

A History of Ecuador, 1960–2017

Macroeconomía Superior

Felipe Tappata

August 11, 2025

- These slides can be found at `https://felipetappata.github.io/docs/ecuador-slides.pdf`.
- An interactive timeline of Ecuador's economic history is available at `https://felipetappata.github.io/ecuador-timeline/`.

The History of Ecuador, 1960–2017

- Three events stand out in Ecuador's recent economic history:
 1. *1971*: Oil exports begin.
 2. *1982*: Latin American debt crisis.
 3. *2000*: Dollarization.
- We may thus roughly divide the economic history into four periods:
 1. *1960–1971*: Before oil.
 2. *1972–1981*: Oil boom.
 3. *1982–1999*: Great Depression (or Lost Decades).
 4. *2000–2017*: Dollarization.

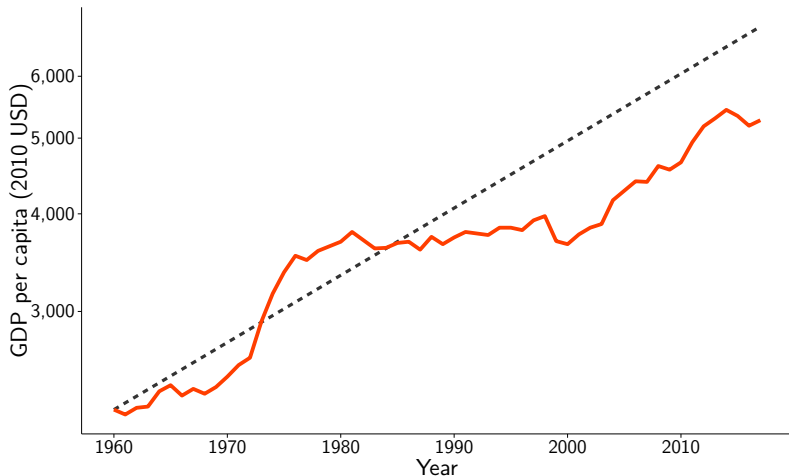


Figure 1: GDP per capita and 2 percent trend, 2010 USD, log scale

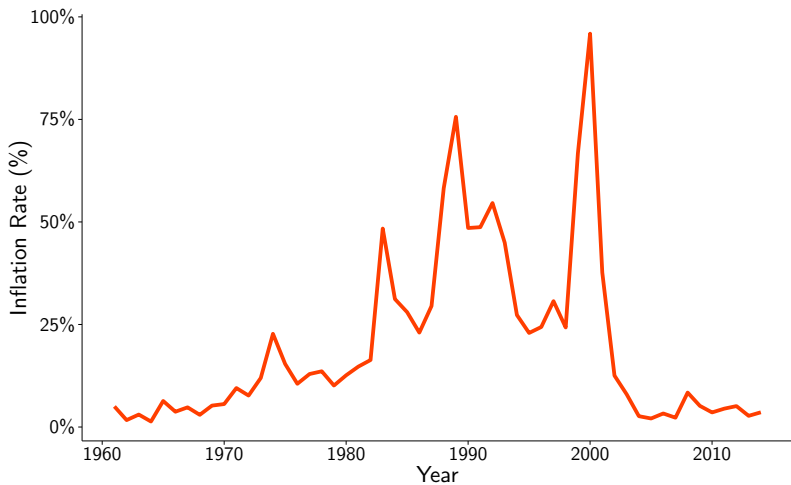


Figure 2: Annual inflation rate

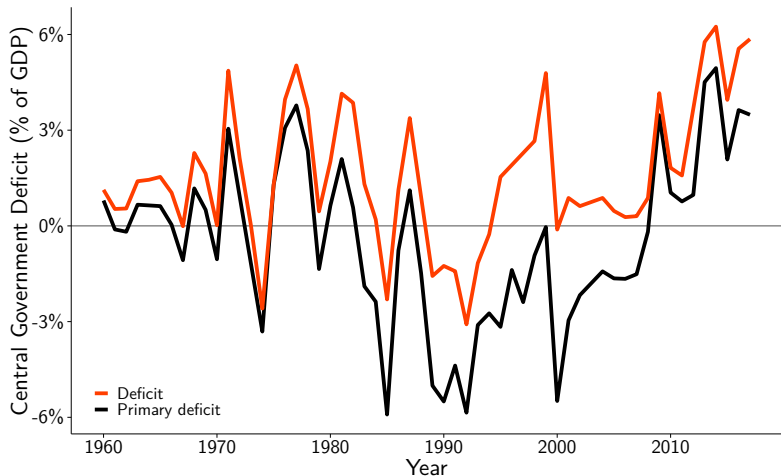


Figure 3: Deficit and primary deficit, percentage of GDP

The History of Ecuador, 1960–2017

Before Oil (1960–1971)

Before oil (1960–1971)

- Economy is primarily agricultural.
- Bananas account for roughly 40% of exports.¹
- Government has a small role in the economy: expenditures average 10% of GDP and deficit around 1%.
- GDP per capita grows at around 2% annually.
- Inflation is low, averaging 4.9% yearly.
- Oil is discovered in late 1960s.
- 1971 Hydrocarbons Law declares oil state property.

¹Exports are 16% of GDP during 1960–1971.

