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# ARMENIA'S TRAVEL AND TOURISM COMPETITIVENESS:

Analysis of Travel & Tourism Competitiveness Rankings and  
Armenia's Significant Competitive Disadvantages

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# ARMENIA'S TRAVEL AND TOURISM

## COMPETITIVENESS: Analysis of Travel & Tourism Competitiveness Rankings and Armenia's Significant Competitive Disadvantages

**DISCLAIMER:** The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

## **Introduction**

The World Economic Forum (WEF) issued, at the end of March 2008, their second World Travel and Tourism (T&T) Competitiveness Index. The Index measures the competitiveness of tourism industries in 130 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 report is available online at

<http://www.weforum.org/en/initiatives/gcp/TravelandTourismReport/index.htm>

Between 2007 and 2008, Armenia dropped in its ranking by 15 places from 74<sup>th</sup> to 89<sup>th</sup> position.

Within the T&T Regulatory Framework, Armenia's ranking improved by eight places putting it in 57<sup>th</sup> position. An improvement was seen prominently in the Policy Rules & Regulations pillar although this was due largely to the addition of new indicators, in which Armenia scored well. However, improvements were also seen in Armenia's performance in the Safety & Security and Health & Hygiene pillars. At the same time, Armenia's rankings in the Environmental Sustainability and the Prioritization of Travel & Tourism Industry pillars decreased; the latter by 32 places! The individual indicators that gave rise to this worsening position are examined in more detail below.

Within the T&T Business Environment Framework, Armenia's ranking dropped by 12 places putting it in 108<sup>th</sup> position. Rankings decreased under each pillar within this subindex. It is under this pillar that the majority of Armenia's competitive disadvantages can be seen.

Within the T&T Human, Cultural & Natural Resources Framework, Armenia's ranking dropped by 32 places putting it in 79<sup>th</sup> position. The country's position fared poorly as a result of a change in methodology in the cultural and natural resources pillars and addition of new indicators, however, there was also a significant drop in the Human Resources pillar. Armenia's ranking for the Affinity to Travel & Tourism pillar improved despite significant decreases in the rankings for the indicators under that pillar.

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

- 1.07 – Time required to start a business
  - 1.09 – Cost to start a business
  - 2.04 – Carbon Dioxide emissions
  - 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
  - 10.02 – Purchasing Power Parity
  - 10.05 – Hotel Price Index
  - 11.06 – Hiring & firing practices
  - 11.07 – Ease of hiring foreign labor
  - 11.08 – HIV prevalence
  - 12.02 – Attitude of population toward foreign tourists
  - 12.03 – Extension of business trips recommended.
- All of these indicators are ranked 40<sup>th</sup> or above amongst the 130 countries identified.

However, the competitive disadvantages outweigh these significantly. 25 indicators give Armenia a ranking in 90<sup>th</sup> 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 and 2008. The last column in the table indicates for each ranking whether an increase, decrease or significant decrease (more than 15 places) is observed. Those indicators that are shaded represent the greatest competitive disadvantages according to the T&T Competitiveness Index methodology. Each of these is examined further below.

### Key

\* Methodology or Source of Information Changed

\*\* New indicator for 2008

\*\*\* Same data used in 2008 as 2007

↑ Increase in ranking from 2007 to 2008

↓ Decrease in ranking from 2007 to 2008

↓↓ Decrease in ranking of more than 15 points from 2007 to 2008

HD – Hard Data

EOS – Executive Opinion Survey

Subindex	Pillar	Indicator No.	Indicator	Method of Data Collection	2007 Ranking	2008 Ranking	↑↓	
<b>OVERALL INDEX</b>					74	89	↓↓	
T&T Regulatory Framework	Policy Rules & Regulations	1			65	57	↑	
		1.01	Prevalence of Foreign Ownership	EOS	92	63	↑↑	
		1.02	Property Rights	EOS	75	76	↓	
		1.03	Business impact of rules on FDI	EOS	71	69	↑	
		1.04	*Visa Requirements	HD	56	77	↓↓	
		1.05	***Openness of bilateral Air Service Agreements	HD	100	101	↓	
		1.06	Transparency of government policymaking	EOS	84	88	↓	
		1.07	Time required to start a business	HD	**	104		
		1.08	Cost to start a business	HD	**	39		
	2	Environmental Sustainability				102	112	↓
	2.01	Stringency of environmental regulation	EOS			95	116	↓↓
2.02	Enforcement	EOS			113	124	↓	

