

ISSUES OF ECONOMIC POLICY AND ECONOMIC GROWTH

*Arnold C. Harberger
University of California, Los Angeles*

Prepared for “A Liberal Agenda for the New Century: A Global Perspective,” a Conference cosponsored by the Cato Institute, the Institute of Economic Analysis and the Russian Union of Industrialists and Entrepreneurs, April 8-9, 2004, Moscow, Russian Federation.

1. **Is Free-Market Economics Now On the Defensive?**

It sometimes seems that of late, no matter where you look, the struggle for free-market economics seems to have turned into a defensive battle. Throughout Latin America, one sees constant attacks against “neoliberalism”. On the political front, we see Hugo Chavez in Venezuela, Kirschner in Argentina. In Bolivia we have seen the recent ouster of a sound, market-oriented president -- Sanchez de Losada -- as a result of demagogic, nationalist-populist agitation. In Peru, recent polls indicate Alan Garcia – the same president who led the Peruvian economy to ruin in the 1980s -- as the favorite for the next presidential election. In Mexico, the polling continues to favor Lopez Obrador, the populist (PRD) Mayor of Mexico City as the likely winner of the next presidential election.

In world circles, we have seen a wave of demonstrations and protests at successive meetings of the International Monetary Fund, the World Bank and the World Trade Organization.

And in Washington, where I have just spent a couple of weeks, I heard all sorts of unexpected rumblings. The Washington Consensus, I was told, was no longer seen as a consensus, and was even labeled by some as a failure. Further, I was told, it was no longer politic to talk favorably about the structural adjustment programs that had transformed the economies of so many developing countries. And inside of the World Bank and other aid-dispensing agencies, the focus seems to have turned away from economic policy, and away from working to promote growth. Instead, it has concentrated more and more on direct, hands-on attacks on poverty.

2. **To Me, The Facts Speak To The Contrary**

All the above signs and omens and rumblings are somewhat of a surprise to me, because I

see most of the evidence as telling a very different story.

Let us start with a panoramic view. As background, note that the historic rate of growth of the U.S. economy was between 1.5% and 2.0% per capita per year. This is the rate of growth that led the world for the better part of a century.

Now look at the quarter century just past – actually 1975-2001 (data from UNDP, Human Development Report, 2003, Table 12). During this period the OECD countries' GDP grew at an average rate of 2% per capita per year. The economies of the developing countries grew at an annualized rate of 2.3% per capita in the same period. In the past decade or so (actually 1990-2001) the per capita rate of growth for the OECD economies was 1.7% per year, while the developing countries came through with a per capita growth rate of fully 2.9% per year.

All these figures beat the historic U.S. average, as did the United States economy itself. with a per capita growth rate of close to 2.75% per year in both the above periods. This does not look anything like failure to me.

Now let us look at the main big winners over these two periods. Table 1 shows the per capita growth rates of ten countries with per capita growth rate of 4.0% or more for the 1975-2001 period. In addition, I have appended the data for India, a recent arrival which is approaching the champions' circle.

TABLE 1

RECENT GROWTH CHAMPIONS^a PER CAPITA GROWTH RATES

1975-2001 and 1990-2001

	<u>Growth Rates of GDP Per Capita</u>	
	<u>1974-2001</u>	<u>1990-2001</u>
1. China	8.2	8.8
2. Korea	6.2	4.7
3. Thailand	5.4	3.0
4. Singapore	5.1	4.6
5. Viet Nam	4.9	6.0
6. Hong Kong	4.5	2.1
7. Indonesia	4.3	2.3
8. Ireland	4.2	6.3
9. Chile	4.1	4.7
10. Malaysia	4.1	3.9

India	3.2	4.0

^aThese countries were selected on the criteria of: i) per capita growth rate above 4% for the period 1975-2001, and ii) 1975 population greater than 4 million. Data from UNDP Human Development Report, 2003, Table 12. India's figures added for readers' information. Source did not carry comparable data for Taiwan.

It is interesting to note that all of these countries took major steps to liberalize and open their economies during this period, that all of them have undertaken and accomplished significant structural adjustments, and that all have followed the Washington Consensus in its main lines of internal stability and external openness.

So why do we sense so much malaise in the development community? Why so many complaints?

Maybe it comes from the fact that crises have not been averted. But one can easily read the tea leaves another way – namely that five of our champion countries (Korea, Thailand, Indonesia, Chile and Malaysia) achieved a quarter century of growth at more than 4% per capita per year, in spite of having suffered a major crisis during the period.

