

## **THE VIEW FROM THE TRENCHES:**

### **Development Processes and Policies As Seen by a Working Professional**

Arnold C. Harberger

University of California, Los Angeles

December 1999

This essay is a series of impressions and reflections that arose as I witnessed and participated in the proceedings of the Dubrovnik Conference. Obviously, one cannot distill into a few sentences or paragraphs the full richness and variety of the many ideas and interpretations spread before us during those two days of meetings, by a cast that consisted of many of the leading figures in the development economics field. So I will not even attempt such a task. Rather, I will concentrate on a certain sense of uneasiness that I was left with as the conference closed. As I put it in a comment during the proceedings, it was as if a very important guest -- the working professional -- had not been invited to the party.

Now, ask me to characterize this working professional,<sup>1</sup> and I am hard put to produce a simple, straightforward answer. I have to recognize that he or she exists in my mind as an

---

<sup>1</sup>I know that this is a less-than-adequate label, in that most economists of all stripes see themselves as both “working” and “professional”. I earlier used the term “practitioner”, which is more restrictive and perhaps more descriptive. But I want the label to cover academics (like Schultz and Krueger) as well as policy people (like Greenspan and Cavallo), and the term practitioner may not be apt for the academics. The characteristic that I think best describes my “working professionals” is their concentration on diagnosing situations and problems and on finding solid and workable solutions for them. They are little concerned either with the current fashions in economic journals or with Dogmengeschichte tracing the evolution of our concepts over long periods of time.

embodiment of a whole set of traits, which may never be seen simultaneously in any single individual. I will go on to elaborate on the traits themselves, but, just to put readers in the right mood, let me make a short list of people who seem to me to fit pretty well into the suit of clothes I am about to describe -- central bankers Alan Greenspan and Mervyn King; U.S. policy experts Michael Boskin and Lawrence Summers; agricultural economists D. Gale Johnson and T.W. Schultz; trade economists Jagdish Bhagwati and Anne O. Krueger; longtime IMF professionals Manuel Guitian and Vito Tanzi; key Latin American policymakers Pedro Aspe, Hernán Buchi, Domingo Cavallo, Carlos Massad; Indian policymakers Raja Chelliah and Manmohan Singh. I could add many more, but these should suffice to give readers something of the flavor of what Harberger's "working professional" is all about.

One thing that these people certainly have in common is that they are anything but naive. They fully appreciate the infinite complexity of the real world, and know in their hearts that it is beyond human comprehension. Out of this appreciation arises the imperative of oversimplification. Only through oversimplification do we reach understanding. Hence to have an idea of theirs attacked because it is alleged to be an oversimplification would hardly bother these people -- indeed, they would view such an attack as reflecting more the naivete of the critic than the vulnerability of the idea. On the other hand, they would take very seriously criticisms that questioned the relevance or usefulness of their oversimplifications.

**We Must Have Respect For Market Forces.** Without a doubt the greatest, most profound, and most useful simplification of economics is the vision of supply and demand interacting in a market. Without this vision, we would be nowhere. Now are these markets characterized by perfect knowledge, perfect foresight, perfect competition with all its nuances? Of course not. And it is naive to think that any important real-world application really rests on such restrictive assumptions. The right way to look at it is to see players entering the market

with the knowledge they have; their supply prices and demand prices are based on this knowledge, and in this context their gains from market transactions are perfectly genuine and real. (Put another way, at the time of any transaction, an omniscient deity could extract the full surplus perceived by both suppliers and demanders, leaving them all feeling just as well off with the transaction as without it.)

It is the same with foresight. Supplies and demands today (e.g., of capital goods and securities) are based on the various agents' perception of what is likely, and their surpluses could in principle be extracted at the moment of any transaction, leaving them just as well off as before. Future events may change this, either: a) because the agent's initial vision was faulty (i.e., he was not as well off as he thought he was) or b) because new shocks entered to modify a previously correct vision. It is even hard for us poor mortals to tell the difference between a) and b), especially when we are dealing with unknown probability distributions in both cases. What we can say for certain is that disturbances of type b), especially in the form of innovations and real cost reductions of various kinds, are essential ingredients of the growth process.

So, too, it is with the textbook assumptions of perfect competition. We may need these assumptions to make precise analytical proofs, but the big messages that follow from those proofs stay substantially true even when we draw our supply and demand curves with the side of the chalk rather than its point. It is well to remember that a monopoly markup is in theory just like an excise tax (or any other tax) in introducing a wedge between demand price and marginal resource cost. Yet it would be a rare country in which total monopoly/monopsony profits added up to as much as a quarter or a third of total tax revenues. The existence of tax and monopoly distortions does not seriously impede the use of supply and demand in predicting the effects of changes in demand due to income shifts, of changes in supply due to innovations or world price

changes, or of changes in market equilibrium as new distortions are introduced or old ones changed.

### **We Must Recognize the Limited Scope of Action Available to Any Given**

**Government.** I don't think any of the people on my list would quarrel with the statement that "equilibria are often not efficient" (Stiglitz and Hoff, p. 36); more likely they would prefer it to be stronger, something like "real world equilibria are never -- or hardly ever -- efficient in a textbook sense". Why? Because, among other important reasons, government policy is never even close to optimal. Every government in the world inherits from its predecessors a patchwork quilt of policies, containing a great many undesirable distortions, and often even downright contradictions (one policy undoing the desired effects of another). The task of government is to improve things. But there is never the option of tearing up the quilt and starting anew. The typical government -- certainly the typical democratic government -- must proceed by adding its own patches to the quilt. And what it is able to do in any given term of office will depend on what political "windows of opportunity" happen to open up during that period. History tells us that major crises open multiple windows of opportunity and that in placid times governments rarely get the chance to institute major reforms; and if they do, they will most likely be in selected areas, brought to the fore by whatever fate and history conspire to bring under the spotlight of public attention while they hold the reins of power.

