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# **Financial Globalization and Instability in the Early 21st Century**

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## Financial Globalization and Instability in the Early 21<sup>st</sup> Century

### ABSTRACT

*This article provides the figures of the volatility of economic growth in poor and rich countries and analyzes it. The conclusion is that while volatility has declined almost everywhere in advanced countries, the picture is much more mixed in developing countries. This article then examines the case of India, where GDP volatility has been declining for the last twenty years. The figures show that by moving away from an agricultural economy, the Indian economy has stabilized. Increased financial depth and the favorable evolution of the terms of trade had a similar effect. Finally, this article examines the relationship between economic instability and insecurity at the global level.*

The first current has its source in the literature on globalization, especially on the globalization of financial flows. One of the first assertions of the supporters of globalization is that it accelerates growth, although this growth may become more volatile than before (ILO 2004, IMF outlook, 1999). This is why the international financial institutions have recommended the organization of a safety net for those left out of globalization to limit the effects of instability.

Opinions differ on how globalization affects instability in rich or poor countries. Its proponents explain that by providing liquidity, the globalization of financial flows would favor consumption less chaotic in economies subject to various internal or shocks external. Opponents led by Joseph Stiglitz (Stiglitz 2000, Easterly, Islam, Stiglitz, 2001) argued that, in the case of developing countries, there is ample evidence that volatility has increased without necessarily leading to more quick economic growth. The theoretical underpinnings of these remarks have been provided by information theory which teaches that a financial contract has nothing to do with a normal commodity contract.

The second current, very close to the first, looks at the results of globalization in terms of economic growth and instability. During the 1980s, and even until 1995, it was observed that the average growth rate of the OECD economies during the post-globalization period was significantly lower than that of the golden age. That almost all OECD countries, with the exception of Turkey, experienced lower growth between 1980 and 1995 than in the period 1950-1973. It was also observed that the majority of developing countries experienced during the 1980s and 1990s lower growth and higher volatility than in the previous period. The analysis presented below will show that performance has varied greatly during the post-globalization period. There are winners and losers in both rich and poor countries. There is no total success or total failure.

The third is the one that is concerned with the social protection of the poor. How should governments manage the problem of the poor who face job and income loss as a result of economic instability? What kind of insurance would it be possible to put in place that is also sustainable? Volatility can have

detrimental effects, especially on the poor and women. Even if economic instability is temporary, its impact on the poor can be sustainable.

The fourth current to which the analysis of instability relates is that of the great question of cycles in economic analysis. These economic cycles are out of date or have we learned to tame them better, and what are the predictions for the future? As we will see below, many rich countries have experienced unprecedented stability. One of the questions is whether it will last. This question is not unimportant since it contains the question of how to manage the huge account deficits in the United States current and budget without compromising global economic growth.

This article is more of a research statement than the result of successful work. In addition to providing some basic facts about economic instability, it goes on to look at a number of current hypotheses that explain these facts. We will focus in particular on the case of India, where the trend of GDP growth has been on the rise for about 20 years and where the standard deviation of this growth has also declined over this period. We will present the results of time series analyzes on the determinants of volatility in India. Finally, we will also examine the relationship between economic instability and insecurity at the global level. We will examine the impact on the world of a hard landing in the United States following the current global monetary imbalances. We will also see the implications of this analysis for the various streams discussed above.

Section I will focus on economic instability in developed countries. Section II will do the same for developing countries. Section III will examine the possible determinants of instability. Section IV will describe the evolution of volatility in India and Section V will present some figures from the econometric analysis of the determinants of volatility in India. Section VI will explore the relationship between volatility and insecurity at the global level and then the conclusions will be presented.

## I - ECONOMIC VOLATILITY IN DEVELOPED COUNTRIES

Rowthorn and Martin (2004) study four economic regions: the United States, the Eurozone, the United Kingdom and Japan; using a small macroeconomic model, they attempt to identify the forces that have led to a decline in economic volatility. The authors divide the half-century into four periods: 1954-1973 is the period of the "golden age", 1974-1983 is the turbulent decade of oil shocks or other, 1984-1993 is that of disinflation and 1994 -2003 is a favorable decade of moderation of the economic cycle. Standard deviation is the tool used to measure volatility.

The volatility of GDP inflation and growth around the world has declined somewhat over the last twenty years; in terms of real GDP growth, the trend is mostly for the period 1994-2003, while for inflation it includes the last two decades. The volatility of GDP and inflation growth is lower in the period 1984-2004 than in the period between 1954 and 1983 in almost each of the seven developed countries. The frequency of severe recessions also dropped in these countries and increased only in Japan.

