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INSTITUTIONAL INNOVATIONS, GROWTH PERFORMANCE AND POLICY

Paper Prepared for the 44th European Congress of the European Regional Science Association (ERSA) Porto Portugal, August 25-29, 2004.

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Abstract

The aggregate picture of world economic growth shows a remarkable diversity in growth performance, both geographically and across time. We find high growth countries and low growth countries; countries that have grown rapidly throughout time, and countries that have experienced growth spurts for a decade or two; countries that took off around 1980, and countries whose growth collapsed around 1980. What is the role of policy in this diversity? How can policy help transform this picture? This paper tries to answer these questions, analysing the performance of the high growth developing countries and the way they developed institutional innovations.

Analysis of the success story of China, with an astonishing annual growth rate of 8.0 percent since the late 1970s, together with other well-known East Asian experiences that have taken place in countries such as South Korea and Taiwan, provide the basis to build some stylised facts about the take-off and the process of sustaining economic growth. On the other hand, the experience of liberalisation, deregulation and privatisation in countries such as Mexico, Argentina, Brazil, Colombia, Bolivia, and Peru have offered substantial evidence that allows us to question the standard formulae used to propel and maintain economic growth.

The paper puts forth three main conclusions that could be extensive to the growth of sub-national regions: a) Successful reforms are those that put together sound economic principles and local capabilities, constraints and opportunities; b) Economic growth is not the natural order of things, and setting up a fair and levelled ground may not be enough to stimulate productive dynamism; c) Institutional innovation requires a pragmatic approach that avoids ideological lock-in.

Keywords: *Economic growth, development policy, market/government failure, institutions, spillovers, stylised facts.*

INSTITUTIONAL INNOVATIONS, GROWTH PERFORMANCE AND POLICY

1. Introduction

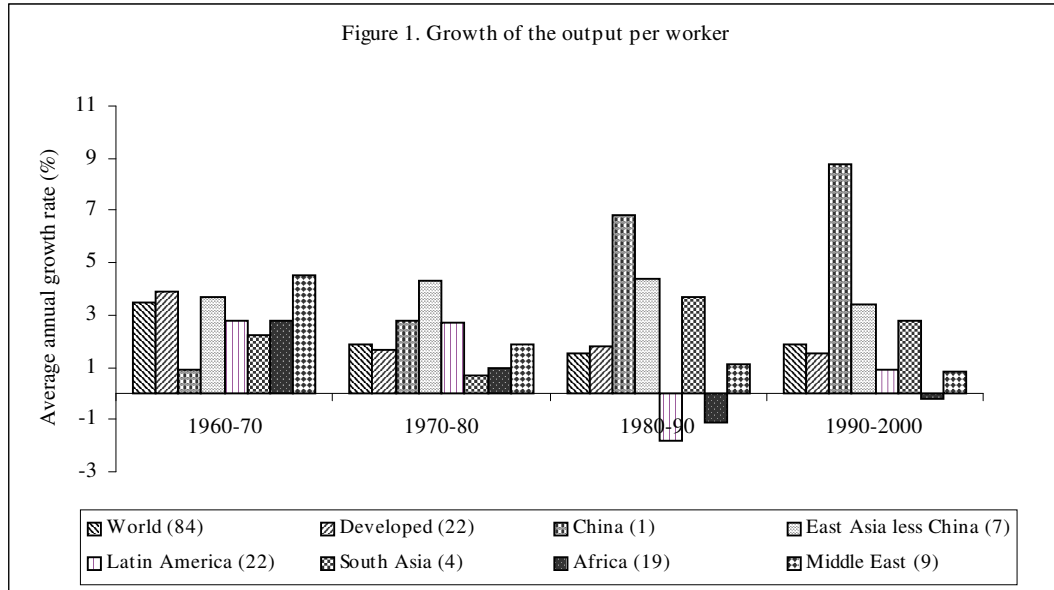
In the four decades before 2000 the economic growth performance in the developing world was very remarkable: the exponential growth rate of the real Gross Domestic Product (GDP) per capita for the group of low and middle-income countries grew at an average rate of 2.3 percent per annum¹. It's indeed, a high growth rate. On the one hand, at this pace incomes double every 30 years, allowing each generation to enjoy a level of living standards that is twice as high as the previous generation's. On the other hand, this pace shows an economic growth, which is significantly higher than the 1.3% growth rate of British GDP per capita, during the period of British economic supremacy in the 19th century (1820-1870). The rate of 2.3 percent per annum is also significantly higher than the rate of the American economic growth per capita (1.8%), when the United States left Britain behind as the world's economic leader, during the half century before World War I (Maddison 2001, Table B-22, 265).

However remarkable in historical perspective, the high economic growth performance of the developing world was not enough to assure the convergence between poor and rich nations. As the rich world itself grew at a more rapid pace during the same last four decades of the 20th century, only few developing countries ended the century with productivity levels that stood significantly closer to those enjoyed in the advanced countries. Almost all exceptions are located in Asia.

In fact, as it is apparent in figure 1, the aggregate picture of world economic growth shows a noteworthy diversity in growth performance, both geographically and across time. South Asia, which has lost ground in 1960s and 1970s, surpasses the pace of World and Developed Countries economic growth per worker in the 1980s and 1990s. East Asia less China, whose rate of economic growth per worker was slightly superior to the World rate in the 1960s, clearly surpasses the world average and is the most dynamic region in the 1980s and 1990s. But the most astonishing example of growth takeoff and sustained growth is China. After growing modestly in per worker

¹ Based on data (in constant 1995 US\$) from the World Development Indicators CD-ROM (World Bank, 2002).

terms in the decade of 1960, it presents a rate which is approximately equal to the Latin America in the 1970s and undoubtedly surpasses the pace of all the other regions in the 1980s and the 1990s.



Source: World Development Indicators, CD-ROM (Word Bank, 2002).