What is needed in this setting is solid cost-benefit analysis. This is what will tell policymakers whether adding a particular patch to a given policy quilt will move welfare up or down. The mere mention of this point should remind all of us that in the end all policy economics represents cost-benefit analysis in some form or other. But we are here distinguishing between the rather ivory-tower, utopian pursuit of the "conditions for an optimum" and the down-to-earth, pragmatic questions of whether a given policy change moves us up or down, or of

which of two or three plausible alternatives will move us up the most. To answer these latter kinds of questions, we must turn to what I call the “economics of the nth best”, which really translates into the application of the basic tools of applied welfare economics in a setting where there are a considerable number of existing distortions, all but one or two or three of which have to be taken as given as one analyzes today’s (or this year’s) policy moves.

The analytical machinery exists for doing this type of cost-benefit analysis -- indeed the best “how-to-do-it” courses in economic project evaluation have shown that we can train significant numbers of technicians so that they are able to apply it with a modicum of perceptiveness and subtlety. But what I, and I think a great many “working professionals” would lament, is the extent to which hours and days can go by, in meetings dealing with policies for promoting economic development, without this type of cost-benefit analysis being given a serious place in the discussion, let alone the spot at center stage that we think it deserves.

**We Must Focus on Meeting the Basic Needs and Providing Opportunities for the Poor, rather than an Income Distribution per se.** The limits on what any given government can do are particularly restrictive when it comes to policies focusing on the income distribution. I believe that most working professionals sooner or later come to realize that the income distribution is very much an endogenous variable of the overall economy, and that most of the factors that determine it are pretty much beyond the range of serious policy influence. It is the market that determines the relative rewards given to the various skills and occupations that make up a nation’s labor force. Where skills are scarce, the premium on them is high; where menial labor is in short supply, relative to its demand, workers and housemaids and gardeners end up being “pretty well treated” by the economy. Education policy is the surest way for a government to set a nation on a path to a more equal distribution. But, though the benefits to each individual are unquestionably present at every stage of an educational process, the impact of a changed

education policy upon the distribution of income comes only slowly -- over decades rather than years. Moreover, the internal machinery of the economy can work -- as it has over the past 20 years or so -- to offset the effects of many decades of educational effort upon, say, a country's Gini coefficient.

The true answer here is for societies to get their priorities right, in recognition of the true constraints that face them. Education has been and always will be a principal line of escape for the children of the poor. It is also, very typically in developing countries, a quite productive economic investment in its own right. The best reasons for opening wide educational opportunities for the children of the poor are quite independent of whether the Gini coefficient will go up or down as a result. So let's use the good reasons, not the dubious ones, in motivating and justifying sound educational policies.

The same goes for other types of so-called "redistributive" measures. Public finance people are quite aware of how hard it is to produce, in the real world, a tax system that is more than modestly progressive. And most economists are aware that too much zeal in this direction can be counterproductive, entailing enormous efficiency costs for each marginal dollar of revenue. The bottom line from these two observations is that not much redistribution has come or is likely to come, or even is advisable to come from the tax side of the public finance ledger.

This brings us to the expenditure side. Here the data reveal somewhat more of a redistributive potential, but not a great deal more. The trouble seems to be that the benefits obtained by the poor stem from some element of altruism (or sense of fairness) on the part of the non-poor. We see this in many parts of the world, and should not hesitate to applaud. But, typically, our society's altruism is less than 100% pure. The non-poor will vote funds for free public education for the poor, provided that most of them (the non-poor) get it too. The same goes for better access to medical care, for potable water and sewerage, etc., etc. In the end the

bottom quintile surely benefits from these and other government-provided or assisted services, but they probably don't get much more than their proportionate share of the benefits.

I like to think in terms of what I call a realistic benchmark for government's impact on the income distribution.. This consists of government's taking from households in proportion to their income and providing services to households in proportion to their numbers (of people). This benchmark has no moral connotations, but it is helpful to realize that very few countries, and certainly hardly any developing countries, have in fact been able to do as much redistribution as this benchmark implies.

Pursuing these avenues leads one quickly to a recognition that our societies and polities would be better served by focusing their thinking on meeting the basic needs of the poor and expanding the opportunities available to them, rather than constantly sounding the harsh and divisive claxon of "redistribution". But is there any hope? My jaded observation is that whenever the income distribution turns toward greater equality, the governing party claims credit for it, and whenever it turns toward greater inequality, the opposition puts the blame on the government. Are we, the economics profession, capable of leading our societies away from this type of fruitless populism? I am not sure, but certainly we will not get far until we instill in ourselves the discipline that comes from recognizing the severe limits that constrain governments' capacity to influence the income distribution.

