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Fiscal Shocks, Local Projections, and the Macroeconomic Payoff of "One Big Beautiful Bill"

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Abstract. This paper examines how discretionary U.S. fiscal policy episodes since 1975 influence macroeconomic outcomes and financial conditions, with an application to forecasting the short-term effects of a comprehensive package, such as "One Big Beautiful Bill". An episode-based quarterly fiscal shock series is constructed from observable policy outlays scaled by nominal GDP, and dynamic responses are estimated using a local projection framework across multiple horizons. The results show a front-loaded pattern: output responds strongly to impact, remains positive in the next quarter, and then reverses as one-time transfers dissipate and payback dynamics emerge. When the target variable is replaced with financial indicators, the results reveal that while consumption growth rises immediately and then tapers off rapidly, the federal funds rate and bank lending rates decline in the aftermath of large transfer episodes—consistent with easing financial conditions during stimulus periods. Overall, the results suggest that OBBBA-like programs are most effective for quick stabilization, but to keep the benefits functioning, persistence mechanisms should be incorporated within.

Keywords: Discretionary fiscal shocks, Local projections, Impulse response functions, Financial conditions.

1. Introduction

Since the mid-1970s, U.S. fiscal policy has been essential in stabilizing the overall economy, especially when private demand declines and monetary policies face constraints. However, the effectiveness of fiscal actions has not been consistent over time: tax rebates during the 1970s and 1980s, tax rebates in the early 1980s occurred amid high inflation, while those in the early 2000s were implemented under distinct financial conditions and household debt levels. Also, large transfer programs during the Great Recession and the pandemic worked with very loose financial regulations and credit markets that were under a significant amount of stress, which implies that short-run multipliers and financial-condition responses can vary meaningfully across episodes; therefore, it's risky to generalize from a single crisis or a narrow window. Motivated by this heterogeneity, this paper constructs a long-run quarterly series of discretionary fiscal shocks since 1975 and asks how such shocks transmit to financial conditions and through them to real activity.

A growing amount of work examines the macroeconomic effects of fiscal policy and the empirical challenges of determining exogenous fiscal shocks [1]. Recent work provides useful

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information on how to use local projection methods to predict responses that are specific to the horizon without requiring the setup of a structure for the entire system [2]. The foundational local projection framework defines the direct estimation of impulse responses at each horizon, which is the basis for the empirical design [3]. Narrative identification continues to perform a significant role in fiscal research by developing shock measures that are credibly exogenous to current macroeconomic conditions [4]. Recent research shows that fiscal multipliers may be state-dependent, or crisis conditions, hence requiring the utilization of an extensive sample that includes several regimes [5]. It is even more important to examine credit conditions along with output because financial issues may make the effects on the budget stronger in times of difficulty [6]. Research on transfers and family balance sheets indicates that one-time payments might lead to substantial but temporary shifts in consumption [7].

Prior work often uses short samples or output-only analysis; this study fills the gap by using long-sample local projections to trace the movement of fiscal shocks and real activity. This report measures the discretionary fiscal shocks that have come from U.S. policy episodes since 1975 and use a Local Projection framework to estimate how they have changed financial conditions over time, which provides not only a long, but also heterogeneous history of fiscal episodes, which covers high and low inflation eras, as well as different monetary stances so that the study has non-continuous variation to identify shocks credibly and draw externally valid inferences. The study then uses this information to determine what the likely short-term effects of a comprehensive fiscal package, or "One Big Beautiful Bill", will be. The OBBBA forecasts thus serve as an ex-ante policy tool, by which translating historical estimates into quantitative guidance on near-term effects on economic conditions, enables lawmakers to calibrate the package's size and timing, and manage therefore implementation risks.