On the other hand, Latin America and Sub-Saharan Africa lost ground in a very impressive way. In the four mentioned decades the African performance has always been inferior to the world average, but the 1980s and the 1990s are dramatic, with negative rates of growth in GDP per worker. The decade of the 1980s was also dramatic for Latin America's growth performance, and despite some recovery its growth rate of GDP per worker has remained very low in the 1990s.

This paper looks at economic policies and institutional arrangements implemented in some developing countries, and is trying to answer the following question: Why is it so difficult for many, and why does it seem so easy for a couple of others, to achieve economic convergence with the living standards prevailing in advanced countries? The approach that we exploit in this paper is to look into both the initial economic conditions and the employed development policy. We consider of particular interest the broad design of the policy principles that are underlying in successful growth experiences and in growth disasters. Rather than using regression methods, we prefer a more classical approach.

Classical economists, such as Smith, Malthus, and Ricardo, treated the problem of development as part of a general inquiry into the causes and consequences of

economic growth. They sought to explain the basic forces that could account for the economy's dynamics as well as its static performance, and thus explain the observed pattern of wealth accumulation and productivity growth across nations. In more recent times, growth and development economics have been treated largely as separate subjects of study rather than as part of a unified theory that could explain the diversity of growth experience in all countries. We aim at contributing to break this separation and, consequently, our explanation we'll combine mainstream economic growth theories with the view of some pioneers of development economics such as Rosenstein-Rodan (1943), Nurkse (1953), Hirschman (1958), Kuznets (1959), Rostow (1960) or Gerschenkron (1962).

Given that this paper is about development policy, we'll begin with a clarification about the need of considering the distinction between sound economic principles and the political convictions of economists associated to the secular swing of the fashions pendulum. Therefore, the next section deals with government intervention from the viewpoint of economics. Section 3 is dedicated to the need of energising entrepreneurship as a strategy to launch growth, and is followed by a section that analyses the most important market failures in low-income environments. Section 5 deals with institutions. Section 6 compares the Latin America growth experience with the Asian economic growth. Section 7 depicts some stylised facts in development and policy. Concluding remarks are presented in section 8.

2. Government intervention

At the beginning of the 21st century, privatisation and deregulation are the straight cries of an increasing number of the advocates of economic reform. Usually this hands-off approach is enforced with arguments of efficiency and some paragons of the economic well thinking. However, we need to disentangle what is the well-accepted wisdom of science from the evanescent fashion. Merging these two things may be too dangerous for lots of people that soon or later would experience the effects of such political voluntarism.

As a matter of fact, in the evolution of economics, there is no clear trend in favouring or rejecting government intervention. We find, of course, economists who were enthusiastically committed to laissez-faire and some who believe that the market, left to itself, would alleviate most economic problems. This liberal wing has naturally

become weaker in the post-1929 decades, when we have seen the emergence of a school of market socialism led by Abba Lerner and Oskar Lange². However, the same period observed the opposite positions of Hayek (1948) and von Mises (1949), as Baumol (2000) has argued. Not even the University of Chicago, the archetype of liberalism, had a monolithic economics department. The liberal branch, led by Milton Friedman, has coexisted along with more moderate voices such as those of Paul Douglas, and Jacob Viner and it produced Samuelson and Patinkin (Baumol, 2000).

On the other hand, it is true that some dramatic events may affect the pendulum swing. It is probably no accident that after the Great Depression many economists began to advocate a much more extensive role to macroeconomic policy than before. But this was not a singular event, the controversy on the support of government intervention has a long story since the dawn of economics: discussions of monetary and banking policy, including issues such as bimetallism and the gold standard, or the “Poor Laws” and the “Corn Laws” go back to the sunrise of economics.

So, it is not an astonishing fact that development policy has always been subject to fashions. During the 1950s and 1960s, planning, import-substitution and the “big push”, were the straight cries of economic reformers in developing nations. In the 1970s these ideas were replaced with more market-friendly and outward-orientation approaches³. By the late 1980s, a set of policy principles usually known as “the Washington Consensus” (Box 1) has obtained a remarkable convergence of views among international institutions⁴. Some authors, such as Rodrik (2003), argue that these principles remain at the core of today’s conventional understanding of a desirable policy framework for economic growth.

Box 1. The ten principles of the Washington Consensus	
1. Fiscal discipline	6. Trade liberalisation
2. Reorientation of public expenditures	7. Liberalisation of FDI inflows
3. Lower marginal tax rates and broaden the tax base	8. Privatisation
4. Interest rate liberalisation	9. Deregulation
5. Unified and competitive exchange rate	10. Secure property rights

Source: Williamson (1990).

² See Lange and Taylor (1938).

³ For the evolution of thinking on economic development see Easterly (2001), and Lindauer and Pritchett (2002).

⁴ John Williamson coins the term “Washington Consensus” in 1989. See Williamson (1990).

However, as we'll argue in this paper, the simple paste of such principles to the economic context of a real country is not the most appropriate strategy to boost economic development. Accordingly, we think that it is preferable to foster a policy approach which is based on the careful examination of the advantages and disadvantages of government intervention in the actual and historical conditions. In this paper we'll argue in favour of the superiority of such an approach.

3. The growth *Takeoff*

From the standpoint of economic development, the most important question in the short run for an economy trapped in a low-activity equilibrium⁵ is how to energise entrepreneurship. How to put into motion all the activities that entrepreneurs undertake in more developed locations, such as the production of new products, the use of new processes, the expansion of capacity, the use of new technology, the search for new markets, and so on.

In the literature, there are two kinds of approaches on how to invigorate entrepreneurship. One view emphasises the role of government-imposed barriers to entrepreneurship — the government failure view. In this view, institutional malfunctions, policy biases, and high levels of policy uncertainty and risk create dualistic economic structures and hold back entrepreneurship. The elimination of these impediments is then expected to set free a flood of new investments.

