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ANALYSIS OF ARMENIA'S TRAVEL AND TOURISM COMPETITIVENESS 2009

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Introduction

The World Economic Forum (WEF) issued, at the end of March 2009, their third World Travel and Tourism (T&T) Competitiveness Index. The Index measures the competitiveness of tourism industries in 133 countries around the world. The overall index is comprised of three subindices and beneath this, a series of pillars that utilize a number of industry indicators. The framework is outlined in the table below. The full Index and reports are available online at:

1. 2008 Report: <http://www.weforum.org/ttcr08browse/index.html>
2. 2009 Report: <http://www.weforum.org/documents/TTCR09/index.html>

Between 2007 and 2008, Armenia dropped in its ranking by 15 places, from 74th to 89th position. Between 2008 and 2009, Armenia slightly dropped in its ranking by 2 places, from 89th to 91st position. Therefore, between 2007 and 2009, Armenia dropped in its ranking by 17 places, from 74th to 91st position.

It is important to mention that the number of countries included in the 2009 rankings increased to 133, from 130 in 2008.

Within the T&T Regulatory Framework, Armenia's ranking between 2008 and 2009 decreased by 1 place, putting it in 58th position. Compared with 2007, the overall improvement is 7 positions, from 65th in 2007 to 58th in 2009. Armenia's ranking in the Policy Rules & Regulations pillar declined from 63rd (in 2008) to 77th position (in 2009). A small decrease (from 112th to 113th between 2008 and 2009) was seen in the Environmental sustainability pillar. The Safety & Security pillar ranking remained the same as last year at 45th position. Prioritization of Travel & Tourism increased by one place from 105th to 104th position compared to last year, but the Health and Hygiene pillar ranking jumped from 45th position in 2008 to 30th in 2009. The individual indicators that gave rise to the changes are examined in more detail below.

Within the T&T Business Environment Framework, Armenia's ranking increased by 3 places overall putting it in 105th position. Rankings increased under three of the five pillars within this subindex. The ICT infrastructure and Price Competitiveness in the T&T industry pillars decreased their rankings by 6 and 21 positions respectively.

Within the T&T Human, Cultural & Natural Resources Framework, Armenia's ranking dropped by 8 places putting it in 102nd position. The Human Resource pillar ranking decreased by 2 places and the Cultural Resources and Affinity for Travel & Tourism pillars by 3 places each. However, the largest ranking decrease was observed in the Natural Resources pillar.

Armenia's current competitive advantages in travel and tourism, according to the WEF T&T Competitiveness Index are:

- 1.08 – Cost to start a business
- 3.01 – Business costs of terrorism
- 3.03 – Business costs of crime and violence
- 3.04 – Road traffic accidents
- 4.01 – Physician density
- 4.04 – Hospital beds
- 11.06 – Hiring & firing practices
- 11.07 – Ease of hiring foreign labor
- 11.08 – HIV prevalence
- 12.03 – Extension of business trips recommended.

All of these indicators are ranked 40th or above amongst the 133 countries identified.

Compared to the 2008 rankings, the following indicators went out from competitive advantages list:

- 1.07 – Time required to start a business
- 2.04 – Carbon Dioxide emissions
- 10.02 – Purchasing power parity

10.05 – Hotel price index

12.02 – Attitude of population toward foreign visitors.

However, the competitive disadvantages outweigh these significantly. 27 indicators give Armenia a ranking in 90th position or below. These indicators are highlighted by shading in the table below and are examined further in this short report.

Armenia's T&T Competitiveness Rankings

The table below provides details of Armenia's rankings under each of the subindices, pillars and indicators for 2007, 2008 and 2009. The table also provides annual and overall comparisons. Positive changes in indicators are colored green. Negative changes in indicators are colored red. The last column in the table indicates the differences between 2007 and 2009. Those indicators that are shaded represent the greatest competitive disadvantages according to the T&T Competitiveness Index. Each of these is examined further below.

Keys

* Methodology or Source of Information Changed for 2008 ranking

▪ Methodology or Source of Information Changed for 2009 ranking

** New indicator for 2008

*** Same data used in 2008 as 2007

**** Same data used in 2009 as 2008

***** New indicator for 2009

+ **number** Increase in ranking

- **number** Decrease in ranking

↓ Decrease in ranking of more than 15 points from 2007 to 2009

↑ Increase in ranking of more than 15 points from 2007 to 2009

HD – Hard Data

EOS – Executive Opinion Survey

Subindex	Pillar	Indicator No.	Indicator	Method of Data Collection	2007 Ranking	2008 Ranking	2008 compared to 2007	2009 Ranking	2009 compared to 2008	2009 compared to 2007
OVERALL INDEX					74	89	-15	91	-2	↓-17
T&T					65	57	+8	58	-1	+7
Regulatory Framework	Policy Rules & Regulations	1			92	63	+29	77	-14	↑+15
		1.01	Prevalence of Foreign Ownership	EOS	75	76	-1	84	-8	-9
		1.02	Property Rights	EOS	71	69	+2	69	0	+2
		1.03	Business impact of rules on FDI	EOS	56	77	-21	87	-10	↓-31

Subindex	Pillar	Indicator No.	Indicator	Method of Data Collection	2007 Ranking	2008 Ranking	2008 compared to 2007	2009 Ranking	2009 compared to 2008	2009 compared to 2007
		1.04	Visa Requirements	HD	100	101*	-1	117*	-16	↓-17
		1.05	Openness of bilateral Air Service Agreements	HD	84	88***	-4	89****	-1	-5
		1.06	Transparency of government policymaking	EOS	N/A	104**	N/A	103	+1	+1
		1.07	Time required to start a business	HD	N/A	39**	N/A	54	-15	↓-15
		1.08	Cost to start a business	HD	N/A	31**	N/A	30	+1	+1
	Environmental Sustainability	2			102	112	-10	113	-1	-11
		2.01	Stringency of environmental regulation	EOS	95	116	-21	118	-2	↓-23
		2.02	Enforcement of environmental regulation	EOS	113	124	-11	128	-4	↓-15
		2.03	Sustainability of T&T industry development	EOS	90	97	-7	96	+1	-6
		2.04	Carbon dioxide emissions	HD	N/A	37**	N/A	41	-4	-4
		2.05	Particulate matter concentration	HD	N/A	88**	N/A	99	-11	-11
		2.06	Threatened species	HD	N/A	86**	N/A	78	+8	+8

Subindex	Pillar	Indicator No.	Indicator	Method of Data Collection	2007 Ranking	2008 Ranking	2008 compared to 2007	2009 Ranking	2009 compared to 2008	2009 compared to 2007
		2.07	Environmental treaty ratification	HD	N/A	97**	N/A	104	-7	-7
	Safety & Security	3			49	45	+4	45	0	+4
		3.01	Business costs of terrorism	EOS	39	40	-1	33	+7	+6
		3.02	Reliability of police services	EOS	74	92	-18	95	-3	↓-21
		3.03	Business costs of crime & violence	EOS	37	35	2	32	+3	+5
		3.04	Road traffic accidents	HD	N/A	23**	N/A	24****	-1	-1
	Health & Hygiene	4			40	39	1	30	+9	+10
		4.01	Physician density	HD	12	11	1	12	-1	0
		4.02	Access to improved sanitation	HD	53	67*	-14	59	+8	-6
		4.03	Access to improved drinking water	HD	53	66*	-13	47	+19	+6
		4.04	Hospital beds	HD	N/A	41**	N/A	39	+2	+2
	Prioritization of Travel & Tourism	5			67	105	-38	104	+1	↓-37
		5.01	Government prioritization of the T&T industry	EOS	52	65	-13	85	-20	↓-33
		5.02	T&T government	HD	N/A	52	N/A	55	-3	-3

