# Interview with Arnold Harberger*

*David Levy*

**Arnold Harberger:**

Professor of Economics at the University of California Los Angeles since 1984; Professor Emeritus at the University of Chicago since 1991. Other academic positions include visiting professorships at Harvard and Princeton universities, the Massachusetts Institute for Technology Center for International Studies in New Delhi and the University of Paris. Member of the National Academy of Sciences of the United States. Fellow of the Econometric Society and of the American Academy of Arts and Sciences. Past president of the American Economic Association. Consultant to 16 foreign governments, nine U.S. government agencies and eight international agencies and foundations. Author or co-author of nearly 200 journal articles, books, speeches and conference presentations. Forthcoming publications include: Remarks at a conference honoring Milton and Rose Friedman, San Francisco, June 1998, published by the Division of the Social Sciences, University of Chicago; and «Studying the Growth Process: A Primer» in *Capital Formation and Economic Growth*, Michael J. Boskin, editor, the Hoover Institution.

Government leaders of more than 15 countries have called upon Arnold Harberger's expertise. With a reputation as a hands-on practitioner of economics, Harberger has also held consulting positions with global organizations, including the International Monetary Fund, the Asian Development Bank and the Organization of American States.

Numbered among his students at the University of Chicago and the University of California Los Angeles are at least a dozen central bank presidents and two dozen foreign government ministers.

But Harberger may best be known for his leadership of a group of economists known as the «Chicago Boys,» so named because of their connection to the University of Chicago. The «Chicago Boys» were significant free-market reformers in Chile during the 1970s.

Currently a professor of economics at UCLA, Harberger spent 38 years at the University of Chicago, where his research contributions were mainly in the fields of public finance, cost-benefit analysis, international economics, the economics of inflation and economic policy for developing countries.

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In the following interview, Harberger takes the reader around the world as he discusses economic policies and problems in Latin America and Asia, and shares stories of his mentors and colleagues over the years.

*REGION:* The Federal Reserve is always open to advice, expert or otherwise. What advice do you have for the Fed?

*HARBERGER:* When I go to Latin America and other places people ask me, among other things, about the prosperity in the United States and the rather amazing economic expansion and minimal recessions that we've had in recent times. I say, «Well I think that's all because of Greenspan»; I know that it is the whole Board and not just Greenspan, but just about, everybody identifies the Board by its chairman's name.

I think the Greenspan Board has forged a new path, somewhere between Milton Friedman and James Tobin. Friedman conceived of the demand for money as a very stable and immobile function, one that you could rely on. At the same time, he thought of bureaucrats and officials as a very unreliable lot, not to be trusted. These views led him to advocate a simple rule of monetary expansion

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based on the demand for money. Then you have the other extreme: Jim Tobin thinks the demand for money is so volatile as to be completely unreliable. I think that the truth has proved to be somewhere between these two extremes. You can try fitting as many demand functions for money as you like, and you are not going to find one that has exhibited during recent decades the degree of stability that Friedman was counting on.

But at the same time I just don't believe that the demand function for money is not a real and live and important relationship. So we have to deal with a very essential function, central to monetary theory and policy, but with the unfortunate attribute of shifting over time. My view is that even if we cannot predict these shifts, we can try to understand them when they occur. We can reach judgments about whether a given shift is transitory or more lasting. And we can then use these judgments to guide monetary policy. When the demand for money shifts upward, you give the public more money so as to avoid deflationary pressures, and when it shifts downward, you take money away from the public in order to forestall inflation.

I think of Greenspan as having a whole corps of detectives doing detective work on the demand for money, trying to find out when it has shifted and when it has not. When they see what looks like a shift, they ask whether it is likely to last, or if it is purely transitory or an error of observation. This detective work is done, always with the idea that once one learns how the public's demand for money has shifted, one accommodates these shifts, thus helping to stifle important inflationary and deflationary pressures before they gain much force. I really think that that is a fair description of what the Fed tries to do. Indeed, I had occasion a little more than a year ago to sit next to Greenspan at a lunch and I asked him what he thought of this interpretation. He said he considered it a good representation, except that he found the detective work to be a lot more difficult than I had intimated!

*REGION:* When I asked several economists at the Minneapolis Federal Reserve about you before the interview, they invariably said, Harberger is known in the economics world mainly for two or three things. What would you guess they said?

*HARBERGER:* Well, I really have no idea what your colleagues in Minnesota might say, but I know what I would have liked them to say, and for what I would like to be remembered. There are three main things. First, I've had over my long academic life lots and lots of students of whom I am very proud. They have distinguished themselves both in the academic world and in policymaking. Quite a number were among the important architects of major revolutionary changes in their countries' economies, particularly in Latin America. A few of them (notably Gregory Chow, Zvi Griliches, Bob Lucas, Merton Miller and Marc Nerlove) have also been responsible for significant advances in economic science.

Second, I would like to be thought of as an advocate and a missionary of economic ideas in the world. I believe, more than most economists, in the great strength and pervasiveness of economic forces, and in the power of economic policy to do all sorts of things. No one can deny that when it's bad enough, economic policy can certainly ruin an economy. And if bad economic policy can ruin the economy, good economic policy can certainly correct it. Therefore I feel that we have a very important role to play. The role of economists in the world, in some sense the duty of the economics profession, is for us to represent economic knowledge in the councils of government and in debates about policies in all kinds of forums. Policy decisions about economic matters should be built on what we have learned, and it is our job to see that the voice of sound economics is heard by those who make decisions. This is what I have been fighting for, for almost all of my professional life.