A good example of this view can be found in Stern (2001). Stern emphasises the need for an appropriate “investment climate”⁶ and summarises the government-imposed imperfections: macroeconomic instability and high inflation, high government wages that distort the running of labour markets, a large tax burden, heavy licensing requirements, subjective regulations, corruption, etc. Simultaneously, Stern recognises the need for priorities and the likelihood that these priorities will be context specific⁷. The strategy he recommends is to use enterprise surveys and other techniques to discover which of these problems bite the most, and then to focus reforms on the

⁵ Barro and Sala-i-Martin (1995, pp. 49) define a poverty trap as a stable steady-state with low levels of per capita output and capital stock. This is a trap because, if agents attempt to break out of it, the economy has a tendency to return to the low-level steady state. Only by a very large change in their behaviour can the economy break out of the poverty trap and move to the high-income steady state.

⁶ Stern defines “investment climate” quite broadly, as “the policy, institutional, and behavioural environment, both present and expected, that influences the returns and risks associated with investment” (2001, 144-45).

⁷ *The Strategy of Economic Development* (Hirschman, 1958) is a seminal work on this approach.

consequent scope⁸. Once a few, small things are done right, a favourable dynamics is set free initiating a virtuous circle.

According to the second view — the market failure view — the government has to play a more positive role than simply getting out of the way of the private sector: it needs to find means of crowding in investment and entrepreneurship with some helpful inducements. In this view, economic growth is not the natural order of things. There are market imperfections inherent to low-income environments that block investment and entrepreneurship in non-traditional activities. Hence, establishing a fair and levelled ground may not be enough to encourage productive dynamism.

In this view, economies can get trapped in a low-level equilibrium due to the nature of technology and markets, even when the course of government action does not punish entrepreneurship. There are many versions of the market failure view, but some of the main arguments are based either on learning and knowledge spillovers or on market-size externalities induced by scale economies.

4. Market failure

Early in the development process, the adaptation of elsewhere existing technologies is very important to economic growth, because such adaptation is the main source of technological spillovers. However, there are several reasons why adaptation of existing technologies can be the origin of market failures. Firstly, there may be a threshold level of human capital beyond which the private return of acquiring skills becomes strongly positive (Azariadis and Drazen, 1990). Secondly, there may be learning-by-doing which is external to individual firms, such as the diffusion of knowledge that one set of firms obtains without incurring its own costs⁹. Also there may be learning-by-doing, which cannot be properly internalised due to imperfections in the market for credit (Matsuyama, 1992). Thirdly, there may be learning about a country's own cost structure, which spills over from the incumbents to later entrants (Hausmann and Rodrik, 2002)¹⁰.

⁸ A similar approach is used in Friedman *et al.* (2000), and Shleifer and Vishny (1998).

⁹ One mechanism by which this occurs is the movement of individuals among firms, but the knowledge spillovers may occur without such movement, taking place from informal exchanges in both professional and social contexts.

¹⁰ The externalities conferred on other firms in an industry by the first entrant include the demonstration that the sector is physically and economically feasible (Pack and Westphal, 1986) as well as the diffusion of information on technology and marketing conditions.

In all the above cases, the relevant learning is under-produced in a decentralised equilibrium, with the consequence that the economy fails to diversify into non-traditional, more advanced lines of activity. Additionally, though perhaps not so important in the growth takeoff, innovation to create new technologies is also subject to spillovers. The incomplete appropriability of the results of R & D and the possibility that its private riskiness exceeds social riskiness is another market failure. In all these circumstances market failures could provide scope for welfare-enhancing and growth acceleration policy.

The second main group of reasons for market failures relates to the existence of co-ordination malfunctions induced by scale economies¹¹. There is the case of external economies that arise as the size of a competitive industry increases, permitting a falling long run supply curve. Such gains in productivity in a competitive sector in which individual firms exhibit constant or increasing costs are attributable to economies of scope in the use of specialised equipment and greater specialisation of individual skills. Accelerating the growth of the sector may generate an earlier move toward lower long run costs. In the case of non-competitive sectors in which large scale economies exist, firms will incur lower unit cost if capacity is established at higher levels of output. If they perceive only a domestic market, they will construct a larger plant only if potential purchasers also establish large plants that generate extensive demand. The market failure is that at a given point in time, current prices may not convey the information about prospective expansion that is relevant to attaining a lower cost of production through larger plant size (Scitovsky, 1954; Chenery, 1960).

This generates an argument for co-ordination of planned investment given by Murphy *et al.* (1989), who formalise Rosenstein-Rodan's (1943) idea of the 'big push'¹². There are multiple equilibria due to pecuniary externalities generated by imperfect competition with large fixed costs. An industrial policy which "encourages industrialisation in many sectors simultaneously can substantially boost income and welfare even when investment in any one sector appears impossible" (Murphy *et al.*

¹¹ Hoff and Stiglitz (2001) discuss a large class of models with co-ordination failure characteristics.

¹² The big-push theory of development is based on the idea that moving out of a low-level steady state requires co-ordinated and simultaneous investments in a number of different areas. The precise mechanism that generates profit functions of this form depends on the model in question. Murphy, *et al.* (1989) develop models in which the complementarity arises from demand spillovers across final goods produced under scale economies or from bulky infrastructure investments. Rodriguez-Clare (1996), and Rodrik (1996) present models in which the effect operates through vertical industry relationships and specialised intermediate inputs.

1989, p. 1024). Growth of the size of the economy will eventually preclude the need for policies to obtain the productivity gains from either economies of scope or scale.

In the presence of learning externalities and co-ordination failures government intervention can be directly welfare enhancing by improving the competitiveness of domestic industry, leading to both higher national (and world) output. However, there are additional cases in which government intervention can be welfare enhancing or growth promoting through the capture of rents or terms of trade effects associated with international trade¹³. In these cases, national industrial policies have a zero-sum element at the global level and could hence be thought of as containing a strategic or predatory element.