Subindex	Pillar	Indicator No.	Indicator	Method of Data Collection	2007 Ranking	2008 Ranking	2008 compared to 2007	2009 Ranking	2009 compared to 2008	2009 compared to 2007
			expenditure							
		5.03	Effectiveness of marketing and branding to attract tourists	EOS	92	107	-15	109	-2	↓-17
		5.04	T&T fair attendance	HD	70	111*	-41	98	+13	↓-28
T&T Business Environment & Infrastructure	Air Transport Infrastructure	6			96	108	-12	105	+3	-9
		6.01	Quality of air transport infrastructure	EOS	95	97	-2	96	+1	-1
		6.02	Available seat kilometers	HD	85	88	-3	85	+3	0
		6.02	Available seat kilometers, domestic	HD	86	98	-12	N/A	N/A	N/A
		6.03	Available seat kilometers, international	HD	N/A	N/A	N/A	100*****	N/A	N/A
		6.03 (6.04)	Departures per 1,000 population	HD	N/A	N/A	N/A	96*****	N/A	N/A
		6.04 (6.05)	Airport density	HD	76	72	+4	74****	-2	2
		6.05 (6.06)	Number of operating airlines	HD	72	66	+6	71	-5	1
		6.06 (6.07)	International air transport	HD	47	54	-7	64	-10	↓-17
		6.06 (6.07)	International air transport	EOS	107	108	-1	109	-1	-2

Subindex	Pillar	Indicator No.	Indicator	Method of Data Collection	2007 Ranking	2008 Ranking	2008 compared to 2007	2009 Ranking	2009 compared to 2008	2009 compared to 2007
			network							
	Ground Transport Infrastructure	7			98	100	-2	95	+5	+3
		7.01	Quality of roads	EOS	68	75	-7	79	-4	-11
		7.02	Quality of railroad infrastructure	EOS	76	80	-4	83	-3	-7
		7.03	Quality of port infrastructure	EOS	124	104	+20	115	-11	+9
		7.04	Quality of domestic transport network	EOS	86	114	-28	60	+54	↑+26
		7.05	Road density	HD	N/A	61**	N/A	70	-9	-9
	Tourism Infrastructure	8			110	118	-8	106	+12	+4
		8.01	Hotel rooms	HD	66	93	-27	101	-8	↓-35
		8.02	Presence of major car rental companies	HD	102	117*	-15	95	+22	+7
		8.03	ATMs accepting VISA cards	HD	88	87	+1	87****	0	1
	ICT Infrastructure	9			84	101	-17	107	-6	↓-23
		9.01	Extent of business Internet use	EOS	91	111	-20	116	-5	↓-25

Subindex	Pillar	Indicator No.	Indicator	Method of Data Collection	2007 Ranking	2008 Ranking	2008 compared to 2007	2009 Ranking	2009 compared to 2008	2009 compared to 2007
		9.02	Internet users	HD	88	100	-12	105	-5	↓-17
		9.03	Telephone lines	HD	67	62	+5	66	-4	1
		9.04	Broadband Internet users	HD	N/A	99**	N/A	103	-4	-4
		9.05	Mobile telephone subscribers	HD	N/A	118**	N/A	126	-8	-8
	Price Competitiveness in the T&T Industry	10			28	42	-14	63	-21	↓-35
		10.01	Ticket taxes and airport charges	HD	35	53	-18	65	-12	↓-30
		10.02	Purchasing power parity	HD	33	42	-9	57	-15	↓-24
		10.03	Extent and effect of taxation	EOS	67	72	-5	83	-11	↓-16
		10.04	Fuel price levels	HD	40	54	-14	54	0	-14
		10.05	Hotel price index	HD	N/A	50**	N/A	64	-14	-14
T&T					62	94	-32	102	-8	↓-40
Human. Cultural & Natural Resources	Human Resources	11			53	79	-26	81	-2	↓-28
		11.01	Primary education enrollment	HD	72	108*	-36	109	-1	↓-37
		11.02	Secondary education enrollment	HD	48	59	-11	57	+2	-9

Subindex	Pillar	Indicator No.	Indicator	Method of Data Collection	2007 Ranking	2008 Ranking	2008 compared to 2007	2009 Ranking	2009 compared to 2008	2009 compared to 2007
		11.03	Quality of the educational system	EOS	88	94	-6	98	-4	-10
		11.04	Local availability of specialized research & training services	EOS	104	111	-7	125	-14	↓-21
		11.05	Extent of staff training	EOS	103	113	-10	116	-3	-13
		11.06	Hiring & firing practices	EOS	53	40	+13	16	+24	↑+37
		11.07	Ease of hiring foreign labor	EOS	5	2	+3	8	-6	-3
		11.08	HIV prevalence	HD	25	24	+1	22	+2	+3
		11.09	Business impact of HIV/AIDS	EOS	N/A	59**	N/A	49	+10	+10
		11.10	Life expectancy	HD	79	58	+21	87	-29	-8
	Affinity for Travel & Tourism	12			53	43	10	46	-3	+7
		12.01	Tourism openness	HD	47	64	-17	46	+18	+1
		12.02	Attitude of population toward foreign visitors	EOS	25	50	-25	81	-31	↓-56

Subindex	Pillar	Indicator No.	Indicator	Method of Data Collection	2007 Ranking	2008 Ranking	2008 compared to 2007	2009 Ranking	2009 compared to 2008	2009 compared to 2007
		12.03	Extension of business trips recommended	EOS	9	8	+1	31	-23	↓-22
	Natural Resources	13			N/A	107	N/A	118	-11	-11
		13.01	Number of World Heritage natural sites	HD	N/A	70**	N/A	74	-4	N/A
		13.02	Protected areas	HD	57	58	-1	73	-15	↓-16
		13.03	Quality of the natural environment	EOS	N/A	120**	N/A	126	-6	-6
		13.04	Total known species	HD	N/A	97**	N/A	100	-3	-3
	Cultural Resources	14				79	N/A	82	-3	-3
		14.01	Number of World Heritage cultural sites	HD	N/A	54**	N/A	54	0	0
		14.02	Sports stadiums	HD	N/A	59**	N/A	58	+1	+1
		14.03	Number of international fairs and exhibitions	HD	N/A	105**	N/A	101	4	4
		14.04	Creative industries exports	HD	N/A	N/A	N/A	78*****	N/A	N/A

The Executive Opinion Survey is conducted by WEF country partners and is based on the opinion of Company Directors or Senior Staff of companies with international connections. The sample interviewed (100) is selected by the World Economic Forum from a larger sample provided by their partner organizations. The companies questioned represent a cross section of industries. Responses are collected on a scale of 1-7.

Examination of Armenia's T&T Competitive Disadvantages

Each of the 27 indicators ranked 90th or lower in the T&T Competitiveness Index can be considered to be significant competitive disadvantages and are examined further below. In order to understand the rankings in more detail, each indicator is benchmarked against 14 competitor or comparator countries to Armenia. The methodology and source data for each indicator is listed along with comment on the ranking.

T&T regulatory framework

1st Pillar: Policy rules and regulations (77)

- Prevalence of foreign ownership (84)
- Property rights (69)
- Business impact of rules on FDI (87)
- **Visa requirements (117)**
- Openness of bilateral Air Service Agreements (89)
- **Transparency of government policy making (103)**
- Time required to start a business (54)
- Cost to start a business (30)

VISA REQUIREMENTS (117)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Romania	7	Turkey	21
Israel	21	Israel	24
Estonia	46	Jordan	35
Hungary	46	Estonia	40
Poland	46	Hungary	40
Georgia	70	Poland	40
Turkey	73	Romania	40
Moldova	76	Georgia	72
Ukraine	81	Moldova	85
Kazakhstan	97	Ukraine	91
Armenia	101	Kazakhstan	112
Azerbaijan	106	Armenia	117
Russia	107	Azerbaijan	119
Jordan	124	Russia	120
Syria	124	Syria	132

Source of Data: UNWTO

Comment:

The methodology for this pillar has changed. Last year, this indicator was based on the number of countries requiring visas to enter Armenia for tourism and /or business trips as a percentage of UN countries. This year the ranking is based on the number of countries whose citizens are exempt from obtaining a visa or are able to obtain one upon arrival. A different weighting is given to countries that are exempt and to those that can get visas on the borders. Because the methodology has changed, we cannot state that Armenia is any less accessible than it was last year.