			of environmental regulation				
		2.03	Sustainability of T&T industry development	EOS	90	97	↓
		2.04	Carbon dioxide emissions	HD	**	37	
		2.05	Particulate matter concentration	HD	**	88	
		2.06	Threatened species	HD	**	86	
		2.07	Environmental treaty ratification	HD	**	97	
	Safety & Security	3			49	45	↑↓
		3.01	Business costs of terrorism	EOS	39	40	↑↓
		3.02	Reliability of police services	EOS	74	92	↓↓
		3.03	Business costs of crime & violence	EOS	37	35	↑
		3.04	Road traffic accidents	HD	**	23	
	Health & Hygiene	4			40	39	↑
		4.01	Physician density	HD	12	11	↑
		4.02	*Access to improved sanitation	HD	53	67	↓
		4.03	*Access to improved drinking water	HD	53	66	↓
		4.04	Hospital beds	HD	**	41	
	Prioritization of Travel & Tourism	5			67	105	↓↓↓
		5.01	Government prioritization of the T&T industry	EOS	52	65	↓
		5.02	T&T government expenditure	HD	n/a	52	
		5.03	Effectiveness of marketing and branding to attract tourists	EOS	92	107	↓↓
		5.04	*T&T fair	HD	70	111	↓↓

			attendance					
T&T Business Environment & Infrastructure		6			96	108	↓	
	Air Transport Infrastructure				95	97	↓	
		6.01	Quality of air transport infrastructure	EOS	85	88	↓	
		6.02	Available seat kilometers	HD	86	98	↓	
		6.03	Departures per 1,000 population	HD	76	72	↑	
		6.04	Airport density	HD	72	66	↑	
		6.05	Number of operating airlines	HD	47	54	↓	
		6.06	International air transport network	EOS	107	108	↓	
	Ground Transport Infrastructure	7			98	100	↓	
		7.01	Quality of roads	EOS	68	75	↓	
		7.02	Quality of railroad infrastructure	EOS	76	80	↓	
		7.03	Quality of port infrastructure	EOS	124	104	↑	
		7.04	Quality of domestic transport network	EOS	86	114	↓↓	
		7.05	Road density	HD	**	61		
	Tourism Infrastructure	8			110	118	↓	
		8.01	Hotel rooms	HD	66	93	↓↓	
		8.02	*Presence of major car rental companies	HD	102	117	↓↓	
		8.03	ATMs accepting VISA cards	HD	88	87	↑	
	ICT Infrastructure	9			84	101	↓	
		9.01	Extent of business Internet use	EOS	91	111	↓↓	
		9.02	Internet users	HD	88	100	↓	
		9.03	Telephone lines	HD	67	62	↑	
		9.04	Broadband Internet users	HD	**	99		
		9.05	Mobile telephone subscribers	HD	**	118		
		Price	10			28	42	↓

	Competitiveness in the T&T Industry	10.01	Ticket taxes and airport charges	HD	35	53	↓↓↓
		10.02	Purchasing power parity	HD	33	42	↓
		10.03	Extent and effect of taxation	EOS	67	72	↓
		10.04	Fuel price levels	HD	40	54	↓
		10.05	Hotel price index	HD	**	50	
T&T Human. Cultural & Natural Resources					62	94	↓↓↓
	Human Resources	11			53	79	↓↓↓
		11.01	*Primary education enrollment	HD	72	108	↓↓↓
		11.02	Secondary education enrollment	HD	48	59	↓
		11.03	Quality of the educational system	EOS	88	94	↓
		11.04	Local availability of specialized research & training services	EOS	104	111	↓
		11.05	Extent of staff training	EOS	103	113	↓
		11.06	Hiring & firing practices	EOS	53	40	↑
		11.07	Ease of hiring foreign labor	EOS	5	2	↑
		11.08	HIV prevalence	HD	25	24	↑
		11.09	Business impact of HIV/AIDS	EOS	**	59	
	11.10	Life expectancy	HD	79	58	↑	
	Affinity for Travel & Tourism	12			53	43	↑
		12.01	Tourism openness	HD	47	64	↓↓↓
		12.02	Attitude of population toward foreign visitors	EOS	25	50	↓↓↓
12.03		Extension of business trips recommended	EOS	9	8	↑	
Natural	13				107		