Both the learning externalities and the co-ordination failures suggest that the propagation of modern, non-traditional activities is not a natural process, and that it may call for positive inducements. So, policymakers must identify market failures that could provide the scope for welfare-enhancing interventions; design and implement the appropriate interventions; and correct or terminate the applied policy as changing circumstances warrant. As long as there are market failures and strategic needs, well-designed interventions will always promote faster development than free markets. This conclusion is hardly implemented in an environment dominated by a narrow view of the Washington Consensus.

Certainly, in the cases discussed so far, intervention may be effective if the government itself does not suffer from deficiencies leading to government failure. One of the notable lacunae of the literature on industrial policies is the general absence of the discussion of political economy factors, in particular, the possibility of rent-seeking behaviour by self-interested firms and policymakers and the concomitant degradation of policy¹⁴.

It is nowadays well accepted that, in the long run, the convergence with the living standards of advanced countries calls for the existence of high-quality institutions. Consequently, the growth-enhancing strategies described above have to be complemented over time with a cumulative process of institution building. In the next section we'll draw some considerations about institutions.

¹³ Early formalisations of arguments along these lines are contained in Spencer and Brander (1983) and Itoh and Kiyono (1987). The work of Helpman and Krugman (1989) contains a synthesis of the subsequent literature on strategic trade policy. See also Grossman and Helpman (1991).

¹⁴ For an outline of this and others caveats of industrial policy see Pessoa (2004).

5. Building institutions

An important role attributed to the institutions, by literature on institutions itself, is to prevent that growth runs out of steam and to guarantee that the economy remains resilient to shocks. This role is emphasised, both in historical works (North and Thomas, 1973) and econometric studies (Hall and Jones, 1999; Acemoglu *et al.*, 2001). But, though this literature has demonstrated the essential role of the process of institutions building it does not provide much policy guidance because of its very aggregate level of generality (Rodrik, 2003).

In its broadest definition, institutions are the prevailing rules of the game in society (North, 1990). So, the relevant question is: in the process of economic growth, what kind of institutions matter and why? The aspects of institutions that have received the majority of research in empirical work were basically property rights and some forms of contract enforcement. Both aspects require the coercion of public authorities. There are two main ways to deal with these aspects of economic institutions: to take a regulatory approach and to transfer substantial powers to an Interventionist State.

The aim of the regulatory approach based on optimisation and imperfect markets is to secure optima outcomes by introducing competition wherever possible, by putting in place short-term, targeted contracts and by setting up supervisory bodies to ensure compliance with contracts¹⁵. This regulatory approach, pressed by the negative perception of relations with private enterprises (although such negative perceptions are simply of relations and not of the enterprise itself), poses a number of practical problems such as the cost of monitoring contracts, the long service life of infrastructure, the training of regulators, the drawing-up of reference criteria and the asymmetry of information, which affects particularly the action of the regulator.

The other totally different approach, in terms of both structure and recommendations that can be adopted is based, not on a theory of countervailing powers, but on the transfer of substantial power to an Interventionist State. The State shows no mistrust of private enterprises and its interest in making use of such enterprises is that the work will be done and will be done accurately. In order to ensure maximum efficiency, the public authority must make use of partners, which are in a position of strength (major firms, which are often oligopolies) and award them a long-

¹⁵ This is more or less the policy that had been adopted in the privatisation programmes in the UK, and also reflects the main trends in the culture prevailing in international institutions (above all those outside Europe).

term contract which will allow investment to proceed with profits made at a later time. The adoption of a pragmatic approach and trust between the partners are two essential factors.

In recent times the Interventionist State has been under fire. Both the policymakers and the economic reformers seem to be more open-minded to the benefits of the regulatory approach. However, some important questions remain awaiting a satisfactory answer: how can the efficiency of the public services supplied by firms, large enough to be efficient and to deal with the specific attributes of infrastructure, such as the management of risks and externalities, be reconciled with the efficiency of contracts awarded on a competitive basis? How can transaction and supervision costs be controlled and regulatory activities be internalised?

Meeting these challenges will require a dual transition. Firstly, it will require a shift away from the standard liberal institutional approach to one entailing a greater degree of co-operation and less dogma (with a free political regulator). Secondly, there is a need to move away from economies, which are fully controlled by the State or in which heavy reliance is placed on State intervention, to more market-oriented forms of behaviour in which contracts are more explicit. However, to destroy the Interventionist State with the aim of implementing a regulatory approach is a strategy that can only be implemented with great caution. We think that comparison between East Asia and Latin America can help to understand this statement. So, in the next section we'll compare these regions trying to answer the question: Why has convergence occurred in East Asia, and not in Latin America?

6. Why has convergence occurred in Asia and not in Latin America?

The answer to this question has two strands of explanation: initial conditions and the actions designed and implemented to encourage economic growth, that is, the policy implemented in each region. We'll begin with a short analysis of the initial conditions prevailing in Asia and Latin America, in the middle of the 20th century. Afterwards we'll address the broad policy implemented in each one of the regions.

a) Initial conditions

As we have showed in the introduction of this paper, Asia was the developing region where most convergence successes are concentrated. Table 1 shows an indicator

of such convergence: the current GDP per capita relative to the USA¹⁶. As we may see in table 1, in the second half of 20th century, only two in ten Asian countries enlarged the economic gap relatively to USA: Pakistan and Philippines.

Table 1. Economic convergence and initial education in Asia

	Current GDP per capita relative to the USA						Tyr 15
	1950	1960	1970	1980	1990	2000	1960
China	4.99b)	5.33	4.86	5.07	6.82	10.79	
Hong Kong		23.59	39.51	58.27	80.41	78.31	5.17
India	6.57	6.89	6.44	5.51	6.45	7.53	1.68
Japan	21.31	38.18	71.58	73.16	84.47	72.78	7.78
Korea	11.42c)	11.69	15.76	21.69	38.42	41.94	4.25
Pakistan	9.38	6.77	7.82	6.22	6.64	6.06	0.74
Philippines	13.72	16.64	14.89	15.10	11.30	11.41	4.24
Singapore		16.71	31.07	50.32	64.78	80.42	4.30
Thailand	9.71	9.53	12.10	13.35	18.15	18.85	4.30
Taiwan	8.27a)	10.93	17.06	26.67	42.05		3.88

Source: PWT 6.1 (Heston *et al.*, 2002), and Barro and Lee (1996). Notes: a) 1951, b) 1952, c) 1953.

