

## General Discussion: Globalization and Global Disinflation

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*Chair: Guillermo Ortiz*

**Mr. Ortiz:** I think that in the political economy realm of some of the explanations for the decline in inflation in emerging markets, an important one is that people are simply fed up with inflation. There is a much greater consensus toward stability—at least in Latin America. The memory of past crisis and of the costs of inflation is very vivid. The case in Mexico is clear. We've had six years with a divided Congress and not even the far left has proposed extreme ideas, in terms of budgetary deficits and so on. The central bank independence has been respected by the different administrations. And, I'm able to talk in Mexico loud and clear about, for example, wage settlements—something that was just not done before. Talking about excessive wage settlements was just something that you did not do. I mean, that was sacred. Brazil has broken the indexation mechanism. We all knew that Brazil thought it had found a way to live with inflation in the 1970s and 1980s. That was obviously not the case—they've completely broken the indexation mechanism. And, in the case of Argentina, when everybody was predicting hyper inflation, it turns out that inflation will end up in the low single digits this year.

The second point, which is not explicitly mentioned in the paper, is a much better monetary framework. One very important reason why the link between exchange rates and prices has been broken in many

countries is the floating exchange rates regime. The combination of floating rates with inflation targeting has resulted in a drastic change in the environment in which monetary policy is conducted and in which expectations are formed. In Mexico, it used to be the case that any movement of exchange rates would automatically result in price increases—almost a Pavlovian reaction. Now, exchange rates move in both directions, so it's a very different story.

Third—it's obvious even for Mexico—there is a case to be made for the fear of greater competition and more openness that have a very positive impact. But, nonetheless, I believe the first two arguments should carry a bit more weight.

*Mr. Johnston:* I found the paper very stimulating—partly because of my own experience when I was a minister in charge of trying to reduce inflation from 12 percent in the early 1980s in the Canadian government. We had a strong independent central banker, Gerry Bouey. No directives were given to him. Who was the culprit? Who was the butler in Glenn Hubbard's analogy of the Orient Express? And what has changed between then and now?

Clearly, the issues that have been raised—globalization, privatization, and deregulation, which are essentially competition—have been a major factor. But one factor that at the time we focused on was the high level of public-sector wage settlements that were driven by COLA clauses (cost of living adjustments), without reference to productivity, which we were seeing as being a transmission mechanism into the private sector. And that's why the public sector took the lead in actually capping legally the increases at that time. These are the kinds of excessive increases, which Guillermo just referred to. I'm not sure that we have identified sufficiently the decline of union power during this period, and the changes in the economy that have brought that about. And the move to the service sector and to the new-wave industries where union power is much less and expectations, consequently, I think, are much lower. I think that has to be taken into account because when I look at Canada today as opposed to then, I ask what the differ-

ences are. This is largely what I see: a smaller public sector and, of course, a marked decline I think in public sector union power.

Just as a closing note, Glenn Hubbard mentioned that Wal-Mart could not have begun in France. But I would point out that the second largest retailer in the world, Carrefour, is French.

**Mr. Crockett:** One of the problems with the Orient Express analogy is that in that story, everybody did it. So we don't really have any single explanatory thread. In answering the question of why inflation fell, I think it's interesting to ask whether there is not a dominant explanation. And I wonder if Rogoff does not dismiss too easily, in the first paragraph of his analysis of the factors at work, the change in the conceptual underpinnings of policymakers' approach to inflation.

If you think back to the 1960s and 1970s, which was when I began my professional life, one was taught that monetary policy did not have more than a partial influence over the inflation-generating process. And to the extent that inflation was seen as a problem, the costs of eliminating it had to be very carefully weighed against the benefits.

And that led to a couple of consequences for the way in which policy was conducted. One was that anti-inflationary policies focused on what turned out to be ineffective mechanisms exhortation and direct interference in the price and wage-setting process. (I can remember, in 1973, in the International Monetary Fund, at the behest of the U.S. Treasury, we distributed "Whip Inflation Now" buttons to the staff.) The second consequence was that inflation was allowed to accelerate after the oil price shocks, because it was believed that the output costs of tackling it would be unacceptably high.

Only later was it realized that direct intervention in the process didn't work and that the costs of inflation were higher than previously thought. Around the late 1970s it became a more settled consensus that monetary policy was the key policy instrument. At the same time, the costs of accelerating inflation were likely to increase over time. So,

around that time you had more of a change in that approach than I think Rogoff allows.

That, of course, doesn't explain—and this is my last point—why it took longer in the emerging markets. But I would have said that the process of example, whereby the success of the industrial countries as the 1980s wore on, became more and more evident, resulting in a spread of that conceptual paradigm and its more globalized application. Central banks didn't become smarter, but they learned from experience.