Maybe the malaise comes from the fact that we have only ten (eleven counting Taiwan), and not 50 champions.

Or maybe it comes from the fact that in most cases rapid economic growth comes in spurts -- not as a permanent steady stream.

A year ago I presented a paper looking at the question whether rapid economic growth by itself leads to an appreciation of a country's real exchange rate. For that purpose I tried to focus on countries that had averaged GDP growth of 5% per annum (total, not per capita) over a period of at least 10 years. That focus yielded the following countries, in addition to those already named:

Australia	1959-76
Brazil	1968-80
Canada	1964-74
Colombia	1959-80
Costa Rica	1962-79; 1986-99
Dominican Republic	1962-81
Ecuador	1959-80
El Salvador	1959-78

Greece	1958-78
India	1980-99
Israel	1958-74
Mexico	1958-81
Netherlands	1959-73
Pakistan	1973-96
Paraguay	1970-85
Philippines	1959-74
Spain	1958-74

This adds 17 more countries to the high growth group. If we relax our criteria a little more, we can include most of the Western European countries in the group as well. Now many of these episodes were pre-Washington Consensus, but I think one can claim that all of them involved a considerable amount of economic liberalization plus a major increase in openness to trade with the rest of the world.

So a lot of countries have shared in the increased prosperity of the world economy -- but -
- but what? In most cases their super-high rates of growth have tapered off after a while.

Does this signify policy failure? Does it mean we have to look for a new paradigm? I think not.

3. Dissecting the Process of Economic Growth

What we need to do is take off our rose-colored glasses and try to see the world as it is, not as we might dream it to be. In particular, we have to get, and help others to get, a clear and realistic understanding of the process of economic growth and how policy fits into it.

It is absolutely crucial to recognize that all economic growth takes place at the level of the productive enterprise. Without this it is impossible to have a clear understanding of the growth process.

To elaborate a bit -- we measure GDP as the sum of the product produced in all the counted economic activities of the country. Often, we catch it at the level of final goods and

services, but it obviously incorporates all the value added (of earlier stages) that went into those final products. Even more often, in building national accounts, we count the value added in each activity along the way, thus catching all the various pieces that end up constituting the final product of the economy.

Our scientific approach to the measurement of growth, that we have used in the past 50 years or more, breaks down growth into five components:

- a. Some growth comes from added labor
- b. Some comes from the improved quality of labor, through education, training, experience, etc.
- c. Some comes from added capital (the net investment that takes place during a period).
- d. This contribution varies with the rate of productivity of that capital. Invest 10% of your income at a rate of return of 10% and you get a 1% ($= 10\% \times 10\%$) increase in your income. Invest it at a 20% rate of return, and your increment to income is 2% ($= 10\% \times 20\%$).
- e. Finally, and extremely important, we have another element that goes under various names:
 - some call it technical advance
 - some call it the change in “total factor productivity” (TFP);
 - some call it a shift of the production function;
 - I like to call it real cost reduction.

Why the label “real cost reduction?”

- i) because that is something every single business executive understands and identifies with;
- ii) because it serves as its own justification. For a business man to seek to reduce costs is just as natural, just as self-justifying as for consumers to look for ways to increase the satisfaction they get out of their income and their assets.

Why is this important? Because too many economists have for too long sought simple explanations of productivity increases. I say, once you realize that real cost reduction is something every business seeks, you know immediately that it can take a thousand different forms.

- you can mechanize loading
- you can computerize your payroll
- you can downsize your operations
- you can outsource goods and services
- you can change your management style
- you can add or subtract a shift
- you can shift from metal to plastic
- you can introduce incentive bonuses
- you can move to piece rates.

Need I go on? Once, in El Salvador, I was being shown through a maquila operation for assembling blue jeans. The scene was a shed, almost an open-air operation but with a roof to protect it from the daily rains. Some 200 girls were at work, each at a sewing machine, sewing together the pieces of cloth that make up blue jeans. As I watched, I heard music coming from a set of loudspeakers in the roof. When I remarked on this to the owner, he replied “Yes, and would you believe it -- when I installed the music system, productivity went up by 20%.”

As I said, real cost reduction takes place in a thousand different ways, but always it is something that business people are looking for, indeed actively searching for. This continual search is the common element linking all the specific forms that real cost reduction takes. It represents the core of this fifth element in the growth process.

Recognizing this, it becomes easy to see how the incentive to reduce real costs can be blunted or even destroyed, for example:

- in public enterprises where managers often get into trouble when they find labor-saving ways to cut costs.