## II - ECONOMIC VOLATILITY IN DEVELOPING COUNTRIES

This section focuses on economic volatility in the developing world. It presents the volatility figures for GDP growth and inflation between 1960 and 2004, in Asia, Latin America and Africa, followed by a special section dedicated to India. Volatility is measured by standard deviation. Countries in the Middle East and countries in transition are excluded from the study because of the lack of time series. The regional figures include those of all the countries for which they are available, and not only those of the few countries appearing in the tables below.

If we exclude the two years immediately after the crisis in East Asia, this is no longer the case. For most Asian countries, consumer price volatility is highest in the period 1972-1981, before dropping, except in Indonesia and the Philippines.

In South Asia, GDP volatility has fallen sharply in India, Pakistan and Bangladesh over the last 20 years. The variance (square of the standard deviation) of real GDP growth for the period 1982-2004 is significantly lower than that for the period 1961-1981 (at 99%) for all South Asian countries. Despite the East Asian financial crisis of 1997, the variance is significantly lower for the period 1982-2004 as for the period 1961-1981(at 99%) for East Asia and the Pacific as a whole, Kirrane (2018). However, for the countries themselves, volatility declined significantly only in China between 1982 and 2004, and appears to have increased statistically significantly in Malaysia, Thailand and the Philippines.

These figures suggest that volatility has declined over the last two decades in South Asia and in the East Asian region, but less markedly. In the latter group of countries, volatility has clearly dropped in China, but it is not certain that this is the case for other countries as well. The trend is more marked for inflation than for GDP growth. The majority of Asian countries listed here experienced a statistically significant drop in inflation. It does not appear, therefore, that economic instability has increased significantly in the last two decades as these countries opened up their economies, and it seems that the volatility created by the crisis in East Asia has been short-lived, Kirrane (2017).

### III - EXPLAIN VOLATILITY

The following are some of the possible determinants of the evolution of volatility in both developed and developing countries.

#### 1- Developed countries

Rowthorn and Martin (2004) show that over the period as a whole, the rise or fall in the GDP growth rate coincides with the rise or fall in inflation. They attribute the decline in the volatility of these rates from the 1970s to the improvement of monetary policies and a change in behavior with respect to inflation. It became less persistent, less production-related and less volatile, while monetary policies improved as interest rates responded better to changes in inflation. The improvement in monetary policies has in turn led to a decrease in the volatility of economic shocks. They conclude, however, that maintaining this stability requires the application of sound anti-inflationary policies, as well as the absence of geopolitical or natural disasters, which could reduce volatility. In a comprehensive study of the United States, Stock and Watson (2003) conclude that the decline in volatility can be attributed to a mix of policy improvement and "luck" with respect to productivity levels and price shocks.

## 2 - Developing countries

In a cross-sectional study, Easterly et al. (2001) also show that economic volatility (including the volatility of inflation, growth, real wages, fiscal balance, private sector credit, money supply growth, inflation and terms of trade) is stronger in non-OECD countries than in the member countries. The regression results reveal that the volatility of GDP growth cannot be attributed to wage rigidity. Private capital flows or their volatility are not involved either, but they show that the financial depth (private sector credit ratio/GDP or market capitalization) reduces volatility to a certain extent and that economic openness tends to increase it. They also demonstrate the existence of a certain positive correlation between the volatility of the terms of trade and the volatility of production, although this has not been demonstrated econometrically.

### IV- ECONOMIC VOLATILITY IN INDIA

India appears to be one of the developing countries where economic volatility has declined over the period 1980-2004. Table 13 provides the numbers of standard deviations for Indian GDP growth rate over the five recent decades. These figures confirm the quite considerable decline in the volatility of GDP growth over the period 1980-2004, compared to the period 1960-1979. The variance in the real GDP growth rate for the period 1980-2004 is significantly lower than in the period 1951-1979 (at 99%).

The downside volatility is not evident when taking into account the three components of GDP: agriculture, industry and services. The volatility in the share of GDP in agriculture has declined since the 1980s compared to the years 1960-1979 and the decline is significant at 90%, but no significant decline has been recorded in the industry or in the United States.

Many studies attempt to identify the breaking point in GDP growth rates in the Indian economy. It is generally agreed that the turning point in Indian growth was 1980. However, some argue that there would have been other turning points, earlier or later. A simple T-test showing differences in averages between the periods 1951-1979 and 1980-2004 reveals that there was a statistically significant increase in the growth rate for the entire GDP. There was a statistically significant increase in growth rates in the service sector and in industry. The composition of the GDP has evolved a lot over the period. The share of agriculture dropped from 58% in 1950 to 21% in 2004 and the share of services increased from 32% to 58%.