	Resources	13.01	Number of World Heritage natural sites	HD	**	70	
		13.02	Protected areas	HD	57	58	↓
		13.03	Quality of the natural environment	EOS	**	120	
		13.04	Total known species	HD	**	97	
	Cultural Resources	14				79	
		14.01	Number of World Heritage cultural sites	HD	**	54	
		14.02	Sports stadiums	HD	**	59	
		14.03	Number of international fairs and exhibitions	HD	**	105	

*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 25 indicators ranked 90<sup>th</sup> 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 15 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**

#### **1<sup>st</sup> Pillar: Policy rules and regulations (57)**

- Prevalence of foreign ownership (76)
- Property rights (69)
- Business impact of rules on FDI (77)
- **Visa requirements (101)**
- Openness of bilateral Air Service Agreements (88)
- **Transparency of government policy making (104)**
- Time required to start a business (39)
- Cost to start a business (31)

#### **VISA REQUIREMENTS (101)**

<b>Country</b>	<b>Ranking</b>
Romania	7
Israel	21

Estonia	46
Hungary	46
Poland	46
Georgia	70
Turkey	73
Moldova	76
Ukraine	81
Kazakhstan	97
<b>Armenia</b>	<b>101</b>
Azerbaijan	106
Russia	107
Uzbekistan	110
Jordan	124
Syria	124

**Source of Data:** UNWTO

**Comment:** This index indicates the number of countries requiring visas to enter Armenia for tourism and /or business trips as a percentage of UN countries. An Armenian visitor visa 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 \$50. Prices may vary at diplomatic missions.

Whilst Armenian visas are relatively easy to obtain, the low ranking is a direct result of the fact that tourists from many countries still require a visa. For Armenia to improve its ranking here, 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 current visa regulations suggest that Armenia needs to control entry through its borders more stringently than those competitor/comparator countries listed above. In reality, the continuation of the strict visa regime is more likely a revenue generating method than a means to control entry into the country.

TRANSPARENCY OF GOVERNMENT POLICY MAKING (104)

Country	Ranking
Israel	22
Estonia	28
Jordan	57
Turkey	59
Kazakhstan	75
Uzbekistan	89
Hungary	94
Georgia	96
Azerbaijan	97
Moldova	100
<b>Armenia</b>	<b>104</b>
Poland	113
Russia	118
Ukraine	119
Romania	126

**Source of Data:** World Economic Forum, Executive Opinion Survey 2006, 2007

**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 creation of the National Tourism Strategy can potentially be a means to improve Armenia's ranking on this indicator; but only if a public/industry consultation process is carefully orchestrated.

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## 2<sup>nd</sup> Pillar: Environmental Sustainability (112)

- **Stringency of environmental regulation (116)**
- **Enforcement of environmental regulation (124)**
- **Sustainability of T&T industry development (97)**
- Carbon dioxide emissions (37)
- Particulate matter concentration (88)
- Threatened species (86)
- **Environmental treaty ratification (97)**

### STRINGENCY OF ENVIRONMENTAL REGULATION (116)

Country	Ranking
Hungary	31
Estonia	32
Israel	36
Poland	48
Uzbekistan	53
Turkey	57
Jordan	58
Georgia	59
Romania	72
Russia	91
Azerbaijan	93
Kazakhstan	95
Syria	100
Moldova	109
Ukraine	114
<b>Armenia</b>	<b>116</b>

**Source of Data:** World Economic Forum, Executive Opinion Survey 2006, 2007

**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.

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#### ENFORCEMENT OF ENVIRONMENTAL REGULATION (124)