- in monopolies that are regulated so as to provide a guaranteed rate of return, leading managers to not care about reducing costs.
- or even in highly protected industries, where the protection gives owners and managers such a comfort level that many end up enjoying a life of ease while a high import tariff guarantees them a safe and steady flow of profit.

In summary, the five principal ways to generate growth: a) using more labor; b) using labor of greater skill and capacity; c) adding capital via net investment; d) finding investments of higher real rate of return; and e) continually searching for and finding new ways to reduce real costs -- all five of these occur at the level of the productive enterprise. So it is there that the real action of economic growth takes place. We should never forget this basic truth as we think about the connection between economic policy and economic growth.

4. The Role of Economic Policies

It should be clear from the preceding sections that economic policies typically do not by themselves create economic growth. In my opinion, the closest they come is in the field of education, which is an important element in raising the skills and capacities of a country's labor force. But the truth is that today's educational activity typically does not even begin to bear productive fruit until some 10, 15 years from now, when the people who are now being educated will finally enter the labor force. Then, of course, the tree bears fruit for 30, 40 or even 50 years.

But, in general, economic policies typically do not determine any element in the growth process. Instead, they can operate to permit or impede these elements. So a proper understanding of the growth process itself already tells us not to seek mechanical connections between economic policies and economic growth.

One should think of the policy framework as creating an atmosphere, an environment that can be helpful to enterprises as they seek productive investments and new ways of reducing real costs. Or it can be harmful by getting in their way as they try to do these very same things.

So the connection between policy and growth is permissive rather than deterministic, conducive rather than mechanical. Does this mean that policy is not important? That we can forget about it or relegate it to a low priority? Not at all!!!

The easiest way to show this is to trundle out a whole host of cases where bad policies have brought an economy to ruin -- Chile under Allende, Peru under Alan Garcia, Indonesia under Suharto; Nicaragua under the Sandinistas -- nearly a dozen African countries over the last 25 years.

My colleague Deepak Lal has invented the concept of the predatory state -- but he quickly recognizes that it is not in the interest even of a predatory state to kill the goose. Yet that is indeed what happened with Allende, Garcia, Suharto and the rest.

How can one create a policy environment that is conducive to growth?

- Keep inflation under control.
- Open the economy to competition from abroad.
- Try to keep policies from distorting or masking the true real costs of the economy's goods and services – both outputs and inputs (people have to see real prices and costs clearly in order to identify the most productive investments and to find opportunities for real cost reductions).

In short, the Washington Consensus.

5. The Results of Good Policies

Can we count on good policies leading to steady growth at 6% or 7% per annum?

History says no. Growth typically comes in spurts. To see why, let us examine the growth process in more detail.

Many economists have delved into the empirical study of growth, particularly in recent decades. The results I report here are compatible with the great bulk of the findings of others, but they differ somewhat in emphasis. In any case, they represent our own work and our own focus.

The first important generalization to be drawn is that it is very difficult to predict future winners. We already know this from the stock market, but it also applies to real cost reductions. For example, in the U.S. economy, the industries that are winners of the RCR (real cost reduction) race in one decade are typically not so in the next. The U.S. winners in 1948-58 were Communications, Public Utilities, Farming, and “Miscellaneous”. The winners in 1958-67 were Lumber and Wood Products, Railroad Transportation, Textiles and Electrical Machinery. The winners in 1967-76 were Finance and Insurance, Apparel, Communications and Chemicals.¹

Note that the set of top winners changed completely from one period to the next. Only Communications appears twice, but not in adjacent periods. It is notable, in this and other studies, that the pharmaceutical industry does not regularly emerge as a leader. Many people expect that it should because of the great amount of resources that pharmaceutical companies devote to research and development. But we do not find them to be champions of real cost reduction. Why? Because the gains made as a result of their research efforts are largely

¹See Harberger (1998b). Basic data are drawn from Kendrick and Grossman (1980). In this exercise industries were ranked by their percentage of real cost reduction during the indicated period. Those shown are the top-ranked four for each period.

compensated by the cost of those very efforts. They appear to get a normal rate of return on their research and development costs, but not a great deal more. To the extent this is the case, we do not have true real cost reduction or productivity improvement.

A second important generalization from our work is that one firm's meat is another firm's poison. Successful innovators are the big winners. Their rate of return goes up as they reduce real costs. Their competitors, the losers, typically lose market share, and suffer reduced rates of return, even outright losses. These losing firms typically suffer negative real cost reductions, that is to say, increased real costs. Why? Because they are driven back to reduced volumes of output as demanders abandon them in favor of the innovators. [For more detail see Harberger [1998a)].