**The Importance of "Sources of Growth" Analysis.** The idea of breaking down a country's growth rate into a series of components due, respectively, to increase in labor input, increase in capital input, and a residual incorporating other influences has to be recognized as one of the 20<sup>th</sup> century's great advances in economic thinking. At the time of its inception it helped to: a) play down the role of physical capital and b) play up the role of "technical advance" as elements in the growth process. Very soon thereafter the role of human capital was

given new attention. Still later the multi-faceted nature of the residual term came to the fore. My own predilection is to explicitly label this term “real cost reductions”. This label does not change anything, but it helps remind us that this term does not just represent new inventions, or economies of scale, or externalities and spillovers but rather includes all of these things, plus improved personnel management, better office procedures, modernized inventory control, maybe even successful advertising campaigns, and many other paths to greater profits through greater efficiency.

This “disaggregated” view of the growth process does not fit very well in a framework structured around the concept of the aggregate production function. Rather, its natural point of focus is the firm, where every element of the process of growth must ultimately be reflected. This is true at least of the growth of GDP (which is what has traditionally been measured) since the GDP of a nation (or province or country) is nothing but the sum total of the GDP contributions of the entities located there. Focusing on the firm and even on breakdowns of growth by two- and three- and four-digit industries gives one a quite different appreciation of the nature of the growth process than one gets by thinking in terms of an aggregate production function. The more disaggregated one’s focus, the more Schumpeterian becomes one’s vision of the growth process. This is because the great under-appreciated fact of disaggregated growth analysis is the pervasiveness of real cost increases side by side with real cost reductions. In just about every disaggregated data set that one turns to there are losers as well as winners -- and not just a few losers, but lots of them, often accounting for as much as a third or even half of initial value added.

Though some may gravitate toward attributing this to mere randomness, I feel this is like running away from the challenge posed by the phenomenon of widespread declines (side by side with increases) in total factor productivity. I believe, as Schumpeter did, that there is something



about it which is not only systematic, but also quite of the essence of the growth process. On top of whatever simple randomness there is, we have the phenomenon of winners beating out losers, all over the economic landscape. The winners are those who find ways of producing the same products for less, or better products for the same money, or totally new products that attract consumer demand. The losers are those who suffer in this process, typically being driven back to production points where their average costs (which are the raw material that TFP analysis works with) are higher.

**Policies that Promote (or Enable) Real Cost Reductions.** Many different studies of the breakdown of growth into its components have come to the conclusion that high-growth situations tend to be characterized (among other things) by high rates of real cost reduction. These real cost reductions occur, in one sense or another, inside of business entities. So where does policy come into play? In some cases, like improving a highway network, it may directly “produce” reductions in real (in this case transport) costs. In others, like promoting research and development activities, it may involve operations that can actually “deliver” real cost reductions within the firm. But the overwhelming bulk of relevant policies work in neither of these ways. Instead, they play an “enabling” role, making it easier for firms to encounter new ways of reducing real costs.

First and foremost among growth-enabling policies is the control of serious inflation. Much evidence shows that inflation inhibits economic growth. The reasons lie in the many uncertainties that accompany it. At least three deserve special mention -- a) the blurring of relative prices that invariably accompanies high inflation makes it hard for firms to perceive opportunities for real cost reduction; b) some of the investible funds that are generated in inflationary economies tend to be diverted to safer havens (like foreign currency or foreign bank and securities accounts), and c) the higher its rate, the greater the fraction of real resources

dedicated to finding ways of turning the inflation process to one's private advantage (even though no overall gain to society is involved).

Surmounting inflation almost by definition entails pursuing more sensible fiscal and other macroeconomic policies, but it is worth while to list such policies as a separate point. A macro-framework that is economically sound, and that in addition is expected to continue to be so in the future, opens the door to investments and cost-reducing activities that would otherwise be shunned.

Linked to sound macro-policies, but not quite the same thing, is the reduction of economic distortions, most especially those put in place by the government itself. Taxes, tariffs, quotas, price controls, open and hidden subsidies -- these are some of the more important of such distortions. Closely related are the distortions imposed by arbitrary regulations, restrictions, licensing procedures and the like. Some distortions are the inevitable accompaniment of government, but in most real-world cases there is wide scope for reducing their cost to the economy. The idea is to move from an economic system that has lots of "prices that lie" toward one in which there are fewer, and where the lies they tell are more like fibs and less like gross prevarications. This is important because, the greater the degree of distortion in the economy, the more cases there will be of actions that reduce real costs for the economic agents directly involved but that actually increase real costs from the standpoint of the economy as a whole. Ill-advised regulations not only work to keep real costs higher than they need to be; they also reduce the rate of growth by slowing the speed at which opportunities for real cost reduction are implemented.

**Policies that Promote a More Open Economy.** Without a doubt policies promoting freer trade in particular and a more open economy in general can be considered simply as a category under the general heading of policies that reduce economic distortions. But that would

tend to underplay the critical role that openness appears to have played in just about every development success story of recent decades. People can argue about the nuances, but not only did exports and imports both grow dramatically in the great growth episodes of Japan, Taiwan, Korea, Spain, Portugal, Greece, Brazil, Chile and Argentina -- but they grew even in relation to the very notable growth of GDP.

Openness seems to do much more than just eliminate triangles of excess burden stemming from tariffs, quotas and similar distortions. It appears instead to unleash, or at least have the potential for unleashing a new dynamism in previously stagnant or sluggish economies. I know it is hard for many of us economists to accept that economic agents are not always working equally hard to reduce real costs, but the evidence strongly suggests that businesses with a market whose security for the firm is more-or-less guaranteed (by high protection in one form or other) are more likely to take the comfortable route of sticking with routines that proved successful in the past. Once such businesses are exposed to the rigors of world market competition, they either adapt by reducing real costs or (usually gradually by a sequence of painful steps) fade out of the picture. Living with market competition for a period of time also tends to change the outlook of business firms, from a more-or-less static vision of finding a “cash cow” and milking it steadily over a long period to a more dynamic approach of making it part of their regular business routine to constantly look for newer and better products, processes and methods. In these ways, a country’s turning its economy toward greater openness has an effect not only on the level of its GDP (the comparative static effect) but also on its rate of growth (the dynamic effect of trade liberalization).