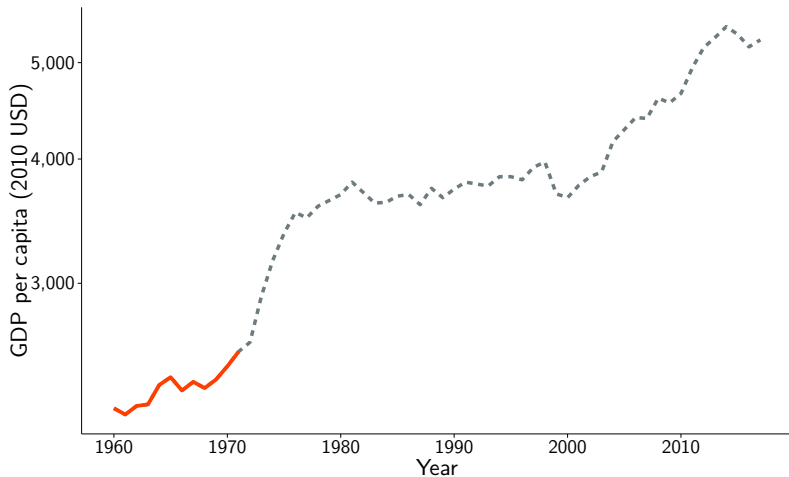


Figure 4: GDP per capita, 2010 USD, log scale

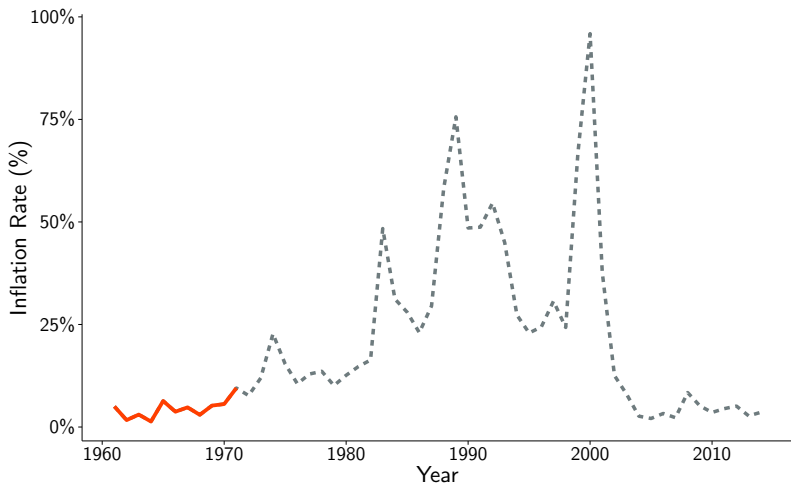


Figure 5: Annual inflation rate

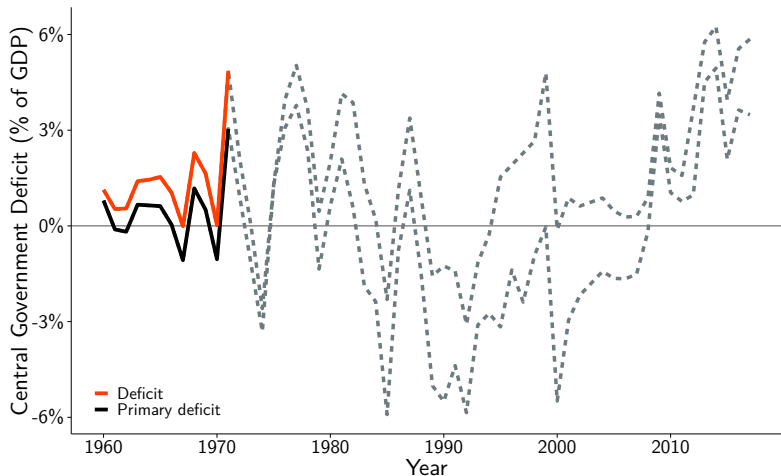


Figure 6: Deficit and primary deficit, percentage of GDP

The History of Ecuador, 1960–2017

The Oil Boom (1972–1981)

The Oil Boom (1972–1981)

- Oil exports begin in 1972.
- *Good timing*: Banana prices begin falling in mid-1960s, and oil prices increase more than twelvefold over 1973–1981.
- Oil represents over half of total exports over this period.²
- GDP per capita grows at average yearly rate of nearly 6 percent and GDP grows 25 percent in 1973 alone.

²Exports are nearly 25 percent of total output over this period.

The Role of the State

- State becomes large participant in the economy, with government expenditures averaging 23%.
- Average deficit doubles to 2% of GDP.
- Low interest rates and abundant liquidity allow government to easily finance deficit; public foreign debt grows by factor of almost 18 from 1971 to 1981.
- Public foreign debt increases from 9 percent to 20.2 percent of GDP.
- Inflation emerges after growth of M1 is over twice annual rates of previous period.

