Monetary and Fiscal History of Peru 1960-2017
Radical Policy Experiments, Inflation and Estabilization

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2. Growth accounting
3. Fiscal accounting, public debt and seigniorage
4. The onset of inflation
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6. Stabilization and its aftermath
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Overview

Inflation in Peru in the last half century
- history of low inflation with periodic bouts of two digit inflation
- chronic, accelerating inflation since the mid 1970s
- hyperinflation in the second half of the 1980s
- successful stabilization of the 1990s
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- hyper stagflation: hyperinflation accompanied by great depression
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- we provide a monetarist interpretation
  - inflation before 1990 reflects the fiscal need for inflationary taxation
  - stabilization corresponded to a fall in seigniorage to negligible levels consistent with regime change
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- political economy: why were those policies adopted?
The big supply shock

Phase 1
Phase 2
Phase 3


GDP per capita
Inflation

logarithmic scale

Inflation rate


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Fiscal deficit
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Growth accounting

Great depressions (Kehoe and Prescott)

\[ \ln y_t = (\gamma - 1)t + \frac{1}{1 - \theta} \ln A_t + \frac{\theta}{1 - \theta} \ln \left( \frac{k_t}{y_t} \right) + \ln h_t, \]

output per worker = sum of trend and stochastic productivity, capital to output ratio, and hours worked (in logs)
Does policy explain the slump?

- radical reforms of the 1970s may have lead to massive misallocation:
  - crowding out of financing for private sector and misallocation induced by selective policies
  - inefficiency of state owned enterprises
  - cyclical deep cuts in public investment affecting quality of investment

- high to hyperinflation contribution:
  - waste of real resources in dealing with extreme price and exchange rate variability
  - price dispersion
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Do terms of trade explain the slump?

Terms of trade and growth
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Government financing

Budget constraint equation (Kehoe-Nicolini-Sargent)

$$\Delta \theta_t^n + \Delta \theta_t^* \xi_t + \Delta m_t + m_{t-1} \left(1 - \frac{1}{\pi_t g_t}\right)$$

$$= d_t + \theta_{t-1}^n \left(\frac{R_{t-1}}{\pi_t g_t} - 1\right) + \theta_{t-1}^* \xi_t \left(\frac{r_{t-1}^*}{\pi_t^w g_t} - 1\right)$$
Government financing and selected components

Total financing
\[ \Delta \theta_t^0 + \Delta \theta_t^* \xi_t + \Delta m_{t-1} + m_{t-1} \left(1 - \frac{1}{\pi_t \theta_t^i} \right) \]

Foreign debt financing
\[ \Delta \theta_t^0 \xi_t \]

Inflation tax
\[ m_{t-1} \left(1 - \frac{1}{\pi_t \theta_t^i} \right) \]
Public debt

% GDP


Total debt
External
Internal

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Public debt
Constant real exchange rate

Total debt

Total debt (constant $\xi_T$

$T = 1990$

% GDP


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Fiscal deficit and government financing
Imputed transfers

Privatization proceeds and change in financial assets

Information on some transfers

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Belaunde administration

- except for brief episode in the 1940s, first democratic regime in Peru in decades
- increased spending on education and roads, among others
- modernization of fiscal institutions
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- “war of attrition” between President and Congress leads to fiscal deterioration and inflationary finance
- balance of payment crisis and devaluation of 1967
- economic crisis, unfulfilled promises (land reform, IPC conflict) lead to military coup
Devaluations
Percentage increase in official exchange rate
The military regime

- el “gobierno revolucionario de la fuerza armada” (1968-1975)

- Social democracy with full participation = military dictatorship
- Land reform, and nationalization of private firms in oil, fishing, mining, food processing, and manufacturing
- Extensive import controls
- Increase in public spending in large investment projects (mining) and arm race
- Inflationary finance and debt accumulation
- Adverse terms of trade lead to balance-of-payments difficulties

“la segunda fase” (1975-1980):

- IMF supported stabilization plan: devaluation + cuts in public investment
- Unpopularity of regime leads to new elections
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Expenditure of central government and state-owned enterprises

[Graph showing the percentage of GDP for central government and state-owned enterprises from 1970 to 2017.]

