The field of study of development macroeconomics

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Class of International Economic Policy

Introduction

- Developing and transition countries produce more than half the world output and they are the majority of the countries monitored by IMF.
- Macroeconomic policies are often designed and implemented in developing contexts, even though most of modern macroeconomics is concerned with developed countries and so it is possible to wonder how helpful it can be for developing countries.
- It is necessary to define under what aspects developing and developed countries are different.
  - We do not make the hypothesis that economic agents of developing countries are not rational, rather that they act in a different environement than those inhabiting developed countries in terms of mechanims to set wages, fiscal institutions, exchange rate regimes and structure of the financial sector.
  - Developing countries have specific problems that developed countries do not have.

Historical background: the monetarists

- Whether macroeconomic analysis built for developed countries can suit developed ones was at the core of the debate between "monetarists" and "structuralists".
- The first ones, for example Harberger (1963) and Sjaastad (1983), think that
    - long-run growth in developing countries is hampered by state interventions and it can be promoted by free market measures and by international trade, limiting state intervention.
    - high inflation and deficits of the balance of payments are the result of excessive money growth and too large public deficits. They can be resolved devaluating the national currency and rising the interest rate.
- Such measures were implemented, for instance, by the "Chicago boys" in Cile in the 70s.

Historical background: traditional structuralists

- Structuralists think that
  - demand elasticity with respect to income is smaller for commodities than for manufacturing goods
  - as a consequence, developing countries should avoid to specialize according to comparative advantage. On the contrary, they should promote policies able to change their economic structure protecting key industries by means of
    - barriers to trade
    - an overvalued exchange rate to import production inputs at a lower price
    - promoting low interest rates to supply cheap credit
    - descourage agricultural activities to make the manufacturing workforce cheap

Historical background: the neo-structuralists

- Key hypothesis of neo-structuralists are that
  - many economic agents have a significative monopoly power
  - "injections" (investments, exports and government expenditures) have a causal preeminence with respect to imposts and savings
  - money is often endogenous (it is not under the control of the central bank)
  - the structure of the financial system has a considerable impact on macroeconomic performance
  - the complementarity between private and public investments and the import of capital and intermediate goods have a great empirical relevance

The point of view of our textbook

- The authors of our manual have an intermediate point of view and they think that
  - large public deficits lead to money growth and high inflation in the long-run (typical monetarist proposition);
  - large public deficits are caused by distributive conflicts between different social groups (typical structuralist proposition).
  - the effect of short-run policies depends on
    - the structural features of an economy
    - the conditions in which they are implemented
    - the other policies that are carried out at the same time (typical structuralist propositions).

The distinctive features of developing economies

- Here we do not want to argue that all the developing economies have the following features, but that these features generally distinguish developing and developed economies, as they are usually presented in economics textbooks
- The features concern
  - the degree of trade openness
  - the nature of financial markets
  - the features of fiscal institutions and of the budget of the government
  - the properties of aggregate supply
  - the digree of income inequality
  - the stability of political regimes
  - the degree of macroeconomic volatility

International trade openness and capital flows

- Developing countries, like small countries, tend to be much more open to international trade than the major developed countries (Canada, France, Germany, Italy, Japan, the UK and the US):
  - The usual measure of trade openness is: $\frac{\text{import} + \text{export}}{GDP}$
  - This entails that closed economy models are not well suited for developing countries
- Developing countries have hardly control of their export and import (their terms of trade are exogenous) as they are a small fraction of the world economy and due to the composition of their exports
  - This implies that models used to analyse this countries should have exogenous terms of trade

International trade openness and capital flows

- Capital mobility is small for many developing countries due to the presence of capital controls
- In the developing countries integrated with the international financial system, capital flows can cause an increase of macroeconomic volatility. Big capital inflows can cause an over-heating of the economy and big capital outflows can cause balance of payments problems affecting the exchange rate and real activity.

