

Simple tools for complex economic problems*

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The beginning - from international relations into Economics

I started my undergraduate studies at Johns Hopkins University in September 1941, but I didn't get too far before the Second World War interrupted. I was in the U. S. Army from April, 1943 until March of 1946. The reason I went to the University of Chicago was that my last army post was in Illinois. I was auditing the accounts of some army camps when my discharge orders came in March. Had I gone back to Johns Hopkins, I would have had to wait until October before I could resume my studies. But Chicago was on the quarter system and I was able to enter there a mere six days after I left the army.

I was fascinated, partly because of the war, by the subject of International Relations and I entered the Chicago program in that field, and completed my masters in International Relations in 1947. I was actually going on to a Ph.D. There were two famous people in International Relations in Chicago at that time - Hans Morgenthau and Quincy Wright. Morgenthau was a very influential person and I really liked his courses. But I thought, if I was doing the Ph.D. I also should take courses with Wright, who taught International Law. So I registered for his course in International Law, which was very demanding. You had to write a paper every two weeks. Each paper would be a case in International Law. I remember that my first case had something to do with Spanish owners of a ship, with French merchants shipping some molasses on that ship to a British colony. So I studied the legal system of the 18th century and how the laws of those three countries interacted at that time, and finally wrote this paper. But on finishing it, asked myself "Harberger, are you a man or a mouse?"

Meantime, I had taken a lot of Economics courses while in International Relations and I always had good results in those courses. The following day, instead of turning in that paper, I

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went to the Economics department and asked "Will you have me?" They were very happy to enroll me, so I shifted to Economics, probably around December of 1947. Quite obviously, that shift was permanent. My studies went very fast, and I left Chicago in September of 1949 with my Ph.D. nearly complete. I actually got my degree at the end of that year (June, 1950) but I was teaching at Johns Hopkins from September 1949 onward.

That's how I got into Economics, by being so unhappy and frustrated with International Law. I was a lucky person in the sense that I was one of the top two people coming out of Chicago in my year. I had a number of different offers of good academic jobs. I decided to go to Johns Hopkins because I had been there as an undergraduate and had a great affection for the place. It was a very good and a very small department. I was not treated like a raw recruit but instead was welcomed as an equal member of the faculty. I had a very good time there for four years before I went back to Chicago as an Associate Professor.

The University of Chicago in the old days

Frank Knight and Jacob Viner were very important scholars in Chicago in those days. I had actually hoped, as I came to Chicago, to study with Jacob Viner. But almost precisely when I arrived to study International Relations in 1946, Viner went to Princeton. So I never overlapped with him. The only contact I had with him was once when he came to Chicago to use the library, when I served as his research assistant. So I did get to see him in that role. I took classes with Frank Knight, a couple for credit, and then I audited about three more. So I probably had more courses with Frank Knight than anybody else. He was, in my day at least, more of a philosopher than a technical economist. Certainly you did not learn much technical Economics from him. He did not talk at all about the issues of risk, uncertainty and profit, the topic which had made him famous. He talked instead about doubting the limits of rationality, that, yes, people are rational but they also do dumb things. That was his way of looking at the world. I think that he instilled in me a certain generalized skepticism and a certain willingness to look on the human beings as full of mistakes and fragilities and weaknesses. Also, in a certain sense, to be comfortable looking at them in that way. That's the way they are and that's all there is to it. We study them with all of their weaknesses and mistakes and foibles.

The deepest influences on my economic thinking came, in alphabetical order, from Milton Friedman, Jacob Marschak and T.W. Schultz. I had Price Theory with Friedman and Macro with Marschak. Schultz taught Agricultural Economics, but I learned from him in all dimensions. He was a very broad economist, one of the great economists of the century. He is not as famous as Friedman, but he did get a Nobel Prize and all the other awards that go to the very

best. Anyway, those three were the big influences on my thinking. My Ph.D. committee consisted of Lloyd Metzler, Kenneth Arrow and Franco Modigliani. With these six as the key people in my formation as an economist how could I possibly lose? I think I was very, very lucky.

Simplicity versus complexity in Economics

I don't have to tell any Brazilian how bad economic policy can get, or how bad economic policy can lead to trouble for a country. Brazilians have seen many such experiences in recent historical times. I think that the Economics profession has the duty, in some sense, to help bring about good policies. We should take that responsibility very seriously and be willing to make personal sacrifices in order to bring about and implement such policies for the good of society. I think that we have many people who do make great sacrifices in trying to bring about better economic policy. Those who work in government who are serious about Economics have to suffer many things - governments do such dumb things that these poor "fulanos" can't change. If they complain too much they will get fired. And if they quit, then less able people will probably take their place, and they do not want to see that.