The third thing that I would like to be remembered for is that I was a genuine professional economist who practiced what he preached. I have worked hard on lots of problems, in lots of places, covering lots of areas of economics. I would like people to think of me as somebody who, with a very simple kit of robust tools based on economic fundamentals, was able to go out and face many different problems in many different places and come up with some pretty good answers.

*REGION:* Your students are salted throughout the international organizations and central banks and universities of the world. Is there a way that we can understand who they are, where they are and what they're doing?

*HARBERGER:* In the developing world and Latin America in particular, I have been fortunate to have a large number of students over the years. I've taught something like 300 or more Latin American students in American universities, plus many more in the shorter courses that I've given down there. In any case, I am very proud of what they have accomplished. I think my number of ministers is now crossing 25, and I know my number of central bank presidents has already crossed a dozen. Right now the central bank presidents of Chile, Argentina and Israel were my students, and the immediate former central bank presidents in Argentina, Chile and Costa Rica were also my students. So that's at one level.

I think the entire atmosphere al Chicago for a long period there, in the 1960s and 1970s in particular, made it a cradle for the training of people in policy economics, always emphasizing fundamentals and always trying to give them a true sense of how economics links to the real world.

In the international agencies, they have also built an enviable record. There was one moment in time when four regional chief economics at the World Bank had been my students in Chicago. One of them, Marcelo Selowsky, went off to be the chief economist for the newly minted ex-Soviet empire area, which is the biggest such job in the whole bank. And guess what? He was replaced by yet another former student, Sebastian Edwards. So, it's very nice to see these people moving up, and I'm proud to have played a part in their development as economists. But I certainly don't want to claim anything like exclusive responsibility for their training.

I think the entire atmosphere at Chicago for a long period there, in the 1960s and 1970s in particular, made it a cradle for the training of people in policy economics, always emphasizing fundamentals and always trying to give them a true sense of how economics links to the real world. These attributes are woefully lacking, I think, in much of the training that goes on today. Far too much time is now spent, in most graduate schools, on highly formalized techniques that are very remote from the real world and that do much less to prepare future policy economists than was done in that era at Chicago and a number of other places.

*REGION:* So if you were to generalize about what your students might have in common, the «Harberger» in them, it might be this practical hands-on approach.

*HARBERGER:* Underneath it all I think is a certain element of modesty—a recognition that we're not going to be able to «model» the world, that the world is not just going to accommodate itself to some little frame that we make up. On the other hand, there is almost no economic event where supply and demand does not enter. So if you really know how to handle supply and demand, put it into different contexts at different times, you're way ahead of the game. People coming from graduate school are going to fall flat on their face if they try to apply ultra-sophisticated models in tough real-world situations like the ex-Soviet empire. Those situations will be much better understood, diagnosed and acted upon by more fundamentals-oriented people who say, «Well here we've got proto-markets that are just now being created; how do we see the forces of supply and demand working here?»

And I think the reason why these Chicago products of the 1960s and 1970s rose like corks in the international agencies and in other policy arenas came from the fact that, on so many different occasions in countless boardroom and brainstorming sessions, they seemed to see problems more clearly; diagnose them more accurately, and to draw more direct policy implications from their analyses than most of their competitors. And to build these attributes, I believe their fundamentals-based, real-world-oriented training was the key.

*REGION:* I would also imagine that your students reflect predominately-free market thinking?

*HARBERGER:* Correct. I think that when people talk of the Chicago School who haven't been there and who only read about it in the press, they tend to think of Chicago as being characterized for a long period of time by an ideological slant on

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economics. Nothing could be farther from the truth. It was never like that. Milton Friedman had his office next to mine for something like 20 years and I can vouch that Free to Choose was never used in classrooms. Nor were the messages of Free to Choose put forth in the classroom. A Monetary History of the United States and Milton's text on price theory and its applications was used. I think three basic tenets characterized the Chicago School during the years that I was active there.

First, everybody believed theory was important. Theory was important because otherwise you can't cope with very complex issues in an organized way. The second tenet was that theory is important only insofar as it helps us really understand and interpret the way the world works. Theory for its own sake (or what I sometimes call stratospheric theory) had very little place in «Chicago» thinking at that time.

And the third tenet of the Chicago School is a firm, unshaking conviction that market forces really work. It isn't that markets are perfect. It isn't that they lead to the beautifully refined equilibria of contemporary theory. They're genuine forces: The one law that nobody can repeal is the law of supply and demand, and those who try to fight that law are headed for big trouble. This view was shared by all the people who were active in Chicago. The faculty all believed it and they kept showing students one real-world example after another, looking at it and saying, «Behind what we observe are these fundamental forces. You observe, you reason, you gain understanding, and finally you predict on the basis of these forces.» This way of thinking became an integral and essential part of the way most Chicago students ended up viewing the world and exercising their profession.

*REGION:* Hayek came during your tenure at Chicago?

*HARBERGER:* He was in and out, but not in economics.

