TOWARDS A RELEVANT DEVELOPMENT POLICY RESEARCH AGENDA

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Introduction

I am very pleased indeed to address this highly qualified audience on the topic of the Development Policy Research Agenda. We are all aware that, as the process of globalization advances, increasingly free flows of capital are taking place across borders. However, against expectations rooted in conventional economic theory, such flows are arguably failing to narrow the gap between the capital rich and the capital poor countries. Why this is so and how the development policy research agenda should be shaped as a result is the key topic of this lecture. Before addressing this issue, let me set the stage by taking a brief a look at some key current trends in world industry.

World Industry Trends

Diversity and divergence are the most distinct features exhibited by the world industrial development scene. Only a few selected developing economies have successfully coped with the fast-changing challenges posed by world competition. But a disturbingly large number of developing countries have done badly. Early deterministic models of convergence based on simple neoclassical growth models have given way to more complex analyses stressing that structural, institutional and social factors may continue driving economies apart and, thus, making the spread of patterns of growth with equity an unattainable goal.

Constantly emerging, rapidly spreading new technologies are driving a quickly changing industrial scene and altering the competitive stand of economic agents. National and international rules and regulations are also changing and thus affecting the working of markets. Those countries that fail to adapt to these shifting conditions risk becoming marginalized and excluded.

Facing to these changes entails much more than opening economies to global trade, investment and technology flows. Countries also need to enlist their domestic potential for dynamic growth by addressing the development of the necessary technological and innovative capabilities in the context of a social, economic and institutional environment conducive to advancing firm-specific knowledge, skills and practices, fostering technology diffusion and promoting economy-wide productivity growth for social advance.

The magnitude of the challenges currently faced by the development and transition economies can be conveyed by means of a few figures. UNIDO's latest Industrial Development Report clearly reveals that industrial activities and capabilities are moving towards increasing concentration. Only 16 of the 58 developing countries for which comparable statistics exist display dynamic production and export structures and manage to capture increasing shares of technology-intensive products. This group includes Brazil, Costa Rica, Malaysia, Mexico, the Philippines, Saudi Arabia, South Africa, Taiwan Province of China, Thailand and Turkey. The remaining 42 countries had in 1998 a technological structure essentially similar to the one they had in 1985. Most developing countries continue to languish at the bottom of the world performance and capability ladder. Unfortunately, as we shall see, the international Development Agenda fails to address properly the underlying causes of marginalization, exclusion and divergence.

Proximate Factors in the Economics of Divergence

Let me precede my next comments on the role of the proximate factors in the economics of divergence with the following quotation, which I think will help to place what follows in perspective:

"For theoretical and empirical reasons … future work on convergence should focus much more carefully on technology. Why do countries have different levels of technology? How technologies change over time? How do we measure technology…? How much of convergence that we observe is due to convergence in technology versus convergence in capital-labor ratios?" (Bernard and Jones, 1996).

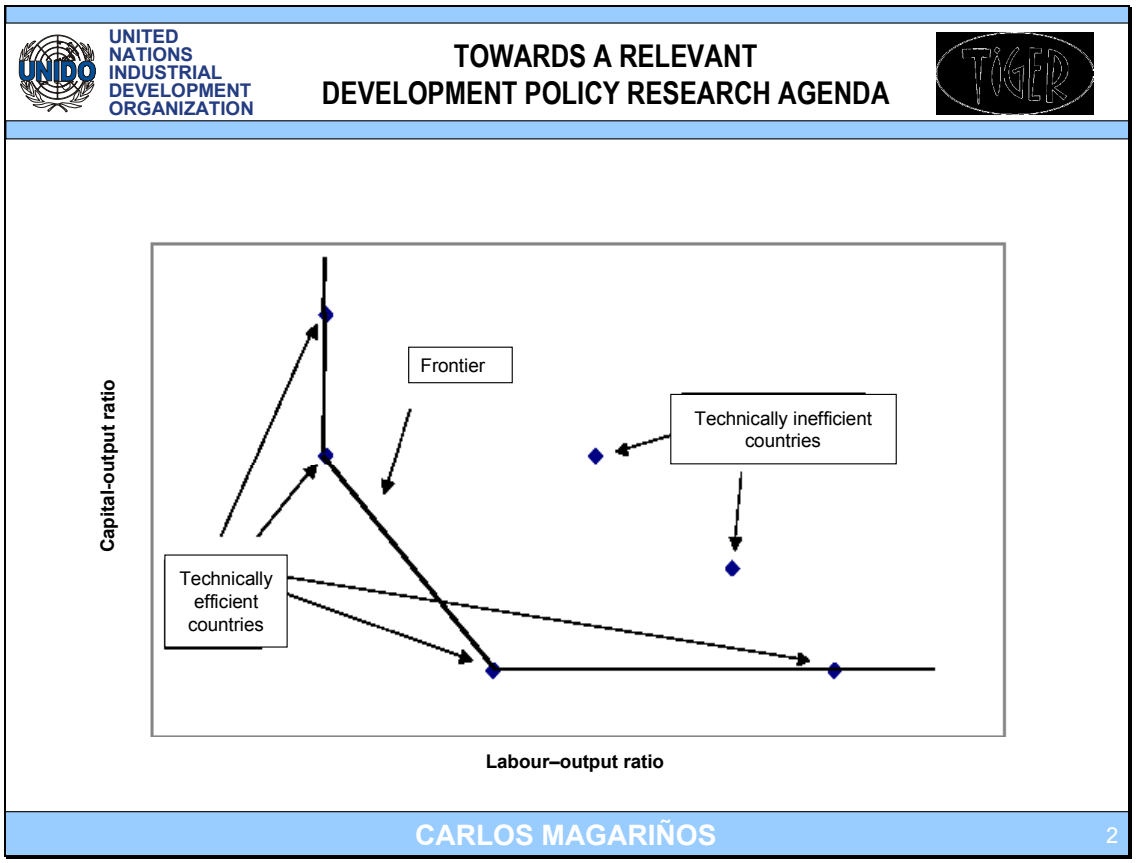
Bernard and Jones reached this conclusion in their summary of views on technology and convergence published by the Economic Journal in June 1996. As you know, while exogenous growth theory focuses on capital accumulation as the source of (conditional) convergence, endogenous growth theory emphasizes differences in technology across countries and over time as the source of the presence or lack of convergence. The growth of labor productivity, which is a crude measure of welfare, can be de-composed into three components, i.e.:

i. Shifts in the world technological frontier (made up of potentially transferable technology)
ii. Distance from the technological frontier
iii. Capital accumulation

Shifts in the world technological frontier and associated efficiency levels of individual economies (or distances from the frontier) can be gauged through Data Enveloping Analysis, which applies non-parametric, mathematic programming algorithms. This approach has the advantage of doing without the need to specify any given functional form for the technology or make assumptions about market structure and market imperfections.[1] Figure 1 illustrates the approach taking the state of the art as given. Each point in the figure represents a given country's requirement of factors per GDP unit. The points that lie outside of the technological frontier indicate how (relatively) technically inefficient specific countries are.

[1] This approach is based on Farrell (1957), Afriat (1972), Färe et al. (1994) and Kumar and Russell (2002). It allows establishing a link between the macroeconomic convergence literature and the frontier production function literature.

Figure 1: The technology frontier

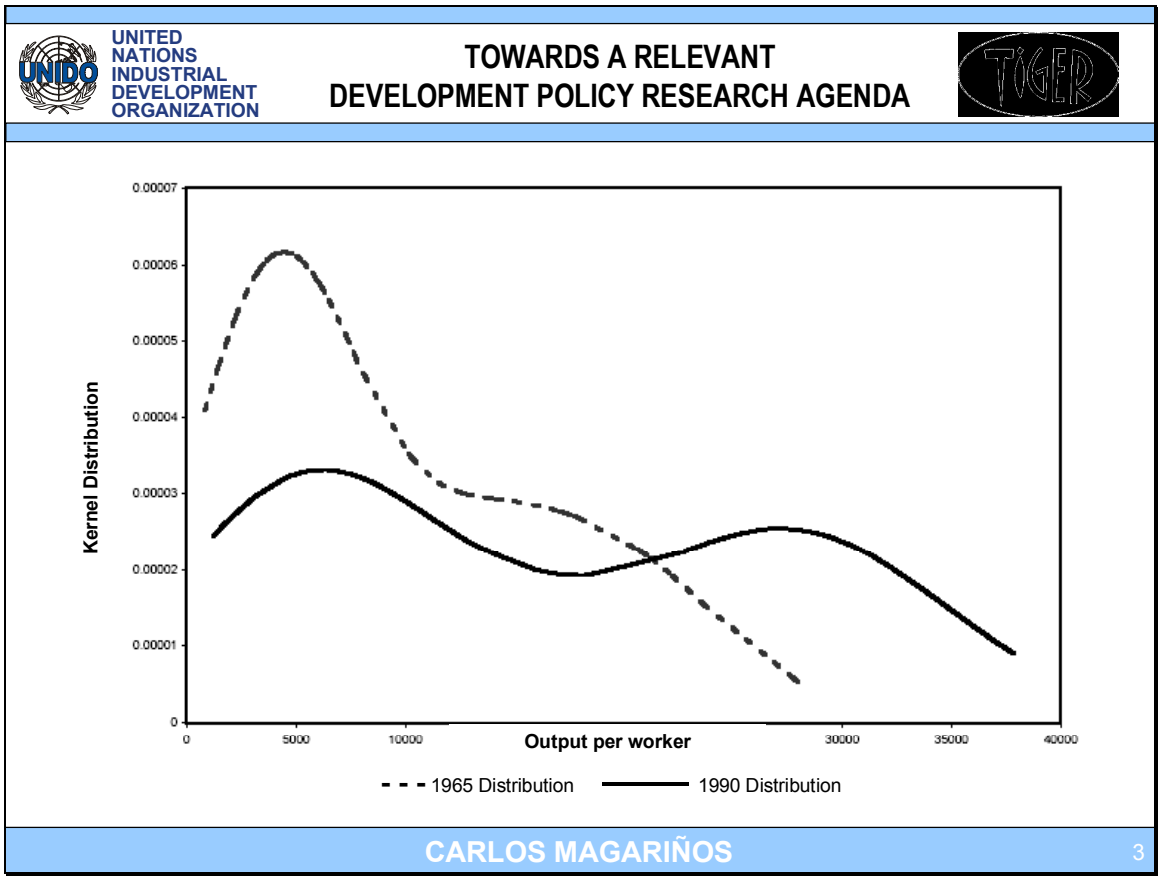


Source: UNIDO

Note: The present 'input-orientated' representation of production builds on the assumption of constant returns to scale. The technology frontier is traced out by the most technically efficient countries. Countries to the north-east of the frontier are technically inefficient, i.e., they could reduce at least one of the inputs needed to produce one unit of output.

This rather recent tradition of analysis allows assessing the role of the three proximate growth factors over the *entire inter-country distribution*. As cogently argued by Quah (1996), the alternative standard regression methods, by focusing on the first moments of the distribution, fail to adequately address the convergence issue. Thus, for instance, as Figure 2 shows, data for 57 countries over the period 1965-90 shows that the distribution of labor productivity was transformed from a *unimodal* into a *bimodal* distribution. While in 1965 there were many countries in the middle-income group, in the 1990s the world had become divided, as a stylized fact, into the rich and the poor. Only by studying the dynamic of the entire cross-section it is possible to reach this kind of conclusions, which remained overlooked in previous analyses.

