

**IMPROVING ECONOMICS TRAINING IN AND FOR DEVELOPING COUNTRIES:  
PROPOSAL FOR A CONFERENCE**

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To help set the stage for this proposal, let me recount my own experiences with what might be called “total immersion” in the problem we are dealing with. In early 1994, I was approached by Domingo Cavallo, then Minister of Economy in Argentina, to help organize a university-level program for training economists for his own ministry as well as for other ministries and agencies of the Argentine government. The idea was to design a program of two years’ duration, which would be administered by Argentine universities, and which would focus on giving young Argentines the kind of training and the kind of tools that would best prepare them for future careers as government economists.

Cavallo got this idea as a result of two experiences. The first was his stint as foreign minister of Argentina. While at the foreign ministry he was impressed by the level of professionalism that he found among the members of the diplomatic corps. He took special note that entry level diplomats were the products of a university-level training course, specially designed to prepare them for a career in the foreign ministry. His second experience came when he took over the Economics Ministry. There, he had quite the opposite reaction. He was impressed (and distressed) by the lack of serious professionalism, even among high-level personnel (e.g., national directors), and by a generalized laxity, pretty much at all levels

throughout the ministry, in making real use of the tools of our discipline to grapple with the problems of diagnosis, analysis, policy formation, and implementation.

It was at this point that Cavallo conceived the idea that ultimately led to the formation of the Higher Institute for Government Economists (ISEG), which was the organization that implemented the training program. ISEG ended up with wider responsibilities than just the 2-year university level program in which I was involved. It sponsored short courses on various topics, as well as regional outreach programs. But its main effort was the 2-year training program. This program was implemented at four Buenos Aires institutions -- the University of Buenos Aires, CEMA University, the Torcuato Di Tella Institute and San Andres University. Maybe it would have been better to concentrate it more narrowly, but the chosen solution at the very least prompted a certain healthy competition among the four, and avoided carping criticism from those who would have ended up as losing bidders for the program.

These four institutions were asked to implement a program of studies that had been proposed at the behest and with the approval of the Ministry. I was part of the team that produced this recommended program.

Then, once the teaching program got started, I was named as its external auditor. My task was to try to keep tabs on the program -- particularly on how well it was serving the purpose of giving participants the tools and skills they would most need in future careers as economists in the Argentine government. Here is where my ordeal began. On my first 2-week visit as auditor, I was greeted at my hotel by 2 messengers, each carrying a banker's box full of "blue-books" -- all the final exams and all the midterms of all the nine courses that had been given at all four institutions during the first academic year of the program. One thing I can guarantee -- if you really want to get a good view of a course, not just the quality of the teaching, but its scope,

content, emphasis, methodology, etc., there is no better strategy (other than attending the whole course itself), than reading its examination booklets. There you get a very good idea about what was taught, what was emphasized, what were thought to be important questions, what were thought to be the best answers.

If I learned any one thing from that and subsequent immersions in blue books over the next four years or so, it was this theorem: If you ask a recent Ph.D. from a good world-class university to teach a course on a given subject, chances are about 10 to 1 that he or she will present something pretty close to the last course they took on that subject in graduate school. It does not matter that this might be an undergraduate course while that was a graduate course. Nor does it matter that this course was supposed to be designed for public sector practitioners while that was designed for future researchers at the frontiers of knowledge. To me the theorem is as solid as the proposition that migrants to a new country tend to go to locations where friends and relatives are already installed. In both cases the action in question is totally natural and understandable. This is the easiest road to take, and the one that requires the least work. And in the case of the young faculty members, what better imprimatur of quality is there than the fact that this is simply a version of what they learned from their very own professor X in their very own world-class university Y?

The problem, of course, was that much of the time professor X's course whatever its merits, was not designed, nor even particularly apt for the training of future government economists. In macro, it might emphasize highly stylized models of dynamic optimization instead of much more basic study of real-world monetary and balance-of-payments adjustment. In international trade, it might emphasize how different countries' underlying endowments of natural resources, labor and capital influence their specializations, instead of how in real life a

country's comparative advantage is continuously changing, being bombarded by shocks from international capital flows, fluctuations of world commodity prices, real cost reductions in its own production of tradables and nontradables, and by its own taxes, import tariffs, export subsidies, etc. These shocks elicit responses of real exchange rate adjustment that finally determine where the line is drawn that determines which activities pass and which other ones fail that economy's current test of comparative advantage. In micro, the basics of supply and demand can be lost in a maze of game-theoretic exercises. In econometrics, students can end up practically married to the idea of instrumental variables without realizing that in principle the only information content that an instrument brings to a regression is the true exogenous influence that it brings to bear (or otherwise represents) on the system being studied.