**Mr. Frenkel:** I have three comments. First, I very much like the points raised in the paper. I would put the entire group of variables—competitiveness, deregulation, globalization, and productivity growth—under one major heading: Flexibility of the Economic System. The point, indeed, that when you have a flexible economic system, the temptation to carry out inflationary policies for output gains or the output costs of disinflation is diminishing. This has very important implications for the debate on the sequencing between stabilization policies and structural policies because it highlights the importance of the complementarity of those two rather than going in sequences since they reinforce each other.

The second and more important point that I want to mention is the role of the exchange rate. Rogoff explores the performance of alternative exchange rate regimes and the impact of their performance. The very choice of the exchange rate regime reflects the commitment to disinflation, it reflects the degree of independence of the central bank, and it reflects the flexibility of the economic system. With a strong commitment for disinflation, the choice of flexible exchange rates becomes natural because, as Guillermo Ortíz indicated, you get an extra kick through the appreciation of the currency associated with the disinflation. But in order to stand the pressures from the various segments of the economy that criticize this appreciation, you must have a strong, independent central bank. In order to be able to do this, you must demonstrate that the cost of the appreciation is relatively low. Therefore, you need a flexible economic system. They really go hand in hand.

I would say that the very choice, therefore, of the flexible exchange rate is part of disinflation and independent central banking.

Finally, one remark concerning the countries under operation: There is a big distinction, and this comes back to the point Arminio Fraga made, between the group of countries that start with high inflation and undertake an effort to disinflate. For them, inflation targeting proved to be a very successful mechanism. Actually, no country that chose it regretted it. For another group of countries for whom the objective is maintenance—maintenance of price stability and maintenance of financial stability—there it is a different regime. One needs to distinguish between the two.

*Mr. Fischer:* Just two points: First, on the point that Rogoff made about the tradeoff between growth and inflation and work that actually was done by Michael Bruno in the first instance, claiming that 40 percent was a turning point in that relationship. Most subsequent work says that if there is a point at which the relationship changes, it is more around 10 percent or lower. The 40 percent number, as where you need to start worrying about growth being impacted by higher inflation, is way too high.

Secondly, I would like to reinforce Andrew Crockett's point. In terms of the model, you have a ratio of  $\mu$  over  $\chi$ , which affects inflation. I am sure that  $\mu$ , the flexibility of the economy, has changed and I am sure that explains, for instance, why devaluations don't feed through as rapidly into inflation as they used to. That must be part of the story. But the  $\chi$ , the ratio of the dislike of inflation to the dislike of output shortfalls, must have gone up significantly. That must have been affected heavily by the intellectual climate and by institutions. For instance, the BIS, by reaching out to central banks around the world rather than sticking with the G-10, has helped spread the intellectual climate. That has a big role. It has to do with the growing understanding since the 1960s that there are no long-run tradeoffs between inflation and output at inflation rates at which we have been operating in the past. The question is: This is a model that has two parameters. Is there anything you

could possibly do to identify changes in them and tell us which is responsible and by what proportion?

*Ms. Krueger:* First, as anyone who knows the work I've done on open trade regimes will know, I like the hypothesis. So, that is not in question, and I think it is a good paper. What worries me just a little bit, and this is in a form of a question, is: If you think of the growth of world trade and the rapid growth of world output, it is 1950-73 that is the golden age. The second stylized fact is that during that time, the inflation rate was rising. I can recall meetings in the early 1970s of economists where it was taken for granted that we were going to have an upward secular trend in inflation and the best you could hope to do would be to cut the rate of increase in the secular trend. So, there is a question as to what happened. I tend to share the power-of-ideas point, to some extent, because in that era, it was thought there was very little harm to inflation. There was even an IMF staff paper which said that inflation didn't hurt growth. There was the Latin American structuralist school, which said you needed inflation for growth. There were all kinds of things going on. It would be interesting to try to take this back to the 1950s to see what extent you got the same set of suspects as you do later on. I suspect that the power of ideas, plus the improved central banking, are terribly important.

*Mr. Corbo:* The largest reductions in inflation are from emerging markets. The first thing is that the costs—the regressive tax, the short term horizon for investment, and so on—were just too obvious to ignore, as Guillermo Ortíz said. Given that the costs were there, it helped that there was a much better understanding of how you could reduce it. Along with what Anne Krueger was saying, when I was an undergrad, I was taught in Chile that inflation was good for growth because it forced savings. Saving was equal to investment. And investment was directly linked to growth. I came out of undergraduate school thinking that inflation was very good for growth. I went to graduate school, where I was taught that reducing inflation was very costly. I came out after my training thinking inflation was something that you had to live with it. Things have changed radically over the last 20 years. We learned that the Phillips

curve was vertical. We also learned that reducing inflation with a credible policy was much less costly than we thought. I think the most important change in Latin America, where we eradicated inflation, is on the institutional side, where we built institutions in such a way that we could help reduce inflation. We have very strong independent central banks. I come from a country where a center left coalition in power has set a rule where the fiscal budget has to be balanced on average. Latin America has changed radically because we are so aware of the costs of inflation. You underestimate the fact that we learned a lesson and that we have learned that building institutions that are able to provide low inflation are good for growth and for many other things.

