

ANNEX V STATISTICAL ANNEX: INFRASTRUCTURE INDICATORS

Introduction

Table 1. Transport

Table 2. Water supply and sanitation

Table 3. Energy

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This statistical annex provides an overview of the state of economic infrastructure in the seven countries of Latin America and the Caribe. It contains information for selected years on stock, access, affordability, efficiency, the state of reform, and financial performance of the energy, water supply and sanitation (WSS), telecom, and transport sectors. The annex comprises 4 tables and 302 infrastructure indicators.

This statistical Annex was commissioned from Ernst & Young Italy and Cohen & Co as part of the background work for this report. The data was compiled from a variety of sources, usually country specific. It is fully documented in the original work of Ernst & Young and Cohen & Co which is available upon request from MFay@worldbank.org.

Table 1: Transport

Units	Argentina		Brazil		Costa Rica		Guatemala		Jamaica		Mexico		Peru		
	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	
ACCESS															
Vehicle ownership															
Motorized vehicles	% households	71.1%	67.8% (a)					11.5% (c)	n.a.				n.a.	10.1% (b)	
Rural	% households							7.3% (c)	n.a.				n.a.	1.6% (b)	
Non-motorized vehicles	% households	41.1%	n.a.					32.2% (c)	n.a.				n.a.	21.2% (b)	
Rural	% households							30.0% (c)	n.a.				n.a.	16.4% (b)	
Vehicle ownership		181.10	187.76 (b)	184.82	174.35	137.94	171.71	71.55	n.a.			145.77	192.26	49.11	56.14
Road density in terms of															
Population	Road km/1000 people	5.96	6.14 (a)	10.07	10.01 (a)	10.20	8.96	1.28	1.17	7.36	7.21 (a)	3.35	3.51 (a)	3.10	2.97 (a)
Land	Road km/1000 sq km	78.72	84.12 (a)	197.49	n.a.	729.98	691.39	127.79	129.52	1,727.00	1,727.00 (a)	167.10	182.59 (a)	61.03	61.12 (a)
Rail density in terms of															
Population	Rail km/1000 people	0.99	0.95	0.18	0.17	0.16	n.a.	0.13	0.12 (b)	0.03	0.03 (a)	0.28	0.25	0.08	0.08
Electric lines		0.0046 (c)	n.a.	0.01 (c)	n.a.							0.003 (c)	n.a.		
Land	Rail km/100 sq Km	1.31	1.31	0.36	0.36	1.14	n.a.	1.28	1.28 (b)	0.60	0.60 (a)	1.39	1.40	0.16	0.17
Electric lines		.0070 (c)	n.a.												
AFFORDABILITY															
Average pump price for super	US\$/liter	0.94	0.48	0.80	0.55	0.41	0.64	0.41	0.48	0.37	0.52	0.36	0.62	0.55	0.74
Average pump price for diesel	US\$/liter	0.33	0.34	0.34	0.31	0.28	0.44	0.32	0.32	0.33	0.44	0.28	0.47	0.33	0.48
Spending on transport	%hh expenditure	3.97%	5.16%	n.a.	15.10%										
Average Rail Tariff															
Freight	US\$/tn-km	.02 (c)	.02 (a)											0.02	0.02(a)
Passenger	US\$/Passenger-km													0.06	0.13(a)
Inter-city	US\$/Passenger-km	n.a.	0,142 - 0,157'	0.03	0.02										
Intra-city	US\$/Passenger-km	n.a.	0.013	0.02	0.013										
Ports handling costs	US\$	n.a.	3,30 - 1,80												
Ports handling costs	Freight t/km (US\$)			n.a.	24.75										
QUALITY															
Travel time to work in main cities	Min/one-way work trip	42	n.a.					n.a.	n.a.						
Paved roads															
	% of total roads	29.50%	27.6% (a)	9.60%	11.37%	21.00%	22.01% (a)	31.00%	38.90%	70.10%	70.10% (a)	32.53%	33.55%	12.97%	13.36% (a)
National	% of total paved roads	n.a.	44.7% (b)												
Secondary/regional	% of total paved roads	n.a.	55.3% (b)											1.42%	1.41% (a)
Roads in good/fair condition	km							45.00%	n.a.	13.00% (b)				n.a.	43,876
National roads in good condition	% of national roads	53.00%	59.00% (b)	n.a.	69.00%				n.a.	48.00% (b)	n.a.	70.00%			
Annual fatalities in car accidents	Fatalities/10,000 vehicl.	0.56 (c)	0.47	6.50	6.20	5.45	3.87			360.00	278.00	3.63	2.48	2.69	1.95
Railway traffic density	Traffic units/railway km	317.7 (c)	n.a.	0.43	0.44 (a)							n.a.	2928.12	1.34(c)	0.44(a)
Commercial perception															
	Index based on quality perception	59.4% (c)	n.a.	34.3% (c)	n.a.	23.4% (c)	n.a.	n.a.	n.a.			n.a.	n.a.	80.0% (c)	n.a.
Services delivered by road dept															
Railroad services				64.3% (c)	n.a.										
Services delivered by road dept		n.a.	5.0 (a)	n.a.	4.4 (a)	n.a.	3.7 (a)	n.a.	3.9 (a)	n.a.	4.1 (a)	n.a.	5.0 (a)	n.a.	4.3 (a)
Port facilities		n.a.	4.3 (a)	n.a.	3.2 (a)	n.a.	2.8 (a)	n.a.	2.8 (a)	n.a.	5.1 (a)	n.a.	3.3 (a)	n.a.	2.8 (a)
Railroad services		n.a.	3.5 (a)	n.a.	2.5 (a)	n.a.	1.4 (a)	n.a.	1.4 (a)	n.a.	1.4 (a)	n.a.	2.7 (a)	n.a.	1.9 (a)
Air transport services		n.a.	4.6 (a)	n.a.	5.4 (a)	n.a.	4.5 (a)	n.a.	3.9 (a)	n.a.	5.8 (a)	n.a.	4.8 (a)	n.a.	3.6 (a)