Getting back to my story, these discoveries revealed a problem that we never really cracked. The fact is that, at least at the university level, it is not easy to influence how a subject is taught. In the four universities of the ISEG program there were quite a few professors whose bluebooks revealed a nice sensitivity to the needs of future government economists. Most of these -- not surprisingly -- were in their 40s and 50s or beyond, with lots of teaching and professional experience behind them. For them it was easier to shift gears, and tailor their classes in light of the specific purposes of the ISEG program. Also, they revealed an oft-observed rule that while new professors tend to think their course is better, the more flashy its subject matter, more experienced professors feel that it is the most basic and fundamental material that brings the most merit.

It was heartening to note that among the recent Ph.D. professors there were a few who seemed to recognize, right from the beginning, the special purpose of the program, and to adapt well to it. In some cases, I feel quite sure that this came in part from the fact that their graduate

school courses had themselves focused on basics, so they were not really exceptions to the theorem, but very much appreciated nonetheless. In some other cases, I got the feeling that they simply had “natural economics” in their blood, and quite instinctively adapted their courses to the purposes of the program.

Over the period that I served at ISEG (until its untimely demise during the disastrous de la Rúa presidency), I had long meetings with the professors in the program, and explained its objectives many times. I think these conversations served a positive purpose, gradually nudging some of the courses in the desired direction. But the movement was slow, if not glacial, and the problem remained until the very end.

I am totally convinced that the problem exists throughout the developing world. In countries that desperately need hands-on economic talent, more than half of the talent they actually get might better be described as “hands-off” (in the sense of its reflecting perhaps lots of expertise, but not expertise that is very relevant or useful in confronting the problems and challenges that the countries’ ministries and agencies have to face).

Throughout the developing world, in special courses and in regular university programs, the problem exists and no doubt will continue to exist. It is a reflection of the ethos of our profession, of the way our professional journal literature has developed, of the incentives and requirements for promotion in our universities. Personally, I would love to see a “back-to-basics” movement in our entire profession, but that is another story. Here we are looking for a way to stimulate a back-to-basics movement in the teaching of economics in developing countries, and perhaps in advanced-country programs that are dedicated mainly to the preparation of economists who will work in and on developing countries.

To achieve this, our aim is to get the endorsement of a very distinguished panel of famous economists. Distinction and fame are important because, we believe, only in this way will individuals and institutions in developing countries be persuaded to make major changes. Out of this panel we would hope to derive three types of output.

1. A model curriculum for a two-year program.
2. “helpful hints”, “tricks of the trade”, “lesson of experience”. There would be a series of vignettes: indicating elements that it is sensible to include in such a program, but which are often (or even typically) omitted.
3. Useful critiques of existing textbook material, from the standpoint of such a program. These could be couched in the abstract, simply listing: a) topics often excluded that should in fact be included, and b) topics often (or typically) included that should probably be excluded. Alternatively, they could focus on one or more specific textbooks.

It is utterly essential to recognize the need to exclude materials from such a program. In a U.S. university, under the quarter system, a student typically takes 3 courses per quarter, meeting 3 hours per week for 10 weeks. That’s 30 hours per course; 90 hours per quarter. In a 2-year program that means 540 classroom hours. If the courses meet 4 hours per week, we get to 720 classroom hours -- for everything. There is no time for frills or luxuries in such a program. Something has to be left out. The underlying problem is that owing to the caprices of history, to the particular path that the evolution of our profession has taken, and to the “theorem” about how young professionals design and model their courses, a lot of what is left out of today’s actual programs consists of basics that should definitely be in them, while a lot of what is in the programs consists of frills that can (and should) readily be dispensed with.

I am including as an appendix to this proposal a “model curriculum” somewhat similar to the one we designed for ISEG in Argentina. One task that we would like to ask of conference participants is to look critically and carefully at this program with an eye to suggesting improvements. But any suggestions should bear in mind the constraint of 540-720 classroom hours for everything.

I am also introducing two separate documents:

1. “Can We Identify the Basic Tools Needed for Policy Analysis in Developing Countries?”

