Standing Committee
for Economic and Commercial Cooperation
of the Organization of Islamic Cooperation (COMCEC)

COMCEC

COMCEC TRANSPORT AND COMMUNICATIONS OUTLOOK 2018

COMCEC COORDINATION OFFICE
September 2018

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PREFACE

The COMCEC Strategy, adopted during the 4th Extraordinary Islamic Summit held in Makkah Al-Mukarramah on 14-15 August 2012, envisages Working Group Meetings as one of the main instruments for its implementation. Through the Working Groups, country experts get the chance of elaborating the issues thoroughly in the respective cooperation areas and sharing their good practices and experience. The Working Groups are established for each cooperation area defined by the Strategy, namely Trade, Transport and Communication, Tourism, Agriculture, Poverty Alleviation, and Finance.

The COMCEC Outlooks are prepared in each cooperation area of the Strategy with a view to exploring the global trends and current situation in the OIC Member Countries in the respective area and enriching the discussions during the Working Groups Meetings by providing up-to-date data.

The COMCEC Transport and Communications Outlook is a contribution of the COMCEC Coordination Office to enrich the discussions during the Transport and Communications Working Group Meetings. The COMCEC Transport and Communications Outlook 2018 provides general information on the status of transport and communications in the Member States. It dwells on the major issues with regards to transport and communications sector development in the light of international trends, provides insights on the current status of the OIC Member States and makes comparative analyses with the different country groupings to demonstrate the situation in the Member States and thus the cooperation potential.

Views and opinions expressed in the report are solely those of the author and do not represent the official views of the COMCEC Coordination Office or the Member States of the Organization of Islamic Cooperation. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the COMCEC/CCO concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its political regime or frontiers or boundaries. Designations such as “developed,” “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgement about the state reached by a particular country or area in the development process.

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1. INTRODUCTION

There is a strong emphasis on transportation sector within the OIC (Organization of Islamic Cooperation) framework. First of all, one of three principles of the COMCEC Strategy, which is enhancing mobility, is directly related to transport. Secondly, transportation is explicitly affirmed as one of the three priority sectors by the COMCEC along with agriculture and tourism. Thirdly, it is one of the six cooperation areas specified by the COMCEC Strategy besides trade, tourism, agriculture, poverty alleviation, and finance.

Such an emphasis on the transport sector is not surprising, since it is crucial for economic and social development of the nations. From the point of view of households, people spend considerable time and money for traveling to fulfil a wide variety of purposes such as business, education, shopping, vacation, and socializing. According to Eurostat statistics, transportation activities account for 4.6% of the EU's gross domestic product (GDP) and 4.5% of its total employment (European Commission 2013). In addition, transport expenditures correspond to 13.2% of a household's budget on average within the EU as of 2012 (Eurostat 2012).

Problems and challenges associated with the transport industry are just as big as the transport industry itself. Regarding transportation infrastructure, developed countries try to maintain and improve their transportation network while developing and the least developed countries aim at developing a transport infrastructure to meet their basic needs. With respect to transportation finance and privatization, almost all countries suffer from insufficient public budgets and inefficient provision of transport services through public ownership and management. From environmental point of view, transportation is one of the biggest sources of greenhouse gas emissions and the rate of increase in transport emissions is quite high. In addition to these problems, other outstanding challenges like increasing traffic congestion, problems associated with the transportation safety and security, the lack of transit services are also noteworthy. Revealing these current challenges facing transportation sector, this brief Outlook, through a focused approach, attempts to provide an overview on how OIC countries are performing in terms of transport and telecommunication sector.

The analyses within this Outlook include comparisons between the OIC countries and other regions such as the European Union (EU), Latin America and the Caribbean, East Asia and Pacific, and the Organization for Economic Co-operation and Development (OECD). For more detailed analysis, the OIC countries were divided into geographical regions such as OIC-MENA (Middle East and North Africa), OIC-Asia, and OIC-Sub-Saharan Africa when deemed necessary. Further information on this geographical classification is available at Table A.1 in the Appendix.

Information and communication technologies (ICT) is another critical area for economic and social development of countries. Radical developments in ICT during the second half of the 20th century have significantly changed the way information is gathered, stored, processed and transferred and thus accelerated the process of transformation into information society.

As technologies as telegraph, telephone, radio and television have created unprecedented communication opportunities when they were invented, Internet has deeply affected the ways people communicate.

Internet usage has been rapidly increasing throughout the world. Governments try to develop fixed and mobile internet infrastructures and increase internet usage rates in their countries. However, distribution of both supply of and demand for internet are not evenly distributed across and within countries. Telecommunication section of the Outlook summarizes the developments about telecommunications in the world and OIC countries by representing data on telephone and internet penetration rates.

2. TRANSPORT, LOGISTICS, AND TRADE

The increased per capita income and mobility needs of the households, trade globalization, deregulation and privatization trends in transportation infrastructure and services, and the technological progress in vehicle technology have all contributed to the high growth rate of the transportation industry.

ITF estimates that the trade related international freight will grow by a factor of 4.3 by 2050. Maritime transport is more characterized by movement of freights as almost 85% of global trade is carried by sea in terms of weight. Therefore, increasing international trade will result in unprecedented challenges for the transport infrastructure, especially for ports. According to ITF projections, port volumes are expected to increase nearly fourfold by 2050 (OECD/ITF, 2015). In fact, Infrastructure to 2030 (OECD, 2012) argues that worldwide container throughput could quadruple even by 2030.

With regard to the surface transport, worldwide road and rail passenger travel is expected to grow around 120% to 230% until 2050, whereas this growth is expected to range from 240% to 450% for non-OECD economies. Besides, the global road and rail freight transport is projected to increase by 230% to 420% (OECD/ITF, 2015).

Infrastructure to 2030 concludes that global transport and distribution infrastructure investment needs, i.e. airports, ports, rail, and oil and gas, may exceed USD 11 trillion over 2009-2030 period. As major infrastructure can take around 10 to 20 years to plan and implement, countries that want to develop their infrastructure at the right time and location will need to get two crucial things right, i.e. national policy frameworks and assured funding (OECD, 2012).

Table 1: Notable developments and trends in transport industry

Transport Mode	Notable challenges and trends
Transport in general	Increasing international trade Lack of national policy frameworks Lack of assured public funding Need for increased private-sector investments Aging infrastructure Environmental effects of transportation Deregulation and privatization Oil dependency Terrorism and security concerns
Maritime transport	Containerization Increasing vessel sizes Rise of international and regional hub ports Operations of major ports by major shipping lines Trade with China Global crisis Increase of LNG and LPG trade
Air transport	Airline alliances Inclusion of aviation into EU ETS Airport privatizations and rise of global airport companies Air cargo: fast, reliable, and cheaper than before Rise of low cost carriers Mergers and acquisitions Fall of state-owned airlines
Road transport	Increasing greenhouse gas emissions Congestion in big cities Emphasis on road safety Car dependency
Rail transport	Deregulation of rail industry Implementation of high-speed railway network Multimodal trade corridors through rail network

Transport infrastructure is crucial for both economic and social development of the nations and "quality infrastructure is a key pillar of international competitiveness" (OECD, 2012). It is therefore not surprising to see that developing transport infrastructure is assessed as a powerful instrument for a wide variety of policy goals such as reducing logistics costs, poverty (through enhancing rural road infrastructure) and congestion, and enabling the mobility of the workforce, etc. The problems associated with the transport infrastructure vary across the nations. For developed nations, for example, the major transportation problem is to sustain the aging infrastructure in the most cost-effective way and to maintain their competitive power through efficient transport networks. For least developed nations, the major concern is to establish a transportation infrastructure by meeting at least the basic needs.

The variation in the needs of transportation infrastructure across the OIC countries is in parallel with the situation outlined above. On the one hand, there is a group of oil producing gulf countries with high income per capita and relatively smaller areas (except Saudi Arabia). On the other hand, there is a large pool of OIC countries with low income per capita and relatively larger areas, mostly from Sub-Saharan Africa. The Global Competitiveness Report 2017–2018 (WEF, 2017) of the World Economic Forum provides evidence on this gap. Four of the seven best performing OIC countries (i.e. United Arab Emirates (UAE), Malaysia, Bahrain, Qatar, Turkey, Azerbaijan, and Saudi Arabia) in terms of quality of transport infrastructure are oil producing gulf countries. On the other hand, nine out of eleven worst performing OIC countries (i.e. Benin, Cameroon, Chad, Lebanon, Mali, Mauritania, Mozambique, Nigeria, Senegal, Sierra Leone, and Yemen) in the same measure are from Sub-Saharan Africa.

Table 2 presents the variation in the quality of transport infrastructure in terms of indexes among the 36 OIC countries (i.e. 11 countries from OIC-Sub-Saharan Africa, 16 from OIC-MENA, and 9 from OIC-Asia). The indexes range from 1 to 7, where 1 represents the extremely underdeveloped infrastructure and 7 stands for extensive and efficient infrastructure by international standards.

Second column of Table 2 shows the indexes for the quality of overall infrastructure (e.g. transport, telephony, and energy) whereas the rest of the columns provide comparable indexes for road, railroad, port, and air transport infrastructure, respectively. One implication of Table 2 is that all of the OIC and OIC-Sub-Saharan Africa averages fall below world averages in every measure. Secondly, OIC-MENA performs better than world average in every measure but the quality of railroad infrastructure. Finally, the superior performance of OIC-Asia in the quality of railroad infrastructure is noteworthy.

Table 2: The indexes for the quality of transport infrastructure (2017-2018)

Country	Quality of overall infrastructure	Quality of roads	Quality of railroad infrastructure	Quality of port infrastructure	Quality of air transport infrastructure
UAE	6.2	6.4	N/A	6.2	6.6
Malaysia	5.3	5.3	5	5.4	5.7
Bahrain	5.2	5.1	N/A	5.1	4.9
Qatar	5.2	5.5	N/A	5.6	6.3
Turkey	5	5	3	4.5	5.4
Azerbaijan	5	4.8	4.7	4.7	5.6
Saudi Arabia	4.9	4.8	3.3	4.7	4.9
Oman	4.9	5.5	N/A	4.6	4.7
Morocco	4.7	4.5	3.9	5	4.8
Brunei	4.4	4.8	N/A	3.9	4.5
Albania	4.3	4.3	1.2	4.1	4.1
Jordan	4.2	4.1	2.2	4.5	5.4
Tajikistan	4.2	4.1	3.7	2	4.3
Kuwait	4.1	4.1	N/A	3.8	3.2
Indonesia	4.1	4.1	4.2	4	4.8
The Gambia	4.1	4.1	N/A	4.4	4.5
Egypt	4	3.9	3.3	4.7	5.1
Kazakhstan	3.9	2.9	4.1	3.2	4
Iran	3.9	4	3.7	4	3.7
Pakistan	3.8	3.9	3.3	4	4
Tunisia	3.7	3.7	2.8	3.3	3.9
Algeria	3.5	3.5	3.4	3.4	3.7
Uganda	3.3	3.4	1.6	2.6	3.1
Kyrgyz Rep.	3	2.7	2.4	1.4	3.1
Bangladesh	2.9	3.1	2.9	3.6	3.3
Senegal	2.9	3.7	2.2	4.4	4.2
Mali	2.7	3.6	2.1	1.9	3.9
Sierra Leone	2.6	3.2	N/A	3.3	2.8
Mozambique	2.5	2.5	2.5	3.6	3.5
Benin	2.4	2.9	1.4	3.9	3.4
Lebanon	2.3	2.7	N/A	3.5	3.8
Nigeria	2.3	2.5	1.5	2.8	2.9
Cameroon	2.3	2.6	2.3	3.1	2.8
Yemen	2.2	2.3	N/A	2.6	2.1
Chad	1.8	2.6	N/A	2.6	3.1
Mauritania	1.5	2	2.2	2.6	2.5
WORLD AVG.	**4.0**	**4.0**	**3.5**	**4.1**	**4.4**
OIC AVG.	**3.7**	**3.8**	**2.9**	**3.8**	**4.1**
OIC-SUBSAH. AFRICA	**2.6**	**3.0**	**2.0**	**3.2**	**3.3**
OIC-MENA	**4.3**	**4.3**	**3.0**	**4.4**	**4.4**
OIC-ASIA	**4.0**	**4.0**	**3.8**	**3.6**	**4.4**
OIC Maximum	**UAE**	**UAE**	**Malaysia**	**UAE**	**UAE**
OIC Minimum	**Mauritania**	**Mauritania**	**Albania**	**Kyrgyz Rep.**	**Yemen**

Source: Author from the Global Competitiveness Report 2017–2018 (WEF, 2017)

Transport infrastructure, logistics services, and trade go hand in hand and nations that are able to deliver their products in the cheapest, fastest, and the most reliable way through their efficient logistics infrastructure and services gain competitive advantage in the global trade. That is why, as a historical fact, trade capitals of the world have been those cities and countries with better accessibility and connectivity. The rapid growth of world trade after World War II as a result of decreasing transportation costs (Hummels, 2007) is another implication of the linkage between trade and logistics.

As underlined above, quality of logistics infrastructure and services is a major determinant in terms of shares of countries in the global trade. In this section some important measures with respect to trade and logistics will be analysed to better understand the current situation of the OIC countries.

The most widely used measure for logistics performances of the countries is the World Bank Logistics Performance Index (LPI). As can be seen in Table 3 showing the latest (2018) LPI scores, the OIC countries such as UAE, Qatar, Malaysia, and Oman come on top of the rankings; while Afghanistan, , Sierra Leone, Libya, and Gabon come at the bottom.