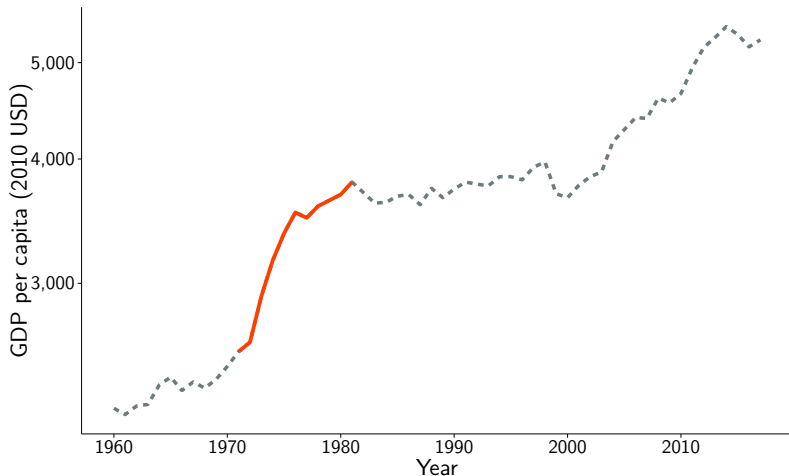


Figure 7: GDP per capita, 2010 USD, log scale

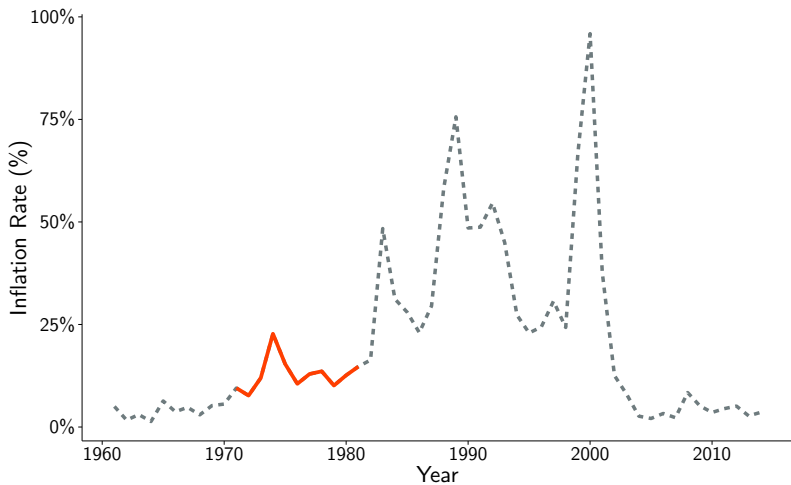


Figure 8: Annual inflation rate

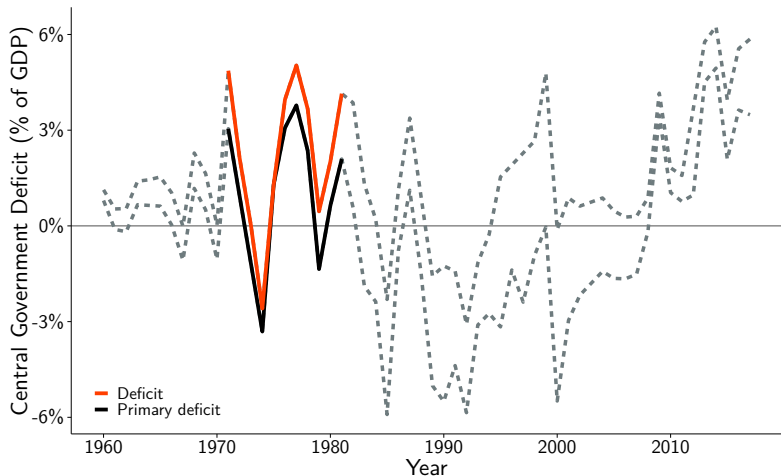


Figure 9: Deficit and primary deficit, percentage of GDP

The History of Ecuador, 1960–2017

The Great Depression (1982–1999)

Debt Crisis and End of the “Golden Years” (1982–1983)

- Growth in oil prices stagnates in 1981 and price per barrel declines over the decade to approximately half.
- Interest rates start rising in 1981.
- 1982: Mexico defaults, leading to Latin American debt crisis.
- Domestic complications:
 - Paquisha War with Peru spreads uncertainty and burdens fiscal accounts.
 - *El Niño* phenomenon destroys agricultural crops and infrastructure.
- *Minidevaluaciones*: Fixed exchange rate is abandoned for *crawling peg* scheme.
- *Sucretización*: Private foreign debt is converted into *suces* and owed to the central bank, which assumes the dollar-denominated debt.

Liberalization (1984–1988)

- León Febres-Cordero government implements market-oriented reforms and eliminates price controls.
- Good first half:
 - Surplus achieved in 1985.
 - Keeps deficit small in 1986 despite falling oil prices.
 - Inflation slows under tighter monetary policy.
- Crawling peg is abandoned.
- *March 1987*: Earthquake destroys Ecuador's only oil pipeline, freezing oil exports for six months.
- Economy contracts 6 percent in 1987, and deficit is largest since 1982 (3.4 percent of GDP).
- *1987 Default*: Ecuador suspends foreign debt service; significant arrears begin to accumulate, and fiscal and monetary prudence is abandoned.

Gradualism (1989–1992)

- Rodrigo Borja government begins with emergency austerity plan: expenditure cuts, increases in fuel prices, and suspension of net lending from central bank to government.
- Tax reform of 1988 simplifies structure and creates value-added tax (VAT).
- Trade restrictions are lifted and exchange rate regime is simplified
- Crawling peg reinstated with hopes of taming inflation; unsuccessful: inflation hovers around 50 percent for remainder of administration.
- *Gulf War (1990–1991)*: Increase in oil prices aids improvement of fiscal position.
- 1992 *Ley de Régimen Monetario* confers autonomy to central bank, establishes price stability as objective, and prohibits lending to the government.

Orthodox Management (1992–1996)

- Briefly after taking office in 1992, Sixto Durán Ballén presidency abandons crawling peg and depreciates sucre 35 percent, seeking to rein in inflation.
- Inflation spikes after depreciation, but policy is ultimately successful: inflation reaches 27 percent in 1994, lowest value since 1986.
- 1994 liberalization of financial sector allows banks to issue checking and savings accounts in dollars.

Orthodox Management (1992–1996)

- 1994 Brady agreement restructures foreign debt defaulted on in 1987.
- Crawling peg replaced by *crawling bands* in 1995.
- 1995 *Cenapa* War with Peru and long drought hurt output and cause central government expenditures to rise.
- Reserves are lost in war with Peru and defending crawling band system; authorities eventually forced to widen the range of fluctuations permitted.
- *Political instability*: Vice president Dahik charged with embezzlement and flees country.

Political Instability and Financial Crisis (1996–1999)

- Seven presidents between 1996 and 2007, five of whom do not finish their term.
- 1997 *El Niño* phenomenon destroys crops and infrastructure, coinciding with depressed oil prices; fiscal accounts suffer.³
- *1998 Constitutional Reform*: Central Bank granted technical and administrative autonomy from government, price stability is defined as only objective, and lending to government is prohibited.⁴

³Deficit is 2.3% of GDP in 1997 and 2.7% in 1998.

⁴Except “in unavoidable cases to avoid liquidity issues.”