As it is apparent from table 1, in the 1950s South Korea and Taiwan were quite poor. In 1953, Korean current GDP per capita was only 11.42 percent of the USA equivalent value. The Taiwanese average level of development was even lower, as the 8.27 per cent figure of the current GDP per capita shows. Both countries, and the remaining Asian pioneer NICs (Hong-Kong and Singapore), show a sustained process of convergence with USA along every decade of the second half of the 20th century.

One of the possible explanations for the different performance of the countries is the diverse endowment in human resources. Thus, we also include in table 1 the average schooling years in the population aged 15 and over (Tyr 15), as a proxy of initial human capital in those countries. However, the existing level of education is not a satisfactory explanation: if the low educational level of Pakistan could be a reason to posterior disappointing economic performance, this excuse does no longer subsist in the Philippines, whose educational level is similar to that verified in Korea and even superior to the Taiwanese one.

On the contrary, as we may see in table 2, in Latin America the broad picture of convergence is the reversal of the Asian one: only 1 (Brazil) out of the 15 countries

¹⁶ This is the variable Y in the PWT 6.1 (Heston *et al.*, 2002). This variable represents the current per capita GDP expressed relative to the United State (US=100) in each year.

included in the table shows a GDP per capita relative to the USA higher in 2000 than in 1950. An interesting parallel to Latin America is the experience of the Philippines¹⁷.

In explaining the causes of the different performance of Asian and Latin America countries, numerous studies have emphasised that Korea and Taiwan exhibited at the beginning of their high growth period higher literacy rates than its economic level could indicate. But, table 1 and table 2 show that neither Korea nor Taiwan had the education levels of Argentina, Chile, Bolivia or Uruguay¹⁸.

Table 2. Economic convergence and initial education in Latin America

	Current GDP relative to the USA						Tyr 15
	1950	1960	1970	1980	1990	2000	1960
Argentina	61.18	60.03	55.42	50.21	26.90	32.93	5.25
Bolivia	24.30	17.21	15.60	14.79	9.58	8.24	5.37
Brazil	15.47	19.26	22.05	30.30	23.87	21.74	2.85
Chile	29.76a)	31.46	31.22	25.90	23.38	29.17	5.21
Colombia	19.56	19.66	18.27	20.12	18.65	16.27	3.20
Ecuador	15.90a)	17.18	15.07	22.50	14.69	10.44	3.23
Guatemala	22.94	20.77	19.48	18.98	13.29	12.17	1.50
Honduras	15.50	12.91	11.07	10.73	8.07	6.08	1.87
Mexico	29.87	32.75	33.46	38.29	28.05	27.26	2.76
Nicaragua	21.23	24.66	25.21	16.15	8.07	5.47	2.26
Panama	19.23	18.70	24.16	23.76	18.35	18.67	4.64
Peru	24.99	26.12	29.16	24.33	13.73	13.47	3.30
Paraguay	17.61a)	15.48	15.30	19.80	18.75	13.48	3.64
Uruguay	47.63	46.34	37.04	36.25	27.57	28.87	5.36
Venezuela	33.21	35.56	31.97	38.66	27.86	20.31	2.91

Source: PWT 6.1 (Heston *et al.*, 2002), and Barro and Lee (1996). Note: a) 1951.

Other authors claim that South Korea and Taiwan possessed at the beginning of their growth takeoff good infrastructure such as roads and ports, which have allowed the important role played by exports. As a matter of fact, there is a lot of evidence that manufacturing exports have pulled the industrialisation in these Asian countries. But, we may also note that neither Argentina nor Chile had sufficiently good transportation and ports to have engaged in significant primary product exports.

¹⁷ Philippines began the post-war period with many advantages including high education, a large number of English speakers (conducive to trade relations), and close affiliation with the USA. Nevertheless, despite predictions in the 1950s that it would be the success story in Asia (Morawetz, 1980), its dismal performance is similar to those of Latin America. Accordingly, most of the standard empirical studies of the impact of ISI, group the Philippines with Latin American countries (see, for example, Little *et al.*, 1970).

¹⁸ Moreover, the university education levels and the health care system of both Argentina and Chile were considerably superior to the Asian countries (Noland and Pack, 2001).

Perhaps the resource endowments are the reason. Several authors have argued (for instance, Noland and Pack, 2001) that Latin American Countries have relative resource endowments (labour, physical capital, human capital, and arable land) very different from East Asian countries. Taiwan, Korea, Hong Kong, and Singapore are land-scarce countries. In contrast, the Latin American countries tend to reveal relatively large endowments of land and low endowments of physical capital¹⁹. The large Latin American countries are arable land abundant, and as it is usual in economies with larger natural resource bases, the rents generated by resource extraction will retard specialisation in manufacturing and will bias specialisation to resource-based sectors.

These factor endowments starting points are important. As several authors (Chenery, 1960, 1979; Chenery and Syrquin, 1975; Leamer, 1987) show, there is some evidence that land-scarce countries (such as the former East Asian ‘Tigers’) will tend to specialise earlier in manufactures (i.e., at lower levels of per capita income) and more intensively (i.e., exhibit higher output per worker ratios) than economies with more diversified resource bases. But, how to explain the astonishing growth experience of Mainland China, after 1978?

b) The role of policy

To consider only the initial conditions is clearly insufficient to understand the convergence process. The transitional path should play a role in the catching-up process too. Hence, the discrepancy in the nature of the industrial policies and their actual implementation are, in our view, critical.