Table 3: 2018 LPI scores and ranks of the OIC countries

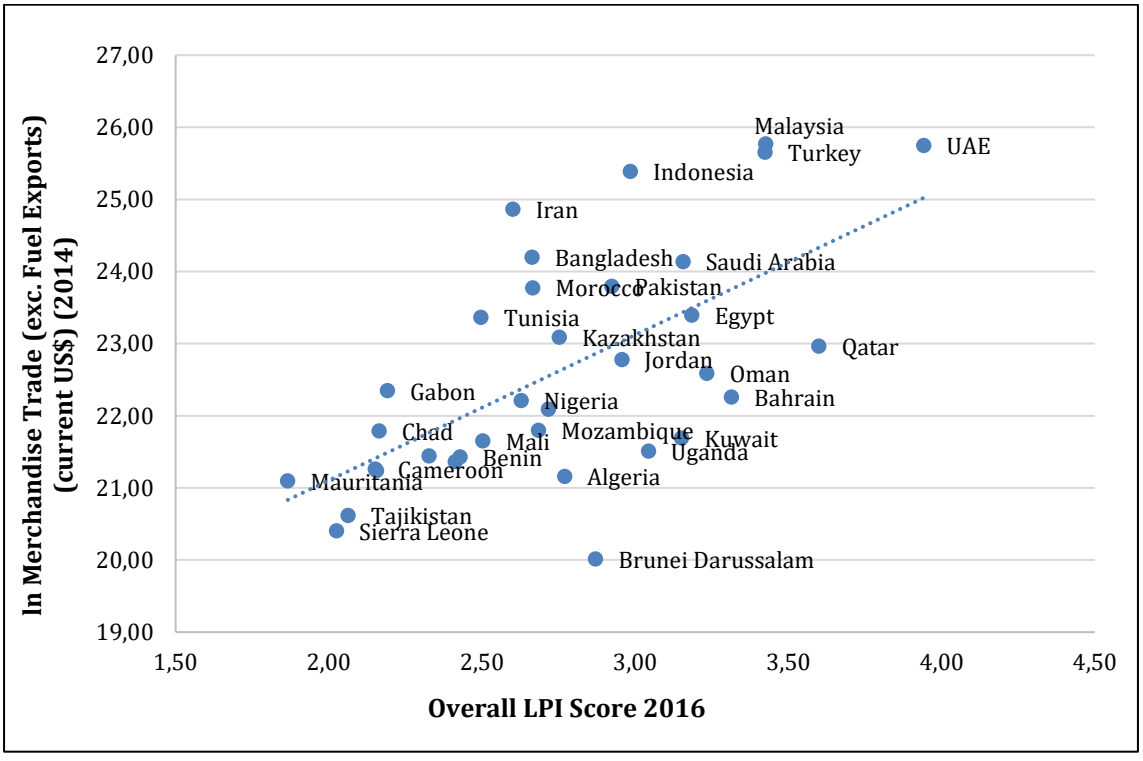
Country	Overall LPI		Customs		Infra-structure		Int. Shipment		Logistics Comp.		Tracking & Tracing		Timeliness	
	rank	score	rank	score	rank	score	rank	score	rank	score	rank	score	rank	score
Germany	1	4.2	1	4.09	1	4.37	4	3.86	1	4.31	2	4.24	3	4.39
UAE	11	3.96	15	3.63	10	4.02	5	3.85	13	3.92	13	3.96	4	4.38
Qatar	30	3.47	38	3	27	3.38	9	3.75	31	3.42	30	3.56	36	3.7
Malaysia	41	3.22	43	2.9	40	3.15	32	3.35	36	3.35	47	3.15	53	3.46
Oman	43	3.2	44	2.87	39	3.16	36	3.3	49	3.05	66	2.97	29	3.8
Indonesia	46	3.15	62	2.67	54	2.9	42	3.23	44	3.1	39	3.3	41	3.67
Turkey	47	3.15	58	2.71	33	3.21	53	3.06	51	3.05	42	3.23	44	3.63
Côte d'Ivoire	50	3.08	51	2.78	56	2.89	45	3.21	37	3.23	49	3.14	71	3.23
Saudi Arabia	55	3.01	66	2.66	43	3.11	56	2.99	57	2.86	46	3.17	67	3.3
Bahrain	59	2.93	63	2.67	68	2.72	55	3.02	58	2.86	60	3.01	68	3.29
Kuwait	63	2.86	56	2.73	45	3.02	98	2.63	67	2.8	96	2.66	59	3.37
Iran	64	2.85	71	2.63	63	2.77	79	2.76	62	2.84	85	2.77	60	3.36
Egypt	67	2.82	77	2.6	58	2.82	73	2.79	63	2.82	89	2.72	74	3.19
Kazakhstan	71	2.81	65	2.66	81	2.55	84	2.73	90	2.58	83	2.78	50	3.53
Benin	76	2,75	82	2,56	83	2,50	83	2,73	98	2,50	87	2,75	57	3,42
Lebanon	79	2.72	106	2.38	73	2.64	705	2.8	104	2.47	74	2.8	77	3.18
Brunei	80	2.71	73	2.62	89	2.46	113	2.51	77	2.71	88	2.75	80	3.17
Jordan	84	2.69	88	2.49	70	2.72	119	2.44	93	2.55	84	2.77	76	3.18
Maldives	86	2,67	105	2,40	71	2,72	94	2,66	125	2,29	104	2,60	64	3,32
Albania	88	2,66	114	2,35	110	2,29	69	2,82	92	2,56	95	2,67	73	3,20
Djibouti	90	2,63	113	2,35	60	2,79	118	2,45	135	2,25	72	2,85	85	3,15
Burkina Faso	91	2.62	100	2.41	95	2.43	60	2.92	106	2.46	124	2.4	95	3.04
Cameroon	95	2,60	90	2,46	76	2,57	63	2,87	87	2,60	118	2,47	142	2,57
Mali	96	2,59	133	2,15	109	2,30	88	2,70	107	2,45	54	3,08	119	2,83
Uzbekistan	99	2,58	140	2,10	77	2,57	120	2,42	88	2,59	90	2,71	91	3,09
Bangladesh	100	2.58	121	2.3	100	2.39	104	2.56	102	2.48	79	2.79	107	2.92
Uganda	102	2.58	76	2.61	124	2.19	78	2.76	99	2.5	123	2.41	110	2.9
Tunisia	105	2.57	107	2.38	133	2.1	115	2.5	123	2.3	71	2.86	70	3.24
Comoros	107	2.56	72	2.63	113	2.25	116	2.49	138	2.21	68	2.93	120	2.8
Kyrgyz Rep.	108	2,55	55	2,75	103	2,38	138	2,22	114	2,36	99	2,64	106	2,94
Morocco	109	2.54	115	2.33	93	2.43	103	2.58	101	2.49	112	2.51	114	2.88
Nigeria	110	2.53	147	1.97	78	2.56	110	2.52	112	2.4	92	2.68	92	3.07
Niger	110	2,53	147	1,97	78	2,56	110	2,52	112	2,40	92	2,68	92	3,07
Algeria	117	2.45	138	2.43	96	2.42	122	2.39	113	2.39	103	2.6	124	2.76
Togo	118	2.45	119	2.31	116	2.23	111	2.52	134	2.25	120	2.45	112	2.88
Sudan	121	2,43	136	2,14	125	2,18	102	2,58	96	2,51	115	2,51	139	2,62
Pakistan	122	2.42	139	2.12	121	2.2	97	2.63	89	2.59	136	2.27	136	2.66
Chad	123	2,42	134	2,15	104	2,37	125	2,37	86	2,62	127	2,37	138	2,62
Turkmenistan	126	2,41	111	2,35	117	2,23	136	2,29	120	2,31	107	2,56	130	2,72
Guinea-Bissau	129	2.39	144	2.01	159	1.78	108	2.53	126	2.28	80	2.78	116	2.86
Guyana	132	2.36	84	2.55	137	2.09	148	2.17	137	2.24	121	2.44	137	2.65
Tajikistan	134	2,34	150	1,92	127	2,17	133	2,31	116	2,33	131	2,33	104	2,95
Mauritania	135	2,33	128	2,20	112	2,26	145	2,19	144	2,19	119	2,47	134	2,68
Senegal	141	2,25	130	2,17	118	2,22	128	2,36	149	2,11	150	2,11	145	2,52
Somalia	144	2,21	145	2,00	157	1,81	100	2,61	121	2,30	140	2,23	157	2,20
Guinea	145	2,20	93	2,45	160	1,56	132	2,32	152	2,07	91	2,70	160	2,04
Iraq	147	2,18	153	1,84	140	2,03	131	2,32	159	1,91	144	2,19	129	2,72
Gabon	150	2,16	148	1,96	136	2,09	153	2,10	151	2,07	153	2,07	135	2,67
Libya	154	2,11	149	1,95	115	2,25	159	1,99	153	2,05	160	1,64	123	2,77
Sierra Leone	156	2,08	155	1,82	156	1,82	147	2,18	156	2,00	134	2,27	154	2,34
Afghanistan	160	1,95	158	1,73	158	1,81	152	2,10	158	1,92	159	1,70	153	2,38

Source: Compiled by the author from the World Bank World Development Indicators

Logistics costs have become more important over time for two main reasons. Firstly, the tendency to shift the production facilities abroad to enjoy lower labour costs necessitates more movement of goods (e.g., raw materials and final products). Secondly, with decreasing tariffs, logistics costs increase in ad valorem terms and turn into an important factor in the prices of products. That is why, the nations which have the aim of increasing their international trade should improve their logistics capabilities.

As an evidence of this fact, Figure 1 shows the LPI scores of the OIC countries for the year 2016 and their respective international merchandise trade (excluding fuel exports) for the year 2014. The figure reveals that there is a positive correlation between the LPI scores and international merchandise trade (excluding oil exports) of the OIC countries. This might imply that if an OIC country has a high LPI score this gives it a competitive advantage over those with lower LPI scores as it can facilitate its international trade through its enhanced logistics infrastructure and services.

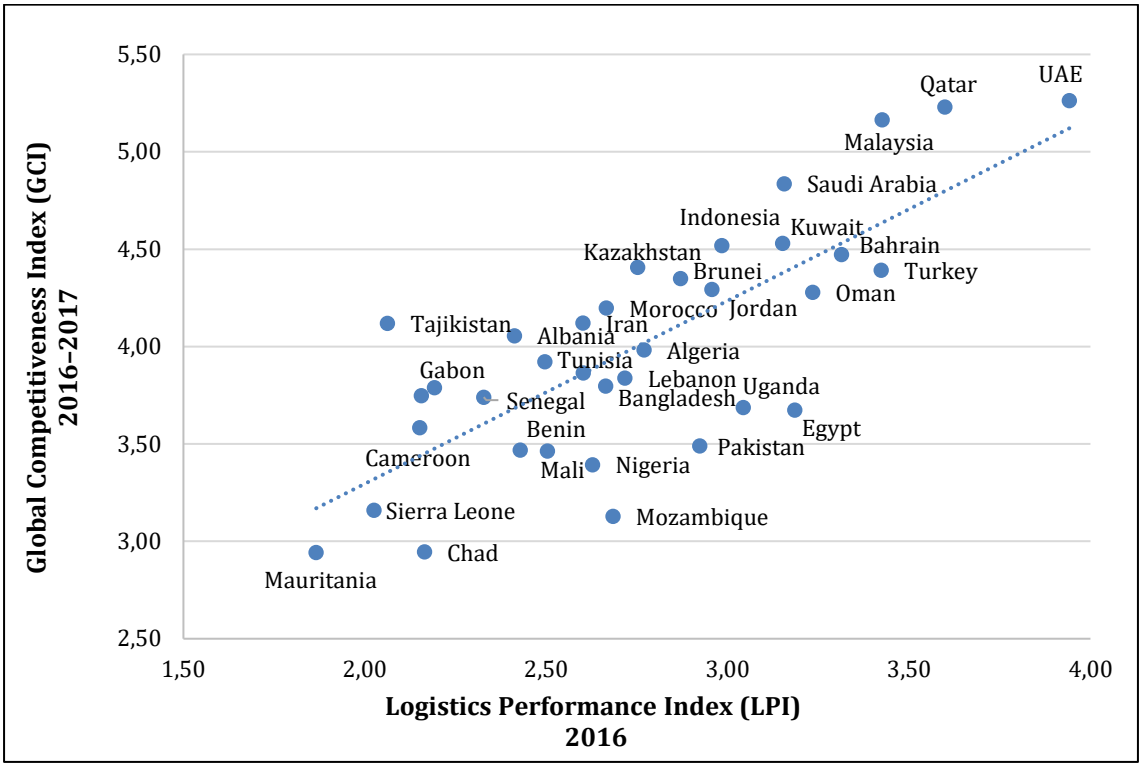
Figure 1: Total merchandise trade (exc. oil exports) and LPI scores in OIC countries (2016)



Source: Author from the World Bank World Development Indicators

Figure 2 shows this relation for the 35 OIC countries where the horizontal axis exhibits the 2016 LPI scores and the vertical axis presents their Global Competitiveness Index (GCI) scores, published by the World Economic Forum (2016), for the period 2016-2017. The figure shows that there is a positive correlation between the LPI and GCI scores of the OIC countries.

Figure 2: 2016 LPI scores and 2016-2017 GCI scores of the OIC countries



Source: Author from the World Bank World Development Indicators and World Economic Forum (2016)

Another measure is the World Bank's Liner Shipping Connectivity Index (LSCI), which aims at capturing a country's level of integration into the existing liner-shipping network. As can be seen in Table 4, the 2018 LSCI scores show that Malaysia (98.08), UAE (73.65), Morocco (67.03), and Egypt (54.62) are well connected to the global shipping network whereas Maldives (3.74), Comoros (5.26), and Tunisia (6.56) are least connected.

One implication of Table 4 is that the best performing countries have large transshipment ports (e.g. Malaysia, Morocco, and Egypt) and gateway ports (e.g. Malaysia, Saudi Arabia, and Turkey). Secondly, the least performing countries are either not located on the main liner shipping services or lack the physical and operational capacity to serve large container ships (COMCEC, 2015).

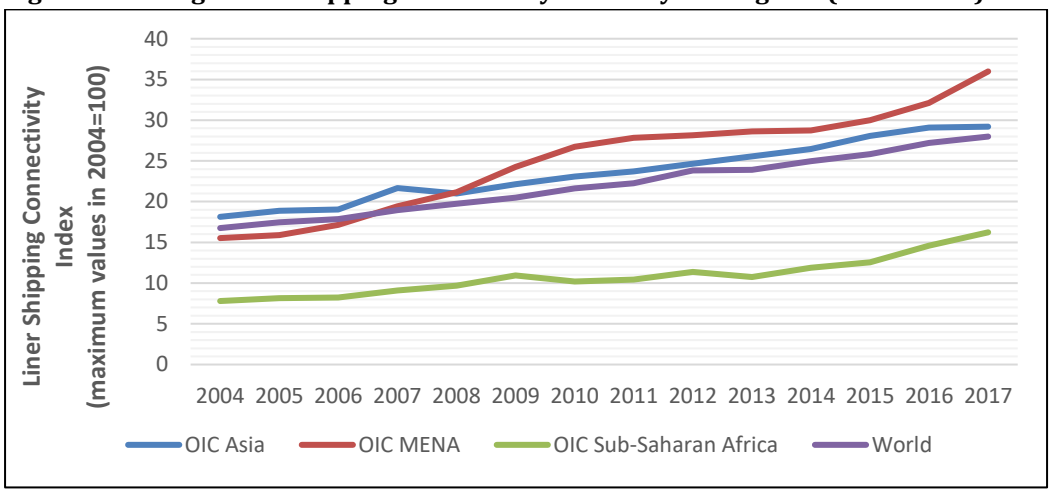
Table 4: LSCI scores for OIC Member States, exc. landlocked countries

Country	2011	2012	2013	2014	2015	2016	2018
Malaysia	90.96	99.69	98.18	104.02	110.58	106.79	98.08
UAE	62.5	61.09	66.97	66.48	70.4	70.57	73.65
Morocco	55.13	55.09	55.53	64.28	68.28	64.72	67.03
Oman	49.33	47.25	48.46	49.88	48.37	47.35	63.59
Saudi Arabia	59.97	60.4	59.67	61.25	64.83	61.79	59.51
Turkey	39.4	53.15	52.13	52.37	51.97	49.61	57.21
Egypt	51.15	57.39	57.48	61.76	61.45	62.5	54.62
Lebanon	35.09	43.21	43.16	42.63	41.81	35.1	44.52
Bahrain	9.77	17.86	17.9	27.01	26.72	26.48	41.02
Indonesia	25.91	26.28	27.41	28.06	26.98	27.19	40.85
Iran	30.27	22.62	21.3	5.85	11.91	24.63	40.75
Togo	14.08	14.07	14.76	19.09	20.44	30.29	33.91
Pakistan	30.54	28.12	27.71	27.5	32.33	36.58	33.39
Qatar	6.33	6.35	5.59	7.52	5.71	5.35	32.09
Djibouti	21.02	16.56	20.29	20.22	20.76	29.41	31.09
Iraq	4.16	4.48	4.91	5.03	5.09	4.98	30.48
Senegal	16.77	15.64	16.53	17.46	17.43	13.37	22.7
Sudan	-	12.75	8.42	13.14	14.58	18.41	21.08
Nigeria	19.85	21.81	21.35	22.91	32.68	21.93	19.97
Benin	12.69	15.04	14.28	17.21	17.67	18.34	18.42
Côte d'Ivoire	17.38	16.45	17.55	21.87	31.35	22.01	17.83
Gabon	10.12	9.82	10.23	8.96	10.91	9.51	16.68
Libya	4.19	7.1	5.69	5.17	4.88	4.88	14.55
Cameroon	11.4	13.44	10.85	12.74	10.96	15.01	14.24
Guyana	6.59	7.51	7.29	6.82	5.93	4.86	12.85
Kuwait	6.21	7.42	8.06	5.78	9.01	8.92	11.83
Somalia	1.62	1.6	8.12	7.79	7.59	7.59	11.61
Yemen	5.24	7.81	5.89	5.64	8.21	6.04	11.12
Suriname	3.6	6.53	3.35	3.86	5.2	5.2	10.98
Bangladesh	12.27	13.59	11.08	12.9	12.19	12.77	10.79
Guinea	7.97	9.23	8.95	8.59	8.49	9.38	10.33
Mauritania	4.2	4.34	4.2	5.45	5.43	6.52	9.41
Mozambique	8.15	8.02	7.96	8.4	9.31	12.62	9.31
Sierra Leone	5.6	6.6	7.12	8.22	8.89	8.89	8.29
Guinea-Bissau	3.96	4.06	4.31	4.13	4.64	4.52	7.53
Gambia	5.62	8.2	6.53	6	8.63	6.26	7.27
Algeria	11.89	13.19	19	18.45	24.17	5.76	7.26
Albania	4.68	4.44	4.61	4.3	4.56	3.86	7.22
Brunei	4.07	4.31	4	3.98	3.97	3.97	6.58
Tunisia	7.14	5.17	5.21	6.83	6.78	5.38	6.56
Comoros	31.06	7.8	6.91	6.94	5.92	5.55	5.26
Maldives	5.41	7.4	5.15	5.64	8.3	7.61	3.74

Source: Compiled by the author from UNCTAD Statistical Database

Figure 3 provides, on average, the LSCI changes for the OIC-groupings between 2004 and 2017. As the figure suggests, in terms of average LSCI scores, OIC-MENA region performed better than OIC-Asia region as well as the world starting from 2008. On the other hand, average LSCI scores for OIC-Sub-Saharan Africa region remained well below the world averages throughout the same period.