Interventions on the exchange rate and on domestic financial markets

- Many developing countries, with difference to developed ones, did not adopt neither a flexible exchange rate nor a really fixed one. Their exhange rates are called "administered", which means that the fixed exchange rate is adjusted with a certain frequency or that there are government interventions on flexible exchange rates. The implications of pegging one country's currency to that of a developed one, of changing a fixed exchange rate and the rules to carry out this change have a great relevance for development macroeconomics.
- Financial systems are not often developed in developing countries.
  - equity markets either do not exist or they have a low turnover
  - commercial banks often are the only financial institutions in place and they have tight rules regarding reserves, liquidity and interest rates caps

Domestic financial markets and the budget of the government

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  - credit supervision institutions are missing
  - economic agents tend to have a greater rationing in developing countries
- Developed and developing countries tend to differ due to the composition of the expenditures and revenues of the public sector
  - the fomer ones tend to spend more for health and pensions, while the latter ones for education, defence, services and public productive activities
  - in the fomer ones fiscal revenues come for the great part from taxes on individuals and enterprises, in the latter ones from indirect taxes, seignorage and import taxes.

Short term supply function and the labour market

- State intervention in production activities is greater in developing countries than in developed ones. The public share of the capital stock is greater in the former ones than in the latter ones, notwithstanding the privatization process of recent decades.
- Imported intermediate goods have a greater role in developing countries: changes in the exchange rate or a scarce availability of foreign currency have sizeable effects on the supply function.
- Firms in developing countries resort to credit also to pay workers and to buy intermediate goods. A shock to the interest rate is more likely to cause stagflation than in developed countries.
- The informal sector has a considerable role in setting wages and on the dynamics of employment, unemployment and urban poverty in developing countries.

Political instability

- In developing countries political changes can be recurrent and abrupt.
- Democracies are rare.
- Changes in political regimes can have considerable macroeconomic effects (capital flights, exchange rate crises, decreases in private investments, currency substitution).

Macroeconomic volatility

- External causes: small developing economies are particularly exposed to changes in the terms of trade and in financial flows
- Internal causes:
  - political instability
  - fiscal policies tend to be procyclical in some countries (Gavin and Perotti, 1997, on Latin America).

Some empirical evidence on economic fluctuations: the Agénor, McDermott e Prasad (2000) study

- The data
  - The used data concern 12 developing countries with different paths in structural change and for which it was possible to collect data with some quality at a quarterly frequency (Colombia, Cile, India, Corea, Malesia, Messico, Marocco, Nigeria, Filippine, Tunisia, Turchia, Uruguay).
  - Analyzed variables are manufacturing output, prices, salaries, various money aggregates, domestic credit to the private sector, fiscal variables, exchange rates and trade variables. The relationship between such variables and an output index of industrialized countries and the world interest rate was also analyzed.
- Methodology
  - The stationary and non-stationary components of the series were separated
    - This step was necessary because some features of the data (among which their correlation) have a meaning only for stationary series

Some empirical evidence on economic fluctuations: the Agénor, McDermott e Prasad (2000) study

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    - Three different filters were analyzed: the Hodrick-Prescott, band-pass and a non-parametric filter
  - The degree of commovement of a given series y_t with manufacturing output x_t was measured by the correlation coefficient - $\rho(j)$, $j \in \{0, \pm 1, \pm 2, ...\}$ - of their stationary components
    - A series is procyclical if $\rho(0) > 0$, acyclical if $\rho(0) = 0$, countercyclical if $\rho(0) < 0$
    - A series is strongly contempouranously correlated if $0.26 \leq |\rho(0)| < 1$, weakly contemporaneously correlated if $0.13 \leq |\rho(0)| < 0.26$, contemporanously not correlated if $0 \leq |\rho(0)| < 0.13$
    - A series anticipates the cycles if $|\rho(j)|$ reaches its maximum for $j > 0$, contemporaneous with the cycle if $|\rho(j)|$ reaches its maximum for $j = 0$, it is lagged with respect to the cycle if $|\rho(j)|$ reaches its maximum for $j < 0$

Some empirical evidence on economic fluctuations: the Agénor, McDermott e Prasad (2000) study

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    - To test the significance of correlation the following result by Kendall e Stuart (1967, pp. 292-93) was used: $\frac{\ln\left[\frac{1+\rho}{1-\rho}\right]}{2} \sim N\left(0, \frac{1}{T-3}\right)$, where T is the number of observations.
- Risults
    - output volatility, measured by the standard deviation of its stationary component, tends to be greater in developing countries (see also Neumeyer and Perri, 2005 and Pallage et al., 2006).
    - movements of output and the real interest rate of developed countries have a positive impact on output movement in developing countries (see also Ahmed, 2003, Neumeyer and Perri, 2005, Uribe and Yue, 2006 regarding the impact of the real US interest rate).
    - Public expenditure tends to be acyclical in some countries and counter-cyclical in others. The fiscal stiumuls $\left(\frac{\mathit{spesa\ pubblica}}{\mathit{entrate\ fiscali}}\right)$ is countercyclical.
    - Real salaries are procyclical. Evidence on nominal salaries not robust.