However, the current ranking does continue to suggest that Armenia, in general, is difficult to access. On the basis of the methodology provided, CAPS staff recalculated the score and ranking. We believe that there was a gross error in the calculations and that Armenia should be positioned around 10th place.

An Armenian visitor visa currently entitles a foreigner to enter the Republic of Armenia and stay in the country for up to 120 days. Visas are obtainable from overseas diplomatic missions, at border points and online. Visas are not automatically issued to tourists from all countries at border points; some visitors require letters of invitation. The visa price online and at the border is currently AMD15,000 or approximately \$40. There are plans to introduce a 21 days visa at the border for AMD 3000 (approximately \$8). Prices may vary at diplomatic missions.

For Armenia to improve its ranking even further, it will need to liberalize its visa regime, enabling a greater number of tourists of different nationalities visa-free travel. Visas were originally introduced by countries as a means to control entry by citizens of particular countries. The fact that Armenia issues visas to citizens of most countries upon arrival suggests that the visa regime is more likely a revenue generating method than a means to control entry into the country.

TRANSPARENCY OF GOVERNMENT POLICY MAKING (103)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Israel	22	Estonia	27
Estonia	28	Israel	37
Jordan	57	Jordan	49
Turkey	59	Kazakhstan	70
Kazakhstan	75	Azerbaijan	83
Hungary	94	Georgia	86
Georgia	96	Moldova	87
Azerbaijan	97	Turkey	97
Moldova	100	Armenia	103
Armenia	104	Syria	106
Syria	112	Ukraine	114
Poland	113	Hungary	117
Russia	118	Russia	119
Ukraine	119	Romania	124
Romania	126	Poland	127

Source of Data: World Economic Forum, Executive Opinion Survey 2007, 2008

Comment: This indicator measures firm-level perception towards information availability or dissemination on changes in policies and regulations affecting the T&T industry. If the private sector feels that it is not aware of what government policy or industry regulations are, or engaged in policy-making affecting the tourism industry then they will be unable to work collaboratively and effectively together to develop tourism infrastructure or effectively promote the country.

Measured through the Executive Opinion Survey, there could be a number of reasons for the low ranking including a lack of engagement by tourism enterprises in government policy and decision making or poor information dissemination to industry by government. The Ministry has certainly improved the way they engage with the private sector. Sadly, their efforts are not reflected here.

Compared to last year, Armenia's ranking improved by 1 position (the actual score increasing from 3.5 to 3.6 on a 7 point scale), which compared to neighboring Azerbaijan and Georgia is negligible since they improved dramatically (by 14 and 10 positions respectively). At the same time, Turkey's ranking dramatically decreased by 38 positions.

2nd Pillar: Environmental Sustainability (113)

- **Stringency of environmental regulation (118)**
- **Enforcement of environmental regulation (128)**
- **Sustainability of T&T industry development (96)**
- Carbon dioxide emissions (41)
- **Particulate matter concentration (99)**
- Threatened species (78)
- **Environmental treaty ratification (104)**

STRINGENCY OF ENVIRONMENTAL REGULATION (118)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Hungary	31	Estonia	26
Estonia	32	Hungary	35
Israel	36	Israel	42
Poland	48	Jordan	52
Turkey	57	Romania	60
Jordan	58	Azerbaijan	63
Georgia	59	Georgia	70
Romania	72	Poland	72
Russia	91	Syria	80
Azerbaijan	93	Turkey	84
Kazakhstan	95	Russia	89
Syria	100	Kazakhstan	108
Moldova	109	Armenia	118
Ukraine	114	Ukraine	124
Armenia	116	Moldova	128

Source of Data: World Economic Forum, Executive Opinion Survey 2007, 2008

Comment: This indicator measures firm-level perception on the stringency of environmental regulation. Many tourism destinations rely heavily on their natural environment as a tourism asset. Any degradation of the natural environment will negatively affect the tourist experience and in the long-term, tourist arrivals. If the local population has little faith in the stringency of environmental regulation then this will likely be perceived by visiting tourists.

The low ranking suggests that firms have little faith in the quality of Armenia's environmental regulations and their strength in protecting the natural environment. This issue requires further research to understand perceptions in more detail. It may be that there is a lack of awareness of the regulations or a belief that regulations must be liberal; a consequence of the poor state of the environment.

Armenia's ranking was the lowest in the scale of comparator countries in 2008, but increased in the 2009 scale in relation to Ukraine and Moldova; their positions dropped in relation to Armenia. Armenia's score stayed the same (2.9 in both years).

A decrease in ranking is observed in many listed countries except Estonia, Jordan, Romania, Azerbaijan and Syria. Special attention should be paid to Syria and Azerbaijan, whose rankings increased by 20 and 30 positions respectively. In support of Azerbaijan's environmental protection goals, a number of important laws, legal documents and state programs, all of which conform to European legislative requirements, have been reported to have been developed and approved in order to improve the ecological situation in the country. This may be a reason for such an increase in their ranking.

ENFORCEMENT OF ENVIRONMENTAL REGULATION (128)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Estonia	30	Estonia	29
Israel	32	Israel	41
Hungary	48	Jordan	42
Jordan	51	Azerbaijan	49
Georgia	56	Hungary	59
Poland	59	Georgia	66
Turkey	67	Romania	67
Romania	76	Poland	79
Kazakhstan	77	Syria	81
Azerbaijan	81	Turkey	86
Moldova	82	Kazakhstan	90
Syria	87	Russia	95
Russia	94	Moldova	104
Ukraine	110	Ukraine	119
Armenia	124	Armenia	128

Source of Data: World Economic Forum, Executive Opinion Survey 2007, 2008

Comment: This indicator measures firm-level perception on the stability, consistency and fairness of environmental regulation enforcement. This indicator is similar to the one above and reflects the quality of Armenia’s natural environment. If the local population believe that environmental regulations are poorly or unfairly enforced, then it is likely that tourists will have a similar perception, reducing their satisfaction with the destination.

The low ranking for this indicator, unsurprisingly, mirrors the low ranking for the indicator above. Not only do firms believe that environmental regulations are not stringent; they also believe that Armenia’s environmental regulations are poorly, inconsistently or unfairly enforced. The reason for this perception, as above, would require further investigation.

Although Armenia’s ranking decreased from 2008 to 2009, from 124th to 128th position, its actual score stayed fairly similar.

Comparing with 2008, the rankings of Estonia, Israel, Jordan, Romania, Azerbaijan and Syria increased, while others decreased. Special attention should be paid to Azerbaijan as it had a dramatic increase in its ranking; rising from 81st to 49th positions. This can be also explained by the announced development and approval of a number of important laws, legal documents and state programs, all of which conform to European legislative requirements

SUSTAINABILITY OF T&T INDUSTRY DEVELOPMENT (96)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Jordan	40	Jordan	41
Israel	46	Turkey	55
Estonia	52	Estonia	57
Turkey	56	Azerbaijan	71
Syria	72	Georgia	79
Hungary	84	Israel	86
Georgia	86	Syria	87
Azerbaijan	94	Armenia	96
Kazakhstan	96	Kazakhstan	97
Armenia	97	Hungary	102
Moldova	109	Ukraine	115
Poland	114	Poland	118
Ukraine	120	Romania	121
Romania	122	Russia	123
Russia	125	Moldova	124

Source of Data: World Economic Forum, Executive Opinion Survey 2007, 2008

Comment: This indicator measures firm-level perception on the government taking the necessary steps to ensure that the T&T sector is being developed in a sustainable way.