*Mr. Meltzer:* I join all those who point to the intellectual change that occurred, and I won't repeat that. Anne Krueger said it very well. I would like to take up a different point—one that is just as nefarious as the view that inflation was not costly—which is the idea now that deflation is terribly costly. This is very much overstated.

There are two cases that one can point to great costs of deflation: the Great Depression and the recent experience of Japan. The latter is much less costly than the Great Depression. In both of those cases, there was a mistaken monetary policy.

Let me point to some of the cases on the other side. In the 1880s, we had a big deflation under the gold standard. Many countries joined the gold standard. We had deflation everywhere. That was a period of great growth. In 1920-21, we had a deflation of up to 15 percent. I would say that anyone who compared that cycle, which the National Bureau classes as a major cycle, with other major cycles will not find substantial differences in the recovery, even though the deflation persisted into the recovery. We also had deflations in 1937-38 and 1948-49, both of those with zero interest rates in the United States. The 1948-49 period is a relatively mild recession. The recovery from that also compares with the recoveries from other mild recessions. We can add 1960-63 when, if you allow for the bias in the price level, there probably was deflation because the actual measured rate of infla-

tion was between zero and 1 percent through most of that period. So, the actual rate of inflation was negative.

The lesson to be learned is that if a central bank does the right thing, then deflation, like inflation, can be a problem that can be put away. If a central bank does the wrong thing, then deflations can become serious problems, just as inflations can become serious problems.

**Mr. Balcerowicz:** First, I fully agree with those who stress interactions and a change in the intellectual paradigm, its impact upon policies in the developed West, and that it spread into developing countries, not disregarding the experiences of Latin America. In this context, one should consider the impact of IMF conditionality on actual fiscal and monetary policies in less-developed countries.

Second, it would be premature to say that the danger of fiscal dominance is gone. No, it is not. It is a reason to worry when one looks at fiscal policy in some emerging economies.

Third, in discussing deflation, I would fully agree with Allan Meltzer about the facts of deflation. I think comparison of the Great Depression and Japan is not valid; they are completely different stories. One more aspect: One should think about the following, to what extent the intellectual climate which stresses the dangers of deflation can undermine the anti-inflation safeguards in less-developed countries.

**Sir Andrew Large:** I just had one observation that struck me on Rogoff's paper, which was the consistency he sees between low inflation and rising deficits. Clearly, this isn't the conventional wisdom that markets have. I wonder if he is suggesting that markets actually may have some significant learning to do in the years ahead?

**Mr. Meyer:** There is a wonderful tension between the first two papers this morning. Stock and Watson assumed there was no change in credibility of monetary policy and then presented some evidence to support it. It seems to me that what Ken Rogoff has told us is that global disin-

flation is all about increased credibility of monetary policy. Now, since they have taken opposite points of view, I feel kind of funny about this, but I disagree with both of them. The credibility that is relevant for Stock and Watson is what I call credibility after the fact. You achieve price stability. You get the credibility that way and then you can become more aggressive about stabilization policy.

The credibility that is relevant for disinflation is credibility before the fact. There is very little evidence that matters very much. If it matters, I can't believe the political economy argument that the increased credibility comes because there is less temptation on the part of central banks to inflate. The problem with that is that it leaves a question: What is the impact of globalization, deregulation, and privatization? How does it work? How does it contribute to global disinflation? It's a wonderfully interesting question, but I am not sure we have advanced it very much.

**Mr. Barnes:** In the discussion of the Stock and Watson paper, the issue of endogeneity was raised in terms of the interaction between lower inflation volatility and output volatility. I wonder if endogeneity is an issue here too. The paper acknowledges that central banks have played a central role in bringing inflation down. The very success of central banks in doing this may have contributed to increased globalization directly in the sense that if companies can't hide behind the protective veil of inflation, then it gives them microeconomic incentives to seek out increased trade links, lower cost alternatives, etc., contributing to increased globalization directly.

**Ms. Swonk:** I take two issues, two points that I want to make. The first one is your crossreference across countries that deficits don't matter as much as they do. The reason for running structurally large deficits differs greatly by country, so I take issue that the results on inflation would also differ greatly.

