

José De Gregorio: Macroeconomics, policymaking and the crisis

Keynote speech by Mr José De Gregorio, Governor of the Central Bank of Chile, at the Bank of Finland and Bank of Italy Conference on *Challenges of the Global Crisis to Macroeconomic Theory and International Finance*, in honour of Pentti Kouri, Helsinki, 11 June 2010.

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I am grateful for useful discussions and comments from Mariana García and Pablo García.

It is an honor to participate in this tribute to Pentti Kouri. I did not have the pleasure to be close to him, but I not only know well who he was and his work, but we also share some things in common. We both study at MIT and did international finance. We were very close to Rudi Dornbusch. There is a group of economists from all over the world, Chile and Finland for example, which had the privilege to work close to him, as students or as colleagues, and to enjoy his unconditional friendship and intellectual influence. In this conference there are a few of this fortunate group.

Kouri and Dornbusch had pathbreaking work explaining exchange rate fluctuations as movements of asset prices. Kouri's papers were always an important reference in our course's work. By the time I was student, late 80s, reading Kouri's papers, he was a successful investor living in Connecticut. I remember a couple of times when Rudi told me that he would visit this great friend, economist and successful investor to get some funds for the department. He succeeded, proof of which is that the department now has the Pentti J.K. Kouri Career Development Associate Professor of Economics.

Today, rather than attempting to elaborate on Kouri's contribution, I think this is a good opportunity to address some issues on the state of macroeconomics and policymaking, which is the purpose of the conference, and are two aspects to which Rudi and Pentti contributed a lot. If they were here with us today, their deep insights and provocative ideas, regardless of whether we agreed with them or not, would certainly make us think.

Changes in the world economy, macroeconomics, and policymaking

More than 30 years after Kouri's influential work, the world has changed dramatically, and so have economic theory and policymaking, especially in emerging market economies. There is a growing role of markets in the determination of prices, in particular interest rates and exchange rates. There is much greater trade and financial integration, which is a source of greater interdependence cross economies, but is also a source of much greater opportunities for developing countries. Finally, financial markets are much more sophisticated, which is also a source of vulnerabilities and opportunities.

There has been also a profound evolution of macroeconomics. Developments, such as rational expectations and dynamic inconsistency, changed the views on what macroeconomic policies could achieve. They were also the basis for the discussion of rules versus discretion, and the general preference for the conduct of policies under flexible rules, or constrained discretion.

The possibility of expectational inefficiencies has also become an important insight for policies. Contagion, self-fulfilling prophecies, coordination failures and multiple equilibria, are just some of the phenomena from which market inefficiencies arise, and there are many examples in the real world. However, one has to be careful when the failure of bad policies is attributed to phenomena outside the control of authorities. Many crises that some may want to classify as bad-expectational equilibria are simply the result of bad policies. Indeed, there is no crisis that has struck a country without an associated fundamental problem. What

expectational inefficiencies do is that they amplify the probability of occurrence and the cost of crises.

Other important development has been the understanding of policymaking, in particular monetary policy, as a rule rather than changes in policy variables without reason. Thus, rather than thinking of changes in the policy variables, it is more realistic to think of changes in the determinants of policies. Finally, we have learned that credibility is central for the effectiveness of policies.

All these developments have also led to changes in the way monetary policy is conducted. However, an important caveat has to be made. There is a two-way relationship between theory and policy developments. It would be presumptuous to argue that theory has changed policies. Indeed, the development of inflation targeting came before it was seriously discussed in academic circles. New Zealand implemented its inflation targeting regime in the early 1990s, before the main analytical developments took place. Along the same line, the Taylor rule was, obviously, used before John Taylor estimated it.

Regardless causality, monetary policy and central banking have changed significantly. The movement toward granting central bank independence around the world has been a positive one. Of course, this comes with the challenge for central bankers to demonstrate that this is really a good thing, something that certainly has been questioned in some countries during the recent crisis.

Although central banks were created to address problems in the banking sector, over time, their objectives moved to more general aspects such as economic development or growth. Then, since the 1980s, and with the success of the Great Moderation, central banks increasingly, and rightly so, focused on price stability. Unfortunately, financial stability, another issue at the core of central banking, was overlooked.