**The “Washington Consensus”**. In many discussions, including some at the Dubrovnik conference, the so-called “Washington consensus” has been characterized as a cookie-cutter approach to development policy, derived from a blind application of neoclassical economics to

the problems of the developing world. Well, it may be that it is not just beauty that rests in the eye of the beholder. For many economists, including Harberger's working professionals, would see the Washington consensus as a pragmatic distillation, derived from some four decades of postwar experiences in a host of developing countries.

Who, in particular, can take serious issue with John Williamson's crisp summary of the consensus: "macroeconomic stability, domestic liberalization, and international openness?" As I see it the Washington consensus, in seeking these ends, has been quite tolerant of moderate fiscal deficits, moderate rates of inflation, moderate ranges of import tariffs, and moderate tax rates generally. The consensus has been anti-neoclassical in paying little attention to Ramsey rules and other pillars of the modern neoclassical tax literature. Neither has any consensus emerged on the alternatives to Ramsey: uniform, across-the-board ad valorem tariffs and value-added taxes at a uniform rate on a broad bases. Yet I have not the slightest doubt that, asked to choose between Ramsey tariffs and uniform tariffs, or between a Ramsey-style differentiated VAT and a broad-based, uniform one, my practicing professionals and Williamson's consensus members would vote overwhelmingly in favor of the uniform-rate alternatives. And in doing so they would be expressing not the implications of neoclassical theory but rather what they think of as practical wisdom derived from long experience. In supporting uniform tariffs they would probably emphasize the guarantee they provide of equal effective protection to all existing and potential import-competing industries. They would surely also stress how hard it is for any single firm or industry to plead for specially favored treatment for itself, in a context where every import-substituting activity is equally protected via a general and uniform tariff. This is a political-economy argument for uniformity, not a neoclassical one. Similarly, uniform value-added taxation would be seen by these people as a safeguard against pressures for special treatment by all sorts of special interests. At the same time they would see in a uniform rate and

broad base a tremendous boon to the equitable and efficient administration of a value-added tax. This is because a predictable consequence of differentiated rates is that much evasion will take the form of mislabeling important chunks of value-added -- i.e., putting them in low-rate categories rather than the high-rate ones where they belong.

These are simply a few examples of how the Washington consensus is something quite different from a faithful reflection of modern neoclassical economics in the medium of economic policy.

**Some Examples of “Excess of Zeal”**. It should be clear that I am myself a strong supporter of the Washington consensus, and feel that many real-world success stories (Argentina, Chile, Hong Kong, Peru, Taiwan, among others) have emerged from policy packages that fit quite well into its framework. Moreover, I believe the separate propositions of the consensus have a strong foundation in experience, that would stand up well under a rigorous analysis of their costs and benefits.

Yet as an ardent broker for “The Cost-Benefit Approach to Economic Development”, I feel it incumbent on me to recognize cases where this approach has been cast aside in favor of one or another imagined panacea. The three cases I will treat are privatization, capital and exchange controls, and “currency boards/dollarization”.

Privatization came to the fore as a policy alternative once economists and others began to see with their own eyes the many trammels under which public sector enterprises typically have to operate. They are often very severely restricted as to what they can pay their executives, their lower-ranked workers are often paid total compensation (in cash or in benefits) well above the prevailing market wage for comparable work; it is often next to impossible for them to shut down unprofitable lines of activity; modernization is frequently resisted when it would “make too many waves”; the pursuit of real cost reduction, is rarely encouraged. For all these reasons,

it would be wise if most of what we have tended to call state-owned enterprises would end up being transferred to the private sector.

But this does not mean transferred “right now, no matter to whom, no matter under what conditions”. My position on privatization is very clear. I believe that government should do the same kind of careful study, the same sort of survey of potential buyers, the same sort of “preparation of the product for sale” as General Electric or General Motors would do if it decided to sell off a division or two. I do not want to be perfectionist here, but one must make serious efforts to avoid the taint of nepotism (a la Somoza, Marcos, Suharto, et al.) or other corrupt practices (e.g., sales to favored supporters at bargain prices). One must be careful in the case of public utilities that the regulatory framework under which they will operate, once privatized, is based on sound economic principles and is known in advance by all relevant bidders. (One must not make the mistakes that prevailed in the telephone industry in several Latin American countries, in which what was sold was in large measure the right to exploit the public via monopoly pricing for a significant period of time.) One must avoid hasty and imprudent contracting, as was the case when Mexico authorized the construction of thousands of kilometers of privatized roads. (The contracts were awarded on the basis of the shortest promised payback period; the winners then charged the exorbitant tolls implicit in the abbreviated payback period; at those tolls traffic was minimal, far below what the government had “guaranteed” when the contracts were let, so the government ended up by buying back the roads from their private owners.)

In the eyes of this jaded observer, much of the recent wave of privatizations was done for the wrong reason. It was not that most developing country governments were following the dictates of sound economics; instead, I believe, many of them were simply mesmerized by the

thought of getting their hands on “all that money”, thus permitting them to “patch over” endemic budget deficits for their own term of office, leaving a double problem to successor governments -- finding a real and lasting solution to the deficit problem plus coping with the heritage of hasty, poorly-prepared privatizations.