The idea of negative real cost reductions, or reduced total factor productivity, may seem strange at first, but one gets more and more comfortable with it as one thinks of different real-world cases.

- Foreign steel almost killed American steel producers who stuck too long to an outmoded technology.
- Walmart and Target actually did kill many of our old department stores.
- Supermarkets killed most mom-and-pop grocery stores.

What we are witnessing is the true story of growth, for which Joseph Schumpeter coined the insightful phrase “creative destruction”. The victory of the new and the destruction of the outmoded are the essence of the growth process in a well-functioning market economy.

6. More About Good Policy -- Costs and Benefits

Now let's dig deeper into what makes for good economic policy. We really should already know the answer by now, for policy has been at the center of a great deal of economic analysis, all the way from the time of Adam Smith, and even earlier.

Import tariffs saddle the economy with more costs than benefits. Going to free trade brings more benefits than costs. But the standard analysis of free trade and tariffs says nothing about the growth rate. Instead it talks about economic efficiency.

Take the example of a 50% import tariff. If the exchange rate is 10 pesos per dollar, then the economy is saying to producers – you can safely use up to 15 pesos of resources in order to save a dollar by way of import substitution generated by the 50% tariff. But you can only use up to 10 pesos to produce an additional dollar by expanding exports.

This shows directly the inefficiency caused by the tariff. Cut import substitution by one million dollars and you release 15 million pesos of resources. Shift these same resources to export activities and they can generate \$1.5 million dollars of export revenue.

I have spent a lot of my career trying to measure the efficiency costs of tariffs, taxes, subsidies, incentive schemes, agricultural programs, minimum wages, price controls, domestic content requirements, etc., etc.

What can we say about all these different kinds of policies? The main conclusion is that they typically introduce distortions into the economy. But second, and very importantly, the main effect of these distortions is to alter the level of economic output, not its period-after-period rate of growth. The rate of growth is affected as the economy transits from one level of activity to another. But the permanent effect is on the level, not on its growth rate.

7. It Takes a Lot Of Work To Build a Tower

I like the analogy between the process of economic growth and the building of a tower. In the one case it is the economy that grows; in the other it is the structure. But it is clear in the case of the tower that new resources and new efforts are required as one adds each additional floor to the structure. Indeed, in this case it is true that the taller the structure already is, the greater will be the effort required to add the next story.

This is, I believe, the right way for us to see the process of growth. We make a net investment of 12% of GDP (to create additional capital stock) and that investment yields a 15% real return. These two elements together should give a growth of 1.8 percentage points. If at the same time the enterprises and activities across the economy find new and better ways of doing things, with the result that real costs are reduced by 1.5% (on average, and over the whole economy), then on that score we will get an additional 1.5 percentage points of growth. To these rates we should add the contribution of incremental labor. This is measured by the share of labor times the rate of growth of the labor force when the “quality” of the labor force does not change. To achieve this, the society would have to invest enough in education and training to endow the newly-entering labor force with the same human capital per worker as prevailed in the prior period. Here we do not make any assumption about the labor contribution; we simply note that in this example the capital contribution plus real cost reduction gives us 3.3 percentage points of growth.

Now to my main point. Next year’s growth rate represents in principle a whole new set of challenges. New net investments have to be made and maybe this time they amount to only 10% of GDP. These investments will have their own economic rates of return, maybe this time only 11%. Together these would produce a capital contribution to the growth rate of 1.1 (rather

than 1.8) percentage points. The slate is also clean as far as next year's real cost reductions are concerned. The way we calculate growth, last year's real cost reductions are assumed to continue to prevail, but that simply maintains the output level that they brought about. New contributions to growth arise only when new, additional cost savings are found. So, maybe for next year these savings, even the whole economy, only amount to nine-tenths of one percent of costs (not great, historically, but not bad either). So for next year, we would have a capital contribution plus real cost reductions amounting to just 2.0 instead of 3.3 percent. When the following year rolls around, the same sort of challenges will reappear. New investment will emerge, with new rates of productivity, and new sources of real cost reduction will (one hopes) be found. So a new rate of growth will be generated.

The above described process repeats itself year after year, with rather low predictability as to who, what, when, where, why and how much. My own vision of the growth process, based on many years of study and observation, takes as its starting point a constant search for ways to reduce real costs. All good managers, all good business executives, are constantly trying to reduce real costs, but at any given time only a small fraction typically succeed. And those who succeed are typically not the same from period to period. To a considerable degree the challenges of reducing real costs and, for that matter, of finding profitable investment opportunities, reappear anew in each successive period. Winning in one ball game does not by any means guarantee winning in the next.