Table 1: Transport (continued)

Units	Argentina		Brazil		Costa Rica		Guatemala		Jamaica		Mexico		Peru			
	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002		
Railway employee productivity	Annual output/employee	n.a.	1,209 (b)	n.a.	3,970 (b)								3,925	n.a.	363 (c)	n.a.
Road length	Thousands of kms	215.4	230.2 (a)	1,670.1	1,744.4	37.3	35.9 (a)	13.9	14.1 (a)				319.0	348.5 (a)	78.1	79.3
Motorways	Thousands of kms	0.7	n.a.			n.a.	n.a.	0.10	n.a.				6.3	n.a.	0.0	n.a.
Highways	Thousands of kms	38.4	38.6	n.a.	165.0 (a)	7.4	7.4 (a)	0.0	0.0				41.7	n.a.	17.0	17.2
Secondary/regional	Thousands of kms	176.3	192.6 (b)	n.a.	1,580.2	29.8	28.0	4.2	n.a.				61.4	n.a.	14.3	14.1
Other roads	Thousands of kms							9,486.0	n.a.				209.6	n.a.	46.9	47.0
Information on seaport traffic	Thous. of freight tons		75,080	443,005	502,829	n.a.	9,574	12,033	14,640	n.a.	16,963	237,380	254,613	14,689 (c)	16,061	
Urban transport modes – modal structure	%work trips per mode															
(a) private car	%work trips per mode	33.50%	n.a.					n.a.	6.63% (b)							
(b) train/tram	%work trips per mode	16.40%	n.a.													
(c) bus or minibus	%work trips per mode	42.20%	n.a.					n.a.	8.11% (b)							
(d) motorcycle	%work trips per mode							n.a.	0.77% (b)							
(e) bicycle, foot and other modes	%work trips per mode							n.a.	84.49% (b)							
FISCAL COSTS																
Annual central gov. spending on transportation	Millions US\$	1,244.4	160.3													
Annual central government spending on roads	Millions US\$	613.9	528.4 (b)	1,460.3	467.8			65.6	n.a.						362.4	n.a.
New construction	Millions US\$	206.9	115.9 (b)	n.a.	n.a.											
Maintenance/rehabilitation	Millions US\$	217.4	110.6 (b)	n.a.	n.a.			59.8	n.a.	n.a.	134.1				70.9	30.0
Others	Millions US\$	54.1	131.4 (b)	0	0											
Administration	Millions US\$	135.5	170.5 (b)	n.a.	n.a.											
Annual local government spending on Transportation	Millions US\$	1,484.2	1,217.7 (a)	3,100.3	1,742.2											
Annual local government investment on roads	Millions US\$	404.5	423.1 (a)													
Road Fund	Millions US\$	316.6	261.0 (a)													
Provincial spending	Millions US\$	87.9	162.1 (a)													
Road Recurrent and Capital Expenditure	Millions of US\$									1,906 (c)	1,434					
FINANCIAL AUTONOMY																
Annual expenditure by private sector in owning/operating vehicles	US\$	765.56		n.a.	522											

Table 1: Transport (continued)

Units	Argentina		Brazil		Costa Rica		Guatemala		Jamaica		Mexico		Peru		
	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	
INSTITUTIONAL DEVELOPMENT															
National roads boards exists and reports annually	Y/N	n.a.	Y		Exist	Y	Y	Y (exists) N (reports)	Y (exists) N (reports)		Y	Y	Y	Existence: Y Rep.: poor	Existence: Y Rep.: poor
National road safety action plan	Y/N	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y		Y
Social assessment of road projects mainstreamed	Y/N				Y	Y	Y							Y	Y
Environmental assessment of road projects mainstreamed	Y/N	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ECONOMIC REGULATION															
Transport formal economic regulatory framework															
For road	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
For airport	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y
For ports	Y/N	Y	Y	Y	Y	Y	Y				Y	Y	Y		Y
For railway	Y/N	Y (Pass.) / N (Loads)	Y (Pass.) / N (Loads)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Transport regulatory agency with some degree of independence															
For road	Y/N	N	N		Some	Some	Some	N	N	N	N	N	N		Some
For airport	Y/N	N	N	N	N	Some	Some	N	N	N	N	N	N	N	N
For ports	Y/N	N	N		Some	Some	Some	N	N	N	N	N	N	N	N
For railway	Y/N	N	N		Some	Some	Some	N	N	N	N 2)	N	N		Some
Geographical scope of regulation															
For road	National/Subnational	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N	N	N/S	N/S	N/S	N/S
For airport	National/Subnational	N	N	N	N	N	N	N	N	N	N	N	N	N	N
For ports	National/Subnational	N/S	N/S	N/S	N/S	N	N				N	N	N	N	N
For railway	National/Subnational	N/S	N/S	N/S	N/S	N	N	N	N	N	N	N	N	N	N
ENVIRONMENTAL REGULATION															
Specific environmental regulation for transportation projects	Y/N	Y	Y	Y	Y	N	N	N	N		Y			Y	Y
Environmental assessment of transportation projects mainstreamed	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Engineering design specifications related to environmental factors	Y/N				Y				Y						
Regulations requiring population resettlement in transport projects	Y/N				Y										
Relevant internat. environmental agreements affecting transportation projects	Y/N	n.a.	N	Y	Y										

Note: (a) data from 2001; (b) data from 2000; (c) data from 1999.