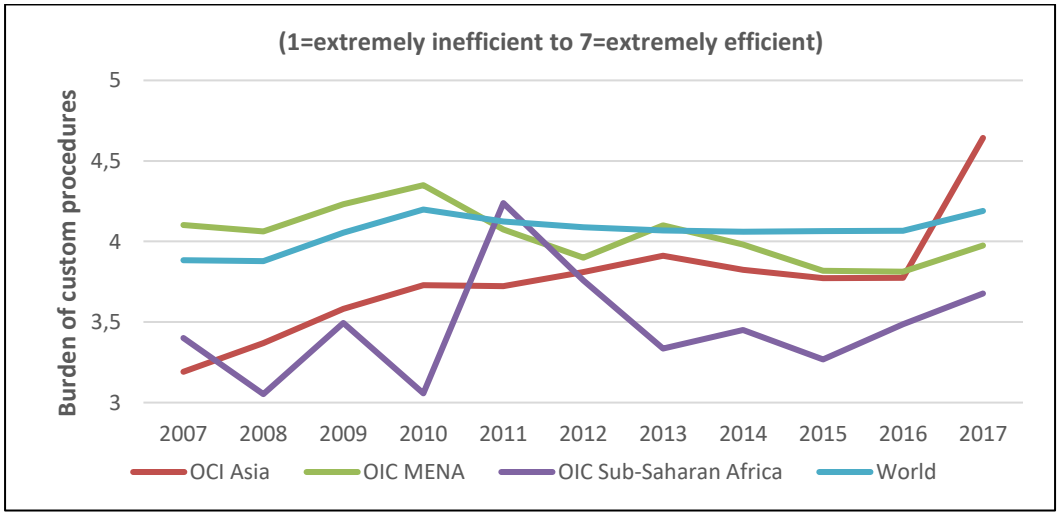
Figure 3: Average liner shipping connectivity scores by OIC regions (2004-2017)



Source: Author from UNCTAD Statistical Database

Lastly, custom procedures were analysed for the three OIC regions as they directly affect trade facilitation. For this purpose, burden of custom procedures index, which is provided by the World Bank, were examined on a scale of 1 to 7, where 7 corresponds to the extremely efficient case. Figure 4 reveals a very fluctiative pattern for the custom performance of the OIC regions.

Figure 4: Average burden of custom procedure scores by OIC regions (2007-2017)



Source: Author from the World Bank World Development Indicators

3. TRANSPORT BY MODES

As most of the transportation textbooks underline, transportation is a derived demand. People use transportation services to go work, to visit their relatives and friends, to go shopping, etc. That is why, the change in the transportation activities can be used as a proxy for changes in overall economic activities. The rise in the container traffic, for example, is a perfect indicator of the growth in the trade and manufacturing industry. On the other hand, the change in the air passenger traffic can reveal how some high-tech and service based industries, which rely more on air travel, are performing.

The changes in the transport and traffic figures may also signal some other aspects of the transportation system. The continuously growing traffic figures at an airport, for example, may imply that a capacity expansion may be needed in the near future. On the other hand, relatively stable traffic figures of a port may reveal a physical bottleneck which becomes a barrier for further traffic growths.

In the following sections, the current of state among the OIC geography will be provided with regard to four transport modes, i.e. road, rail, maritime, and air transport.

3.1. ROAD TRANSPORT

Roads are an important public asset; improving the road network can bring about immediate and large benefits by providing better access to hospitals, schools, and markets; improved comfort, speed, and safety; and lower vehicle operating costs. Not surprisingly, the road network in most OIC countries is not in a very good condition. The analyses below point to a need for further development of the road networks in the OIC Member Countries. To begin with, Table 5 gives data on the socio-economic and road network indicators in the OIC countries.

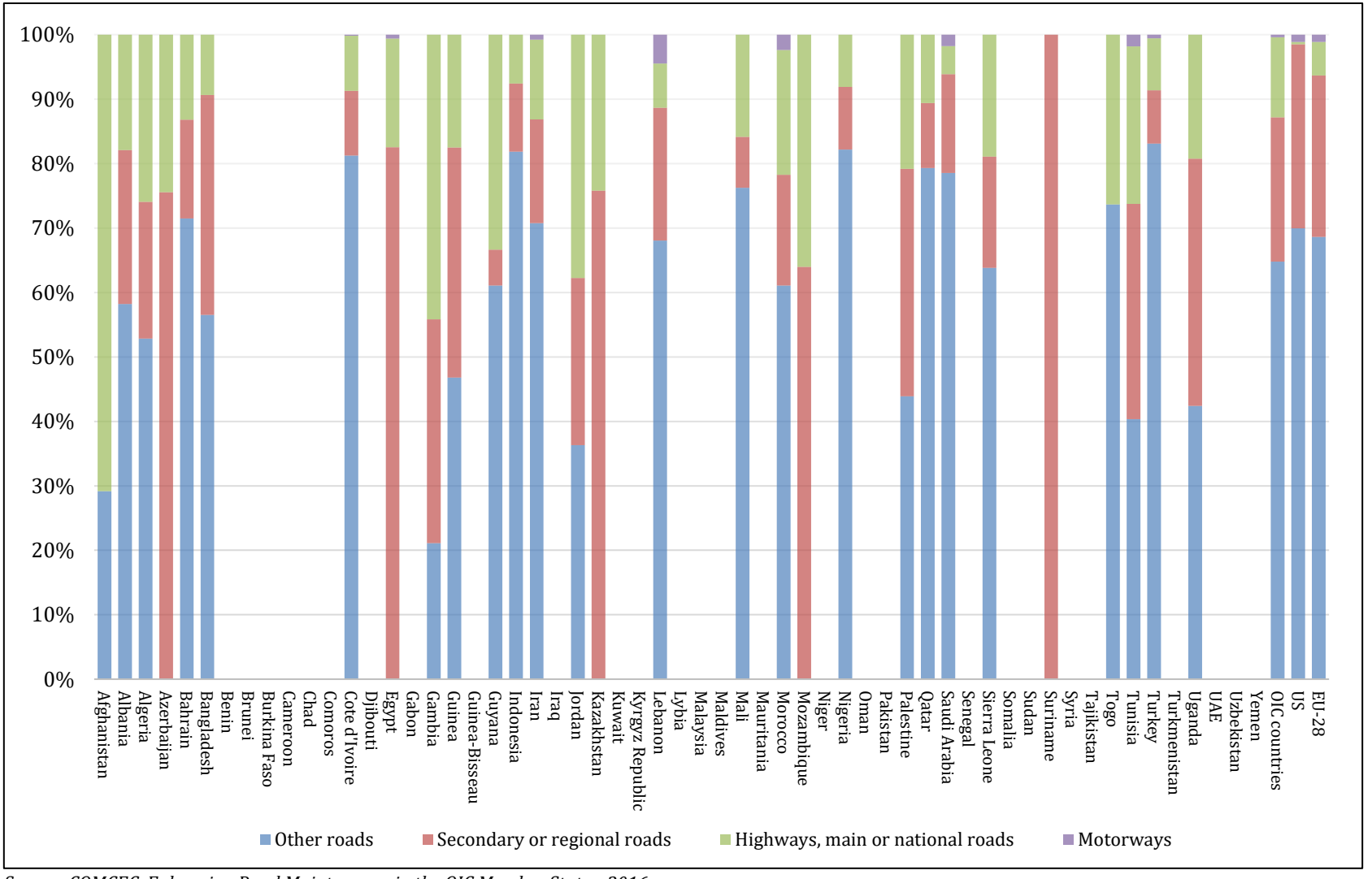
Table 5: Socio-economic and Road Network Indicators

Indicator	Min	Max	Average
Population (m)	**0.345** (Maldives)	**250** (Indonesia)	**29**
GNI per capita ($)	**400** (Niger)	**86,790** (Qatar)	**5,676**
Motorways (km)	**0** (Albania)	**3,891** (Saudi Arabia)	**590**
Highways, main roads (km)	**0** (Suriname)	**38,570** (Indonesia)	**11,534**
Secondary or regional roads (km)	**0** (Togo)	**113,451** (Egypt)	**21,505**
Other roads (km)	**0** (Suriname)	**415,788** (Indonesia)	**69,807**
Total length of roads (km)	**88** (Maldives)	**508,000** (Indonesia)	**68,227**
Paved roads (%)	**1** (Chad)	**100** (Jordan)	**52**
Paved roads (km)	**88** (Maldives)	**355,220** (Turkey)	**35,740**
Non-paved roads (km)	**0** (Jordan)	**220,074** (Indonesia)	**31,423**
Length of roads by GDP per/c (km/$)	**0.03** (Maldives)	**300** (Uganda)	**49**
Density of roads (km/km2)	**0.005** (Sudan)	**5.6** (Bahrain)	**0.32**

Source: COMCEC, Enhancing Road Maintenance in the OIC Member States, 2016.

Figure 5 gives the proportion of the road network that is: a motorway; highway, main or national road; secondary or regional road; and other roads. What is clear from this picture is that with the exception of Afghanistan, a large share of the road network in most OIC countries is made up of secondary or regional roads, or other roads. However, on comparing the composition of the road network in the OIC countries as a group to the road networks in the United States, and the European Union as a whole, it is worth noting a big difference in the composition of the road networks in these three categories. It is striking to see that a large percentage of the total road networks in OIC countries are motorways and highways.

Figure 5: Percentage of Road Type (Motorway, Highway, Secondary, Other) by Country



Source: COMCEC, Enhancing Road Maintenance in the OIC Member States, 2016.

Table 6 shows that in OIC countries the proportion of the road network that is a motorway, highway, main, or national road is almost 12.8% compared to 1.4% for the US, and 6% for the EU. This finding suggests that the OIC Member States, as a group, are investing more in developing motorways and highways, and not investing in developing their secondary, regional and other roads. This focus on developing high-quality and high-volume roads requires large amounts of capital. Given the limited resources that are available in many OIC Member States, it is very likely that this focus results in insufficient resources being allocated to maintenance activities.

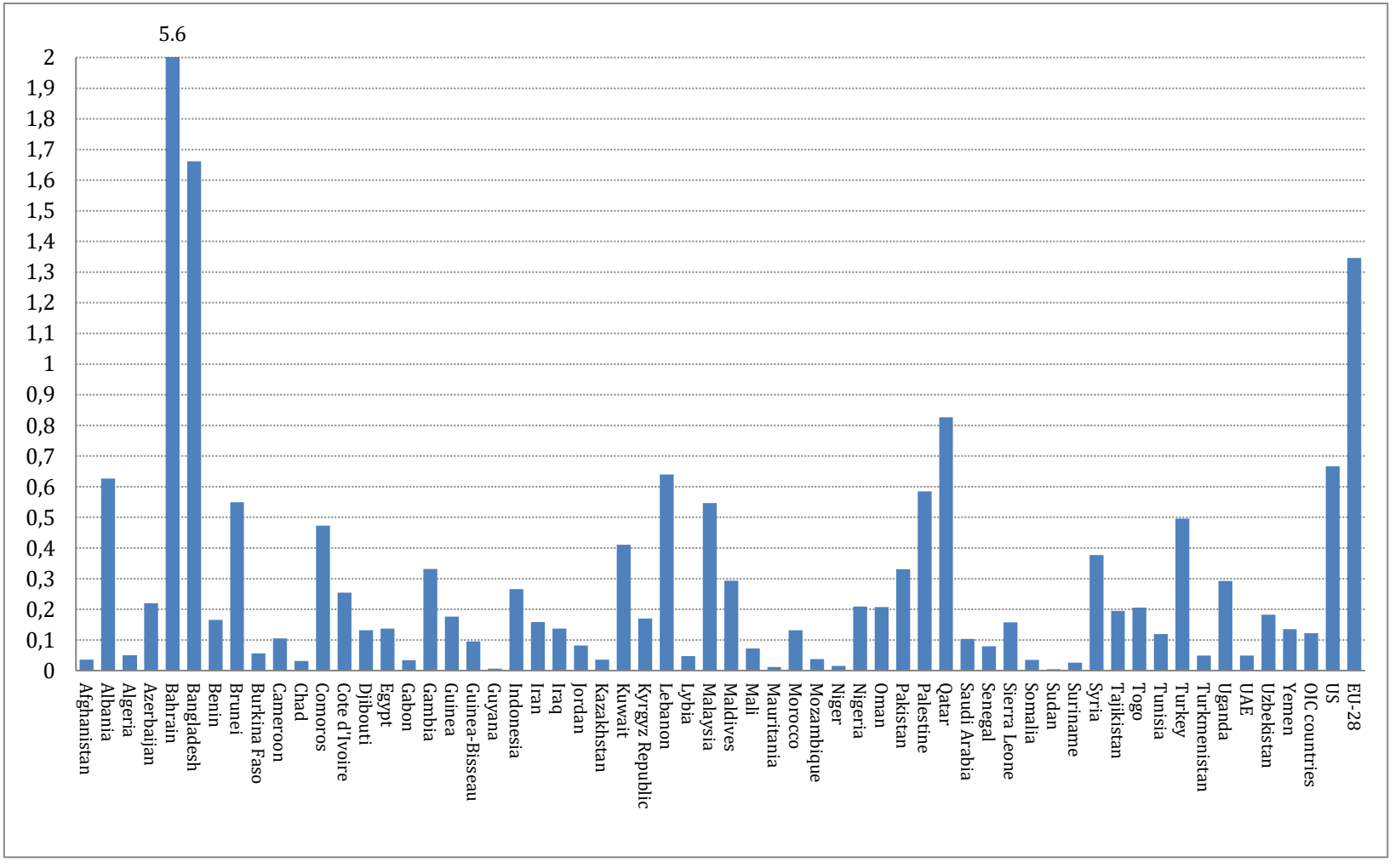
Table 6: Percentage of Road Categories in OIC Countries, USA and the EU

Type of Road	OIC (%)	US (%)	EU (%)
Motorways	0.42	1	1
Highways, main, or national	12.4	0.4	5
Secondary or regional	22	28.6	25
Other	65	70	69

Source: COMCEC, Enhancing Road Maintenance in the OIC Member States, 2016.

Figure 6 gives the density (the length of road network divided by the area of the country) of the road networks in the OIC countries. This figure shows several things. First, there is a large variation in the density of the road networks in the different OIC countries. Albania, Bahrain, Bangladesh, Brunei, Comoros, Gambia, Indonesia, Kuwait, Lebanon, Malaysia, Maldives, Pakistan, Palestine, Qatar, Turkey, and Uganda have more dense networks compared to the remaining countries. Actually, Bahrain is among the top 5 countries in the world regarding this indicator. However, for some countries the low density of the road network reflects the geography of the country. For example, in Saudi Arabia, a very large part of the country is a desert with little to no habitation. The density of the road networks in the OIC countries as a group and individually, is quite low compared to the US and the EU which is not surprising. For the OIC countries the density of the road network is 0.12 compared to 0.67 and 1.34 for the US and the EU, respectively.

