planned investment rises after conflict, but realized spending falls short, hampering reconstruction of the local tax base. This stems from the unmet expectations of external transfers, the erosion of revenue-generating capacity, and administrative contraction. Second, communes persistently struggle to meet their overall revenue and expenditure targets. These gaps between budget ambition and fiscal reality reflect a broader loss of *budget efficiency*.

Taken together, these findings suggest that prolonged conflicts embed fiscal and administrative constraints deep into the structure of local governance. Persistent underinvestment and weakened budget execution gradually hollow out institutional capacity, limiting the ability of communes to attract qualified staff, implement complex projects, or absorb external funding effectively. Over time, the interplay between fiscal decline, reduced service provision, and weakened citizen trust risks locking communes into a low-capacity equilibrium in which recovery remains elusive without sustained external intervention. In the context of Burkina Faso, such an outcome undermines the foundations of decentralization – originally designed to strengthen local autonomy – by reversing gains in self-governance and reinforcing dependence on the central state.

7 Robustness Checks and Mechanisms

In this section, we assess the robustness of our findings and consider alternative explanations. First, we verify that the results hold under a recentered IV for non-random exposure (Borusyak and Hull, 2023, 2025), controls for pre-conflict fiscal discipline and spillovers, and a non-absorbing treatment assumption. Next, we test whether changes in local economic activity — migration, private investment, and local GDP — explain the fiscal erosion. Finally, we examine how effects vary by regional capital status, decentralization timing, jihadist presence, and resource endowment. Together, these analyses confirm the robustness of our results and help isolate the channels through which conflict undermines local public finance.

7.1 Robustness Checks

Re-centered IV Approach

Table 2 presents the recentered instrumental variable (IV) and OLS estimates for the main outcome variables. The OLS results are reported in a difference-in-differences (DiD) format, capturing the average post-conflict effect on local fiscal capacity. For the IV, both first- and second-stage results are shown alongside the DiD estimates.

Overall, the IV estimates closely align with the baseline findings. Shares of own-source revenues fall by 1.4 (planned) and 1.8 (realized) percentage points, closely tracking DID results. Estimates representing reliance on external revenues, administrative contraction, and unfulfilled revenues are also similar across IV and DID specifications. Planned capital revenues rise by 2.2 percentage points in IV estimates, while realized capital revenue is statistically not different from zero. The share of personnel payments falls by nearly 1 percentage point, while the gap between planned and realized shares of investment expenditures remains. Lastly, conflict reduces the likelihood of meeting expenditure targets by 5.6 percentage points in IV estimates, close to the 4.6 percentage points estimates reported with the DID results.

These findings remain robust under alternative binning simulations that generate different re-centered instruments (Appendix Tables C3–C6). Taken together, the results strengthen confidence that the observed fiscal effects are not driven by endogeneity but reflect the causal impact of conflict on local governments.

Controlling for Past Fiscal Discipline and Geographical Spillovers

One potential concern is that our results could be driven by differences in fiscal discipline prior to conflict or by spillovers from neighboring violence. To test this, we control for budgetary discipline in years t and $t - 1$ – measured as efficiency in revenue collection and expenditure execution before conflict onset – as well as for conflict intensity in neighboring communes (captured by the number of incidents and casualties in a given year). The results remain virtually unchanged, suggesting that neither pre-existing fiscal discipline nor neighboring conflict dynamics accounts for the observed effects. These results are reported in Figure C3.

Robustness to Non-Absorbing Treatment Assignment

Our main specification assumes absorbing treatment, reflecting the expectation that conflict inflicts lasting damage on local fiscal capacity. To distinguish the effects driven primarily by

contemporaneous disruption, we re-estimate our models under non-absorbing treatment. We allow communes to revert to the control group once conflict ceases. We find in Figures C4 - C8 that results are largely similar, with non-absorbing estimates matching or exceeding the absorbing specification in magnitude at longer horizons. This confirms that our findings are robust to the treatment definition. Moreover, the fact that non-absorbing estimates match or exceed the absorbing specification suggests that fiscal capacity losses are driven at least as much by ongoing conflict exposure as by the lingering effects of past violence.

7.2 Local Outputs, Private Investment, and Net Migration

Another potential channel through which conflict may undermine fiscal capacity is the contraction of local economic activity. Economic activity both shapes the demand for public services and provides the basis for local government revenues. Conflicts could therefore weaken fiscal capacity indirectly as well as directly by reducing local output, discouraging private investment, or altering population dynamics. We test this channel using measures of local GDP from Rossi-Hansberg and Zhang (2026), private investment proxied by the expansion of 2G mobile network coverage, and net migration. Local GDP measures capture the overall extent of the local economic activity. Mobile network coverage and operations are predominantly provided or funded by private actors, although with central government agreements. Net migration serves as an indicator of shifts in population size and service demand.

Most notably, we find that conflict has no discernible effect on local economic output. We report the local GDP measures in terms of per capita (Figure 10), in logs (Figure D1), and growth rates (Figure D2). All measures of local GDP are statistically indistinguishable from zero at all horizons. These patterns emerge across constant US Dollars, current US Dollars, and PPP-adjusted specifications. If conflict eroded fiscal capacity primarily by shrinking the local economy, we would expect a corresponding decline in output. The absence of such results points instead to institutional and administrative channels.

The results in Figure 9 show that private investment is modestly affected after conflict. In treated communes, both the share of land and the share of population covered by 2G networks fall by about two percentage points in the year of conflict. Coefficients remain negative in subsequent years but are not consistently significant at the 5 percent level. This suggests some hesitation from private actors to expand or maintain investment in conflict-affected areas, possibly due to reduced demand, though the evidence is insufficient to identify this mechanism as a systematic driver of fiscal decline. By contrast, we find no systematic differences in migration between treated and control communes. Neither net migration nor

migration relative to population size changes meaningfully after conflict. This indicates that population loss is not the primary channel through which fiscal capacity erodes.

Taken together, the results suggest that conflict has no concrete or reliable effects on local output, private investment, and migration outflows. The absence of a broad economic contraction indicates that fiscal decline cannot be attributed to a shrinking economy or massive change in population base. Instead, the evidence points to a combination of weakened administrative capacity and unmet expectations of external transfers as the main drivers, with reduced private investment playing at most a secondary role.

7.3 Heterogeneous Effects of Conflicts

In this section, we investigate the heterogeneity of the effect of conflicts across regional characteristics and types of conflicts. We examine heterogeneity by regional capital status, timing of decentralization, jihadist involvement, and resource endowment. This provides suggestive evidence on the channels through which conflict erodes local state capacity, by identifying where the effects are most amplified.

We first document the distinctive patterns in regional capitals and communes decentralized in the first wave, i.e., in 1995, in [Figure E1](#), [Figure E2](#) and [Table E1](#).²⁴ These communes suffer larger losses in own-source revenues, while also being promised and receiving disproportionately larger external transfers than other communes. However, these transfers do not translate into statistically detectable increases in realized capital investment. The results are notable for two reasons. First, these communes have more developed fiscal administrations than peripheral communes and have more to lose. This suggests that conflicts inflict the heaviest damage on the communes that had advanced the furthest in local revenue mobilization. Second, the central response deepens their dependence on transfers precisely where self-governance had progressed most, offsetting the gains of decentralization.

Additionally, we report heterogeneous effects among communes with the presence of jihadist groups, with particular focus on the group called JNIM.²⁵ The results are reported in [Figure E3](#), [Figure E4](#) and [Table E2](#). Communes with active presence of jihadist groups and JNIM fail to mobilize own-source revenues and experience a contraction of realized investments compared to other communes. Taken together, the effects of conflicts are the

²⁴See [Bargain et al. \(2025\)](#) and [Ky \(2010\)](#) for the timing of decentralization reforms in Burkina Faso and the waves.

²⁵JNIM, or Jama'at Nusrat al-Islam wal-Muslimin, operates as the official al-Qaeda affiliate in West Africa. The group seeks to expel Western influences, topple regional governments, and impose a strict interpretation of Sharia law. JNIM is highly active and controls large swaths of territory in northern, eastern, and western Burkina Faso.

sharpest under the most organized form of insurgency. This suggests that the negative effects on local state capacity are driven by active challenges to the formal state presence, rather than generalized economic disruption alone.

Lastly, we report heterogeneity of the effects based on resource endowments in [Figure E5](#), [Figure E6](#) and [Table E3](#). Estimates for communes with mines or metal production are statistically indistinguishable from the rest. Thus, we find no evidence that effects differ by resource endowment. This rules out resource wealth as a confounding driver of the effects.

7.4 Takeaway

Overall, these results show that the damage from the conflicts is not a byproduct of economic contraction but operates through the institutional core of local governance. Migration, private investment, and local output are largely unaffected. Rather, the effects are the largest in places where local governance had advanced the most and where actors openly challenge the formal state. Conflict thus reverses the gains decentralization reforms were meant to foster, deepening dependence on the central state and locking communes into a low-capacity equilibrium.

8 Conclusion

In this paper, we examine how violent conflicts affect local governments' ability to raise revenues and manage expenditure in conflict-ridden localities in Burkina Faso. We provide micro-level evidence of how conflicts disrupt local state capacity, an area often overlooked in studies that focus on national or macroeconomic impacts. We leverage a commune-by-year variation in conflicts and local public finance and uniquely record both planned and realized budgets. We combine event-study, difference-in-differences, and re-centered instrumental-variable methods to identify the causal effects of conflict on revenue mobilization, spending, and budget efficiency.

We find that conflict erodes local fiscal capacity through an institutional channel that is distinct from economic ones. Own-source revenues fall, and communes grow more dependent on central transfers that fail to materialize, despite being centrally approved. Thus, administrative capacity is contracted, and necessary investments are unfulfilled. In the long run, local governments become inefficient at meeting their overall revenue and expenditure targets. The decline of local fiscal capacity is not driven by the extent of local economic activities or population base. The damage is sharpest in places with more

established local governance structures and where jihadist organizations directly challenge the state. Thus, conflicts reverse the very gains those reforms were designed to secure. By distinguishing planned from realized budgets, we show that these are not forecasting failures but unmet commitments, generating persistent budgetary inefficiencies that undermine local governments over the long run.

These results carry broader implications. In fragile states, post-conflict reconstruction cannot rely solely on restoring revenues or promising transfers. It requires strengthening the administrative core of local governments, ensuring that fiscal support is timely, predictable, and actually delivered, and designing intergovernmental systems that are resilient to shocks. Without such measures, violent conflict risks reversing decades of decentralization reforms and leaving local governments trapped in a cycle of weak capacity, unmet needs, and potentially declining citizen trust.

These dynamics are unlikely to be unique to Burkina Faso. Across the Sahel and other fragile states, local governments increasingly depend on external transfers even as conflict erodes their own revenue base. Where that support is promised but unfulfilled, the progress decentralization was meant to deliver may be reversed.

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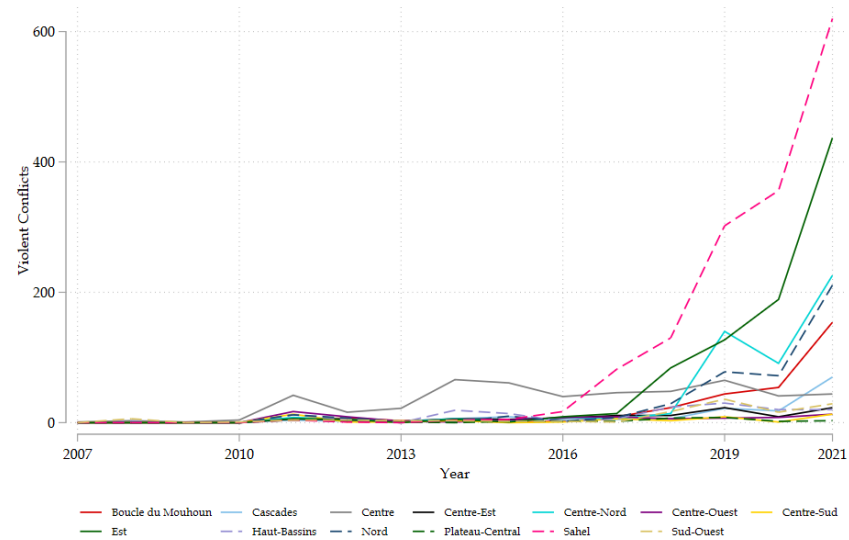
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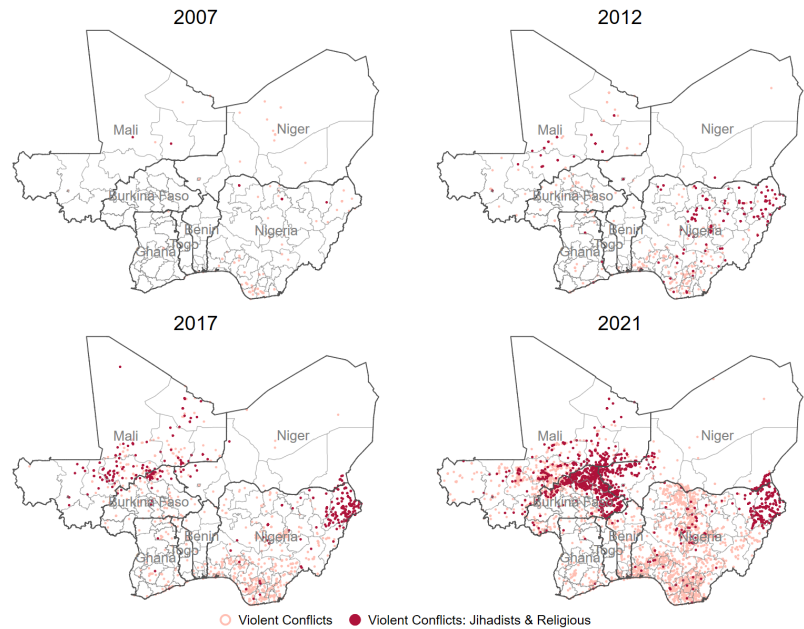
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Data Sources and Description

FIGURE 1: EVOLUTION OF VIOLENT CONFLICTS IN BURKINA FASO



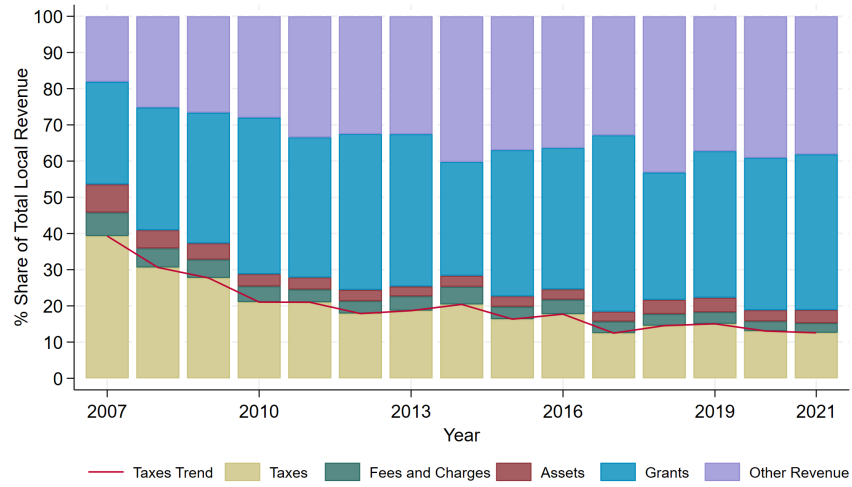
(A) Number of violent conflicts per region in Burkina Faso (2007-2021)



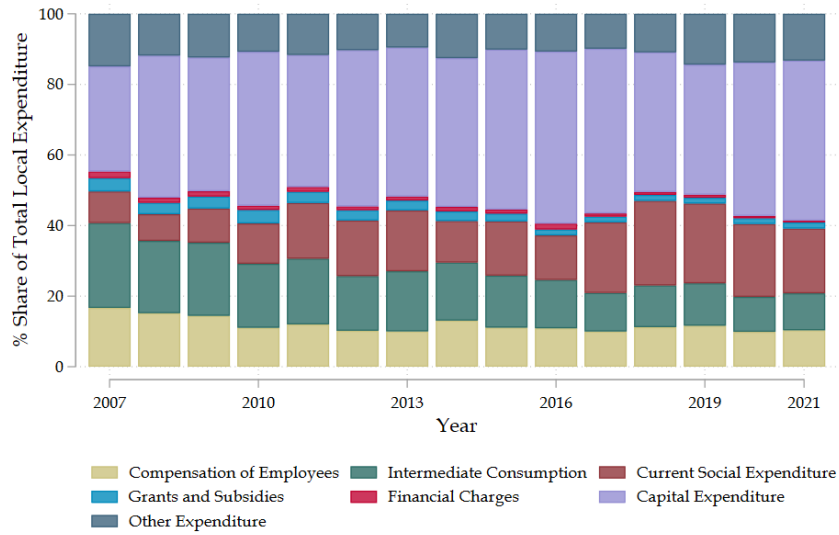
(B) Locations of conflicts in Burkina Faso and Neighboring Countries

Source: Authors' calculation using data from ACLED, GADM, and relevant shapefiles.

FIGURE 2: SHARE OF FISCAL REVENUES AND EXPENDITURE BY CATEGORY, 2007-2021



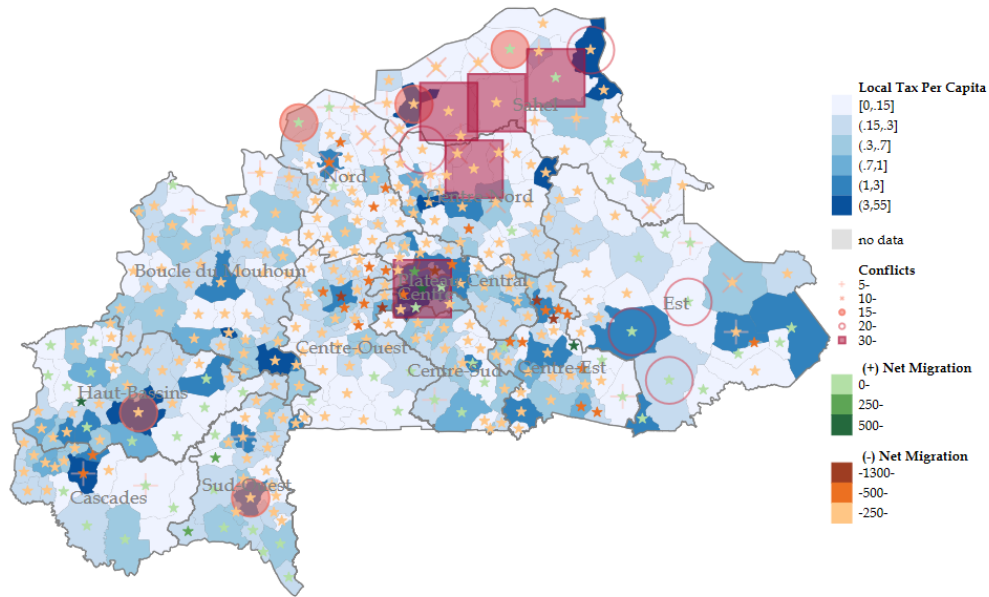
(A) Share of local fiscal revenues across different categories



(B) Share of local fiscal expenditures across different categories

Source: Authors' calculation using the local public finance data

FIGURE 3: CONFLICTS, LOCAL TAX REVENUES AND NET MIGRATION FOR EACH COMMUNE IN 2019



Note: The figure presents the map of each commune, along with local tax revenue per capita and net migration statistics in 2019. Blue shades indicate the volume of per capita local tax revenues collected. Red markers indicate the incidence of conflicts for each commune. The colors on the star marker indicate the size of the net migration. The star marker is in green for those with positive net migration and in orange for those with negative net migration.