So the natural forces of growth add a certain amount to the height of the tower in one period, and a different amount in the next. It is similar with respect to policy measures. Most policy measures will have their main impact on the height of the tower – enabling private firms

to reach a given height more readily, but not profoundly changing the economy's rate of growth, except during the transition from one height to the next.

Let us take a specific example. Suppose that we start with an economy with highly restricted trade, with an average tariff of, say 50%. Now consider a liberalizing reform that brings the tariff level down to just 10%. Suppose, too, that in the initial state imports and exports are each equal to 10% of GDP, and that as a result of the tariff change this moves up to, say, 30% of GDP. The efficiency gain to the economy from this move will be an efficiency increase of 6% of GDP. This will be a permanent increase in efficiency that will bring huge benefits to the economy. But the effect of the liberalization on the growth rate will be only 6 percentage points as the economy moves from a lower level of the tower to a higher level. That might be 2 points a year for 3 years, or one point a year for 6 years, or 1/2 a point a year for 12 years. Here we have a major change of economic policy yet its principal impact on growth would only be to change the growth rate from, say, 3% per year to 4% per year over a six-year period.

Now these are figures representing sensible orders of magnitude for a major trade liberalization. Ask whether it is worth it, only to gain one point on the growth rate, each year for a six-year period, and you may be tempted to doubt the usefulness of the trade liberalization. But put the question another way, and consider the steady flow of an extra 6 percentage points a year, going on essentially forever, and the story looks very different. At the point where the cumulative gain reaches 6 percentage points, the present value of all its future flows, at a 10% discount rate, is 60% of a year's GDP. And at a 5% discount rate, it is 120% of a year's GDP. And these figures assume no economic growth. If the liberalization takes place in an economy

averaging 3% growth, then the present value of the liberalization is 86% using a 10% discount rate and an astounding 300% (of the initial year's GDP) using a 5% discount rate.²

So please don't let anyone claim that the results of major economic reforms are trivial, even if they have no influence on the long-run growth rate. Minor steps obviously have less impact, but their effects will accumulate as long as many steps are taken.

But that tells much of the story of the impact of policy reform on growth. Each reform raises the level of the economy. It brings a permanent stream of benefits, but not a stream that takes GDP to a continuously and forever higher level. In a constant economy the growth in our example would be from 100 to 106,106,106,..., etc. In a growing economy it would add 6 points at the beginning, then 6.18, then 6.36, etc., assuming that other forces are causing the economy as a whole to grow at 3% per year, with our reform lifting it 6 percentage points above that moving base.

8. Education and Economic Growth

I have emphasized that policy changes typically have the effect of adding a story or two to the tower that represents a country's GDP. The addition is typically permanent in the sense that the added height does not later self-destruct, but it is not meaningful to think that the same policy that adds one story to the tower's height this year will add a second story next year, a third story the year after that, etc., etc. Such a policy reform would be truly miraculous and would be readily visible to us all.

²These calculations are based on the standard formula for the present value of an annuity. A steady annuity at A_1 has the present value at time 0 (the year before the annuity starts) of A_1/i , where i is the rate of discount. If the annuity is growing at the rate of g , the corresponding present value is $A_1/(i-g)$.

It is worth mentioning here that even improvements in education have their effects through raising the level of a country's GDP. If the labor force of the country has an average of 8 years of education, and earns a real wage of 100, what will happen when the education level is raised to 9 years? Presumably the real wage will go up, probably by 10 or at most 20 percent. But it won't cause the real wage to explode, moving it from 100 to 120 to 144 to 173, i.e., rising by 20% per year indefinitely. One indeed gets growth by adding to the educational capital of the economy, but each increase in the educational level brings about an additional upward step in output. Further growth from this source will come only with a new increase in the average educational level.³

9. Most Policy Reforms Operate Mainly To Raise the Level of Output

When one thinks seriously about different types of reform, one is driven, I believe, to the conclusion that nearly all of them operate primarily if not exclusively on the level of output rather than on its rate of growth. Their effect on the rate of growth is mainly during the

³There are some nuances that probably should be mentioned. The standard representation of the "labor contribution" to the growth rate is the share of labor in total output times the rate of growth of the labor force. Say the labor share starts at 50%, with output being 1000 and labor's earnings being 500. Now let the real wage rise to 600 owing to an educational improvement. In the transition, output will grow to 1100, without any increase in the labor force. This is the "level effect" of the educational improvement. It will itself take a long time to accomplish, as new cohorts of better-educated people are added, replacing older, less-educated ones as they retire. But there may also be an additional growth effect if the labor force is itself growing through time. Thus, if the share of labor goes up from 50% to 55% as a consequence of this improvement in labor quality, then labor's contribution to the growth rate will grow from .50 times the rate of growth of the labor force to .55 times that same rate. With the labor force growing at 1%, the labor contribution would rise from .0050 to .0055; with labor force growing at 2%, this contribution would rise from .01 to .011.

