

Chile: Catching up with the top performers*

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The best innovation capacity in Latin America

With a rank of 29 among the 131 countries included in the ICI, Chile is by far the best performing country in Latin America. Indeed, it has a rank a full 20 places ahead of Uruguay (49), the next best performer (Table 10). Chile is firmly positioned among 12 members of the European Union, with some slightly ahead (e.g., Belgium, Austria, France, and Spain), and others slightly behind (Italy, Slovenia, the Czech Republic, and Portugal). Chile has the highest rank among countries with a broadly similar level of income per capita, with only Malaysia (34) exhibiting a similar performance. As shown in Table 10, Chile has a rank of 1 in Latin America in several important indicators including government effectiveness, rule of law, absence of corruption, the fiscal balance (as a proxy indicator for the strength of macroeconomic policies), the number of schools connected to the Internet, the ease of paying taxes, broadband penetration rates, reliability of electricity generation, and a top 5 rank in a much larger set of indicators.

Chile’s strong performance in the Innovation Capacity Index is the result of a combination of several factors, two of which have played a central role and are, therefore, desirable to highlight: first, the gradual build-up of an institutional environment that has been broadly supportive of private sector development; and second, the introduction of a range of policies that have explicitly sought to enhance the role of high technologies in promoting gains in factor productivity. It will be useful to present here a brief overview of both.

Chile ranks 23rd among 180 countries in Transparency International’s *Corruption Perceptions Index* 2008, tied with France (23) and ahead of Spain (28), Portugal (32), and far ahead of Korea (40), Italy (55), Mexico (72), Brazil (80), and Argentina (109). In fact, the 22 countries with a better score than Chile are all high-income countries, as defined by the World Bank. In the ICI’s own Good Governance subindex—which also includes measures of voice and accountability, political stability, government effectiveness, rule of law, the property rights framework, and transparency and judicial independence—and in the Country Policy Assessment subindex, which captures various measures of

the quality of public sector policies, Chile ranks 25 and 14 respectively, out of 131 countries in 2009.

Legitimizing market reforms

Market reforms in Chile have been legitimized in the eyes of the public because they have benefited the population in tangible ways, for instance, by increases in per capita income or, as noted earlier, sustained reductions in poverty levels. This contrasts sharply with other countries in the region, where the motivations for public policy have more often been a mixture of dubious ideology or some confusion about public ends and private benefits among the ruling elites. In addition, on those occasions when flaws in the public administration in Chile have emerged, the authorities’ response has been swift and effective. For example, Chile today has a demanding campaign contributions law that is tougher than those found in the statutes of many high-income democracies. Furthermore, the authorities have generally been very good about generating a broad consensus for their policies, which ensures sustainability in the policy environment. Successive governments over the past 19 years, following the country’s return to democracy, have been fairly successful in setting in motion processes of consultation, to elicit the views of various sectors in society, such as opposition political parties, trade unions, and various organizations of civil society. This has resulted in greater understanding on the part of the population, and elicited their commitment to the often painful measures that accompany the implementation of various economic adjustment measures. This approach has also led to a more equitable distribution of the costs of adjustment and contributed to political stability.

A solid macro environment

Together with the Nordics, Chile is part of a small group of countries in which the political process has resulted in broadbased support for fiscal discipline, where safeguards have been introduced, which effectively insulate the budget from the short-term horizon of politicians, and from the diverse demands placed upon it by economic agents in a pluralistic democracy. The net effect has been a virtuous fiscal policy, which has contributed to a sustained reduction in the levels of public debt, from close to 90 percent of GDP in the mid-1980s, to less

than 7 percent of GDP in 2008. We find no example, either among industrialized countries or in the developing world, with as sustained a downward adjustment in debt levels as in Chile. In fact, quite the opposite is the case: the vast majority of OECD members have higher levels of public debt today than 10 years ago. Indeed, according to the IMF, against the background of the global financial crisis and the fiscal stimulus measures that have been taken to address the effects of the crisis, public debt in the advanced economies will rise from 75 percent of GDP in 2008 to 110 percent of GDP in 2014.

Chile's policies have, in contrast, greatly reduced the debt-servicing burden of the public debt in Chile, contributed to sharply lower interest rates, and to the highest credit ratings in Latin America. Indeed, in 2009 Chile was the only country to have actually seen a rise in its credit ratings, at a time of massive ratings downgrades worldwide, affecting corporations and sovereign debt issuers alike. A lower debt burden has, of course, allowed spending to rise in other areas, including education and public health, and is very much behind the progress made in reducing the incidence of poverty, which fell from 38.6 percent in 1990 to 13 percent in 2006.¹

Moreover, as noted above, not only has Chile done much to establish a clear, transparent framework for public policies, also involving a solid legal and regulatory framework—it has a ranking of 23 in the third pillar of the ICI, which captures several indicators measuring various obstacles to private sector activity—but the government has also played a leading role in promoting other innovation-friendly policies which have nicely complemented those aimed at improving the institutional climate.