Capital and Exchange Controls have been much in the economic news of late, with the debate often running between purists who are satisfied with nothing less than the complete absence of controls and apologists who defend capital and exchange controls without really explaining what it is they are defending. There seems to be little appeal to evidence from past experiences, on either side of this debate. One point to be made at the outset is that in probably more than half of the “growth miracle” episodes of recent decades, some form of capital and/or exchange controls were in place. Whatever their effect, it was not so strongly negative as to prevent the “miracles” from happening.

On the other side, the defenders of controls sometimes often seem to be defending the idea of controls rather than the instruments involved and the ways in which they might sometimes be fruitfully employed, and other times quite noxious. Let me try here to sketch how one might proceed. First, let me confess that, based on what I perceive to be the evidence, I am quite close to being a purist on the issue of “compulsory surrender” of export proceeds. This and similar trade-related controls lead rather quickly to black markets in foreign currency, and to wholesale evasion based on the underinvoicing of exports together with the overinvoicing of imports. One need but think about it for a few minutes. It is easy for exporters to underinvoice by 10 or 15 percent, and for importers to arrange for overinvoicing of similar magnitude. This permits a hemorrhage of capital from the country, equal to 20 or 30 percent of  $[(M+X)/2]$  -- which could amount to 4 to 6 percent of total production in a country where imports and exports averaged, say, a fifth of GDP. And if a country with such controls tried hard to enforce them,

this would require a huge diversion of many knowledgeable people from productive activity, turning them into “economic detectives and policemen” when they ought to be out there contributing to the country’s productive efforts.

That said, let me add that the developing country I know best (Chile) had some sort of capital controls on the books during both of its major growth episodes of recent decades -- 1975-81 and 1985-98. Two mechanisms merit mention. The first was the 1985 decision by Chile’s Central Bank to auction off specified amounts of foreign exchange, every few weeks or so, to be used by private parties to buy up the discounted debt of Chilean private banks (in the “secondary market” of New York). This debt was then repatriated to Chile with the foreign currency debt being typically replaced by domestic currency instruments. The “profit” -- the difference between the discounted New York price and par value -- was then split somehow between the Chilean debtor banks and the private impresarios who undertook the “arbitrage” operation. When these operations first began to appear around 1985, the Central Bank feared that there would be an utter flood of demand for foreign exchange to be used for this purpose, putting in peril the government’s objective of trying to keep the real exchange rate within a specified band. The auctioning of licenses for this purpose: a) prevented the flood of demand, b) enabled the Central Bank to create its desired amount of demand for foreign exchange at every periodic auction, a capacity that it used artfully over a period of some five years to keep the real exchange rate within the target band, and c) to make a lot of money from the proceeds of its biweekly auctions.

Whereas the first mechanism (just described) can be classified as a genuine success, the second has clear minuses as well as pluses. Interestingly, this second mechanism was a direct outgrowth of the first. For, as time passed, the amount of discounted debt available for



repatriation kept declining, while the discount at which it sold grew ever smaller. As a consequence, the debt-repatriation instrument had practically no leverage left by 1990.

Nonetheless, the authorities still wanted to maintain the real exchange rate within a band. They reasoned that if the debt repatriation instrument had functioned well by reducing the external liabilities of private banks while increasing their internal debt, could one not obtain similar results by building up the external assets, in this case of the Central Bank, while increasing its internal debt? Thus the Central Bank began to create its own desired extra demand for foreign exchange, using funds obtained by the issuance of internal (indexed) debt. Many will recognize in this description the familiar face of “sterilized intervention”. It was a pillar of Chilean Central Bank policy from about 1990 until very recently.

This new policy had two drawbacks -- first, the reflux back to Chile of some of the foreign exchange the Central Bank was placing abroad, and second, losses incurred as a result of the Central Bank’s having to pay higher interest rates on the funds it borrowed at home than it received when those same funds (converted to dollars) were placed abroad.

The reflux of funds can be described as follows. First, consider an autonomous capital flow of, say, \$3 billion into Chile. This flow had the effect, not welcomed by the Central Bank, of depressing the real price of the dollar. So the Central Bank enters the market with a demand for \$2 billion dollars, to be placed abroad as part of its international reserves. To get the funds for this purchase in a non-inflationary way, it issues an equivalent amount of local debt. But this extra supply of Central Bank debt causes market interest rates in Chile (both nominal and real) to rise. Now the world capital market, attracted by the increased rates, sends an “induced” capital flow of, say, an additional \$1 billion to Chile. So, while the Central Bank carried out an operation in the amount of \$2 billion, its effective influence on the net resource transfer into Chile would be only \$1 billion.

This problem had appeared to a degree in the debt repatriation period, but recall that in this case no Central Bank debt (or Central Bank losses) were involved. Moreover, the intensity of the reflux problem grows with the degree of integration of a country with the world capital market. The greater the degree of integration, the larger will be the fraction of each \$1 billion sent abroad that comes back as what I have called a reflux. This fraction may have been as low as 5 or 10 percent when the debt repatriation policy started in 1985, but was likely in the range of 30 to 50 percent by the 1990s.