Many good people just keep struggling and hope that someday they will be able to contribute something to the building of a better policy. It's not a situation where you just sit down with a pencil and design policies for the ideal world. It's not like that at all. Certainly in doing this kind of work, in bringing good policy to government, the first thing you have to do is recognize to that the only way good policy comes about is by good economists persuading and convincing people. You don't convince them by telling them "Oh, my model says that you have to do this, Sir." "And why?" "Because the model says so." "Can you explain this to me?" "Well, it's too complicated for me to explain." You can't do that. You have to convince people. Therefore, I think it is important for young economists to learn this aspect of life as they are going through their studies. That when they learn about protectionism they should also learn how to explain the difficulties of protectionism to people who don't understand it. And likewise for other, similarly important topics.

I think that in general the use of simple tools should be maximized. One of the great principles that I perceive to be in trouble today is the principle of parsimony or simplicity. That you never use a more complicated tool for a job that can be done by a simpler tool. It isn't that you try to frame everything the complicated way and then have the simple cases as special cases. You work up and only add the complicated tools when they are essential to be added, when they have a strong marginal positive product. I am 100% sure that in many, many pieces of today's literature, the same points could be established using simple supply and demand concepts. Instead people are using very complicated machinery to make the same point.

I have Ph.D. students who work with me on highly relevant topics. I insist on their using straightforward tools, the simplest tools that go straight at their problem. Nothing fancy where you don't need to be fancy. But sometimes they come with a highly "supertechnical" paper, and I ask "Why are you doing this?" Typically they respond "Well, I need this in order to get a job." And I say, "Okay, I won't stand in your way. I won't stop you from doing something that you think you need to do in order to get a job. But please, try to tell me what message you want me to learn from that." Never do I get a message. The message is that they need to do something high-tech in order to please the job market. Not that it is important for its own sake, or that it's teaching you something deep about Economics.

Let me tell you another story to show you how crazy our profession has gotten. I have one recent doctoral thesis in which one chapter deals with the demand for real cash balances. Now that is a very fundamental story in Economics and it goes back forever and ever. There is an enormous literature using demand functions for real cash balances, in all of which a rise in the interest rate causes people to reduce their real balances.

Okay, I lived through periods here in Latin America (including Chile and Argentina during the middle 1970s and lots of countries during the 1980s) when a depositor in a bank could get 3% interest from the bank per month, real interest. How can the holding of these cash balances be a negative function of this interest rate? The own price is the interest you get paid for holding these balances. The interest rates you can get on other assets give rise to a cross elasticity. Isn't it funny that this profession has lived for so many years treating a cross elasticity as if it were the own-price elasticity, in some sense? So this student goes out and fits demand equations in which real cash balances are the dependent variable, and the interest rate paid on these same balances is the relevant explanatory variable. Wonderful results. The rate of inflation is a cost of holding cash balances. That's true everywhere, always. The real interest rate paid on cash balances is a separate variable. Its coefficient is always positive and very important in the cases of time deposits, savings deposits, certificates of deposit, that kind of thing. Inflation affects such deposits negatively, the real interest rate on them affects them positively. The real interest rate among other things affects them negatively as we have always learned. This is a beautiful, simple result. The student did this for some twenty different countries and found it always worked.

Why should a young person from the Banco Central del Ecuador be discovering this thing in the year 2000, while so many giants of the profession have been spinning all kinds of supertechnical wheels in macroeconomics, but not paying attention to something that is so simple, so straightforward, so useful. These are examples of my concerns about where the profession has been going. People have overlooked the simple problems. The example above was a simple problem with a simple solution. I mentioned it because I could tell you all about it in five

minutes. But there are also some very difficult problems, like how do you deal with the problem of quantifying the opportunity costs of labor in the presence of unemployment. This is a very difficult problem. Keynesian type models tend to view the opportunity cost as zero for everything - for labor and for capital, when the economy is in a recession. This obviously is not correct. If you follow that line you get into very deep logical trouble. It leads you to contemplate paying people to dig ditches in the morning and fill them up in the afternoon, as Keynes once suggested. Well, we know that we can do better than that.