Good innovation policies

The government has shown remarkable commitment to e-government, to increasing efficiency in public management, to diminishing the transaction and coordination costs between public entities, to facilitating innovation and creativity in management, to increasing the public value of services, improving government transparency and, more generally, to enhancing the quality of the services provided by the government to civil society.² Three areas in which this has been done in a particularly effective way, providing best practice, are those reforms introduced at the Internal Revenue Service and through the electronic platforms ChileCompra and Trámite Fácil. At the IRS, e-government has boosted direct interactions with tax payers and greatly facilitated tax compliance. Close to 100 percent of Chilean tax-payers now pay income taxes through the Internet, and the Chilean IRS is ac-

knowledged to be one of the most modern, efficient, high-quality taxation administrations in the world, setting high international standards for tax compliance.

ChileCompra was launched in 2000 and is a public electronic system for purchasing and hiring, based on an Internet platform. It has earned a worldwide reputation for excellence, transparency and efficiency. It serves companies, public organizations, and citizens, and is by far the largest business-to-business site in Chile, involving over 1000 purchasing organizations which invoiced well in excess of US\$2 billion in transactions by 2005. It has also been a catalyst for the use of the Internet throughout the country. Trámite Fácil is a government site coordinating the work of over 240 government agencies and bodies, and taking care of a broad range of processes online, including birth certificates, identity documents, pension fund payments, trademarks/patents, housing subsidies, university credits, and so on. The government's efforts to integrate the Chilean school system with the Internet have been no less successful, and have involved heavy infrastructure investments, the training of over 90,000 teachers in the basics of ICTs, digital literacy campaigns, encouraging the study of English and several novel public/private partnerships aimed at bringing to the classroom the latest technologies and know-how.

Some challenges ahead to boost innovation capacity

The authorities in Chile have shown remarkable leadership, as well, in identifying the key challenges ahead to strengthening the role of ICTs in improving productivity and in boosting the innovation capacities of the public and private sectors and civil society. In this respect, they feel that it is necessary to expand and intensify the integration of digital technologies in the educational curriculum and to improve the education and training of highly qualified workers (see Table 11 showing the OECD's Program for International Student Assessment (PISA) results for Chile and other countries). It is also necessary, in their view, to enhance connectivity, especially among the lowest four-fifths of the income distribution, by overcoming unequal income distribution, restrictions facing micro- and small companies, and connectivity problems in rural and remote regions. They would also like to encourage the development by the private sector of computer packages for low-income households and micro-companies so that they can access the Internet more cheaply and effectively, and to continue government subsidies for rural and remote areas and low-income communities and microcompanies.

Priority is also being given to increasing R&D in the use of ICTs to stimulate competitiveness of the main export sectors, to rectify limitations in the legal system, to provide an appropriate institutional framework to stimulate/encourage e-trade, e-government, and use of ICTs, and to assure public trust in electronic operations and platforms. Finally, priority is also being given to facilitating the takeoff of the ICT industry by improving virtuous cycles of cooperation between institutions of higher education and the business community. This is seen as essential for narrowing the skills gap that exists today between Chile and the average in the OECD,

made evident by the results of the PISA tests (Table 11).

¹ For a discussion of the institutional framework in place for the implementation of fiscal policy in Chile, including the targeting of a surplus in the government balance since 2000, as well as other progress made in the implementation of a sound institutional framework, see Lopez-Claros. 2004. "Chile: The Next Stage of Development", *Global Competitiveness Report 2004-2005*. Hampshire: Palgrave Macmillan. pp 111–24.

² For a comprehensive discussion of these issues see Alvarez Voulleme et al., 2006. "Information and Communication Technologies in Chile: Past Efforts, Future Challenges." *Global Information Technology Report 2006*, Hampshire: Palgrave Macmillan. pp. 71–87.

