Monetary and Fiscal History of Peru 1960-2010
Radical Policy Experiments, Inflation and Estabilization

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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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- 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
Real GDP per worker in 2007 soles (0.31 USD)
Inflation
logarithmic scale
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
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:
\[ \Delta \theta_t^{i} + \Delta \theta_t^{s} + \Delta m_{t-1} + m_{t-1} \left( 1 - \frac{1}{\pi_t g_t} \right) \]

Foreign debt financing:
\[ \Delta \theta_t^{i} \]

Inflation tax:
\[ m_{t-1} \left( 1 - \frac{1}{\pi_t g_t} \right) \]

Percentage of GDP

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

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Imputed transfers

Information on some transfers

- Imputed transfers
- Privatization proceeds and change in financial assets

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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)
- 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
Capital expenditure of state-owned enterprises

Percentage of GDP

- General government
- State-owned enterprises

Graph showing the percentage of GDP for general government and state-owned enterprises 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
Heterodox Peru

The heterodox program of August 1985: “control and spend”
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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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- 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
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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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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

Two pillars of stabilization:

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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

Diagram showing monthly inflation trends for Argentina, Ecuador, and Peru after stabilization.
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?

2. Intertemporal budget constraint of the government was not clear until debt renegotiation

3. Unclear monetary targets / lack of coordination between treasury and central bank

4. Vulnerability of stabilization due to persistence of dollarization

5. Lack of instruments to conduct independent monetary policy
   - Open market operations (Central bank certificates of deposits) took a few years
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Why (and how) politicians led to different results after 1990?

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- signalling: from Wikipedia

In the administration of President Alan García, Castilla has served as deputy minister of Finance under minister Mercedes Aráoz from January 2010 to July 2011.[5] On 28 July 2011, newly elected President Ollanta Humala appointed him as Minister of Economy and Finance. The choice of Castilla – who is characterised as an orthodox pro-market economist[6] – was estimated as a sign for Humala's intention to pursue a reasonable and moderate economic policy and to remove the fears of a radical shift to the left.[7]
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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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- demand driven policies?
- 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
- social learning after the trauma of great depression + hyperinflation + violence in the 1980s