Wallack (2003) used progressive F-tests to determine statistical significance for all years between 1951 and 2001 and confirms that the annual growth rate of GDP as a whole has increased significantly and permanently from 1980. It also showed the existence in 1987 of a break in the growth series of the GDP. By studying the various components of GDP, Wallack (2003) found out the dates statistically significant: 1992 for trade, transport and communications, and 1974 for finance, insurance, real estate and business. It assumes that these breaks in the various sectors may be approximately related to policy changes in these sectors, such as trade liberalization, and telecommunications reforms, with growth in the information technology sector for 1992, and at a period of extremely low interest rates for 1974. It combines the break in 1980 in the overall growth rate to a boom in investment.

Using a method similar research breakpoints (Chow test), Virmani (2004) also set in 1980 when the growth taking overall radically changing. If Wallack seems to point to another possible break in 1993, Virmani says that if we consider the 1980 rupture and the variations in precipitation volume, there would be no other point

He concludes that the reforms of the early 1990s did not mark the beginning of a new phase, which is still ongoing. Sarkar (2004) also does not find a trend in the real GDP since 1991 compared to the previous period. A simple F-test reveals that the variance of the GDP growth rate is not statistically different in the period 1990-2004 than it was in the period 1980-1989.

In general, the figures confirm that the growth rate of GDP has risen in 1980 and that the volatility of growth has decreased.

## V - THE EXPLANATION OF VOLATILITY IN INDIA

### 1 - Assumptions

A number of hypotheses can be put forward to explain the decrease in volatility in the Indian economy. are not without impact on the policies envisaged and must therefore be studied systematically. In this section, the econometric analysis will test the following hypotheses.

- A basic hypothesis is that of a change in the structure of the economy, with the shift of agriculture towards industry and services. To what extent is the reduction of volatility attributable to changes structural in the economy? To capture this evolution, econometric analysis uses as a variable the share of agriculture in GDP.
- The role of international private capital flows. Do these flows increase or reduce volatility?
- Another assumption is based on the impact of trade opening on volatility. Paradoxically, it ensures that this should lead to limiting volatility and not to increasing it as one might think at first glance.
- The role of financial sector development and financial liberalization has been highlighted by some economists as an important determinant of volatility.
- The role of shocks will also be studied.
- Finally, the growth rate of the GDP can be important. Is stronger growth associated with greater volatility?

To summarize, in a multi-dimensional analysis, volatility can be thought to be influenced by openness, financial development, state management, shocks and the structure of the economy. These assumptions will be examined in the next section using a time series analysis. The results of the analysis will allow us to deduce what should be the economic policies in India if we want to maintain stability or reduce volatility.

### 2 - Measuring Volatility

In the analysis above, the volatility of GDP growth over the decades has been measured by the gap - type. But econometric analysis of time series requires an annual index.

The growth series of the GDP do not correspond to the archetype processes that are some of the classic models of volatility. We decided to opt for an index based on a two-step error. Servén (1998) used the same kind of tool to measure the uncertainty of various variables in a study of impact of economic uncertainty on investment in developing countries.

The precise index of the measure of volatility used in this article is based on the recurring estimate of the following equation.

However, the analysis was also repeated using another index of volatility GDP growth as a three-year moving standard deviation. This index does not give very different results, but it is not in theory so interesting because the purpose of the forecast error method is to reflect the unexpected changes in growth, which is the essence of economic uncertainty and volatility. However, in practice, the standard deviation is an acceptable approximation.

The previous section has already shown that agricultural production is more volatile than the output of other sectors. The results also show that stronger (delayed) growth is linked to more volatility, although the model represents only the correlations. In the long run, the model would hold not as shown in the previous section. However, it must be remembered that the measure of volatility is functionally constructed from the growth series, and caution must be exercised when interpreting the significance of this variable.

The rise in the terms of trade limits the volatility of the GDP, as well as that of the credit ratio of the private sector, which is an indicator of the financial depth. External factors such as trade or private capital flows are negligible and therefore cannot be seen to have increased instability economic. It's the same thing for inflation and the budget deficit.

Although the trade-to-value ratio is not statistically significant, it is included in the study because it improves the adjustment. It must be recognized that if we withdraw the variable, not remain statistically significant than the historical volatility of the terms of trade and the growth of GDP.

As mentioned above, the regression analysis was repeated to test the robustness of the model using a simple three-year moving standard deviation of GDP growth. The results are briefly presented here. The use of this index of volatility produces a worse fit of regression, so we can prefer the first, besides that it is more attractive from a theoretical point of view. But this other model also reveals that the results are sensitive to the specification. In this model, only the changes in the terms of trade are statistically significant and, perhaps more surprising when compared with the previous model, the trade-to-GDP ratio. The former limit volatility, while the latter increases it. This suggests that external influences may play an important role. The exchange/GDP ratio was not significant in the first model, but the sign of the coefficient is the same in both models. .