*REGION:* On the Committee on Social Thought?

HARBERGER: He was on the Committee on Social Thought, upstairs on the fifth floor. There was amazingly little interaction between Hayek and the rest. I think it would have been more interesting if there had been more interaction. There was a great difference in focus between Hayek (the Austrians) and Chicago as a whole. I really respect and revere those guys. I am not one of them, but I think I once said that if somebody wants to approach economics as a religion, the Austrian approach is about as good as you can get. They approach it from the angle of philosophy: They derived the principles of free market economics from what they saw as «the nature of man» and other fundamental principles. Their approach pays little attention to empirical measurements and testing. If the price of something goes up and the quantity goes up, they infer that the demand must have shifted. That's true. But then they ask, how can you infer anything from anything if you can explain any given paradoxical event by such an easy ploy? That's their story. Whereas the economics department people in Chicago, while being just as devoted to good theory as the Austrians, really ultimately paid a great deal of attention to the empirical world and the use of economics in the empirical testing of theoretical propositions.

*REGION:* So, does the Chicago School still exist?

*HARBERGER:* I think it does. As the faculty rolls over it takes on different forms. In the period to which I refer «policy economics» was the top thing in Chicago. We had T. W. Schultz, Milton Friedman, George Stigler, D. Gale Johnson, Harry Johnson, Bob Mundell, Jacob Frenkel, George Tolley, Larry Sjaastad, and myself, among many others less directly interested in policy issues. Policy economics was the hallmark of Chicago in that period. It was why many students went there, and what many students took advantage of after they left.

Today, policy economics is very little represented at Chicago and there are really two main centers. One is the macroeconomic center that surrounds Bob Lucas, along with Lars Hansen, Nancy Stokey and others. Then on the other side you have a group of people that I package together under the umbrella of «human resources»: Gary Becker, Jim Heckman, Sherwin Rosen, Bob Topel and Kevin Murphy (who won the latest John Bates Clark Award, given every two years to the economist under 40 who has made the most significant contributions to economics).

*REGION:* One gets the sense from your speeches and writings that to you successful economic policy in developing countries is best understood in terms of the people who provided the leadership. Is that correct?

*HARBERGER:* I would start with the fact that most major economic policy changes come in moments either of actual crisis or perceived crisis, that societies that are comfortable rarely want to change their comfort level even though sensible reforms promise to improve things. They may be willing to make «little» sacrifices but not big ones in the hope of promised improvements. This helps explain why major changes have nearly always come at moments when people were reacting to a crisis situation—where in some sense they had «had it up to here» and were willing to risk taking daring new trails. Now, let that be the backdrop.

When I use the word «risk» here I really mean it. It is typical of crisis that people really don't know what to do. The authorities are often just as perplexed as everybody else. They too often have turned to the wrong people for advice, people who prescribed medicine that was altogether wrong and that drove the country's economy to the wall. Examples are Indonesia in the time of Sukarno, Chile in the time of Allende, Nicaragua under the Sandinistas, Argentina under Isabelita Peron, Peru under Alan Garcia. And then there are those wonderful occasions where people who really know what to do, and who embody good economics, are given their head, so to speak. Having such people in the right place at the right time can really propel an important revolution. I think the Indonesian miracle of 1968 and onward, the Brazilian miracle of 1965 and onward, Chile's performance since 1973 and Argentina's since 1990 all have that characteristic.

*REGION:* So really it is a timing issue?

*HARBERGER:* I think in terms of the translation of economic ideas into policy. The maturation of economic ideas in the cauldron of academic life is a continuing process; goes on forever. But I think that for making major policy changes in a country, the element of crisis is critical. It creates opportunity and that opportunity may fall into the lap of somebody who just doesn't know what to do or does it badly. But with luck the reins of policy will be given to people who really know what to do and how to do it.

*REGION:* Let's talk about the «Chicago Boys» in Chile and your role as their «father.» Does the story begin with «El Ladrillo»?

*HARBERGER:* That is an interesting place to start the story. Eduardo Frei (the father of the current president of Chile) was elected in 1964 and his term ended in 1970. Allende was the candidate of the left in the 1970 election, and the Christian Democrats (quite unfortunately from y point of view) named Radomiro Tomic as their candidate. Tomic was from the left wing of the Christian Democratic party and seemed to rival Allende in terms of what they were promising. They almost loocked like peas in a pod.

> After the coup, who was around who had thought about any of the problems of transforming Chile in a positive way? I believe it's fair to say that these guys, most but not all from Chicago, were the only game in town.

Well, it wasn't just Harberger that reached the judgment that this didn't look like a very happy choice. A whole segment of the Chilean body politic was troubled by it. This led to a late candidacy by Jorge Alessandri. Since his candidacy was getting off so late, they called upon a group of younger economists (many of them former students of mine) to put together an economic platform. They worked very intensively and produced what I thought was a very good platform for Alessandri.

That platform turned out to be too reformist and too free-market for Alessandri. His political team so modified it that none of the authors wanted to be identified with the product. But they stayed together as a group thinking about policy issues. Allende was elected (with 38 percent of the vote) and after that this group, plus a few others, kept meeting, working with their 1970 policy prescriptions and evolving them through time. Their aim always was to specify in concrete terms what should be done to straighten out the Chilean economy.