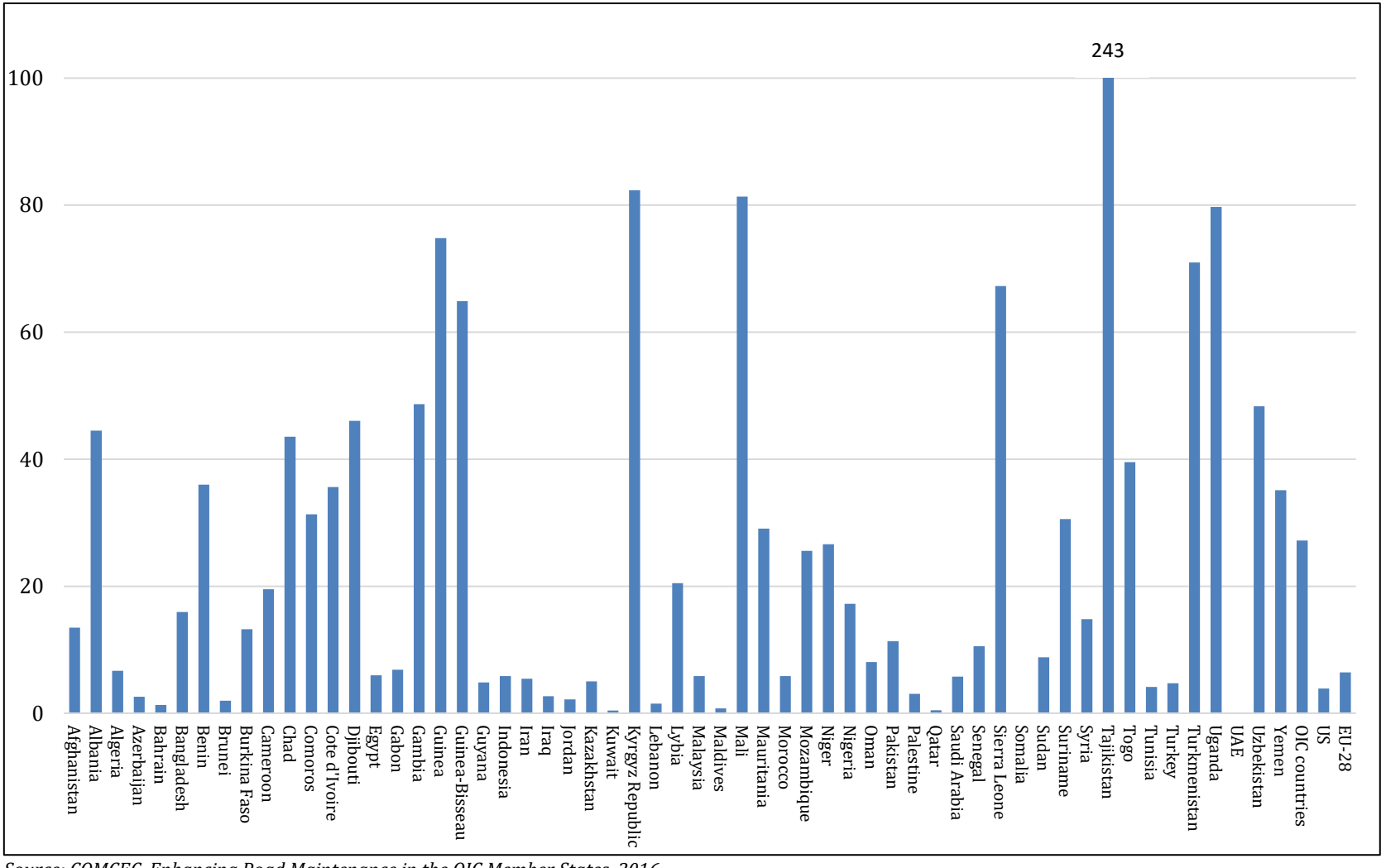
Figure 6: Length of Road Network (km) / km² Area of Country



Source: COMCEC, Enhancing Road Maintenance in the OIC Member States, 2016.

Figure 7 gives the length of the road network in km per USD 10 million GDP. Figure 7 shows that the size of the road network relative to the country's GDP is, compared to the US and the EU, higher in all OIC countries except for Bahrain, Egypt, Gabon, Guyana, Indonesia, Iran, Iraq, Jordan, Kuwait, Lebanon, Maldives, Morocco, Palestine, Qatar, Saudi Arabia, Somalia, Tunisia, and Turkey. For the OIC as a whole, the length of the road network per USD 10 million GDP is about 27. For the US and the EU this number is 3.9 and 6.4, respectively. This is an important observation insofar that it suggests that many of the OIC countries have road networks that are too large for the size of their economy. Obviously, this has clear implications for the maintenance of the road networks as well, i.e. the resources to properly maintain the road networks in these countries is going to be limited.

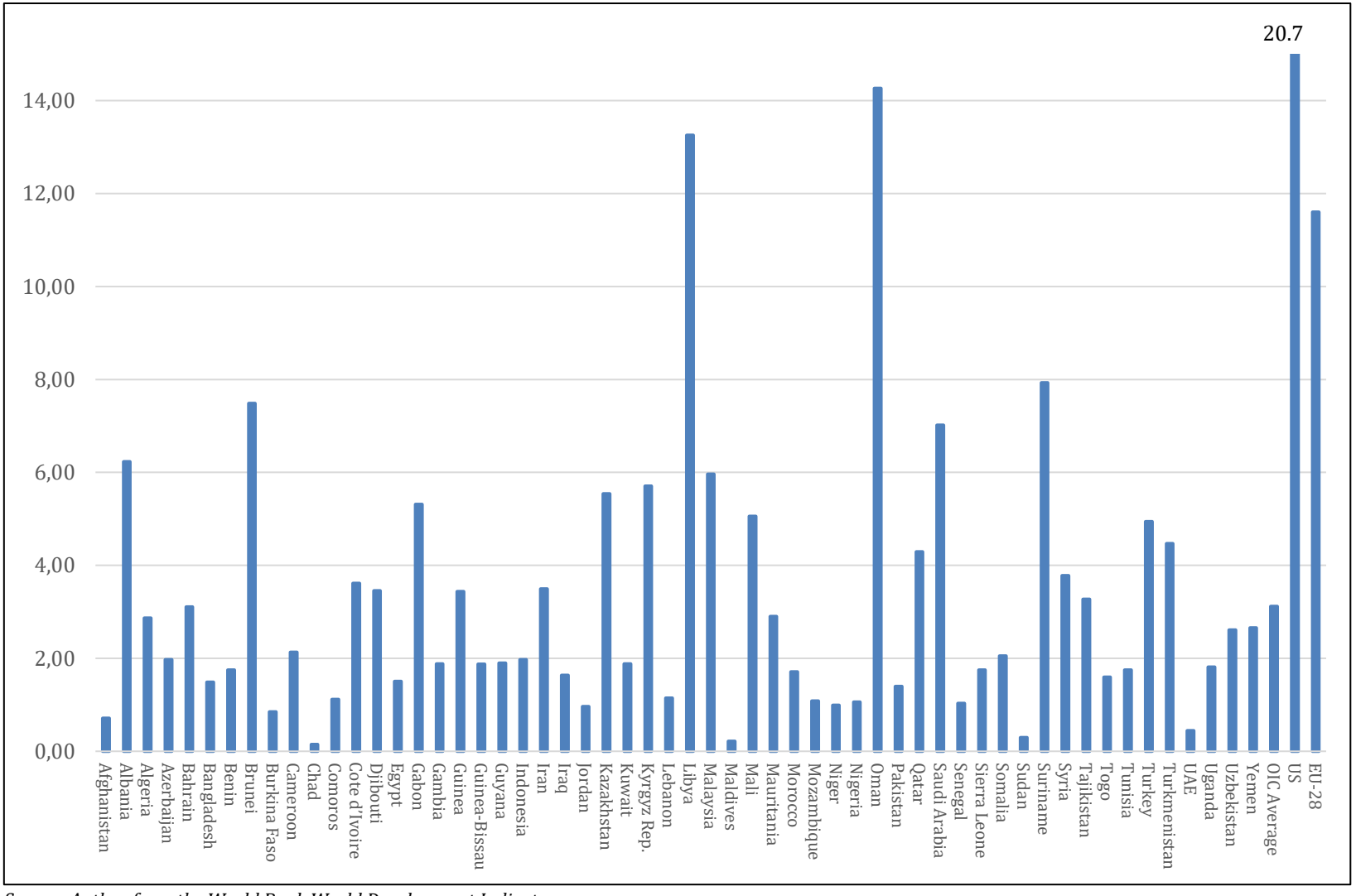
Figure 7: Length of Road Network (km) / USD 10 million GDP



Source: COMCEC, Enhancing Road Maintenance in the OIC Member States, 2016.

Figure 8 shows the length of the road network relative to the country's population. Road network per capita can be considered as a proxy for measuring the extent of service by roads to any person in a country. All OIC countries (except Oman, Libya, Suriname, Brunei, Saudi Arabia, Albania, and Malaysia) have fewer than 6 km of roads per 1,000 population. At the individual country level, Oman registered the highest level of road length, 14.26 km per 1,000 people. Road network per capita in the OIC Member States is relatively low compared to developed countries as well as the world average. The OIC countries as a whole have 3.12 km of roads per 1,000 population compared to 20.7 and 11.6 for the US and EU, respectively. What this would suggest is that the length of the road network is inadequate to serve the population. Yet at the same time, compared to the US and the EU, the road networks in OIC countries are too large relative to GDP, and the proportion of the motorways, highways, national and main roads is also too high.

Figure 8: Length of Road Network (km) / 1,000 Population



Source: Author from the World Bank World Development Indicators

ROAD SAFETY IN OIC MEMBER COUNTRIES[1]

Table 7 provides mortality statistics for countries in each of the three OIC regions; i.e. MENA, Asia, and Sub-Saharan Africa. An interesting, and somewhat surprising result of Table 7 is the relatively high mortality rate of five of the six high income (>15,000 US$) OIC member countries. UAE, Qatar, Kuwait, Oman and Saudi Arabia all have mortality rates that are significantly higher than what would be expected in high income countries internationally. Of the high-income countries, only Bahrain has a mortality rate marginally below the expected norm. Turkey as a middle income country also has a lower mortality rate than expected. Since these data do not take into account important factors, such as the degree of motorisation (and amount of travel), the results must be viewed with some caution. Although it is generally accepted that most high-income countries are highly developed with a high degree of motorisation, this is not always the case. Countries such as Bahrain may be defined as high income, but are yet to experience associated growth in motorisation and transport infrastructure development.

This analysis reveals that Saudi Arabia is a particularly interesting case with a mortality rate about three times higher than the international norm. A possible explanation may be found in the GINI index. For instance, Qatar, which is also a high income country with a somewhat higher than expected traffic mortality rate, has a GINI coefficient of 41.1%, which is not extraordinary high but 1.5 times higher than developed countries, such as Norway and the Netherlands.

Of the middle income countries (between 1,300 US$ and 15,000 US$ per capita), Libya and Iran have remarkably high road mortality rates. The data for Libya reveal extremely high mortality rates and should be treated with caution. Libya's road mortality (734 per million) is some seven times higher than what would be expected from an average middle income country and is more than twice the value of the subsequent country, which is Iran. In Iran, the mortality rate is half of Libya's and double that what is expected from a country with its per capita income level.

A third relevant group is the group of middle income countries and high population with a relatively high mortality, i.e. Iran, Nigeria, Morocco, Algeria, Gabon, Lebanon, Kazakhstan, Malaysia, Turkmenistan, Iraq, Suriname, Tunisia and Jordan. The mortality rate in these countries may well be affected by factors, such as increased motorisation and urbanisation.

Most of the remaining middle-income countries have a somewhat lower road mortality rate. In these cases this could be explained by lower levels of motorisation. Increased affluence may result in increased demand for travel and rising car ownership which could negatively impact the mortality rates in countries such as Afghanistan, Bangladesh and Pakistan.

A next group is formed by most of the remaining low income countries, that almost all have a high road mortality. For these countries, road mortality is not notably higher than the average for all countries; yet, their mortality is still high which may offer opportunities to improve safety.

[1] For a detailed account; see COMCEC, "Improving Road Safety in the OIC Member States", 2016.

Table 7: Road Safety in OIC member countries

Country	GDP/c (current US$)	Income group	Estimated road deaths annually	Mortality rate [deaths/100,000 pop.]
Albania	4,130	Middle	478	15.1
Yemen	1,330	Middle	5,248	21.5
Morocco	3,040	Middle	6,870	20.8
Egypt	4,031	Middle	10,466	12.8
Algeria	4,255	Middle	9,337	23.8
Tunisia	4,373	Middle	2,679	24.4
Libya	4,701	Middle	4,554	73.4
Iraq	5,045	Middle	6,826	20.2
Iran	5,492	Middle	24,896	32.2
Jordan	5,809	Middle	1,913	26.3
Lebanon	10,544	Middle	1,088	22.6
Turkey	10,660	Middle	6,687	8.9
Oman	19,341	High	924	25.4
Bahrain	24,187	High	107	8
Saudi Arabia	26,148	High	7,898	27.4
Kuwait	33,489	High	629	18.7
UAE	42,740	High	1,021	10.9
Qatar	96,884	High	330	15.2
Afghanistan	628	Low	4,734	15.5
Tajikistan	1,125	Low	1,543	18.8
Kyrgyz Rep.	1,149	Low	1,220	22
Bangladesh	1,246	Low	21,316	13.6
Pakistan	1,482	Middle	25,781	14.2
Uzbekistan	2,088	Middle	3,240	11.2
Indonesia	3,450	Middle	38,279	15.3
Guyana	3,959	Middle	138	17.3
Azerbaijan	5,633	Middle	943	10
Turkmenistan	8,299	Middle	914	17.4
Maldives	9,109	Middle	12	3.5
Suriname	9,662	Middle	103	19.1
Malaysia	9,968	Middle	7,129	24
Kazakhstan	10,821	Middle	3,983	24.2
Niger	401	Low	4,706	26.4
Gambia	460	Low	544	29.4
Somalia	544	Low	2,664	25.4
Mozambique	569	Low	8,173	31.6
Guinea	570	Low	3,211	27.3
Guinea-Bissau	620	Low	468	27.5
Burkina Faso	655	Low	5,072	30
Togo	658	Low	2,123	31.1
Uganda	718	Low	10,280	27.4
Benin	821	Low	2,855	27.7
Sierra Leone	822	Low	1,661	27.3
Chad	849	Low	3,089	24.1
Mali	856	Low	3,920	25.6
Senegal	1,108	Low	3,844	27.2
Cameroon	1,312	Middle	6,136	27.6
Mauritania	1,399	Middle	952	24.5
Cote d'Ivoire	1,563	Middle	4,924	24.2
Djibouti	1,820	Middle	216	24.7
Sudan	1,944	Middle	9,221	24.3
Nigeria	2,771	Middle	35,641	20.5
Gabon	8,578	Middle	383	22.9

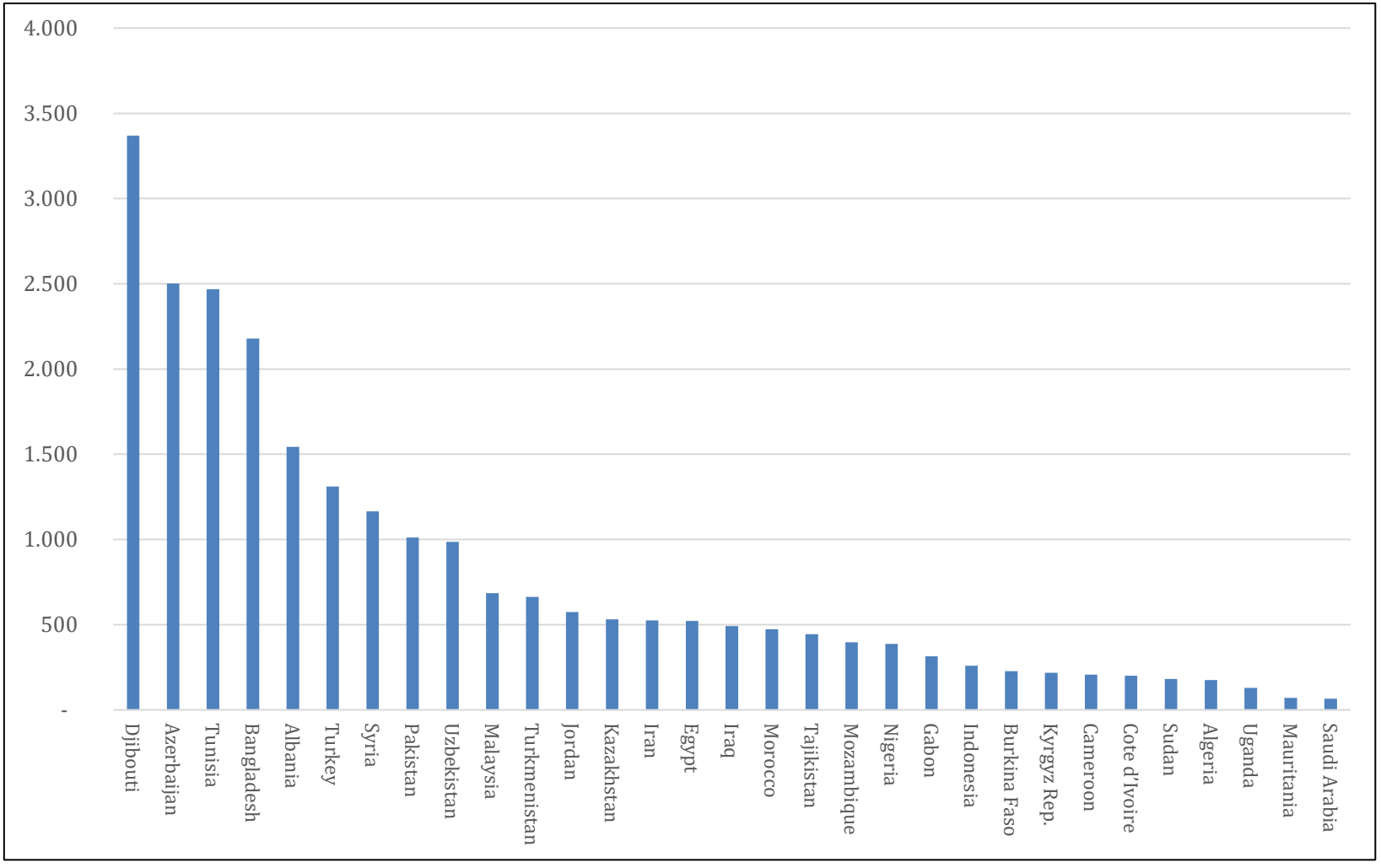
Source: Based on COMCEC, Improving Road Safety in the OIC Member States, 2016.