Table 10. The Innovation Capacity Index: Chile and Latin America

	Selected variables								
	Innovation Capacity Index			Government effectiveness			Rule of law		
	Score	Rank* (131)	Region Rank	Score	Rank* (131)	Region Rank	Score	Rank* (131)	Region Rank
Chile	59.4	29	1	70.8	25	1	79.2	23	1
Uruguay	52.8	49	2	55.0	41	2	62.1	45	2
Costa Rica	51.5	58	3	50.7	47	3	60.8	47	3
Peru	50.6	60	4	30.3	87	13	32.2	98	14
Mexico	50.5	61	5	44.1	59	6	35.5	86	11
Argentina	49.2	66	6	37.7	72	11	37.0	79	8
Panama	48.9	68	7	47.1	53	5	44.8	66	4
Trinidad and Tobago	48.7	69	8	50.1	50	4	44.3	67	5
El Salvador	48.3	70	9	35.5	75	12	33.0	94	13
Colombia	48.0	72	10	41.9	63	8	35.7	85	10
Dominican Republic	46.3	79	11	29.8	90	14	36.2	83	9
Jamaica	46.2	81	12	43.9	60	7	34.2	89	12
Honduras	46.0	82	13	27.0	93	15	28.6	106	16
Brazil	45.2	87	14	38.0	70	10	38.9	73	7
Guatemala	44.5	89	15	26.7	95	16	22.3	119	20
Paraguay	44.3	90	16	20.2	112	18	25.6	114	18
Ecuador	44.2	91	17	15.5	120	21	23.9	116	19
Nicaragua	43.4	93	18	18.8	117	20	28.9	103	15
Bolivia	41.5	100	19	20.8	111	17	26.0	111	17
Venezuela	40.9	102	20	19.6	115	19	13.1	127	22
Suriname	40.1	105	21	40.4	66	9	43.8	68	6
Haiti	28.7	129	22	8.5	124	22	14.4	124	21
Memorandum items:									
Finland	77.8	2	-	88.6	8	-	96.4	8	-
New Zealand	73.4	10	-	87.6	10	-	97.6	5	-
Ireland	70.5	18	-	81.8	17	-	94.0	14	-
Spain	60.3	28	-	65.5	31	-	77.9	24	-
Portugal	57.2	35	-	62.6	33	-	73.6	27	-

* Ranks after rounding to one decimal point.

Table 10. The Innovation Capacity Index: Chile and Latin America (cont'd.)

Selected variables									
	Corruption Perceptions Index			Fiscal balance			Paying taxes		
	Score	Rank* (131)	Region Rank	Score	Rank* (131)	Region Rank	Score	Rank* (131)	Region Rank
Chile	69.0	21	1	62.3	9	1	84.2	17	1
Uruguay	69.0	21	1	30.3	65	15	63.1	91	10
Costa Rica	51.0	40	3	38.1	37	5	59.3	99	12
Peru	36.0	61	6	30.7	62	14	76.6	39	3
Mexico	36.0	61	6	29.4	71	17	63.4	89	9
Argentina	29.0	87	16	32.0	57	12	45.4	120	18
Panama	34.0	72	11	37.1	39	7	53.1	112	15
Trinidad and Tobago	36.0	61	6	56.3	16	2	75.2	43	4
El Salvador	39.0	56	4	21.8	105	21	62.5	92	11
Colombia	38.0	59	5	19.4	113	22	43.5	122	19
Dominican Republic	30.0	82	14	29.3	72	18	55.8	109	14
Jamaica	31.0	79	12	35.0	45	8	49.6	118	17
Honduras	26.0	98	17	29.7	68	16	58.8	102	13
Brazil	35.0	68	10	30.8	61	13	42.8	123	20
Guatemala	31.0	79	12	26.5	85	19	68.6	74	7
Paraguay	24.0	106	19	38.3	35	4	71.2	69	6
Ecuador	20.0	116	20	34.1	49	10	74.9	45	5
Nicaragua	25.0	103	18	34.0	51	11	52.7	115	16
Bolivia	30.0	82	14	37.5	38	6	36.1	127	22
Venezuela	19.0	120	21	41.8	25	3	38.8	124	21
Suriname	36.0	61	6	23.4	99	20	83.7	19	2
Haiti	14.0	130	22	34.5	47	9	66.8	82	8
Memorandum items:									
Finland	90.0	5	-	48.2	20	-	74.0	52	-
New Zealand	93.0	1	-	51.4	18	-	87.7	12	-
Ireland	77.0	16	-	43.8	24	-	89.3	9	-
Spain	65.0	26	-	40.9	26	-	72.9	61	-
Portugal	61.0	29	-	19.2	116	-	78.2	36	-

* Ranks after rounding to one decimal point.

Table 10. The Innovation Capacity Index: Chile and Latin America (cont'd.)