Figure 2. Distributions of output per worker, 1965 and 1990



Source: Kumar and Russel (2002)

In addition, this evidence also suggests that lack of improvement, or even deterioration, in technological practices at very low capital-labor ratios may coexist with rapid improvement in technological practices at high capital/labor ratios.

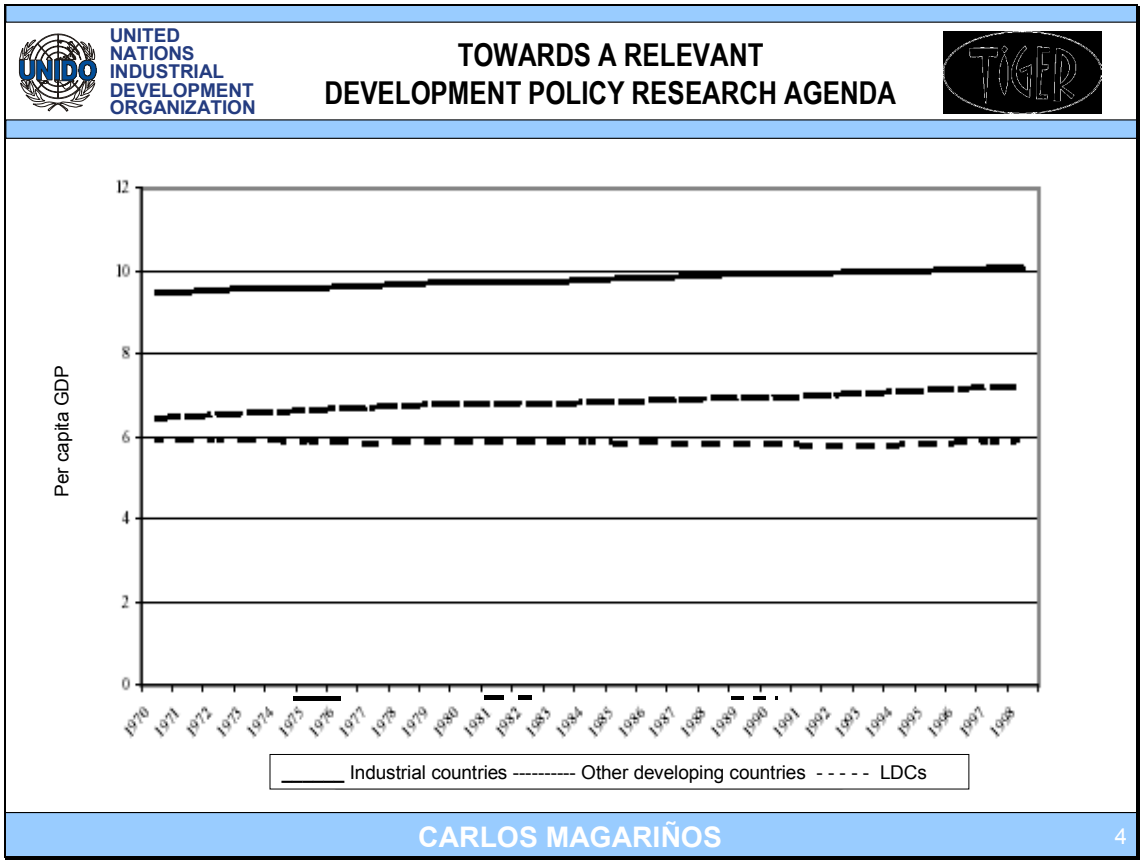
The Case of the Least Developed Countries

Let us now review some work that UNIDO has done relating to the application of the methodology that I have just described for the case of the Least Developed Countries (LDCs).

UNIDO has applied this methodology to measure productivity change over time for the case of the LDCs. To begin with, Figure 3 confirms a clear pattern of divergence in

population-weighted GDP per capita between LDCs, on the one hand, and the rest of the developing world and the advanced industrial countries, on the other, during the last three decades.

Figure 3: GDP per capita, by country group, 1970 to 1998



Source: UNIDO calculations based on data from the UNIDO Statistics Database.