3.2. RAIL TRANSPORT

Rail transportation had been the major transport mode especially for most of inland cities for decades. However, expanding network of roads and improvements in aircraft and road vehicle technology increased the stiff competition from air and road transport. As a result, rail transport has become more freight-oriented over time. Today, rail passenger operations are in general financially viable only at some high-speed and commuter lines whereas other rail passenger lines are generally subsidized by the governments.

Figure 9 gives the rail network density (the length of rail network divided by the area of the country) of the OIC countries. Again, there is a large variation in the density of rail networks in the different OIC countries. Almost all OIC countries (except Djibouti, Azerbaijan, Tunisia, Bangladesh, Albania, Turkey, Syria, and Pakistan) have fewer than 1,000 km of rail lines per 100,000 km^2 land area, while almost half of the OIC countries have no railway network. Djibouti with its 781 km of rail lines has the highest rail network density, i.e. 3,369 km per 100,000 km^2, among the OIC countries due to its relatively small land area. In comparison, Kazakhstan, with its 14,329 km rail length, which ranks it top among the OIC countries, has only a density of 531 km per 100,000 km^2, due to its very large land area. Average network density of the OIC countries is equal to 426 km of railway per 100,000 km^2 land area, which accounts almost half of that of developing economies, which averages at 740 km.

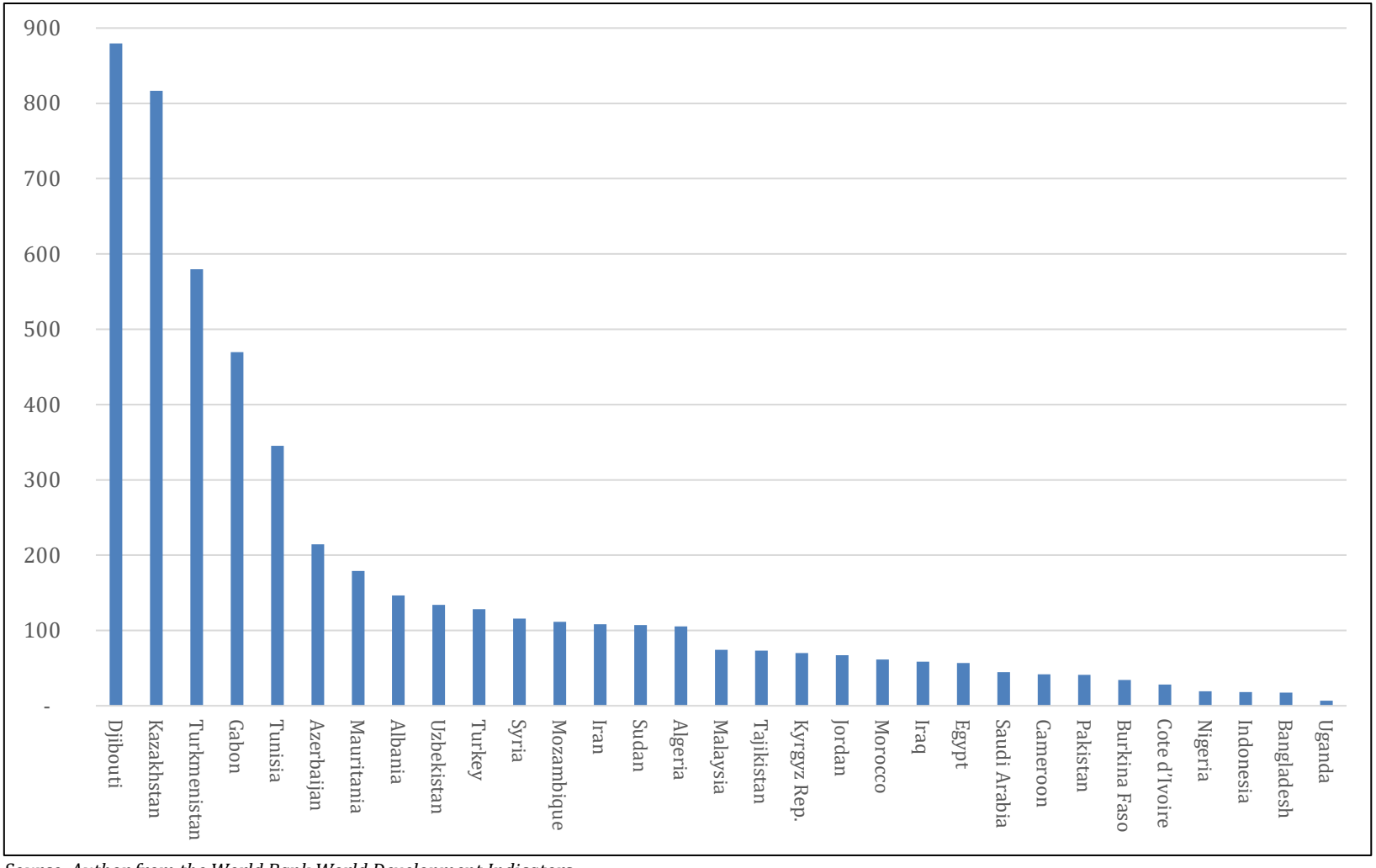
Figure 9: Rail network density (km/100,000 km² land area)



Source: Author from the World Bank World Development Indicators

Figure 10 shows the length of the rail network relative to the country's population. As in the case of road network, rail network per capita can be considered as a proxy for measuring the extent of service by railways to any person in a country. All OIC countries (except Djibouti, Kazakhstan, Turkmenistan, Gabon, Tunisia, and Azerbaijan) have fewer than 200 km of rail lines per million population. At the individual country level, Djibouti and Kazakhstan registered the highest level of rail network per capita, i.e. 880 and 817 km per million population, respectively. Average rail network per capita of the OIC countries is equal to 92 km per million population while the world average is 164 km. This suggests that the length of the rail network is inadequate to serve the OIC population, even without taking into consideration that almost half of the OIC countries have no railway network.

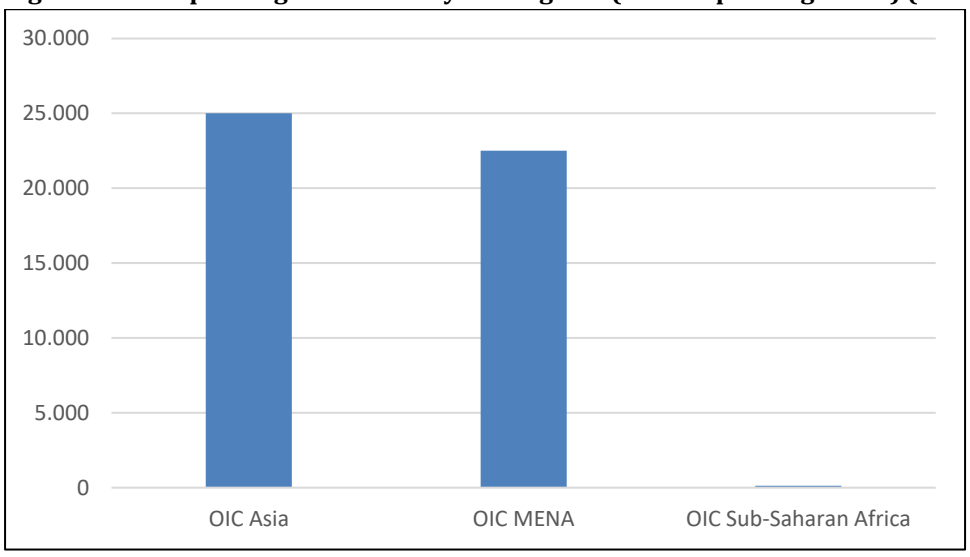
Figure 10: Rail network density ((km/million population)



Source: Author from the World Bank World Development Indicators

Figure 11 reveals that OIC-Sub-Saharan Africa has very low share compared to the OIC-MENA and OIC-Asia regions in terms of rail passengers carried in 2016. Egypt and Iran from the OIC-MENA region and Pakistan, Indonesia, and Kazakhstan from the OIC-Asia are the leading member states with regard to rail passengers.

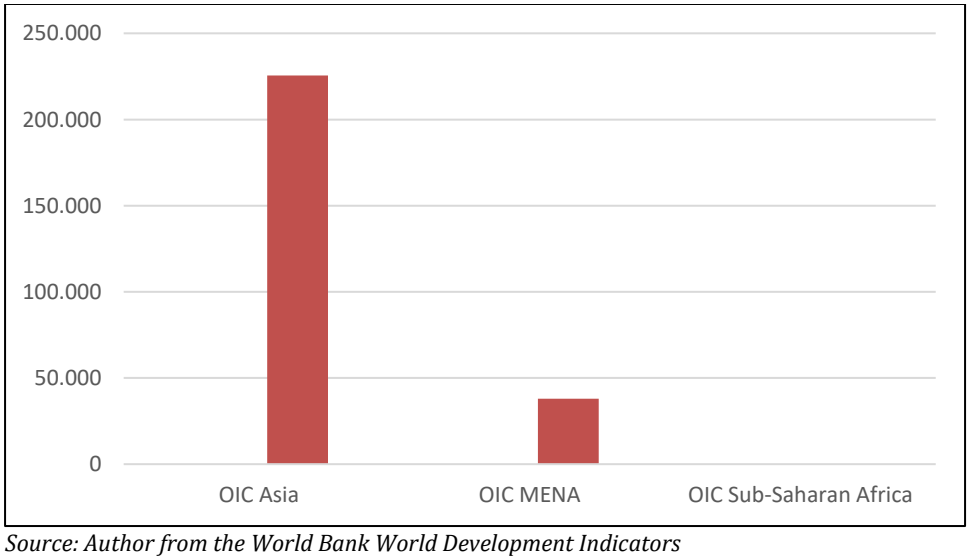
Figure 11: Rail passengers carried by OIC regions (million passenger-km) (2016)



Source: Author from the World Bank World Development Indicators

As Figure 12 shows, rail freight carried in the OIC-Asia region, which predominantly belongs to Kazakhstan, is far above other regions in 2016. In the OIC-MENA region, Iran and Turkey together carried more than two-thirds of region's rail freight.

Figure 12: Rail freight carried by OIC regions (million ton-km) (2016)



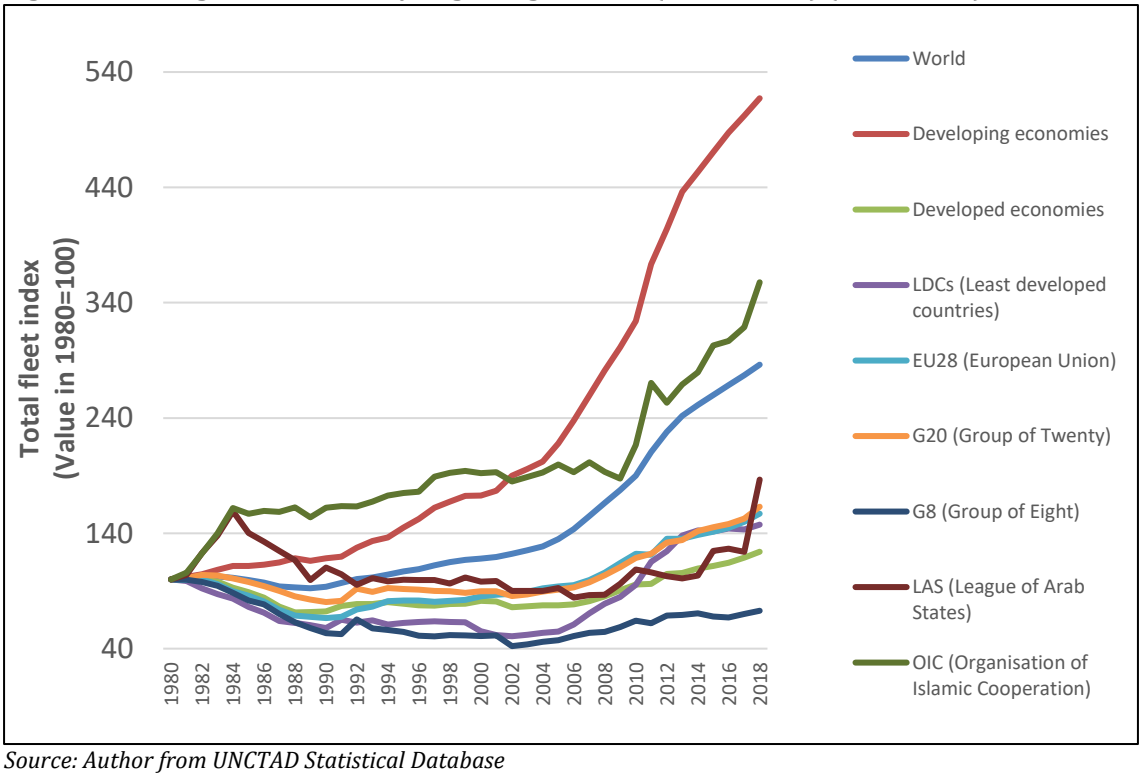
Source: Author from the World Bank World Development Indicators

3.3. MARITIME TRANSPORT[2]

While all modes of transport are important, maritime transport needs special attention given that almost 85% of global trade is carried by sea in terms of weight and thus ports can account for a significant proportion of trade logistics and transport costs. (COMCEC, 2015)

A measure that can be used as a proxy for the international trade is the change in global fleet. Figure 13 shows, using UNCTAD data, the change in the total fleet, in dead weight tons in thousands, by flag of registration for the 1980-2018 period. During this 29-year period, world fleet has increased 186% while only two subgroup, i.e. developing economies and OIC, outperformed this global average with a growth of 417% and 258%, respectively.

Figure 13: Change in total fleet by flag of registration (in 1000 dwt) (1980-2018)



Source: Author from UNCTAD Statistical Database

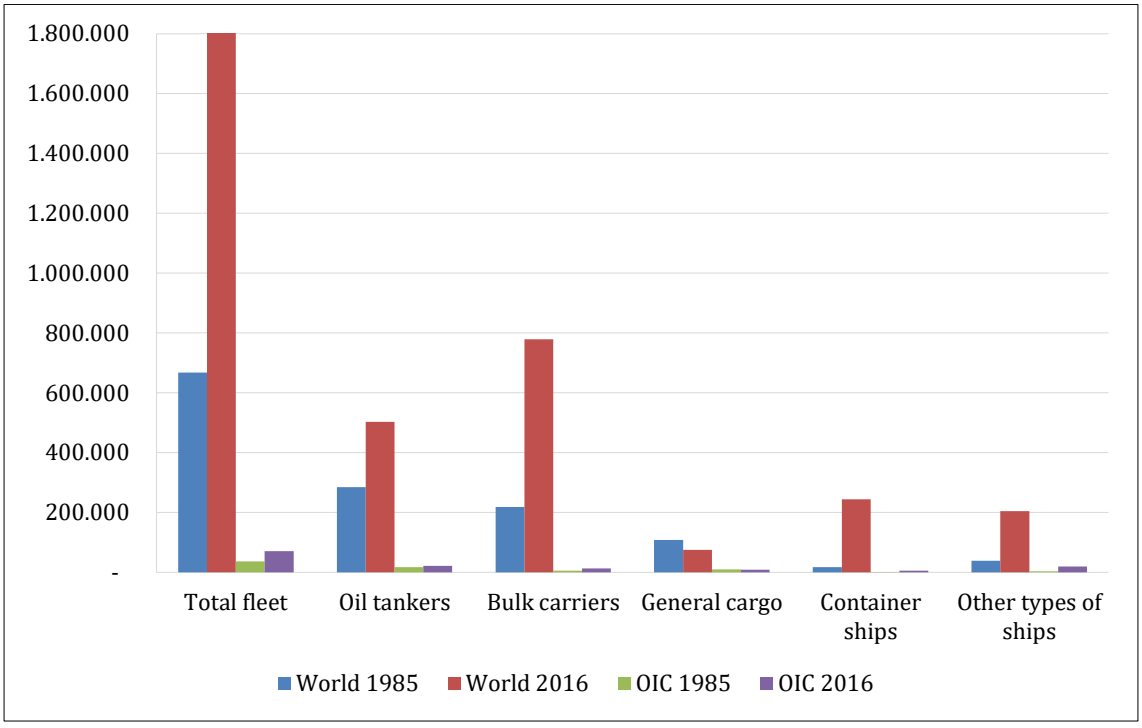
The increase in the commercial fleet registered under the flags of the OIC Member States corresponds to a total capacity of 84.5 million deadweight tons (dwt) in 2018 compared with 23.6 million dwt in 1980. The majority of the fleet consist of oil tankers whereas container ships represent only 8.2% of the total fleet. Considering the comparatively higher share of the OIC countries in the world trade, i.e. around 10%, than that of the fleet capacity, it can be concluded that the majority of the OIC's merchandise trade is being carried by foreign shipping companies.