This is a paper I presented at the January 2007 meetings of the American Economic Association at a session organized by Anne Krueger. It expresses the same sense of malaise that motivates this proposal, and spins out some suggestions of a few subjects and ideas that I think should be included in a real-world, fundamental-based, policy-oriented program. I include it because it devotes enough space to a few main topics to be able (I hope) to convey something of the tone and spirit that I think (in addition to pure content) should characterize such a program.

2. “Contributions to a Sourcebook of Helpful Hints for Training Future Practitioners of Development Economics and Policy”

This is a series of “helpful hints” or “tricks of the trade” that I believe manage to convey important fundamentals in a direct and efficient way. The exposition is a bit terse, and I have not taken space to elaborate on the advantages that each vignette has vis-a-vis alternative, more traditional ways of dealing with the same material. One of the things we will want to do in our sessions is to examine critically not just these suggestions but also the sets of similarly-motivated vignettes that we hope will be contributed by the other conference participants.

The plan is to create a sourcebook of ideas for those who teach economics in a developing country setting, or with a developing country emphasis. Perhaps it could carry a title like “Making Economics Teaching More Relevant: A Sourcebook of Ideas From Leading Economists”. Even if this were only to be available online, it could help people get started in shifting their teaching emphasis toward a more basic, more robust, ultimately more useful curriculum.

### **What Participants Should Bring to the Conference**

1. Contributions to the Sourcebook, helpful hints, tricks of the trade, lessons of experience that will help teachers in and on developing countries bring more fundamentals-based material into their classes. I would like to have perhaps 100 such vignettes to assemble into a sourcebook soon after the conference.
2. Comments on the Model Curriculum described in the appendix to this paper, including especially suggestions for its improvement. Once again we would like to have at the end of the conference an improved model curriculum that most participants would be prepared to recommend.
3. Detailed Outlines for Specific Courses. These could consist of critical analyses of existing textbooks or of what a participant might characterize as a standard or typical treatment of a subject. The focus here should be on what new material to add (to concentrate on what is basic and important for policy-oriented work in developing countries) and what old material to subtract (in light of the time and resource constraints of the proposed program).

I have not been specific about the level at which such a program would be pitched -- in part because I believe it will necessarily vary. I have no doubt that in Argentina, Brazil, Chile or

Mexico one could think of program's being at a high master's or even ABD level (i.e., the coursework leading to a Ph.D. degree, but without the dissertation). This is because these countries have high-quality undergraduate economics programs capable of generating a steady flow of participants. In countries with lower-quality undergraduate training, one has to think of pitching the program at a lower level -- perhaps an elite undergraduate program to compete with the existing ones; perhaps a lower-level Master's program to upgrade the training of existing graduates.

Of one thing I am quite sure. The fundamentals of economics represent an extremely rich lode, which can be mined again and again with great profit to the student. I guess the graduate courses in price theory that I took from Milton Friedman in 1947 represented my third or fourth pass at that subject, but those two courses still would probably rank #1 in terms of their contribution to my subsequent professional life as an economist. What we're after in this conference is to design a program that will help revitalize and make more relevant the teaching of economics in and for developing countries. I have faith that so long as we really focus on fundamentals, the level can easily be flexible.

**APPENDIX****Recommended 2-Year Program****FIRST YEAR****First Quarter****Microeconomics I**

The economics of resource allocation: how the price system works, elementary applied welfare economics. To be covered: supply and demand; theory of consumer behavior, theory of the firm, market for productive factors, determination of factor prices.

**Macroeconomics I**

Basic economic aggregates; product, income, consumption, investment, capital, rate of return. Equilibrium in a closed economy. Introduction to open-economy macroeconomics -- tradable and nontradable goods and services. Introduction to growth accounting and growth economics.

**Mathematics for Economists**

Basic mathematical tools that will be needed in the rest of the program and in later professional activities. Uses of differential and integral calculus in economics. Systems of equations. Determinants and matrices and their uses. Optimization under constraints. Dynamic optimization.

## **Second Quarter**

### Microeconomics II

Resource allocation over time, capital markets and rates of interest, gross (marginal productivity) and net (time preference) rates of return. Risk premia, theory of risk and uncertainty. Basic cost-benefit analysis; externalities and public goods.

### Macroeconomics II

The demand for real monetary balances. The consolidated balance sheet of the monetary system. Central Banks, international reserves, bank credit and the money multiplier. Public debt and the banking system. Practical exercises using basic data sources; International Financial Statistics, World Development Report, Human Development Report.