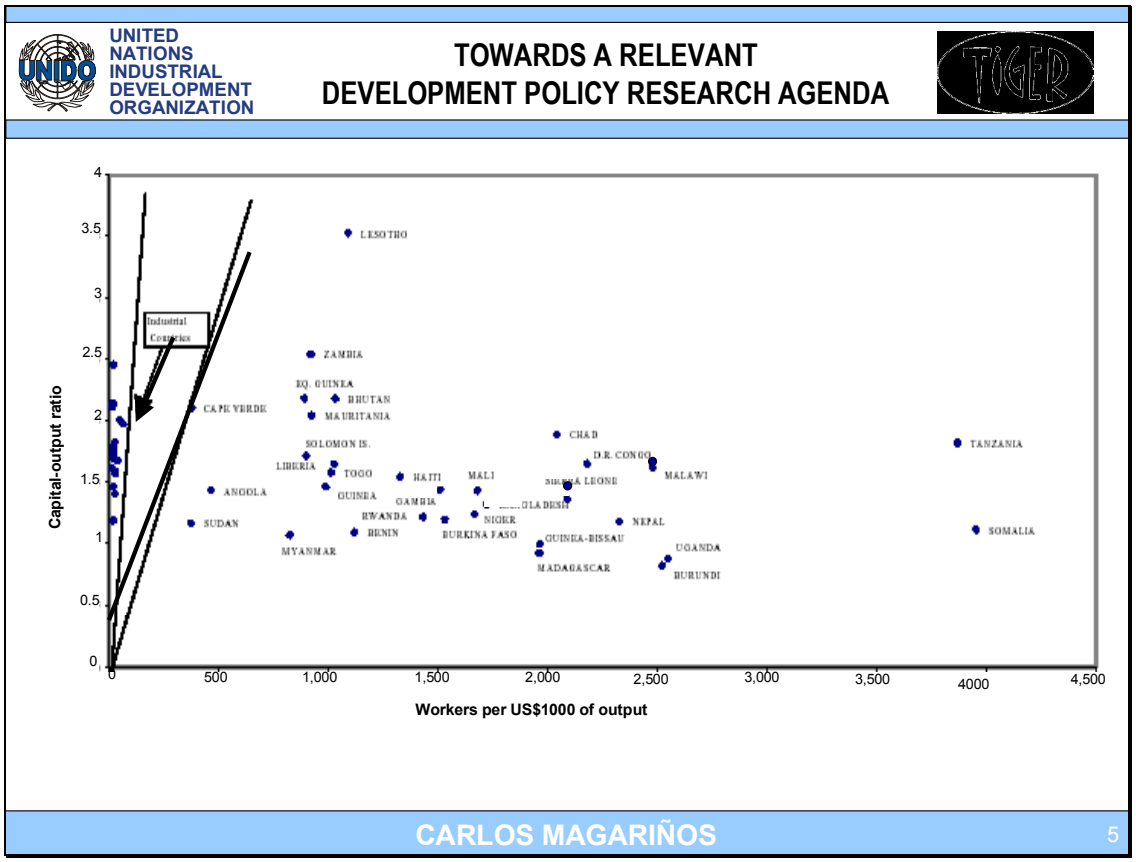
Note: The figure shows weighted group averages of real levels of per capita GDP with population as the weighting variable. Values are in 1990 US dollars per person and are plotted on a natural-logarithmic scale. The data cover 41 LDCs.

Figure 4 compares 32 LDCs with 22 industrial countries for which the data are readily available.[2] These data suggest a striking gap between both groups of countries in terms of

[2] The LDC sample includes Angola, Bangladesh, Benin, Bhutan, Burkina-Faso, Burundi, Cape Verde, Chad, Dem. Rep. Of Congo, Equatorial Guinea, Gambia, Guinea, Guinea-Bissau, Haiti, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Myanmar, Nepal, Niger, Rwanda, Sierra Leone, Solomon, Somalia, Sudan, Tanzania, Togo, Uganda and Zambia. The industrial country sample comprises Australia, Austria, Belgium, Canada, Denmark, Finland, France, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, UK and USA.

levels of technology and related practices. Indeed, this evidence is a bit at odds with the very notion of a world technological frontier since it suggests distinct frontiers between both groups of countries. Actually, the methodology applied assumes a diversity of best practice frontiers depending on the factor-intensity of output.

Figure 4: The technical divide: LDCs vs. Industrial countries, 1992



Source: UNIDO estimates and calculations based on data from the UNIDO Statistics Database.

Note: Each point in the plot represents a GDP-production technique, which is characteristic of a particular country. All value data involved in the calculations are in constant US dollars at 1990 prices. Country samples are as described in endnotes vii and xi. The two straight lines drawn into the scatter plot delimit a factor-proportions cone that separates LDC from industrial-country production techniques.

Table 1 and Figure 5 summarize the results of the exercise as applied for the 32 LDCs during the 1970-92 period. The central finding is that the LDCs have experienced an *overall decline in total factor productivity*, pointing to technological practices as major hurdle. *Indeed, these countries appear to have suffered technological regress (that is,*

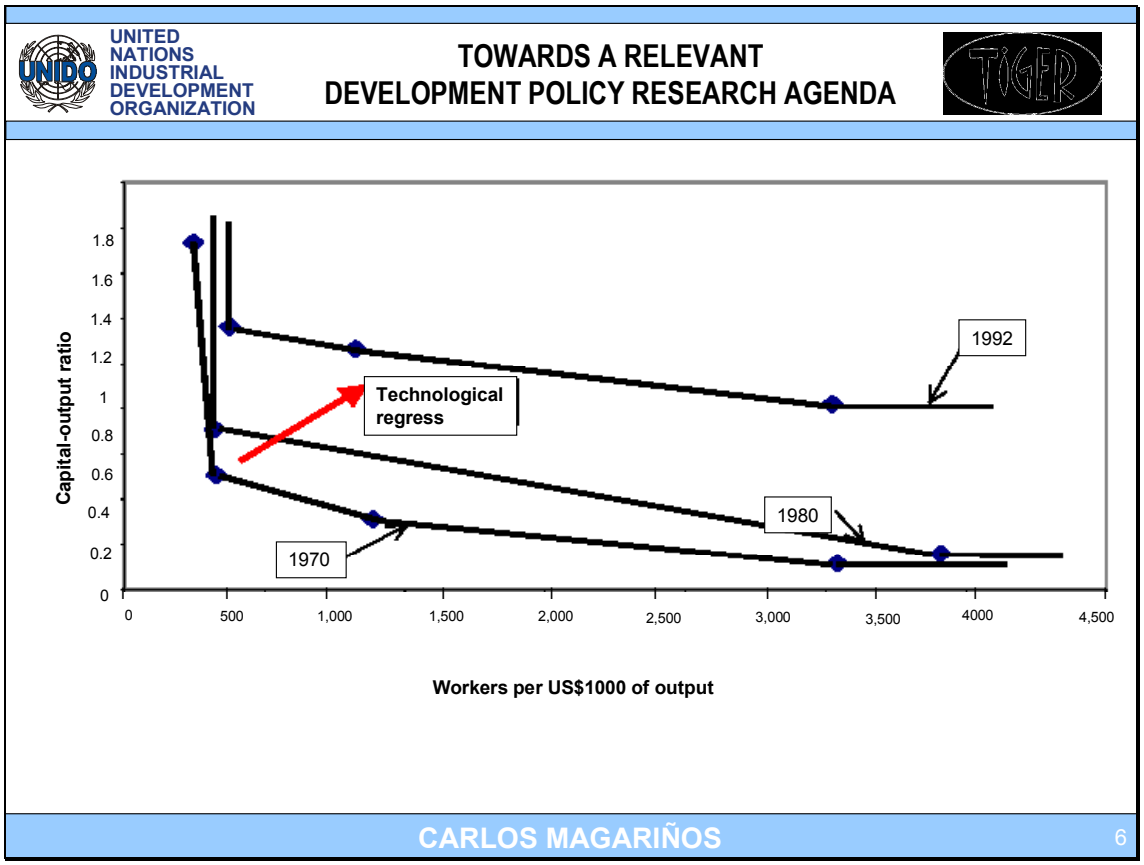
increasing distance from the frontier) rather than progress, which reveals their serious problems to access, assimilate and diffuse technology.