[2] For a more detailed account on the subject, see COMCEC, "Evaluating the Ownership, Governance Structures and Performances of Ports in the OIC Member Countries", 2015.

Although such a situation is a common trend in today's globalized shipping industry, this often leads to high maritime transport costs and low shipping connectivity particularly for the OIC countries with smaller economies located in remote locations (COMCEC, 2015).

Figure 14 compares the share of OIC fleet in the global fleet by ship's type in 1985 and 2016, respectively. The figure reveals that the OIC's share of general cargo ships is currently 12.5% of the world's general cargo fleet, while the OIC share in the global bulk and tanker fleet is only 1.7% and 4.4%, respectively. This is surprising considering the trade in many OIC countries are mainly dominated by bulk and fuel commodities (COMCEC, 2015).

Figure 14: OIC and global commercial fleet by type of ship (1985 and 2016)



Source: Compiled by the author from UNCTAD Statistical Database

Table 8 presents the commercial fleet capacity of the OIC countries. Between OIC countries, there is a great disparity in ship ownership and operation. In 2018, Indonesia had the largest commercial OIC fleet capacity with a total tonnage of 22.3 million dwt. Other countries with large fleets include Saudi Arabia (13.5 million dwt), Malaysia (10.2 million dwt), and Turkey (7.7 million dwt). At the other end of the scale, some OIC countries such as Afghanistan and Mali have no commercial fleet while others like Benin and Somalia have negligible tonnage despite the importance of their maritime trade related sectors.

Table 8: Commercial fleet in OIC countries by flag registration (1.000 dwt) (2018)

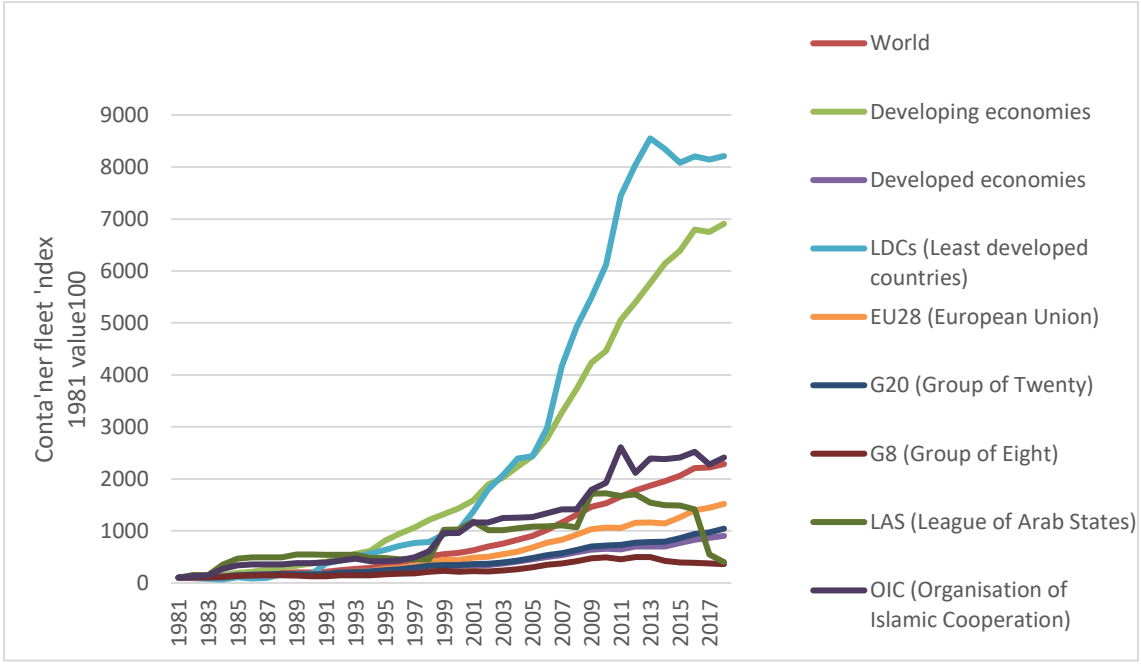
Country	Number of ships	Tonnage
Indonesia	9 053	22 313.288
Saudi Arabia	380	13 522.914
Malaysia	1 704	10 230.538
Turkey	1 263	7 740.821
Kuwait	158	4 886.736
Iran	720	4 176.286
Nigeria	576	3 717.102
Libya	98	2 124.394
Bangladesh	329	2 050.39
Sierra Leone	469	1 877.177
Egypt	389	1 549.304
Togo	327	1 444.179
Comoros	203	1 207.513
Qatar	140	1 134.662
United Arab Emirates	616	764.824
Azerbaijan	313	751.025
Pakistan	53	717.05
Algeria	106	640.422
Brunei Darussalam	100	552.941
Yemen	31	441.066
Cameroon	19	433.508
Gabon	29	395.436
Tunisia	66	313.299
Bahrain	259	291.317
Lebanon	55	188.921
Morocco	87	177.541
Kazakhstan	121	154.304
Turkmenistan	72	123.938
Iraq	80	106.507
Jordan	32	98.526
Maldives	67	70.619
Albania	60	56.658
Guyana	55	35
Mozambique	27	26.527
Sudan	18	17.808
Mauritania	7	15.586
Oman	51	13.858
Senegal	27	13.589
Côte d'Ivoire	15	9.916
Suriname	10	6.517
Niger	1	3.168
Gambia	9	3.006
Djibouti	15	1.768
Guinea-Bissau	9	0.781
Somalia	5	0.629
Benin	6	0.388

Source: Author from UNCTAD Statistical Database

Among other categories of cargo, the container transport deserve particular attention and is the major maritime focus in this report. The invention of the container was arguably the most important transportation advance of the 20th century. The container has revolutionized the global trade like the semiconductor has changed information and communication systems. Thanks to the deployment of freight containers in multimodal chains of transport, efficiency of logistics are increased, logistics costs are reduced, less goods are damaged, and security of shipments is strengthened. (COMCEC, 2014) "The container has made the world smaller as the transit time between origins and destinations of cargo flows has declined, and it made the world larger as the container ensures to integrate even the remotest region into world trade. It is therefore no wonder that the container has become the icon of globalism." (COMCEC, 2013)

Containerization has been the main stimulant in increasing container fleet capacity. In parallel with this trend, the growth in container fleet outpaced that of total fleet and the world container fleet has been almost quadrupled in 38 years, between 1981 and 2018. As can be seen in Figure 15, the increase in the OIC container fleet is more than that of the world.

Figure 15: Change in container fleet by flag of registration (in 1000 dwt) (1981-2018)



Source: Author from UNCTAD Statistical Database

Nevertheless, the total share of container shipping companies from the OIC countries, which is less than 3% of the global container shipping market, does not mirror OIC's share in world trade. Table 6 shows that major container shipping companies in the OIC countries are mainly from the UAE and Indonesia which are followed by Iran and Turkey. "However, those statistics must be interpreted with caution given the ownership and operational features of the global container shipping industry. For instance, the Turkish conglomerate Yıldırım Group has, as of November 2014, a 24% stake in CMA-CGM, the 3rd largest container shipping line. At the same time,

container liners in some OIC countries such as Indonesia and Malaysia are more focused on domestic and regional trade, while other OIC countries still retain high public stakes in national shipping companies." (COMCEC, 2015)

Table 9: Major container shipping companies in the OIC countries

Country	Operator	Global rank	TEU	Ships
UAE	UASC	18	338,872	53
Iran	HDS Lines	23	88,608	22
Turkey	Arkas Line / EMES	28	54,753	37
UAE	OEL / Shreyas (Transworld Group)	41	31,072	22
Indonesia	Salam Pacific	44	29,020	45
UAE	Meratus	45	28,789	49
Indonesia	Tanto Intim Line	46	27,310	47
UAE	Emirates Shipping Line	54	20,917	6
Turkey	Turkon Line	61	13,568	8
Indonesia	Temas Line	62	13,442	23
Malaysia	MTT Shipping	79	7,918	7
Qatar	Qatar Navigation (Milaha)	88	6,651	8
Indonesia	Caraka Tirta Perkasa	93	6,103	9
Algeria	CNAN	96	5,316	9

Source: COMCEC (2015) from Alphaliner (2015)

Ports are critical logistics infrastructure facilities and play a key role in the international trade. There are over 200 OIC ports that serve as either gateway or transshipment facilities, and sometimes as transit points to other landlocked OIC countries. Ports are of critical importance for integration of the OIC countries into global markets as well as among themselves given that some OIC countries have smaller economies located in remote locations. Indeed, some OIC ports have a strategic importance for global trade due to their positions on the international maritime routes or services to large hinterland markets. However, there are also many OIC countries that are landlocked, i.e. Afghanistan, Azerbaijan, Burkina Faso, Chad, Kazakhstan, Kyrgyz Republic, Mali, Niger, Tajikistan, Uganda, and Uzbekistan; while some others that are Small Island Developing States (SIDS), i.e. Comoros, the Maldives, and Suriname.

The container throughput of the OIC countries has reached 119 million TEU in 2017 up from 85.2 million TEU in 2010. However, the share of OIC countries in the global container throughput has remained flat at around 15% in the 2010-2017 period. Both Malaysia and the UAE show high volume throughput with 24.7 million TEU and 21.3 million TEU, respectively. On the other hand, majority of the OIC countries couldn't even reach the one million TEU threshold. In the Maldives, Mauritania, Albania, and Brunei, very low container throughput volumes reflect the small size of the port sector in those countries.

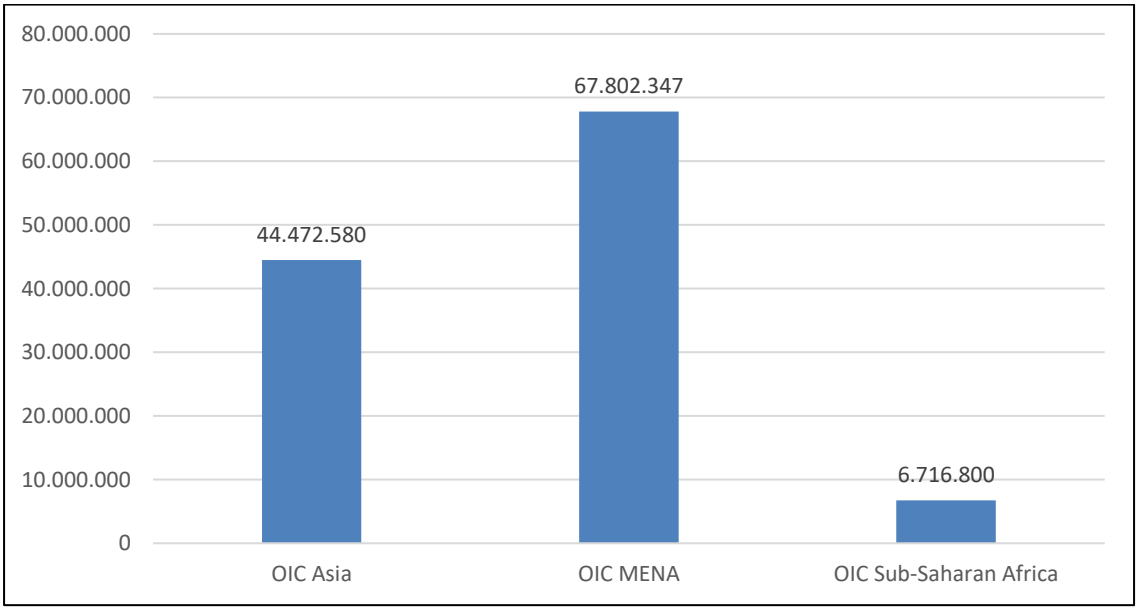
Table 10: Container-port throughput in the OIC countries over the 2010-2017 period (TEU)

YEAR	2010	2011	2012	2013	2014	2015	2016	2017
Malaysia	18141919	20064456	20898133	21376500	22645237	24259700	24570000	24719000
UAE	15177436	16866912	18120112	18693112	20223612	21233200	20613200	21280900
Indonesia	9692442	10413589	11543294	11862228	11619900	11978700	12478700	13859500
Turkey	6603579	7392584	8168692.5	9428746.25	9341316.375	8832075.813	8580941.594	9927385
Saudi Arabia	5810404	7001000	7949000	7811139	7446762.25	7567862.25	7578862.25	8404000
Egypt	6833009	6514020	7434989	7345189	7897189	7186489	7377489	7430000
Oman	3943835	3749817	4330000	4024400	3886000	3569000	4075000	4784712
Morocco	2800000	3033000	2964820	3526200	4075000	3965000	3979000	4570000
Iran	3045500	3426000	2656000	2129000	2270000	2165250	2555062.5	3091000
Pakistan	2149000	2278000	2222000	2262000	2534600	2755600	2755600	2985600
Bangladesh	1349627	1417251	1426651	1489351	1642951	2044651	2376651	2587000
Nigeria	1232000	1510900	1723000	1580000	1700000	1400000	1437000	1656000
Algeria	1114117	1083800	1083800	1142300	1248300	1243300	1256200	1403300
Kuwait	950000	950000	950000	950000	1050000	1035000	1262174	1317707
Lebanon	949000	1034000	1042000	1117300	1210000	1130000	1130000	1305000
Qatar	420000	420001	420001	420001	462000	568000	568000	1267000
Djibouti	600000	634200	659600	660000	736000	910000	987000	987000
Tunisia	349646	375000	375000	375000	375000	375000	375000	947132
Jordan	606000	705000	817000	873000	787000	767000	767000	796087
Côte d'Ivoire	530000	546000	633900	633900	600000	625000	705000	663000
Sudan	430000	430000	441000	538000	538000	538000	538000	551900
Gabon	355000	442800	518000	518000	518000	518000	518000	550000
Yemen	640076	619694	569694	559694	496000	377000	375000	535000
Senegal	349200	369100	383900	383900	383900	530000	540000	496800
Libya	70000	..	..	434608	456773	456773	451232	473793
Mozambique	290800	389300	326200	387000	449700	449700	449700	432100
Cameroon	290000	340000	340000	340000	340000	340000	340000	387000
Benin	316700	334800	348200	348200	348200	348200	348200	353000
Bahrain	269331	269331	269331	269331	269331	269331	269331	269331
Togo	339900	352700	288500	311500	380800	380800	380800	240000
Guinea	120000	135000	135000	135000	135000	135000	135000	160000
Brunei Darussalam	93230	105018	109219	121813	128026	128026	124919	124919
Suriname	59583	97335	103961	108020	108703	106014	107359	113800
Sierra Leone	50000	75000	75000	75000	75000	75000	75000	89100
Mauritania	65705	69500	72228	72700	72700	72700	72700	88400
Maldives	49627	53062	54820	79712	83777	83778	81744	82761
Gambia	58521	71932	65226	68759	70000	65000	60000	62500
Guyana	59850	52000	66000	50991	48735	52834	50476	51655

Source: Author from the World Development Indicators

Figure 16 provides distribution of the container port traffic among the OIC regions in 2017. As the figure shows, the OIC-MENA region outperforms other regions in terms of container port traffic. In the OIC-MENA region UAE, Egypt, and Turkey were the top performers regarding container throughput. For the OIC-Asia region most of the traffic were handled by a few countries such as Malaysia and Indonesia. It should also be underlined that the scope of the container port traffic is very limited in the OIC-Sub-Saharan Africa.

Figure 16: Container port traffic in the OIC regions (TEU: 20 foot equivalent units) (2017)



Source: The World Bank World Development Indicators

As of 2014, the container penetration intensity (share of containerisation in break bulk and general cargo traffic) in several OIC countries were many times lower than the rate for the global market (~100 TEU per 1,000 capita), and far lower than that of developed countries (~230 TEU per 1,000 capita). Especially, some OIC countries such as Nigeria, Algeria, and Bangladesh show very low container volumes in comparison with the size of their economies and populations as Table 11 reveals. On the other hand, a few OIC countries (e.g. UAE and Oman) have very high container penetration levels although their figures should be readjusted to account for their high transshipment traffic.