Country	Ranking
Estonia	30
Israel	32
Uzbekistan	47
Hungary	48
Jordan	51
Georgia	56
Poland	59
Turkey	67
Romania	76
Kazakhstan	77
Azerbaijan	81
Moldova	82
Syria	87
Russia	94
Ukraine	110
<b>Armenia</b>	<b>124</b>

**Source of Data:** World Economic Forum, Executive Opinion Survey 2006, 2007

**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.

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#### SUSTAINABILITY OF T&T INDUSTRY DEVELOPMENT (97)

Country	Ranking
Uzbekistan	34
Jordan	40
Israel	46
Estonia	52
Turkey	56
Syria	72
Hungary	84
Georgia	86

Azerbaijan	94
Kazakhstan	96
<b>Armenia</b>	<b>97</b>
Moldova	109
Poland	114
Ukraine	120
Romania	122
Russia	125

**Source of Data:** World Economic Forum, Executive Opinion Survey 2006, 2007

**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 a transparent and long-term strategy for the tourism industry. 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. The national tourism strategy, if widely disseminated after adoption, could significantly improve this ranking if it demonstrates not only tourism development, but sustainable development.

#### ENVIRONMENTAL TREATY RATIFICATION (97)

Country	Ranking
Jordan	18
Poland	28
Romania	28
Hungary	45
Ukraine	45
Syria	72
Georgia	72
Moldova	72
Estonia	88
Russia	88
Azerbaijan	97
<b>Armenia</b>	<b>97</b>
Israel	109
Turkey	121
Uzbekistan	123
Kazakhstan	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 Law 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.

### 3<sup>rd</sup> Pillar: Safety & Security (45)

- Business costs of terrorism (40)
- **Reliability of police services (92)**
- Business costs of crime & violence (35)
- Road traffic accidents (23)

#### RELIABILITY OF POLICE SERVICES (92)

Country	Ranking
Jordan	14
Hungary	41
Estonia	44
Georgia	45
Turkey	52
Israel	53
Uzbekistan	55
Azerbaijan	71
Poland	77
Romania	82
Syria	84
Kazakhstan	91
<b>Armenia</b>	<b>92</b>
Ukraine	104
Moldova	109
Russia	110

**Source of Data:** World Economic Forum, Executive Opinion Survey 2006, 2007

**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, the Armenia 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.

#### 5<sup>th</sup> Pillar: Prioritization of Travel and Tourism (105)

- Government Prioritization of Travel and Tourism (65)
- T&T government expenditure (52)
- **Effectiveness of marketing and branding (107)**
- **T&T fair attendance (111)**

#### EFFECTIVENESS OF MARKETING AND BRANDING (107)

Country	Ranking
Estonia	44
Jordan	48
Israel	49
Uzbekistan	57
Turkey	63
Syria	84
Hungary	90
Kazakhstan	98
Georgia	99
Azerbaijan	104
<b>Armenia</b>	<b>107</b>
Poland	109
Ukraine	112
Moldova	117
Romania	118
Russia	120

**Source of Data:** World Economic Forum, Executive Opinion Survey 2006, 2007

**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 as does the unreliability and lack of existing statistics with which to evaluate marketing activities.

#### T&T FAIR ATTENDANCE (111)

Country	Ranking
Poland	5
Russia	5

Turkey	5
Hungary	22
Israel	32
Jordan	45
Estonia	45
Romania	56
Ukraine	56
Georgia	76
Azerbaijan	76
Kazakhstan	76
Moldova	93
Syria	93
Uzbekistan	111
<b>Armenia</b>	<b>111</b>

**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 2006-7

Armenia's ranking is based on attending only two of the 13 fairs listed above, when in fact ATDA and Armenian tour operators were represented at three. This therefore moves their rank to 93<sup>rd</sup> position along with Moldova and Syria.

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!

