

Reasons for Slow and Decelerating Growth in the Andean Countries

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1. Introduction.

In recent years the countries of the Andean region have registered rather low rankings on Competitiveness, and have not experienced especially rapid economic growth. This does not mean that the economies of the region are incapable of fast growth. On the contrary, each country in the region has experienced episodes of rapid growth in the past. Some of the rapid growth occurred during the very early period of import substituting industrialization, and was based on large public expenditure programs and rapid structural change from agriculture to the cities. Later growth episodes were associated with natural resource booms or surges in foreign borrowing, both of which are temporary in nature. What the region has not yet experienced is a particular kind of growth: sustainable growth associated with exporting and external competitiveness.

Although the Andean economies on average are not competitive when measured against the top fifty economies of the world, each country has some firms and some sectors that are highly competitive. The region tends to have local pockets of prosperity that are mainly concentrated in urban areas and not distributed widely across the region. The result is a region that is not extremely poor, that has demonstrated some economic success at different periods of time, but which still falls short of the kind of rapid extensive and sustainable growth that makes a real difference in living standards. In addition, in four of the five countries of the region and perhaps Colombia as well if current trends continue, growth has decelerated, suggesting that the trend is getting gradually worse. What is behind the relatively slow and decelerating growth of the region?

The first stage of the indicators part of the Andean competitiveness project was designed to use the wide scope of data in the Global Competitiveness Reports to focus on areas where the Andean economies differ markedly from other countries, and to investigate these areas as possible sources of slow growth. The strong point of the G.C.R. data is that it provides wide breath of coverage and a common international standard against which to measure performance of each country. The weak point of the data is that many of the indicators are based on a survey of perceptions of executives and as such depend on the knowledge and truthfulness of the executives. Therefore, the Indicators project started with a series of seminars in each country where knowledgeable experts were given the opportunity to comment on and to criticize the indicators from the G.C.R. After this round of meetings, a number of points were selected by each local partner for more in-depth analysis and investigation - points for which

there was a consensus that the data were revealing something important. The outcome was a set of reports from each country, listed at the back of this paper.

This paper provides a summary of the main results from the first stage of this project. It briefly discusses the definition of competitiveness underlying this work, summarizes the ranking of the five Andean countries, and the evidence behind the rankings. The paper next focuses on two important causes of continued slow growth. First, the drag on structural change and innovation related to high entry barriers and reduced incentives for innovation or transfer of technology. Second, the high cost of capital related to continued hidden import barriers and high costs due to poor infrastructure and transportation networks. The heart of the project however and where most attention should be paid, are the four reports prepared by experts in Bolivia, Peru, Colombia and Venezuela. These provide much more detail on these points than is possible to summarize in this short paper, as well as a more comprehensive survey of the competitive strengths and weaknesses of each country.

2. Definition of Competitiveness.

In our definition, countries are competitive if they can achieve rapid, sustainable economic growth. This requires more than just macroeconomic stability and more than low costs or the ability to sell products at low prices on international markets, except to the extent that these help the growth process. We hope that this definition of competitiveness helps reduce concern that the usage of the term in international circles had become hopelessly vague and meaningless. Indeed some interpreted the use of the term to be a vague code-word for pro-business, anti-poor, anti-environment dogma, or a “dangerous obsession” in the words of Paul Krugman¹, because it encouraged the notion that countries could only gain in economic terms at the expense of other countries. The theory of international trade demonstrates, to the contrary, that all countries can gain from a more integrated international trading system.

Of course there are areas where economies are involved in rivalry that has zero-sum elements. Countries compete to attract international firms to their country. And for some specific products like textiles, developing

¹ See Paul Krugman, “Competitiveness: A Dangerous Obsession” *Foreign Affairs*, number xx 1994.

countries compete for fixed international markets in the short run. The point is not that international trade is without these zero-sum aspects, but rather that these can be overcome over the long run by a different pattern of specialization. At the global level, the world's economy is not zero-sum; it is quite possible to see growth and an expansion of trade by all countries.