Table 1: Average annual changes in productivity, best practice and technical efficiency: 32 LDCs, 1970-1992

Country	Productivity	Best practice	Technical efficiency
Angola	0.973	0.982	0.991
Bangladesh	0.977	0.961	1.017
Benin	1.010	0.964	1.048
Bhutan	1.006	0.963	1.045
Burkina-Faso	0.970	0.965	1.005
Burundi	0.982	0.965	1.018
Cape Verde	1.006	0.983	1.023
Chad	1.029	0.967	1.064
Dem.Rep. of Congo	0.958	0.961	0.998
Eq. Guinea	0.953	0.978	0.975
Gambia	0.971	0.961	1.010
Guinea	1.003	0.965	1.039
Guinea-Bissau	1.006	0.961	1.048
Haiti	0.967	0.960	1.007
Lesotho	0.956	0.960	0.996
Liberia	0.992	0.984	1.008
Madagascar	0.985	0.959	1.027
Malawi	1.003	0.961	1.044
Mali	0.992	0.961	1.033
Mauritania	0.954	0.964	0.990
Myanmar	0.993	0.964	1.029
Nepal	0.986	0.962	1.025
Niger	0.949	0.959	0.990
Rwanda	0.965	0.962	1.003
Sierra Leone	1.007	0.963	1.045
Solomon	0.993	0.965	1.029
Somalia	0.926	0.938	0.986
Sudan	0.980	0.980	1.000
Tanzania	0.993	0.958	1.036
Togo	0.964	0.963	1.002
Uganda	1.007	0.958	1.051
Zambia	0.989	0.982	1.007
Mean	**0.982**	**0.965**	**1.018**

Source: UNIDO estimates based on data from the UNIDO Statistics Database

Note: See the note of Table 2



Source: UNIDO estimates based on data from the UNIDO Statistics Database.
Note: Each one of the technology frontiers shown here is not only typical for a given year, but also characteristic of 'best-practice' methods of production within the country sample under purview. The 32 countries of the present sample are listed in footnote 2. Here too, constant returns to scale are assumed.

This inference is supported by complementary evidence on capital good imports showing that the share of LDCs in world imports of this kind of goods has dropped from 1.6 per cent in 1970 to 0.4 percent in 1998. This only stresses the scant access of LDCs to world flows of rapidly changing embodied technologies, including ICTs, and their extremely poor technology absorption capacity because of lack of skills, policies and institutions geared to technology diffusion.