**T&T BUSINESS ENVIRONMENT AND INFRASTRUCTURE**

**6th Pillar: Air transport infrastructure (97)**

- Quality of air transport infrastructure (88)
- **Available seat kilometers (98)**
- Departures per 1000 population (72)
- Airport density (66)
- Number of operating airlines (54)
- **International air transport network (108)**

AVAILABLE SEAT KILOMETERS (98)

Country	Ranking
Russia	14
Turkey	25
Israel	41
Poland	50

Ukraine	60
Hungary	62
Kazakhstan	64
Jordan	65
Romania	70
Uzbekistan	78
Syria	80
Azerbaijan	91
<b>Armenia</b>	<b>98</b>
Estonia	110
Georgia	113
Moldova	122

**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.

**Comment:** This indicator measures the scheduled available seat kilometers per week originating in each country (in millions), January 2007 and July 2007 average.

The low ranking here 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. With the anticipated introduction of scheduled flights to Italy and Latvia and the expansion of Armavia routes and frequencies, this indicator should improve.

INTERNATIONAL AIR TRANSPORT NETWORK (108)

Country	Ranking
Israel	15
Jordan	35
Turkey	43
Estonia	45
Hungary	51
Azerbaijan	72
Uzbekistan	75
Russia	79
Kazakhstan	85
Poland	89
Romania	91
Georgia	94
Syria	97
<b>Armenia</b>	<b>108</b>
Moldova	115
Ukraine	120

**Source of Data:** World Economic Forum, Executive Opinion Survey 2006, 2007

**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

Further research would be required to understand the primary concerns. The recent addition of Air Arabia to the list of airlines, the announcement of new routes by Armavia and the possible introduction of flights with Air Baltic and WindJet may increase future rankings of this indicator.

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## 7<sup>th</sup> Pillar; Ground Transport infrastructure (100)

- Quality of roads (75)
- Quality of railroad infrastructure (80)
- **Quality of port infrastructure (104)**
- **Quality of domestic transport network (114)**
- Road density (61)

### QUALITY OF PORT INFRASTRUCTURE (104)

Country	Ranking
Estonia	26
Israel	37
*Azerbaijan	47
Jordan	54
*Hungary	71
Russia	72
Georgia	77
Turkey	83
Ukraine	86
*Kazakhstan	88
Poland	95
Syria	96
Romania	99
<b>*Armenia</b>	<b>104</b>
*Uzbekistan	123
*Moldova	127

**Source of Data:** World Economic Forum, Executive Opinion Survey 2006, 2007

\*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.

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QUALITY OF DOMESTIC TRANSPORT NETWORK (114)

Country	Ranking
Israel	14
Jordan	18
Hungary	23
Estonia	24
Turkey	46
Syria	68
Moldova	82
Azerbaijan	83
Georgia	86
Romania	87
Kazakhstan	93
Uzbekistan	94
Russia	96
Poland	101
Ukraine	103
<b>Armenia</b>	<b>114</b>

**Source of Data:** World Economic Forum, Executive Opinion Survey 2006, 2007

**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.

There is clearly a poor perception of the domestic transport network. Further research would be required to identify the reasons, but they may relate to quality, reliability, frequency, extent of network, information availability, ease and accessibility of ticket purchasing, safety, etc.

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**8<sup>th</sup> Pillar; Tourism Infrastructure**

- **Hotel rooms (93)**
- **Presence of major car rental companies (117)**
- ATMs accepting Visa cards (87)

HOTEL ROOMS (93)

Country	Ranking
Estonia	16
Israel	39
Hungary	41
Romania	51
Jordan	58
Turkey	63
Poland	70
Georgia	72
Russia	82

Azerbaijan	87
Kazakhstan	92
<b>Armenia</b>	<b>93</b>
Syria	94
Ukraine	104
Moldova	105
Uzbekistan	114

**Source of Data:** UNWTO

**Comment:** This indicator measures the Number of hotel rooms per 100 population, 2006 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 incentives and information to potential investors.

*PRESENCE OF MAJOR CAR RENTAL COMPANIES (117)*

<b>Country</b>	<b>Ranking</b>
Estonia	1
Hungary	1
Romania	1
Israel	1
Jordan	1
Turkey	1
Poland	33
Russia	56
Ukraine	56
Moldova	74
Georgia	89
Azerbaijan	89
Syria	89
Kazakhstan	103
<b>Armenia</b>	<b>117</b>
Uzbekistan	123

**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.

Armenia's ranking reflects the presence of just one car rental company in the country when in fact there are four: Avis, Europcar, Hertz and Sixt. Had these four been taken into account then Armenia's ranking would have moved to 74<sup>th</sup> position alongside Moldova.