Table 2: Water and Sanitation

		Argentina		Brazil		Costa Rica		Guatemala		Jamaica		Mexico		Peru	
		1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002
ACCESS															
Access to improved water sources	% population	n.a.	78.6% (b)	n.a.	89.0% (b)	n.a.	95.0% (b)	n.a.	80.3% (b)	n.a.	80.5% (b)	n.a.	86.5% (b)	n.a.	80.0% (b)
Rural	% population	n.a.	29.8% (b)	n.a.	65.0% (b)	n.a.	91.5% (b)	n.a.	70.3% (b)	n.a.	59.4% (b)	n.a.	64.6% (b)	31.7%	42.4% (a)
Urban	% population	n.a.	84.7% (b)	n.a.	95.7% (b)	n.a.	99.6% (b)	n.a.	98.8% (b)	n.a.	97.7% (b)	n.a.	94.5% (b)	80.9%	82.9%
Urban access to improved sanitation	% population	n.a.	88.5% (b)	n.a.	93.6% (b)	n.a.	88.8% (b)	n.a.	94.7% (b)	n.a.	90.0% (b)	n.a.	87.0% (b)	n.a.	79.0% (b)
Sewerage	% population	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	71.5%	74.3%
On-site Sanitation	% population	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	15.5%	19.2%
Rural access to improved sanitation	% population	n.a.	47.7% (b)	n.a.	53.0% (b)	n.a.	97.1% (b)	n.a.	71.3% (b)	n.a.	91.0% (b)	n.a.	32.1% (b)	n.a.	49.0% (b)
Sewerage	% population	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.7%	5.5%
On-site Sanitation	% population	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	40.0%	50.2%
AFFORDABILITY															
Spending on water services	% of HH expenditure	n.a.	1.9%	n.a.	0.78%				0.33% (b)						
Rural	% of HH expenditure			n.a.	0.23%				0.18% (b)						
Urban	% of HH expenditure			n.a.	0.82%				0.52% (b)						
Spending on water and sewerage services	% of HH expenditure	n.a.	2.60%			n.a.	0.42 (b)			n.a.	1.07 (b)	n.a.	0.25	0.45	0.38
Water average tariff	US\$/m ³ -year	n.a.	0.14	0.55 (c)	0.42	n.a.	0.05 (b)	n.a.	0.39(b)	n.a.	1.07 (b)	n.a.	0.25	0.45	0.38
Sanitation average tariff	US\$/m ³ -year					n.a.	245 (b)			n.a.	1.07 (b)				
Average water bill	US\$/month	21.86	8.62			n.a.	0.06 (b)								
Average water connection charge	US\$	n.a.	116	n.a.	n.a.	n.a.	220 (b)	n.a.	0.14(b)			n.a.	0.33 (b)		
Average sanitation connection charge	US\$	n.a.	103			n.a.	245 (b)								

Table 2: Water and Sanitation (continued)