These are very small changes in the growth rate, and they depend on labor's share changing. If, say because the capital stock is also growing, labor's share remains constant over the period of the educational change, then the educational improvements would have an impact on growth only in the transition from one level to another; it would have no effect on the long-term growth rate of the economy.

transition from a lower to a higher output level. They are not magic bullets that raise the growth rate not just for a transition period but in some sense permanently.

Here is a short list of policy changes that I believe fall in the category of mainly affecting the level of output:

- most educational improvements
- trade liberalizations
- nutrition programs
- potable water projects
- sanitation projects
- improved medical care
- road improvements
- telecommunications projects
- electric power plants
- tax reforms to reduce distortions
- regulatory reforms
- port and airport projects
- irrigation projects

Now reforms and projects in every one of these categories, if well-chosen so that benefits do indeed exceed costs, will have an effect on the growth rate as the economy moves from one level to another as a result of the operation. As indicated in the previous section, a better educated labor force will be more productive. Similarly, a healthier and better-fed labor force will be more productive. Highway, port and airport projects have the effect of lowering the costs of transport but they don't keep lowering them forever. Trade liberalizations, tax reforms and regulatory reforms mainly add to the efficiency of the economy, bringing it up from, say, 60 to 70 percent of its potential.

I emphasize this matter so much because I am genuinely worried that those involved will lose heart and then abandon their struggle or slacken their efforts when the miracles that they expect fail to happen. My point is that only with a realistic appreciation of how the growth process works will people recognize how much of a success is involved in a growth rate of 2%

per capita per year. And how the efforts that brought the last decade's rate of growth to 2% per year do not at all guarantee the same result for the next decade. In general, the next decade's growth will depend on new and different investments, probably with different rates of return than those of the previous 10 years. It will also depend on new and different real cost reductions, different efficiency gains. To the extent policy improvements are involved, it is likely that we have already enjoyed most of the gain in output levels that we will get from the last decade's policy improvements, so that it will take new and additional improvements to maintain a good policy contribution to growth in the coming decade.

10. Perspectives In the Growth Process

To give readers a sense of how difficult it is to generate huge rates of growth, I am presenting here some results of earlier work on Latin American and East Asian countries (see Tables 2 and 4). In these exercises we look at growth in 5-year spans (shorter in a few cases due to data limitations). We divide the overall growth rate (of total, not per capita, GDP) into a labor contribution, a capital contribution, and a contribution of real cost reductions.

The first point to be made is that growth was outstanding (median growth rate = 8.53 percent per year) in the East Asian group and quite satisfactory (median = 4.86 percent) in the Latin American group.

The second point is that the contribution of real cost reduction was the main factor in discriminating between periods of faster and periods of slower growth, in each of the two regions. This is demonstrated in Tables 3 and 5. Here we take the top 13 and bottom 13 (of 41) episodes for the Latin American countries and the top 9 and bottom 9 (of 29 episodes) for the Asian countries. We then compare the differences (between the top group and the bottom group) in median and mean growth rates with the corresponding differences in rates of real cost

reduction. It turns out that differences in the rate of real cost reduction account for some 70-odd percent of the differences in growth rates for the Latin American countries and some 60-odd percent for the Asian countries.

Unfortunately, this is the most elusive, the most idiosyncratic, the most variable of the basic components of the growth rate. It ranges from -1.06 percent per year to 7.24 percent per year in the Asian countries, with an overall median of 2.62 percent. In the Latin American countries the range is from -2.71 percent to 9.58 percent, with an overall median of 1.02 percent per year.

Now there can be no doubt whatsoever that a good policy environment gives scope for successful real cost reduction, and a bad policy environment inhibits it. But the real cost reduction itself is the result of the efforts of productive entities. The variability that we see in its contribution to growth is not mainly due to policy shifts. Much of it comes from the intrinsic difficulty the search for new and better ways of doing things.