Monetary policy has abandoned money supply and exchange rates as nominal anchors, to target directly inflation and anchoring nominal variables via inflationary expectations. To reinforce credibility and to gain legitimacy, communication has become central to the conduct of monetary policy. Many challenges remain; in particular how to incorporate the financial stability goal into policy making, but the evolution of policy making has been enormous, in particular for emerging economies.

However, progress in economics has not been completely successful, and many challenges remain to make economic analysis more helpful to guide policies, and that is the issue I want to discuss next.¹

On models and theory

Macroeconomics has increasingly moved towards models more rigorously specified, with sound micro-foundations, with all general equilibrium interactions, and explicit informational constraints. However, there will always be tensions between rigor, realism and flexibility. There are many tradeoffs.

The costs of these tradeoffs are often subtle. The tendency to base models on ever more rigorous grounds, although a logical trend, has undesired effects. The incentives for younger academics – the very ones who are supposed to push the borders of knowledge, and who must *publish or perish* – limit their capabilities for innovation. The required rigor ends up necessarily threatening realism. Nobody expects a model to explain all the complexities of the real world, but the problem is that it can overlook elements that are crucial to understanding and preventing economic disasters like the one we faced some years ago. It

¹ For further discussion on these issues, see De Gregorio (2009).

may be more rewarding from an academic standpoint to write an equilibrium model explaining some particular phenomenon, than trying to formulate a model that properly represents all the distortions of said phenomenon. It is harder and less rewarding for an academic to formulate distortions – of which the real world has plenty – than to use elegant general equilibrium competitive models to explain important stylized facts with a minimum number of new ingredients. Only a handful of academics are able to think rigorously out of the box, and Kouri was one of them.

Complexity also jeopardizes the capacity to move from scientific research to economic policy proposals. For academic ideas to be useful in economic policy making, they must be persuasive. Perhaps that was the virtue of the IS-LM model that was used for many years in macroeconomic policy discussions, or of Solow's growth model that to this day remains the cornerstone of economic growth analysis. Fortunately, this is not a time where prescriptions are taken by policymakers without scrutiny – and are later labeled as orthodox – and therefore, the capacity to intuitively explain a result is essential. Models are only a part of the reality that allows us to organize our ideas before diagnosing and prescribing. The arguments' logic and a good deal of judgment are also critical when it comes to making economic policy decisions.

Indeed, the current crisis has revealed that models have a limited ability to deal with all the complexities of the real world. Even current state-of-the-art DSGE models, used in many central banks, have been unable to consider in a manageable and explicit way all the intricacies associated with financial markets' distortions and imperfect arbitrage, let alone the existence of default and credit losses.

This brings me to the theory of finance. If there ever was one discipline that should have anticipated the vulnerabilities that were building up in financial markets, it was finance. Had the origin of the problem been inflationary, then the problem would have been macroeconomics, but the origin was financial.² The origin of the crisis was closely related to financial innovation and the creation of instruments that should have diversified risks. Most of financial innovation was used to circumvent regulation, allowing credit expansion with a weak capital base. Low interest rates, search for yields and a monetary policy that promised to rescue after severe falls in asset prices prompted the creation of a housing bubble. Enormous efforts were made to price many extremely complex financial instruments, but even those efforts failed to build valuation models that realistically considered the instruments' insolvency probabilities. No evidence is necessary to assert that these methods failed because of an extreme event that struck everything. These failures were exacerbated by severe liquidity shortages and widespread panic in the markets.

It is paradoxical that while asset price theories, and their application to the real world, are based on the existence of full arbitrage (consider, for example, the CAPM), corporate finance theories are essentially dominated by information asymmetries and are plagued by frictions from principal-agent problems. This dichotomy will have to be corrected over time to ensure that more realistic models of how financial markets work become available, models which will shed more light on economic policy recommendations.