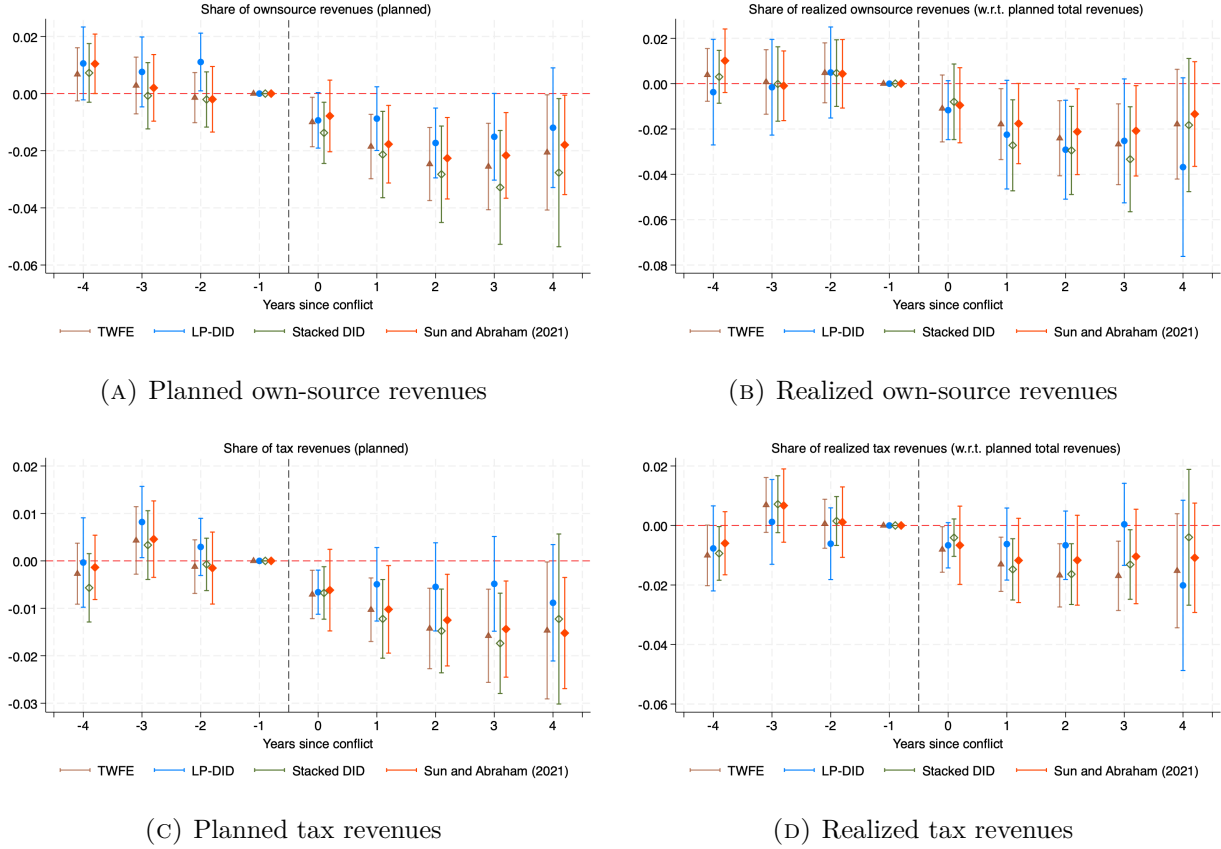
TABLE 1: SUMMARY STATISTICS

	Mean	Standard Deviation	10th Percentile	50th Percentile	90th Percentile
Panel A. Outcome variables: Aggregate (million CFA francs (XOF))					
Planned total expenditure	440	2825	0	200	618
Planned total revenues	440	2825	0	200	621
Realized total expenditures	235	1068	13.4	109	374
Realized total revenues	352	1676	21.2	168	530
Total expenditure efficiency	.56	.237	.311	.556	.793
Total revenue efficiency	.819	.228	.594	.829	1.01
Panel B. Outcome variables: By Category (units in shares)					
Planned own-source revenues	.126	.116	.0302	.0789	.296
Planned current revenue	.408	.141	.233	.394	.601
Planned tax revenue	.0691	.0797	.0107	.0341	.182
Planned user fees	.0339	.036	.009	.0213	.0776
Planned asset revenues	.0357	.0503	.00346	.0178	.0905
Planned capital revenues	.592	.141	.399	.606	.767
Planned current expenditures	.41	.146	.233	.394	.606
Planned GF1	.292	.152	.142	.248	.526
Planned staff payments	.0689	.0541	.0248	.0503	.141
Planned capital expenditures	.59	.146	.394	.606	.767
Planned GF4	.555	.151	.353	.573	.738
Planned direct investments	.567	.149	.369	.583	.748
Realized own-source revenues	.106	.103	.0271	.0707	.232
Realized current revenue	.376	.17	.196	.359	.569
Realized tax revenue	.06	.0848	.00828	.0302	.149
Realized user fees	.0295	.0301	.00818	.0208	.06
Realized asset revenues	.027	.048	.00167	.0115	.0693
Realized capital revenues	.541	.152	.337	.549	.735
Realized current expenditures	.284	.133	.133	.266	.453
Realized GF1	.208	.121	.0949	.173	.376
Realized staff payments	.0599	.0502	.0197	.0427	.123
Realized capital expenditures	.276	.193	.0684	.265	.476
Realized GF4	.256	.182	.0543	.246	.454
Realized direct investments	.267	.191	.0609	.257	.466
Panel C. Conflicts					
All conflicts	.92	4.77	-	-	-
Jihadist conflicts	.491	3.47	-	-	-
Religious conflicts	.00854	.142	-	-	-
Non-religious conflicts	.424	2.48	-	-	-
Panel D. Covariates (units in parenthesis)					
Net Migration (persons)	-34.4	610	-204	-48.4	38.8
Population (persons)	50133	143084	13815	33138	82261
Population density (per km^2)	87.1	268	26.2	57.9	130
Grassland (km^2)	1322	3659	0	17	4412
Irrigated Cropland (km^2)	52.4	94.4	0	13	142
Urbanland (km^2)	12.6	145	0	0	6
Precipitation (mm)	72.4	14.7	53	72.7	91.1
Temperature (celsius)	28.8	.574	28	28.9	29.4
Nightlight (0-63)	.163	1.31	0	0	.24

Notes The table reports summary statistics for the variables used in the study. Panel A presents the total revenue and expenditure and efficiency measures. Panel B reports the share of expenditures and revenues for each category. Panel C reports the incidence of conflicts at the commune-by-year level from ACLED. Panel D specifies the descriptive statistics for the independent variables. The timeframe of the summary statistics is from 2007 to 2021.

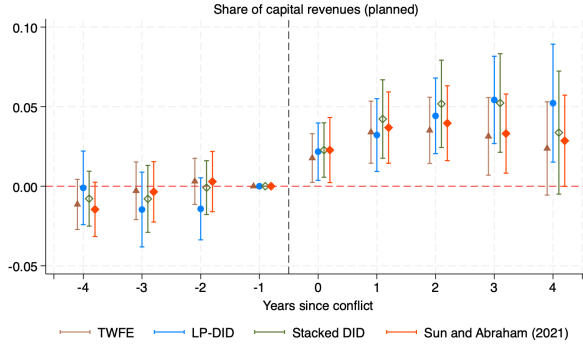
Regression Results

FIGURE 4: OWN-SOURCE REVENUES FOLLOWING CONFLICTS

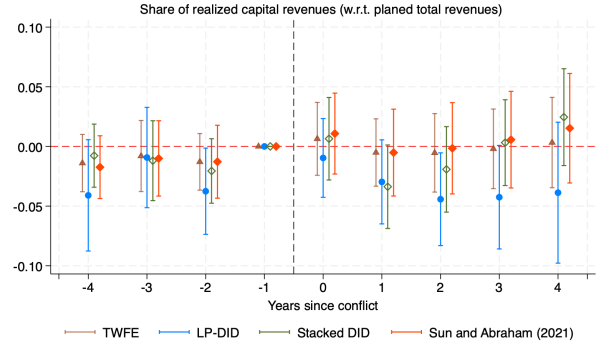


Note: The figure presents the coefficient on the timing relative to conflict indicators from TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

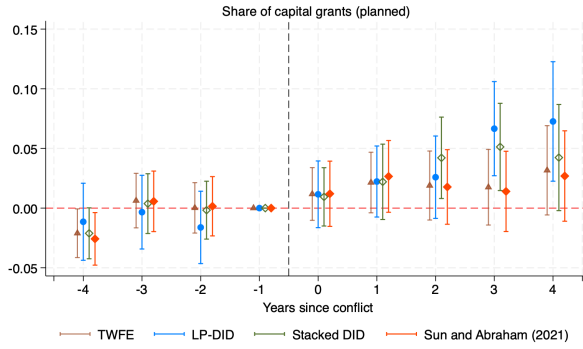
FIGURE 5: CAPITAL REVENUE AND GRANTS



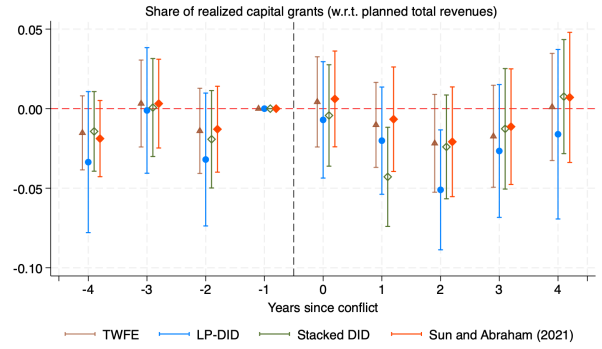
(A) Share of planned capital revenue



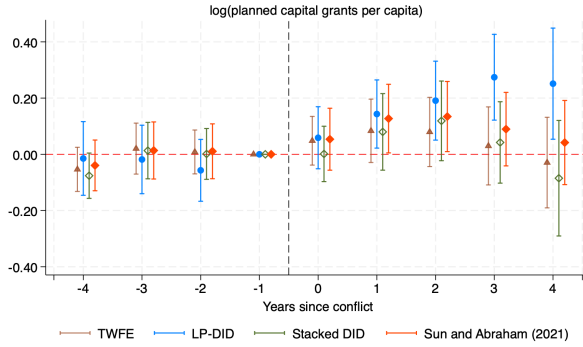
(B) Share of realized capital revenues



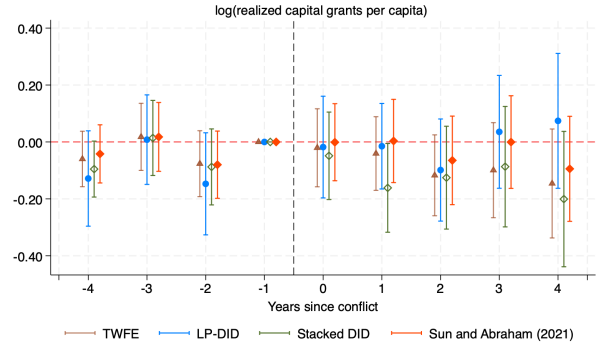
(C) Share of planned capital grants



(D) Share of realized capital grants



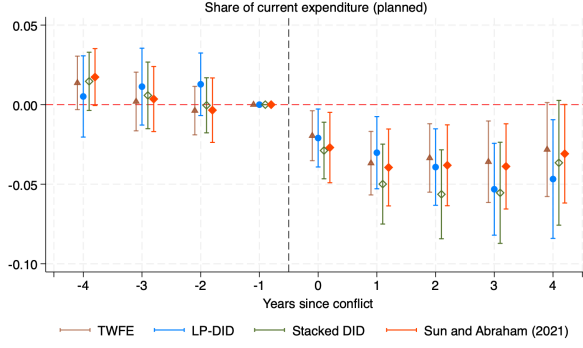
(E) log(planned capital grants per capita)



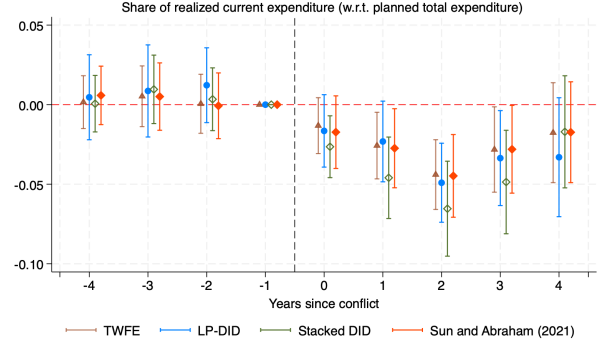
(F) log(realized capital grants per capita)

Note: The figure presents the coefficient on the timing relative to conflict indicators from TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

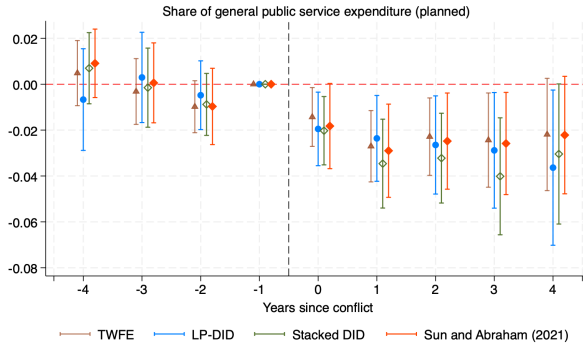
FIGURE 6: GENERAL ADMINISTRATION AND CURRENT EXPENDITURE



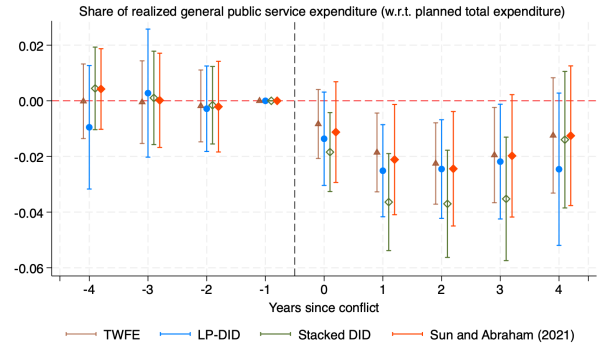
(A) Planned current expenditure



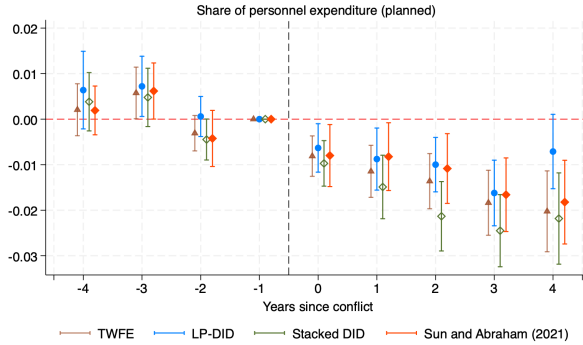
(B) Realized current expenditure



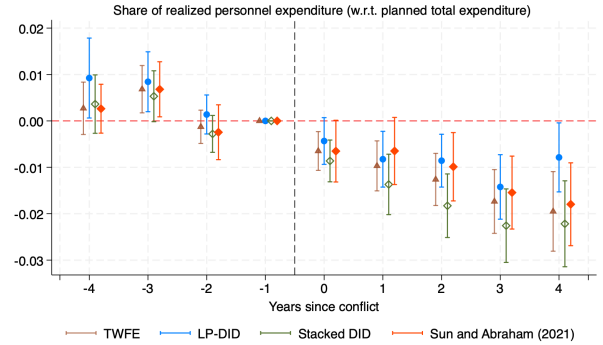
(C) Planned general service spending (GF1)



(D) Realized general service spending (GF1)



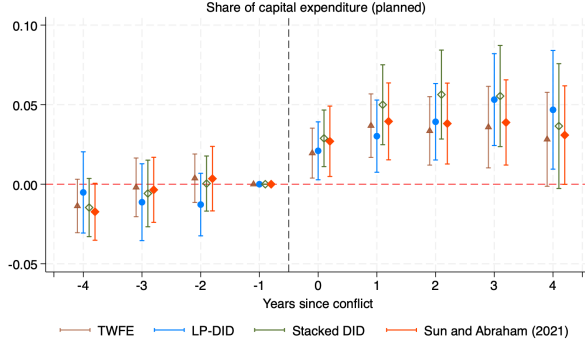
(E) Planned staff wages & compensations



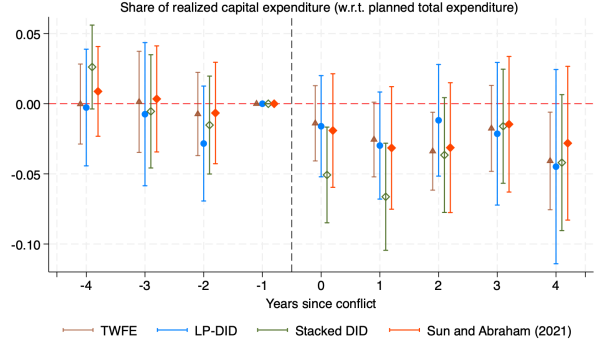
(F) Realized staff wages & compensations

Note: The figure presents the coefficient on the timing relative to conflict indicators from TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

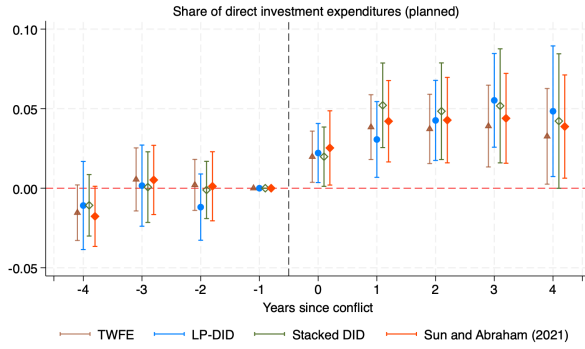
FIGURE 7: INVESTMENTS FOLLOWING CONFLICTS



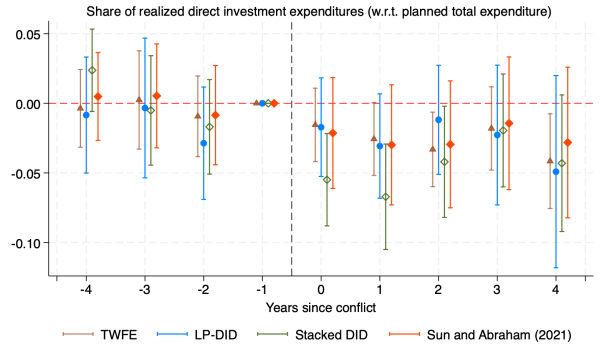
(A) Planned capital expenditure



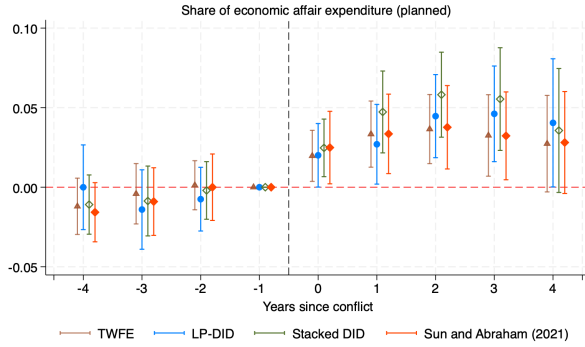
(B) Realized capital expenditure



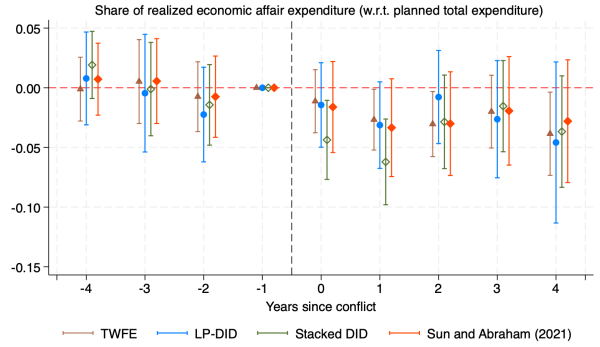
(C) Planned direct investments



(D) Realized direct investments



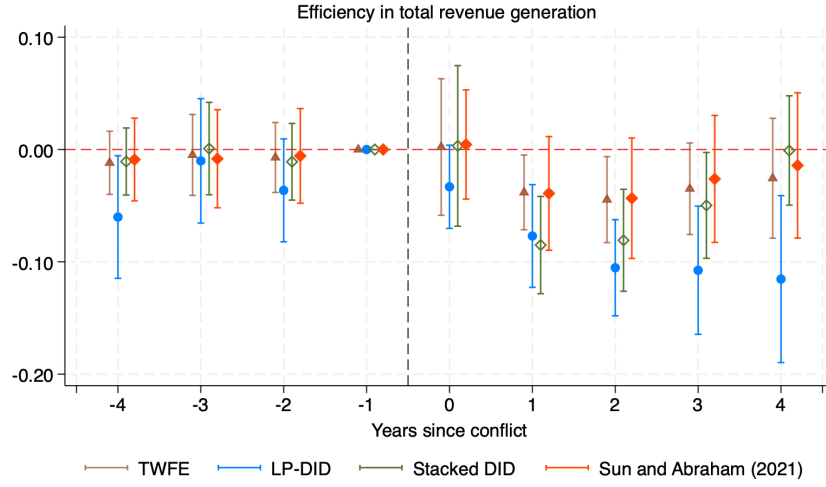
(E) Planned economic affairs spending



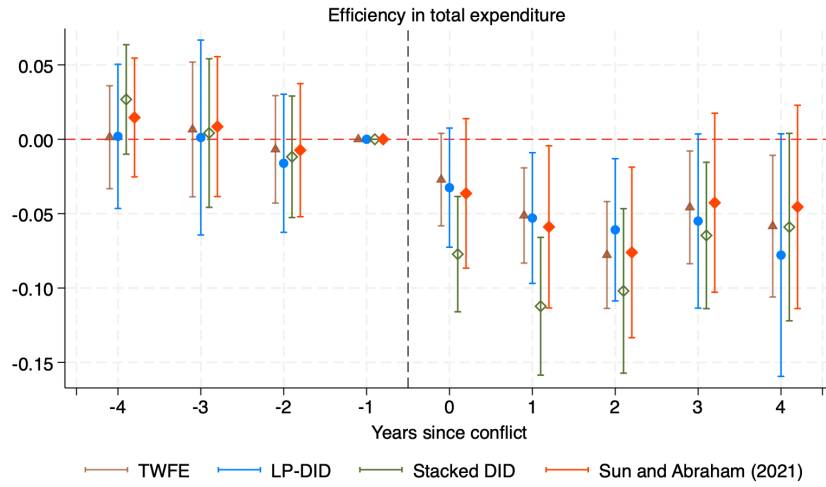
(F) Realized economic affairs spending

Note: The figure presents the coefficient on the timing relative to conflict indicators from TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