1999 Financial Crisis

- Banks begin to show signs of distress by end of 1998.
- Initially attributed to inability of borrowers to repay after *El Niño* disaster.
- Others more skeptical: de la Torre et al. (2001) and Jácome (2004) identify flaws in 1994 banking law:
 - Deficient supervision, especially of offshore activity.
 - Lack of instruments to deal with bank failure resolution.
 - Moral hazard caused by unlimited deposit insurance.
- Central bank forced to finance massive bailout; M1 expands 137 percent in 1999.
- Deposit insurance agency, still new, had not accumulated sufficient funds and was forced borrow from the central bank.

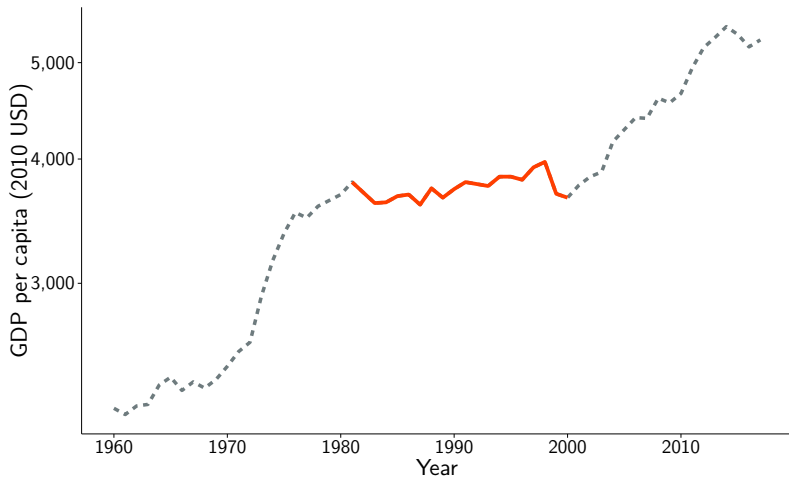


Figure 10: GDP per capita, 2010 USD, log scale

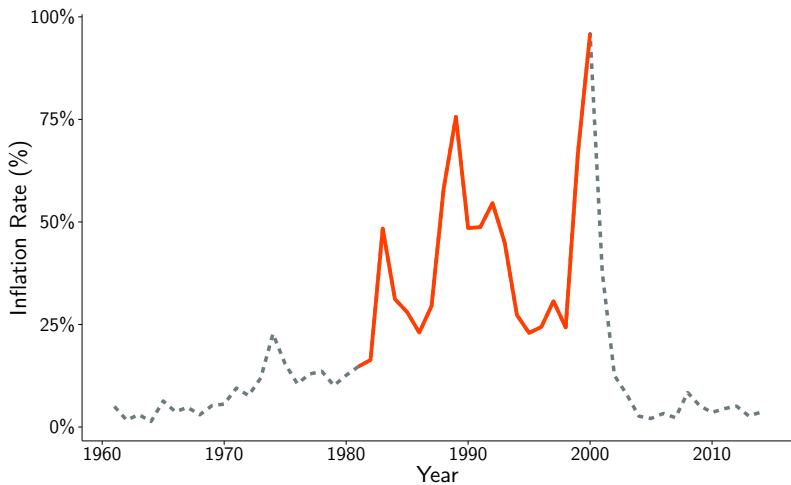


Figure 11: Annual inflation rate

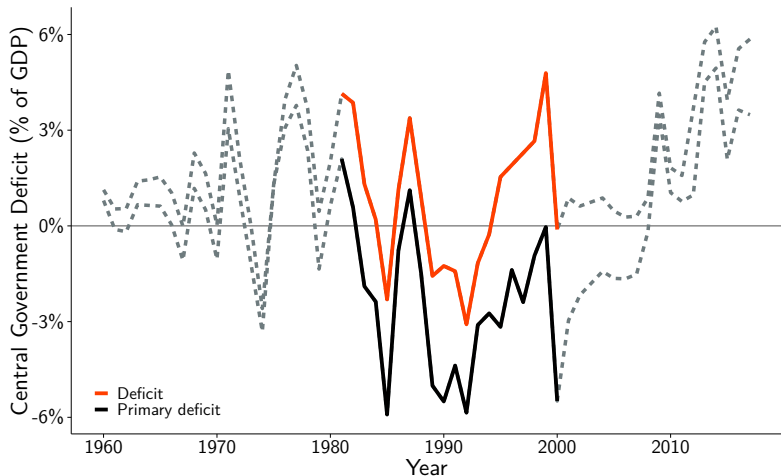


Figure 12: Deficit and primary deficit, percentage of GDP

The History of Ecuador, 1960–2017

Dollarization (2000–2017)

The Initial Years (2000–2006)

- *De facto dollarization*: By 1999, dollar-denominated share of M2 was already 45 percent.
- President Jamil Mahuad officially announces adoption of dollar in January 2000; social unrest forces his resignation.
- Successor Gustavo Noboa confirms dollarization, at 25 000 sucres per dollar.⁵
- Fiscal responsibility laws passed, capping annual growth rate of real government expenditures (3.5%) and debt-to-GDP ratio (40%).
- Previously defaulted debt is restructured at a haircut of 40%.

⁵The rate is chosen to ensure the central bank is able to implement the swap with its reserves.

The Initial Years (2000–2006): Inflation Conquered

- After peaking at 108 percent in 2000, inflation rate begins consistent decline.
- By 2003, inflation is single-digit, unseen since the early 1970s.
- Growth also rebounds after dollarization, averaging 4.3% annually over 2000–2006.
- *Fiscal responsibility*: Primary surpluses are recorded averaging 2.5% over 2000–2006, foreign-debt-to-GDP ratio falls from 55 percent in 2000 to 21.5 percent in 2006, and domestic debt-to-GDP ratio falls from 16 percent to 7 percent.

The Second Oil Boom (2007–2017)

- Rafael Correa takes office and increases participation of state in economy.
- Oil prices at historic highs.
- Fiscal discipline is reverted; expenditures jump from average of 16% of GDP over 2000–2006 to 23.5% over 2007–2017.
- Despite high oil and tax revenues, and depletion of stabilization funds created during previous period, deficits average 3.5% of GDP.⁶

⁶Average in previous period was 0.5%.