Table 11: Container trade penetration in the OIC countries (2014) (including transhipment)

Country	TEU/1,000 capita	Country	TEU/1,000 capita
UAE	2,300	**Iran**	66
Djibouti	882	**Tunisia**	55
Oman	855	**Indonesia**	47
Malaysia	760	**Benin**	39
Kuwait	340	**Côte d'Ivoire**	35
Brunei	307	**Albania**	34
Bahrain	274	**Yemen**	33
Lebanon	266	**Senegal**	31
Maldives	234	**Mauritania**	21
Qatar	205	**Cameroon**	16
Saudi Arabia	205	**Pakistan**	14
Jordan	121	**Sudan**	14
Gabon	117	**Mozambique**	12
Turkey	100	**Bangladesh**	10
Egypt	98	**Algeria**	9
Morocco	91	**Nigeria**	6
Libya	73		

Source: Author from UNCTAD and World Bank

3.4. AIR TRANSPORT

There is a large variation in the air traffic figures between the OIC Member States. On the one hand, several OIC countries achieve highest air traffic globally. As can be seen in Table 12, there are three airports from the OIC region that are ranked in the top 30 busiest airports in terms of passenger traffic and two airports in the top 20 busiest airports in terms of air cargo traffic as of 2016.

Table 12: OIC airports ranked in the top 30 for passenger traffic and in the top 20 for air cargo traffic (2016)

PASSENGER		CARGO	
City (Airport)	**Passengers**	**City (Airport)**	**Metric Tonnes**
Dubai, UAE	83,654,250	**Dubai, UAE**	2,592,454
Istanbul, Turkey	60,422,847	**Doha, Qatar**	1,758,074
Jakarta, Indonesia	58,195,484		

Source: Author from Airports Council International

On the other hand, several OIC member countries lack an operating airport and accordingly fail to experience any air traffic movement. As can be seen in Table 13, among all OIC countries, Turkey, Indonesia, and UAE had the highest air passenger traffic in 2017. In terms of geographical classification, Turkey, UAE, and Saudi Arabia in the MENA; Nigeria, Cote d'Ivoire, and Mozambique in the Sub-Saharan Africa; and Indonesia, Malaysia, and Pakistan in the Asia were the top three OIC member countries with highest air passenger movement. Nevertheless, almost two thirds of the air passengers is carried at MENA region while one third is carried at Asia.

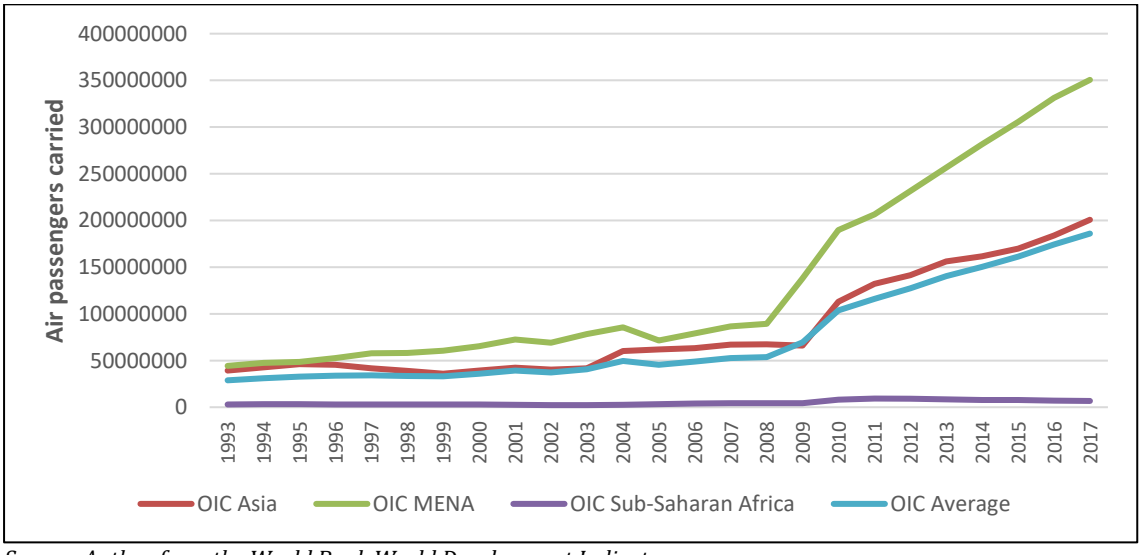
Table 13: Air passengers carried at the OIC Member States (2017)

MENA		Sub-Saharan Africa		Asia	
Turkey	107,917,326	**Nigeria**	3,446,717	**Indonesia**	110,252,913
UAE	95,306,296	**Cote d'Ivoire**	788,098	**Malaysia**	58,188,823
Saudi Arabia	37,503,000	**Mozambique**	569,829	**Pakistan**	9,919,768
Qatar	29,949,181	**Togo**	500,686	**Kazakhstan**	5,653,190
Iran	19,282,796	**Mauritania**	418,817	**Bangladesh**	3,785,509
Egypt	12,017,179	**Sudan**	328,741	**Uzbekistan**	2,581,865
Oman	9,065,019	**Cameroon**	236,000	**Azerbaijan**	2,331,308
Morocco	8,436,970	**Burkina Faso**	145,049	**Afghanistan**	1,858,558
Algeria	6,241,924	**Gabon**	77,320	**Maldives**	1,485,752
Kuwait	5,586,034	**Uganda**	54,937	**Turkmenistan**	1,279,937
Bahrain	5,190,484	**The Gambia**	53,735	**Brunei Darussalam**	1,172,201
Tunisia	4,194,174	**Senegal**	21,038	**Kyrgyz Republic**	1,127,285
Jordan	3,381,677	**Niger**	14,713	**Tajikistan**	796,383
Lebanon	2,869,266	**Somalia**	4,486	**Suriname**	284,935
Iraq	2,170,504				
Libya	1,186,424				
Yemen, Rep.	132,571				

Source: Author from the World Bank World Development Indicators

Regarding the number of air passengers throughout the 1993-2017 period, Figure 17 reveals that OIC-MENA outperformed other regions since 1993 while OIC-Sub-Saharan Africa remained well below the other regions during this period.

Figure 17: Total air passengers carried in the OIC regions (1993-2017)



Source: Author from the World Bank World Development Indicators

In general, more populous countries tend to have higher air passenger traffic. In addition, the income level, geographical position and the availability of alternative transport modes affect the level of air passenger traffic in that country. For example, higher per capita income countries are more likely to have higher per capita air passenger traffic. Similarly, it is possible to observe that island countries where surface transport linkages are quite limited have higher per capita air passenger traffic figures. To analyse the linkage between population and air passenger movements for the OIC Member States, the air passenger movements of the member states were normalized with their populations. In this regard, Table 14 presenting the ratios of air passengers carried to the populations of each member state has several implications. Firstly, in parallel to the theory, the high income gulf countries such as Qatar, UAE, and Bahrain and island states like Brunei Darussalam and Malaysia have higher per capita air passenger traffic figures. Secondly, the OIC countries with dominant network airlines are more likely to experience higher per capita air passenger traffic. Thanks to their well-established hub-and-spoke system, large network airlines such as Turkish Airlines and Emirates can achieve higher economies of scale and thus enjoy higher per capita air passenger traffic.

Table 14: Per capita air passengers carried at the OIC Member States (2016)

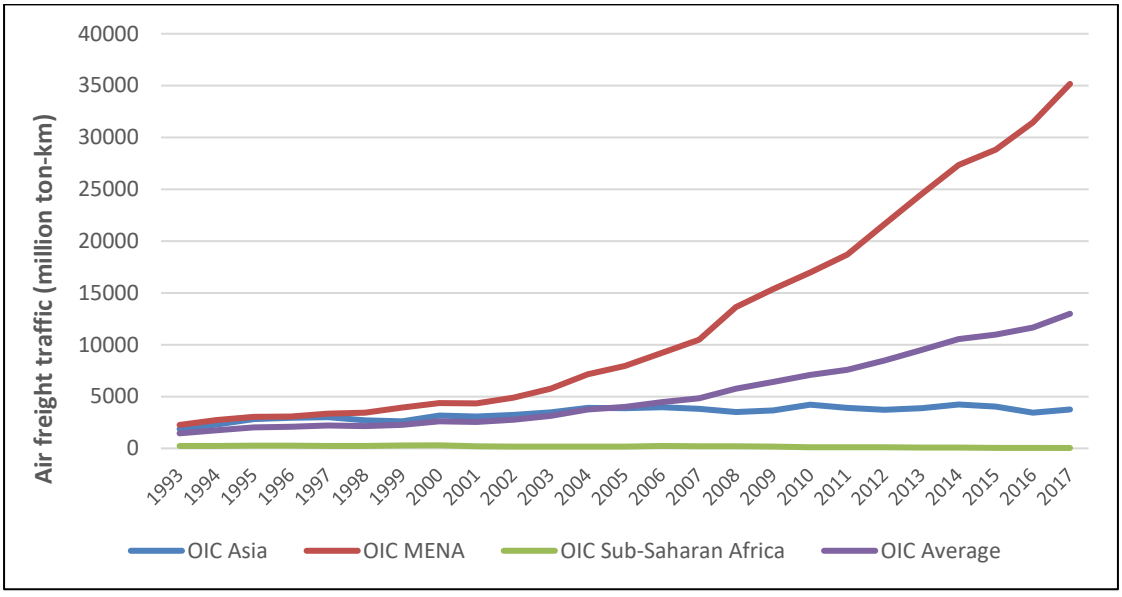
MENA		Sub-Saharan Africa		Asia	
Qatar	12,145	**Mauritania**	0,065	**Maldives**	3,377
UAE	9,942	**Togo**	0,062	**Brunei Darussalam**	2,761
Bahrain	3,663	**Gabon**	0,039	**Malaysia**	1,726
Oman	1,727	**Nigeria**	0,024	**Suriname**	0,480
Turkey	1,262	**Mozambique**	0,022	**Indonesia**	0,370
Saudi Arabia	1,069	**Gambia, The**	0,022	**Kazakhstan**	0,281
Kuwait	0,988	**Cote d'Ivoire**	0,018	**Turkmenistan**	0,233
Lebanon	0,441	**Cameroon**	0,015	**Azerbaijan**	0,201
Jordan	0,336	**Burkina Faso**	0,008	**Tajikistan**	0,119
Tunisia	0,316	**Sudan**	0,007	**Kyrgyz Republic**	0,096
Morocco	0,219	**Uganda**	0,001	**Uzbekistan**	0,075
Libya	0,204	**Niger**	0,001	**Afghanistan**	0,055
Iran	0,193	**Senegal**	0,001	**Pakistan**	0,050
Algeria	0,150			**Bangladesh**	0,023
Egypt	0,130				
Yemen	0,030				
Iraq	0,013				
Albania	0,009				

Source: Author from the World Bank World Development Indicators

Figure 18 shows the changes in the air freight traffic among the OIC regions between 1993 and 2017. One implication of Figure 18 is that air freight traffic in the OIC-Sub-Saharan Africa has been quite premature and fell well below the other regions during this period. It is also noteworthy that there is an exponential growth of air freight traffic in the OIC-MENA region since 1993.

As a result of the boom, OIC-MENA has experienced an about 17-fold increase in its air freight traffic between 1993 and 2017 whereas OIC-Asia only less than doubled its air freight traffic during the same period. When the aggregate data is decomposed, it is seen that the boom of air freight traffic in the OIC-MENA region mostly originated from UAE.

Figure 18: Total air freight carried in the OIC regions (million ton-km) (1993-2017)

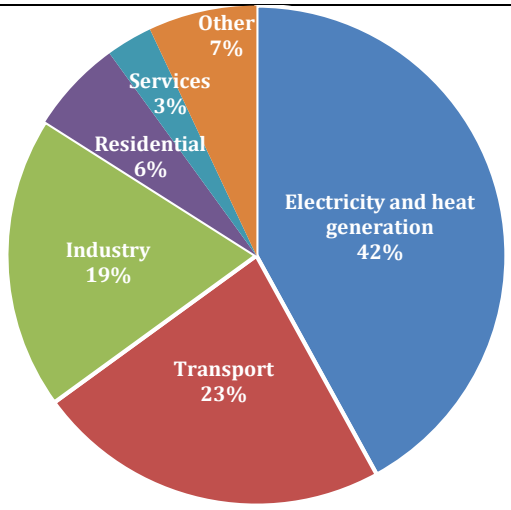


Source: Author from the World Bank World Development Indicators, adjusted for missing data

4. ENVIRONMENTAL EFFECTS OF TRANSPORT SECTOR

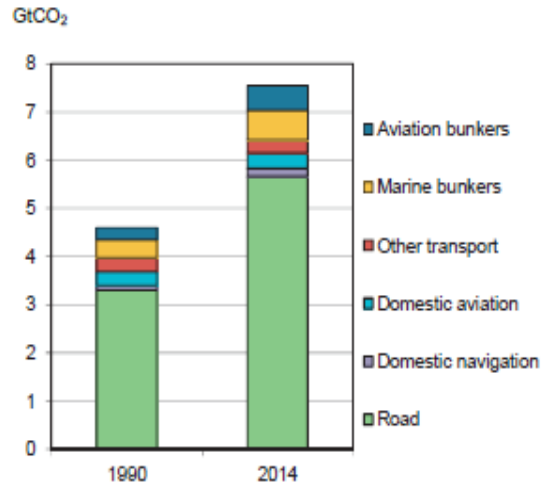
Transport emissions have been rising over time in parallel with the increase in transport demand. As Figure 19 shows, with regard to CO_2, the most emitted GHG, transportation accounted for 23% of global CO_2 emissions, which makes it the second largest CO_2 emitter, proceeded by electricity and heat generation (42%) and followed by industry (19%) in 2014 (OECD/IEA, 2016). Figure 20 reveals that with regard to international trade related CO_2 emissions by transportation mode, road transportation dominates CO_2 emissions by 53% and it is followed by maritime transport (37%), air transport (7%), and rail transport (3%).

Figure 19: World CO_2 emissions by sector (2014)



Source: OECD/IEA (2016)

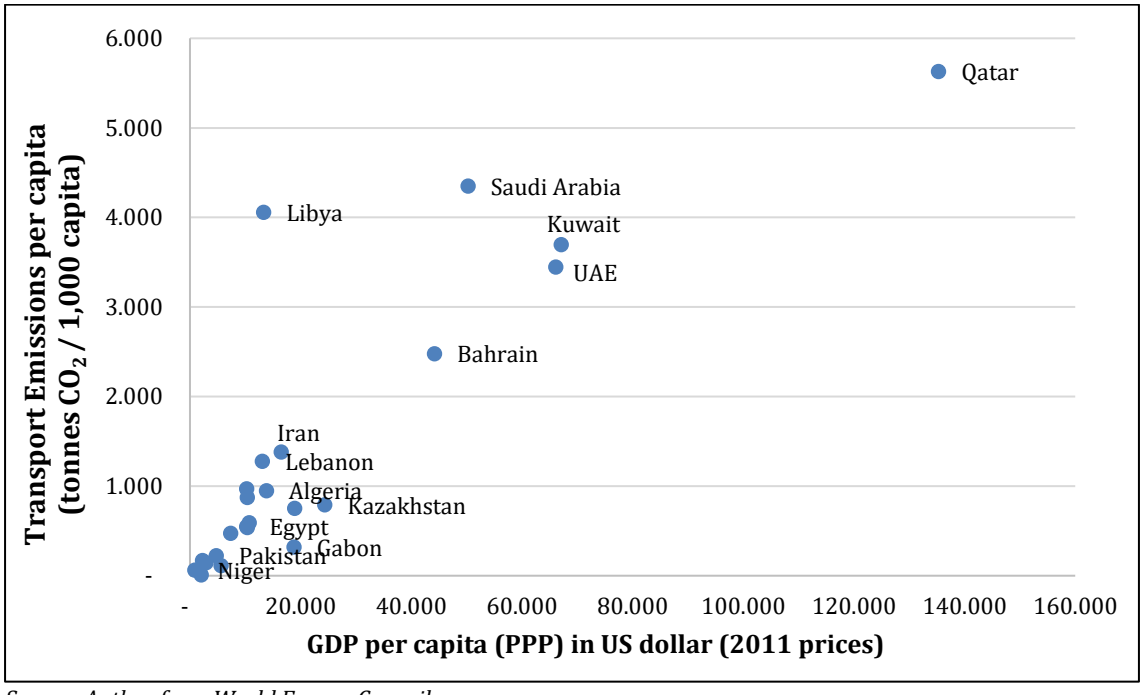
Figure 20: International trade related CO_2 emissions by mode (2014)



Source: OECD/IEA (2016)

Although it is likely to observe some variations depending on the domestic fuel prices and the availability of alternative energy sources, higher per capita income countries tend to emit more GHG per capita. Figure 21 shows that there is a positive correlation between transport-related CO_2 emissions and GDP per capita (PPP) in the OIC countries. One reason for this tendency is the increased private car ownership with increasing per capita income, which eventually increases personal trips and accordingly GHG emissions. Another implication of the figure is that the countries with higher GHG emissions are mostly from oil producing countries, which often corresponds to lower pump prices for gasoline and consequently more road sector energy consumption.