FIGURE 8: EFFECT OF CONFLICTS ON OVERALL EFFICIENCY OF LOCAL GOVERNMENTS



(A) Failure to meet revenue targets



(B) Failure to meet expenditure targets

Note: The figure presents the coefficient on the timing relative to conflict indicators from TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

Robustness Checks: Re-centered IV results

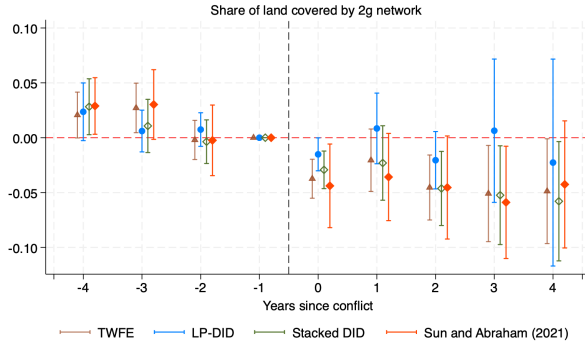
TABLE 2: Effect of Conflict on Local Public Finances: Re-centered IV and DID

	IV (1)	DID (2)	IV (3)	DID (4)
<i>Panel A. Planned and Realized Revenues</i> (Obs. = 4,462)				
Own-source revenues	−0.014** (0.006)	−0.017*** (0.005)	−0.018** (0.008)	−0.020*** (0.006)
Tax revenues	−0.008** (0.004)	−0.011*** (0.003)	−0.012** (0.005)	−0.015*** (0.004)
Current revenues	−0.022** (0.009)	−0.026*** (0.008)	−0.024 (0.015)	−0.025** (0.012)
Capital revenues	0.022** (0.009)	0.026*** (0.008)	−0.013 (0.013)	0.006 (0.011)
<i>Panel B. Planned and Realized Current Expenditure</i> (Obs. = 4,461)				
Current expenditures	−0.024** (0.010)	−0.027*** (0.009)	−0.027*** (0.009)	−0.028*** (0.008)
General services (GF1)	−0.011 (0.008)	−0.015** (0.007)	−0.014** (0.006)	−0.016** (0.006)
Wages & salaries	−0.009*** (0.003)	−0.013*** (0.003)	−0.008*** (0.002)	−0.013*** (0.003)
<i>Panel C. Planned and Realized Capital Expenditure</i> (Obs. = 4,461)				
Capital expenditures	0.024** (0.010)	0.027** (0.009)	−0.029** (0.012)	−0.019** (0.009)
Economic affairs (GF4)	0.028*** (0.010)	0.027*** (0.009)	−0.027** (0.012)	−0.019** (0.009)
Direct investment	0.022** (0.010)	0.027*** (0.008)	−0.030** (0.012)	−0.019** (0.009)
<i>Panel D. Revenue and Expenditure Budget Efficiency</i> (Obs. = 4,462/4,461)				
Realized/planned ratio	−0.037* (0.021)	−0.019 (0.015)	−0.056*** (0.016)	−0.046*** (0.013)
First stage	1.419*** (0.037)		1.419*** (0.037)	
First-stage F	1503.9		1503.9	

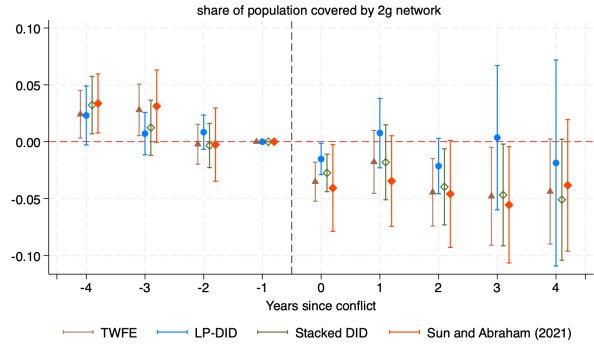
Notes: The table reports re-centered IV and difference-in-differences (DID) estimates of the effect of conflict on local public finances. In Panels A-C, the four columns report planned (columns 1-2) and realized (columns 3-4) outcomes, expressed as shares of planned total revenues or expenditures. In Panel D, the ratio of realized to planned revenues (columns 1-2) and expenditures (columns 3-4) are reported. Observations are reported in each panel header, and all regressions come from 351 communes. The first-stage coefficient on the re-centered instrument and its F-statistic are common across outcomes and reported at the foot of the table. All regressions control for pre-conflict precipitation, temperature, grassland area, urban area, nightlights, and population density, each interacted with year fixed effects, and include year, commune, and region-specific linear trends. Standard errors, clustered at the commune level, are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$.

Mechanisms

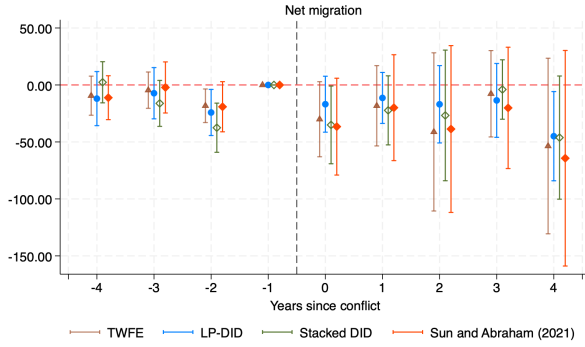
FIGURE 9: MECHANISMS: PRIVATE INVESTMENTS AND NET MIGRATION



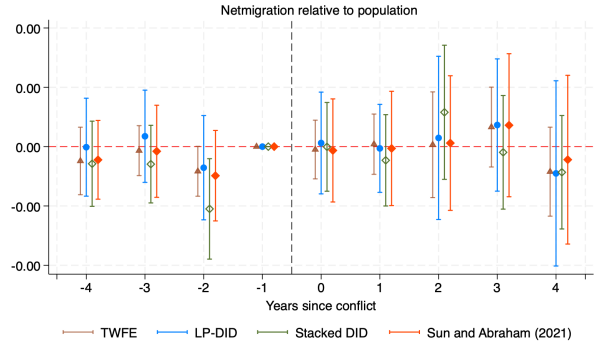
(A) 2G mobile coverage, share of land



(B) 2G mobile coverage, share of population



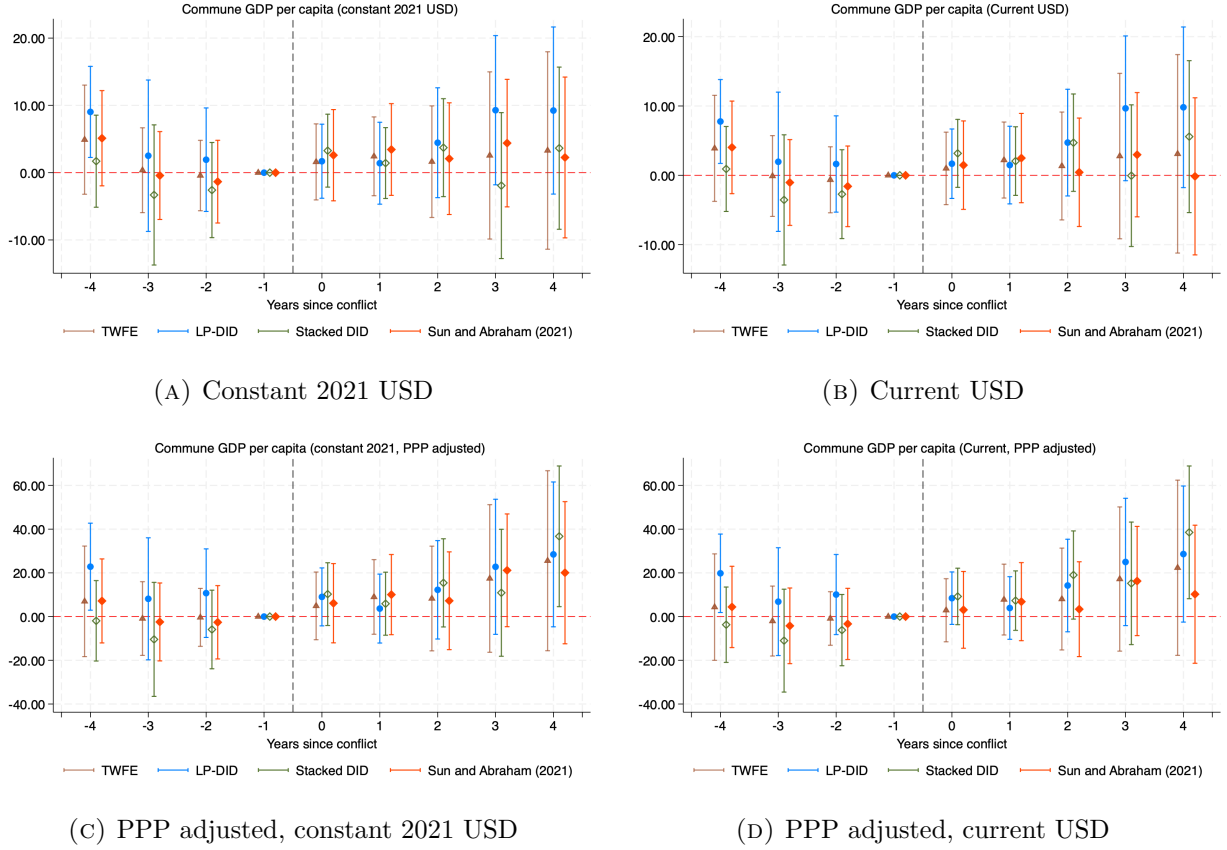
(C) Net migration



(D) Net migration relative to population

Note: The figure presents the coefficient on the timing relative to conflict indicators from TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

FIGURE 10: MECHANISMS: GDP PER CAPITA



Note: The figure presents the coefficient on the timing relative to conflict indicators from TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

Online appendix

A Additional background information

A.1 History of Decentralization in Burkina Faso

Burkina Faso’s 1991 Constitution establishes decentralization by affirming the principles of local self-governance and subsidiarity.¹ However, its practical implementation was gradual and unfolded over multiple phases. The first wave of decentralization in 1995 involved the creation of a limited number of communes with elected officials, the organization of democratic local elections, and the establishment of local public administration. This was followed by a second wave in 2000 and a third, more comprehensive expansion in 2005-2006, which led to the nationwide adoption of decentralized governance structures (Bargain et al., 2025; Ky, 2010). In 2004, the country adopted the Local Government Act (*“Code Général des Collectivités Territoriales”* or CGCT), defining the legal and regulatory framework for territorial and multi-level governance, including regulations on electing local executives, governing fiscal and civil affairs, and planning local and regional development. The legal parameters are applied nationwide, and Parliament adopts all legal texts.² Through this reform, Burkina Faso aimed to empower local governments to fulfill their mission of providing local and accessible public services, promoting local economic development and income-generating opportunities for their constituents.

The reform took place during a period when public sector decentralization was regarded as a pivotal institutional reform in Sub-Saharan Africa and was backed by several international initiatives. The transfer of powers to local authorities was then seen as a means of ensuring political stability, limiting inter-regional conflicts, and ultimately reducing poverty (Vaillancourt and Bird, 1999; Crawford and Hartmann, 2008; Martinez-Vazquez and Vaillancourt, 2011; Bardhan, 2002; Dickovick and Wunsch, 2014; Dafflon and Madiès, 2013).³

¹Articles 143 to 145 of the said Constitution explicitly state that *"the territory of Burkina Faso is organized into local authorities"* and that *"the law organizes the participation of the population in the free administration of local authorities."* (République du Burkina Faso, 1991). It must be noted that the Constitution has been amended several times, including most recently in 2023. Article 145 was slightly modified in 1997 and 2000 to reflect changes in national elections and governance. See République du Burkina Faso (1991) for more details.

²See Appendix A in Bargain et al. (2025) for an overview of key decentralization milestones.

³It must be noted that the gains of decentralization reforms are still debated today. While some empirical research points to benefits in terms of access to education and healthcare, especially in rural areas (Faguet, 2004; Galiani et al., 2008; Habibi et al., 2003; Alatas et al., 2012; Bardhan, 2002), some others point to the risks associated with decentralization such as limited local capacities to implement the reform, coordination failure across layers of governments or between jurisdictions and elite capture, leading to more governance

In a country as ethnically and linguistically diverse as Burkina Faso, with over 60 languages and ethnic groups, multi-level governance has thus been considered essential.

Public sector decentralization reforms, in Burkina Faso or elsewhere, are consistent with the notion of state capacity in the literature. Building strong state capacity involves mobilizing revenue through taxation, hiring competent and impartial security forces and civil servants, and collecting accurate information about populations to ensure adequate public goods provision (Acemoglu and Robinson, 2023; Besley et al., 2013; Dincecco, 2015; Dincecco and Prado, 2012; Dincecco and Katz, 2016).⁴ In fact, economic theory frames decentralization as a means to align revenue generation with public service delivery, fostering efficiency gains that can strengthen state capacity. Oates (2005) highlights two key mechanisms supporting this argument. First is the proximity principle, which asserts that local governments, due to their informational advantage, are better positioned to understand and address the specific needs and preferences of their constituents. Second is the inter-jurisdictional self-sorting mechanism, whereby individuals reveal their preferences for public goods either by "voting with their feet" (Tiebout, 1961), leading to the optimal provision of services, or through yardstick competition (Besley and Case, 1995), where citizens compare policies across jurisdictions and hold leaders accountable, even in the absence of mobility.

Given Burkina Faso's plurality in cultural and geographic composition, the decentralization reforms are crucial for a discussion on local state capacity in Burkina Faso. Evidence suggests that between 1960 and 1995, despite being an independent state, Burkina Faso lacked structures capable of effectively addressing the needs of its diverse communities, particularly in the hinterlands and rural areas (Englebert, 2018; Harsch, 2017, 2021). Thus, the reform, as intended, allows for governance structures that are more proximate to the people, ensuring that decision-making reflects local contexts and priorities. In a multi-ethnic and linguistically diverse setting, it was also intended to promote social cohesion and to reduce the risk of alienation among marginalized groups, especially in remote areas where central governments often struggle to build trust and where traditional and local rulers tend to have a predominance (Ouedraogo, 2006). This also resonates with the broader state-building literature, which emphasizes inclusive governance in fragmented societies as essential to enhancing legitimacy and ensuring long-term stability (Hickey et al., 2014).⁵

fracture (Grossman et al., 2017; Kessing et al., 2007). See, for instance, Bargain et al. (2025) for a discussion on the existing empirical evidence.

⁴Historically, the development of strong states has been tied to high fiscal capacity, often driven by the need to finance wars. A powerful state is defined in the literature as having a monopoly on legitimate violence within a specified geographical area. Maintaining this monopoly requires resources, which compel states to collect revenue from their populations (Schumpeter and Swedberg, 1918; Weber, 1919; Tilly, 1975; Dincecco et al., 2011; Karaman and Pamuk, 2013; Gennaioli and Voth, 2015; Queralt, 2019).

⁵Decentralization is equally pivotal in fostering local accountability and participation— other key pillars of

A.2 Local Public Administration

Burkina Faso’s decentralized governance system consists of 17 (previously 13) regions and 351 communes, each governed by elected councils. While the law stipulates that regional and municipal elections occur every five years, political instability often delays these timelines, and the country has experienced multiple periods of highly centralized governance during periods of political turmoil. Of the 351 communes, some are classified as urban communes (49) and others as rural communes (302). Ouagadougou, the capital city, and Bobo-Dioulasso, the second largest city, hold special statuses. (Englebert and Sangare, 2010, 2014). While the communes operate independently, they remain subject to central government oversight, particularly regarding financial management and planning. The national framework grants local governments administrative autonomy but limits their fiscal and staffing discretion. Notwithstanding, elected local officials can resort to legal mechanisms to assert their autonomy and self-governance in areas assigned to them by law.

The allocation of responsibilities to local governments is primarily outlined in Articles 80 to 105 of the 2004 Local Government Act (CGCT). In practice, around ten key competencies or functions have been transferred to elected local authorities. They are, by law, in charge of primary and pre-primary education, waste disposal, cultural activities, sports and leisure activities, among others. These competencies are, *de jure*, to be exercised exclusively by the local governments, both in management and funding, while regional planning is jointly undertaken by the central government and the regions. Certain functions require cooperation or consultation with other tiers of government. For example, communes are solely responsible for cemetery management, while wildlife conservation in protected areas is jointly handled by regions and communes. Additionally, local authorities are consulted on matters involving health hazards, safety risks, or environmental concerns within their jurisdictions, emphasizing the interconnected framework of governance in Burkina Faso.