As a result of this continuing operation, a document, later called The Brick («E1 Ladrillo») was created. As far as I know, at the time the military coup took place in Chile it existed only in typewritten copies with many carbons. It wasn't even duplicated. After the coup, who was around who had thought about any of the problems of transforming Chile in a positive way? I believe it's fair to say that these guys, most but not all from Chicago, were the only game in town. They became key advisers on economic policy, but the military kept the ministries for about a year and a half.

During that time, inflation kept roaring on, in spite of the fact that part of the reason for the military coup was to stop inflation. Under the Allende government there were enterprises that had been taken over by the government via a legal expropriation process, but many others that had simply been «intervened» by the government, which left the owners sitting out there in the cold but still the owners. The «interventors» whom I called commissars, paid little attention to efficiency and profitability, and as a consequence ran huge deficits.

Then came the coup, and the commissars were replaced by colonels. From on high came an order to each colonel: Thou shalt not have a deficit. Here is another case of flying in the face of economic laws. You cannot eliminate deficits by fiat, and they did not eliminate them. How had the commissars financed their deficits? They remembered some guy they studied with in Moscow some years back who was running a bank, so they'd go to him and ask for credit. Well, the colonels who took over from the commissars did much the same thing. They remembered some colonel that went to military school with them who ran a bank and leaned on him for the credit to finance their deficits.

After about 18 months, inflation was still running at virtually 20 percent a month and things were not getting better. Ultimately, the decision was reached by the military to throw in the towel. They named Jorge Cauas, a good friend of mine, not a Chicago person but one who could be, as a sort of super minister. That is when the «Chicago Boys» began to rise up to positions of top authority like minister, central bank president, etc., whereas up to that time they had been one notch lower in the hierarchy.

That is the time when major fiscal reform took place and when a good part of the transformation took place. Certain reforms had happened under the military. They had eliminated price controls on nearly everything very soon after the coup. They had unified and freed the exchange rate; they had also acted early on the first steps of a tax reform and had begun a process of privatization. Thus, it was not that no reforms had taken place before this passage of control from the military to the technocrats, but the big macroeconomic story of inflation and the budget was where the military had failed to cope. Finally, after 18 months, they recognized that they had failed. That was how it came about that the team known as the some of the things that «Chicago Boys» took were happening on over in the top economic policy posts.

*REGION:* And your role?

*HARBERGER:* I don't know how people ever got the idea that I somehow was acting as the conductor of Chile's economic policy orchestra. It was nothing like that. When people see «my hand» in the package of policies actually put in place in Chile, the source of that «hand» was more than 90 percent likely to be my lectures and seminars in Chicago, and the interminable bull sessions that I and my Chilean students had been having ever since the late 1950s.

I was trouble by some of the things that were happening on the political scene during and after the military coup. As a consequence there were five years at least, in which I absolutely refused to be a «consultant» to the Chilean government in the same way as I worked in other countries.

Moreover, at the same time I was troubled by some of the things that were happening on the political scene during and after the military coup. As a consequence there were five years at least, in which I absolutely refused to be a «consultant» to the Chilean government in the same way as I worked in other countries. The closest I got was writing a couple of papers for a private think tank, the Center for Policy Studies, in Chile. But at the same time I took every opportunity I could get to go to Chile, to see what was going on and to talk to my former students who were ministers, vice ministers or president or vice president of the central bank. We would meet at lunch and talk about problems. I don't know if I did anything except express my enthusiasm for the positive things I saw being done, and maybe every now and then emphasize the need for them to approach their policy problems in a mature and measured way, weighing benefits against costs, and trying to find policy designs that would strengthen support for and lessen the opposition to their programs.

*REGION:* During the authoritarian Pinochet government, the «Chicago Boys» promoted free-market reforms. Isn't it ironic that in a top-down situation you could make bottom-up solutions work?

*HARBERGER:* For a long time opponents would say these were reforms that would never be adopted by a democratic government. Then what happened is that one democratic government after another in Latin America adopted virtually identical reforms. Argentina, in particular, compressed the period so that they did in less than five years most of what it took Chile 15 years to do. Therefore, you cannot say that these reforms are inevitably shackled to a military government.

Now it can be said, however, that the first ones to do something, the pioneers, always have a harder time than those that follow them. And in the context of the middle and late 1970s in Latin America it took a great deal of courage to take those steps. Given that there was a military government, the idea that they were willing to cede economic authority to a group of technocrats made that transition easier than it would have been in a democratic context of the same time and place.

*REGION:* Milton Friedman played a different, lesser role in Chile, yet because of this connection with the Pinochet government, it had quite an effect on his life.

*HARBERGER:* And mine too.

*REGION:* How so?

*HARBERGER:* Milton, in a sense, is a big hero in that he took a lot of heat on the basis of just a single visit to Chile. He went there for a private foundation in March of 1975, and gave lectures in the universities and to broader audiences. Notably, these included lectures on the principles of freedom and similar topics. He spent less than a week in Chile and he came back to five years of demonstrations against him wherever he went. There was no justice in that, but Friedman really took it with great dignity and strength of character.

*REGION:* Even onto his Nobel Prize.