It was in order to combat this reflux problem that Chile introduced its well-known “tax” on inflows of portfolio funds. This “tax” consisted of a requirement that 30 percent of incoming funds be placed as a non-interest-bearing deposit at the Central Bank for a period of a year. The cost to the investor was the loss of a year’s interest in these funds, and the Central Bank made things easy by permitting investors to simply pay 3% of the incoming funds up front (as if compensating an intermediary to make the 30% deposit for them). The effect of this was to allow one-year interest rates to be 3 percent higher in Chile than in the world marketplace, without this differential attracting any “reflux” funds. Reflux would now begin only as the interest differential exceeded 3 percent.

The “tax” on inflows of portfolio capital clearly helped reduce the extent of reflux, but it practically guaranteed that Chilean interest rates would be substantially above world market rates, at least so long as portfolio capital was still flowing into Chile. This created a virtual assurance that the Central Bank itself would incur significant losses as it borrowed funds in the domestic market to be placed abroad. Moreover, such losses were generated not on this year’s increment to domestic debt and international reserves, but on the whole outstanding stock of reserves which had been generated in this way. The resulting problem of Central Bank losses

became more and more severe as the international reserves of the Central Bank grew from some \$6 billion in 1990 to over \$18 billion in 1997, largely via sterilized intervention operations.

The growth of reserves would have been much larger, and the consequent Central Bank losses as well, had the Chilean authorities not modified their real exchange rate target band, permitting a steady real appreciation of the peso between 1990 and late 1997, when a modest market-induced real devaluation set in, in the wake of the Asian crisis. Subsequently, Chile first lowered and then abandoned its “tax” on capital inflows, and some \$3 billion of the Central Bank’s international reserves were sold as Chile responded to the crisis.

I tell this perhaps overlong story to let readers see, from the inside as it were, how serious problems can arise even from a rather mild but quite intelligent set of controls, put in place for the “sensible” objectives of using the real exchange rate as a positive signal for producers of tradable goods and perhaps smoothing what might be transitory currency appreciations due to unusual spates of capital inflow. I do not believe that the evidence says that Chile’s policy, centered on the use of sterilized intervention to influence the real exchange rate, was a mistake. But certainly one must admit that whatever was gained on the real exchange rate front was bought at a significant price.

Currency Boards and Dollarization have been the subject of a new wave of enthusiasm in the last few years, with protagonists often claiming almost miraculous powers for these particular nostrums. I believe that both theory and real-world observation feed into a simple distillation of “what we know” about exchange rate regimes. I believe that the correct starting point is the notion of the real exchange rate -- the real price, in local currency, of a real unit (measured as its buying power over tradable goods) of foreign currency. Under a flexible exchange rate system it is possible for a country’s domestic price level to remain constant, while the nominal exchange rate,  $E$ , fluctuates to reflect movements in the equilibrium real exchange rate. Under fixed rate

systems, real exchange rate equilibrium is brought about through movements in the domestic price level  $\mathcal{P}_d$  relative to the world price level of tradables,  $\mathcal{P}^*$ .

We have had lots of experience with situations calling for an appreciation of the equilibrium real exchange rate (i.e., a fall in  $RER = E\mathcal{P}^*/\mathcal{P}_d$ ). Typically when  $E$  is fixed, these situations call for the domestic price level  $\mathcal{P}_d$  to rise. This tends to happen with relative ease. Whether caused by a capital inflow or by a boom in the world price of a major export, there is typically a flood of “dollars” on the market, as a consequence of which real spending goes up, pushing up the prices of nontradables. Some people mistakenly think that this type of adjustment should be resisted because it is “inflationary”, but in fact it is simply an adjustment by which the real exchange rate is moved to its new equilibrium level.

Unfortunately, the adjustment is not equally easy when a downward movement of the domestic price level is called for. Chile had a fixed exchange rate when the 1980s debt crisis struck. Within one year (June, 1981 to June, 1982), its rate of unemployment rose from less than 10 percent to over 25 percent. And it took years before unemployment was brought back to “normal” levels. Something similar happened in Argentina in the wake of the Mexican crisis of 1994-95. Here unemployment rose from around 6 percent to as high as 18 percent, before drifting down to 13 percent at the time of the Asian crisis, which gave rise to new pressure on the RER, causing unemployment to rise again, to 15-16 percent.

In both the Chilean and Argentine cases, flexible wages and prices surely would have brought about a rapid and smooth path to the new equilibrium RER. But wages and prices were not flexible enough in a downward direction to permit this happy outcome. Both governments made efforts to stimulate wage flexibility, but to little avail. It is, to me at least, a well-established fact of life that workers accept with relative ease reductions in real wages that come about through the impersonal mechanism of a rising nominal price of the dollar, but instinctively

resist similar reductions brought about by cuts in nominal wages. This difference is also perfectly understandable. When real wages fall due to a rising price of the dollar, no employees in their right mind would blame their employer. Yet anytime that employer comes to them and asks them to take a nominal wage cut, they have good reason to view this request with suspicion, as on its face it represents a straight transfer from them to him. Experience has shown us that in these circumstances the use of layoffs rather than wage cuts is preferred by both employers and employees. And it is this fact of life that lies at the root of the asymmetry of real exchange rate adjustment under a fixed-exchange-rate system.

The framers of the Bretton Woods Agreement recognized all this, in providing for a system of fixed rates most of the time, with adjustments to correct situations of “fundamental disequilibrium”. I believe the experience of the Bretton Woods period was a pretty good one. It was massive flows of funds between major financial centers rather than great human misery that brought about that system’s demise.