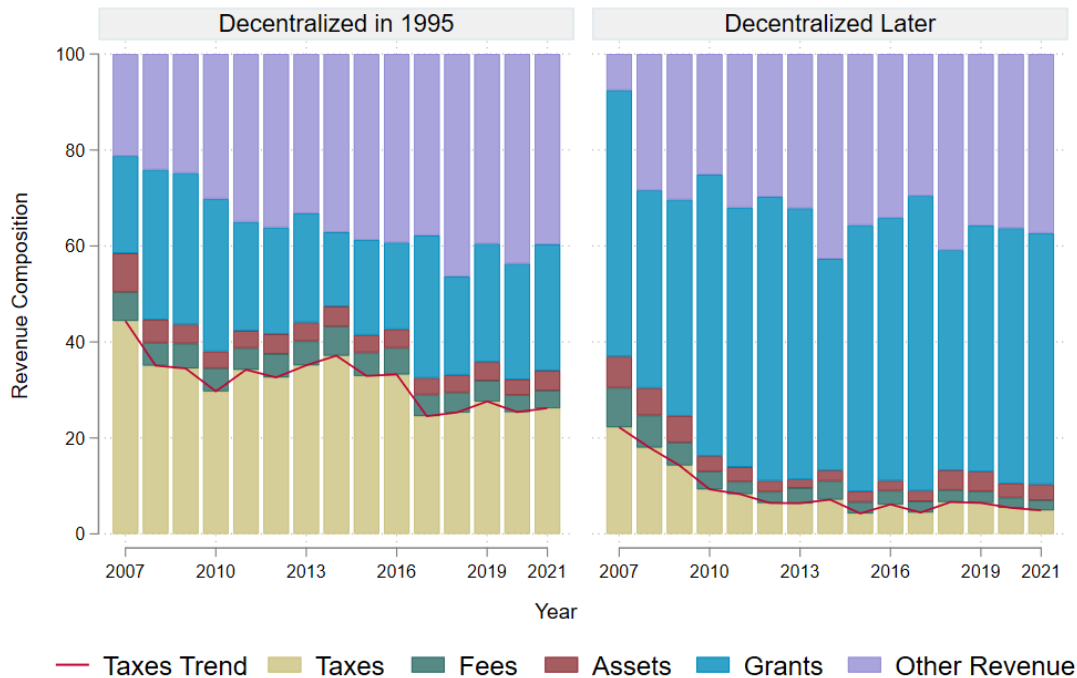
On the revenue side, Burkina Faso’s tax code and Local Government Act define the revenue frameworks and tax instruments assigned to local government budgets. Most revenues are collected by the centralized tax authority, the *Direction Générale des Impôts*, and subsequently transferred to the communes. However, communes and their respective local councils are legally permitted to establish agencies for revenues such as fees and charges, so long as it is transparent and transferred to their respective accounts with the national treasury. Each commune maintains a treasury account that records its financial transactions,

state capacity. Granting citizens greater involvement in decision-making processes can enhance transparency and responsiveness of the State, as citizens are more likely to hold their local leaders accountable, a dynamic that can reduce corruption and lead to more efficient public spending.

including debits and credits. Communes' rights to shared taxes or other revenues are predetermined and included in the annual (planned) budget. General operating grants support local administration and cover expenses for intermediate consumption and staff salaries, especially temporary staff. Capital grants finance infrastructure projects mandated by central authorities or outlined in local or regional development plans. The allocation and use of capital grants are subject to inter-sectoral regulations (i.e., specific ministries) and require approval from central government authorities.

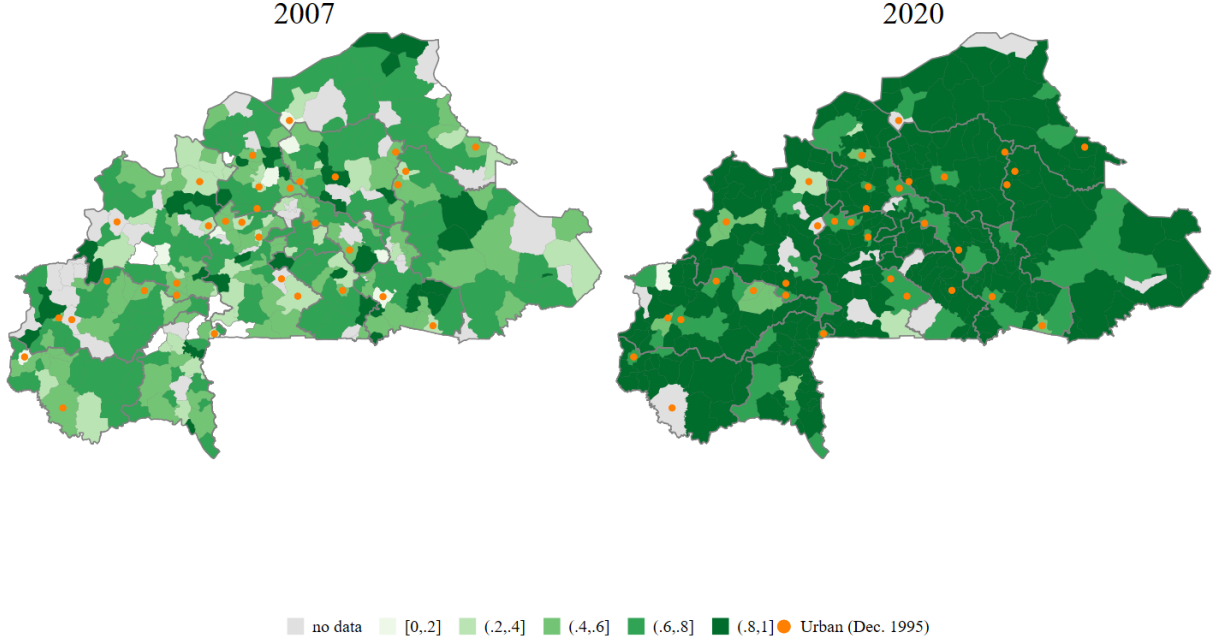
All taxes, whether at the local or national level, follow the guidelines established in the tax code. A key source of own-source revenue for communes is the local business license, known as *patentes*, the proceeds of which are shared between communes and regions. This is also collected by the centralized tax authority and assigned to each commune's respective account. That said, local governments also rely significantly on fiscal grants and transfers, including earmarked grants for specific decentralized functions such as education, water and sanitation, and recreational activities. As shown in Figure A1, this is particularly acute in communes that were decentralized later than 1995, where less than 15% of their revenues stem from own-source, including local taxes, user fees and charges, and revenues from assets.

FIGURE A1: Revenue Composition by Decentralization Wave



Most financial decisions made by local governments, such as the planned annual budget, require review and approval by state authorities. Technical and financial oversight committees

FIGURE A2: Evolution of Vertical Fiscal Imbalance at the Commune Level



– namely the *Commission Technique Inter-Ministérielle (CTI)* and the *Commission Technique Régionale (CRT)* oversee public financial management at the regional and communal levels. The CTI is responsible for approving the budgets of the regions and communes with special statuses (Ouagadougou and Bobo-Dioulasso). In contrast, the CRT, which is region-specific, examines and approves the budgets of the communes within each region.⁶ This governance framework highlights the balance between local autonomy and central oversight in Burkina Faso’s fiscal management system.

⁶The regional oversight committees (CTR) also supervise inter-municipal cooperation projects and twinning arrangements between the communes and foreign municipalities. Vertical coordination of sectoral policies is managed by the *Conseil d’Administration du Secteur Ministériel (CASEM)*, while other specialized bodies address specific coordination needs or are formed as necessary.

TABLE A1: CATEGORIZATION OF REVENUES AND EXPENDITURES

Panel A. Revenue categorizations		
Own-source revenue	Current revenue	Tax revenue
		Property taxes
		Other indirect taxes (including business licenses)
		Proceeds from fines and public services
		Fees from school, document services
		Rents and concessions from land and shops
		Interest on financial products
	Capital revenue	Rents from communal equipment
		Sales of fixed assets (land, building, transport, roads, etc.)
Outside revenue	Current revenue	Current grants
		Earmarked grants (health, education, culture, water)
		Nonearmarked grants
	Capital revenue	Capital grants
		Value of assets allocated
		Endowment funds and capital donations
Panel B. Expenditure categorizations		
Current and capital expenditure	Current expenditure	Staff payments
		Permanent staff cost
		Temporary staff cost
		Purchases of goods used as inputs, not including fixed assets
		Social benefits and in-kind transfers
		Subsidies expenses and other current transfers
		Interest payments and property income payable
	Capital expenditure	Gross fixed capital formation
		Acquisition of capital assets
		Capital Transfers
COFOG categorization	General public service(GF1)	Operational costs of service provision (staff compensations, supplies, general service provision)
	Economic affairs(GF4)	Construction and maintenance of roads, buildings, infrastructure, and other projects
	Environmental protection(GF5)	Expenses related to waste management and pollution abatement
	Housing(GF6)	Expenses related to housing development, water supply, and lighting
	Health(GF7)	Expenses on provision of health services (medical products, hospital services)
	Recreation, culture(GF8)	Expenses on recreational, cultural, and religious activities)
	Education(GF9)	Provision of schooling services

Notes The table presents the definitions and categorizations of different types of revenues and categories. Panel A provides categorizations depending on own-source vs. outside source, as well as current vs. capital revenues. In Panel B, permanent staff costs include salaries and social charges paid to such workers (similarly defined for temporary workers). In COFOG categorization, there are also expenses for defense (GF2), and public safety (GF3), both of which are primarily duties of provincial or central government.

Public procurement at the local level is also governed by national regulations to ensure uniformity and accountability. Local governments are responsible for managing contracts related to infrastructure, goods, and services. However, these agreements require approval by both local councils and central authorities. This layered process reflects the fiscal constraints faced by local governments, which often depend on central government transfers for operational and developmental activities.

To date, three decades after the onset of the decentralization reform in 1995, most transferred competencies remain financed through central government grants, and local revenues have declined sharply since 2007, resulting in a high vertical fiscal imbalance at the local level, as illustrated by [Figure A2](#) (see also [Figure 2](#)).

A.3 Security challenges in Burkina Faso around 2016

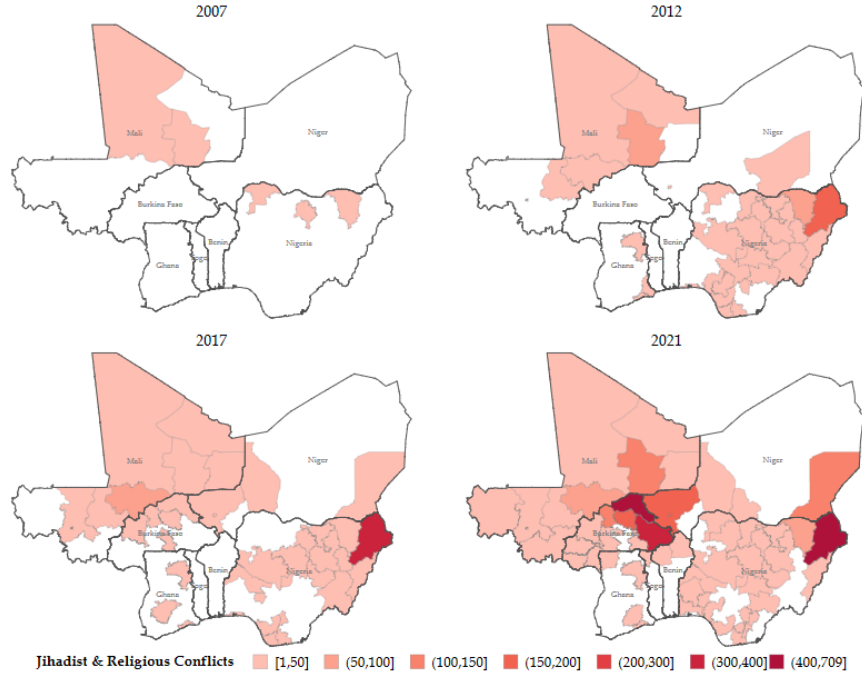
Since the mid-2010s, Burkina Faso has experienced a sharp break in its political stability. In fact, the risk of conflict spillovers from Mali or the Sahel was considered minimal by many analysts ([Haavik et al., 2022](#)).⁷ Blaise Compaoré, who had ruled Burkina Faso autocratically since 1987, was ousted by mass protests opposing his planned constitutional reform that would have extended his term. After his overthrow in 2014, a Transition President and Government were appointed, along with a National Transition Council to oversee general elections. However, political instability persisted, marked by a coup in September 2015 by elements of the Presidential Guard loyal to Compaoré. This was followed by the general elections later that year, which brought Roch Marc Christian Kaboré to power.

While political tensions around the government calmed in 2016, the country's security situation deteriorated sharply due to instability in neighboring Sahelian countries. Surprisingly, the first terrorist attack hit the capital, Ouagadougou, in January 2016, and in November of the same year, the first Jihadist insurgency began. Terrorist attacks, initially targeting expat-frequented locations in Ouagadougou between 2016 and 2018, signaled that Burkina Faso was not immune to the spillover of regional instability ([Newswire, 2023](#)). By 2022, the government had lost control of a significant share of national territory to radical Islamist groups, threatening the state's territorial integrity. The International Center for Counter-Terrorism estimates that the country experienced the most significant terrorism-related deaths around 2019, with an increase of more than 590%.⁸

⁷The UNDP program even launched in 2016 to prevent violent extremism in Africa, and similarly identified Mali as an epicenter of violent extremism and Niger as the potential spillover country in this region, while Burkina Faso was not even identified as a country at risk. See more from UNDP [source](#).

⁸See report by [Demuyne and Julie Coleman \(2022\)](#) as well as regular policy notes published by [ACLED \(2024\)](#) on violent conflicts in the Sahel.

FIGURE A3: Distribution of Religious and Jihadist conflicts at the regional level



Today, Burkina Faso rivals Mali as the epicenter of the Sahel crisis, characterized by inter-communal violence and jihadist insurgent groups aligned with Al-Qaeda and the Islamic State⁹, fighting for influence and territorial control, with devastating consequences for households and local communities (Tapsoba et al., 2024; Büttner et al., 2022; Druetz et al., 2020; Okafor et al., 2023). A major argument presented in the literature to explain this unexpectedly unstable situation is that the pre-2016 tranquility is based on realities ranging from internal tensions or conflicts to organizational methods of law enforcement based on delegation or government’s collaboration with non-formal entities generating deep-rooted tensions between communities and these non-state entities endowed with informal authorities generating under-governed spaces and security problems (Durmaz, 2022).

In 2007, incidents of violent conflict were limited to isolated areas, primarily in northern Mali. By 2017, these events had intensified and spilled over into Burkina Faso, especially in its northern territories. By 2021, Burkina Faso had become a major epicenter of violence across much of its north and eastern regions, with concentrated clusters of violent conflicts (see Figure A3). The maps also highlight the religious and jihadist nature of many of these conflicts, showing the growing dominance of extremist groups in the Sahel and their significant impact on Burkina Faso and neighboring countries. This increase reflects the expanding

⁹Two major groups have been identified, namely the Jama’at Nusrat al-Islam wal-Muslimin (JNIM), affiliated to AQIM, and the Islamic State in the Greater Sahara (IS-GS), linked to the Islamic State.

operations of jihadist groups and the weakening of state control over northern and eastern territories.

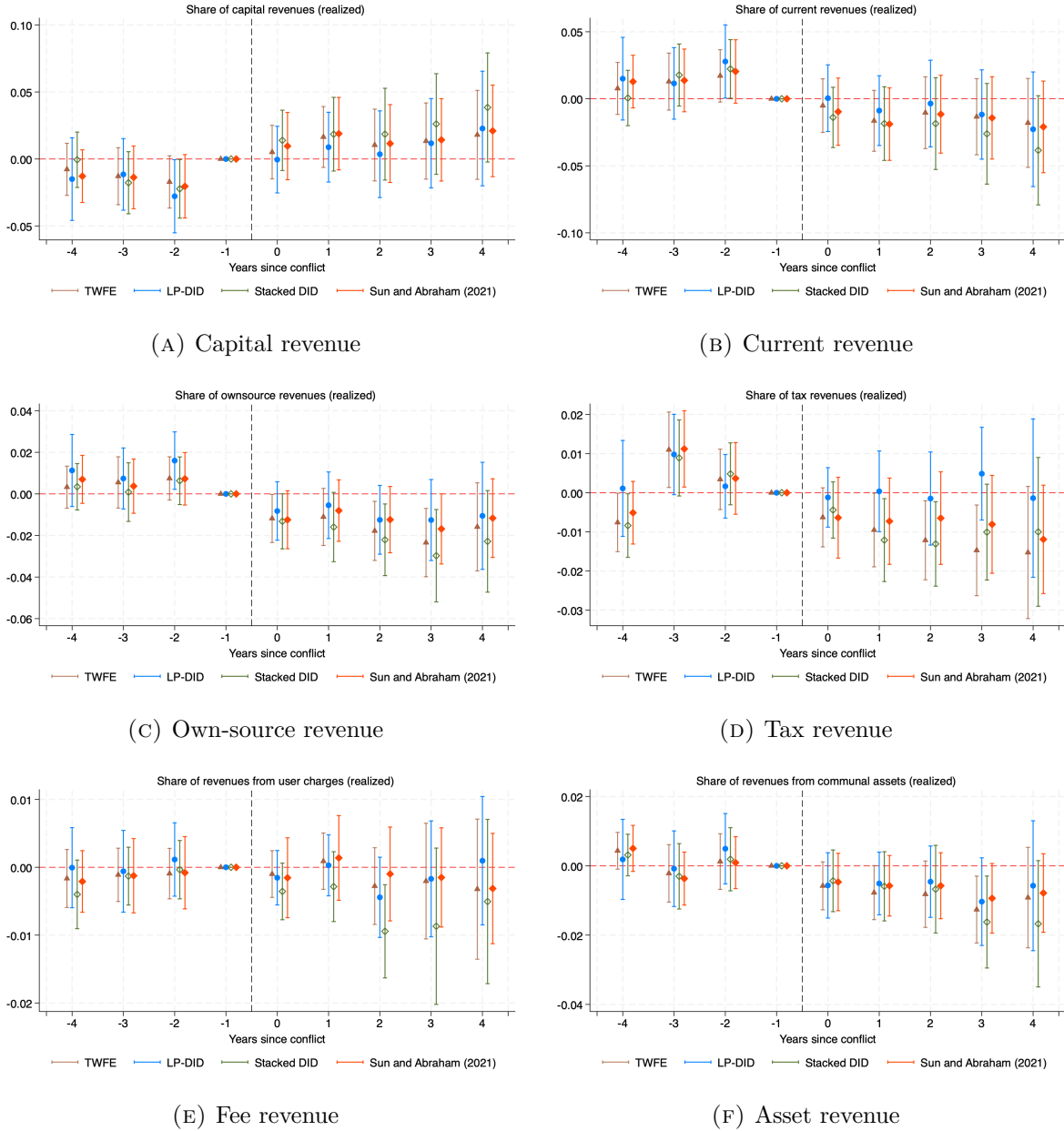
The deterioration of security coincided with significant political upheaval and governance challenges. In 2022, two successive military coups ousted the elected government of Kaboré, resulting in the establishment of the Patriotic Movement for the Safeguard and Restoration, a military junta.¹⁰ In 2023, the junta demanded the withdrawal of French forces amidst a resurgence of jihadist attacks. Burkina Faso’s political landscape remains highly fragile and unstable, marked by frequent coups and the suspension of the constitution since October 2022, with no clear timeline for its reinstatement or revision.

Rising violence has widened the gap between the country’s poorest regions and the rest: the areas hit hardest are those where poverty was already most entrenched. The communal governments in these areas carry a double burden. Endowed with few resources and receiving limited backing from the central state, they are nonetheless the tier of government that confronts the crisis first — managing displacement, sustaining basic services, and maintaining an administrative presence under threat. How local institutions absorb these pressures, and whether governance structures can be rebuilt where they have eroded, are the questions at the heart of this paper.

¹⁰For a discussion of the political tensions surrounding Kaboré’s presidency, including challenges at its outset, see [Roger \(2016\)](#).