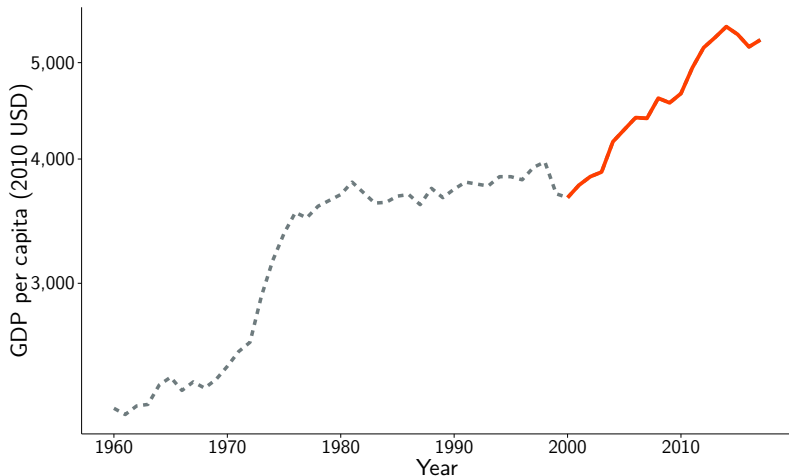


Figure 13: GDP per capita, 2010 USD, log scale

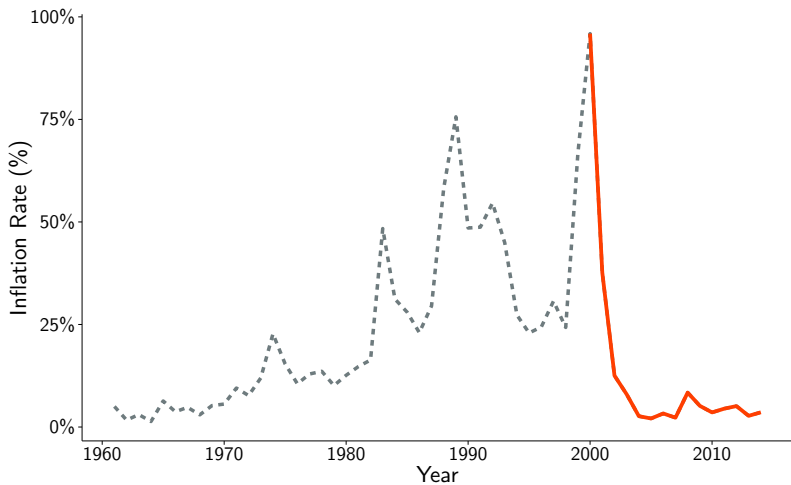


Figure 14: Annual inflation rate

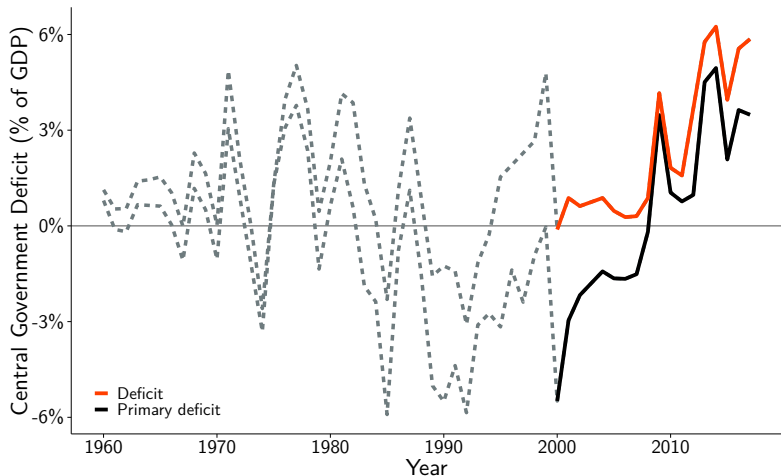


Figure 15: Deficit and primary deficit, percentage of GDP

A Budget Constraint Accounting Exercise

A Budget Constraint Accounting Exercise

The Framework

Baseline Model

Employing the framework of Sargent (1993), the government's budget constraint is

$$B_t + b_t P_t + B_t^* + M_t = (D_t + T_t) + B_{t-1} R_{t-1} + b_{t-1} r_{t-1} P_t \\ + B_{t-1}^* R_{t-1}^* E_t + M_{t-1},$$

where

- B_t , b_t , and B_t^* are nominal, indexed, and dollar-denominated debt in period t .
- R_t , r_t , and R_t^* are the respective gross returns.
- M_t is the stock of money.
- D_t is the primary deficit.
- T_t represents government transfers.
- P_t and E_t are the price level and nominal exchange rate.

Cueva and Díaz (2021) propose two modifications to the baseline model:

1. *No indexed debt*: Because there are no publicly available statistics on government indexed debt in Ecuador, $b_t = 0$ in all periods.
2. *Central bank deposits*: An alternative option for financing deficits, traditionally used in Ecuador, is the use of previously-accumulated assets in the form of money accounts in the central bank, which earn no return and are represented by A_t .

Modified Budget Constraint

The modified budget constraint is

$$\begin{aligned} B_t + B_t^* E_t + M_t + (A_{t-1} - A_t) = & (D_t + T_t) + B_{t-1} R_{t-1} \\ & + B_{t-1} R_{t-1}^* E_t \quad (1) \\ & + M_{t-1}, \end{aligned}$$

where A_t is the stock of government deposits in the central bank at time t .

A Budget Constraint Accounting Exercise

Applying the Framework to Ecuador

Budget Constraint Accounting for Ecuador

- The fiscal level at which statistics are available over the entire period is the central government.⁷
- Transfers T_t are defined as the residuals that make the budget constraint (1) hold in each period.
- Dollarization in 2000 implies that the government cannot issue currency at its discretion, so the terms corresponding to seigniorage revenues in the period after 2000 are set to zero.