Countries with rapid population growth will have rapid labor force increments. That does not come from some endogenous growth model, it comes from the fact they have many babies, which those models do not talk about. So let us get down to earth and try to understand what we observe.

*HARBERGER:* That was only one year later. I encountered the same kind of student demonstrations—in Wisconsin, Berkeley, Davis and Duke. In Harvard I was made an offer of what is now Jeffrey Sachs' job, and there was a set of reverberations surrounding the Chilean story. In the end I wisely turned down that offer. I felt that t made no sense to enter a new and challenging job and to have to spend your first couple of years beating down other people's misinformed and false images of yourself. It's counterproductive for anybody to be in that situation.

*REGION:* The Mont Pelerin Society met in Chile.

*HARBERGER:* In 1981.

*REGION:* What was the significance of picking Chile?

*HARBERGER:* Chile was being touted as a great free-market economy and they wanted to see it. That was why it was picked. They were very careful to have lots of sessions on freedoms of all kinds so that it would become clear to everybody that they were not there to endorse a military or an authoritarian government. They were there to endorse what they thought of as very good economic policy.

*REGION:* You've talked a great deal about why some countries grow more rapidly than others.

*HARBERGER:* I try to approach the study of growth working up from the tangible basics. I guess that is part of my trademark in economics. Economic growth comes in part from a growing labor force, and/or one whose quality is improving, in a human capital sense. It also comes as a result of investment in physical capital. Finally, growth comes from improvements in total factor productivity. I prefer to use the term «real cost reduction» rather than «total factor productivity» because it's something that every businessman in the world recognizes. This element of real cost reduction certainly has been an extremely important part of the growth process and something that we have known about and studied since the 1950s.

The «breakdown of growth» analysis that I'm talking about really came into the forefront of economics in the 1950s. People like Abramowitz, Schultz and Kendrick. Many people identify it with Bob Solow, who was the first to build new theory on this base, but others were working on it empirically before that time. Indeed, Tinbergen and Stigler had the basic idea in the 1940s, before others brought it to center stage.

One of the things that I find very puzzling is once you realize that the increment of the labor force is one source of growth; that the improvement in education (i.e., the quality of the labor force), is another; that the rate of investment in physical capital is still another; that the productivity of that physical capital is another source of growth; and that real cost reduction is yet another, why does 99 percent of the literature on growth not study these things one by one? They deserve to be studied one by one because they depend on such different elements. You can see Asian countries saving 30 and 40 percent of their GDP. That explains quite a lot of their growth. Why not zero in on that and try to study what leads to high and low savings rates, rather than nearly always run regressions just for the overall growth rate? Countries with rapid population growth will have rapid labor force increments. That doesn't come from some endogenous growth model, it comes from the fact they have a lot of babies, which those models don't talk about. So let's get down to earth and try to understand what we observe.

Now I feel that in this breakdown of growth we understand reasonably well the parts that have to do with the productive factors, labor and capital. The one that is the most difficult for us to fully «internalize» is the element of real cost reduction. I think we need to do a great deal more work studying that term. We need to try to get a much clearer picture of the elements that seem to make it bigger or smaller at different points in time. We have been moving in this direction in some of our recent work here at UCLA.

*REGION:* Can you give us some of the flavor of that recent work?

*HARBERGER:* In my 1998 American Economic Association presidential address called «A Vision of the Growth Process», one of the things I emphasized was what I called, in another context, the juxtaposition of «yeast vs. mushrooms». Yeast makes the bread rise kind of evenly, the way a balloon blows up. If real cost reduction were like that, we'd have similar improvement in productivity in shoeshines, in laundromats, in carwashes, in the auto industry, in pharmaceuticals—everything would grow evenly all through the economy. The mushroom analogy comes from the fact that it is very hard to predict where mushrooms are going to pop up—here, there or another place. And that's what we see. Real cost reduction is extremely uneven across industries and activities. It is very hard to predict in advance how strong it will be and where it will occur.

I focused on this around 1990, and subsequently I was struck by yet another fact: Not only is this real cost reduction uneven, but in nearly every data set broken down by industries within an economy or by firms within an industry, you have some with falling real cost (rising productivity) and others with rising real cost (falling productivity) per unit. This juxtaposition is something that I'm fascinated by right now and that I want to pursue, because if only we could do something to reduce the incidence of rising real cost we could gain a lot. Indeed as we study different periods, we find that the good periods are those with low incidence of cases of falling productivity, while the bad periods show a high incidence of such cases. This differential incidence explains most of the difference between good and bad results. I think we should focus our energies on studying and understanding this phenomenon of rising real cost, especially in light of how much difference it makes.

This has led me to the «vision of the growth process» that I tried to convey in my presidential address. Firms are the locus where growth takes place. Entrepreneurs and other decision makers within the firms are the people who are the agents of this process. Somebody out there finds some way to make a dramatic reduction in real cost, does so, expands output, reduces prices, prospers. What happens to competitors? They're driven back along their average cost curves, and they end up having increased average costs, which is what we measure. So those with negative real cost reductions are the losers in the competitive battle.