It is well known that many Latin American economies embarked on systematic import substitution (ISI) programs. Initially, ISI was established partly out of disillusion with world trade prospects during the depression of the 1930s and the disruptions of World War II. After having registered some success in large countries, such as Brazil, it became a fashion, reflecting the regnant view of Hans Singer and Raul Prebisch and the UN’s Economic Commission for Latin America (ECLA). Consequently, in the 1950s, ISI was theorised as the most effective way of running away from the deterioration of the terms of trade. As it is well known in a lot of cases, the attempt has failed at considerable economic cost.

¹⁹ Chile, with its lower arable land abundance, differs somewhat from Argentina, Brazil, and Mexico in this respect.

It may be helpful to briefly consider why Latin America experienced failure in this kind of industrial policy, while in Asia the similar policies appear not to have damaged the economies during their high growth period, and may even have had slight benefits as it is emphasised by several authors (Noland and Pack, 2001). The explanation is usually tied to the extensive protection that was given to many sectors in Latin America as evidenced by the high rates of effective protection calculated for all of the countries for which such estimates were made²⁰.

Most of the East Asian economies have traditionally applied a ‘dual track approach’, that is, an approach trying to foster both import substituting industries, and export-oriented industries, while at the same time attracting foreign direct investment²¹. Why did not LA proceed in the same way? The answer may lie in the actual implementation of policy, particularly in the mechanisms that have forced the firms to concentrate on improving productivity, as on the efforts to import and assimilate foreign technology (Kim, 1999, on Korea; Dahlman and Sananikone, 1997, and Pack, 2001, on Taiwan).

As a matter of fact, in LA there was no mechanism that induced technological change. The external protection to resident firms was granted independently of its success. In contrast, in Japan, Korea, and Taiwan there was continuous monitoring of the progress of firms²². Realised exports were compared with targets set by the Economic Planning Board for each firm. As the export targets were constantly increased, firms were forced to improve their productivity in order to lower marginal costs, the alternative being lower profits over time.

Having pursued the earlier policies with care about implementation, Japan, Korea, and Taiwan did not suffer and may have extracted some small benefit for several decades though some would argue they could have done still better given their high

²⁰ As a matter of fact, in spite of the general concern that protection rates would be highest for consumer goods and lowest for machinery, they were nevertheless high for most sectors. As a result of the high rates of protection, firms in inefficient sectors could earn significant profits and their employees earn high wages (paid out of the rents collected from consumers) and faced little credible prospect that protection would be contingent on improved efficiency.

²¹ In this respect, there was, however, an important difference between forerunners (i.e., Japan, Korea, and Taiwan) and latecomers (i.e., Southeast Asian countries and China); the latter actively utilised incoming FDI not only in export-oriented industries, but also in some major import substituting industries such as automobiles, domestic electric appliances, pharmaceuticals, and food processing.

²² The clearest example is provided by Korea in which subsidised credit and protection in the domestic market were contingent on export performance. Exports became the indicator by which the progress of individual firms was measured. Current data on exports of individual firms were presented at quarterly meetings at the Blue House, the seat of the executive, with all of the firms in a given promoted sector. The information was obtained not from companies but from bills of lading at Korean ports.

saving and investment rates. Latin American nations, on the other hand, suffered almost immediately from protection combined with overvalued exchange rates that discouraged exporting. Thus the Asian countries were able to zoom past their initial Latin American per capita income peers (or superiors) such as Argentina and Chile.

The comparison between Latin America and East Asia, shows another inter-regional difference: while the 1980s were the “lost decade” of Latin America, on the contrary, in East Asia those were the days of a significant change in the countries’ national development strategy. Such changes led to the formation of international production/distribution networks. In the mid 1980s and the early 1990s, the East Asian developing economies started applying new development strategies in which the benefit from hosting FDI is aggressively explored. The new development strategies do emphasise the utilisation of market forces, but they are not simple laissez-faire policies; rather, they pursue new roles of government involvement in the process of development.

While East Asia is presenting a new model of development strategies in the globalisation era, the reformers in Latin America are experiencing the traditional receipt of liberalisation, privatisation and deregulation. This radical change may have some dangerous effects on the economic structure. Latin American firms under import substituting industrialisation (ISI) received considerable protection from external competition, with very little control. In the 1990s, with the implementation of some policies of the Washington Consensus these same firms faced perhaps lots of foreign competition, but little incentives. This line of argument provides one potential suggestion of the disappointing economic performance of Latin America in the 1990s despite a much improved “investment climate” according to the standard criteria.

The way Taiwan has reacted to its rising labour costs, and to the intensifying competition from cheaper countries, illustrates the contrast with the policies of the Washington Consensus. As a matter of fact, Taiwanese government embarked in late 1980s on a major program of restructuring and upgrading technological capabilities in the industry. The Industrial Development Bureau of the Ministry of Economic Affairs developed a US \$95.4 million program, of which 95% was provided as grants to private firms to speed up technological renovation. Over 250 textile plants received technical and financial assistance, enabling them to import the latest automated equipment and both train their staff in the new technologies and develop new design skills. A number

of public and private agencies were involved in this restructuring exercise: banks provided low interest loans to SMEs to move their facilities overseas and have special credit lines for them to import new equipment.

Despite controversies about the precise levels of TFP growth in Korea and Taiwan, it is clear that the TFP growth rates in these two countries were far above those in Latin America during its import substitution phase (Young, 1995; Nelson and Pack, 1999). We think that the superiority of Asian performances is partly tied to its endogenous capacity of combining sound economic principles with local capabilities, restrictions and opportunities, in a dynamic way. We'll use US patents granted, to resident in Industrialising Asia (IA) and Latin American (LA) countries, as a proxy of the use of local capabilities in search windows of opportunity.