If you go to the other extreme you get Lucas type models. Lucas type models only have voluntary unemployment. People are always on their labor supply function, choosing between labor and leisure all of the time. But do you think those who are unemployed are happy in that status? Obviously not, but if you offer these people a job at 25% below the going wage, at least if it is a permanent job, they are going to say no. So they are not willing to take the job at a lower wage but they are not content being unemployed. So, what price should we set for their opportunity cost? Obviously this is not an easy question to answer. But, its an important question. It's something that is very interesting to look into. Much more interesting that a lot of things that one sees in today's literature. Yet one sees little pressure for people to move in that direction.

This preference for sophistication is not a new thing. I think that there were strands in the profession that were always somehow one way or another headed in supertech direction. There are different variants of supertech. I think that an important crossroads came with the rational expectations revolution. That was a significant watershed. I think that the rational expectations revolution was a very healthy thing. There was just too much ad hoc playing around before that time and people didn't think enough about the rationality aspect of things. But going back to Frank Knight, rationality is by no means the whole story and I do not at all like the magical solutions of "super-rationality" In Chicago the students used to have skits where they made fun of professors. In one of these the question was "When did the ancestors of the human race stop walking on all fours and start walking on two feet?" And the answer was "When the present value of the future benefits first exceeded the costs." In that kind of Economics you are not putting yourself in the position of the decisionmaker, you are pretending that even though each decisionmaker doesn't see something, that somehow the decision makers combined end up doing that thing. Adam Smith said something that sounds like that and I believe Adam Smith. But Adam Smith's version of the magic of the market was based on supply and demand, where we can see and easily understand the signals that lead to any given behavior. The demanders that don't demand something are those that don't want to pay so high of a price. And the suppliers that don't supply are those that want a higher price. It all makes sense. Anybody can understand the mechanics of supply and demand.

Project evaluation is a similarly clear case. You say, "How does the market mechanism work in the capital market?" Well, people see a cost of capital, let that be 10%. Then they study carefully the project and find that it promises to yield them only 8%. So they don't do that project because they're going to lose money. But if its expected yield is 14% while the cost of capital is 10%, the project looks fine. It is easy to see how the capital market works, with people doing actual evaluations trying to see what is the likely yield of this or that investment and how does it compare with the cost. In the end, this is the mechanism that links interest rates with the marginal productivity of capital.

I think that is the way we ought to think about lots of things. And the interesting thing in project evaluation is that you can go to good businesses all around the world and they're actually calculating internal rates of return on prospective investments and comparing them to their "cost of capital" So it isn't that this is something that is just imagined by economists. I'd like to see us implement this kind of link with reality as we work in any area of Economics. What do people actually do? What signals do they see, and respond to in their actions?

Contrast this with people who were writing papers in which the banks which lent to the Asian countries (prior to the 1997 crisis) were assumed to be counting on the IMF to bail them out if they got into trouble. Do you know how you should study that problem? Go to the files of Goldman Sachs, Citicorp and Chase Manhattan Bank and find out what they were saying in those meetings. You don't need to do fancy econometrics or anything else; you can simply learn from the people who were there. Ask those people and you'll find out. And I'll bet that they were not sending lots of memos saying "Oh, we surely can count on the IMF to bail us out." But I'm willing to be convinced if you can bring me the memos (or transcripts of meetings) in which such things were said.

I think that its important for economists to practice observation from day one to day n, always being alert to the things we see in the world around us, and making connections back and forth between what we see and what we do. When I get to a new country, the first thing I want to do is to go to a supermarket. There I want to look at the prices and see what goods are on the shelves. Between the supermarket, the cost of a taxi ride, and the cost of a haircut you can infer a great deal about the level of income in a country, about the nature of its economy, and about what kind of trade restrictions and many other policies it has. All sorts of things can be seen from such simple observations. But people have to practice in order to develop the capacity to do it. I think its very important for young economists to be alert to the world around them, today to see critical factors. When I first saw a 30% real interest rate, I didn't believe it. But now I understand the circumstances in which such high real rates can emerge. So it's no longer a total anomaly for me. Now, when I see it, I expect also to see very

constricted credit, a credit crunch, lots of bad loans on the banking system, leading the banks to squeeze credit still further. These things together constitute a syndrome, in which I can now understand how real interest rates can get so very high. But if I see high real rates without the rest of the syndrome, then I will have to swallow my pride and look for a new explanation. Little by little as you accumulate experience you begin to have sort of a world view into which a lot of things fit. And when you later observe certain things that do not fit, that's when you have to struggle afresh with the evidence, and restart your learning process.