Schumpeter used the term «creative destruction» for the process of growth in a market economy. I pick up on that and say that here we have a lot of evidence. Creativity brings about the positive real cost reductions in the winning firms, but for a period of time the losing firms suffer an opposite force so that the net gain for the economy is not as great as what you're seeing in the winners alone. Yet the losers are either going to adapt, in which case the consumers will gain all over the place, or they'll go out of business, in which case consumers will gain as they shift their demand to the winners. That's my line of thinking.

In policy we have to try to make it easier for people to perceive opportunities for real cost reduction. We have to fight against inflation, which blurs their perceptions, and against market distortions, which send them false signals about real costs. We have to fight for more open markets and freer competition, both within and among nations. This speeds the process of implementing real cost reductions and bringing their benefits to consumers. And we have to provide an institutional framework (laws, contracts, property rights, etc.) and a macroeconomic policy environment (stable and broadly predictable) that fosters a rapid adjustment of capital stocks in response to changing circumstances.

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*REGION:* You just came back from Indonesia. What’s happening in Indonesia with you?

*HARBERGER:* Indonesia was one of the big sufferers from the great Asian crisis which started in Thailand in July of 1997 and spread rather quickly to half a dozen other Asian countries. Indonesia was particularly hard hit because the political equilibrium in Indonesia was not as solid as in a lot of the other countries, and so you have a kind of political uncertainty layered on top of an economic crisis. They underwent a huge flight of capital, which led to an enormous depreciation of the exchange rate. Both the capital flight and the currency depreciation helped reveal a pre-existing weakness in the whole structure of the banking system, and in part precipitated further weakness because these banks owed dollars to foreign banks. The weight of this dollar-denominated debt was magnified as the price of the dollar went from Rp 2,500 to Rp 15,000. That's a quick description. It was a combination of a credit crunch combined with an exchange rate crisis, a balance of payments crisis, a loss of capital.

One of the principles of dealing with a crisis of confidence of the magnitude that happened in Indonesia is that God only knows you don't want M2 to go down (M2 is, generally speaking, currency, demand and savings deposits, and other balances largely held by households). In my opinion people shouldn't really worry too much about a declining M2 per se, but they should worry about its consequences for bank credit, especially to the business sector. It is the credit side that is the problem. M2 going down just by itself means that people are going to spend more (as they get rid of unwanted cash balances). That would not have been a problem in Indonesia in 1998. But it is a huge problem if M2 going down means that all of a sudden the volume of real credit is cut from a hundred billion to fifty billion in a matter of months. What about all those firms whose credit was cut so sharply? What about all the product that is lost as fundamentally solvent firms are driven to the wall for pure «liquidity reasons»? So that's the reason why you want to keep M2 up. Indonesia was relatively successful at keeping M2 up; in that sense, they were trying hard to save the situation.

But a very funny thing happened on the way to the forum, so to speak. What happened was that they passed through three months of a strange sort of price level stability. Strange in that even now the underlying forces are quite inflationary. As the exchange rate was dropping from its peak of over Rp 15,000 down to Rp 7,500 it was dragging down the prices of tradables with it. The prices of nontradables were still going up, reflecting the underlying inflationary force of the economy. These two forces roughly canceled each other and left the general price level basically flat. Okay, you've got this flat price level and an interest rate on SBIs (which are like Treasury bills), at 38 percent. This is the interest rate they were paying on deposits when I was there in December 1998. In other places where I've seen such high real interest rates, the situation was driven by the demand for loans—the private sector so desperately needed loans that they were willing to pay real interest rates of 2 and 3 percent a month and stick with it since credit was so scarce. High real interest rates were just the rationing price of scarce credit in these moments.

What's different about Indonesia is that (as they tell me) virtually no debtor to a bank has amortized any of that debt in something like 15 months. So the whole credit structure is frozen. These debtors are not paying anything on their debt because they know that if they pay the banks, the banks won't lend them back. The banks are too concerned with shoring up their own tottering portfolios to want to make new business loans or renew old ones. Now this 38 percent interest rate which is holding up M2 is being paid somehow. Part of it is being paid by writing up the interest on inactive deposit accounts, and similarly adding interest charges to inactive loan accounts so that banks' books balance at the end of the month. But that written-up interest is still ultimately going to be paid to bank depositors. At the same time, interest is also actually being paid right now to depositors who withdraw their money. This is happening and will continue to happen because Bank Indonesia, in the early stages of the crisis, guaranteed deposits, which is something I think it had to do. But now this promise has turned into its guaranteeing M2 deposits with a 35 to 40 percent interest rate. And who's paying? It's going to be Indonesia's people, its taxpayers, on whom in the end much of the burden will fall.

Now, in somewhat similar situations that occurred in Chile and Argentina the depositors were being paid high real interest rates in order to finance an active market for bank credit to business borrowers who were willing to pay, say, 40 percent for their credit. But here you're not buying anything. I ask, for what are they paying this 38 percent interest? Cannot a better solution be found? If they lower that interest rate and M2 drops by a third, would the consequences be so bad? Should they contemplate such a move, in light of the fact that the credit market is already in a state of deepfreeze anyway? These are the burning questions of the moment.

> I point to Argentina in exactly that same period as my evidence for why a typical grownup country shouldn’t and can’t have a currency board.

*REGION:* Were you consulting in Jakarta?