		Argentina		Brazil		Costa Rica		Guatemala		Jamaica		Mexico		Peru	
		1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002
QUALITY															
Water supply time	hours/day	n.a.	24.0 (b)	n.a.	24.0 (b)	n.a.	24.0 (b)	n.a.	16.7 (b)	n.a.	16.0 (b)				13.7 (b)
Rural	hours/day	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	18.5 (b)			n.a.	9.9 (b)		
Urban	hours/day	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	15.2 (b)			n.a.	20.0 (b)	12.9	17.5
Source of drinking water in rural areas															
Piped water	% of rural households			19.0% (c)	n.a.	n.a.	94.5% (b)	61.0% (c)	58.5% (b)	61.3%	62.3% (b)			31.70%	39.70%
Well water	% of rural households			32.4% (c)	n.a.	n.a.	n.a.	20.1% (c)	22.9% (b)	0.30%	0.50% (b)			13.50%	11.40%
Surface water	% of rural households			n.a.	n.a.	n.a.	n.a.	9.1% (c)	12.6% (b)	9.6%	6.3% (b)			51.90%	45.10%
Rainwater	% of rural households			n.a.	n.a.	n.a.	n.a.	0.02% (c)	0.99% (b)	25.7%	23.6% (b)			n.a.	n.a.
Tanker truck	% of rural households			n.a.	n.a.	n.a.	n.a.	0.01% (c)	0.39% (b)	n.a.	n.a.			0.40%	0.70%
Bottled water	% of rural households			n.a.	n.a.	n.a.	n.a.	7.0% (c)	n.a.	n.a.	n.a.			n.a.	n.a.
Others (Rainwater, Bottled water, others)	% of rural households													2.50%	3.10%
Source of drinking water in urban areas															
Piped water	% of urban households			n.a.	n.a.	n.a.	99.4% (b)	63.1% (c)	91.2% (b)	92.4%	92.7% (b)			85.60%	83.70%
Well water	% of urban households			n.a.	n.a.	n.a.	n.a.	7.1% (c)	3.3% (b)	0.10%	0.00% (b)			2.30%	3.80%
Surface water	% of urban households			n.a.	n.a.	n.a.	n.a.	2.01% (c)	0.43% (b)	0.10%	0.87% (b)			2.40%	2.00%
Rainwater	% of urban households			n.a.	n.a.	n.a.	n.a.	0.00% (c)	0.02% (b)	5.10%	2.33% (b)			n.a.	n.a.
Tanker truck	% of urban households			n.a.	n.a.	n.a.	n.a.	0.02% (c)	0.52% (b)	n.a.	n.a.			4.70%	6.40%
Bottled water	% of urban households			n.a.	n.a.	n.a.	n.a.	25.0% (c)	n.a.	n.a.	n.a.			n.a.	n.a.
Others (Rainwater, Bottled water, others)	% of urban households													5.00%	4.10%
Source of drinking water															
Piped water	% of households	n.a.	80.1% (a)												
Well water	% of households	n.a.	17.1% (a)												
Surface water	% of households	n.a.	0.8% (a)												
Rainwater	% of households	n.a.	1.1% (a)												
Tanker truck	% of households	n.a.	0.9% (a)												
Time to water source from hh's with in dwelling hand-washing material															
Less than 2 minutes	% of households							43.6% (c)	n.a.					n.a.	17.2% (b)
2-5 minutes	% of households							4.3% (c)	n.a.					n.a.	6.0% (b)
5-9 minutes	% of households							13.3% (c)	n.a.					n.a.	25.6% (b)
10 or more minutes	% of households							38.7% (c)	n.a.					n.a.	51.2% (b)
Disinfected water/produced water															
% urban population with disinfected water	% urban population	n.a.	90.0% (b)	n.a.	92.0% (b)	n.a.	50.0% (b)	n.a.	45.0% (b)			82.0%	96.0% (a)	14.20%	20.00%
% urban systems with disinfection	% urban systems	n.a.	98.0% (b)	n.a.	n.a.	n.a.	100.0% (b)	n.a.	25.0% (b)	n.a.	90.0% (b)			n.a.	91.0% (b)
% urban treated residual water before discharge	percentage	n.a.	10.0% (b)	n.a.	20.0% (b)	n.a.	3.0% (b)	n.a.	9.0% (b)			n.a.	13.0% (b)		
% collected volume which is treated	percentage	n.a.	10.0% (b)	n.a.	10.0% (b)	n.a.	4.0% (b)	n.a.	1.0% (b)			n.a.	15.0% (b)		
Public distribution of water - total												n.a.	85.3% (b)		
TECHNICAL DIMENSIONS															
Unaccounted-for water	percentage	32.6% (c)	n.a.	32.6% (c)	30.7%	n.a.	48.0% (b)		43.0% (b)	65.0%	67.0%			45.00%	45.10%
Water supplies that are functioning in rural areas	% of total supplies	n.a.	100.0% (b)	n.a.	n.a.	n.a.	56.0% (b)	n.a.	96.0% (b)	n.a.	40.0% (b)				
Water utility labor productivity	employees / 1000 connections	n.a.	1.95	3.00	3.46	n.a.	5.07							1.78	1.53

Table 2: Water and Sanitation (continued)

		Argentina		Brazil		Costa Rica		Guatemala		Jamaica		Mexico		Peru	
		1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002
FISCAL COSTS															
Total national spending on water & sanitation	US\$ million	95.52	7.34												
Total subnational spending on water & sanitation	US\$ million	362.08	82.62												
Operating subsidies	US\$ million			398.54	1,196.72										
Rural	US\$ million			n.a.	n.a.										
Urban	US\$ million			n.a.	n.a.										
Last ten years mean investment in water & sanitation (1990-2000)	US\$						20.0 (b)								
Urban	US\$						10.8 (b)								
Rural	US\$						9.2 (b)								
Capital investment	US\$ million	n.a.	300,000 (b)	2,808.24	946.51	n.a.	161.8 (b)	73.0 (b)		14.0 (b)	n.a.	268.3 (b)			
Rural	US\$ million	n.a.	20,000 (b)	n.a.	n.a.	n.a.	75.0 (b)	58.3 (b)		1.0 (b)	n.a.	60.1 (b)			
Urban	US\$ million	n.a.	280,000 (b)	n.a.	n.a.	n.a.	86.8 (b)	14.7 (b)		13.0 (b)	n.a.	208.2 (b)			
Water supplies recurrent and capital expenditure	US\$ million									402 (c)	298				
Total public spending on water & sanitation of the central administration	US\$ million							29.50				n.a.	39.51		
FINANCIAL AUTONOMY															
Water utilities working ratio	operating costs/op. revenues	0.84	0.90	0.67	0.49									0.70	0.67
INSTITUTIONAL DEVELOPMENT															
Existence of policy requiring tariff to cover O&M costs	Y/N	Y	Y	N	N	Y	Y	Y	Y		Y	Y	Y		Y
ECONOMIC REGULATION															
Formal economic regulatory framework															
- For tariff	Y/N	Y	Y	Decentralz	Decentralz	Y	Y	Y	Y			Y	Y	Y	Y
- Coverage	Y/N	Y	Y	Decentralz	Decentralz	Y	Y	Y	Y						
- Service Quality	Y/N	Y	Y	Decentralz	Decentralz	Y	Y	Y	Y			Y	Y (DF)	Y	Y
- Sanitary Quality	Y/N	Y	Y		Decentralz		Y		Y	Y			Y (DF)		
Regulatory agency with some degree of independence	Y/N	N	N	N	Some	Some	Some	N	N	N	N	N	N	Some	Some
Geographical scope of regulation	National/subnational	N	N	N	S	N	N	N	N	N	N	N/S	N/S	N	N
ENVIRONMENTAL REGULATION															
Environmental assessment of water and sanitation projects mainstreamed	Y/N	Y	Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Standards and regulations of environmental quality															
- water quality standards	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
- contamination of water resources	Y/N	Y	Y	Y	Y	Y	Y			Y	Y	Y	Y	Y	Y
- disposal of hazardous or toxic wastes	Y/N	Y	Y	Y	Y						Y	Y	Y	Y	Y
- disposal of liquid wastes	Y/N	Y	Y	Y	Y	Y	Y			Y	Y	Y	Y		
- disposal of solid wastes	Y/N	Y	Y	Y	Y	Y	Y			Y	Y	Y	Y		Y

Note: (a) data from 2001; (b) data from 2000; (c) data from 1999.