2. Data processing

This study constructs the fiscal shock series using administrative and macroeconomic datasets. Monthly fiscal disbursements come from the U.S. Treasury's Monthly Treasury Statement, and for each policy episode, the study tracks the most relevant MTS line items [8]. After doing this, the study sums the relevant monthly outlays within a calendar quarter to obtain a quarterly measure of policy cash payments. To scale shocks, the study divides by nominal GDP from the BEA [9]. Macroeconomic controls are taken from standard sources and converted to quarterly frequency as needed: the unemployment rate from BLS is averaged within each quarter; CPI inflation comes from BLS and is converted to quarter-over-quarter annualized growth [10]; when the federal funds rate or bank lending rates are used as y_t, the study takes the effective rate or a representative bank loan rate and compute quarterly averages.

Data cleaning follows transparent rules. The study keeps the raw MTS time stamps, for example, "This Month", and compares them to the actual disbursement quarter; when a policy line is absent, the quarter takes a value of zero. The study removes administrative reversals and reclassifications that produce mechanical spikes but no net cash flow in the quarter, and the study reconciles any re-labeling of line items across documents. Outliers unrelated to legislation, for instance, data entry corrections, are flagged using a 3-sigma rule relative to neighboring quarters; if documentation confirms an error, the observation is corrected or replaced by linear interpolation, otherwise it is retained. All macro series are calendar-quarter averages, or sums for CPI changes, with seasonality handled by the source agency (e.g., seasonally adjusted CPI and unemployment). Finally, all variables correspond to the same quarterly index before performing the local projection regressions.

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As for sample selection and policy episodes, the shock sample covers discretionary, one-off fiscal actions with (i) a clearly dated disbursement window, (ii) measurability in the MTS, and (iii) macro scale (a peak quarterly flow near or above 0.5% of GDP, or historically salient reforms). Episodes that are predominantly automatic stabilizers or gradual baseline changes without identifiable payment surges are excluded. After applying these criteria, the following Table 1 is obtained:

Table 1. Policy episodes used to construct the fiscal shock series

	Name	Core features
1	1975 Tax Reduction Act	Personal tax rebates concentrated in 1975Q2-Q3
2	1981 ERTA	Staged rate cuts with notable payment effects across 1981Q3-1982Q1
3	1990 OBRA	Adjustment episode (refunds/withholding changes) with visible quarterly spikes in 1990Q3-Q4
4	2001 EGTRRA (advance rebates)	One-time checks mailed mainly in 2001Q3 (spillover to Q4)
5	2003 JGTRRA (child tax credit advance checks)	Lump-sum payments concentrated in 2003Q3 (July-August)
6	2008 Economic Stimulus Act (ESA)	Large one-time payments in 2008Q2-Q3; this episode anchors the Great Recession stimulus.
7	2018 TCJA	Tax reform with smaller contemporaneous cash-flow spikes (tracked via JCT/IRS and MTS), included for breadth of policy types.
8	2020-2021 EIPs under CARES/CAA/ARP	Three waves of direct payments: EIP1 (2020Q2), EIP2 (2021Q1 with late-2020 spillover), and EIP3 (2021Q1-Q2), all directly observable in the MTS “Economic Impact Payments” lines.

For each episode, the study records its impact form (refund/rebate, advance checks, credits, etc) and timing concentration (quarters with the bulk of disbursements), which governs how the shock enters the t dimension of the LP design. Using an example to illustrate the core features that matter for identification: 2008 ESA delivered a very sharp, front-loaded transfer concentrated in 2008Q2-Q3, which produces a clean, non-repeating spike in Shock_t . To summarize, the long-sample design (1975-present) utilizes application to episodic, non-continuous shocks across regimes to elicit realistic impulse reactions and translate these factors into prospective OBBBA scenario analysis.

3. Measurement setting of the local projections model

Discretionary fiscal packages are irregular and politically timed, facilitating the identification of “external” fiscal impulses orthogonal to the business cycle. The report addresses four questions: How volatile is fiscal policy in fact, based on measured cash outlays and refunds instead of model-implied shocks? How can this study construct a quarterly series of exogenous fiscal impulses that can be verified and scaled across episodes? What do local projections indicate regarding the pattern of real activity following such a shock? What happens to the results if the study looks at a further period in the past and modifies the target variable (y_t) from GDP growth to spending or interest rate outcomes?