The low ranking for this indicator may reflect the lack of visible implementation of the tourism strategy. It can be seen as an all encompassing indicator reflecting a general perception of government interest in the tourism industry and their prioritization of the industry over the long-term.

Armenia's ranking increased slightly compared to last year (the actual score also slightly increased from 4.2 to 4.3). A slight increase is also observed for Turkey, Ukraine, Romania and Russia. Georgia has an increase by 7 points while Azerbaijan has the biggest and most significant increase, by 23 points.

PARTICULATE MATTER CONCENTRATION (99)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Estonia	8	Estonia	4
Romania	8	Romania	6
Hungary	15	Hungary	16
Kazakhstan	16	Russia	21
Russia	22	Kazakhstan	24
Ukraine	36	Ukraine	33
Israel	54	Israel	52
Poland	54	Poland	69
Moldova	57	Moldova	72
Georgia	69	Turkey	78
Turkey	72	Georgia	85
Jordan	73	Jordan	86
Azerbaijan	80	Azerbaijan	90
Armenia	88	Armenia	99
Syria	99	Syria	109

Source of Data: The World Bank, World Development Indicators 2007, 2008

Comment: Particulate matter concentrations refer to finely suspended particulates, less than 10 microns in diameter (PM10), that are able to penetrate deep into the respiratory tract and cause significant health damage. Data for countries are urban population-weighted PM10 levels in residential areas of cities with more than 100,000 residents. The estimates represent the average annual exposure level of the average urban resident to outdoor particulate matter.

Only Estonia, Romania, Russia, Ukraine and Israel have a slight improvement in these indicators. The highest increase was seen by Estonia; going up from 8th to 4th position. All other countries have lower rankings; the most significant being Georgia (by 16 positions) followed by Poland and Moldova (by 15 positions each).

Although Armenia's ranking dramatically worsened compared to 2008, quantitative data shows that particulate matter actually decreased slightly from 69 mg/m³ in 2004 (2008 rating) to 68.1 mg/m³ in 2005 (2009 rating).

ENVIRONMENTAL TREATY RATIFICATION (104)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Jordan	18	Hungary	21
Poland	28	Jordan	21
Romania	28	Poland	21
Hungary	45	Romania	34
Ukraine	45	Ukraine	52
Syria	72	Estonia	67
Georgia	72	Georgia	67
Moldova	72	Moldova	81
Estonia	88	Syria	81
Russia	88	Russia	94
Armenia	97	Armenia	104
Azerbaijan	97	Azerbaijan	104
Israel	109	Israel	115
Turkey	121	Kazakhstan	115
Kazakhstan	125	Turkey	125

Source of Data: The International Union for Conservation of Nature (IUCN) Environmental Law Center ELIS Treaty Database

The treaties included are: International Convention for the Regulation of Whaling, 1948 Washington; International Convention for the Prevention of Pollution of the Sea by Oil, 1954, as amended in 1962 and 1969, 1954 London; Convention on Wetlands of International Importance especially as Waterfowl Habitat, 1971 Ramsar; Convention concerning the Protection of the World Cultural and Natural Heritage, 1972 Paris; Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 London, Mexico City, Moscow, Washington; Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973 Washington; International Convention for the Prevention of Pollution from Ships (MARPOL) as modified by the Protocol of 1978, 1978 London; Convention on the Conservation of Migratory Species of Wild Animals, 1979 Bonn; United Nations Convention on the Law of the Sea, 1982 Montego Bay; Convention on the Protection of the Ozone Layer, 1985 Vienna; Protocol on Substances that Deplete the Ozone Layer, 1987 Montreal; Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989 Basel; International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990 London; United Nations Framework Convention on Climate Change, 1992 New York; Convention on Biological Diversity, 1992 Rio de Janeiro; International Convention to Combat Desertification in those countries Experiencing Serious Drought and/or Desertification, particularly Africa, 1994 Paris; Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, 1994 New York; Agreement relating of the Provisions of the United Nations Convention on the Lay of the Sea relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, 1995 New York; Kyoto Protocol to the United Nations Framework Convention on the Climate Change, Kyoto 1997; Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, 1998 Rotterdam; Cartagena Protocol of Biosafety to the Convention on Biological Diversity, 2000 Montreal; Protocol on Preparedness, Response and Cooperation to Pollution Incidents by Hazardous and Noxious Substances, 2000 London; Stockholm Convention on Persistent Organic Pollutants, 2001 Stockholm; International Treaty on Plant Genetic Resources for Food and Agriculture, 2001 Rome; International Tropical Timber Agreement 206, 2001 Geneva.

Comment: This indicator is based on the total number of international treaties from a set of 25 for which a state is a participant by ratification, formal confirmation, accession, acceptance, definitive signature, approval, simplified procedure, consent to be bound, succession and provincial application.

This indicator highlights the importance government's place on the environment; a country adopting all of the 25 treaties suggesting that they are more concerned about environmental sustainability. Whilst a country may adopt or subscribe to an international treaty, this does not necessarily mean that it is fully implemented. Further research would be needed to review which treaties Armenia subscribes to and the extent to which they are implemented or followed.

Almost all countries in the sample have a slight decrease in rankings from 2008 to 2009. Poland and Georgia have a slight increase. Hungary, Estonia and Kazakhstan have a significant increase, by 24, 21 and 10 points respectively. Hungary and Estonia achieved this by ratifying 2 new treaties each. Kazakhstan achieved it by ratifying 4 new treaties.

Armenia's ranking decreased compared to last year, although the number of treaties ratified stayed the same. Armenia's ranking decreased because other countries ratified new treaties pushing other countries down in their rankings.

3rd Pillar: Safety & Security (45)

- Business costs of terrorism (33)
- **Reliability of police services (95)**
- Business costs of crime & violence (32)
- Road traffic accidents (24)

RELIABILITY OF POLICE SERVICES (95)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Jordan	14	Jordan	20
Hungary	41	Estonia	35
Estonia	44	Georgia	39
Georgia	45	Hungary	46
Turkey	52	Azerbaijan	59
Israel	53	Syria	69
Azerbaijan	71	Romania	74
Poland	77	Israel	76
Romania	82	Turkey	83
Syria	84	Poland	86
Kazakhstan	91	Armenia	95
Armenia	92	Kazakhstan	97
Ukraine	104	Russia	104
Moldova	109	Ukraine	105
Russia	110	Moldova	112

Source of Data: World Economic Forum, Executive Opinion Survey 2007, 2008

Comment: This indicator measures firm-level perception on the reliability of police services to protect businesses from crime. A more appropriate indicator might be to measure the perception of police services to protect tourists from crime.

However, Armenia’s ranking here demonstrates that the private sector have little faith in the ability of Armenia’s police force. The ranking is likely to result from direct experience of survey respondents with the police. Fortunately, crime in Armenia is low, particularly against foreign tourists. Further research would be needed here to focus in on the poor perception.

Comparing with last year, Armenia’s ranking decreased by 3 points, but stays the same in terms of actual score (average rating is 3.6 in both years on 7 point scale). Estonia, Georgia, Azerbaijan, Romania, Syria and Russia have increased their ranking. Attention should be paid to Azerbaijan and Syria whose rankings increased by 15 positions each.