The Chicago tradition always incorporated the real world, always incorporated simple Economics tested against reality and always incorporated giving our students, in particular, an intuitive appreciation for the nature of economic processes - what economies are like and what they're not like, what makes sense and what does not make sense. I would say one more thing, that certainly when I take on a new problem, the last thing I want to do is to look at all of the literature first. I want to look at the problem and understand it as best I can, to try to grapple with it directly rather than put myself in the mold that has evolved in the literature. I want to get a "natural" answer to the problem, so to speak, before I go to the literature.

We always used to ask questions (on final exams, comprehensives, prelims, etc) that were directly derived from the world. We summarized the underlying facts, and the student was supposed to be able to move from these facts to analysis. That was an important part of the Chicago way of doing things.

The recipe for success in our profession

That's an easy question: there is no recipe for success in Economics. You look at the people who have succeeded in the profession and they range from people like T. W. Schultz and D. Gale Johnson, who have made a huge impact on the real world, but wouldn't know what to do with second derivatives, all the way to mathematical prodigies like Gerard Debreu and Kenneth Arrow. All these have been great successes in the profession. There is a saying in English, "different strokes for different folks" There are people whose natural aptitudes carry them to one area in Economics and there are others whose aptitudes carry them in another direction.

I certainly don't think that people should try to do a kind of Economics that isn't natural to them. I think I mentioned earlier that I like natural Economics. That's really the way I feel about it. For myself, I find it most natural to focus on the supply and demand for different things and how those forces interact and what are the outside forces driving them. For me there is no magic, only people behaving and responding to the forces and pressures they see and per-

ceive. I think my main tasks as an economist are first to observe, then order and rationalize what I see.

What do I want to be remembered for?

That's hard to say. Certainly for being a teacher of good economists, good policy economists, serious economists who know how to deal with the real world. I think I was very lucky to have so many wonderful students who have gone on to do wonderful things in every avenue of life. More than a dozen central bank presidents, around 30 ministers, 2 presidents of Republics in Latin America, half a dozen Rectors of universities, some 25 deans. These lists just keep building. They go on and on. I feel very proud of my former students and I am very happy that they were part of my life. If you say, what do you think is more important, what I wrote or my students? My students are more important without any doubt whatsoever in my mind. Having this kind of connection with my own students has also led to a very happy life. Generation after generation of students, they keep adding, nothing gets subtracted. It's a very happy relationship.

In another direction, I think I want to be known as a very ardent defender of using simple tools seriously to solve economic problems. I really don't think that complicated tools reach far into the policy sphere. You can be doing complicated things and convince a seminar at MIT or Carnegie Mellon, perhaps with a very neat solution to a tricky problem. But complicated analyses do not help much in designing or in deciding how to liberalize our trade. Here the necessity to convince so many key people becomes paramount. Every now and then you may face a problem which by its nature is so complicated that you can only communicate with experts about it. But I don't think that there are many of that kind. I know that you can go very, very far emphasizing simplicity and communicability, as I have suggested. The great scope and versatility of consumer surplus analysis provide one with all the evidence I need to support this view.

I'm feeling much the same right now about Real Exchange Rate Economics. Everywhere I go, somehow Real Exchange Rate Economics pursues me. It isn't that I pursue it, it pursues me. I ran into real exchange rate problems in El Salvador in the late seventies and in Chile and all over Latin America during the debt crisis of the 1980s and in Mexico's 1994 crisis. I go to Indonesia from 1997 through 2000, and there I find more real exchange rate problems. Now I've just now returned from Russia, where I encountered still more real exchange rate problems. So I feel that God has made me to be a man of the real exchange rate. It isn't that I chose it, it was thrust upon me. God keeps putting more and more real exchange rate problems on my plate.

So I hope that before I depart from this profession I'll be able to fulfill this mission. More and more, I perceive that even very smart people often don't seem to have fully absorbed and understood Real Exchange Rate Economics. Somehow the essence of this branch of Economics must come to be appreciated much more widely. The real exchange rate is a vastly more important concept than most economists realize. It is the key equilibrating variable of a nation's balances of trade and payments. Moreover, as the real exchange rate adjusts to bring about an economic equilibrium, it also acts as a fundamental determinant of a country's comparative advantage. And finally, it is difficult to conceive of a macroeconomic analysis (or modeling) of a country's economy in which the real exchange rate did not play a very basic, essential role. The task that fate has placed at my doorstep, because of so many different exposures to the workings of the real exchange rate mechanism, is to use that experience to help bring our profession at large to a fuller appreciation of the pivotal role that the real exchange rate plays in our economic life.