The above analysis only helps to understand short-term correlations. Further studies will need to address the problem of correlations between average GDP volatility, and variables such as GDP growth, the share of agriculture in GDP, and the various state-specific variables at the level of GDP.

The objective of this section is to evaluate the evolution of some indicators of security or well-being in the countries considered above. The absence of numerical time series precludes us from conducting a more detailed analysis, so that we will consider trends in unemployment, poverty and income inequality for the periods for which we have data. Measuring these indicators is not easy and one may even wonder whether the figures are comparable across countries, but the purpose here is to provide a brief overview.

In Asia, the evolution of unemployment rates over the last two decades varies from one country to another and cannot be clearly linked to the economic volatility observed for these decades. In the industrialized countries, despite the stabilization of the economy, and with the exception of the United Kingdom, unemployment rates have not declined between 1980 and 2004. For the two countries for which we have figures from 1960 (Japan and the United States), unemployment has not declined in the last decade compared to the previous one. In Japan, it has even increased. Although probably rather imprecise, these figures suggest that increased economic stability in the industrialized world may not have increased security when measured against changes in unemployment.

Main Economic Indicators Source: Organization (MEI) 2005, ESDS for Economics International, Development and University Cooperation of Manchester. In the field of employment there are other variables besides unemployment, related to the evolution of the nature of the employment contract and to the impact of external pressures on wages, which can provide a better insight into the evolution of insecurity; but the time series are absent or difficult to obtain. The remainder of this section briefly reviews developments in income inequality and poverty.

Inequalities and poverty are the other indicators that allow us to estimate social evolutions. Measuring inequality is not easy. This article uses previous work to gain insight into possible developments in income inequality in some of the countries studied. The results by country may be questionable as the figures below do not come from country monographs, but are presented only to provide a global picture.

Ravallion and Chen (1996) examine the evolution of income and poverty inequalities for the period 1981-1994 in 42 developing countries. The figures were provided by household surveys. They analyze 64 phases, a phase defined as the period between two surveys carried out in the same country. While the number of available data has increased for developing countries during the period under review, many gaps remain, especially in sub-Saharan Africa. This is why the phases analyzed for this region only concern four countries.

The authors' conclusions for the above regions studied are summarized in Tables 20 and 21. The inequalities have grown more often than they have declined only in East Asia and in the period 1981 to 1994. The numbers show no clear link between inequality and economic instability in the regions studied in the previous sections. On the other side, the authors show that poverty declined in 7 of 9



phases studied in East Asia, while economic instability dropped while increased poverty in six of the 14 phases in Latin America and in five of the seven phases in sub-Africa Saharan.

Saia-i-Martin and Mohapatra (2002) use a larger dataset to assess the income distribution in all G20 countries for the 1970s, 1980s, 1990s, and 1998. Their estimates of income distribution have been used Table 22 below compares the evolution of poverty and the distribution of income for the 1970s and 1998s. While the evolution is not clearly significant, inequalities and poverty are judged to have remained "about the same".

Their results also show that the correlation between inequality and economic instability remains ambiguous. As has been shown, the volatility of the economy has declined in China and the United States, but income inequality seems to have increased in both cases. In Argentina, where the volatility of the economy has accelerated, it seems that both inequality and poverty have increased. On the other hand, the volatility of the economy has not much changed in South Africa over the decades, but inequalities such as poverty have also increased. According to this analysis, poverty appears to have declined, except in South Africa and Argentina (where economic stability has increased for the latter).

The question here is:

- The link between economic growth and volatility It is possible that economic growth is always accompanied by volatility, so we need to be cautious when we judge the level of volatility. The relationship can be complex. In South Asia, growth has been stronger, but volatility is lower, while in Latin America, in many cases growth has been low but volatility is high Is there an optimum level Volatility-

The link between insecurity and volatility. It is not clear.

- The consequences for economic policies and the means to control the volatility of the economy.

Finally, let us return to the question posed in the introduction: Has the economic cycle been tamed, at least in the developed countries, by measures such as the independence of central banks? The answer to this question is likely to be negative since the global economy is currently experiencing huge monetary imbalances that can have a significant impact on global GDP volatility.

Debates are currently raging to see if these imbalances will be resolved by a hard landing for the US economy. The question goes beyond the scope of this article, but many admit that this possibility should not be excluded. In this case, the consequences could be devastating for the developing world, as was the case for the hard landing of the years 1979-1983. Even countries of the weight of India and China may not escape. Given the strongest financial integration in the world today, a recession in developed countries could lead to serious financial instability in developing countries, with stock market crashes and banking crises. Financial globalization is far from over, but it is more advanced than before, with serious risks for developing countries.

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