5th Pillar: Prioritization of Travel and Tourism (104)

- Government Prioritization of Travel and Tourism (85)
- T&T government expenditure (55)
- **Effectiveness of marketing and branding (109)**
- **T&T fair attendance (98)**

EFFECTIVENESS OF MARKETING AND BRANDING (109)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Estonia	44	Turkey	41
Jordan	48	Jordan	46
Israel	49	Estonia	55
Turkey	63	Georgia	74
Syria	84	Israel	78
Hungary	90	Syria	86
Kazakhstan	98	Azerbaijan	90
Georgia	99	Kazakhstan	105
Azerbaijan	104	Hungary	107
Armenia	107	Armenia	109
Poland	109	Ukraine	113
Ukraine	112	Poland	114
Moldova	117	Romania	119
Romania	118	Russia	122
Russia	120	Moldova	127

Source of Data: World Economic Forum, Executive Opinion Survey 2007, 2008

Comment: This indicator measures firm-level perception on the effectiveness of tourism marketing and branding in attracting inbound tourists.

The poor ranking for this indicator reflects the low level of government financing for travel and tourism promotion, a lack of coordination between the public and private sectors in marketing and/or a belief that the funds currently provided are used ineffectively. Given the results obtained through recent targeted marketing, the latter perception should improve with further promulgation of these results. The low level of government promotional funding needs to be addressed.

Armenia's ranking in this indicator slightly decreased from 107th to 109th position. When looking at 2008 and 2009 scores we can see that there is actually an increase from 3.7 in 2008 to 3.9 in 2009.

A comparison with other countries shows that most countries have decreased in this indicator. An increase is observed in Jordan, Turkey, Georgia, Azerbaijan and Ukraine, with the highest increases in Georgia (by 25 positions) and Azerbaijan (by 14 positions).

T&T FAIR ATTENDANCE (98)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Poland	5	Israel	3
Russia	5	Russia	3
Turkey	5	Poland	14
Hungary	22	Turkey	14
Israel	32	Syria	25
Jordan	45	Azerbaijan	41
Estonia	45	Ukraine	41
Romania	56	Estonia	62
Ukraine	56	Georgia	62
Georgia	76	Hungary	62
Azerbaijan	76	Romania	62
Kazakhstan	76	Jordan	81
Moldova	93	Armenia	98
Syria	93	Kazakhstan	98
Armenia	111	Moldova	98

Source of Data: Booz Allen Hamilton Inc.

(ITB Berlin, Salon Mondial du Tourisme (France), World Travel Market (London), Holiday World Prague, International Trade Fair for Tourism (Russia), Arabian Travel Market (Dubai), PATA Travel Mart (Pacific Asia Travel Association), China International Travel Mart, Japan Association of Travel Agents (JATA) World Travel Fair, Travel and Tourism Fair (India), American Society of Travel Agents' Trade Show, Travel Mart Latin America, and the International Tourism Fair of Latin America)

Comment: This indicator measures the participation of individual countries at 13 major international travel and tourism fairs in 2007 and 2008

The indicator measures representation at a wide diversity of fairs throughout the world rather than the total number of fairs attended. The methodology used here does not take into account that destinations may carefully target their promotional efforts to particular geographical markets. This indicator is

therefore considered to be a poor reflection of T&T prioritization – in fact an oxymoron – attending all 13 fairs suggests little prioritization!

Armenia’s ranking in 2008 is based on attending only two of the 13 fairs listed above in 2007, when in fact ATDA and Armenian tour operators were represented at three. This would have therefore moved their rank to 93rd position along with Moldova and Syria in the 2008 ranking.

Ukraine and Georgia have an increase in their ranking by 15 and 14 positions respectively. Armenia increased by 13 positions. This is due to the number of fairs attended by Armenia being recognized as increasing from two to three. However, Armenia actually attended four fairs in 2008.

Azerbaijan and Syria have a dramatic increase in their positions by 35 and 68 places respectively. Azerbaijan participated at 6 fairs in 2008 (compared to 4 fairs in 2007), and Syria participated at 7 fairs in 2008 (compared with 3 fairs in 2007).

T&T Business environment and infrastructure

6th Pillar: Air transport infrastructure (96)

- Quality of air transport infrastructure (85)
- **Available seat kilometers, domestic (100)**
- **Available seat kilometers, international (96)**
- Departures per 1000 population (74)
- Airport density (71)
- Number of operating airlines (64)
- **International air transport network (109)**

AVAILABLE SEAT KILOMETERS, DOMESTIC (100)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
N/A		Russia	4
		Turkey	19
		Kazakhstan	32
		Ukraine	42
		Poland	50
		Romania	52
		Israel	63
		Syria	64
		Jordan	80
		Estonia	93
		Azerbaijan	98
		Armenia	100
		Georgia	100

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
		Hungary	100
		Moldova	100

AVAILABLE SEAT KILOMETERS, INTERNATIONAL (96)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
N/A		Russia	19
		Turkey	25
		Israel	37
		Poland	43
		Ukraine	59
		Jordan	63
		Romania	64
		Hungary	65
		Kazakhstan	73
		Syria	76
		Azerbaijan	94
		Armenia	96
		Georgia	108
		Estonia	110
		Moldova	120

Source of Data: International Air Transport Association, SRS Analyzer; national sources
This variable measures an airline's passenger-carrying capacity; it is composed of the number of seats available on each flight multiplied by the flight distance in kilometers. The resulting variable is an average of the total for all scheduled flights in a week during January (winter schedule) and July (winter schedule) 2007/2008.

Comment: This indicator measures the scheduled available seat kilometers per week originating in each country (in millions), January 2008 and July 2008 average.

A comparison with last year is not possible here since the methodology changed. Last year's ranking was based on All Available seat kilometers, while this year's ranking has been subdivided (Domestic Available and International Available seat kilometers).

Although Armenia is ranked 100th in the Domestic Available seat kilometers pillar, we cannot expect it to be higher since Armenia is a small country with little demand now or perhaps in the future for domestic air transport.

Armenia also ranks low in the International Available Seat Kilometers pillar. This reflects a combination of a relatively small number of destinations, low flight frequencies, the short-haul nature of flights and the size of aircraft used on flights.

INTERNATIONAL AIR TRANSPORT NETWORK (109)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Israel	15	Israel	27
Jordan	35	Jordan	30
Turkey	43	Turkey	52
Estonia	45	Estonia	60
Hungary	51	Hungary	61
Azerbaijan	72	Azerbaijan	64
Russia	79	Russia	79
Kazakhstan	85	Georgia	85
Poland	89	Poland	92
Romania	91	Romania	94
Georgia	94	Kazakhstan	96
Syria	97	Syria	100
Armenia	108	Armenia	109
Moldova	115	Ukraine	120
Ukraine	120	Moldova	123

Source of Data: World Economic Forum, Executive Opinion Survey 2007, 2008

Comment: This indicator measures firm-level perception on the extent to which the air transport network provides good connections to the overseas markets that offer their businesses the greatest potential.

The low ranking for this indicator could be a result of:

- 1) Inconvenient flight departure and arrivals times for much of Western Europe
- 2) Inadequate frequencies of flights
- 3) Inadequate number of destinations served by existing airlines

All selected countries have a decrease in ranking from 2008 to 2009, except Jordan and Azerbaijan whose rankings increased by 5 and 8 positions respectively. When looking at numerical results, we can see that Jordan's results did not significantly increase – from 5.8 in the 2008 report to 5.9 in the 2009 report (on a 7 point scale). A similar increase is observed with Armenia's score; increasing from 3.9 in 2008 to 4.0 in 2009.