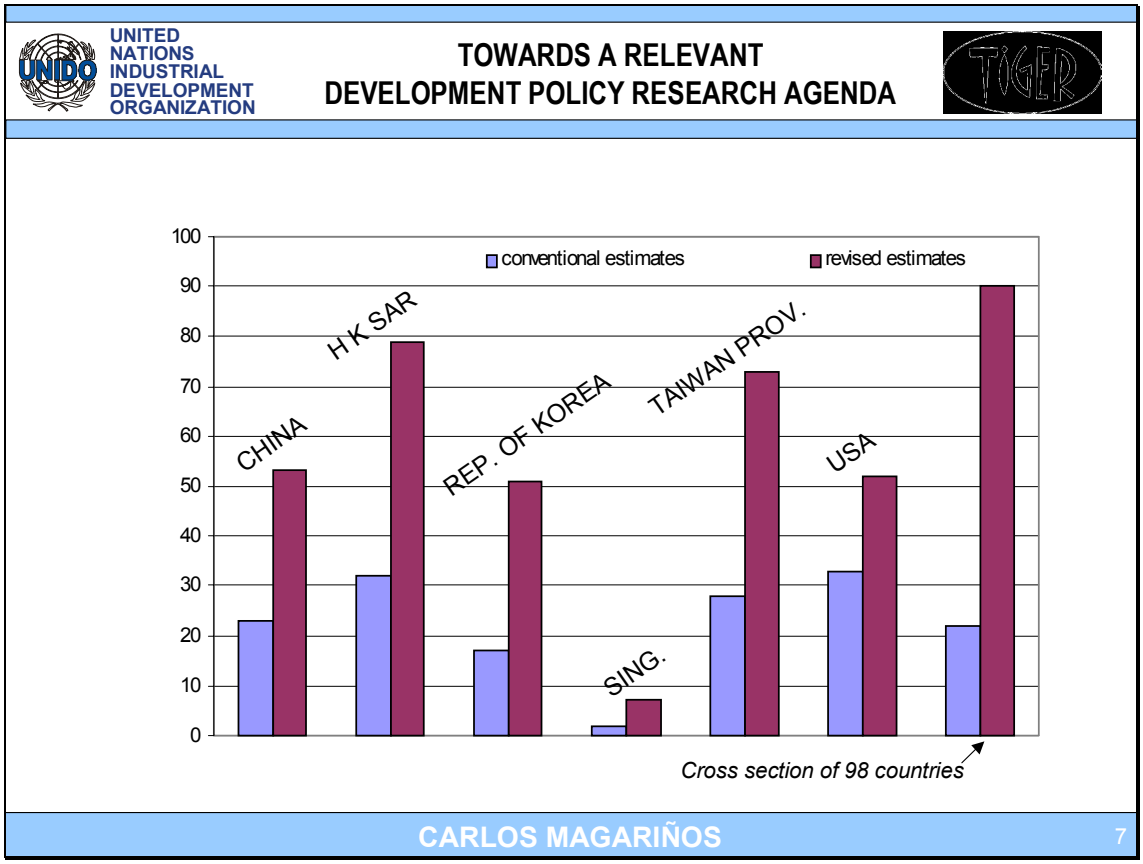
Some Caveats

Let me, however, make a few caveats with respect to this kind of analysis. In the first place, it is basically a growth accounting exercise. Therefore, it does not purport to

provide fundamental reasons for the phenomena that are measured. It does not account for the *fundamental*, as opposed to the *proximate*, causes of economic growth (geography, integration and institutions are among the former). Secondly, standard growth accounting exercises exaggerate the role of capital deepening in accounting for labor productivity growth at the expense of the role of multifactor productivity by neglecting the impact of technological progress on the return to capital. Thirdly, because of their very high level of aggregation, these exercises fail to capture insights on technology diffusion that can only be revealed by industry-specific analyses. Lastly, the existence of industry- and even firm-specific technological innovation trajectories blurs the concept of a stylized 'state-of-the-art' or 'best-practice' technology thus posing the risk a neglecting the role of domestic technological and innovative capabilities particularly for the case of developing countries. As a prelude to a discussion on policy research implications, let me now make a brief historical review of the evolution of ideas on the proximate causes and then to some comments on the fundamental causes of labor productivity growth.

During recent years economic ideas on growth and development have undergone significant changes. For one thing, much greater emphasis is being given to issues of governance, the quality of institutions and equity. For another, along a parallel track, economic efficiency as measured by total factor or multifactor productivity (TFP), which is considered vital in the industrial world, is beginning to occupy center stage in the developing world as well. For example, as Figure 6 shows, recent revisions of growth accounting acknowledge a much more important role to TFP in the explanation of economic growth than had previously been thought. Such revisions, based on data between 1960 and 1995, led to the conclusion that increases in TFP are the key explanatory variable of the *rate* of economic growth per capita in various emerging economies and, as important, of the *dispersion* in income per capita across countries.

Figure 6: Growth accounted for by TFP in various estimates (in %)



Source: UNIDO based on various authors

The Evolution of Ideas on Catching Up

The idea that we live in a world where economic progress is explained solely or mainly by increases in capital per worker, and therefore, where gaps in development are to be bridged essentially through international capital movements is shared by a rapidly decreasing number of analysts. However, this is how economic progress in developing countries and their chances to catch up with the advanced industrial countries were viewed up to very recently – and how it is still seen in many influential quarters. Let us review very briefly how these ideas took hold of development thinking in recent times – albeit they came to be regarded increasingly at odds with the actual reality of economic growth.

According to the Harrod-Domar model, the rate of growth of an economy any given year is proportional to the rate of investment the previous year. This model was adopted since

the early 1950's as the standard for growth accounting and to estimate the so-called 'financing gap' suffered by developing countries to sustain growth. And is still being used by international institutions and planners the world over to predict developing countries' future growth rates and financing needs. This despite the fact that the model was designed solely to account for *short-run fluctuations in developed countries' total output* and was *explicitly disavowed as growth theory by Domar himself not long after its original formulation*.

Influential development thinkers such as A. Lewis and W.W. Rostow further strengthened the idea that physical investment is what determines growth. In his 'surplus labor' model, Lewis considered building factories as the key response to growth needs. And Rostow defined his key 'stage' of economic growth, i.e. that of the take-off into self sustained growth, as being determined only by an increase from 5 to 10 per cent in the proportion of investment in income.

S. Kuznets, a Nobel laureate, tried in 1963 – and failed – to find empirical corroboration for this theory. A more recent, quite rigorous, test undertaken by W. Easterly (2002) found that the underlying assumptions held in only 1 out of 138 countries (Tunisia), which is well within the statistical margin of error. Nobel laureate R. Solow found in 1956 that technological change accounted for almost 90 per cent of growth per worker in the U.S. during the first half of the twentieth century. In his view it is technological change, rather than physical investment, what drives long-run growth.

Although very influential, Solow's theory failed to change the minds of many development practitioners who continued to believe that growth in the developing countries is driven by physical investment. Is it perhaps that Solow's finding applies just to the industrial countries, while physical investment, rather than technological change, still is what really counts in the developing world?