*HARBERGER:* Well, I have over the last 15 months gone to Jakarta three times under the auspices of USAID (U.S. Agency for International Development). These trips have taken me to the central bank, the ministry of finance, the planning office and other government agencies to talk to people and try to introduce into general discussion a somewhat independent and «outsider» point of view. I think I got off to a good start with the Indonesian authorities. My guess is that the AID people asked me to come back because I could talk easily with the Indonesian authorities and technicians about many things.

*REGION:* And the International Monetary Fund's role in Indonesia? Do you have any advice for them?

*HARBERGER:* No. In some circles the IMF has been accused of moving with a too heavy hand in the Indonesian case. Sometime relatively early in the crisis, October/November of 1997, the IMF was working out a package with Indonesia and insisted that they close something like 16 weak banks. They did close at least some of these banks, which may have led to pressure on other banks and thus helped to exacerbate that situation. The critics say, «Well, the Fund was being very heavy-handed in demanding that they actually close these banks.» But you talk to people from the Fund about the same subject and they all say, «Look, these banks were really bankrupt, and there are plenty more that are close to technical bankruptcy. We've got to send the signal in some way or another that something has to be done, otherwise the predictable response will be just to postpone, postpone, postpone. If we provide money and all they do is postpone the problem, what's our money buying?» So you can see there are two sides to that story.

*REGION:* What are your thoughts on currency boards that economist Steve Hanke promotes?

*HARBERGER:* Well, I think Mr. Hanke has a lot in common with the Austrians. To him, the virtues of the currency board come from on high; the currency board can do no wrong. Now it's interesting that some currency board advocates point to Argentina in the period of the Mexican crisis as a prime example of how wonderfully a currency board works. I point to Argentina in exactly that same period as my evidence for why a typical grownup country shouldn't and can't have a currency board. Formally, a currency board «prints» local high-powered money only in exchange for «hard» foreign currency. A currency board is supposed to function «automatically,» doing nothing but make that exchange. It is not supposed to implement discretionary monetary policy, or to be a lender of last resort or to be a regulator of the banking system. A currency board's base money is simply the mirror image of its international currency holdings.

Now turn to Argentina early 1995. What happened? In the wake of the Mexican crisis, which was I think the 20th of December 1994, there was a period of just a few weeks in which Argentina lost one-third of its gross international reserves and one-half of its net international reserves. Now, under a proper currency board, the entire pyramid of M2 would have contracted by one-third or one-half depending on which of those is the proper base. That collapse of M2 by a third or one-half would have so constricted credit in Argentina that they would surely have had something like the U.S. Great Depression or worse. Now, what did they do in fact? On an international reserves base of only half of what it was before (if you take the net reserves figure), they maintained a pyramid of M2 which was 90 percent of what it was before.

How did they work that miracle? By doing things that no currency board advocate would ever think of. Number one, they drastically cut the reserve requirements of the banks, and second, they took advantage of a very sly provision that Domingo Cavallo had put into the convertibility law. This law said that part of the dollars that had to back the liabilities of the Central Bank of Argentina could consist of Argentine government obligations denominated in dollars. I think the fraction could be up to 30 percent. That authority was used to the maximum. That's no currency board, nor is the changing of reserve requirements compatible with the concept of a currency board. Yet if it hadn't been for those two violations of the currency board concept, it would have been a terrible disaster. So I say, Argentina is a perfect example of why a currency board doesn't work. With the currency board you're backing only base money; you're not backing M2.

Currency boards can work well in situations where the demand for money can fall sharply without inducing a corresponding contraction of credit. This was the case in the British colonies where the currency board idea originated. It is also the case in any town or city in the U.S. today. A small country can approximate this result by having most of its banking done by big international banks, assuming these banks are willing to maintain their loan portfolios in the country (as the big British banks used to do in the colonies) even in the face of a large decline in deposits. That is what I feel has to be done to make a currency board work.

*REGION:* In the last edition of The Region magazine, we wrote exclusively about the importance of economic literacy. This seems to be one of your topics. Do you have an opinion on economic literacy at any level?

*HARBERGER:* Let me give you a prime example of the importance of economic literacy. Here in the United States, we've had this deficit with Japan for many years. Everybody knows that the bilateral trade balance between two countries is not supposed to mean anything, but forget that. Our governments, going back to before Reagan, have always been saying, «Japan should spend more, they have to stop having this surplus with us» So we are pressing Japan not to have a trade surplus in order for us not to have this bilateral deficit with Japan. Many people (myself included) were taught very early on that all deficits were involuntary and therefore in the same sense bad; you were losing these reserves that you never wanted to lose. But most of the time in the real world, a deficit arises when people from abroad are putting money into your country. Far from being bad, trade deficits are a signal that others regard your country as a good place to invest. If we look back historically, and you say who the hell's been feeding the world capital markets for lo these 30 or 40 years, it's been mainly Japan. To me, our successive administrations have been saying to Japan: Stop feeding the world capital market!

Now the question is, why does such a straightforward and sensible economic interpretation not get anywhere. How many people have you heard in the press, out of the press, policymakers, etc., thinking of it this way? Yet isn't it a natural way? I think this is a case where we obviously need more economic literacy.

*REGION:* You influenced so many people who studied under you. Who do you point to as those you studied under who influenced you?