When searching for data and constructing shocks, the study uses: (i) the U.S. Treasury’s Monthly Treasury Statement to read cash outlays and refunds in the “This Month” line items; (ii) BEA nominal GDP to scale shocks; and (iii) auxiliary macro controls from BLS (unemployment rate) and CPI inflation.

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When constructing Shock, two characteristics are essential for identification: (a) non-continuity — the series goes to zero for most of the time and only increases when laws require checks or refunds; (b) timing clarity — the study connects spikes with legally required payment months and aggregates to determine the quarter amount as shown in equation (1). For quarter t,

$$Shock_t = \frac{\Delta policy\ outlays/refunds_t}{Nominal\ GDP_t} \times 100\% \quad (1)$$

The amount of the one-time cash injection that was required by legislation is displayed as a percentage of the total GDP at the time. Considering for episodes, the benchmark sample includes: 1975 Tax Reduction Act (individual refunds), 2001 EGTRRA (advance refund/rebate), 2003 JGTRRA (child tax credit advance checks), 2008 Economic Stimulus Act (rebates), 2018 TCJA (tax reform timing via JCT/IRS implementation), and 2020 to 2021 Economic Impact Payments (CARES, CAA, ARP). The study also added two supply-side events, by which does not make the series continuous; rather, it increases early data density and improves the representativeness of pre-2000 shocks while preserving the "rare impulse" nature that identification needs that caused clear cash-flow timing on the household or company side to improve sampling from 1975 to the early 2000s: 1981 ERTA (Economic Recovery Tax Act) and 1990 OBRA (Omnibus Budget Reconciliation Act). The expanded series still exhibits spikes clustered around 1975, 1981-1982, 1990, 2001-2003, 2008, 2018, and 2020-2021, with the largest magnitudes in 2008 and 2020.

The next procedure is to put calculated $Shock_t$ into Local Projections (LP), where the study estimates for horizons h=0,1,2, 4, 6… as shown in equation (2).

$$y_{t+h} = \alpha_h + \beta_h Shock_t + \sum_{p=1}^{P} \Gamma_{h,p} X_{t-p} + \varepsilon_{t+h}^{(h)} \quad (2)$$

At each horizon h, the future outcome y_{t+h} is regressed on today's fiscal shock and a few lags of controls, so the coefficient β_h is the impulse response of y to the shock at horizon h. With P = 2, 4, and 6 as checks for coherence. Controls X_{t-p} include two lags each of real activity y, unemployment, and inflation, with standard errors being Newey-West consistent. This keeps from having to commit to a fixed VAR structure and gives the sequence β_h that the study plots as impulse-response functions. When designing the matrix and sample, a compact figure around the 2008 stimulus shows how the matrix stacks Shock_t, two lags of y, unemployment, and inflation, along with targets y_t, y_{t+1}, y_{t+2}. The best time intervals for estimating different tasks depend on the data that is available. For the 2008 to 2009 example, the study uses 2008 to 2009.

4. Empirical analysis

The study first verifies that the quarterly shock series has two features that help identify it: it is sparse and has a clear payment timetable. In practice, the series is zero (or economically negligible) in most quarters, spiking only when legislation triggers one-off checks or accelerated credits—each spike can be associated with specific "This Month" outlays or refunds in the MTS and then matched to the corresponding quarter with BEA nominal GDP used for scaling, preserving the external nature of the fiscal impulse and avoiding tax receipts and transfers from moving excessively with the usual shifts in the business cycle.