The lesson for developing countries is, I believe, that fixed rates are quite fine when the equilibrium RER is stable or falling (appreciating), and may be bearable under moderate rises (depreciations) of the real price of foreign currency. But big depreciations translate into big deflations under a fixed-rate system, and these impose huge costs on the economy and the society. Argentina is in a very special position in this regard, as three “hyperinflations” in a period of less than 20 years have left their mark on the Argentine people. Most of Argentina’s best economists, of all political stripes, seem to agree that even a small deviation from parity with the dollar would cause a huge flight from the peso. So here is the case of a country whose people have up to this point, and in a certain sense, willingly borne the costs of persistent deflationary pressures, feeling that this is the price they have to pay for stability.

Few developing countries are in Argentina's position, however. For most, the alternative of a somewhat flexible exchange rate system is a perfectly viable option. History holds many examples of flexible rates that are kept constant through Central Bank policy for years, but that retain the legal attribute of flexibility, and many other examples of rates whose nominal fix is broken by intermittent devaluations as serious crises emerge. Many other systems -- dirty floats, crawling pegs, exchange rate bands (both nominal and real), tablitas (setting the nominal rate on a predetermined, typically upward path) -- can claim significant periods of successful operation, and all have the capacity to deal with situations that would call for serious deflations in a fixed exchange rate setting.

So why the great enthusiasm for currency boards and/or dollarization, both of which make devaluation extremely costly -- indeed impossible except by abandoning the system? I believe some of it comes from a misconception -- that somehow by imposing a rigid system one will bring about the type of behavior which is a precondition for such a system to work. Thus, huge and chronic fiscal deficits financed by the banking system are simply incompatible with fixed rates of any kind. A country cannot rationally undertake to have a currency board or to dollarize unless it has surmounted such chronic deficits. But the natural sequence is to first surmount the deficit, then fix the exchange rate in the traditional way, and finally to move to a currency board or dollarization.

The same logic applies with respect to international reserves. A country with few (or zero or negative) international reserves simply cannot contemplate fixing its exchange rate. Significant reserves (in relation to the volume and volatility of its trade and capital movements) are required before even the most elementary form of exchange rate fix is possible. For a currency board or for dollarization the accumulation of reserves must be even greater.

In the end, such exchange rate systems might be good for some countries. But they are certainly no panacea for most developing nations. Both objective facts and policy adjustments can help determine for which countries such mechanisms are suitable. The objective facts concern the likelihood of volatility in the equilibrium real exchange rate in the future. A country whose exports are mainly primary commodities with volatile world prices has a naturally more volatile real exchange rate than countries like Taiwan and Korea whose tradable goods are mainly manufactures with relatively high elasticities of supply (hence low volatility in their equilibrium relative prices). But also, countries whose political systems have not yet developed strong stabilizing traditions risk RER volatility from this side. The risks of domestic riots and disturbances, of uncertain changes in government, of quick shifts from one governing ideology to another -- all these bode ill for any long-term commitment to a peg with the dollar (or other numeraire).

On the side of policy there is a poorly understood proposition that can be quite critical to the success of, say, a currency board. This concerns the nature of a country's banking system. A country with "its own" banks is much more vulnerable than a country (like Panama) whose banking system consists mainly of foreign banks. An "own" banking system suffers from the link between the asset and liability sides of the banking system's balance sheet. If people significantly reduce their deposits, the banks are constrained to cut private sector credit, which in turn has strong depressive effects in GDP. This sequence is present in just about every major banking crisis of recent times. It can be avoided if the banking system can somehow maintain its loan portfolio, even as deposits decline. This is an easy task for banks that have 70 or 80 percent of their loans and deposits outside the country in question, as is the case in Panama and as was the case in the British colonies (where the four big British banks accounted for most of the banking activity).

I use the city of Peoria, Illinois as my standard example of a case where dollarization worked perfectly well, and where a currency board would surely work. Peoria (and any other city within a country with a good capital market) has two attributes that are critical to this success. First, there is no connection between the saving that is done by people and entities resident in Peoria, and the investment that occurs there in any given period. And second, there is little connection between the real cash balances held by Peoria residents and entities and the bank loans they receive. These two dislinkages -- the unhooking of saving from investment and the unhooking of bank loans from bank deposits -- are the real secrets of success of “dollarization” in entities like cities. Panama and the old British colonies came close to emulating them, and enjoyed some success with dollarization and with currency board respectively. But how many developing countries can hope to do likewise, and how soon? This, to me, tells us why the zealots of dollarization and of currency boards have gone way too far in urging the general adoption of these systems. Here, as elsewhere in economic policy, there is no substitute for the calm and careful diagnosis of the situation at hand, and the subsequent calm and careful weighing of costs and benefits.

**Whither Development Economics?** Readers should be able to sense from the preceding sections the directions in which contemporary “working professionals” would like to see our discipline evolve. Here I want to emphasize the vision of a developing country as one small element in the interconnected web we call the world economy. For a small country to contemplate being a closed economy makes no sense at this stage of history. That places in center stage the question of the linkages by which it connects to the world economy.

Here I want to focus on these linkages, paying special attention to the pervasive roles played by the real exchange rate, by the financial sector, and by real cost reduction. To me, the textbook representations of international trade (two quite symmetrical countries, two products,



two factors), though interesting in themselves, shed precious little light on the problems facing a developing country's policymakers in the modern world. Far more relevant is the vision of one country facing a much larger, quite impersonal entity known as the world market. In this market, thousands upon thousands of goods and services are traded, for nearly all of which a country must be thought of as a "price taker".