- Central government
- State-owned enterprises
Capital expenditure of state-owned enterprises

- General government
- State-owned enterprises

Percentage of GDP over time from 1970 to 2017.
Military spending
An arm race

Percentage of GDP

- Chile
- Peru

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Return to democracy

- Belaunde’s second term 1980-1985
- hit by adverse shocks:
  - drying out of foreign finance
  - worsening interest rate on foreign debt
  - extraordinary negative weather shock (el Niño of 1982-1983)
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- hit by adverse shocks:
  - drying out of foreign finance
  - worsening interest rate on foreign debt
  - extraordinary negative weather shock (el Niño of 1982-1983)
- policy responses:
  - cutting public investment
  - arrears in debt payments
  - inflationary finance
The heterodox program of August 1985: “control and spend”
Heterodox Peru

The heterodox program of August 1985: “control and spend”
- freezing of exchange rate
- freezing of public sector prices: gasoline, electricity, water, etc
- temporary freeze of all prices
- tax exemptions to selected sectors
- reduction of interest rate: zero interest rate for agricultural loans
- debt default (debt service capped at 10% of exports)
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- Peru declared ineligible by the IMF
- commercial loans to Peru classified as “value-impaired” in the US
Heterodox Peru

- initial success
  - inflation goes down and economic reactivation
  - similar to other macroeconomic populist episodes in Dornbusch-Edwards (1991)
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- inflation rebounds in 1987, exchange rate lags, looming balance-of-payment crisis
- law of nationalization of the banking sector (July 1987)
  - passed by government and opposition in Congress, defended by courts
  - government backtracks after huge demonstrations (MVLL)
  - turning point
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- why persist in failed policies? gambling for success with model uncertainty?
The unique exchange rate, and others

Sept 1988: 33 → 250 intis per USD
Monthly inflation and hyperinflation episodes

el Salinazo y el Fujishock

![Graph showing monthly inflation and hyperinflation episodes from 1988 to 1991, with peaks in 1990-07 and 1990-10. The graph indicates significant inflation during these periods.](image-url)
Stabilization

- in 1990 a political outsider, Fujimori, was elected president
- two camps in new administration:
  - exchange-rate based versus monetary-based program
  - total lack of credibility of state policies made exchange-rate based stabilization unviable
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- two camps in new administration:
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  - total lack of credibility of state policies made exchange-rate based stabilization unviable
- key aspects of the August 1990 stabilization plan:
  - initial devaluation (166%) and then an exchange rate target (managed floating)
  - freeing regulated utility prices: gasoline (3040%), electricity (5270%), water (1318%), etc
  - monetary anchor
  - reduction of banking reserve requirements
  - fiscal austerity measures
  - trade liberalization
  - Creation of Budget Committee (coordination between Central Bank, Finance Ministry and Revenue Authority)
Stabilization and its aftermath

Two pillars of stabilization:

1. strong commitment to cut inflationary finance
   - after initial emergency loan, government committed not to ask for central bank financing
   - new Central Bank Law (1993) rules out government financing by the central bank
Stabilization and its aftermath

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2. **market-friendly policies**
   - eliminating multiple exchange rates, freeing exchange rate
   - reduction of tax and tariff dispersion
   - privatization of state-owned enterprises
Monthly inflation during stabilization
Argentina, Ecuador and Peru

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Why did stabilization take so long?

1. uncertainty about commitment of Fujimori government to end fiscal dominance
   - Fujimori campaigned against “orthodox shock” proposed by MVLL
   - conflicts with Congress → “self coup” of 1992 and new constitution of 1993
   - is authoritarian rule necessary for stabilization?
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5. lack of instruments to conduct independent monetary policy
   - open market operations (Central bank certificates of deposits) took a few years
Why (and how) politicians led to different results after 1990?

- institutional changes: new law of central bank
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- signalling
Conclusions

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- two radical attempts to refashion the economy: 1968-1975 and 1985-1987
- fundamental mistrust in market allocations by economic and political actors in the run-up to hyperinflation
- compounded by wishful thinking or wrong model
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- fundamental mistrust in market allocations by economic and political actors in the run-up to hyperinflation
- compounded by wishful thinking or wrong model
- social learning after the trauma of great depression + hyperinflation + violence in the 1980s