The study then places the scaled shock into the Local Projection system to obtain impulse-response coefficients period by period. In plain terms: at each horizon h, the study regresses the future value of the outcome on today's fiscal shock and a small set of lagged controls; the slope on

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the shock tells the response of the outcome h quarters after the shock. The controls are two lags each of real activity (or the alternative target), unemployment, and inflation, and the study checks robustness with P=2,4,6 lags. For the 2008 to 2009 example, the compact design matrix the study presents combines the immediate shock, two lags of the target, as well as each control. It then runs the regression again for h=0, 1, 2, ..., giving a clean set of estimates.

The baseline LP with real GDP growth as y_t produces a familiar short-run pattern: the contemporaneous coefficient is highly positive, remains positive in the following quarter, and then turns negative as the one-time stimulus disappears and payback dynamics appear. In the benchmark numbers, $\beta_0 \approx 0.94$ (SE 0.41; $t = 2.29$), $\beta_1 \approx 0.84$ (SE 0.43; $t = 1.93$), and $\beta_2 \approx -0.76$ (SE 0.21; $t = -3.65$), where β_h measures the marginal effect of a one-percentage-point-of-GDP fiscal shock on real GDP growth h quarters ahead—that is, by how many percentage points growth moves when the shock occurs now; SE summarizes sampling uncertainty around β_h, given the available episodes, a smaller SE allows to more precisely estimate the amount of the growth response; The t-statistic (β_h divided by its SE) measures signal-to-noise in comparison to the "no effect" null; larger absolute t implies stronger evidence that the response is truly different from zero at horizon h, for example, |t| > ~2 is commonly treated as statistically meaningful. The R^2 reports the share of variation in y_{t+h} that the LP regression explains using the shock and lagged controls; The calculated R^2 values (0.81, 0.86, and 0.98 for $h = 0,1,2$) indicate that the compact specification captures plenty of the difference in the quarter-ahead period during the event windows, even though the shock occurs once per episode.

To test whether the mechanism operates through financial conditions rather than only through output, the study replaces the target series y_t in turn with three alternatives and re-estimates the same LPs. When y_t is the federal funds rate (quarterly average), it's evident that the reaction is flexible because the policy rate goes down when it takes effect and stays below baseline for the next two quarters. As shown in Figure 1, in the event-window table around the 2008 ESA, the contemporaneous funds-rate response is about -0.9 percentage points with -1.2 to -0.4 in the subsequent two quarters, which is consistent with an accommodating monetary policy and the cooperative operation of fiscal transfers during large stimulus periods.

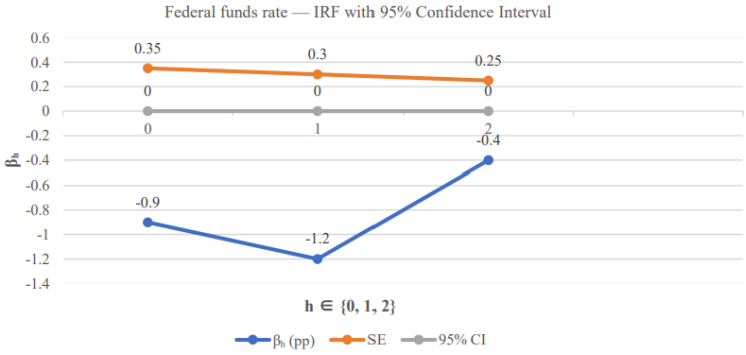

Figure 1. Federal funds rate

As shown in Figure 2, when y_t is real consumption growth (q/q), the response is positive on impact (about $+2$ percentage points annualized in the ESA window the study displays) and then steps down to a modest $+0.25$ thereafter, matching the classic "cash-on-hand" behavior from one-time rebates. When y_t is a bank lending rate (a representative new-loan APR), the shock is followed by a decline in borrowing costs, on the order of -0.5 to -0.9 percentage points over

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two quarters in the 2008 to 2009 window, suggesting that less complicated policy and demand that comes from transfers collaborate to lower loan costs and make credit conditions.