*HARBERGER:* I am the most blessed economist that I know. Really. I can't exaggerate the amount of luck that I had in my economic education. My three most influential classroom teachers (in alphabetical order) were Milton Friedman, Jacob Marschak and T. W. Schultz. Milton taught me price theory in a way that I can't imagine price theory being better transmitted. It ended up that you internalized it. It was not something that you learned and were able to play back on exams. It was a part of yourself by the time you got out of that course.

Jacob Marschak taught me macro—a very simple, neo-Keynesian kind of macro. My vision of macroeconomics has since moved beyond that, but he was a wonderful intellectual and a wonderful teacher. It was through him that I got the idea of making simple models for just about anything that I was going to do, and thinking always in general-equilibrium terms.

T. W. Schultz was one of the great economists of the century, I'm sure. He was true real-world in the sense that he struggled with issues at the level of farm policy and the study of the transition through which American agriculture was going. I'd say in his lifetime probably the fraction of people on farms went from close to 50 percent when he was born to like 3 percent when he died. He was the one who, studying that phenomenon, recognized what was going on and always fought for good economics, which means you don't try to keep people on the family farm because the family farm has such a sacred image. What he saw was an economic process going on and his conclusion was that economic policy has to help this economic process work. And then he was also, of course, one of he great advocates or the great revivers in our century of the concept of human capital.

My Ph.D. committee consisted of Lloyd Metzler, who was one of the great international trade economists of his era and also a wonderful teacher. My other two you'd never guess—Kenneth Arrow and Franco Modigliani. Now when I say I was blessed, do you understand what I mean?

*REGION:* Frank Knight?

*HARBERGER:* I took more classes with Frank Knight than almost anybody. He too was a wonderful old man. He was a philosopher more than an economist, and a true intellectual. There was nothing sacred for Frank, especially not religion. But he also had a certain kind of humility. You have to recognize that some representatives of Chicago, both professors and former students who go out in the world, could conceivably be painted as somewhat less than humble. Well, Frank was not like that. He was constantly recognizing how much he didn't know, and constantly wrestling with observations and ideas.

*REGION:* So many wonderful things came out of your «Chicago Boys» experience in Chile. One of them for you personally was that you found a bride in Chile. Is that right?

*HARBERGER:* Oh, absolutely. I met Anita in Chicago, not in Chile. I met her at a party in the apartment shared by several of my students, including Sergio De Castro, who became the most prominent leader of that first big wave of Chilean reform, and Ernesto Fontaine, who to this day is a hero in Chile (in economic terms in my sense) because he more than any other person has made economic project evaluation a living reality and in that country and as a result saved the country billions of dollars.

We got married in London. I had met Anita only in October and I was scheduled to go tc England right after Christmas for a term in Londor and then a term in Cambridge. She was al North western at the time, and came over at the end of the winter term. She arrived in London on t Saturday morning and we got married thai afternoon. Our wedding took place for curious reasons but very happily in St. Martin's-in-the Fields. The person who gave away the bride waf Lionel Robbins and my best man was Richarc Stone. Attending the wedding were onl) economists (because they were the only people knew) and their families. Harry Johnson was then and Dick Lipsey and Chris Archibald and Pete: Bauer and Basil Yamey and goodness knows maybe 20 or so more.

*REGION:* She was Chilean?

*HARBERGER:* She was Chilean.

*REGION:* Did that influence your involvement in the Chilean project?

*HARBERGER:* I was already involved. My firs visit to Chile was the first of July of 1955 when went with three other Chicago professors to hell] determine whether we did or did not want to ente into a program of collaboration with the Catholic University of Chile. That was the beginning of my Chilean adventure. I had studied Spanish in high! school, did pretty well in it, went to Johns Hopkin University, took a first-year course in Spanish, am then in my sophomore year I was taking graduate courses in Spanish. In the Army I went through basic training, took some tests and they classifies me as a Spanish linguist. I went to the University c Illinois for six months and wrote a thesis on the latifundia [owner-operated large-scale agriculture estates] in Spain while in the Army. So the decision to take Spanish in high school influenced my arm career, it influenced ‘a great deal of my profession;
life, my whole linkage with Latin America, and my marriage!

*REGION:* Your house is decorated so interestingly with artifacts from all around the world, especially I'm noticing from Hindu mythology. Did collecting become a hobby as you went to the corners of the globe?

*HARBERGER:* People think of me in connection with Latin America, but really I have quite solid links with India because we spent a whole year there in 1961-62 on an MIT project. Then I had a long hiatus and I went back a couple of times in 1971 and 1972, and again more recently in connection with an International Center for Economic Growth project. I went at the beginning of that project in 1993 and again at the end in 1996. If the occasion had arisen that I could have got another year's leave in 1962-63, I believe we would have stayed on with great pleasure. However, the plethora of Indian artifacts in this house stems mainly from the fact that the Cottage Industries Emporium in New Delhi is such a fascinating place to shop.

*REGION:* When did you move to UCLA?

*HARBERGER:* I did some visiting here in 1982, 1983 and early 1984, and then signed on in July of 1984. That was followed by seven years during which I was two quarters here and two quarters in Chicago. I retired from Chicago, but I never «left» Chicago. I became Emeritus in 1991 and since then I've been full-time here.

*REGION:* Thank you, Mr. Harberger.