Table 3. US patents granted to residents in Asian and Latin America countries

	Patents per million population			Averaged number of patents relative to 1963-1977 period	
	1963-1977	1978-1989	1990-2001	1978-1989	1990-2001
Argentina	0.97	0.64	0.95	0.66	0.98
Bolivia	0.61	0.12	0.06	0.19	0.09
Brazil	0.18	0.20	0.43	1.11	2.41
Chile	0.40	0.25	0.61	0.64	1.51
China	0.01	0.01	0.06	1.29	7.02
Colombia	0.22	0.13	0.16	0.59	0.72
Ecuador	0.10	0.08	0.14	0.80	1.45
Guatemala	0.53	0.08	0.12	0.15	0.22
Honduras	0.38	0.06	0.16	0.16	0.43
Hong-kong	2.68	5.20	16.98	1.94	6.34
India	0.03	0.02	0.07	0.61	2.68
Japan	34.07	93.90	200.48	2.76	5.88
Mexico	1.36	0.53	0.55	0.39	0.41
Nicaragua	0.57	0.03	0.04	0.05	0.07
Pakistan	0.01	0.00	0.01	0.39	0.82
Panama	1.28	0.48	0.32	0.37	0.25
Paraguay	0.06	0.10	0.03	1.59	0.57
Peru	0.31	0.07	0.13	0.23	0.42
Philippines	0.16	0.09	0.08	0.55	0.48
Singapore	1.10	2.14	27.26	1.94	24.76
South Korea	0.13	1.13	39.01	8.58	297.14
Taiwan	0.51	10.01	109.72	19.54	214.18
Thailand	0.01	0.03	0.16	2.67	13.21
Uruguay	0.57	0.17	0.49	0.30	0.87
Venezuela	0.65	0.83	1.22	1.28	1.87

Source USPTO for patents and PWT 6.1 (Heston *et al.*, 2002) for population.

Table 3 shows that, with the exception of Japan, the averaged number of patents granted in the 1963-1977 period was very low: only two countries in LA (Mexico and Panama), and two countries in Asia (Singapore and Hong-Kong) have more than a US patent granted per million people. But, if the starting point was similar, the subsequent evolution was very different. In the 1978-89 period, in LA, with the exception of Paraguay²³, only Brazil and Venezuela improved the averaged number of patents per million people. In contrast in IA only India, Pakistan and Philippines show a decrease in the number of patents. The 1990-2001 period shows the increase in differences of performance: while LA countries suffer a decrease, or present a timid recovery in patent counts relative to the 1963-77 period, IA countries show robust increases in the patents per million people. Consequently table 3 shows that, with the exception of Venezuela, all the economies that present more than one US patent granted per million people, in the end of the 20th century, are located in Asia.

These differences in US patent counts are a result of the diverse behaviour in search of the windows of opportunity. The increase of such differences was accompanied with a stumpy manufacturing productivity in LA countries. The Inter-American Development Bank (1992) has investigated the revealed comparative advantage (RCA) in 1988-90 in manufacturing for Latin America, the OECD countries, and industrialising Asia, and has showed that in all sectors the efficiency of LA manufacturing was low²⁴.

What can we learn with the comparison of different country performances? Since Kuznets (1959) the analysis of the comparative experience of nations of different size, location and historical heritage have served to establish “common features and patterns”. Such regularities generally known as stylised facts can help explain the modern economic growth. However, as Kuznets frequently has emphasised, the lessons condensed in the stylised facts are conditioned by national factors. This conclusion is important because such national factors are in almost all cases irreproducible.

As a matter of fact, the consequences of some not planned events may have a considerable role in political and economic behaviour, affecting subsequently the future path of evolution. In this light, some initial disadvantages may be converted in rewards.

²³ In this country, the increase verified from 1963-77 to 1978-89 was not sustained. In the 1990-2001 period, the average number of patents per million people was only a half of the number registered in the 1963-77 period.

²⁴ While IA did exhibit a greater RCA in unskilled labour intensive than LA, 3.38 vs 2.51, it also had a greater RCA in natural resource intensive products, 1.91 vs. 1.15.

Perhaps one advantage of Japan, Korea, and Taiwan lay in the disturbing experiences following World War II. In all three cases, the governments had little legitimacy. Japan had suffered a traumatic defeat after initiating the Second World War in the Pacific. Korea had gained independence from its Japanese colonial ruler but had then been partitioned and a devastating three-year war destroyed much of the infrastructure and caused a lot of victims during 1950-52 period. Taiwan was the basis of the defeated Kuomintang government that had hurriedly left the mainland China in 1949. In each one of these countries, the government eventually tried to set up its authority by emphasising economic growth in the 1950s in Japan and early 1960s in Korea and Taiwan. In all three countries a land reform had overcome one set of opponents to policies that were conducive to growth with equity. In Latin America the history was quite diverse. However such diversities some lessons can be outlined. In the next section we list some such lessons.

7. Stylised facts

1. Countries do not need an extensive set of institutional reforms in order to start growing. This regularity is shown both theoretically and empirically. The standard growth theory shows that when an economy is so far below its potential steady-state level of income it will experience a positive growth rate of income. Such rate will be as higher as the current level of income is far away from the potential level of steady state.

Even in well-known cases, policy changes at the beginning of the growth process have been typically modest²⁵. South Korea's experience in the early 1960s illustrates this point. The military government led by Park Chung Hee that took over power in 1961 did not have strong views on economic reform, except that it regarded economic development as its key priority. It moved in a trial-and-error fashion, experimenting at first with various public investment projects. The hallmark reforms associated with the Korean miracle, the devaluation of the currency and the rise in interest rates, came in 1964 and fell far short of full liberalisation of currency and financial markets. The gradual, experimental steps towards liberalisation that China undertook in the late 1970s are also good illustrations of this stylised fact.

²⁵ This fact is supported also by several empirical studies. For instance, Rodrik (2003) has listed 64 cases of growth transitions and concluded that not much reform was actually taking place in those cases.