3. *Rankings.*

The rankings in terms of growth competitiveness of the Andean countries for 2000 were Peru - 48th, Bolivia 51st, Colombia 52nd, Venezuela 54th and Ecuador 59th. Behind these rankings were rankings in the 50's on Economic Creativity, which in turn takes into account innovation, technology transfer and start-ups, and somewhat higher but still low rankings on the Finance Index and the Openness Index. The evidence showed that these three indexes, Economic Creativity, Finance and Openness, were correlated with cross country growth in the 1990's after controlling for short term economic crises and a number of other possible determinants of growth.

The supporting regression evidence is summarized in table 1. The Economic Creativity Index and the Finance Index are statistically significant in all regressions. The additional variables that were found not to be significant after controlling for these variables include financial depth, government expenditures as a share of GDP, the rule of law, institutions, ethnic diversity, and the index of economic freedom from the Heritage Foundation. The openness index was sometimes insignificant but was retained as part of the competitiveness Index because this result was sensitive to the presence of a single country in the sample (Costa Rica). In several other specifications, the openness index was significant.

The rankings above broadly agree with the growth performance of the Andes countries during the 1990's. Colombia ranks 46th in real growth per-capita between 1990 and 1999, Ecuador 51st and Venezuela 52nd. Peru ranks highest at number 17, but that is the result of a strong recovery from an equally strong downturn in the late 1980s rather than a long-term positive growth trend. Bolivia ranks 28th, again partly because the 1990s was a recovery phase from the problems of the 1980s (see table 2 for the growth rates). As is clear from the regression evidence, the Competitiveness Index explains a little over 50 percent of the variation across countries in growth in the 1990's. This leaves plenty of room for countries such as Peru and Bolivia that do not fit precisely the pattern across countries.

Section 2. Possible Causes for Slow Growth.

2.1. Entry Barriers and Lack of Technological Absorption.

One aspect that stands out for the Andes countries are the high barriers for start-ups. The executives that responded to the *Executive Opinion Survey* of the World Economic Forum reported that it was very difficult to start new businesses in Bolivia (rank 52nd) Peru (53rd) Colombia (54th) Venezuela (57th) and Ecuador (59th). These ratings have been consistently low in the Andes countries since we began asking this question in 1998. Moreover, this perception is supported by additional data recently collected by the World Bank that measures the average number of procedures, average time and cost required to start enterprises in several countries. In table 3 we list the countries in order of most hostile environments to start-ups according to our survey. In Ecuador an entrepreneur is required to comply with 12 procedures that take on average 141 business days and cost an average of 15.5 percent of the annual income per-capita. One can see that all of the Andes countries are near the top of the table, implying extremely difficult startup environments.

Figure 1 shows that the data from the opinion survey on ease of start-ups and the data measuring number of required procedures are highly correlated. Figure 2 also shows that the data on the number of days required to begin operation as a legal entity is also correlated with the survey data. These are evidently two of the reasons why executives rate the Andes countries as difficult places for start-ups. A third is the cost required to comply with the procedures, shown in the last column of table 3. These costs do not include unofficial costs incurred in obtaining licenses. This omission may be one reason for the fact shown in figure 1 that Bulgaria, Ukraine, Ecuador and Zimbabwe are perceived to be more difficult start-up environments than the official number of procedures would suggest.

The difficult start-up environment in the Andes countries is not only related to the number of administrative requirements. When asked whether it was easy to obtain a bank loan with just a good business plan and little

collateral, respondents in all the Andes countries disagreed quite strongly (see page 289 of *The Global Competitiveness Report 2000*). When asked whether venture capital financing was available, executives again ranked the Andes countries at the bottom of the list of countries.

One reason that high entry barriers may depress growth is that they serve to frustrate innovation and the diffusion of innovation throughout the economy. This idea is incorporated in the Economic Creativity Index. This Index measures the ability of a country to develop new technologies and techniques itself or to import them and to support the diffusion of these new technologies with a financial and regulatory system that supports new organizations and start-ups². One underlying idea of the index is that it is not essential for growth that a country has the ability to do its own innovation as long as the country can absorb new technologies from abroad through international licensing, or foreign direct investment or joint ventures.