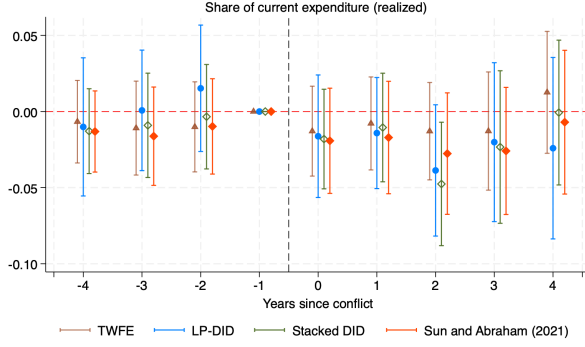
B Additional regression results

FIGURE B1: EFFECTS ON SHARE OF REVENUES CALCULATED RELATIVE TO REAL TOTAL REVENUES

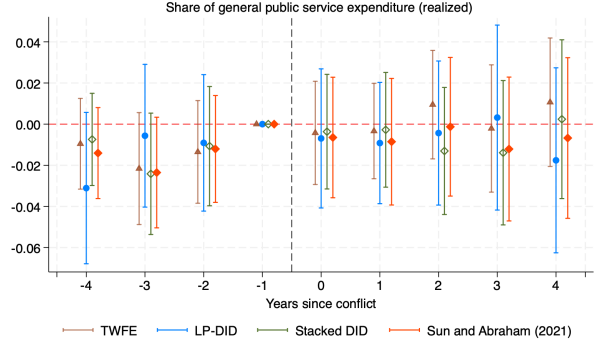


Note: The figure presents the coefficient on the timing relative to conflict indicators from TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. Outcome variables are realized revenues divided by realized total revenues. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

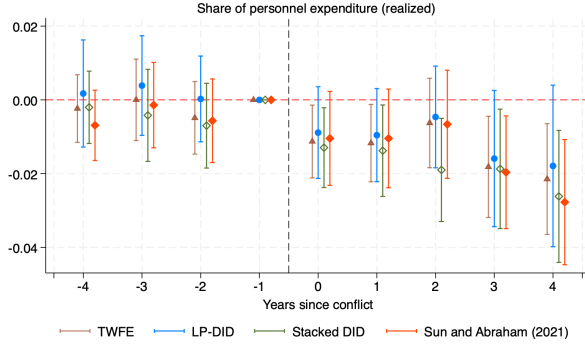
FIGURE B2: EFFECTS ON SHARE OF EXPENDITURE CALCULATED RELATIVE TO REAL TOTAL EXPENDITURE



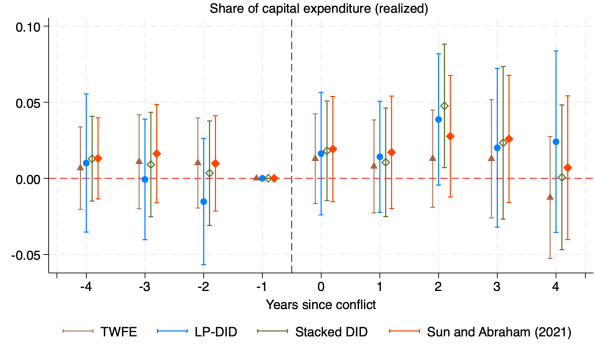
(A) Current expenditure



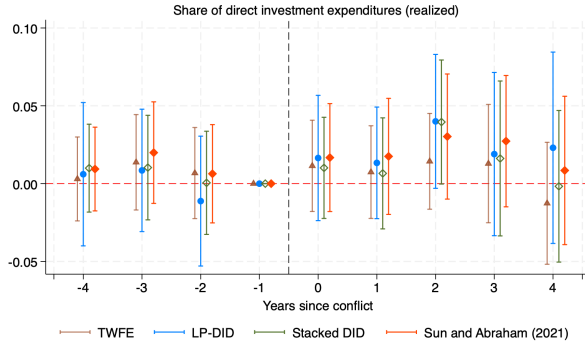
(B) General service spending



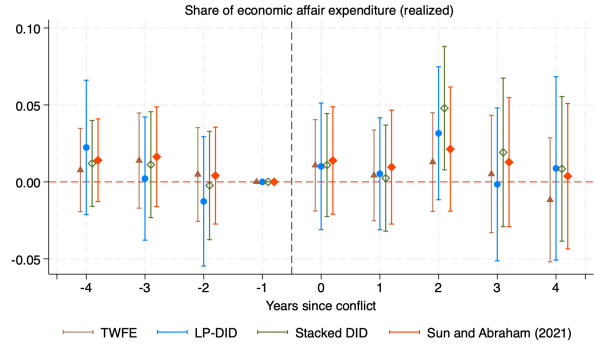
(C) Staff expenditure



(D) Capital expenditure



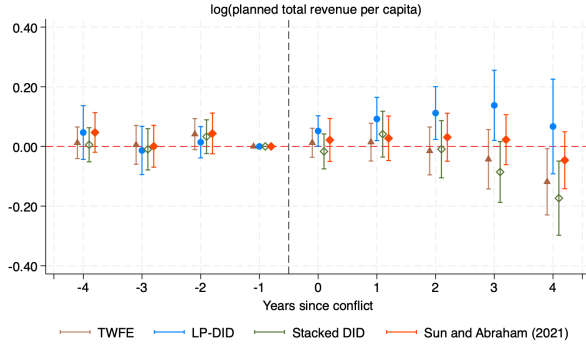
(E) Direct investment expenditure



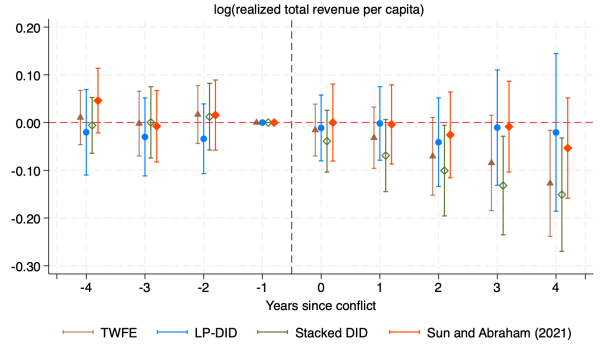
(F) Economic affairs expenditure

Note: The figure presents the coefficient on the timing relative to conflict indicators from TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. Outcome variables are realized revenues divided by realized total expenditures. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

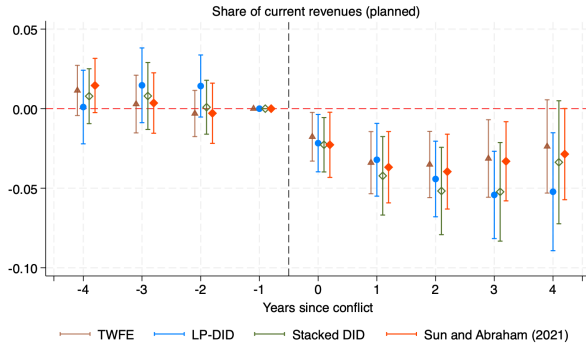
FIGURE B3: TOTAL AND CURRENT REVENUE



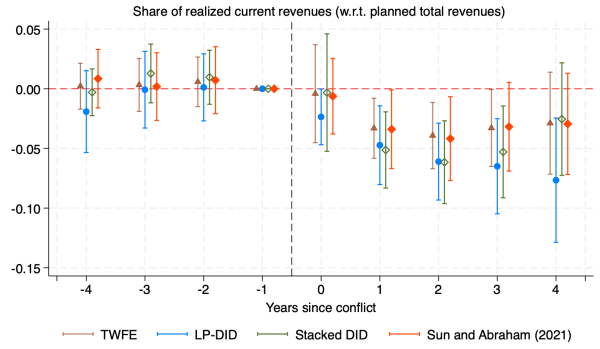
(A) log(planned revenue per capita)



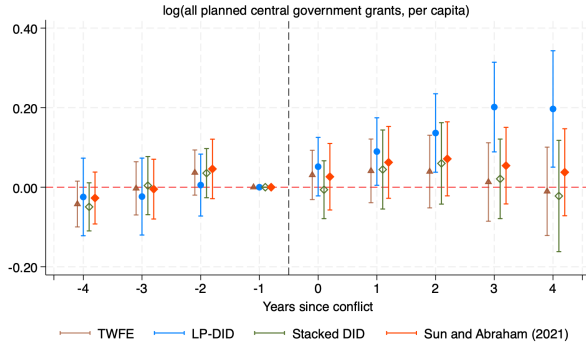
(B) log(realized revenue per capita)



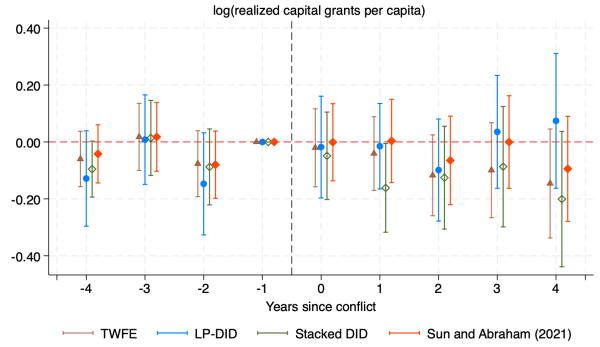
(C) Planned current revenue



(D) Realized current revenue



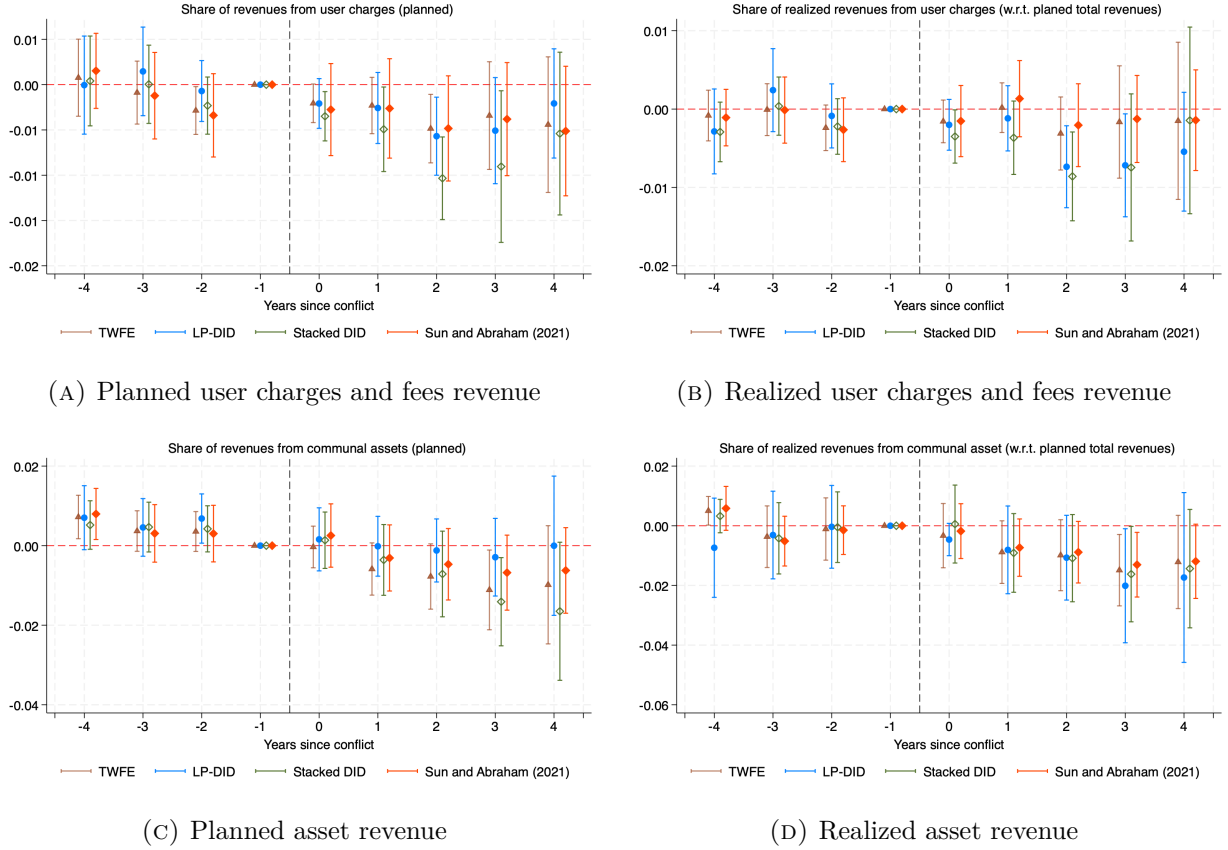
(E) log(planned grants per capita)



(F) log(realized capital grants per capita)

Note: The figure presents the coefficient on the timing relative to conflict indicators from TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

FIGURE B4: COMPOSITION OF OWN-SOURCE REVENUES FOLLOWING CONFLICTS

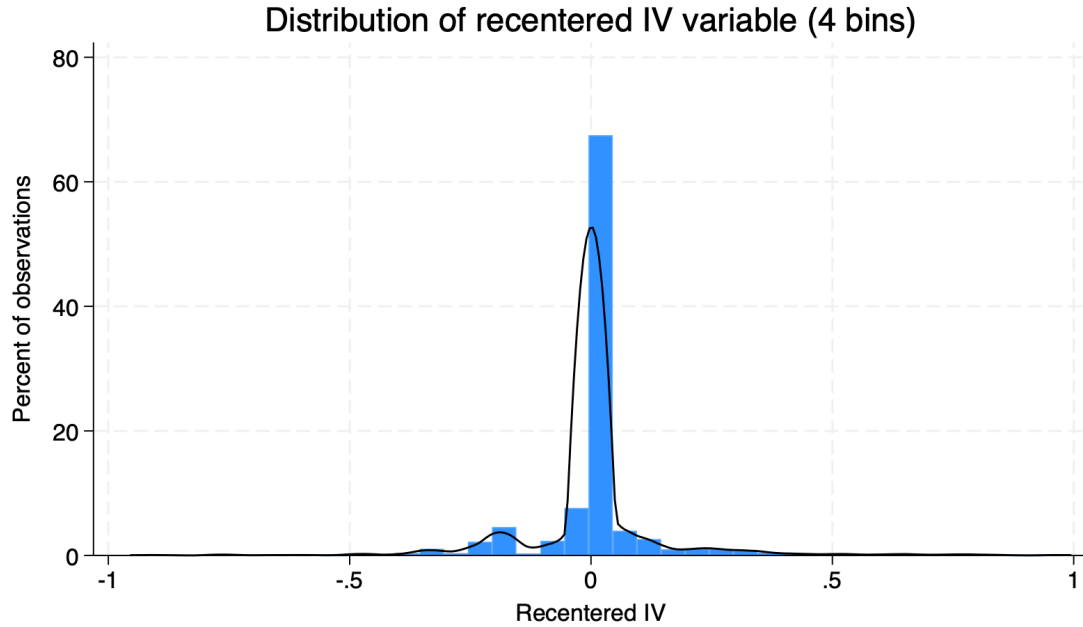


Note: The figure presents the coefficient on the timing relative to conflict indicators from TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

C Robustness test results

C.1 Re-centered IV diagnostics and results

FIGURE C1: DISTRIBUTION OF THE RECENTERED IV VARIABLE



Note: The figure presents the distribution of the recentered incidence of conflicts, obtained by subtracting the incidence of conflicts (1 if yes, 0 if not) from the average incidence of conflicts obtained by the procedure explained in Section 4. The communes were split into four categories, each with 25% interval. Simulation was carried out 1,000 times to obtain the average incidence of conflicts. Then, the actual incidence of conflict is subtracted by this measure to obtain the recentered IV values.

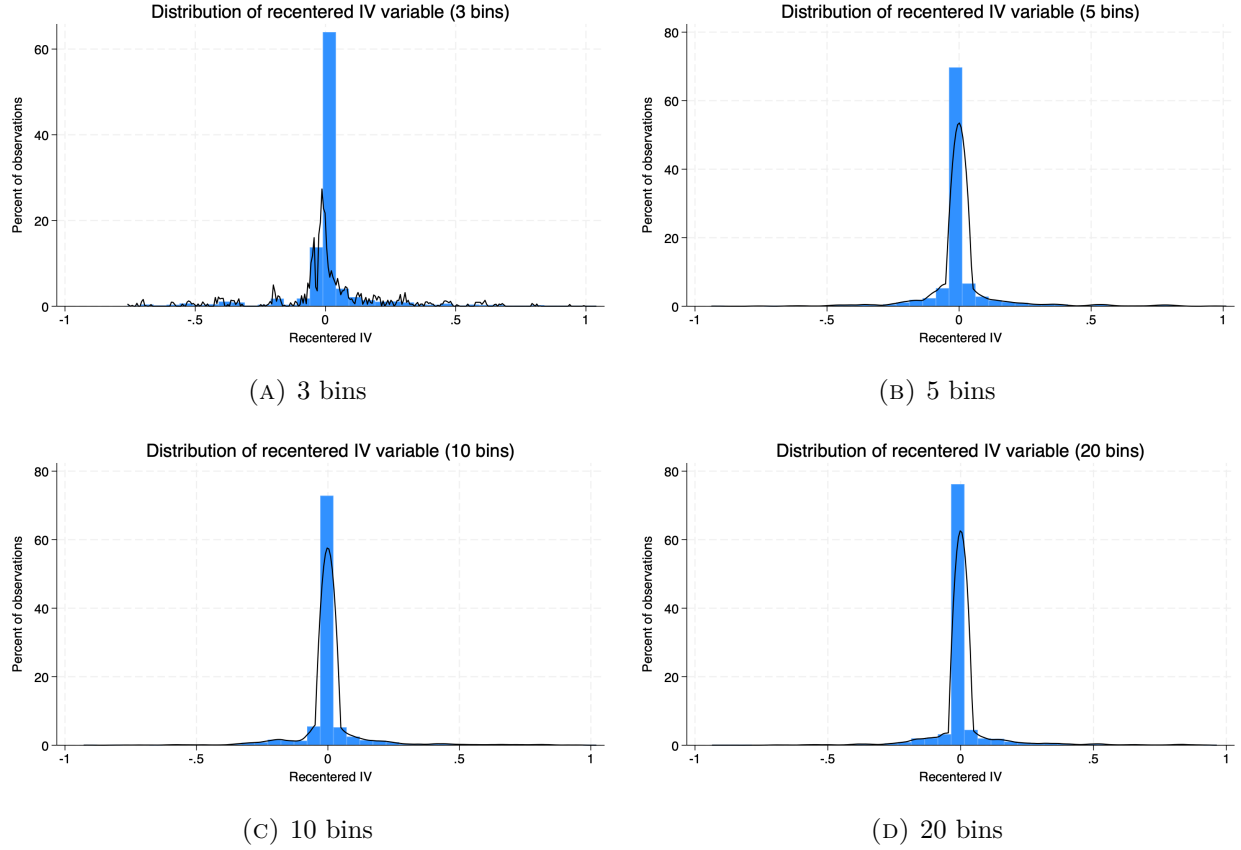
TABLE C1: Diagnostics of the Recentered Instrument

	(1)	(2)
	Recentered IV (4 bins)	
Precipitation	0.0002 (0.0006)	0.0004 (0.0006)
Temperature	0.0350 (0.0370)	0.0450 (0.0380)
Grasslands	0.0001 (0.0001)	0.0001 (0.0001)
Irrigated lands	-0.0007 (0.0011)	-0.0002 (0.0012)
Nightlights	-0.0014 (0.0280)	0.0011 (0.0300)
Population density	-0.0001 (0.0008)	-0.0003 (0.0008)
Total population (in thousands)	0.0007 (0.007)	0.0011 (0.0008)
Commune FE	✓	✓
Year FE	✓	✓
region-year trend		✓
Observation	4995	4995
F statistics	0.33	0.56
P-value	0.94	0.79

Notes: The table reports the regression results that estimate the correlation between the re-centered instrument and the pre-conflict characteristics. The outcome variable is the re-centered incidence of the conflicts for each commune-year split across 4 different probability bins defined in Section 4. The regression includes the fixed effects combination specified in the tables. The F-statistic reports the significance of the model as a whole, with the p-value reported below. Standard errors are clustered at the commune level.

* $p < .10$, ** $p < .05$, *** $p < .01$

FIGURE C2: DISTRIBUTION OF RECENTERED IVs IN ALTERNATIVE BINNING EXERCISE



Note: The figure presents the distribution of the recentered incidence of conflicts, obtained by subtracting incidence of conflicts (1 if yes, 0 if not) with the average incidence of conflicts obtained by the procedure explained in the last subsection of Section 4. The communes were split into three, five, ten, and twenty categories with equal probability intervals. Simulation was carried out 1,000 times to obtain the average incidence of conflicts. Then, the actual incidence of conflict is subtracted by this measure to obtain the recentered IV values.