7th Pillar; Ground Transport infrastructure (95)

- Quality of roads (79)
- Quality of railroad infrastructure (83)
- **Quality of port infrastructure (115)**
- **Quality of ground transport network (60)**

- Road density (61)

QUALITY OF PORT INFRASTRUCTURE (115)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Estonia	26	Estonia	20
Israel	37	Jordan	46
*Azerbaijan	47	Israel	53
Jordan	54	Azerbaijan	58
*Hungary	71	Georgia	67
Russia	72	Hungary	70
Georgia	77	Russia	76
Turkey	83	Ukraine	87
Ukraine	86	Turkey	88
*Kazakhstan	88	Syria	97
Poland	95	Kazakhstan	101
Syria	96	Romania	102
Romania	99	Armenia	115
*Armenia	104	Poland	119
*Moldova	127	Moldova	130

Source of Data: World Economic Forum, Executive Opinion Survey 2007, 2008

*For landlocked countries, the indicator measures the ease of access to port facilities and inland waterways.

Comment: This indicator measures firm-level perception on the development of or access to port facilities and inland waterways.

Few landlocked countries appeared high in the rankings for this indicator. The low ranking could be attributed to:

- 1) Costs of transportation
- 2) Logistical constraints and obstacles
- 3) Procedural obstacles – taxes, customs, etc
- 4) Ability to deal with, and efficiency of procedures in neighboring countries with ports

Further research would be required to determine the cause for the low ranking.

Almost all countries have a decrease in ranking in 2009 compared to 2008. Only Estonia, Jordan and Georgia have increased their rankings. Armenia also decreased with its score; from 2.8 in 2008 to 2.7 in 2009.

QUALITY OF GROUND TRANSPORT NETWORK (60)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Israel	14	Turkey	19
Jordan	18	Israel	27
Hungary	23	Syria	28
Estonia 5	24	Estonia	29
Turkey 27	46	Azerbaijan	34
Syria 40	68	Jordan	37
Moldova	82	Ukraine	42
Azerbaijan	83	Kazakhstan	55
Georgia	86	Armenia	60
Romania	87	Russia	65
Kazakhstan	93	Georgia	71
Russia	96	Hungary	74
Poland 11	101	Moldova	87
Ukraine	103	Poland	90
Armenia	114	Romania	110

Source of Data: World Economic Forum, Executive Opinion Survey 2007, 2008

Comment: This indicator measures firm-level perception on the extent to which a country's national transport network (domestic flights, buses, trains, taxis, etc) offers efficient, accessible transportation to a wide range of travelers to key business and tourist attractions within the country.

Armenia significantly improved its ranking compared to 2008 by 54 positions, rising from 114th to 60th position. When looking at numerical results, we can see that this increase is minimal, from 4.2 to 4.6 (on a 7 point scale).

Other CIS countries also show high increases in this indicator. Ukraine increased by 61 positions, Azerbaijan by 49 positions, Kazakhstan by 38 positions and Russia by 31 positions. Other countries which have increased rankings include Syria (40 positions), Turkey (27 positions), Poland (11 positions) and Estonia (5 positions).

8th Pillar: Tourism Infrastructure (106)

- **Hotel rooms (101)**
- **Presence of major car rental companies (95)**
- ATMs accepting Visa cards (87)

HOTEL ROOMS (101)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Estonia	16	Estonia	16
Israel	39	Israel	41
Hungary	41	Hungary	43
Romania	51	Romania	53
Jordan	58	Jordan	61
Turkey	63	Turkey	64
Poland	70	Poland	75
Georgia	72	Georgia	81
Russia	82	Russia	85
Azerbaijan	87	Azerbaijan	87
Kazakhstan	92	Kazakhstan	90
Armenia	93	Syria	100
Syria	94	Armenia	101
Ukraine	104	Ukraine	107
Moldova	105	Moldova	110

Source of Data: UNWTO

Comment: This indicator measures the Number of hotel rooms per 100 population, 2006 and 2007 or most recent year available.

The shortage of tourist accommodation, particularly in peak season, is well understood by the tourism industry in Armenia. Whilst there are apparently plans for hotel expansion, it is necessary to provide greater incentives and information to potential investors.

Although Armenia's 2009 ranking decreased compared to 2008, when looking at numerical data, we can see that the indicators are much the same (0.1 for both years).

PRESENCE OF MAJOR CAR RENTAL COMPANIES (95)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Estonia	1	Hungary	1
Hungary	1	Israel	1
Romania	1	Romania	1
Israel	1	Turkey	1
Jordan	1	Estonia	23
Turkey	1	Jordan	23
Poland	33	Poland	23

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Russia	56	Russia	23
Ukraine	56	Ukraine	23
Moldova	74	Moldova	73
Georgia	89	Syria	73
Azerbaijan	89	Armenia	95
Syria	89	Azerbaijan	95
Kazakhstan	103	Kazakhstan	95
Armenia	117	Georgia	122

Source of Data: Individual rental car company websites.

Comment: This indicator is measured by the presence of 7 main companies in each country; Avis, Budget, Europcar, Hertz, National Car Rental, Sixt and Thrifty.

Last year Armenia's ranking reflected the presence of just two car rental companies in the country when in fact there were four: Avis, Europcar, Hertz and Sixt. Had all four been taken into account then Armenia's ranking would have moved to 74th position alongside Moldova last year.

This year Armenia's ranking reflects the presence of 3 companies. In fact, 5 (Avis, Europcar, Hertz, Sixt and Thrifty) out of 7 major car rental companies offer services in Armenia. If this was taken into account, Armenia's ranking would be in 46th position instead of 95th.

Other countries which have increased their ranking in this indicator include Russia, Ukraine, Moldova, Syria and Kazakhstan.

9th Pillar: ICT infrastructure (107)

- **Extent of business Internet use (116)**
- **Internet users (105)**
- Telephone lines (66)
- **Broadband Internet subscribers (103)**
- **Mobile telephone subscribers (126)**

EXTENT OF BUSINESS INTERNET USE (116)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Estonia	2	Estonia	4
Israel	14	Israel	17
Poland	39	Poland	30
Jordan	42	Jordan	39
Hungary	51	Ukraine	44
Russia	54	Turkey	46

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Turkey	56	Russia	52
Azerbaijan	63	Hungary	59
Ukraine	77	Azerbaijan	68
Kazakhstan	78	Romania	69
Romania	79	Moldova	84
Georgia	97	Kazakhstan	87
Armenia	111	Georgia	98
Syria	113	Armenia	116
Moldova	121	Syria	123

Source of Data: World Economic Forum, Executive Opinion Survey 2007, 2008

Comment: This indicator measures the extent to which companies use the Internet extensively for buying and selling goods and services and for interaction with customers.

Armenian firms clearly lack proficient and effective use of the Internet. Specific reasons for lack on use require further research but may be attributable to lack of knowledge of internet applications and websites, and./or availability, reliability and costs for Internet access.

Only seven countries from the list have increased their ranking compared with 2008. These are Moldova (by 37 positions), Ukraine (by 33 positions), Romania and Turkey (by 10 positions each), Poland (by 9 positions), Jordan (by 3 positions) and Russia (by 2 positions).

Although Armenia's ranking has decreased, when looking at numerical data we can see that Armenia scored 3.1 in 2008 and 3.2 in 2009 rankings, showing a slight increase (on a 7 point scale).

INTERNET USERS (105)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Estonia	17	Estonia	20
Hungary	34	Romania	21
Romania	39	Poland	38
Poland	44	Hungary	39
Israel	47	Israel	52
Russia	59	Ukraine	64
Moldova	62	Russia	67
Turkey	66	Jordan	72
Jordan	71	Moldova	73
Ukraine	78	Turkey	74
Azerbaijan	84	Syria	75

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Kazakhstan	87	Kazakhstan	84
Syria	91	Azerbaijan	85
Georgia	93	Georgia	96
Armenia	100	Armenia	105

Source of Data: International Telecommunication Union, World Telecommunications Indicators 2007, 2008

Comment: This indicator measures the number of Internet users per 100 population.