Table 3: Energy

		Argentina		Brazil		Costa Rica		Guatemala		Jamaica		Mexico		Peru	
		1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002
ACCESS															
Access to electricity network	% of population	n.a.	94.6% (b)	n.a.	95.4%	94.4%	97.0%	56.8%	79.6%	n.a.	92% (b)	n.a.	95% (b)	70.0%	75.3%
Households reporting access to electricity	% households	99.5% (c)	n.a.	99.5% (c)	96.3%	n.a.	98.4%	65.0%	73.1% (b)	80.8%	87.0%	n.a.	97.2% (b)	67.0%	71.9%
Rural	% households	n.a.	n.a.	71.3%	79.5%	n.a.	99.8%	46.0%	56.2% (b)	n.a.	79.5% (b)	n.a.	n.a.	30.7% (c)	30.8%
Urban	% households	100%	99.57%	99.1%	99.4%	n.a.	96.3%	89.0%	95.3% (b)	n.a.	92.0% (b)	,	n.a.	92.2% (c)	93.7%
Households using as main cooking fuel:															
Modern fuels	% total hh	n.a.	95.0% (a)	90.7% (c)	n.a.	n.a.	89.5%	26.6% (c)	n.a.			n.a.	81.0% (b)	n.a.	57.2% (b)
Urban	% total hh			97.3% (c)	n.a.	n.a.	96.6%	57.7% (c)	n.a.			n.a.	n.a.	n.a.	85.2% (b)
Rural	% total hh			61.7% (c)	n.a.	n.a.	78.7%	11.6% (c)	n.a.			n.a.	n.a.	n.a.	10.0% (b)
Solid fuels	% total hh	n.a.	5.0% (a)	8.1% (c)	n.a.	n.a.	9.3%	72.1% (c)	73.0% (b)	n.a.	47.0% (b)	n.a.	18.3% (b)	n.a.	37.2% (b)
Urban	% total hh			1.9% (c)	n.a.	n.a.	2.5%	40.5% (c)	n.a.			n.a.	n.a.	n.a.	9.2% (b)
Rural	% total hh			35.6% (c)	n.a.	n.a.	19.6%	87.4% (c)	n.a.			n.a.	n.a.	n.a.	86.1% (b)
AFFORDABILITY															
Average electricity end-user prices															
Residential	US\$/MWh	103.00	32.00	103.00	64.00	54.40	63.60	67.50	79.60	130.50	161.20	47.60	80.30	108.00	97.00
Commercial	US\$/MWh	120.00	35.00	92.00	59.00	80.00	71.70	91.30	75.00	101.80	108.60	43.30	62.90	95.00	73.00
Industrial	US\$/MWh	68.00	22.00	54.00	33.00									78.00	50.00
Spending on electricity	% of hh expenditure	n.a.	4.60%	2.60%	2.21%									n.a.	6.3%
Spending on alternative sources of energy	% of hh expenditure	n.a.	2.43%	3.09%	7.18%										
Electric power consumption	kwh per capita	1,941.22	2,106.87 (a)												
Expenditure in electricity per capita	US\$	n.a.	779.54 (a)												
Percentage of GDP per capita spent on electricity	Percentage	n.a.	2.44% (a)									n.a.	1.40% (a)		
QUALITY															
Electricity supply time	hours/day			23.93	23.95	23.92	23.95	n.a.	23.43 (b)						
Frequency of interruptions	number per consumer-year	5.60 (c)	2.94	20.00	15.00										
Duration of interruptions	hours per consumer-year	8.7 (c)	5.15									160.00	124.42		

Table 3: Energy (continued)