On crisis prevention and management

A pervasive question for the past and current crises is whether they could have been anticipated. On the one hand, it is tautological to say that crises are unpredictable, or else

² It is out of the scope of this presentation to discuss the role of monetary policy in causing the crisis. As I have argued elsewhere (De Gregorio, 2010), the cause of the crisis was mainly financial fragility, while lax monetary policy played only a secondary role. Many countries, such as Chile or Canada, for example, had very expansionary policy before the crisis, and did not suffer a financial collapse.

they would never occur. History is plagued with crises. Moreover, crises have become more frequent in recent decades as compared with the Bretton-Woods period, although their severity and duration have not changed significantly (Bordo et al., 2001). Crises must be avoided, but the only way to make sure they do not happen is to eliminate financial innovation and development altogether, which we know is not a good prescription. Therefore, crises will still occur, and the role of policies is not to be the cause of them, but to increase resilience of financial systems and minimize their cost.³ Of course, all these elements were absent in the global financial crisis and for this reason we need to devote more thinking to reforms.

Although crises will continue to happen, we must not conclude that since crises are unavoidable, there is nothing we can do about them. Instead, the proper way to act is to strengthen the financial system and macroeconomic policies, in order to minimize their probability of occurrence and their consequences, and to set up a proper crisis-management strategy once they hit.

As in the case of natural disasters, or accidents, the fact that crises will continue to happen does not mean that we must allow no regulation of economic activities (such as building codes, or driving standards). Countries with better building codes are better at facing earthquakes. In the case of financial crises, it is reasonable to improve regulatory mechanisms, particularly to allow financial innovation while keeping vulnerability at bay.

Meanwhile, it is necessary to continue devoting efforts to the detection of early alerts, although unambiguous indicators are impossible to find. But there are symptoms of fragility, very common in emerging economies. High and persistent current-account deficits, misaligned exchange rates, currency mismatches in the financial and corporate sectors, excessive increases in the prices of assets and credit, all signal a potential problem, although they do not necessarily result in a crisis. Therefore, a look at the indicators is not enough; it is important to put them together to detect fragilities. This is precisely what we try to do in our financial stability reports, which allow us to gain an overall vision of vulnerabilities, although, once again, it does not provide a final verdict.

Final remarks

The world has gone through the worst crisis since the Great Depression. The initial shock on the global economy did not differ much from the one that hit in the 1930s. There were many similarities between the Great Depression and the Great Recession. Worth noting are the initial fall in manufacturing output and trade, the collapse of stock prices and credit, and the increase in bond spreads (see Eichengreen and O'Rourke, 2010). These remarkable similarities in the first months of the crisis were alarming. The questioning of the profession was also worrisome.

However, the subsequent evolution of the global economy was quite different from that of the Great Depression, and it was certainly the result of good macroeconomic management. There was a failure in crisis prevention, but the policy response has been good so far. More remarkable has been the response of emerging market economies. In particular, Latin America, a region that historically magnified the global cycle, this time will perform better than the world economy's average.

The world has still many macroeconomic problems to solve before we can declare victory. Indeed the same policies that averted a collapse require careful review to avoid planting the seeds for the next crisis.

³ On this issue, Rancière et al. (2008) find that "countries that have experienced *occasional* financial crises have on average grown faster than countries with stable financial systems".

First, there is a need to think seriously about moral hazard. It is true that during the crisis this was a second order problem. But, in the gestation of asset price bubbles there was the commitment that if and when the bubble burst, the Fed would take care of the mess. This is exactly the same as the build up of currency mismatches in emerging markets when authorities promise to ensure exchange rate stability. In addition, we have witnessed a messy bail out of banks, and more recently, and more worrisome, bail out of countries with weak public finances.

The issue of sustainability has become very relevant, in particular on the fiscal sphere. Economies cannot live forever beyond their means, and a serious effort of fiscal consolidation must be made, in particular in fragile industrial economies. It is ironic that after going through a very complex financial crisis, we are now worried about a very traditional crisis, caused by fiscal imbalances in the context of a fixed exchange rate regime, with potentially serious financial ramifications. The type of crisis that was analyzed and modeled in international finance at the most intellectually prolific time of Pentti Kouri. He would certainly have a lot to say about this.

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