TABLE C2: Diagnostics of the Re-centered Instrument, alternative binning simulations

	(1) Re-centered IV (3 bins)	(2) Re-centered IV (3 bins)	(3) Re-centered IV (5 bins)	(4) Re-centered IV (5 bins)	(5) Re-centered IV (10 bins)	(6) Re-centered IV (10 bins)	(7) Re-centered IV (20 bins)	(8) Re-centered IV (20 bins)
Precipitation	0.0005 (0.0007)	0.0006 (0.0007)	-0.0001 (0.0006)	0.0002 (0.0006)	0.0003 (0.0005)	0.0005 (0.0005)	0.0001 (0.0005)	0.0003 (0.0005)
Temperature	0.1300** (0.0390)	0.1300** (0.0380)	0.0084 (0.0350)	0.0150 (0.0350)	0.0130 (0.0320)	0.0210 (0.0320)	0.0240 (0.0300)	0.0300 (0.0300)
Grasslands	-0.0001 (0.0001)	0.0001 (0.0001)	-0.0001 (0.0001)	-0.0001 (0.0001)	-0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)
Irrigated lands	-0.0012 (0.0008)	-0.0013 (0.0008)	-0.0010 (0.0012)	-0.0006 (0.0012)	-0.0010 (0.0010)	-0.0007 (0.0011)	-0.0011 (0.0009)	-0.0010 (0.0010)
Nightlights	-0.0440 (0.0530)	-0.0440 (0.0610)	-0.0250 (0.0220)	-0.0200 (0.0250)	-0.0095 (0.0240)	-0.0038 (0.0260)	-0.0110 (0.0250)	-0.0036 (0.0260)
Population density	-0.0006 (0.0007)	-0.0006 (0.0007)	0.0004 (0.0008)	0.0002 (0.0007)	0.0002 (0.0008)	-0.0001 (0.0007)	0.0005 (0.0008)	0.0004 (0.0007)
Total population (in thousands)	0.0011 (0.0009)	0.0012 (0.0011)	0.0009 (0.0008)	0.0013 (0.0009)	0.0010 (0.0007)	0.0013 (0.0009)	0.0009 (0.0007)	0.0012 (0.0008)
Commune FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
region-year trend		✓		✓		✓		✓
Observation	4995	4995	4995	4995	4995	4995	4995	4995
F statistics	2.29	2.36	0.54	0.49	0.51	0.64	0.74	0.87
P-value	0.027	0.023	0.810	0.840	0.830	0.720	0.640	0.530

Notes: The table reports the regression results that estimate the correlation between the re-centered instrument and the pre-conflict characteristics, using alternative binning based on probability of exposure to conflicts at the commune-year level. The outcome variable is the re-centered incidence of the conflicts for each commune-year split across three, five, ten, and 20 bins. The regression includes the fixed effects combination specified in the tables. The F-statistic indicates the overall significance of the model, with the p-value reported below. Standard errors are clustered at the commune level.

* $p < .10$, ** $p < .05$, *** $p < .01$

TABLE C3: Effect of Conflicts on Budget Efficiency
Re-centered IV with alternative binning simulations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Revenues				Expenditure			
	3 bins	5 bins	10 bins	20 bins	3 bins	5 bins	10 bins	20 bins
First stage	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)
Estimated Effect	-0.006 (0.025)	-0.016 (0.019)	-0.027 (0.018)	-0.023 (0.022)	-0.035** (0.015)	-0.042*** (0.015)	-0.056*** (0.018)	-0.052*** (0.019)
F-stat	2212.62	1876.47	1651.46	1103.22	2212.60	1876.28	1651.51	1103.40
Observations	4462	4462	4462	4462	4461	4461	4461	4461
Communes	351	351	351	351	351	351	351	351

Notes: The table shows the first and second stage estimates for the re-centered instrumental variables regression for different combinations of the probability bins for simulation. The first stage estimates reports the coefficient on the re-centered instrumental variable when regressed onto the endogenous incidence of conflicts. The estimated effects report the second-stage estimates for the IV results. All regressions include controls for pre-conflict precipitation, temperature, grassland area, urban area, nightlights, and population density, all of which are interacted with year fixed effects. There are also year, commune, and region-specific linear year fixed effects. Standard errors are reported in parentheses and are clustered at the commune level.

* $p < .10$, ** $p < .05$, *** $p < .01$

TABLE C4: Effect of Conflicts on Revenues
Re-centered IV with alternative binning simulations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Planned				Realized			
	3 bins	5 bins	10 bins	20 bins	3 bins	5 bins	10 bins	20 bins
Own source revenues								
First stage	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)
Estimated Effect	-0.013** (0.005)	-0.013** (0.005)	-0.014*** (0.005)	-0.014*** (0.006)	-0.012 (0.008)	-0.012** (0.006)	-0.015** (0.007)	-0.015* (0.008)
Tax revenues								
First stage	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)
Estimated Effect	-0.007** (0.004)	-0.010*** (0.004)	-0.009** (0.004)	-0.010** (0.004)	-0.008* (0.005)	-0.012** (0.005)	-0.012** (0.005)	-0.014** (0.006)
Current revenues								
First stage	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)
Estimated Effect	-0.016* (0.009)	-0.015 (0.009)	-0.013 (0.009)	-0.008 (0.010)	-0.007 (0.018)	-0.011 (0.014)	-0.013 (0.014)	-0.009 (0.017)
Capital revenues								
First stage	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)
Estimated Effect	0.016* (0.009)	0.015 (0.009)	0.013 (0.009)	0.010 (0.010)	0.003 (0.016)	-0.006 (0.014)	-0.015 (0.015)	-0.014 (0.016)
F-stat	2212.62	1876.47	1651.46	1103.22	2212.62	1876.47	1651.46	1103.22
Observations	4462	4462	4462	4462	4462	4462	4462	4462
Communes	351	351	351	351	351	351	351	351

Notes: The table shows the first and second stage estimates for the re-centered instrumental variables regression for different combinations of the probability bins for simulation. The first stage estimates report the coefficient on the re-centered instrumental variable when regressed onto the endogenous incidence of conflicts. The estimated effects report the second-stage estimates for the IV results. All regressions include controls for pre-conflict precipitation, temperature, grassland area, urban area, nightlights, and population density, all of which are interacted with year fixed effects. There are also year, commune, and region-specific linear year fixed effects. Standard errors are reported in parentheses and are clustered at the commune level.

* $p < .10$, ** $p < .05$, *** $p < .01$

TABLE C5: Effect of conflicts on current expenditure, Recentered IV with alternative binning simulations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Planned				Realized			
	3 bins	5 bins	10 bins	20 bins	3 bins	5 bins	10 bins	20 bins
Current Expenditures								
First stage	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)
Estimated Effect	-0.018* (0.010)	-0.017* (0.010)	-0.017* (0.010)	-0.013 (0.011)	-0.014* (0.009)	-0.019** (0.009)	-0.022** (0.009)	-0.019* (0.010)
General Services spending (GF1)								
First stage	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)
Estimated Effect	-0.009 (0.007)	-0.009 (0.007)	-0.009 (0.007)	-0.007 (0.008)	-0.005 (0.006)	-0.011* (0.006)	-0.012** (0.006)	-0.012* (0.007)
Payments to personnel								
First stage	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)
Estimated Effect	-0.004 (0.003)	-0.006** (0.003)	-0.006** (0.002)	-0.005** (0.003)	-0.003 (0.002)	-0.006** (0.002)	-0.006** (0.002)	-0.006** (0.002)
F-stat	2212.60	1876.28	1651.51	1103.40	2212.60	1876.28	1651.51	1103.40
Observations	4461	4461	4461	4461	4461	4461	4461	4461
Communes	351	351	351	351	351	351	351	351

Notes: The table shows the first and second stage estimates for the re-centered instrumental variables regression for different combinations of the probability bins for simulation. The first stage estimates reports the coefficient on the re-centered instrumental variable when regressed onto the endogenous incidence of conflicts. The estimated effects report the second stage estimates for the IV results. All regressions include controls for pre-conflict precipitation, temperature, grassland area, urban area, nightlights, and population density, all of which are interacted with year fixed effects. There are also year, commune, and region-specific linear year fixed effects. Standard errors are reported in parentheses and are clustered at the commune level.

* $p < .10$, ** $p < .05$, *** $p < .01$

TABLE C6: Effect of Conflicts on Capital Expenditure
Re-centered IV with alternative binning simulations

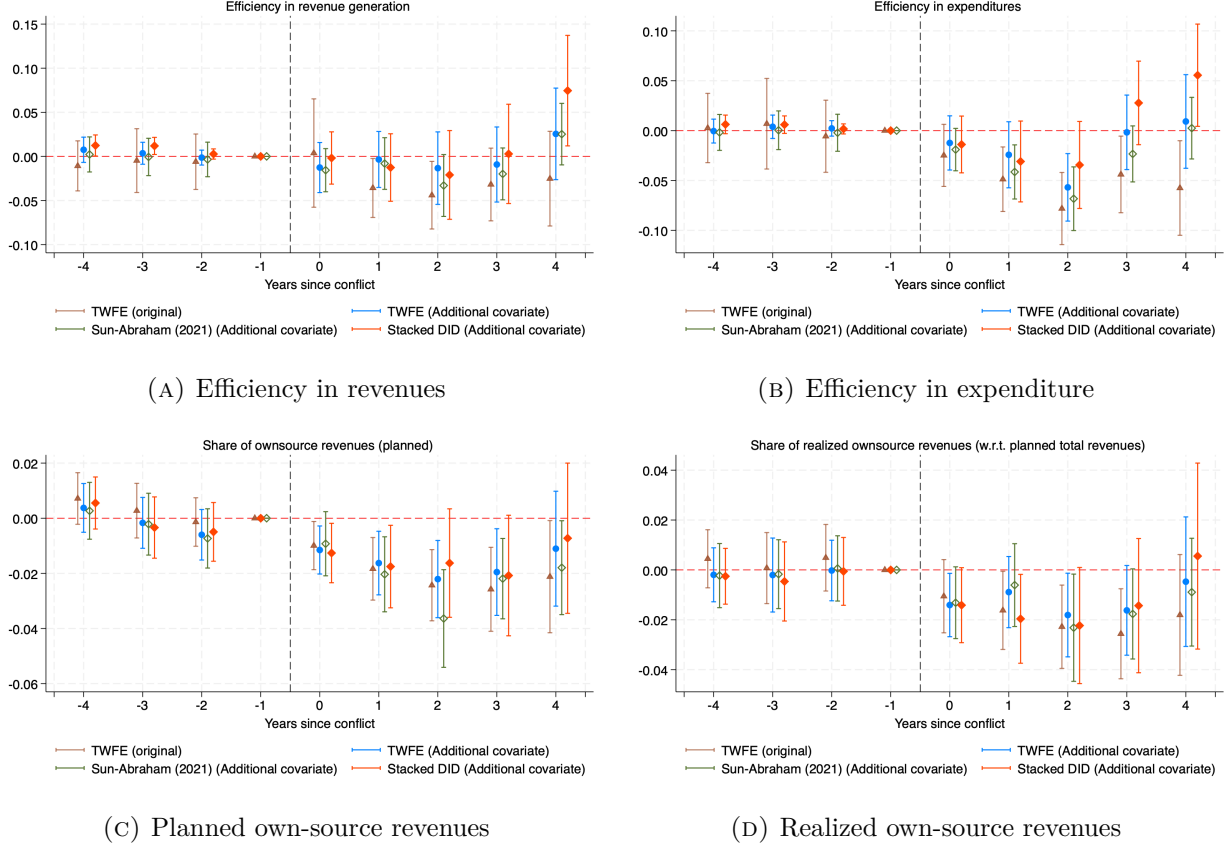
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Planned				Realized			
	3 bins	5 bins	10 bins	20 bins	3 bins	5 bins	10 bins	20 bins
Capital Expenditures								
First stage	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)
Estimated Effect	0.018* (0.010)	0.017* (0.010)	0.016* (0.010)	0.015 (0.011)	-0.021* (0.013)	-0.023** (0.012)	-0.034** (0.013)	-0.031** (0.014)
Economic affairs spending (GF4)								
First stage	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)
Estimated Effect	0.020** (0.010)	0.019** (0.010)	0.021** (0.010)	0.018 (0.011)	-0.018 (0.012)	-0.021** (0.011)	-0.032** (0.013)	-0.031** (0.014)
Direct investment expenditure								
First stage	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)	1.292*** (0.027)	1.431*** (0.033)	1.453*** (0.036)	1.475*** (0.044)
Estimated Effect	0.020** (0.010)	0.017* (0.010)	0.016* (0.010)	0.015 (0.011)	-0.020 (0.012)	-0.022** (0.011)	-0.035** (0.013)	-0.032** (0.014)
F-stat	2212.60	1876.28	1651.51	1103.40	2212.60	1876.28	1651.51	1103.40
Observations	4461	4461	4461	4461	4461	4461	4461	4461
Communes	351	351	351	351	351	351	351	351

Notes: The table shows the first and second stage estimates for the re-centered instrumental variables regression for different combinations of the probability bins for simulation. The first stage estimates reports the coefficient on the re-centered instrumental variable when regressed onto the endogenous incidence of conflicts. The estimated effects report the second-stage estimates for the IV results. All regressions include controls for pre-conflict precipitation, temperature, grassland area, urban area, nightlights, and population density, all of which are interacted with year fixed effects. There are also year, commune, and region-specific linear year fixed effects. Standard errors are reported in parentheses and are clustered at the commune level.

* $p < .10$, ** $p < .05$, *** $p < .01$

C.2 Past Fiscal Discipline and Geographical Spillovers

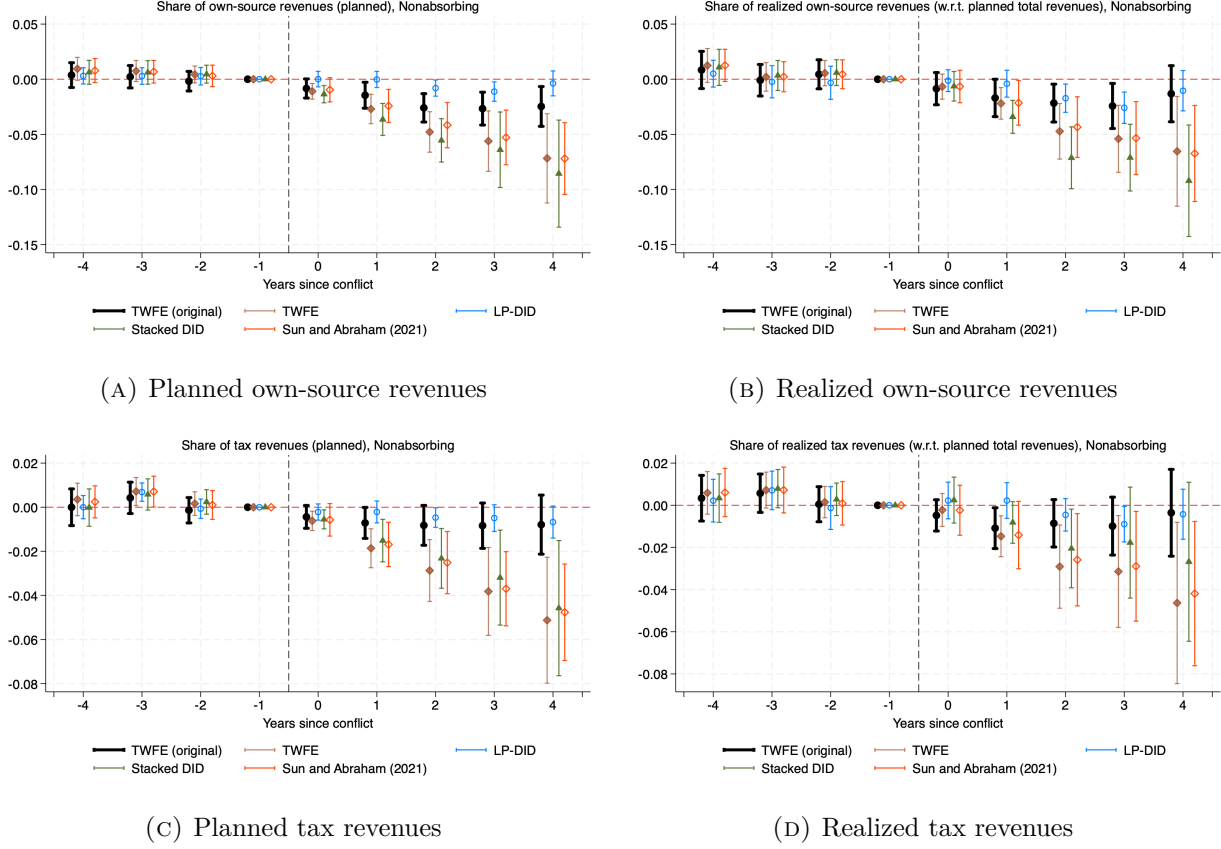
FIGURE C3: FISCAL DISCIPLINE RESULTS



Note: The figure presents the coefficient on the timing relative to conflict indicators from TWFE (eq. 1), Stacked-DID, and Sun and Abraham estimators, along with the 95% confidence intervals. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. The additional covariates refer to the setup that also includes conflict intensities in neighboring communes (total incidences and casualties) as well as measures of fiscal discipline in year t and $t-1$ (efficiency in revenue and expenditures). In addition, all regressions control for total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

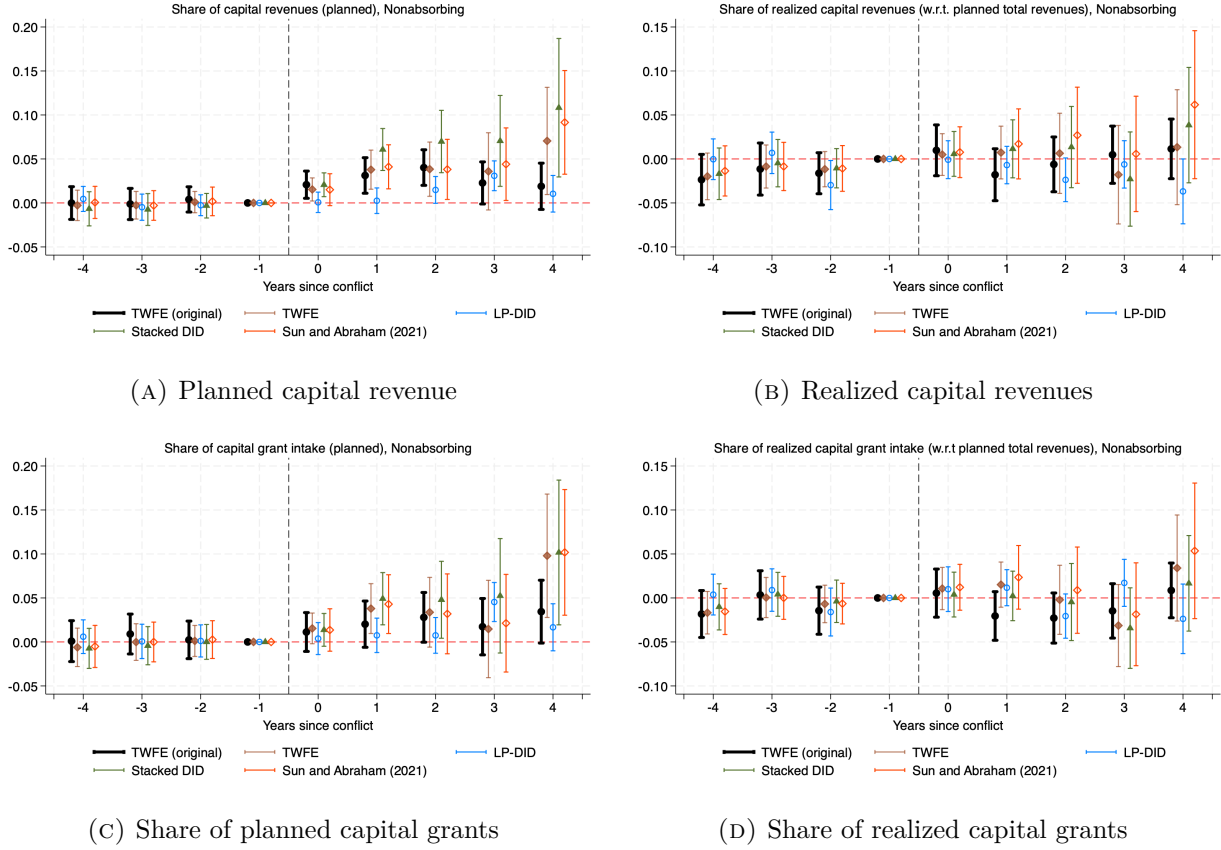
C.3 Non-absorbing treatment assignment

FIGURE C4: OWN-SOURCE AND TAX REVENUES, NON-ABSORBING TREATMENT



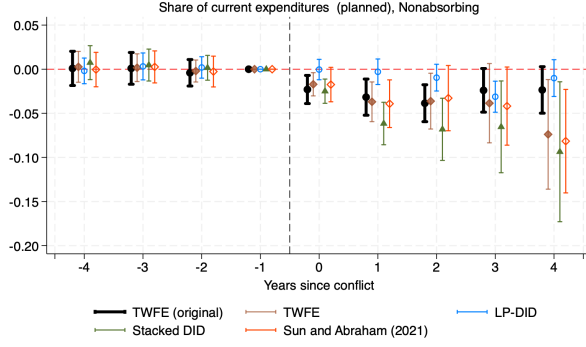
Note: The figure presents the coefficient on the timing relative to conflict indicators from five specification: TWFE with absorbing treatment assignment, TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. The latter four estimates assume non-absorbing treatment where treated units are reassigned to the control group after conflicts cease. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