	Selected variables								
	Environmental sustainability			Total fixed broadband subscribers per 100 inhabitants			E-government readiness index		
	Score	Rank* (131)	Region Rank	Score	Rank* (131)	Region Rank*	Score	Rank* (131)	Region Rank
Chile	83.4	28	4	19.8	42	1	58.2	40	3
Uruguay	82.3	35	8	13.6	51	3	56.5	46	5
Costa Rica	90.5	5	1	8.1	56	8	51.4	55	9
Peru	78.1	55	13	5.6	64	11	52.5	53	8
Mexico	79.8	43	11	11.8	52	4	58.9	37	1
Argentina	81.8	37	9	18.1	43	2	58.4	39	2
Panama	83.1	29	5	2.8	77	15	47.2	73	15
Trinidad and Tobago	70.4	81	19	3.2	73	14	53.1	51	7
El Salvador	77.2	60	15	3.6	72	13	49.7	63	11
Colombia	88.3	9	2	7.2	57	9	53.2	50	6
Dominican Republic	83.0	32	6	4.3	68	12	49.4	64	12
Jamaica	79.1	51	12	8.2	55	7	46.8	75	16
Honduras	75.4	68	17	0.0	108	21	40.5	86	19
Brazil	82.7	33	7	11.6	53	5	56.8	45	4
Guatemala	76.7	64	16	0.6	91	20	42.8	81	18
Paraguay	77.7	59	14	2.2	81	16	46.5	76	17
Ecuador	84.4	22	3	6.6	60	10	48.4	68	14
Nicaragua	73.4	72	18	0.9	87	19	36.7	88	20
Bolivia	64.7	96	20	1.0	86	18	48.7	66	13
Venezuela	80.0	42	10	8.5	54	6	51.0	58	10
Suriname	-	-	-	1.6	84	17	34.7	92	21
Haiti	60.7	104	21	0.0	108	21	21.0	120	22
Memorandum items:									
Finland	91.4	4	-	91.7	4	-	74.9	15	-
New Zealand	88.9	7	-	44.4	28	-	73.9	17	-
Ireland	82.7	33	-	45.1	27	-	73.0	19	-
Spain	83.1	29	-	49.4	25	-	72.3	20	-
Portugal	85.8	18	-	41.6	30	-	64.8	31	-

* Ranks after rounding to one decimal point.

Table 11. The Innovation Capacity Index and PISA scores: Latin America

	PISA (Program for International Student Assessment)*								
	Innovation Capacity Index			Science		Reading		Mathematics	
	Score	Rank** (131)	Region Rank	Score	Upper and Lower Ranks*** (57)	Score	Upper and Lower Ranks*** (57)	Score	Upper and Lower Ranks*** (57)
Chile	59.4	29	1	438	40-42	442	37-40	411	44-48
Uruguay	52.8	49	2	428	42-45	413	41-44	427	42-43
Costa Rica	51.5	58	3	-	-	-	-	-	-
Peru	50.6	60	4	-	-	-	-	-	-
Mexico	50.5	61	5	410	48-49	410	41-44	406	46-48
Argentina	49.2	66	6	391	50-55	374	51-53	381	50-53
Panama	48.9	68	7	-	-	-	-	-	-
Trinidad and Tobago	48.7	69	8	-	-	-	-	-	-
El Salvador	48.3	70	9	-	-	-	-	-	-
Colombia	48.0	72	10	388	50-55	385	48-53	370	52-55
Dominican Republic	46.3	79	11	-	-	-	-	-	-
Jamaica	46.2	81	12	-	-	-	-	-	-
Honduras	46.0	82	13	-	-	-	-	-	-
Brazil	45.2	87	14	390	50-54	393	46-51	370	53-55
Guatemala	44.5	89	15	-	-	-	-	-	-
Paraguay	44.3	90	16	-	-	-	-	-	-
Ecuador	44.2	91	17	-	-	-	-	-	-
Nicaragua	43.4	93	18	-	-	-	-	-	-
Bolivia	41.5	100	19	-	-	-	-	-	-
Venezuela	40.9	102	20	-	-	-	-	-	-
Suriname	40.1	105	21	-	-	-	-	-	-
Haiti	28.7	129	22	-	-	-	-	-	-
Memorandum items:									
Finland	77.8	2	-	563	1-1	547	2-2	548	1-4
New Zealand	73.4	10	-	530	3-9	521	4-6	522	8-13
Ireland	70.5	18	-	508	15-22	517	5-8	501	17-23
Spain	60.3	28	-	488	26-34	461	34-36	480	31-34
Portugal	57.2	35	-	474	35-38	472	29-34	466	35-38

* PISA 2006: *Science Competencies for Tomorrow's World*. Executive Summary. OECD, 2007.

** Ranks after rounding to one decimal point.

*** Rankings for all participating countries. On the basis of the samples of students assessed by PISA, it is not always possible to say with confidence which of two countries with similar performance has a higher mean score for the whole population. However, it is possible to give a range of possible rankings within which each country falls.