		Argentina		Brazil		Costa Rica		Guatemala		Jamaica		Mexico		Peru		
		1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	
TECHNICAL DIMENSIONS																
Energy production	MWh														20.33	21.72 (a)
Electricity production	MWh	75.06	84.07	321.75	344.60	5.79	7.46	4.46	5.86 (a)	6.48	6.66 (a)	170.98	200.36	18.58	21.98	
Total net electricity generation	Billion KWh	71.88	80.89	317.08	339.05	5.23	6.61	4.28	6.61	6.10	6.29	172.28	203.65	18.15	21.74	
Net production by fuel type																
Hydropower	% of total production	43.4%	50.8%	90.6%	81.7% (a)	80.8%	81.5% (a)	36.2%	32.9% (a)	1.8%	1.74% (a)	13.6%	13.6% (a)	74.3%	84.7% (a)	
Coal	% of total production	1.2%	0.2%	2.2%	3.1% (a)	n.a.	n.a.	0.7% (c)	8.5% (a)	n.a.	n.a.	9.8%	11.1% (a)	n.a.	0.94% (a)	
Oil	% of total production	4.1%	0.3%	3.9%	4.0% (a)	7.0%	1.4% (a)	48.7%	44.1% (a)	96.7%	96.7% (a)	51.4%	44.2% (a)	21.0%	9.7% (a)	
Gas	% of total production	41.7%	42.0%	n.a.	2.6% (a)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	16.9%	24.0% (a)	4.0%	3.8% (a)	
Nuclear	% of total production	9.6%	6.7%	1.0%	4.4% (a)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.1%	4.2% (a)	n.a.	n.a.	
Net electricity generation by type																
Hydroelectric	% of total generation	37.0%	43.7%	91.0%	83.2%	82.4%	84.4%	37.4%	31.5%	1.9%	1.8%	14.2%	12.1%	75.3%	82.1%	
Conventional thermal	% of total generation	52.8%	48.7%	4.9%	8.4%	6.8%	1.0%	47.7%	56.4%	96.6%	96.6%	77.4%	80.6%	24.1%	17.1%	
Nuclear	% of total generation	10.0%	6.6%	1.0%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.1%	4.5%	0.0%	0.0%	
Geothermal, solar, wind and wood and waste	% of total generation	0.2%	1.0%	3.1%	4.3%	10.8%	14.6%	14.9%	12.1%	1.6%	1.6%	3.3%	2.8%	0.7%	0.8%	
Main energy source for households																
Piped gas	% of households	60.9%	66.5%	n.a.	n.a.											
Gas in containers	% of households	12.0%	7.9%	n.a.	n.a.											
Coal	% of households	4.3%	3.3%	n.a.	n.a.											
Electricity	% of households	19.8%	21.1%	94.2% (c)	n.a.											
Oil/kerosene	% of households			5.5% (c)	n.a.											
Other/Not stated	% of households			0.34% (c)	n.a.											
Natural gas	% of households			0.4%	0.7%											
Firewood	% of households			31.4%	37.1%			53.4% (c)	n.a.							
Liquefied petroleum gas	% of households			31.3%	29.5%											
Kerosene	% of households			0.1%	0.3%			0.3% (c)	n.a.							
Gasworks gas	% of households			0.4%	0.1%			15.6% (c)	n.a.							
Electricity	% of households			34.5%	30.2%			29.0% (c)	n.a.							
Charcoal	% of households			1.9%	2.1%			1.9% (c)	n.a.							
Energy consumption per unit of GDP	Kg of oil equivalent/1000 PPP GDP	137.72	139.74 (b)	160.13	148.48 (c)	87.37	85.49 (c)	142.78	141.73 (b)	426.48	424.9 (b)	204.99	182.94 (c)	110.21	105.71 (b)	
Electricity transmission and distribution losses	% of total output	15.1%	13.6% (a)	16.8%	17.24% (a)	7.9%	7.2% (a)	20.5%	23.0% (a)	9.9%	8.5% (a)	14.6%	14.4% (a)	12.9%	10.8% (a)	
FISCAL COSTS																
Public expenditure on energy, fuel and mines	US\$ millions	335.67	119.11											103.07	84.46	
Total federal budget spending on energy	US\$ millions			865.85	2,673.44	835.54	1,508.81	29.48	2.22							
Total federal budget spending on energy/GDP	Percentage			0.1%	0.6%	5.9%	9.0%	0.2%	0.0%							
Private investment in energy	US\$ millions	3,299.80	299.80	10,319.60	2,611.70	58.50	n.a.	540.40	60.00			1,201.50	1,184.00	358.72	132.34	
Private investment in energy/GDP	Percentage	1.10%	0.29%	1.3%	0.6%	0.4%	n.a.	2.8%	0.3%			0.3%	0.2%	0.7%	0.2%	
FINANCIAL AUTONOMY																
Return on equity	Percentage	11.1%	-35.7%	7.7%	-21.9%	10.50	15.11 (a)					2.6%	-1.5%	3.0%	5.4%	

Table 3: Energy (continued)

		Argentina		Brazil		Costa Rica		Guatemala		Jamaica		Mexico		Peru	
		1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002
INSTITUTIONAL DEVELOPMENT															
Oil industry															
Supply corporatized	Y/N	Y	Y	Y	Y	N	N	Y	Y	N	0 (official), see Local PSTN	N	N	Y	Y
Board of directors autonomous from executive branch	Y/N	n.a.	n.a.	N	N	N	N			N	N	N	N	N	N
Legislation requiring transparent and arm's length	Y/N	Dereg./Commodity 1)	Dereg./Commodity	Commodity	Commodity	N	N	Transparency	Transparency			N	N	Dereg./Commodity	Dereg./Commodity 2)
Is this legislation properly implemented?	Y/N											N	N		
Seasonality of supply quality	Y/N	N	N	N	N	n.a.	n.a.			n.a.	n.a.			N	N
Seasonality of demand	Y/N	N	N	N	N	N	N							N	N
Gas industry															
Supply corporatized	Y/N	Y	Y	Y	Y	n.a.	n.a. 1)	Y	Y	n.a.	n.a.	N	N	Y	Y
Board of directors autonomous from executive branch	Y/N	n.a.	n.a.	N	N	n.a.	n.a. 1)			n.a.	n.a.	N	N	N	N
Legislation requiring transparent and arm's length	Y/N	N	N					Transparency	Transparency	n.a.	n.a.		Y	N	Y
Is this legislation properly implemented?	Y/N									n.a.	n.a.				
Seasonality of supply quality	Y/N	N	N	N	N	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.			N	N
Seasonality of demand	Y/N	Y	Y	Y	Y	n.a.	only LPG	n.a.	n.a.	n.a.	n.a.	Y	Y	Y	Y
Power industry															
Supply corporatized	Y/N	Y	Y	Y	Y	10%	15%	Y	Y	N	Y	N	N	Y	Y
Board of directors autonomous from executive branch	Y/N	n.a.	n.a.	N	N	N	N	N	N (35% EGEE)		n.a.	N	N	N	N
Legislation requiring transparent and arm's length	Y/N	N	N	N	N	N	N	N	N					N	Y
Is this legislation properly implemented?	Y/N														
Seasonality of supply quality	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	N	N			Y	Y
Seasonality of demand	Y/N	Y	Y	Y	Y	N	N	Y	Y			Y	Y	Y	Y
Market structure															
Independent system operator	Y/N	Y	Y	Y	Y	N	N	Y	Y	N	N	N	N	Y	Y
Single buyer	Y/N	N	N	N	N	Y	Y	N	N	Y	Y	Y	Y	N	N
Bilateral contracting	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Power pool	Y/N	Y	Y	Y	Y	N	N	Y	Y	N	N	N	N	Y	Y
Industry structure															
Vertical unbundling	Y/N	Y	Y	Y	Y	N	N	Y	Y	N	N	N	N	Y	Y
Horizontal unbundling in generation	Y/N	Y	Y	Y	Y	Little (see Supply)	Little (see Supply)	Y	Y	Y	Y	N	N/10%	Y	Y
Horizontal unbundling in distribution	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N/Minor	Y	Y