The second point is one made both by Rogoff and Hubbard and that is the issue of coordination of long-term goals of fiscal and monetary

policy. I take issue with Glenn Hubbard in the fact that the market perception was that there was much more coordination on long-term goals of monetary and fiscal policy in the 1990s than we see today. The markets are certainly concerned about deficits and the structural nature in which they may emerge in the future—a concern that maybe we are not linking monetary and fiscal policy, coordinating their long-term goals as much as we were in the past.

**Mr. Mussa:** When the United States rebased the CPI in 1982 from the 1967 base, the CPI stood at 400. So, there was 300 percent inflation in those 15 years. The United States had lower inflation over that period than any industrial country, save Switzerland and Germany. The great surge of inflation worldwide, unprecedented in human history, was in the late 1960s through the early 1980s. What made inflation go up? Was it a decline in the independence of central banks? Surely not. The collapse of the pegged exchange rate system meant more central bank independence rather than less. Was it a massive decline in global competitiveness? That also is a very difficult story to tell. What made inflation go up worldwide in the late 1960s to the early 1980s was that monetary policy no longer provided a reliable anchor of price stability, which was partly what the United States was doing and partly what other countries were doing. What made inflation come down worldwide subsequent to the early 1980s? There, I agree very much with Guillermo and others. All around the world people saw inflation—something they hadn't had a great deal of experience with before. They didn't like it and they wanted something done about it. Independence of central banks directed toward keeping inflation low is one of the outgrowths, one of the symptoms of that response on the part of the general public. Obviously other things matter as well. Increased competitiveness and so forth make a difference. But it is relevant to ask: What worked on the upside as well as what worked on the downside in addressing this question?

**Mr. Rogoff:** First of all, I would like to thank my discussant, Glenn Hubbard, and all of you who made comments. In academics, it is sometimes said that the mark of a great paper is one that at first everyone thinks is completely wrong and later they think is obvious. I can

see I passed test one; we'll see if the paper ever passes test two. I am fortified by the fact that I gave a paper to this audience three years ago, with Maury Obsfeldt, that wrote about the U.S. current account and how, when this process is reversed which it inevitably would be, it would lead to a very large change in exchange rates—40 percent or more potentially. Everyone in the room disagreed with it, except for Mike Mussa. Rightly or wrongly, this is now considered conventional wisdom. I am perhaps overstating how much you are disagreeing with the present paper. I am hardly trying to say that these other factors you're raising: improved understanding, improved institutions, and improved central bankers are not important. I thought it would be a little dull to revisit that for the 40th time in this conference, so I only wrote a paragraph. I apologize to those of you that I didn't put six pages about these issues, revisiting them.

To Stan Fischer, of course, in my little model, having a more conservative anti-inflation central banker is very important; I wrote about that 20 years ago when I was working at the Federal Reserve and I'd certainly like to think that it is an important issue. I accept all of this. This paper is about what else might there be? Is having more anti-inflation central bankers 70 percent of the explanation, 98 percent of the explanation, or have there been other important factors? And have these other factors fortified the ability to have independence when you are living in an era of growth? When things are going well, it is easier for the central bank to be independent.

A central point of this paper is that whatever the political economy process is—obviously my little two-parameter model doesn't begin to capture its many complexities—long-term trend inflation is the outcome of a political economy process. A shock does not throw you for 20 years, or 10 years even, into much lower inflation if it does not fundamentally affect this political economy process. I no more have the right model than did Jim Stock and Mark Watson, but it is nevertheless helpful to have some model in trying to think about this.

Just a couple other points: Some of the comments made in disagreement, I took to be in agreement because, for example, the decline of union power—well, that is greater competition. As for exchange rate regimes, the evidence is just not so clear on that. I'd like to believe it is clear, but if you look at my work with Carmen Reinhart and look at the evidence on developing countries' performance, industrialized countries' performance with regimes (not of fixed rates, but of limited flexibility versus much more variable rates), the evidence is not as black and white as you might think. Whatever your priors are, they need to be revisited.

That brings me to something that Anne Krueger said and also Mike Mussa raised. What was different about the 1950s and the 1960s? Fixed exchange rates! We had a different system. What I am talking about here is clearly much more relevant to a system where more countries are floating, where most countries are choosing their own exchange rates. If everyone is fixing and the United States is not inflating, you are going to have low world inflation. We can talk about what changed things. The breakdown of Bretton Woods, the Vietnam War era that led up to that, were certainly very important. Individual characters like Richard Nixon, who I regard as the all-time hero of political business cycles, also made a contribution. I certainly intended to provoke discussion; I didn't intend to reverse everything you had ever thought and, indeed, certainly not my own writings from 20 years ago. I wanted you to think that about the piece that is not often spoken about.