In order to address this central question, a closer look into Solow's theory is necessary. Sustained growth would not be possible if some resources, say labor or capital, fall far shorter than other resources with respect to the proportions required by prevailing

production techniques and factors costs. This is because there are limits to the extent to which growth can be fuelled by using greater quantities of an abundant resource in order to substitute for a scarce resource. In other words, the most abundant resources are subject to *diminishing returns*. These hence affect, *in principle,* the resource that happens to be most abundant; i.e. capital, in the case of the advanced industrial countries. This is a central feature in Solow's model, which led him to conclude that, without technological change, zero growth of output per person would eventually result from continuous capital accumulation. But technological change comes to the rescue by saving on whatever resource becomes scarcer and more expensive, thereby releasing the law of diminishing returns' iron clad and hence offsetting the fall in the rate of return on investment. Solow never claimed that his theory applied to the developing countries.

But economists in the Solow tradition did. And, by assuming that all countries have automatic access to and do use the same technology, the only key inter-country difference that remained is capital, which led straight back to the world of Harrod-Domar. Because of their capital shortage, along the lines of conventional theory, developing countries were supposed, to have a higher rate of return and thus to attract capital inflows which would eventually lead to convergence in both capital and output per person across all countries. But this did not happen. R. Lucas, another Nobel laureate, showed why. Lucas found (1988) that to account for the actual income difference between the U.S. and India just in terms of capital per worker, the U.S. should have 900 times more capital per worker than India – against an actual rate of 20 times! Clearly, he concluded, most of the difference had to be explained by factors other than capital per worker. He was not able, though, to come up with clear or definitive answer as to what these other factors are (the hypotheses on this ranged from political stability to geography, from the risk of expropriation to institutions and from skills to corruption).

However, there is growing consensus across different schools of thought, from the neoclassical to the evolutionary that, whatever weights are to be attached to other factors, the capacity to draw on technological change – or the lack thereof – does play a decisive role. But there was another problem with the extension of Solow's model to developing countries. Solow viewed technological progress as driven by non-economic causes, such

as basic science. The obvious implication is that, if technological progress is not automatically transmitted from the developed to the developing countries and if the domestic science base does not enable the developing countries to keep up with technological progress, there will be no convergence.

The Engines of Growth in Developing Economies

This dilemma was stressed by the new growth theories developed by P. Romer (1986) and others, which postulated that technical progress is largely endogenously driven by the economic system and, that this can lead to *increasing returns* to capital investment. He concluded that, for these reasons, the extension of Solow's paradigm to the developing countries was not warranted. Against the predictions of received theory, most of these countries have failed to narrow down their differences with the industrial countries and this was largely due to their incapacity to take advantage of technological change.

Still we may ask: do productivity gains from technological change drive growth in the developing countries – as they do in the industrial countries? As a first approximation to the answer, we can contend that the lack of the capacity to draw on technological change definitely plays an important role in accounting for the *lack* of growth – both in absolute and in relative terms.

Furthermore, the experience of the very few developing countries that actually managed to catch up, i.e., the Republic of Korea and the Chinese Province of Taiwan, shows conclusively that without the domestic mastery of initially imported technologies, they would have not succeeded. Yes, it is true that both of them kept remarkably high rates of investment over time. But there are solid grounds to contend that such rates of investment would have been unsustainable without the beneficial impact of technological change on the return on investment.

In addition, to the extent that there is reciprocal causation between high rates of investment and high rates of growth, technological change also positively affects the former through its influence on the latter. In addition, recalculations of previous growth

accounting exercises performed for these and other emerging countries conclusively show that TFP was the main explanatory factor accounting for their success in catching up with the advanced industrial world. These recalculations simply lifted the assumptions that capital investment takes places irrespective of the impact that technological change has on the return on investment and that the same technologies are used around the world. Furthermore, they focus on growth in output *per capita,* rather than growth of total output, as the relevant variable to be explained.

At a more aggregate level, evidence for a panel of 98 countries lead to the conclusion that TPF accounts for 91 per cent of the dispersion in per capita income. Capital accumulation accounted for three per cent and human capital for the remainder. Contrary to the usual practice, and more in line with the real world than previous exercises, this growth accounting exercise assumed that technology is *not* the same for all countries and firms and that capital investment is *not* independent from the impact of technological change on the return on investment.

In sum, in a world where capital movements were, in and of themselves, the means to forge productivity convergence between the advanced industrial countries and the developing countries, an Agency like the one I lead, which is concerned with speeding up the international diffusion of technology, would have very little to do indeed. Appropriate macroeconomic conditions and unfettered capital flows would do the job. But, in a world where the diffusion of technological change is the key underlying factor accounting for productivity convergence, and where severe structural barriers sharply slow down the process, an international agency in charge of fostering the international diffusion of technical knowledge and enabling developing countries to take advantage of it gains great potential relevance and importance.[3]

The next question is: to what extent the theoretical and practical insights gained over the last few decades on the engines of growth and how best to promote them have been fully taken on board of conventional prescriptions about development policy? We explore this

[3] The above is by no means intended to belittle the role of capital movements and capital formation in development, but just to reach an adequate balance between them and technology diffusion.

key question further below and arrive to a rather downbeat answer. Clearly, in our search for answers we cannot fail to take due note that what is at stake is none less than the fate of many billions of deprived people in the developing world and their expectations to attain dignified standards of living, if not for themselves, then at least for their offspring. We just cannot postpone the settling of the cumulative social liability resulting from failed policy reform processes indefinitely. We need to come up with answers that are attainable, timely and sustainable. Therefore, the question how far conventional public policy prescriptions are consistent with the strategies adopted to attain the targets aimed at by the Millennium Development Goals, the Monterrey Conference on Financing for Development, the Doha Development Round and the Johannesburg Summit for Sustainable Development is central for the international community if it is to leave behind wrong leads and dead ends and to come up with appropriate policy answers.