**9<sup>th</sup> Pillar: ICT infrastructure**

- **Extent of business Internet use (111)**
- **Internet users (100)**

- Telephone lines (62)
- **Broadband Internet subscribers (99)**
- **Mobile telephone subscribers (118)**

EXTENT OF BUSINESS INTERNET USE (111)

Country	Ranking
Estonia	2
Israel	14
Uzbekistan	33
Poland	39
Jordan	42
Hungary	51
Russia	54
Turkey	56
Azerbaijan	63
Ukraine	77
Kazakhstan	78
Romania	79
Georgia	97
<b>Armenia</b>	<b>111</b>
Syria	113
Moldova	121

**Source of Data:** World Economic Forum, Executive Opinion Survey 2006, 2007

**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.

INTERNET USERS (100)

Country	Ranking
Estonia	17
Hungary	34
Romania	39
Poland	44
Israel	47
Russia	59
Moldova	62
Turkey	66
Jordan	71
Ukraine	78
Azerbaijan	84
Kazakhstan	87
Syria	91
Georgia	93
Uzbekistan	98

<b>Armenia</b>	<b>100</b>
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**Source of Data:** International Telecommunication Union, World Telecommunications Indicators 2007

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

***BROADBAND INTERNET SUBSCRIBERS***

<b>Country</b>	<b>Ranking</b>
Israel	13
Estonia	22
Hungary	34
Romania	35
Poland	36
Turkey	50
Russia	56
Ukraine	63
Jordan	69
Georgia	73
Moldova	79
Kazakhstan	87
<b>Armenia</b>	<b>99</b>
Uzbekistan	102
Syria	104
Azerbaijan	105

**Source of Data:** International Telecommunications Union, World Telecommunications Indicators 2007  
 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.

***MOBILE TELEPHONE SUBSCRIBERS (118)***

<b>Country</b>	<b>Ranking</b>	<b>Mobile telephone subscribers per 100 population</b>		
Estonia	5	125.19	123.4	
Israel	7	122.74	117.5	
Ukraine	22	106.53	105.2	
Hungary	30	98.95	99.00	
Poland	34	95.45	96.4	
Russia	45	105.71	83.4 (2005)	
Romania	47	80.45	61.8 (2005)	
Jordan	54	74.4	74.4	
Turkey	57	71.00	59.6 (2005)	
Kazakhstan	75	52.86	52.9	

Azerbaijan	86	39.23	39.2	
Georgia	87	38.43	38.5	
Moldova	93	32.38	32.3	
Syria	103	23.96	24.0	
<b>Armenia</b>	<b>118</b>	<b>10.54</b>	<b>10.5 (2005)</b>	<b>39.5</b>
Uzbekistan	128	9.27	2.7 (2005)	
		ITU World Telecommunications/ICT Indicators database 2007	UNCTAD Calculations based on the ITU World Telecommunications/ICT Indicators database 2007	National Statistical Service - Armenia

**Source of Data:** International Telecommunication Union, World Telecommunication Indicators 2007  
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 or most recent year available.  
Armenia is currently ranked 118<sup>th</sup> position. If the statistic from the National Statistical Service is used, Armenia's ranking for this indicator would increase to nearer 80<sup>th</sup> position. It would appear at first sight that either the wrong data is being provided to the International Telecommunications Union or the data is provided too late to be included in the database.