FIGURE C5: CAPITAL REVENUE AND GRANTS, NON-ABSORBING TREATMENT

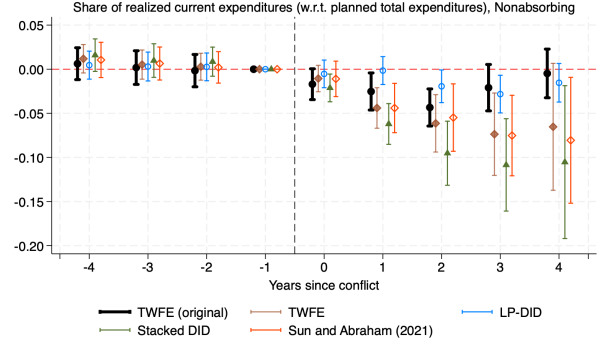


Note: The figure presents the coefficient on the timing relative to conflict indicators from five specification: TWFE with absorbing treatment assignment, TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. The latter four estimates assume non-absorbing treatment where treated units are reassigned to control group after conflicts cease. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

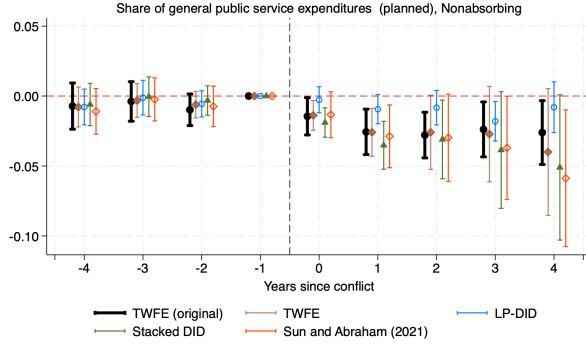
FIGURE C6: GENERAL ADMINISTRATION AND CURRENT EXPENDITURE, NON-ABSORBING TREATMENT



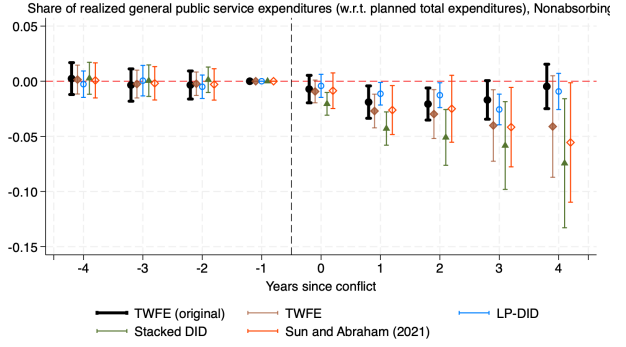
(A) Planned current expenditure



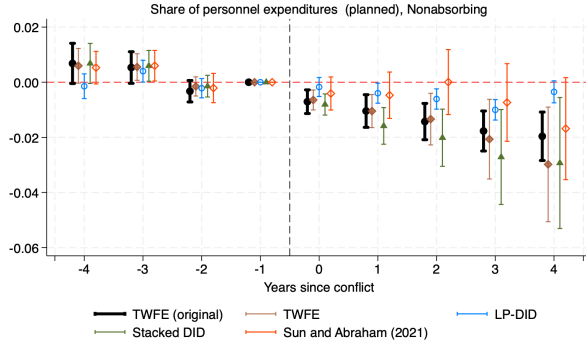
(B) Realized current expenditure



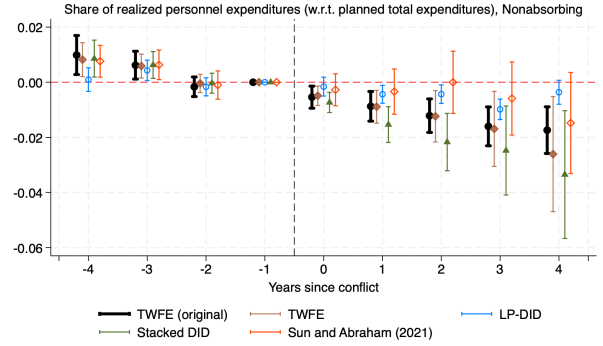
(C) Planned general service spending (GF1)



(D) Realized general service spending (GF1)



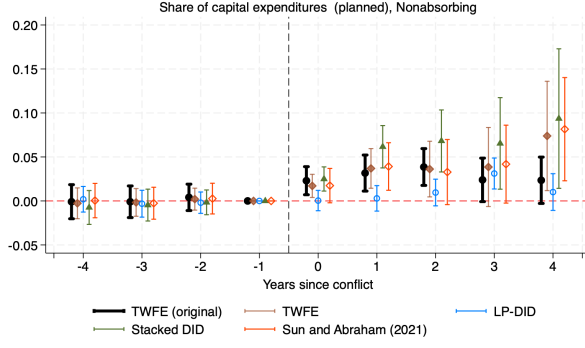
(E) Planned staff wages & compensations



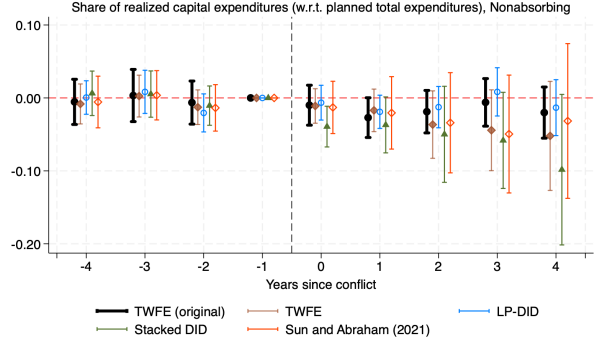
(F) Realized staff wages & compensations

Note: The figure presents the coefficient on the timing relative to conflict indicators from five specification: TWFE with absorbing treatment assignment, TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators, along with the 95% confidence intervals. The latter four estimates assume non-absorbing treatment where treated units are reassigned to the control group after conflicts cease. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

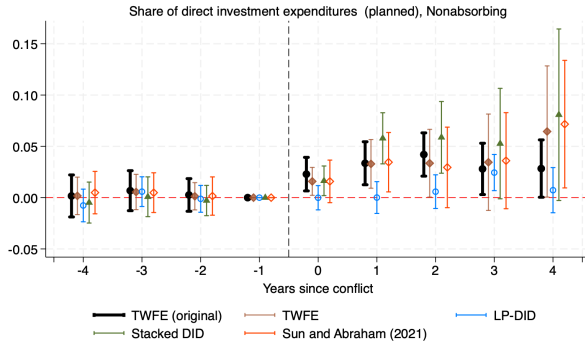
FIGURE C7: INVESTMENTS FOLLOWING CONFLICTS, NON-ABSORBING TREATMENT



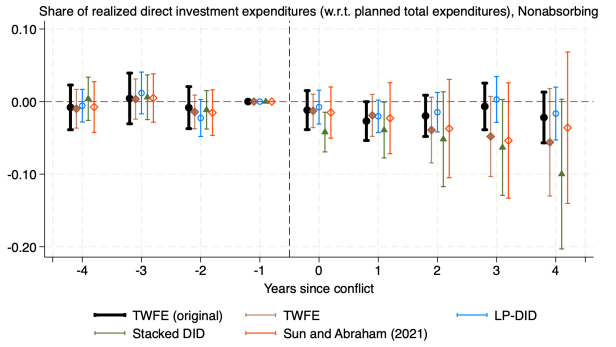
(A) Planned capital expenditure



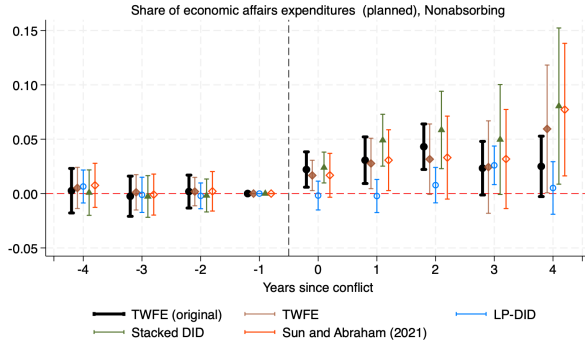
(B) Realized capital expenditure



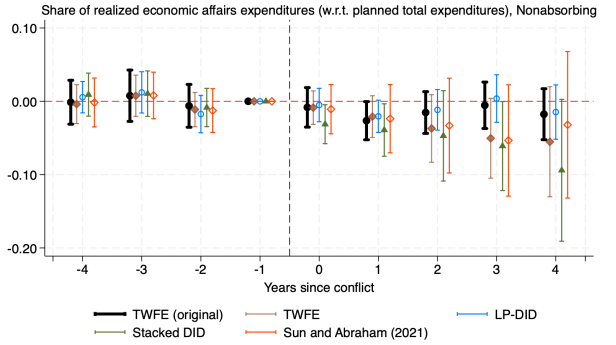
(C) Planned direct investments



(D) Realized direct investments



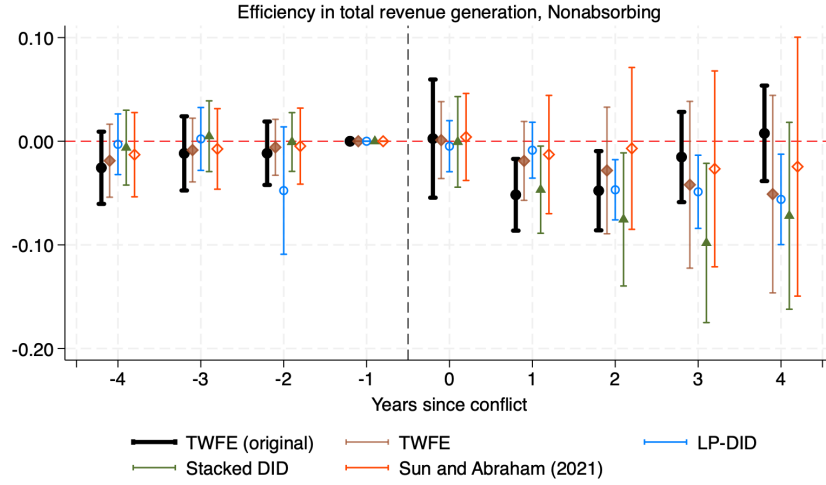
(E) Planned economic affairs spending



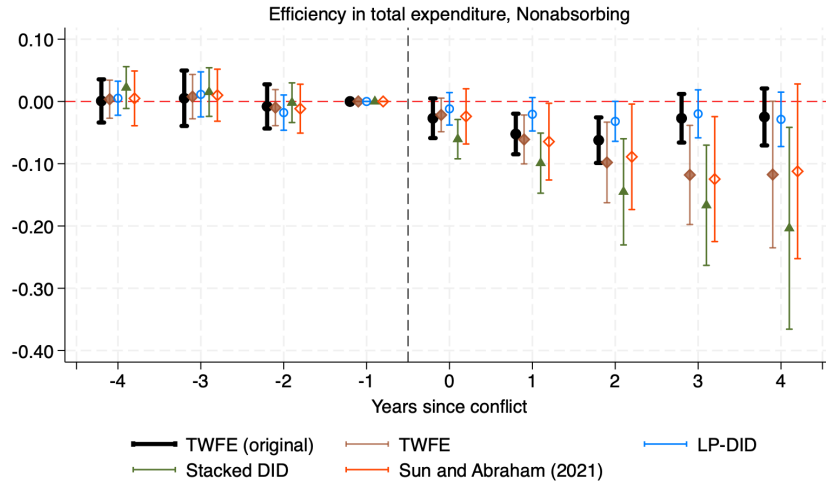
(F) Realized economic affairs spending

Note: The figure presents the coefficient on the timing relative to conflict indicators from five specification: TWFE with absorbing treatment assignment, TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. The latter four estimates assume non-absorbing treatment where treated units are reassigned to the control group after conflicts cease. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

FIGURE C8: EFFICIENCY OF LOCAL GOVERNMENTS, NON-ABSORBING TREATMENT



(A) Failure to meet revenue targets

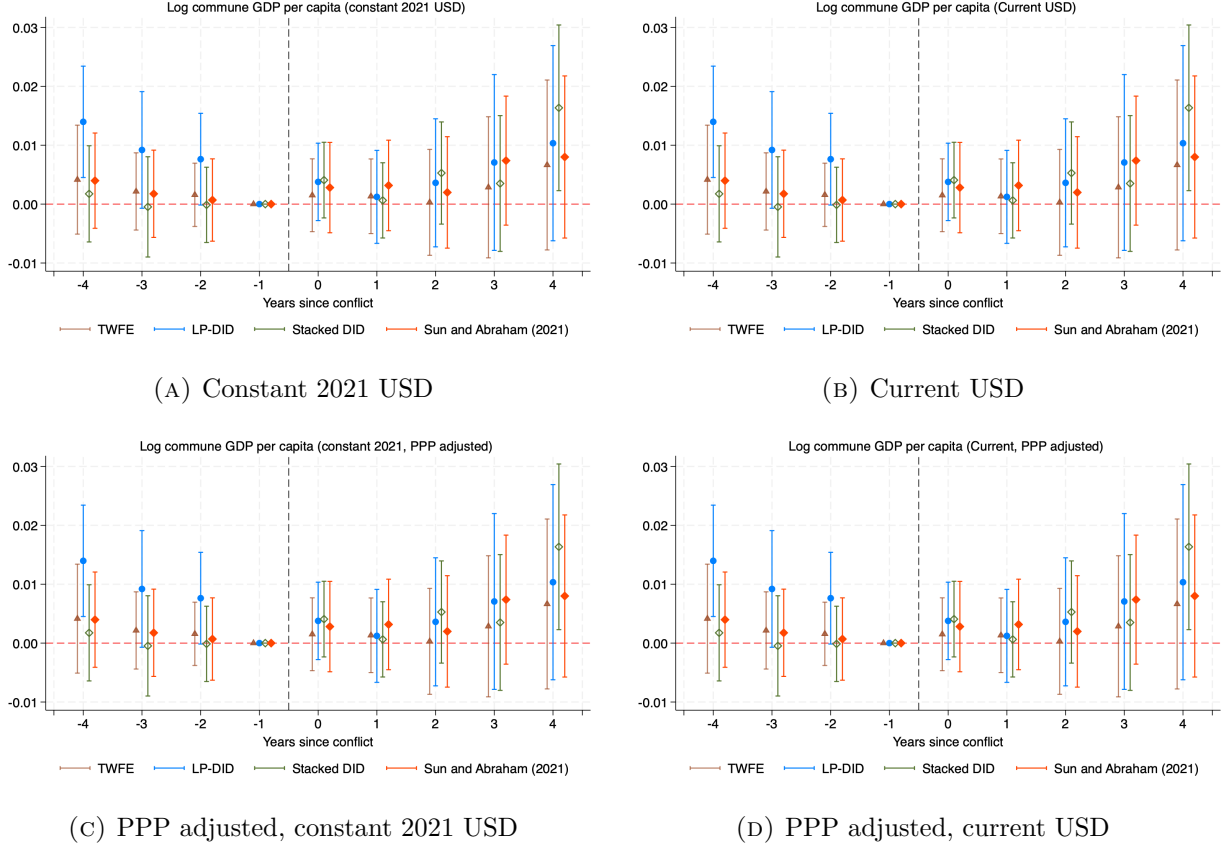


(B) Failure to meet expenditure targets

Note: The figure presents the coefficient on the timing relative to conflict indicators from five specification: TWFE with absorbing treatment assignment, TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. The latter four estimates assume non-absorbing treatment where treated units are reassigned to control group after conflicts cease. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

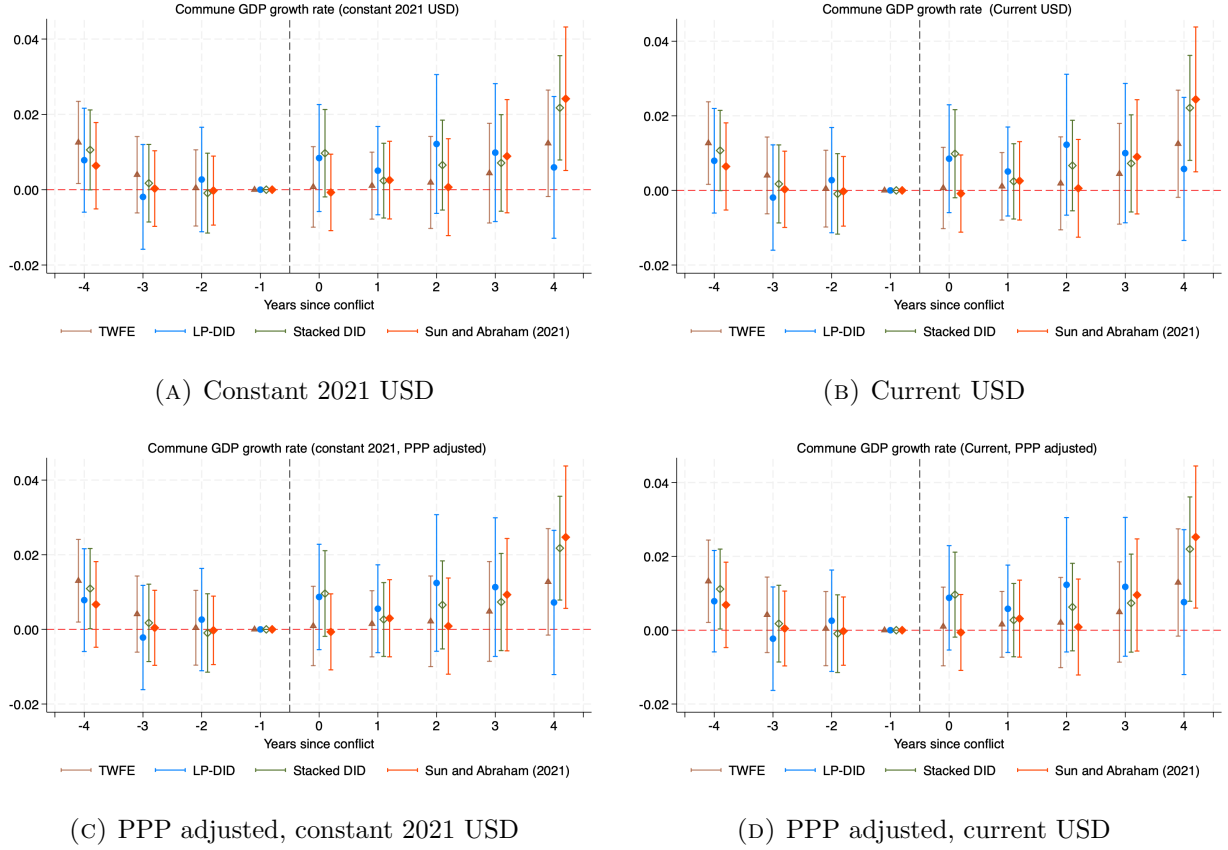
D Additional Regressions on Mechanisms

FIGURE D1: MECHANISMS: LOG GDP PER CAPITA



Note: The figure presents the coefficient on the timing relative to conflict indicators from TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

FIGURE D2: MECHANISMS: GDP GROWTH RATES



Note: The figure presents the coefficient on the timing relative to conflict indicators from TWFE (eq. 1), LP-DID (eq. 2), Stacked-DID, and Sun and Abraham estimators along with the 95% confidence intervals. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, nightlights, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

E Heterogeneity Analysis

TABLE E1: Heterogeneity by Regional Capital Status and Timing of Decentralization

	Capital vs. non-capital				Timing of decentralization			
	Planned		Realized		Planned		Realized	
	Treated (1)	×Cap (2)	Treated (3)	×Cap (4)	Treated (5)	×Early (6)	Treated (7)	×Early (8)
<i>Panel A. Revenues</i> (Obs. = 4,462)								
Own-source rev.	−0.006 (0.006)	−0.059*** (0.007)	−0.010* (0.006)	−0.051*** (0.011)	−0.003 (0.005)	−0.067*** (0.011)	−0.009 (0.006)	−0.052*** (0.009)
Tax rev.	−0.006 (0.004)	−0.027*** (0.008)	−0.007* (0.004)	−0.043*** (0.007)	−0.004 (0.004)	−0.032*** (0.008)	−0.006 (0.004)	−0.041*** (0.007)
Current rev.	−0.011 (0.008)	−0.074*** (0.011)	−0.007 (0.013)	−0.091*** (0.009)	−0.007 (0.008)	−0.084*** (0.015)	−0.006 (0.013)	−0.086*** (0.019)
Capital rev.	0.011 (0.008)	0.074*** (0.015)	−0.006 (0.013)	0.062*** (0.018)	0.007 (0.008)	0.084*** (0.015)	−0.007 (0.013)	0.062*** (0.018)
<i>Panel B. Expenditures</i> (Obs. = 4,461)								
Current exp.	−0.013 (0.009)	0.073*** (0.015)	−0.015* (0.008)	0.065*** (0.015)	−0.009 (0.009)	−0.082*** (0.015)	−0.013 (0.008)	−0.069*** (0.015)
General services (GF1)	−0.005 (0.007)	−0.050*** (0.011)	−0.009 (0.006)	−0.037*** (0.011)	−0.003 (0.007)	−0.056*** (0.011)	−0.007 (0.006)	−0.041*** (0.011)
Staff exp.	−0.007*** (0.003)	−0.032*** (0.007)	−0.007*** (0.002)	−0.034*** (0.007)	−0.006*** (0.002)	−0.033*** (0.007)	−0.006*** (0.002)	−0.034*** (0.007)
Capital exp.	0.013 (0.009)	0.073*** (0.015)	−0.024** (0.010)	0.025 (0.018)	0.009 (0.009)	0.082*** (0.015)	−0.025** (0.010)	0.028 (0.018)
Economic affairs (GF4)	0.015 (0.009)	0.063*** (0.014)	−0.023** (0.010)	0.020 (0.018)	0.012 (0.009)	0.071*** (0.014)	−0.024** (0.010)	0.023 (0.017)

Notes: The table reports difference-in-differences estimates of heterogeneous conflict effects by regional/provincial capital status (columns 1–4) and timing of decentralization (columns 5–8), for planned and realized outcomes separately. Each outcome is expressed as a share of planned total revenues or expenditures; observations are reported in each panel header. *Treated* is the post-conflict indicator; ×Cap and ×Early give the additional effect for regional/provincial capitals and for communes decentralized in the 1995 wave, respectively. All regressions control for pre-conflict precipitation, temperature, grassland area, urban area, nightlights, and population density, each interacted with year fixed effects, and include year, commune, and region-specific linear trends. Standard errors, clustered at the commune level, are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$.