A second idea behind the index is that for better diffusion of new technologies, new techniques and new ideas through an economy it helps to have policies that support new enterprises and new organizations. The reason is that large or existing enterprises sometimes have an incentive to block innovation because they tend to crowd-out demand for their older products, and the companies have often sunk a lot of investment in their older products. New companies are not as burdened by these competing incentives. While it is undoubtedly true that new products sometimes complement the existing products, the overall tendency is that eventually new products replace existing products. If we think of products that were in use thirty years ago, most have now been replaced by newer versions that often are radically different.

The Andes countries do not score high on innovation or on the ability to actively absorb technologies from abroad. The latter is measured by low rankings on survey questions about the extent of foreign direct investment and the extent of licensing of foreign technologies. It is also corroborated by data that shows that the Andes region export composition is not oriented towards high-tech goods. This subject is examined extensively in the paper by Fabio Sanchez and Paula Acosta.

² See Andrew M. Warner "Economic Creativity", *Global Competitiveness Report, 2000*, New York: Oxford University Press, 2000, pp. 28-38. In statistical analysis contained in this article, the Economic Creativity Index was found to be positively correlated with growth rates in the 1990s, after controlling for initial income levels, saving and investment rates, financial depth, openness to international trade and economic crises.

Entry barriers are also likely to slow down structural change - the movement of capital and labor to new sectors or activities in response to new incentives - since this kind of change also usually requires new enterprises. To the extent that the lack of structural change is an underlying cause of stagnation in growth, entry barriers may be responsible for deceleration in growth.

2.2. High costs of capital due to geography-related and policy-related barriers to international trade.

Barriers to trade can depress growth if they raise the prices of internationally traded capital goods or intermediate inputs. Higher prices on capital goods will reduce the incentive to invest in all sectors; non traded and traded alike, unless product prices in these sectors rise proportionately, which is highly unlikely. To assess the extent of such barriers, what matters is not just the official tariff, but all charges associated with importing such as fees at the port, fees for licenses, bribes, and bank fees for processing payments, and transport charges. Such higher prices also mean that any given amount of investment expenditure or saving will translate into less real investment and real accumulation of capital, because much of the nominal investment spending is wasted on associated expenditures. High import charges also mean that countries will be at a competitive disadvantage in international markets relative to other countries when selling exports to third countries. This will reduce the incentive for foreign firms to invest in one of the Andes countries, so the investment disincentives do not just apply to domestic firms.

Official tariffs in some of the Andes countries are rather low, especially when compared to much higher tariff levels in these countries in previous decades. In 1999, the Heritage Foundation reported that average tariff levels in Colombia, Peru, Venezuela and Ecuador were all approximately ten percent, with Bolivia somewhat lower at about 5 percent (reported in *The Global Competitiveness Report 2000*, p. 303). However, when we asked executives to estimate the full amount that all fees associated with imports raise the cost of foreign equipment, the amounts were much higher. The mean response from this question is shown in figure 3 on the vertical axis with the official tariff measured on the horizontal axis. The scale for the survey question ranged from 1 (10 percent) to 2 (20 percent) and 3 (30 percent) and so forth, so a response of 2.5 may be interpreted as an estimate that the mean import

charge for that country was about 25 percent.

Notice from figure 3 that four of the Andes countries are in the northwest of the figure - meaning high all-inclusive import charges relative to the official tariff rates. In comparison to official average tariffs of about ten percent, full import charges are estimated to be around 33 percent in Bolivia, 30 percent in Peru, 31 percent in Venezuela and 32 percent in Ecuador. In Colombia the estimates are about 26 percent. These estimates place the Andes countries as having some of the highest import charges in the world.