From the listed countries, only 5 have improved their ranking. These are Romania (by 18 positions), Syria (by 16 positions), Ukraine (by 14 positions), Poland (by 6 positions) and Kazakhstan (by 3 positions).

Armenia's ranking has decreased but when looking at numerical data, we see that it stayed the same – 5.7 internet users per 100 population in both 2006 and 2007 (information used for 2008 and 2009 rankings).

The National Statistical Service of Armenia only estimates the number of Internet subscribers and not the number of Internet users. If it was surveyed, we believe that Armenia would get a much higher ranking.

BROADBAND INTERNET SUBSCRIBERS (103)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Israel	13	Israel	19
Estonia	22	Estonia	22
Hungary	34	Hungary	33
Romania	35	Romania	36
Poland	36	Poland	41
Turkey	50	Turkey	46
Russia	56	Russia	62
Ukraine	63	Kazakhstan	64
Jordan	69	Ukraine	70
Georgia	73	Jordan	72
Moldova	79	Moldova	77
Kazakhstan	87	Georgia	81
Armenia	99	Armenia	103
Syria	104	Syria	110
Azerbaijan	105	Azerbaijan	112

Source of Data: International Telecommunications Union, World Telecommunications Indicators 2007, 2008

The International Telecommunication Union considers broadband to be any dedicated connection to the Internet of 256 kilobits per second or faster, in both directions. Broadband subscribers refers to the sum of DSL, cable modem, and other broadband (for example, fiber optic, fixed wireless, apartment LANs, satellite connections) subscribers.

Comment: This indicator measures the number of broadband Internet subscribers per 100 population.

Although Armenia's ranking has decreased, a comparison of numerical results show that Armenia has increased its penetration.

According to information provided by the National Statistical Service, the number of internet users in 2007 in Armenia was 1.9 per 100 population (compared to 0.1 reflected in the T&T Competitiveness Report). NSS defines internet subscribers as "internet users" in its report.

Compared to last year, the rankings of many listed countries decreased. Increased rankings are seen only in Kazakhstan (by 6 positions), Turkey (by 4 positions), Moldova (by 2 positions) and Hungary (by 1 position).

MOBILE TELEPHONE SUBSCRIBERS (126)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Estonia	5	Estonia	3
Israel	7	Israel	10
Ukraine	22	Ukraine	14
Hungary	30	Russia	24
Poland	34	Hungary	31
Russia	45	Poland	32
Romania	47	Romania	35
Jordan	54	Turkey	62
Turkey	57	Kazakhstan	63
Kazakhstan	75	Jordan	65
Azerbaijan	86	Azerbaijan	88
Georgia	87	Moldova	89
Moldova	93	Georgia	98
Syria	103	Syria	105
Armenia	118	Armenia	126

Source of Data: International Telecommunication Union, World Telecommunication Indicators 2007, 2008

The term subscribers, refers to users of mobile telephones subscribing to an automatic public mobile telephone service that provides access to the public switched telephone network using cellular technology. This can include analogue and digital cellular systems but should not include non-cellular systems. Subscribers to fixed wireless, public mobile data services, or radio paging services are not included.

Comment: This indicator measures the number of mobile telephone subscribers per 100 population, 2006 (for 2007 report) 2007 (for 2008 report) or using most recent year available.

Seven of the listed countries increased their rankings compared with the previous year. Russia had the largest increase (by 21 positions), followed by Kazakhstan and Romania (by 12 positions each), Ukraine (by 8 positions), Moldova (by 4 positions) and Estonia and Poland (by 2 positions each).

Armenia's indicator used for the 2009 ranking states that Armenia's number of mobile phone subscribers per 100 population is 10.5, giving Armenia 126th position. Our estimations suggest different results. According to the National Statistical Service, the population of Armenia in 2007 was 3.2301 million people. The number of mobile phone subscribers was around 1.7 million in 2007. So, the number of mobile phone subscribers per 100 population was 52.6 in 2007, placing Armenia around 87-88th position.

10th Pillar: Price competitiveness in the T&T industry

Ticket taxes and airport charges (65)

Purchasing power parity (57)

Extent and effect of taxation (83)

Fuel price levels (54)

Hotel price index (64)

HOTEL PRICE INDEX (64)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Moldova	12	Moldova	10
Syria	18	Syria	17
Hungary	20	Jordan	29
Jordan	30	Poland	47
Poland	43	Estonia	55
Turkey	48	Turkey	57
Armenia	50	Israel	61
Israel	62	Armenia	64
Estonia	68	Hungary	68
Romania	83	Romania	90
Kazakhstan	100	Azerbaijan	96

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Azerbaijan	102	Georgia	106
Georgia	104	Kazakhstan	108
Ukraine	112	Ukraine	114
Russia	114	Russia	115

Source data: Deloitte 2007 (2006 for Armenia in both years' rankings)

Comment: This index measures the average price, in US dollars, of first-class hotel accommodation in each country. The index is calculated by using the average room rate achieved by first-class hotels in each country over a 12-month period from January through December 2007, to mitigate the impact of any seasonality fluctuations.

Armenia's ranking decreased by 14 positions going down from 50th to 64th position. This happened due to estimated increase in average hotel prices from \$ 116.8 in 2008 to 142.6 in 2009 rankings. The issue is that both 2008 and 2009 rankings for Armenia use the same Deloitte's 2006 data. This would suggest having same numbers for 2008 and 2009 rankings, but in fact, the numbers differ, showing some incompatibility in source of data or may be an error in data processing.

T&T Human, Cultural and Natural Resources

11th Pillar: Human resources (81)

- **Primary education enrolment (109)**
- 2ndary education enrolment (57)
- **Quality of the educational system (98)**
- **Local availability of research and training services (125)**
- **Extent of staff training (116)**
- Hiring and firing practices (16)
- Ease of hiring foreign labor (8)
- HIV prevalence (22)
- Business impact of HIV / AIDS (49)
- Life expectancy (87)

PRIMARY EDUCATION ENROLMENT (109)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Israel	27	Israel	33
Poland	35	Poland	44
Estonia	45	Syria	56
Syria	50	Estonia	60
Georgia	59	Romania	67
Romania	63	Turkey	77

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Russia	67	Russia	81
Kazakhstan	73	Ukraine	84
Turkey	79	Kazakhstan	85
Jordan	81	Jordan	89
Hungary	83	Georgia	91
Moldova	101	Hungary	96
Azerbaijan	102	Moldova	103
Ukraine	105	Azerbaijan	105
Armenia	108	Armenia	109

Source of Data: UNESCO, Institute of Statistics (for 2008 rankings) and UNESCO, Institute for Statistics (June 2008); *The World Bank, World Development Indicators 2008*; national sources (for 2009 rankings).

According to the World Bank, this corresponds to the ratio of children of official school age (as defined by national education system) and enrolled in school, to the population of the corresponding official school age. Primary education provides children with basic reading, writing and mathematics skills along with an elementary understanding of such subjects as history, geography, natural science, art and music.

Comment: This indicator measures the net primary education enrollment rate in 2005 or more recently, if data available, for the 2008 ranking and net primary education enrollment rate in 2006 or more recently, if data available, for the 2009 ranking..

Only Ukraine and Turkey increased their ranking compared to the previous year (by 21 and 2 positions respectively). All other countries decreased their ranking.

Although Armenia's ranking had decreased, a comparison of numerical results show that the net primary education enrolment rate increased from 78.8 in 2005 (used in 2008 rating) to 82.2 in 2006 (used in 2009 rating).