⁷Data for the nonfinancial public sector are available only from 2000 onward.

- Seigniorage and debt were used as substitute sources of revenue.
- Usage of seigniorage coincides with periods of high inflation.
- Inflation falls drastically when dollarization eliminates seigniorage as a source of revenue.
- Fiscal policy has been procyclical.
- Transfers can be thought of largely as unrecorded expenditures, and spike during moments of high fiscal costs.

Table 1: Sources of central government financing, 1960–2017
(percentage of GDP)

Period	Domestic debt	Foreign debt	Money issuing	Seigniorage	Assets in Central Bank	Total
1960–81	0.08	1.39	−0.03	1.40	−0.32	2.52
1960–71 (pre-oil)	1.26	0.38	0.14	0.85	−0.19	2.44
1972–81 (oil boom)	−1.34	2.60	−0.23	2.05	−0.48	2.61
1982–99	1.79	0.64	−0.02	1.82	−0.68	3.56
2000–2017	−0.08	−0.90			−0.17	−1.16

Consideration of Table 1 reveals:

- Seigniorage was low during the pre-oil period, with the largest source of financing being domestic debt.
- During the oil boom, both seigniorage and foreign debt play a large role in financing.
- During the Great Depression, seigniorage remains the primary source of financing.
- Obviously seigniorage is not available post-dollarization, but the negative values are explained by a large negative transfers term rather than surpluses.⁸

⁸More on the transfers term later.

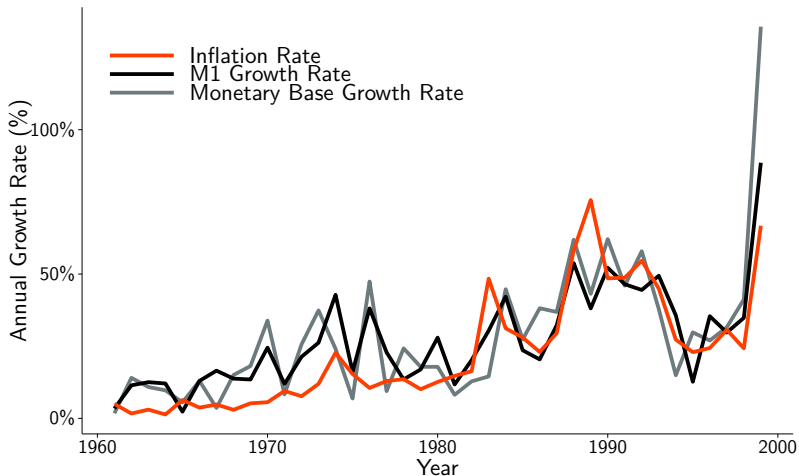


Figure 16: Inflation and annual growth rates of monetary base and M1

Table 2: Average growth rates and inflation, and correlation between M1 and inflation, by period

Period	Average growth rate of M1 (%)	Average inflation rate (%)	Correlation between M1 and inflation
1960–81	17.1	8.6	0.64
1960–71	11.7	4.9	0.37
1972–81	23.6	12.9	0.39
1982–99	36.0	39.1	0.47
1982–84	24.6	32.3	−0.01
1985–88	32.4	34.4	0.77
1989–92	44.2	57.3	0.11
1993–96	35.7	30.3	0.47
1997–99	41.6	39.5	0.60

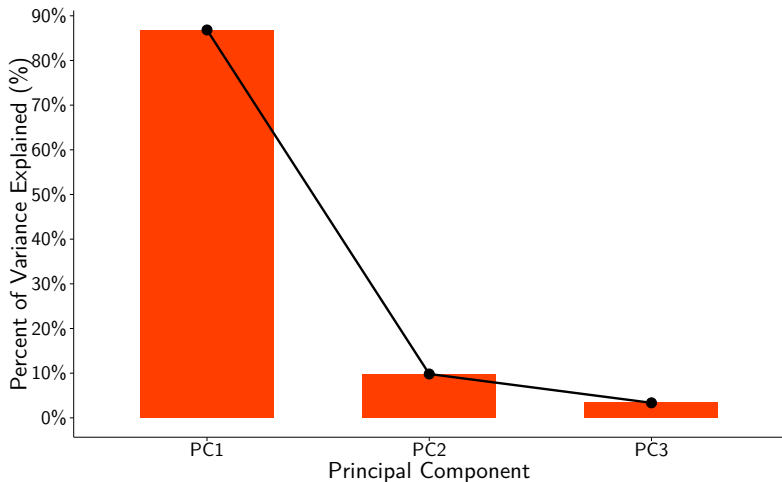


Figure 17: Scree plot of first three principal components for inflation, and annual growth rates of monetary base and M1 (shown in Figure 16)

Why Doesn't Inflation Drop Immediately?

- Not only does inflation take three years to finally reach single digits, but it actually *increases* after dollarization is implemented.
- Several explanations:
 - Exchange rate chosen for conversion is significantly above the going rate (18 000 sucres per dollar), leading to sizable depreciation and large increase in traded goods inflation.
 - Dollarization is followed shortly by fiscal adjustment program that raises utility rates and public transportation fares.
 - Widespread practice of rounding up prices to nearest dollar when converting from sucres.