This issue is investigated in more detail in the report by Marcela A. de Guzman for the Bolivian case. Her estimates (table 6 and 7, page 25-26) are that total import charges raise the price of a consumer good from Canada by 115 percent and a capital good by 99 percent. Of this, the main items are tariffs and taxes of 32 percent, transport costs of 46 percent and insurance and other charges of about 18 percent. Bolivia is an extreme example with higher than normal transport charges, but this example suggests that the difference between official tariffs and full import charges can be quite dramatic. If anything, these numbers suggest that the respondents to the executive opinion survey underestimate the full amount that additional charges raise the price of imported goods.

All countries in the Andes region have pursued trade liberalization in recent years, and the trade control measures are much lower than in earlier decades of import substitution. However, so has the rest of the world. The comparative data from the G.C.R. suggests that while the Andes countries may be more open when compared to their own history, the rest of the world has liberalized extensively so that the region is still somewhat closed relative to the rest of the world. The data also indicate that import costs associated with high transport costs and geographic isolation are significant, the more so as other forms of import costs are reduced. Geographic isolation is a further reason why the region is not as open as the rest of the world.

3. The next stage.

The driving forces behind past economic growth in the Andean countries -- public spending and capital accumulation, rapid transfer of labor from agriculture to urban areas, booms in commodity prices or mineral discoveries, and foreign capital inflows -- are unlikely to serve as sources for continued economic expansion over the

long run. What the data in the Global Competitiveness Report reveal is that the economies of the region are not yet in a good position for growth based on the strategy of external competitiveness and export growth. What is needed is to remove the obstacles to structural change and economic flexibility that are currently slowing down this transformation.

A reading of the Global Competitiveness Report can give the impression that the Andean countries need simultaneous reforms on a number of fronts in order to achieve growth. This is not necessarily true. Fast-growing countries almost never fix all of their competitiveness problems before they start growing. Instead the pattern is that certain sectors start to grow and this leads to success in other sectors and a continuing upgrading of reforms and competitiveness.

The statistical evidence from growth in the 1990s presented in table 1 of this report tends to support the idea that a strategy focussed on technology transfer, flexibility and exports can lead to faster growth. Countries that combined innovation, technology transfer and flexibility – measured by ease of startups – did well in the 1990s. Some examples are Poland, Singapore, Ireland and Chile. This evidence is not decisive, because the time period is short and nothing is measured perfectly, but it is suggestive nevertheless.

References.

Lic. Marcela A. de Guzman and Kristian Rada Pantoja, "Indicadores de Competitividad" Enero 2001, Universidad Catolica Boliviana.

_____ "Indicadores de Competitividad para los Paises Andinos: El Caso de Peru" Marzo 2001, Centro de Investigacion de la Universidad del Pacifico, Informe Final.

Fabio Sanchez and Paola Acosta, Proyecto Indicadores de Competitividad, Enero de 2000, CEDE: Universidad de Los Andes.

Lino Clemente R. "Venezuela y los Indicadores de Competitividad", Marzo 2001, Venezuela Competitiva: Centro Nacional para la Competitividad.

Table 1. Regression Results Supporting the Growth Competitiveness Index in the *Global Competitiveness Report, 2000*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Economic Creativity Index	0.69 (3.00)**	0.56 (2.61)*	0.69 (2.99)**	0.64 (2.78)**	0.72 (2.90)**	0.67 (2.72)**	0.65 (2.95)**
Finance index	1.32 (2.46)*	1.03 (2.28)*	1.25 (2.62)*	1.45 (3.18)**	1.32 (2.54)*	1.29 (2.67)*	2.10 (3.85)**
International Index	0.79 (1.54)	0.50 (1.06)	0.76 (1.52)	0.66 (1.39)	0.74 (1.48)	0.88 (1.68)	1.22 (2.26)*
log GDPin 1992	-1.28 (3.44)**	-1.00 (2.80)**	-1.29 (3.27)**	-1.46 (3.45)**	-1.21 (3.16)**	-1.29 (3.14)**	-1.53 (4.25)**
Crisis Index	-1.48 (2.99)**	-1.52 (3.44)**	-1.50 (3.18)**	-1.48 (3.28)**	-1.51 (3.20)**	-1.46 (2.95)**	-1.21 (2.67)*
Financial depth	0.00 (0.33)						
Investment rate		0.10 (2.57)*					
Gov. Spending in percent of GDP			0.00 (0.19)				
Rule of law index				0.07 (0.44)			
Institution Index					-0.14 (0.36)		
Ethnic Diversity						0.00 (0.31)	
Index of Economic Freedom							0.91 (1.77)
Observations	54	55	55	47	55	50	53
R-squared	0.59	0.64	0.59	0.63	0.59	0.57	0.64