QUALITY OF THE EDUCATIONAL SYSTEM (98)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Israel	25	Jordan	27
Estonia	35	Estonia	30
Jordan	37	Russia	36
Russia	46	Ukraine	40
Ukraine	47	Israel	45
Poland	49	Poland	54
Romania	58	Kazakhstan	68

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Kazakhstan	64	Romania	71
Hungary	65	Turkey	77
Turkey	70	Azerbaijan	78
Moldova	75	Georgia	83
Georgia	93	Hungary	87
Armenia	94	Moldova	90
Azerbaijan	98	Syria	91
Syria	102	Armenia	98

Source of Data: World Economic Forum, Executive Opinion Survey 2007, 2008

Comment: This indicator measures the extent to which companies perceive their education systems to meet the needs of a competitive economy.

The highest increase compared to last year is observed in Azerbaijan's ranking, by 20 positions. Jordan, Russia and Ukraine have increased their ranking by 10 positions each. Syria and Estonia have increased by 11 and 5 positions respectively. Other listed countries (including Armenia) decreased their ranking.

Although Armenia's ranking had decreased, when looking at numerical data we see that the results of 2008 and 2009 rankings are the same, 3.0 on a 7 point scale.

LOCAL AVAILABILITY OF RESEARCH AND TRAINING SERVICES (125)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Israel	13	Israel	14
Estonia	27	Estonia	21
Poland	41	Poland	50
Turkey	43	Jordan	53
Romania	49	Romania	63
Jordan	59	Ukraine	66
Hungary	61	Azerbaijan	67
Azerbaijan	77	Turkey	68
Russia	79	Russia	71
Kazakhstan	82	Hungary	73
Ukraine	85	Kazakhstan	82
Syria	99	Syria	95
Moldova	104	Georgia	117
Armenia	111	Moldova	122

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Georgia	116	Armenia	125

Source of Data: World Economic Forum, Executive Opinion Survey 2007, 2008

Comment: This indicator measures the extent to which companies perceive specialized research and training services to be available.

A decrease in rankings is observed amongst many of listed countries except Estonia, Jordan, Azerbaijan, Russia, Ukraine and Syria. The biggest increases were seen in Ukraine (by 19 positions) and Azerbaijan (by 10 positions). Armenia decreased its score from 2.9 to 2.8 between 2008 and 2009.

EXTENT OF STAFF TRAINING (116)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Israel	23	Israel	32
Estonia	30	Estonia	35
Turkey	47	Azerbaijan	39
Jordan	57	Jordan	50
Poland	66	Romania	54
Hungary	74	Georgia	73
Romania	84	Russia	80
Azerbaijan	85	Poland	89
Georgia	88	Turkey	90
Kazakhstan	93	Kazakhstan	92
Russia	96	Ukraine	99
Ukraine	98	Hungary	101
Syria	101	Moldova	111
Moldova	103	Syria	112
Armenia	113	Armenia	116

Source of Data: World Economic Forum, Executive Opinion Survey 2007, 2008

Comment: This indicator measures the extent to which companies perceive themselves to invest heavily to attract, train and retrain employees.

An increase in rankings is observed in Jordan, Romania, Azerbaijan, Georgia, Kazakhstan, Russia and Ukraine. The biggest increases are seen in Azerbaijan (by 46 positions) and Romania (by 30 positions).

Although, Armenia's ranking decreased, a comparison of scores shows an increase from 2.9 in 2008 ranking to 3.1 in 2009.

13th Pillar: Natural resources (113)

- Number of World Heritage natural sites (74)
- Nationally protected areas (73)
- **Quality of the natural environment (126)**
- **Total known species (100)**

QUALITY OF THE NATURAL ENVIRONMENT (126)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Estonia	18	Estonia	21
Jordan	35	Jordan	39
Israel	60	Moldova	56
Moldova	74	Israel	72
Romania	91	Georgia	77
Poland	94	Syria	83
Georgia	97	Poland	92
Syria	99	Hungary	94
Russia	104	Azerbaijan	100
Turkey	106	Russia	107
Hungary	107	Romania	110
Azerbaijan	109	Turkey	116
Kazakhstan	118	Ukraine	123
Armenia	120	Kazakhstan	125
Ukraine	121	Armenia	126

Source of Data: World Economic Forum, Executive Opinion Survey 2007, 2008

Comment: This indicator measures the extent to which companies perceive their natural environment to be among the most polluted in the world.

The low ranking for this indicator reflects the rankings given in the Environmental Sustainability Pillar.

A decrease in ranking is observed amongst many listed countries except Moldova, Poland, Georgia, Syria, Hungary and Azerbaijan. The biggest increases are seen in Georgia (by 20 positions) and Moldova (by 18 positions).

Armenia's rank decreased by 6 positions but score decreased by just 0.1 from 3.4 in 2008 to 3.3 in 2009.

TOTAL KNOWN SPECIES (100)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Russia	33	Russia	34
Kazakhstan	56	Kazakhstan	56
Turkey	60	Turkey	63
Israel	66	Israel	69
Romania	73	Azerbaijan	75
Ukraine	77	Ukraine	78
Poland	84	Romania	80
Hungary	87	Jordan	89
Armenia	97	Poland	94
Georgia	98	Georgia	96
Syria	101	Armenia	100
Jordan	103	Syria	102
Azerbaijan	105	Hungary	103
Estonia	113	Estonia	117
Moldova	117	Moldova	120

Source of Data: The International Union for Conservation of Nature (IUCN), Red List of Threatened Species 2007 (for 2008 ranking) and 2008 (for 2009 ranking).

Comments: This indicator measures the total known species (mammals, birds, amphibians) in a country.

A decrease in ranking is observed amongst the majority of listed countries except Georgia, Jordan and Azerbaijan. The biggest increase is seen in Azerbaijan (by 30 positions) followed by Jordan (14 positions increase), which indicates serious changes in data used.

Armenia's rank decreased from 97th to 100th, despite the fact that the actual number of total known species (mammals, birds, amphibians) increased from 356 in 2008 to 392 in 2009. CAPS staff requested figures on the number of mammals, birds and amphibians from the Department of Natural Resources at the Ministry of Nature Protection and was given the number, 434. If this figure were taken into consideration then Armenia would in fact be ranked 82nd in 2009.

14th Pillar: Cultural resources (82)

- Number of World Heritage cultural sites (54)
- Sports stadium (58)
- **Number of international fairs and exhibitions (101)**

NUMBER OF INTERNATIONAL FAIRS & EXHIBITIONS (101)

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking

2008 ranking		2009 ranking	
Country	Ranking	Country	Ranking
Hungary	22	Hungary	22
Poland	27	Poland	25
Turkey	31	Turkey	28
Russia	39	Russia	39
Romania	49	Estonia	48
Estonia	51	Romania	51
Ukraine	70	Ukraine	68
Israel	73	Israel	75
Jordan	80	Jordan	83
Kazakhstan	99	Azerbaijan	96
Azerbaijan	105	Armenia	101
Armenia	105	Syria	101
Syria	113	Kazakhstan	107
Moldova	119	Georgia	117
Georgia	119	Moldova	122

Source of Data: International Congress and Convention Association

This variable measures the average number of international fairs and exhibitions held annually in each country between 2004 and 2006 (for 2008 ranking) and between 2005 and 2007 (for 2009 ranking). Data on international fairs and exhibitions was obtained from the ICCA which includes meetings organized by international associations attended by at least 50 participants that take place on a regular basis (one time events are not included) and rotate between a minimum of three countries.

Comment:

An increase in ranking is observed in Poland, Turkey, Estonia, Ukraine, Azerbaijan, Armenia, Syria and Georgia. The biggest increase is seen in Syria (by 12 positions) followed by Azerbaijan (9 positions).

Armenia increased its rank from 105th to 101st position. Its score increased from 0.7 in 2008 to 1.0 in 2009.