So what is my final message? Economic growth is important. It should never be neglected as a worthy objective in its own right and as a proven instrument for reducing poverty. Economic policy is critical in creating a favorable environment for growth. But most policy changes have their biggest effect on the level of economic activity. Growth itself occurs at the level of the individual productive enterprise, and policy has its impact on growth only through its influence on what happens at this level. Every effort should be made to create a policy environment that is conducive to growth. And that definitely includes all the policy measures whose principal effect is to raise the level of GDP, and whose influence on the growth rate itself is mainly confined to the transition between one level and the other. But most of all my message to policymakers, to those in international organizations, to those in bilateral aid entities, public

and private, is to please stay the course, please recognize how hard it is to generate new growth period after period; please realize that we should not consider it a failure when a country achieves growth at 1 1/2 and 2 percent per capita per year; please understand that where policy is concerned one has to work continuously to improve the policy setting, but that this only creates an environment favorable to growth, not growth itself. That, for better or worse, is the result of the efforts of thousands or even millions of productive enterprises and of those occupied in them.

TABLE 2
SOURCES OF GROWTH IN SELECTED
LATIN AMERICAN COUNTRIES

<u>Period</u>	<u>GDP Growth</u>	<u>Labor Contribution</u>	<u>Capital Contribution</u>	<u>Real Cost Reduction</u>
A. Colombia				
1960-64	4.99%	2.02%	1.43%	1.53%
1964-69	5.13%	1.80%	1.46%	1.87%
1969-74	6.54%	1.37%	1.47%	3.70%
1974-79	5.01%	1.96%	1.57%	1.48%
1979-84	2.45%	1.52%	1.68%	-0.75%
1984-88	4.50%	0.11%	1.57%	2.82%
B. Costa Rica				
1960-64	5.19%	2.25%	1.38%	1.56%
1964-69	7.46%	1.96%	1.63%	3.87%
1969-74	7.14%	1.12%	2.43%	3.70%
1974-79	5.55%	2.07%	1.96%	1.52%
1979-84	0.31%	0.98%	1.53%	-2.21%
1984-88	4.13%	2.19%	1.41%	0.53%
1988-92	4.52%	-0.43%	1.48%	3.47%
C. Ecuador				
1960-64	3.72%	2.51%	1.69%	-0.47%
1964-69	4.49%	2.46%	1.52%	8.52%
1969-74	12.51%	0.08%	2.75%	9.58%
1974-79	7.43%	2.41%	4.27%	0.75%
1979-84	3.37%	0.80%	2.70%	-0.13%
1984-88	4.37%	2.08%	1.63%	0.65%
D. Mexico				
1960-64	7.27%	1.86%	2.96%	2.46%
1964-69	6.87%	1.93%	3.43%	1.51%
1969-74	8.82%	2.23%	2.99%	1.60%
1974-79	6.14%	1.87%	3.25%	1.02%
1979-84	2.51%	-0.40%	3.11%	-0.20%
1984-88	0.97%	0.38%	1.81%	-1.22%
1988-92	3.20%	0.26%	2.28%	0.68%

Table 2 (continued)

<u>Period</u>	<u>GDP Growth</u>	<u>Labor Contribution</u>	<u>Capital Contribution</u>	<u>Real Cost Reduction</u>
E. Panama				
1969-74	4.86%	2.92%	3.47%	-1.54%
1974-79	3.76%	0.97%	2.05%	0.74%
1979-84	4.83%	1.79%	1.90%	1.15%
1984-89	-1.11%	1.13%	0.19%	-2.43%
1988-92	7.48%	0.16%	1.05%	6.27%
F. Peru				
1969-74	5.32%	1.89%	1.48%	1.94%
1974-79	-0.11%	0.19%	1.19%	-1.49%
1979-84	2.19%	1.34%	1.81%	-0.97%
1984-0.80%	0.80%	1.70%	1.62%	-2.52%
G. Venezuela				
1960-64	7.67%	1.30%	1.51%	4.85%
1964-69	4.34%	2.05%	2.58%	-0.28%
1969-74	5.36%	0.51%	3.37%	1.48%
1974-79	5.01%	3.87%	3.54%	-2.20%
1979-84	-1.02%	0.82%	1.06%	-2.71%
1984-88	3.55%	1.82%	0.74%	1.19%

Source: Adapted from A.C. Harberger "Reflections on Economic Growth in Asia and the Pacific," Research in Asian Economic Studies, vol. 8 (1998), p. 26.