2. The policy reforms that are associated with growth transitions typically combine elements of orthodoxy with unconventional institutional practices. China's two-track reform strategy, Mauritius' export processing zone, and South Korea's system of "financial restraint" are some examples of policy arrangements that are quite heterodox from "Washington Consensus" point of view. But, there are many other examples. When Taiwan and South Korea decided to reform their trade regimes to reduce anti-export biases, they did this not via import liberalisation (the 6th principle of the "Washington Consensus" — see box 1) but through selective subsidisation of exports (Rodrik, 2003). When Singapore decided to make itself more attractive to foreign investment, it not do this by reducing state intervention but by greatly expanding public investment in the economy and through open-handed tax incentives (Young, 1992).

In all these examples, standard recommendations such as market liberalisation and outward orientation were combined with public intervention and selectivity of some sort. Hong Kong has been the only straightforward case where heterodox elements have not played a role²⁶. So, it's not easy to build a typology of successful interventions, which can be applied to all countries, because policy packages associated with growth accelerations—and particularly the elements therein that are non-standard—tend to vary considerably from country to country. China's two-track strategy of reform differs significantly from India's gradualism. South Korea's and Taiwan's more protectionist trade strategy differs markedly from the open trade policies of Singapore and Hong Kong. Even within strategies that look superficially similar, a closer look reveals large variation. Taiwan and South Korea both subsidised non-traditional industrial activities, but the former did it through tax incentives and the latter through directed credit²⁷.

3. Successful reforms are those that package sound economic principles around local capabilities, constraints and opportunities. Since these local circumstances vary, so do the reforms that work. An immediate implication is that growth strategies require considerable local knowledge. Attempts to imitate successful policies elsewhere often fail. When Gorbachev tried to institute a system similar to China's Household Responsibility System and two-track pricing in the Soviet Union during the second half

²⁶ In Hong Kong there were three elements that have justified this exception: the important *entrepôt* role in trade, the strong institutions imparted by the British, and the capital flight from communist China. All these three elements had already prevented that Hong Kong has faced the same challenges that Taiwan, South Korea, and Singapore did to crowd in private investment and to stimulate entrepreneurship (Rodrik, 2003).

of 1980s, it produced few of the beneficial results that China had obtained. Most developing countries have export processing zones of one kind or another, but few have been as successful as the one in Mauritius. Import-substituting industrialisation (ISI) worked in Brazil, but not in Argentina.

4. A successful policy is generally associated to an experimental approach to reform. China represents the most remarkable case of this policy experimentation. But it is worth noting that many other examples of successful reform were preceded by failed experiments. In South Korea, President Park's developmental efforts initially focused on the creation of white elephant industrial projects that ultimately went nowhere (Soon, 1994). In Chile, Pinochet's entire first decade can be viewed as a failed experiment in "global monetarism" (Rodrik, 2003).

8. Conclusion

The aggregate picture of world economic growth shows a remarkable diversity in growth performance, both geographically and across time. We find high growth countries and low growth countries; countries that have grown rapidly throughout time, and countries that have experienced growth spurts for a decade or two; countries that took off around 1980, and countries whose growth collapsed around 1980. What is the role of policy in this diversity? How can policy help transform this picture? This paper has tried to answer these questions, analysing the performance of the high growth developing countries and the way they have developed institutional innovations.

On the one hand, analysis of the success story of China, with an astonishing annual growth rate of 8.0 percent since the late 1970s, and the evaluation of some other well-known East Asian experiences and, on the other hand, the liberalisation, deregulation and privatisation in countries such as Mexico, Argentina, Brazil, Colombia, Bolivia, and Peru have provide us with the basis to build some stylised facts about the take-off of economic growth while offering substantial evidence that allows us to question the standard formulae used to propel and maintain economic growth.

Development policy is an art rather than a science. As an art it has an irreducible element of judgement. Given the characteristics of development and the uncertainty intrinsic to any choice, more important than to identify the unique optimum is to collect a smaller set of reasonable choices and implement them comprehensibly and

²⁷ On the institutional differences among East Asian economies, see Haggard (2003).

systematically. Since mistakes are unavoidable, governments have to be flexible in adapting to the changing conditions and quick in monitoring the policies implemented. The test of success in policy making is not that governments are always right in trying to be like a ‘perfect market’, but a good overall performance: governmental intervention must assure that the overall rate of return is higher than doing nothing.

One of the lessons of recent economic history is that creative interventions can be remarkably effective even when the ‘investment climate,’ judged by standard criteria, is pretty lousy. South Korea’s early reforms took place against the background of a political leadership that was initially quite hostile to the entrepreneurial class²⁸. China’s TVEs have been stunningly successful despite the absence of private property rights and the non-existence of an effective judiciary power. Conversely, the Latin American experience of the 1990s indicates that the standard criteria do not guarantee an appropriate investment climate.

This paper puts forth three main conclusions that could be extensive to the growth of sub-national regions. Firstly, the Asian experience shows that successful reforms are those that put together sound economic principles and local capabilities, constraints and opportunities. Secondly, the Latin American reforms of late 1980s and 1990s illustrate the fact that economic growth is not the natural order of things, and that setting up a fair and levelled ground may not be enough to stimulate productive dynamism. Finally, the astonishing Chinese growth reveals that institutional innovation requires a pragmatic approach that avoids ideological lock-in.

The analysis shows another fact already detected in literature on institutions: high-quality institutions can take a multitude of forms and economic convergence needs not necessarily require convergence in institutional forms (North 1994, Berkowitz *et al.*, 2003, Djankov *et al.*, 2003). So, the simple copy of institutions that have proved well functioning elsewhere is not a good strategy: ‘Economies that adopt the formal rules of another economy will have very different performance characteristics than the first economy’, writes North (1994). Moreover, there is no reason to suppose that today’s advanced economies have already exhausted all the useful institutional variations that could underpin healthy and vibrant economies (Unger, 1998).

²⁸ One month after taking power in a military coup in 1961, President Park arrested some of the leading businessmen in Korea under the newly passed Law for Dealing with Illicit Wealth Accumulation. These businessmen were subsequently set free under the condition that they establish new industrial firms and give up the shares to the government (Amsden, 1989).

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