Table 3: Energy (continued)

	Argentina		Brazil		Costa Rica		Guatemala		Jamaica		Mexico		Peru	
	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002
ECONOMIC REGULATION														
Formal economic regulatory framework														
- For power	Y/N	Y	Y	Y	Y	Y	Y	Y	Y		Licence	Y	Y	Y
- For gas	Y/N	Y	Y	Y	Y	Y	y	Y	Y	n.a.	n.a.	Y	Y	Y
- For oil	Y/N	Up-Down: N / Tpt: Y	Up-Down: N / Tpt: Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Up-Down: N / Tpt: Y
Regulatory agency with some degree of independence														
- For power	Y/N	Y	N	N	N 3)	Some	Some	Some	Some	N	N	N	N	Some
- For gas	Y/N	Y	N	N	N 3)	Some	Some	N	N	n.a.	n.a.	N	N	Some
- For oil	Y/N	n.a.	N	N	N 3)	Some	Some	N	N	N	N	N	N	Some
Geographical scope of regulation														
- power and gas distribution	National/subnational	Gas: N, Power: N/S	Gas: N, Power: N/S	N/S	N/S	N	N	N	N	N	N	N	N	N
- power and gas transportation	National/subnational	N	N	N	N	N	N	N (applicable to power)	N (applicable to power)	N	N	N	N	N
- power and gas production	National/subnational	N	N	N	N	N	N	N	N	N	N	N	N	N
- For oil	National/subnational	N	N	N	N	N	N	N	N	N	N	N	N	N
ENVIRONMENTAL REGULATION														
Environmental regulation for hydroelectric power generation	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Environmental regulation for fuel power generation	Y/N	Y	Y					Y	Y	Y	Y	Y	Y	Y
- SO2 Control	Y/N	Y	Y					Y	Y	Y	Y	Y	Y	Y
- NOx Control	Y/N	Y	Y							Y	Y	Y	Y	Y
- other	Y/N	Y	Y					Y	Y	Y	Y	Y	Y	Y
Environmental regulation for power transmission	Y/N	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
Environmental regulation for gas pipeline	Y/N	Y	Y	Y	Y	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	Y	Y	Y
Environmental assessment of energy projects mainstreamed	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Worker health and safety laws and regulations in gas manipulation	Y/N	Y	Y	Y	Y	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	Y (internal)	Y	Y

Note: (a) data from 2001; (b) data from 2000; (c) data from 1999.