Absolute value of t-statistics in parentheses

* significant at 5% level; ** significant at 1% level

Variables:

Dependent Variable: average annual growth in real GDP per capita, 1992 - 1999. For countries that had recession in 1993, calculation is for the period 1993-1999.

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EC Index: Economic Creativity Index, see chapter by Andrew Warner for details.

Finance Index: see previous editions of the GCR for details.

International Index: see previous editions of the GCR for details.

log 92 GDP: 1992 GDP per capita in purchasing power-adjusted U.S. dollars (source IMF).

Crisis. Dummy Variable designed to control for the presence of a severe economic crisis in the 1990s. This variable takes the value 1 if country had either (a) three years of negative growth in the 1990s, or (b) cumulative fall of more than 10 percent in GDP during the negative growth years. Countries are Indonesia, Thailand, Russia, Jordan, Switzerland, Turkey, Venezuela, Ukraine, Bulgaria, Zimbabwe, Ecuador. For other countries value is 0.

Financial depth: Financial Depth variable, measured as total assets of banking system divided by GDP (1998) See King and Levine (1993).

Investment rate: Gross fixed capital formation in percent of GDP, both measured in current local currency, 1999.

Gov exp: Total expenditure of general government, netting out transfers between levels of government, in percent of GDP, 1998.

Rule of Law index: Variable to measure quality of legal system, used in Knack and Keefer (1995), and Barro and Sala-i-Martin (1995, p. 439). Source: Political Risk Services.

Institutions. See previous editions of the GCR for details.

Ethnic: Measure of Ethnic-linguistic fractionalization in 1960 used in Mauro (1995) and Easterly and Levine (1997). Source: Taylor and Hudson (1972) whose calculations were based on data in Atlas Narodov Mira (Department of Geodesy and Cartography of the State Geological Committee of the USSR, 1964), reported in Mauro (1995, p. 708).

IEF: Index of Economic Freedom excluding trade restrictions index. Source Johnson and Sheehy 1996.

References:

King and Levine (1993), Finance and Growth: Schumpeter Might be Right, *Quarterly Journal of Economics*, 108:3 pp. 717-37.

Knack and Keefer (1995) Institutions and Economic Performance: Cross-Country Tests using Alternative Institutional Measures, *Economics and Politics*, 7:3 pp 207-27.

Barro and Sala-i-Martin (1995), *Economic Growth*, Boston: McGraw-Hill.

Paolo Mauro(1995), Corruption and Growth, *Quarterly Journal of Economics*, 110:3, pp. 681-712.

Taylor and Hudson(1972), *World Handbook of Political and Social Indicators*, Ann Arbor, MI, ICSPR, 1972.

Easterly and Levine(1997) Africa's Growth Tragedy: Policies and Ethnic Divisions, *Quarterly Journal of Economics* 112: pp. 1203-50.

Johnson and Sheehy(1996) *1996 Index of Economic Freedom*, Washington, The Heritage Foundation 1996.