TABLE E2: Heterogeneity across location and conflict types

	Religious/Jihadist groups vs others				JNIM involvement			
	Planned		Realized		Planned		Realized	
	Treated (1)	×Religious (2)	Treated (3)	×Religious (4)	Treated (5)	×JNIM (6)	Treated (7)	×JNIM (8)
<i>Panel A. Revenues</i> (Obs. = 4,462)								
Own-source rev.	-0.012*** (0.005)	-0.025*** (0.007)	-0.018*** (0.006)	-0.011 (0.009)	-0.014*** (0.005)	-0.022** (0.007)	-0.018*** (0.006)	-0.019*** (0.006)
Tax rev.	-0.009*** (0.004)	-0.008* (0.005)	-0.015*** (0.004)	-0.003 (0.005)	-0.010*** (0.003)	-0.006*** (0.005)	-0.015*** (0.004)	-0.003 (0.005)
Current rev.	-0.023*** (0.009)	-0.018 (0.012)	-0.027*** (0.011)	-0.008 (0.026)	-0.025*** (0.008)	-0.004 (0.012)	-0.025** (0.012)	-0.001 (0.013)
Capital rev.	0.023*** (0.009)	0.016 (0.012)	0.005 (0.011)	0.007 (0.019)	0.025*** (0.008)	0.004 (0.012)	0.011 (0.011)	-0.032 (0.020)
<i>Panel B. Expenditures</i> (Obs. = 4,461)								
Current exp.	-0.025*** (0.009)	-0.013 (0.013)	-0.022*** (0.008)	-0.027** (0.012)	-0.027*** (0.009)	0.001 (0.012)	-0.025*** (0.008)	-0.017 (0.011)
General services (GF1)	-0.013* (0.007)	-0.010 (0.008)	-0.012* (0.006)	-0.022*** (0.007)	-0.015** (0.007)	0.001 (0.009)	-0.014** (0.006)	-0.013* (0.008)
Staff exp.	-0.013*** (0.003)	0.001 (0.003)	-0.013*** (0.002)	0.001 (0.003)	-0.014*** (0.003)	0.003 (0.003)	-0.014*** (0.003)	0.003 (0.003)
Capital exp.	0.025*** (0.009)	0.013 (0.013)	-0.016 (0.010)	-0.012 (0.014)	0.027*** (0.009)	-0.001 (0.012)	-0.015 (0.010)	-0.028** (0.014)
Economic affairs (GF4)	0.025*** (0.009)	0.012*** (0.012)	-0.017* (0.010)	-0.013 (0.014)	0.028*** (0.009)	-0.006 (0.012)	-0.015 (0.009)	-0.030** (0.014)

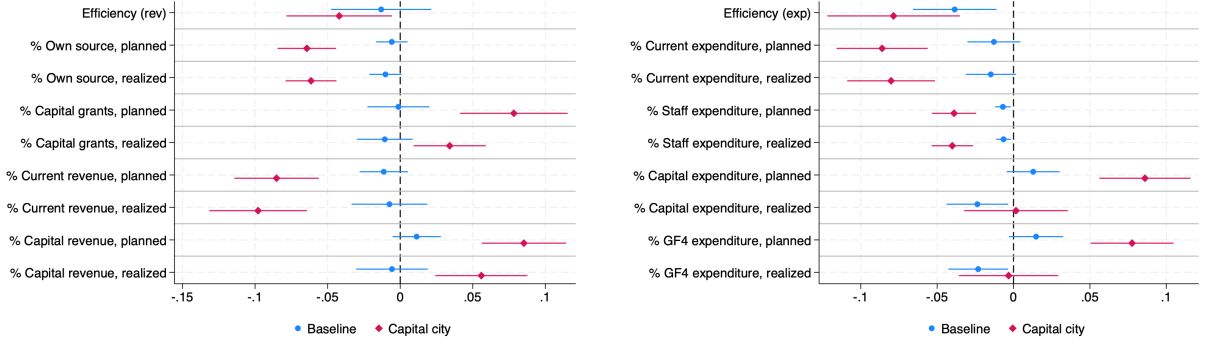
Notes: The table reports difference-in-differences estimates of heterogeneous conflict effects by types of conflict (columns 1–4) and JNIM presence (columns 5–8), for planned and realized outcomes separately. Each outcome is expressed as a share of planned total revenues or expenditures; observations are reported in each panel header. *Treated* is the post-conflict indicator; ×Religious and ×JNIM give the additional effect for communes with religious conflicts and for communes affected by JNIM presence, respectively. All regressions control for pre-conflict precipitation, temperature, grassland area, urban area, nightlights, and population density, each interacted with year fixed effects, and include year, commune, and region-specific linear trends. Standard errors, clustered at the commune level, are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$.

TABLE E3: Heterogeneity across resource endowments

	Communes with mines				Communes with metal production			
	Planned		Realized		Planned		Realized	
	Treated (1)	×Mines (2)	Treated (3)	×Mines (4)	Treated (5)	×Metal (6)	Treated (7)	×Metal (8)
<i>Panel A. Revenues</i> (Obs. = 4,462)								
Own-source rev.	-0.019*** (0.006)	0.019 (0.015)	-0.025*** (0.006)	0.039** (0.017)	-0.019*** (0.005)	0.025 (0.020)	-0.023*** (0.006)	0.036 (0.024)
Tax rev.	-0.011*** (0.004)	-0.004 (0.013)	-0.018*** (0.005)	0.024 (0.015)	-0.011*** (0.004)	0.006 (0.014)	-0.018*** (0.005)	0.031 (0.020)
Current rev.	-0.027*** (0.009)	0.012 (0.021)	-0.029** (0.012)	0.032 (0.024)	-0.029*** (0.008)	0.040* (0.024)	-0.028** (0.012)	0.043 (0.030)
Capital rev.	0.027*** (0.008)	-0.012 (0.021)	0.004 (0.012)	0.021 (0.030)	0.029*** (0.008)	-0.040* (0.024)	0.008 (0.011)	-0.021 (0.027)
<i>Panel B. Expenditures</i> (Obs. = 4,461)								
Current exp.	-0.029*** (0.009)	0.019 (0.021)	-0.031*** (0.008)	0.031 (0.021)	-0.031*** (0.009)	0.048* (0.025)	-0.030*** (0.008)	0.028 (0.021)
General services (GF1)	-0.019*** (0.007)	0.031 (0.022)	-0.019*** (0.006)	0.030* (0.017)	-0.020*** (0.007)	0.066** (0.026)	-0.018*** (0.006)	0.029 (0.018)
Staff exp.	-0.013*** (0.003)	-0.005 (0.008)	-0.013*** (0.003)	-0.004 (0.008)	-0.013*** (0.003)	0.002 (0.009)	-0.013*** (0.003)	-0.003 (0.008)
Capital exp.	0.029*** (0.009)	-0.019 (0.021)	-0.019* (0.010)	0.002 (0.026)	0.031*** (0.009)	-0.048* (0.025)	-0.017* (0.010)	-0.020 (0.032)
Economic affairs (GF4)	0.028*** (0.009)	-0.011 (0.023)	-0.019** (0.010)	0.001 (0.026)	0.030*** (0.009)	-0.045* (0.027)	-0.018* (0.009)	-0.024 (0.033)

Notes: The table reports difference-in-differences estimates of heterogeneous conflict effects by presence of mines (columns 1–4) and nonzero metal production (columns 5–8), for planned and realized outcomes separately. Each outcome is expressed as a share of planned total revenues or expenditures; observations are reported in each panel header. *Treated* is the post-conflict indicator; ×Mines and ×Metal give the additional effect for conflicts in areas with those respective attributes. All regressions control for pre-conflict precipitation, temperature, grassland area, urban area, nightlights, and population density, each interacted with year fixed effects, and include year, commune, and region-specific linear trends. Standard errors, clustered at the commune level, are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$.

FIGURE E1: Heterogeneity across regional capitals vs others

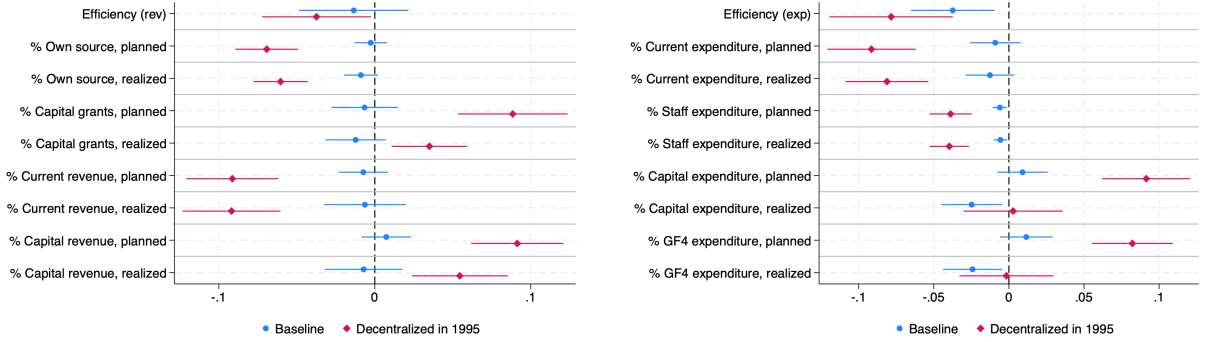


(A) Revenue outcomes

(B) Expenditure outcomes

Note: The figure presents the estimates of the total effect of conflicts for communes that are regional capitals vs others, along with the 95 percent confidence intervals. Total effects for regional capitals are obtained by summing the Post indicator and the Post indicator interacted with dummies indicating regional capitals. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

FIGURE E2: Heterogeneity by timing of decentralization

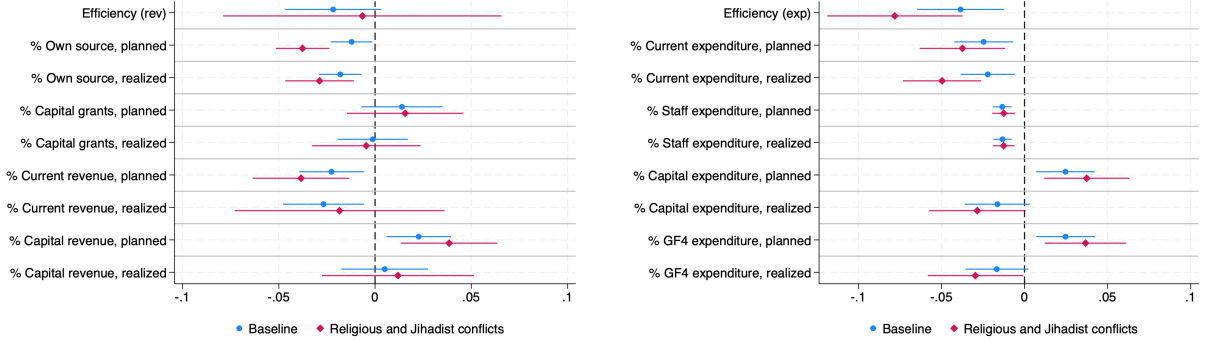


(A) Revenue outcomes

(B) Expenditure outcomes

Note: The figure presents the estimates of the total effect of conflicts for communes decentralized in 1995 vs others, along with the 95 percent confidence intervals. Total effects for communes decentralized in 1995 are obtained by summing the Post indicator and the Post indicator interacted with dummies for decentralization in 1995. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

FIGURE E3: Heterogeneity across types of conflicts

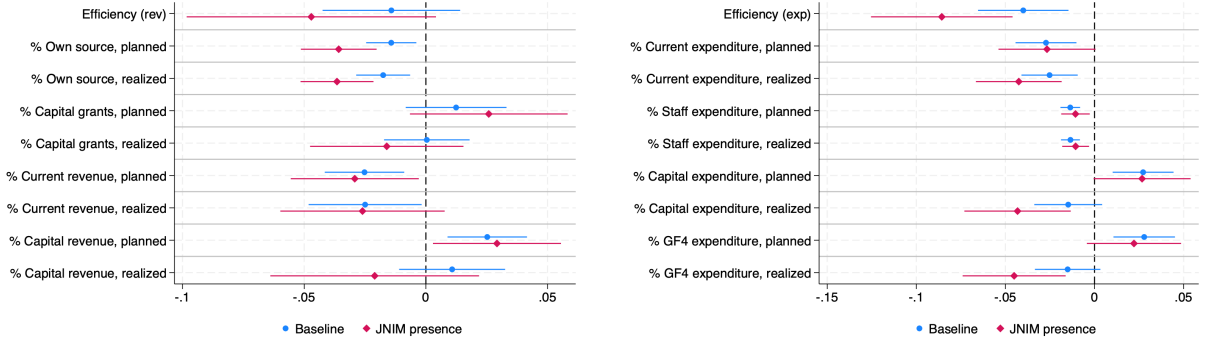


(A) Revenue outcomes

(B) Expenditure outcomes

Note: The figure presents the estimates of the total effect of conflicts for communes experiencing religious or jihadist attacks vs others, along with the 95 percent confidence intervals. Total effects for religious and jihadist conflict are obtained by summing the Post indicator and the Post indicator interacted with dummies for religious or jihadist conflicts. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

FIGURE E4: Heterogeneity by JNIM presence

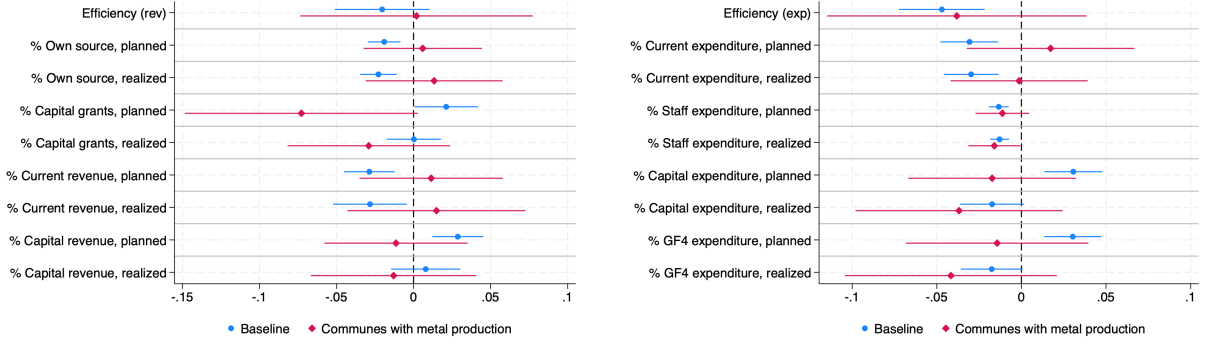


(A) Revenue outcomes

(B) Expenditure outcomes

Note: The figure presents the estimates of the total effect of conflicts for communes experiencing JNIM presence vs others, along with the 95 percent confidence intervals. Total effects for JNIM presence are obtained by summing the Post indicator and the Post indicator interacted with dummies for JNIM presence. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

FIGURE E5: Heterogeneity by Metal production

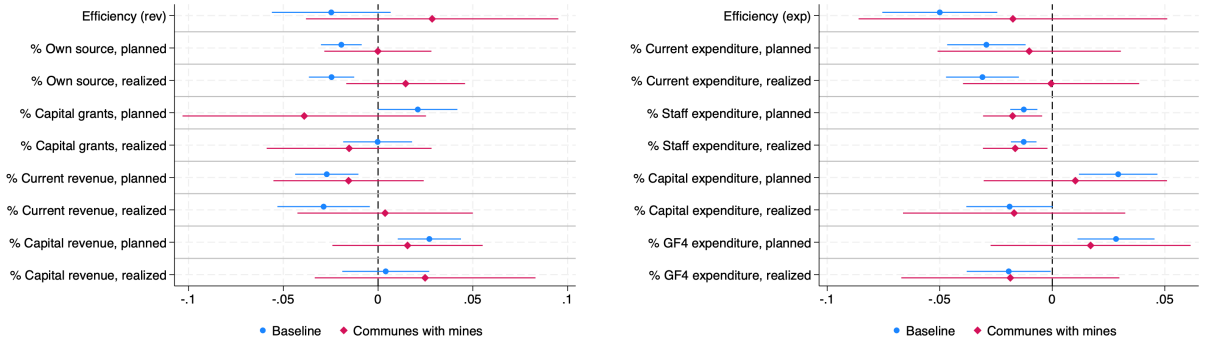


(A) Revenue outcomes

(B) Expenditure outcomes

Note: The figure presents the estimates of the total effect of conflicts for communes with nonzero metal production within their borders vs others, along with the 95 percent confidence intervals. Total effects for communes with metal productions are obtained by summing the Post indicator and the Post indicator interacted with dummies for metal production. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

FIGURE E6: Heterogeneity by presence of mines



(A) Revenue outcomes

(B) Expenditure outcomes

Note: The figure presents the estimates of the total effect of conflicts for communes with mines vs others, along with the 95 percent confidence intervals. Total effects for mine presence are obtained by summing the Post indicator and the Post indicator interacted with dummies for mine presence. Regressions include commune fixed effects, region-specific linear year trends, and year fixed effects. Total population, population density, temperature, precipitation, irrigated cropland area, grassland area, and urban land areas are included as covariates. All covariates are interacted with year fixed effects. Standard errors are clustered at the commune level.

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