Arrayed against this multitude of world prices, we have the country's own resources, skills, knowledge, tastes and productive capacity. If the real exchange rate (the real price of the real dollar) is somehow set too low, the people of the country will want to import everything and will be able to export very little. At higher and higher real prices of the dollar, the menu of desired imports gets shorter, while the list of profitable exports grows. Real exchange rate equilibrium is established through the forces of demand and supply of foreign exchange (including capital flows, debt service, emigrant remittances, etc., as well as export supply and import demand). This is by far the best way to view the process by which a country's comparative advantage is determined. It reveals, in particular, how that comparative advantage is modified when big inflows of capital or major export price booms cause the equilibrium RER to fall, or when the exigencies of debt repayment or the political and economic uncertainties linked to capital flight cause the equilibrium RER to rise.

Readers should note how easy is the transition from discussing the RER as the fundamental equilibrator of a country's international trade and as the basic determiner of its comparative advantage, to seeing the RER as a central variable for the analysis of episodes of debt crisis, capital flight, Dutch disease, and the collapse of export prices. One should recognize, too, that real exchange rate analysis, as we understand it today, was not part of the toolkit of trade and development economists, even as little as half a century ago. Understanding of the real exchange rate began to enter as one branch of international trade economics began to focus on

the “small country assumption” and as history began to produce a series of shocks (oil crises in the 1970s, debt crises in the 1980s, “regional” crises in the 1990s) that carried with them huge movements of the RER.

Yet there is much that we have still to learn about real exchange rate economics. We know, for example, relatively little about how the machinery of RER adjustment works its way through to the allocation of resources in an economy. We do know that when crises strike, the bulk of the effect of a sharp rise in the RER is a severe reduction in imports (to which declining income and restricted credit also typically contribute). Effects on the production of tradables and on exports seem not to be large initially. But as time goes by the productive side seems to take over, with the adjustment process shifting from one dominated by declining imports to one dominated by rising exports. We need to study the dynamics of this shift, and in particular try to trace empirically the path by which a higher RER ends up generating important shifts of resources from the nontradable to the tradable sectors of the economy.

Another set of questions follows quite directly. Both from theory and from observation we can conclude that the dynamics of real exchange rate adjustments are quite different under different exchange rate regimes. We have much greater RER volatility under freely floating rates than under fixed rates, and substantially greater overshooting of the final equilibrium RER as the economy adjusts to major shocks. A lot remains to be learned concerning the whole process of RER adjustment in the wake of shocks, and how the process of adjustment is influenced by the country’s exchange rate regime.

The financial sector was always an important part of the story for developing economies, but its role has grown as the sector itself modernized and developed. To me, the key element that economists should focus on is the consolidated balance sheet of this sector. Drawing the boundaries of the sector in the most useful way (so as to include the Central Bank, the

commercial banks and other deposit receiving institutions like financieras), we have some broad concept of money as the major liability of the consolidated system, and can classify its assets as consisting of net foreign assets plus credit to the government plus credit to the private (or productive) sector.

This broad picture of a consolidated financial system has been available to us for a long time, in Central Bank bulletins and in the IMF's International Financial Statistics.

Unfortunately, we (the economics profession) have not worked hard enough trying to exploit the informational riches contained there. The big picture is as follows. Economic agents (people and firms) decide how much "broad money" they want to hold. Their tastes and judgments can be captured in the notion of a demand function for, say,  $M_2$ . But it is the real amount of money ( $M_2/P_d$ ), not its nominal amount ( $M_2$  alone) that is the object of their tastes and decisions.

Changes in the demand, and in particular large changes, can have dramatic effects on the fortunes of an economy. In every major financial crisis that I can think of, we observe sharp reductions in  $M_2/P_d$ . These, for practical purposes, require that one or more of the three major categories of assets must be cut. Here we see the convenience of a country's having a large cushion of net foreign assets (international reserves) to act as a shock absorber. In nearly all crises however, the reserves cushion cannot do anywhere near the full job, and the consequence is a very large reduction in the volume of "real credit to the private (or productive) sector."

I cannot emphasize too much that in these crisis situations, the credit contraction is far more worrisome than the monetary contraction itself. To the extent that crises culminate in major recessions or depressions it is hard to attribute the direct cause to be the reduction of  $M_2/P_d$ , for people have to increase their spending in the process of reducing real cash balances. The real culprit lies on the credit side, where a sharp contraction of available funds (in real terms) typically leads to high real interest rates (often 20 or 30 percent per year, sometimes much

higher). What we undeniably see in such circumstances are widespread loan defaults and business failures.

It is one of the great mysteries of economics how credit contractions can have so strong an effect on real output. Our textbooks would tell us that the marginal product of credit is measured by the interest rate thereon, but this measure greatly understates the fall in output that follows sharp contractions in real credit. One of the great challenges facing us, then, is to study this nexus between the demand for money, the supply of credit and real output, hoping in the end to dispel much of the mystery that now surrounds it.

The final item on this incomplete agenda for development economics research is real cost reduction. Among the items about which we need to learn more are: a) how economic openness functions as a catalyst for real cost reduction; b) how strong is the influence of particular types of policy measures (controlling inflation, reducing distortions, rationalizing regulations, etc.), on the process of real cost reduction and c) the nagging question of what are the mechanisms that trigger real cost increases for such a significant fraction of firms (and of disaggregated industries), and whether there are ways in which improved policies can reduce their incidence. Answers to these questions will help us to better understand both the nature of the growth process and the ways in which economic policy can improve as policymakers strive to “enable” and to promote economic growth.