## T&T HUMAN, CULTURAL, AND NATURAL RESOURCES

### 11<sup>th</sup> Pillar: Human resources

- **Primary education enrolment (108)**
- 2ndary education enrolment (59)
- **Quality of the educational system (94)**
- **Local availability of research and training services (111)**
- **Extent of staff training (113)**
- Hiring and firing practices (40)
- Ease of hiring foreign labor (2)
- HIV prevalence (24)
- Business impact of HIV / AIDS (59)
- Life expectancy (58)

### PRIMARY EDUCATION ENROLMENT (108)

Country	Ranking
Israel	27
Poland	35
Estonia	45
Syria	50
Georgia	59
Romania	63
Russia	67
Kazakhstan	73
Turkey	79
Jordan	81

Hungary	83
Moldova	101
Azerbaijan	102
Ukraine	105
<b>Armenia</b>	<b>108</b>
Uzbekistan	n/a

**Source of Data:** UNESCO, Institute of Statistics

According to the World Bank, this corresponds to the ratio of children of official school age (as defined by national education system) who are 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.

#### QUALITY OF THE EDUCATIONAL SYSTEM (94)

Country	Ranking
Israel	25
Uzbekistan	32
Estonia	35
Jordan	37
Russia	46
Ukraine	47
Poland	49
Romania	58
Kazakhstan	64
Hungary	65
Turkey	70
Moldova	75
Georgia	93
<b>Armenia</b>	<b>94</b>
Azerbaijan	98
Syria	102

**Source of Data:** World Economic Forum, Executive Opinion Survey 2006, 2007

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

#### LOCAL AVAILABILITY OF RESEARCH AND TRAINING SERVICES (111)

Country	Ranking
Israel	13
Estonia	27
Poland	41

Turkey	43
Romania	49
Uzbekistan	58
Jordan	59
Hungary	61
Azerbaijan	77
Russia	79
Kazakhstan	82
Ukraine	85
Syria	99
Moldova	104
<b>Armenia</b>	<b>111</b>
Georgia	116

**Source of Data:** World Economic Forum, Executive Opinion Survey 2006, 2007

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

EXTENT OF STAFF TRAINING (113)

Country	Ranking
Israel	23
Estonia	30
Turkey	47
Jordan	57
Poland	66
Uzbekistan	70
Hungary	74
Romania	84
Azerbaijan	85
Georgia	88
Kazakhstan	93
Russia	96
Ukraine	98
Syria	101
Moldova	103
<b>Armenia</b>	<b>113</b>

**Source of Data:** World Economic Forum, Executive Opinion Survey 2006, 2007

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

**13<sup>th</sup> Pillar: Natural resources**

- Number of World Heritage natural sites (70)
- Nationally protected areas (58)
- **Quality of the natural environment (120)**

- **Total known species (97)**

QUALITY OF THE NATURAL ENVIRONMENT (120)

<b>Country</b>	<b>Ranking</b>
Estonia	18
Jordan	35
Israel	60
Uzbekistan	73
Moldova	74
Romania	91
Poland	94
Georgia	97
Syria	99
Russia	104
Turkey	106
Hungary	107
Azerbaijan	109
Kazakhstan	118
<b>Armenia</b>	<b>120</b>
Ukraine	121

**Source of Data:** World Economic Forum, Executive Opinion Survey 2006, 2007

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

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

TOTAL KNOWN SPECIES (97)

<b>Country</b>	<b>Ranking</b>
Russia	33
Kazakhstan	56
Turkey	60
Israel	66
Romania	73
Ukraine	77
Uzbekistan	84
Poland	84
Hungary	87
<b>Armenia</b>	<b>97</b>
Georgia	98
Syria	101
Jordan	103
Azerbaijan	105
Estonia	113
Moldova	117

**Source of Data:** The International Union for Conservation of Nature (IUCN), Red List of Threatened Species 2007

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

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**14<sup>th</sup> Pillar: Cultural resources**

- Number of World Heritage cultural sites (54)
- Sports stadium (59)
- **Number of international fairs and exhibitions (105)**

*NUMBER OF INTERNATIONAL FAIRS & EXHIBITIONS (105)*

<b>Country</b>	<b>Ranking</b>
Hungary	22
Poland	27
Turkey	31
Russia	39
Romania	49
Estonia	51
Ukraine	70
Israel	73
Jordan	80
Kazakhstan	99
Azerbaijan	105
<b>Armenia</b>	<b>105</b>
Syria	113
Uzbekistan	119
Moldova	119
Georgia	119

**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. 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:** This indicator measures the number of international fairs and exhibitions held in a country annually.