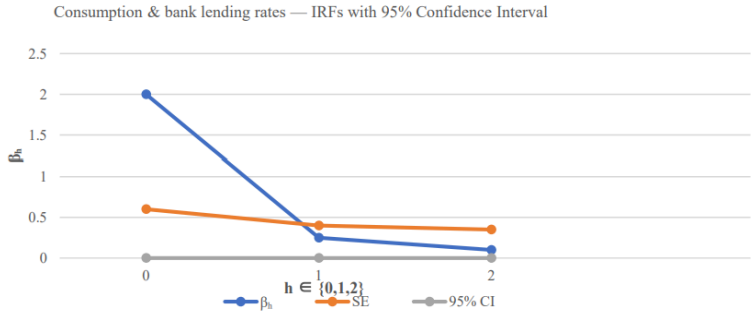

Figure 2. Consumption and bank lending rates

5. Robustness test

Since the shock is scaled by nominal GDP, converting the coefficients into an OBBBA-style framework is a straightforward process. Suppose the package produces a one-off quarter with rebates and transfers worth $x\%$ of contemporaneous GDP and is disbursed in a clearly identified month. Multiplying x by the baseline β_h gives the predicted change in the target at each horizon. For illustration, if $x = 1.5\%$ (a size comparable to 2008 ESA), the model implies an immediate boost to GDP growth on the order of 1.4 percentage points annually. The positive contribution persists into the next quarter but reverses by the second quarter following fund disbursement.

Adding the two pre-2000 laws leaves the policy multipliers essentially unchanged; instead, it improves the validity of long-sample estimates, as the early spikes help the estimator detect fiscal shocks outside the 2000s and the pandemic, which reduces the risk that IRFs are driven by only two recent episodes. Mechanically, the transmission chain that links a discretionary fiscal shock to real activity runs through three reinforcing channels that match the estimates. On the household side, immediate checks and refunds increase current disposable income and liquidity, raising consumption through a high marginal propensity to consume for liquidity-constrained agents, which corresponds to the positive impact response to consumption and the front-loaded GDP increase; On the firm side, stronger near-term demand and improved internal cash flows increase expected revenues and reduce default risk, this appears in the data as a decline in bank lending rates over the next one to two quarters, which facilitates inventory rebuilding and short-term expenditures. On the policy coordination aspect, monetary policy often accommodates significant discretionary transfers in weak macroeconomic states, that the federal funds rate decreasing relative to the baseline, which helps to lower term rates and bank loan rates.

6. Conclusion

This study finds that a comprehensive package like OBBBA generates a front-loaded macroeconomic outcome, characterized by an immediate and substantial boost to economic activity underpinned by more accommodative financial conditions, with limited persistence unless the program contains methods to replicate or expand the impulse. In the long-term sample, discretionary fiscal episodes consistently produce a significant immediate response and a lower next-quarter response, which suggests a clear policy trade-off: If the objective is to achieve immediate stabilization, the disbursing system will function effectively. However, if the objective is to achieve sustained expansion, the package will need to have continuing rules, such as phased disbursement.

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The identification strategy was designed to recover measured cash injections at known dates and map them into local projections for indexes, such as output, policy rates, consumption, lending rates, etc.

This paper's main contribution is to build an episode-based quarterly fiscal shock series and connect it to a unified Local Projection framework that traces both real outcomes and financial conditions. The method connects narrative identification with time-series estimation by connecting shocks to clearly dated policy disbursements and scaling them via nominal GDP. Owing to its production of comparable impulse responses across targets, it is useful for researchers and policymakers, and it shows how the overall condition of a person's finances affects the real impact of actions. However, this study has limitations: for instance, the policy episodes have short time horizons, the estimates may be subject to small-sample bias, and heterogeneous state dependence is not fully incorporated. Future research could expand the shock catalog, test formal mediation effects, and allow for nonlinear responses that vary across recessionary and expansionary phases.

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