### Econometrics

Review of basic statistical concepts (probability and probability distributions, analysis of variance, hypothesis testing). Sampling theory; stratified sampling. Bayesian techniques. Simple and Multiple Regressions. Essential elements of time series analysis. Special problems of cross-section analysis. Special problems encountered with panel data.

## **Third Quarter**

### International Economics

Theory of how a small open economy is linked to the rest of the world. Tradable and nontradable goods. The gains from trade and the costs of trade distortions. Adjustment under different exchange rate systems; international capital movements. Banking and exchange rate crises. Sharp fluctuations in world market prices of principal exports. Country links to international institutions.

### Public Finance

Taxes and Economic Efficiency. Estimating the costs of tax distortions. Taxes in a general equilibrium system. The incidence of taxation. Concepts of tax equity. Estimating the progressivity or regressivity of overall systems of taxes and expenditures.

### Economic Growth

The breakdown of growth into its components. Measuring the contributions to growth of changes in labor force, labor quality, increments to the capital stock, the rate of return to capital. The influence of economic policies on the rate of growth. The role of norms, attitudes, and institutions. Empirical studies of why and how growth rates differ.

## **SECOND YEAR**

### **Fourth Quarter**

#### Cost-Benefit Analysis (Applied Welfare Economics)

Principles of applied welfare economics. Measuring the efficiency effects of monopoly, price discrimination, price controls, quotas, acreage restrictions, subsidies, quota-subsidies, taxes, import tariffs. Distributional weights. Basic needs externalities. The shadow price of government funds. The economic opportunity cost of capital. The economic opportunity cost of foreign exchange and of outlays on nontradables.

### Agricultural Economics

The agricultural sector in developing countries. Patterns of land tenure and labor use. The forces of economic growth in agriculture. Experiment stations, extension services, agricultural colleges. Agricultural price, credit and marketing policies.

### Labor Economics

Supply and demand for labor. Migration, regional labor markets. Wage differentials by occupation, skill, and education. Labor legislation and collective bargaining. Protecting worker rights while maintaining labor market flexibility. Measuring the private and social rates of return to investment in education. Modernizing traditional systems of education. Systems of unemployment insurance, disability insurance, social security (retirement).

## **Fifth Quarter**

### Project Evaluation

Mainly oriented toward the economic evaluation of public sector investment projects -- roads, ports, irrigation, and electricity projects. Also covers basic principles covering the analysis of investments in general. Project profiles, correcting for inflation, issues of the scale and timing of projects. Separable components, interrelations among projects. Identifying key stakeholder groups and allocating benefits and costs among them. Estimating the economic opportunity costs of labor under normal conditions, under cyclical unemployment, under dual or otherwise distorted labor markets, under migration-fed unemployment.

### Natural Resource and Environmental Economics

The economics of exhaustible resources. Contracting for the explorations of a nation's natural resources. Royalties vs. other arrangements. Contingent contracts based on future

discoveries and market developments. Policies with respect to forestry resources. Taxation. Replanting rules. Combating air and water pollution. Tradable caps as devices for obtaining market valuations for given pollutants. Fisheries economics and regulations. National Parks and Wildlife.

### Transport, Communications, and Energy

Dealing with urban congestion (a really big 21<sup>st</sup> century problem). Regulating telecommunications in the age of cell phones and the internet. Managing a national electricity grid. Simulating a competitive solution for generation via marginal cost pricing and a well-managed dispatch center. Need for independent control of transmission lines. Need for direct regulation of the margins of local electricity distribution companies.

## **Sixth Quarter**

### Industrial Organization and Policy

This is a difficult subject to address in a developing-country context, simply because so much of the existing literature is tightly bound to advanced-country institutions and history. I believe serious work has to be done to ferret out good examples of both success and failure of specific efforts by developing countries to deal with problems of industrial organization, regulation and policy.

### Financial Sector Economics

Issues of banking regulation, bankruptcy laws, international capital movements, direct investment by foreign companies, transfer pricing, markets in futures and financial derivatives.

### Institutions in Developing Countries

Law and Order. The Judicial System. Dealing with corruption. Modernizing and reforming the educational structure. Fostering mobility across socioeconomic strata. Deregulation to promote economic efficiency. Well-designed regulations to replace inefficient ones.