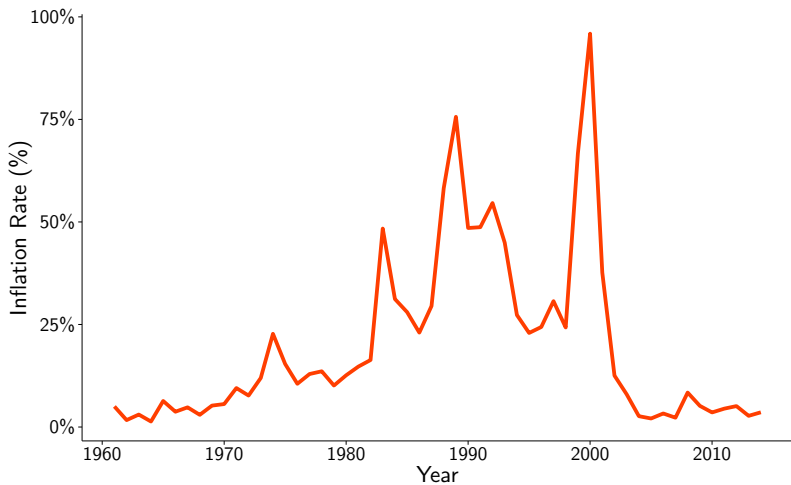


Figure 18: Annual inflation rate

The Downside of Dollarization

- Dollarization helped tame inflation by eliminating the government's ability to finance deficits through seigniorage.
- Deficits persisted, however, with debt taking the primary financing role.
- The economy, highly dependent on oil prices and without independent monetary policy, becomes vulnerable to shocks.
- Ecuador went on to default in 2008 (and in 2020).

Seigniorage and Debt are Substitutes

- Changes in total debt and seigniorage are negatively correlated, with a coefficient of -0.17 .
- This suggests that seigniorage and debt were used as substitute, rather than complementary, sources of financing.

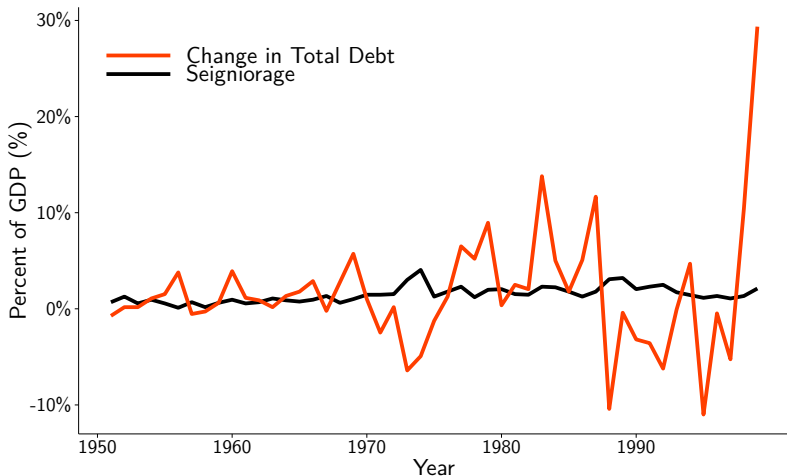


Figure 19: Change in total debt and seigniorage, percentage of GDP

- Fiscal policy has been procyclical in Ecuador, with positive correlations in all periods except early 2000s.
- Over entire period, correlation between cyclical componentes of government expenditures and GDP is 0.70.

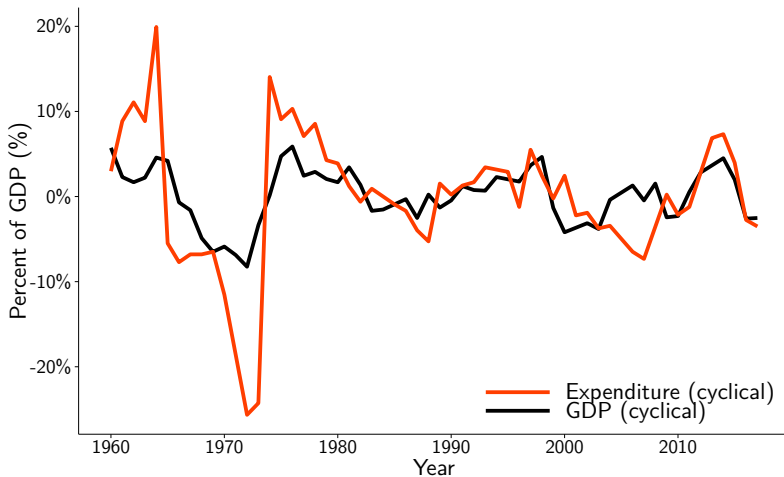


Figure 20: Cyclical components of government expenditures and GDP, percentage of GDP

Table 3: Correlation between the cyclical components of government expenditures and GDP

Period	Correlation coefficient between cyclical components
1960–81	0.78
1960–71	0.74
1972–81	0.85
1982–99	0.56
2000–2017	0.46
2000–06	−0.75
2007–17	0.76
1960–2017	0.70

A Budget Constraint Accounting Exercise

The Role of “Extraordinary Transfers”

What's In the Transfers Term?

- Recall that “transfers” T_t are an accounting residual.
- Notably, transfers are quite large: nearly 16 percent of the obligations over the full sample and almost a third of financing needs over 1982–1999.
- Transfers are also the largest component of obligations during the dollarized era, although with negative sign.
- Transfers can be understood as unrecorded expenditures, or a proxy of prior fiscal mistakes.

Transfers Tell a Story

Moments of high transfers include:

- *Sucretización.*
- 1999 Financial Crisis.⁹

Large negative transfers during:

- 1995 due to 1994 Foreign Debt Restructuring.
- 2000 due to 1999 Default.
- 2009 due to 2008 Default.

⁹Cueva and Díaz (2021) interpret this as evidence that a share of the transfers term corresponds to the deficit of the central bank.