The Deep Determinants of Economic Growth

So far we have been concerned with the role of the *proximate* causes of economic growth, that is, capital deepening and technological change. However, it is legitimate to ask: why some countries accumulate capital and/or engage in technological change at a faster rate than others? This leads us to the *fundamental* or *deep* determinants of economic growth. Although not nearly enough empirical research has yet been carried out on these determinants as to warrant definitive conclusions, a number of hypotheses are being tested. The fundamental determinants normally referred to are:

First of all, **geography**. This does not concern just natural resource endowments (although these can have important direct and, particularly, indirect influences on economic growth through their impact on institutions). Climate, for instance, does have a heavy influence on the quality of land, crop yields and morbidity. Likewise, the distance and relative difficulty of access to international trade routes affects transport costs. Prominent in the treatment of this determinant are Diamond (1997); Gallup, Sachs and Mellinger (1998) and Sachs (2001).

The *second fundamental* determinant is **institutions**, including the rule of law, property rights and historical legacy. The role of institutions has been explored, among others, by Douglass North (1990) and Hall and Jones (1999).

The *third deep* determinant is the degree of **integration** to the world economy. Some authors refer it largely to **policies** while others prefer to deal with it as a rather structural kind of variable and to subsume policies under institutions (since these would be largely the result of the accumulated impact of policies). Frankel and Romer (1999), and Sachs and Warner (1995) have explored this dimension in detail, Rodrik, Subramanian and Trebbi (2002) and Easterly and Levine (2002) have researched the relative importance of all these determinants – and their mutual relationships. These authors stress the overriding influence of institutions and the fact that geography and policies exert their impact particularly through institutions.

The key lesson from these studies appears to be that, in order to explain the inter-country distribution of income levels, rather than of growth rates, countries with institutions that are functional to their development, tend to do well barring major policy mishaps whereas countries with bad institutions tend to do badly regardless of policies. It is important to stress, in this context, that general economic principles such as competition, monetary discipline and property rights do not have a one to one relationship to institutions. Property rights, for instance, can take the shape of common law, civil law or Chinese-type market socialism. In North's words:

"Economies that adopt the formal rules of another economy will have very different performance characteristics than the first economy because of different informal norms and enforcement. The implication is that transferring the formal political and economic rules of successful Western economies to third-world and Eastern European economies is not a sufficient condition for good economic performance" (North, 1994, p. 366).

Conclusion

Let me draw this lecture to a close by drawing your attention on three key issues that should feature prominently in a relevant development policy research agenda.

In the *first* place, I think that we ought to address the challenge involved in matching the Development Agenda to the Millennium Development Goals (MDGs) adopted by the international community. The MDGs focus on sustainable development through poverty eradication, finding solutions to hunger, malnutrition and disease that affect the most destitute portions of the world population. These goals translate into practical targets to be achieved by 2015. Drawing effectively on available science and technology outputs through international cooperation can assist much to meeting the MDGs *directly* and, as a result, helping to create human and social conditions that are less detrimental to development and, hopefully, growth-enhancing. Such cooperation may help to make the problem more manageable but would it, in and of itself, prevent its recurrence? This is unlikely.

Thinking in terms of sustainability, the key clearly lies in the ability of developing countries to use science, technology and innovation - STI for development, thus serving the needs of the poor by contributing to sustainable livelihoods and better living conditions.

Yet, there is a big gap between the Millennium Declaration and associated WEHAB (water, energy, health, agriculture and biodiversity) concerns and those of the prescriptions of the conventional development agenda – CDA (i.e. the set of policy prescriptions aimed at achieving trade and financial liberalization and macroeconomic stability, on the one hand, and institutional reforms, including those relating to good governance, the rule of law, health, education and social security, on the other). The CDA simply has little, if anything, to offer with regard to STI and its productive applications.

The *second* key issue concerns the scope for domestic technological development under the prevailing trade rules. The multilateral trade order rules out many of the policies and instruments used in the past to promote industrialization by both, early and latecomers. It constraints, therefore, the extent to which successful past experiences can be replicated.

But the extent of these constraints can be exaggerated. Public policy has an important room to maneuver for instance in fields such as entrepreneurial, social, regional, environmental and scientific and technological development. I perceive a vacuum of research on this important topic. In fact, the analyses on policies and policy instruments successfully employed in past experience, e.g. that of the Asian tigers, normally conclude that there is little or no scope for replication in the rest of the developing world. But this ought to be the point of departure, rather than that of arrival, as it usually is. We need to specify which policies and policy instruments are best suited to the current multilateral order. For instance, there are three areas of intervention that are compatible with the new normative framework of world trade: they concern the non-actionable subsidies for regional, environmental and S&T development. With macro stability and sound financial and budget practices, the promotion of technological, entrepreneurial and innovative development is accepted as 'best practice' as long as it take place with instruments that do not constraint but lure competition. This is a promising line worth more attention.

The *third* issue concerns the influence of institutions and initial conditions on the scope for the replicability of policy successes. Because of the urge to find answers to critical development challenges, development practitioners often have little choice but to extrapolate lessons from successful experiences elsewhere and replicate policy instruments may or may not be suitable to the domestic environment. For this reason, the research community has an important responsibility in illuminating what may be learnt from previous experiences by means of detailed historical and current case studies of institutional and policy development.

If I had to synthesize the central message of this lecture in a few words I would say that there is an urgent need for a new paradigm for development, built not on the rejection of the conventional one, but on the realization that its chief elements (macroeconomic stability, trade liberalization, good governance) do not suffice to bring about the productivity enhancement that is required for social advance in the developing and transition economies. The magnitude of this task is such that solely the international institutions cannot undertake it: it requires the active involvement of the world of

business, academia and development practitioners. We all share responsibility for the outcome of this effort.

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