Some empirical evidence on economic fluctuations: the Agénor, McDermott e Prasad (2000) study

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    - The price level and inflation are counter-cyclical in most of the countries, but pro-cyclical in some of them.
    - Monetary aggregate are pro-cyclical, while money velocity is counter-cyclical (with difference to developed countries).
    - On domestic credit, results vary from country to country and according to the adopted filter
    - On the relation between exports and imports, results differ from country to country
    - Terms of trade are strongly pro-cyclical
    - Real and nominal exchange rates seem to be a-cyclical

Some empirical evidence on economic fluctuations: the Agénor, McDermott e Prasad (2000) study

- Note: for the countries where the level of prices would seem to be counter-cyclical, the dominant shocks would seem to be supply ones.
- In the literature there does not exist a clear evidence on this issue
  - Hoffmeister and Roldos (1997) for South America, Hoffmeister, Roldos and Wickham (1998) for Sub-saharian countries find that supply side shocks are the major cause of output fluctuations. Furthermore, the former study finds that external shocks (to the world interest rate) and demand shocks have a greater weight in South America than in Asia. The second study argues that external shocks (including those to the terms of trade) tend to have a greater impact in the countries of the CFA franc than in the other countries of Sub-saharia Africa.
  - Kalulumia and Nyankiye (2000) find that shocks to terms of trade have a big impact on output in Cameroon.
  - According to Kose (2002) shocks to relative prices of capital and intermediate goods have an important role in determining output volatility in developing countries.

Economic inequality

- Economic inequality is a well documented fact in developing countries (Todaro and Smith, 2006)
- Inequality can have an impact on long-run growth
- It can also affect economic fluctuations:
    - Countries with sizeable income inequality tend to have limited and volatile fiscal revenues
    - According to Iyigun and Owen (2004) in countries with large inequalities, the poorest cannot distribute their consumption over the economic cycle as they do not have access to credit. This increases macroeconomic volatility.

Relevant problems for developing countries

- **Stabilization of high inflation rates**. Many developing countries experienced high inflation and different stabilization strategies (from the orthodox monetarist one - based on restrictive monetary and fiscal policies and an exchange rate policy aimed at obtaining an equilibrium of the external trade balance, to the most etherodox one, based on restrictive policies of aggregate demand coupled with freezing the exchange rate and with controls on prices and salaries).
- **Fiscal rules and procyclical fiscal policies**. A fiscal policy rule implies trying to keep constant the deficit/GDP ratio and the debt/GDP ratio. These rules tend to make the fiscal policy pro-cyclical. It was also proposed to keep constant the ratio between the deficit without considering public investment spending and the GDP.
- **Inflation targeting and monetary policy regimes**. Intermediate targets of monetary policy (for instance: monetary aggregates and the exchange rate) were abandoned. Inflation targetting is now widespread.

Relevant problems for developing countries

- **Costs and benefits of monetary unions**. Criteria to take part to them:
  - inflation rate similarity
  - degree of mobility of production factors
  - size and openness of an economy
  - diversification degree of production
  - flexibility of prices and wages
  - final product market integration
  - fiscal integration
  - political consensus regarding integration
  - correlation of shocks to member countries
- **Captial flows control**
- **Financial crises.** Role of self-fulfilling profecies, connection between banking and currency crises, how to forecast crises (predictive content of some macroeconomic variables).

Relevant problems for developing countries

- **Reforms of the financial sectors and macroeconomic stability**
- **Labour market institutions.** Segmentation, regulation and sectoral flexbility of the labour market and transmission of macroeconomic policies.
- **Public capital and growth**
- **Economic effect of politics.** Connection between policymakers' objectives and structure of economic policies.