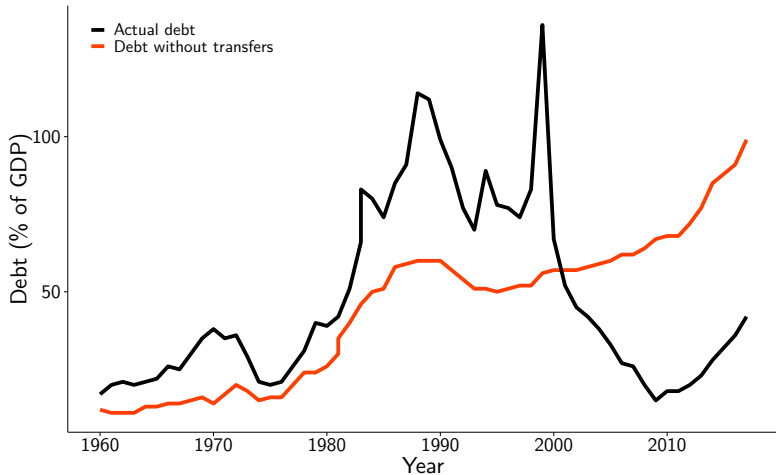


Figure 21: Total public debt, actual and without transfers, percentage of GDP

- In Figure 21, the high transfer terms during the Great Depression period contribute significantly to debt.
- Similarly, in the dollarized era, negative transfer terms interpreted as relief from reduction of stock of debt through restructurings and defaults.
- There is clearly a large part of the government budget constraint that is unaccounted for. Martin (2021) highlights the fact that local finances have been important contributors to aggregate fiscal deficits in Latin America.

Conclusions

Summing Up

- In Ecuador's history, monetary emission and inflation have gone hand in hand.
- Favorable conditions led to rises in expenditures and deficits during the oil boom which were not reversed when conditions worsened.
- The ambitious expenditures and deficits of the oil boom became a fiscal strain in the wake of the debt crisis and left the government with few attractive options.
- Dollarization eliminated the temptation to finance deficits through seigniorage, but left the government vulnerable to shocks.

References

- Cueva, Simón and Julián P. Díaz (2021). **“The History of Ecuador”**. In: *A Monetary and Fiscal History of Latin America, 1960–2017*. Ed. by Timothy J. Kehoe. University of Minnesota Press, pp. 277–320. ISBN: 978-1-5179-1136-2. URL: <http://www.jstor.org.ezproxy.utdt.edu/stable/10.5749/j.ctv27qzskq.12> (visited on 08/11/2025).
- De la Torre, Augusto, Roberto Garca-Saltos, and Yira Mascaró (Oct. 1, 2001). **“Banking, Currency, and Debt Meltdown: Ecuador Crisis in the Late 1990s”**. In: *Documents*. URL: <https://elischolar.library.yale.edu/ypfs-documents/14916>.

- Jácome, Luis I. (2004). **“The Late 1990s Financial Crisis in Ecuador: Institutional Weaknesses, Fiscal Rigidities, and Financial Dollarization at Work”**. In: URL: https://papers.ssrn.com/Sol3/papers.cfm?abstract_id=878835 (visited on 08/11/2025).
- Martin, Alberto (2021). **“Discussion of the History of Ecuador”**. In: *A Monetary and Fiscal History of Latin America, 1960–2017*. University of Minnesota Press, pp. 315–320. ISBN: 978-1-5179-1136-2. URL: <http://www.jstor.org.ezproxy.utdt.edu/stable/10.5749/j.ctv27qzskq.12> (visited on 08/11/2025).

Sargent, Thomas J. (1993). ***Rational Expectations and Inflation***. Princeton University Press. ISBN: 978-0-691-15870-9.
URL: <http://www.jstor.org.ezproxy.utdt.edu/stable/j.ctt2jc97n>
(visited on 08/11/2025).

Appendix

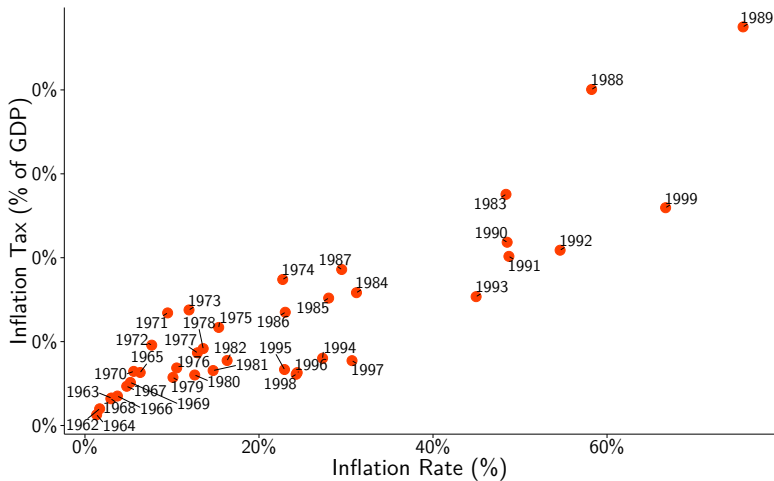


Figure 22: Inflation rate vs inflation tax (percentage of GDP)

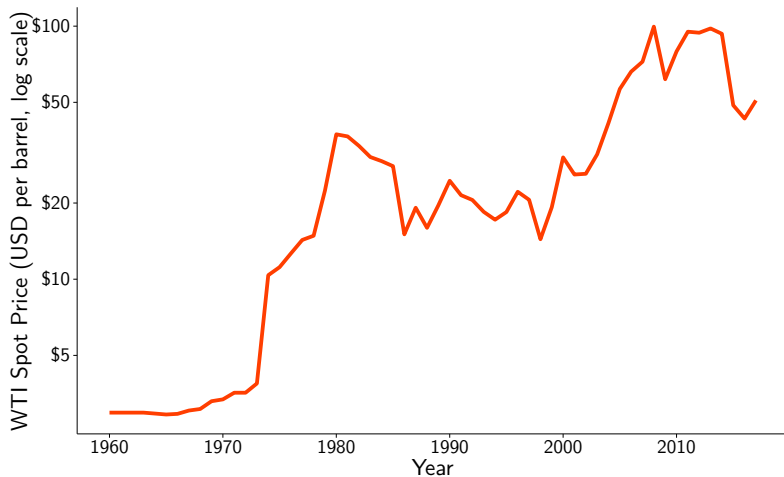


Figure 23: WTI spot price, USD per barrel, log scale