TABLE 3**COMPARISON OF ANNUAL AVERAGE RATES OF REAL GDP GROWTH
AND OF TFP INCREASE (41 PERIODS IN 7 LATIN AMERICAN COUNTRIES)**

		Average Rate of GDP Growth <u>In Period</u> (1)	Average Rate of <u>Real Cost Reduction</u> (2)	Ratio of <u>Differences</u> (2)/(1)
13 Highest Rates of GDP Growth	Median	7.14	2.46	
	Mean	7.25	3.26	
13 Lowest Rates of GDP Growth	Median	2.19	-0.97	
	Mean	1.61	-0.93	
Difference in	Medians	4.95	3.43	.60
Difference in	Means	5.64	4.23	.75
Overall Median		4.86	1.02	

TABLE 4
SOURCES OF GROWTH

IN SELECTED ASIAN COUNTRIES

<u>Period</u>	<u>GDP Growth</u>	<u>Labor Contribution</u>	<u>Capital Contribution</u>	<u>Real Cost Reduction</u>
A. Malaysia				
1971-74	13.09%	0.51%	5.34%	7.24%
1974-79	7.22%	1.47%	4.55%	1.21%
1979-84	6.87%	1.76%	5.77%	-0.66%
1984-89	4.70%	2.01%	2.56%	0.14%
1989-91	9.22%	1.47%	4.43%	3.32%
B. Japan				
1960-64	10.26%	0.43%	8.02%	1.80%
1964-69	10.63%	0.38%	5.75%	4.50%
1969-74	5.99%	2.55%	4.49%	-1.06%
1974-79	4.60%	1.32%	2.06%	1.22%
1979-84	3.86%	0.45%	1.78%	1.63%
1984-88	4.30%	0.28%	1.63%	2.39%
C. Korea				
1960-66	7.33%	0.92%	4.41%	7.00%
1966-70	8.53%	1.86%	6.37%	0.30%
1970-75	7.84%	0.95%	4.65%	2.25%
1975-80	10.03%	2.06%	5.15%	2.82%
1980-85	9.13%	0.55%	3.62%	4.97%
1985-88	11.03%	1.07%	3.49%	6.46%
D. Taiwan				
1960-64	9.08%	1.58%	1.49%	4.02%
1964-69	9.76%	0.93%	4.85%	3.97%
1969-74	10.27%	1.26%	6.15%	2.86%
1974-79	10.31%	1.02%	4.75%	4.53%
1979-84	7.21%	1.63%	3.34%	2.25%
1984-89	9.08%	0.86%	2.77%	5.44%
1988-91	6.51%	0.95%	3.13%	2.43%

Table 4 (continued)

<u>Period</u>	<u>GDP Growth</u>	<u>Labor Contribution</u>	<u>Capital Contribution</u>	<u>Real Cost Reduction</u>
E. Thailand				
1970-74	7.19%	1.22%	3.35%	2.62%
1974-79	8.47%	1.72%	3.71%	3.04%
1979-84	5.60%	0.81%	3.58%	1.41%
1984-89	9.03%	0.17%	4.22%	4.64%
1988-93	9.81%	-0.70%	7.43%	3.07%

Source: Adapted from A.C. Harberger "Reflections on Economic Growth in Asia and the Pacific," Research in Asian Economic Studies, vol. 8 (1998), p. 26.

TABLE 5
COMPARISON OF ANNUAL AVERAGE RATES OF REAL GDP GROWTH
AND OF TFP INCREASE (29 PERIODS IN 5 EAST ASIAN COUNTRIES)

		Average Rate of GDP Growth <u>In Period</u> (1)	<u>Average Rate of Real Cost Reduction</u> (2)	<u>Ratio of Differences</u> (2)/(1)
9 Highest Rates of GDP Growth	Median	10.27	4.53	
	Mean	10.60	4.14	
9 Lowest Rates of GDP Growth	Median	5.60	1.41	
	Mean	1.61	1.12	
Difference in Difference in	Medians	4.67	3.12	.67
	Means	5.09	3.02	.59
Overall Median		8.53	2.62	

REFERENCES

- Harberger, Arnold C. (1998a), "A Vision of the Growth Process," Presidential Address,
American Economic Association, American Economic Review, v. 88, No. 1, March 1988,
pp. 1-32.
- Harberger, Arnold C. (1998b) "Reflections on Economic Growth in Asia and the Pacific,"
Research in Asian Economic Studies, vol. 8 (1998), p. 26.
- Kendrick, John W. and Grossman, Elliot S., Productivity in the United States: Trends and
Cycles, Baltimore, MD: Johns Hopkins University Press, 1980.