Table 2. Real Growth in GDP
per-person, 1990 - 1999

1	China	8.75
2	Ireland	5.64
3	Vietnam	5.09
4	Taiwan	5.03
5	Chile	4.83
6	Korea	4.67
7	Singapore	4.56
8	Malaysia	4.47
9	Luxembourg	3.99
10	Mauritius	3.90
11	Argentina	3.47
12	India	3.41
13	Poland	3.38
14	Portugal	3.15
15	Thailand	3.13
16	Norway	2.80
17	Peru	2.46
18	Indonesia	2.34
19	El Salvador	2.28
20	Australia	2.25
21	Denmark	2.14
22	Spain	2.13
23	Netherlands	2.10
24	United States	2.10
25	Hong Kong, China	1.85
26	United Kingdom	1.82
27	Iceland	1.77
28	Bolivia	1.75
29	Belgium	1.72
30	Greece	1.56
31	Israel	1.50
32	Italy	1.42
33	Germany	1.39
34	Finland	1.38
35	Turkey	1.36
36	Austria	1.35
37	New Zealand	1.32
38	Canada	1.27
39	France	1.21
40	Costa Rica	1.21
41	Mexico	1.19
42	Egypt	1.04
43	Sweden	1.02
44	Japan	1.00
45	Brazil	0.89
46	Colombia	0.64
47	Hungary	0.62
48	Philippines	0.40
49	Jordan	0.15
50	Switzerland	-0.13
51	Ecuador	-0.37
52	Venezuela	-0.61
53	South Africa	-0.90
54	Zimbabwe	-1.21
55	Bulgaria	-3.17
56	Russian Federation	-6.43
57	Ukraine	-10.77

Table 3. Barriers to Entry in Selected Countries

	Rating of Executives on Ease of Start-ups (1=hard .. 7= easy)	Number of procedures required to begin operation as a legal entity	Time in business days required to begin operation as a legal entity	Cost of paying official requirements to begin operation as a legal entity (as ratio to average income)
Bulgaria	2.63	11	20	0.165
Ecuador	3.00	12	141	0.155
Venezuela	3.10	15	124	0.111
Russia	3.13	16	69	0.378
Ukraine	3.17	11	21	0.197
Colombia	3.31	17	55	0.124
Peru	3.38	14	171	0.214
Bolivia	3.39	20	82	2.625
Mexico	3.49	15	112	0.574
France	3.60	16	66	0.197
Vietnam	3.63	15	171	1.502
Argentina	3.76	12	71	0.232
Austria	3.82	12	154	0.454
Italy	3.96	11	121	0.247
Brazil	3.97	15	67	0.674
Portugal	4.00	12	99	0.313
Zimbabwe	4.00	6	59	0.585
Slovak Republic	4.01	12	111	0.131
India	4.05	10	61	0.128
Czech Republic	4.19	11	97	0.251
China	4.20	7	111	0.107
Japan	4.22	11	50	0.114
Spain	4.28	11	83	0.127
Poland	4.36	10	26	0.280
Korea	4.41	11	46	0.156
Chile	4.47	12	78	0.116
Sri Lanka	4.49	8	31	0.086
Greece	4.50	13	53	0.480
Egypt	4.52	15	132	2.161
Germany	4.53	7	90	0.085
Philippines	4.53	15	59	0.106
Belgium	4.85	8	42	0.100
Switzerland	4.85	12	88	0.134
Indonesia	4.85	11	142	0.290
Thailand	4.86	10	39	0.102
Denmark	4.94	5	21	0.014
South Africa	4.94	7	30	0.367
Norway	4.97	6	24	0.025
Jordan	4.99	13	81	0.434
Malaysia	5.02	6	41	0.172
Ireland	5.12	4	25	0.115
Canada	5.17	2	2	0.014
Hungary	5.21	10	53	0.810
Sweden	5.23	4	17	0.025

Israel	5.24	5	32	0.202
Turkey	5.27	11	55	0.034
Finland	5.33	4	32	0.012
Australia	5.38	3	3	0.021
United Kingdom	5.41	7	11	0.006
New Zealand	5.43	3	17	0.004
Netherlands	5.44	8	68	0.190
Taiwan	5.45	8	46	0.007
Singapore	5.87	10	36	0.124
United States	5.92	4	7	0.010
Hong Kong SAR	6.34	6	41	0.247

Sources: Global Competitiveness Report 2000 for subjective ranking. Other variables from "The Regulation of Entry" by Simeon Djankov, Rafael La Porta, Florencio Lopez de Silanes, and Andrei Shleifer, Harvard University, August 2000, who report data from a survey organized and financed by the World Bank.

Figure 1. Poor Environment for Start-ups in the Andean Region