Table 4: Telecommunications

		Argentina		Brazil		Costa Rica		Guatemala		Jamaica		Mexico		Peru	
		1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002
ACCESS															
Telephone subscribers per 100 inhabitants		28.06	39.64	16.49	42.38	22.16	36.15	5.82	20.20	21.36	70.22	13.85	40.12	9.27	14.82
Main telephone lines per 100 inhabitants		20.86	21.88	12.05	22.32	19.33	25.05	4.79	7.05	18.26	16.97	10.36	14.67	6.27	6.69 (b)
Cellular subscribers per 100 inhabitants		7.21	17.76	4.44	20.06	2.83	11.10	1.03	13.15	3.10	53.30	3.50	25.45	2.99	8.62
Mainlines per 100 inhab. outside largest city		18.40 (c)	n.a.	14.70 (c)	n.a.					14.70 (c)	0.00			4.38 (c)	n.a.
International voice traffic	Million minutes	793.84	754.28	1339.96	2,072.2 (a)	196.00	296.87	294.3 (c)	963.60	409.90	2,072.2 (a)	4,285.91	7,833.80	379.16	1,235.48
Personal computers per 1000 inhabitants		54.54	81.97	30.15	74.76	78.10	197.20	8.33	14.42	39.45	53.86	36.52	81.99	30.23	42.97
Internet users per 100 inhabitants		0.85	11.20	1.51	8.22	2.60	19.31	0.46	3.33	1.97	22.92	1.28	9.85	1.21	8.97
Internet hosts per 100 inhabitants		0.19	1.35	0.13	1.29	0.08	0.19	0.01	0.08	0.01	0.05	0.12	1.09	0.02	0.07
Number of internet service providers		47 (c)	n.a.	197 (c)	1219	2 (c)	n.a.	n.a.	5.0 (b)	197 (c)	n.a.	167 (c)	n.a.	15 (c)	n.a.
Number of mail items posted per inhab.		11.38	8.44	42.35	54.50	5.22	6.58	n.a.	2.59	18.64	n.a.	9.75	6.94	1.32	0.48
Total postal savings account deposits	% of GDP														
Radios per 1000 inhabitants		n.a.	681 (a)	n.a.	433 (a)	816 (c)	816 (a)	n.a.	79 (a)	2)	433 (a)	n.a.	310 (a)	n.a.	269 (a)
Ownership in rural areas															
- TV	% of rural households			63.0%	69.0%			34% (c)	n.a.					47.2%	40.8%
- Radio	% of rural households			85.0%	82.0%			73.1% (c)	n.a.					91.4%	90.3%
- Telephone	% of rural households			6.0%	18.0%			6% (c)	n.a.					0.6%	0.4%
Ownership in urban areas															
- TV	% of urban households			92.0%	94.0%			77.1% (c)	n.a.						
- Radio	% of urban households			93.0%	89.0%			86% (c)	n.a.					82.8%	74.6%
- Telephone	% of urban households			36.0%	68.0%			27.0% (c)	n.a.					35.6%	31.9%
Ownership															
- TV	% of households	91.8%	97.0% (a)	86.9%	89.9%	80.8%	84.2% (a)	36.5%	40.4% (a)	67.6%	70.0%	85.8%	93.6%	66.3%	66.8% (b)
- Radio	% of households	88.4%	n.a.	90.1%	87.9%	99.7% (c)	n.a.	79.5% (c)	n.a.	88.7%	n.a.	n.a.	81.5% (b)	n.a.	74% (a)
- Telephone	% of households	73.94	74.60 (a)	0.32	58.9%	n.a.	54.3%	15.6% (c)	15.6%	n.a.	n.a.	33.9%	45.3%	24.0%	20.4%
AFFORDABILITY															
Cost of local phone call	US\$ per 3 mins	0.10	0.03	0.05	0.03 (a)	0.04	0.03	0.10	0.08 (a)	0.06	0.03 (a)	0.13	.16 (a)	0.08	0.08
3 minute local call (peak rate)				0.06	0.07			0.66	0.66 (a)	0.00	0.00	1.21	1.48 (a)		
Cost of phone call to the US	US\$ per 3 mins	2.77 (c)	2.80	2.77 (c)	n.a.	2.82	1.35	0.76 (c)	n.a.	2.77 (c)	n.a.	1.58	3.04 (a)	2.45 (c)	n.a.
Cost of cellular local call	US\$ per 3 off-peak min.	1.23	0.39	0.67	0.36	0.23	0.19	0.43 (c)	0.38 (a)	n.a.	0.50	0.84	0.83 (a)	0.78	n.a.
Internet service provider access charges	\$ per 30 off-peak hours	n.a.	77.90												
Internet service provider access charges	Monthly fee US\$	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Table 4: Telecommunications (continued)

		Argentina		Brazil		Costa Rica		Guatemala		Jamaica		Mexico		Peru	
		1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002
QUALITY															
Phone faults per 100 mainlines		17.29	n.a.	4.63	3.00 (a)	5.70	5.30	n.a.	n.a.	63.60	3.00 (a)	2.81	1.90	23.80	n.a.
Unmet demand		0.79%	1.17% (b)	7.84%	0.53% (a)	5.21%	1.50%	n.a.	n.a.	31.27%	0.53% (a)	1.36%	n.a.	2.99%	2.06% (a)
EFFICIENCY															
FISCAL COSTS															
Total national spending on telecoms.	US\$ millions							10.85	10.92						
ICT sector revenue	US\$ millions	8,447.0	2,358.4	n.a.	1,071.5					0.0	0.0			1,445.8	1,394.7 (a)
Total telecommunication service revenue	US\$ millions	8,451.2	7,547.0 (a)	19,948.3	20,428.0 (a)	229.7	364.3	262.4	448.3 (a)	456.7	20,428.0 (a)	9,211.4	16,938.4	n.a.	0.1
Postal net revenue	SDR	960.1	264.9	n.a.	84.5	n.a.	1.511	n.a.	0.187	n.a.	n.a.	n.a.	-34.312		
ICT sector return on equity	Percentage	19.0%	-59.0%	-29.9% (c)	-4.4%	13.2%	7.5%			-29.9% (c)	0.0%			501.9	187.5
														0.89%	0.33%
INSTITUTIONAL DEVELOPMENT															
Independence of telecom regulator	Y/N	N	N	Y	Y	Some	Some	N	N	N	N	N	N	N	Some
Private ownership of telecom incumbent op.	% of total capital	100.0%	100.0%			0%	0%					n.a.	100%	100%	100%
Local PSTN service competition	full, partial, monopoly	F	F	M	M	M	M	F	F		M (official)	M	M	F	F
Mobile competition	full, partial, monopoly	F	F	P	P	M	M	F	F	M	P	F	F	M, 2 Co's in Lima	F to M dep on province
International long distance competition	full, partial, monopoly	F	F	M	M	M	M	F	F	M	P	F	F		F
Leased phone lines competition	full, partial, monopoly	M	M	M	P	M	M	F	F	M	M		19 op's (partIAL)		M
ISP competition	full, partial, monopoly	F	F	F	F	n.a.	M	F	F	M	F				
Monopoly threshold of item to be mailed	grams					2,000	2,000					1000	1000.00	n.a.	n.a.
Number of other op. in the letter-post sector		277	250	0	0	0	0			0	0	0	0	288	472
ENVIRONMENTAL REGULATION															
Environmental regulation for telecommunication projects	Y/N					Y	Y	Y	Y					Y	Y
Environmental assessment of telecommunication projects mainstreamed	Y/N		Y			Y	Y	Y	Y			Y	Y	Y	Y
Engineering design specifications related to environmental factors	Y/N														

Note: (a) data from 2001; (b) data from 2000; (c) data from 1999.