Figure 21: Transport CO_2 emissions and GDP per capita (PPP) in OIC Countries (2014)

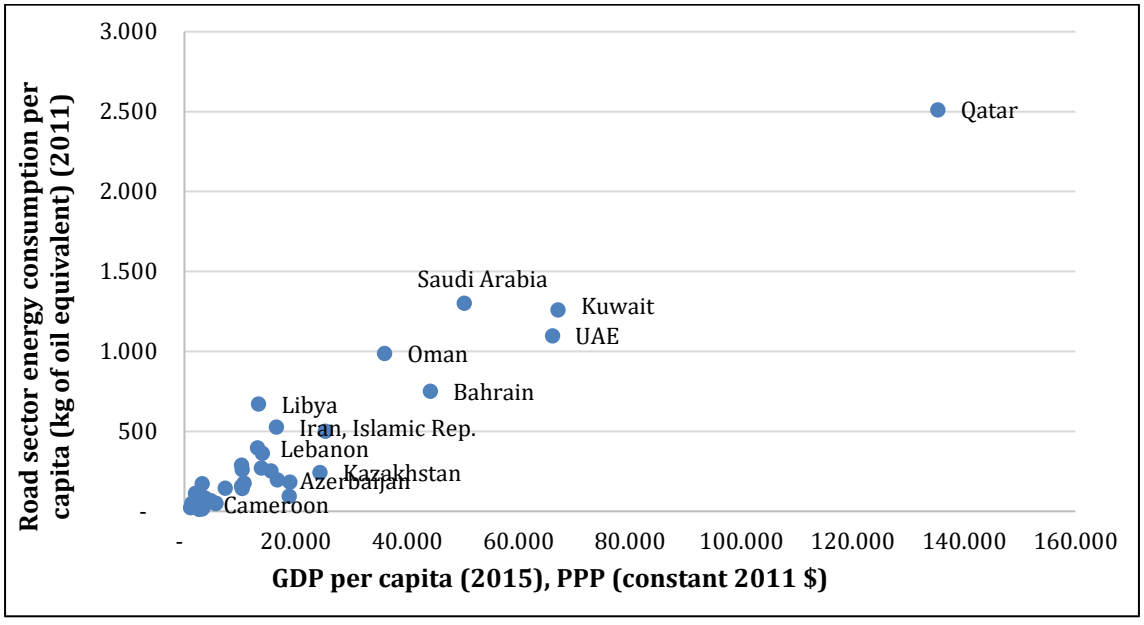


Source: Author from World Energy Council

Further analysis on road passenger transportation regarding the linkage between transport and environment is necessary for two reasons. Firstly, road transport accounts for almost three-quarter of all transport GHG emissions and passenger transportation is the determinant factor. Secondly, available data generally lack comparable statistics on road freight transport but cover road passenger transport statistics.

As noted earlier above, higher per capita income countries tend to emit more GHG per capita and this generalization is valid for the transport GHG emissions as well. Although several other factors, such as existing road infrastructure, alternative public transport opportunities, existing parking policies, personal security concerns, and the urban sprawl, are also influential; the personal income and the prices of the fuels are the two major determinants (in addition to car prices) for private car ownership and use. To begin with, 'per capita income', Figure 22, which depicts the change in road sector energy consumption per capita with respect to per capita income, shows the comparable relation for 37 OIC countries. As the figure suggests, the OIC countries with higher per capita income are more likely to consume more road sector energy per capita. The top OIC countries (i.e. Qatar, Kuwait, UAE, Saudi Arabia Oman, and Bahrain) with highest per capita income are also the top road sector energy consumers per capita.

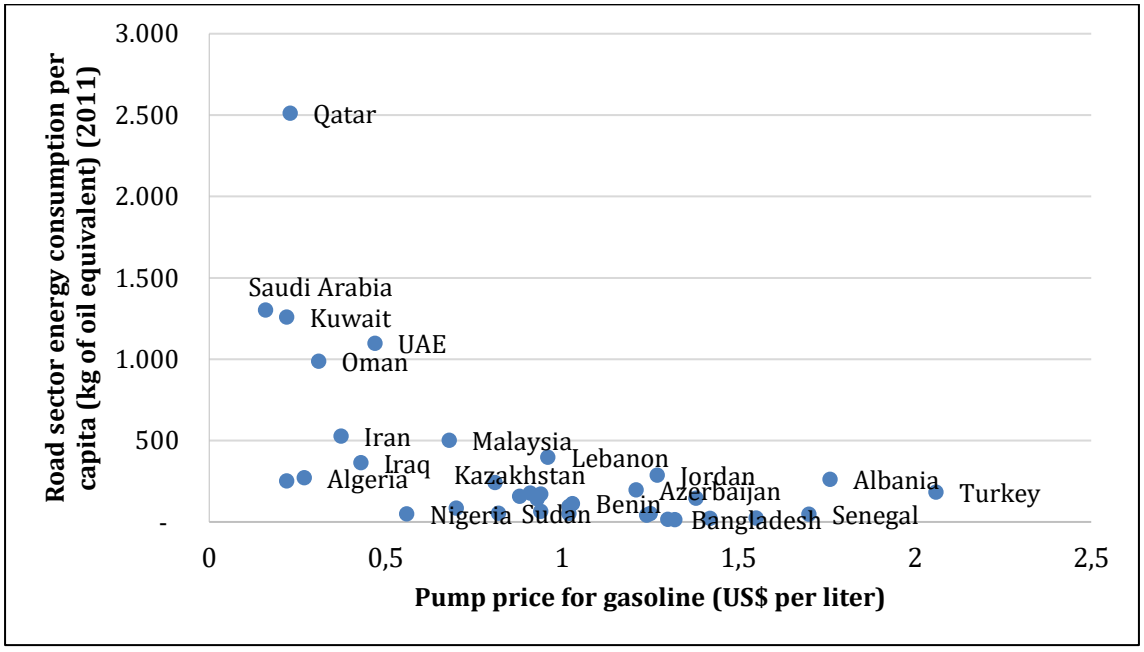
Figure 22: Road sector energy consumption and income per capita in OIC countries



Source: Author from the World Bank World Development Indicators

The pump price for gasoline is also a major determinant for road sector GHG emissions. Figure 23 shows that a negative relation exists between pump price for gasoline and road sector energy consumption in 35 OIC countries in 2011 (which can be used as a proxy for GHG emissions).

Figure 23: Road sector energy consumption per capita and pump price for gasoline in the OIC Member States (2014)



Source: Author from the World Bank World Development Indicators

Options to mitigate transportation-related GHG emissions

Public policy actions aiming at reducing the transportation-related GHG emissions of transport activities involve one or more of the following measures and as any other public policy action, each measure has its own advantages or disadvantages:

- **Enhancing fuel efficiency:** Using less fuel to travel the same amount of distance will help reduce GHG emissions. To achieve this, one option is to use smaller vehicles. Second option is to increase engine efficiency and employing lighter but still safer materials. The drawback of this option is that more fuel-efficient vehicles may stimulate higher vehicle-kilometres which may partially off-set the fuel savings.

- **Using alternative fuels:** This option involves using more environmentally friendly alternative fuels such as biofuels, natural gas, and electricity. However, using more of these alternative energy sources have their own drawbacks. An increase in biofuel (such as ethanol and biodiesel) use will not only threaten food security as it is likely to increase food prices, but also increase water use and contribute to the nitrous oxide (N_2O) emission through fertilizer use. Regarding natural gas and electricity, there is still a large room to develop more efficient, affordable and safer cars using these alternative fuels.

- **Adopting environmental pricing:** Following the polluter pays principle which suggests that a pricing mechanism should be established in a way that the polluters must bear the cost of the pollution they cause, environmental pricing schemes in transportation include some forms of taxing the travellers. The easiest way to implement an environmental pricing scheme is increasing the gasoline taxes. Though mainly aiming at reducing congestion, congestion pricing can also be classified as another form of environmental pricing.

- **Shifting from private car use to environmentally-friendly transport modes:** The most environmentally-friendly transportation mode is non-motorized travel and it does not only help reduce GHG emissions, but also contribute to congestion relief and improve public health and leads to better land use practices. The costs associated with non-motorized travel, on the other hand, are increasing travel times and accident rates. Public transit through buses, light rail system, and metro can also help reduce surface transport GHG emissions. However, especially light rail system and metro require high infrastructure investments, and transit operations may require state subsidy since transit revenues generally fail to cover transit expenses.

- **Adopting traffic restrictions**: While reducing traffic congestion is the major motivation for adopting this option, traffic restrictions are also expected to help handle transport GHG emissions. Traffic restrictions involve driving bans based on number plates, high occupancy vehicle lanes, congestion pricing schemes, and new plate quotas. These policies are difficult to implement politically and may raise equity concerns.

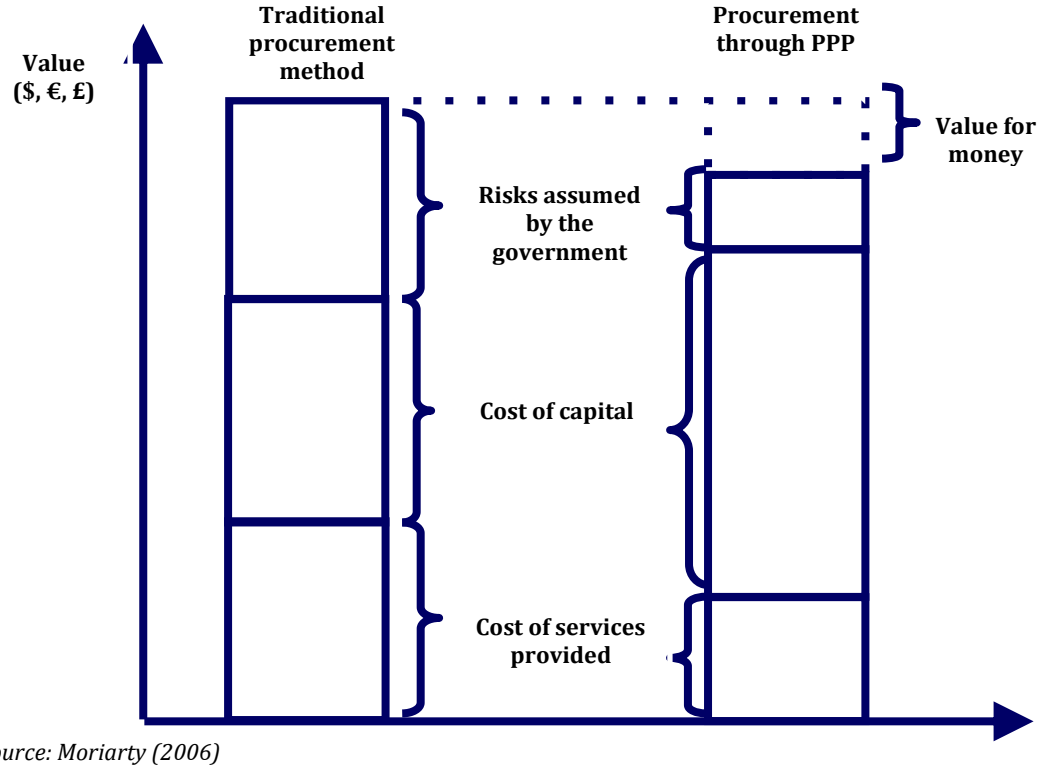
5. PRIVATIZATION IN TRANSPORT

Network industries necessitating big infrastructure investments such as transportation, telecommunication, energy, and water and sewerage have been traditionally state-owned and -operated for two major reasons. Firstly, huge initial investments created a barrier to entry for private investors. Secondly, because of the economic and social importance of such industries, governments preferred to keep them under state ownership. However, poor performances of state ownership and operations, such as low operating efficiency, labour redundancy, politically motivated tariff setting, and underinvestment, initiated a tendency to appeal to private finance and management.

Where the real benefit of a PPP project lies?

To make a comparison between the traditional public procurement and public procurement through PPP models, we can divide the total value of a project into three: (1) the cost of services provided, (2) the cost of capital, and (3) the risks assumed by the government (Figure 24).

Figure 24: The comparison of traditional public procurement with PPP procurement



Source: Moriarty (2006)

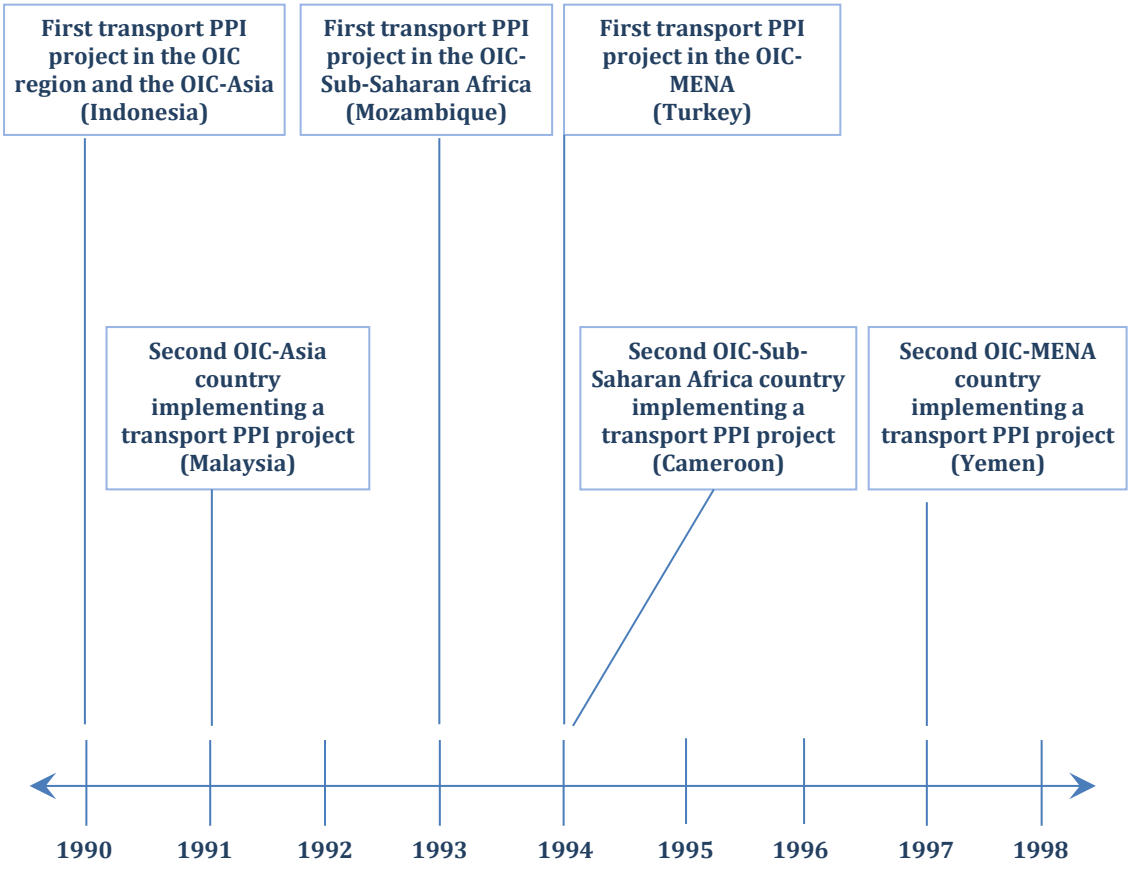
Regarding cost of capital, state procurement is generally more advantageous than PPP-type procurement because cost of borrowing of a private entity is generally higher than that of public sector, given generally high risks inherently involved in PPP projects. On the other hand,

advantages of PPP-type procurement arise by regarding cost of services provided and risks assumed by the government. It is generally expected that private sector can achieve more cost savings during implementation of investments and provide cheaper services than public sector can. In addition, during PPP-type procurement, private sector assumes that some of risks, such as construction, availability, and demand risks associated with projects which public sector assumes in traditional procurement. For a PPP model to be eligible, value of money must be achieved, which means that sum of benefits- from cost savings for services provided and risks transferred from public sector to private one -should exceed costs associated with higher cost of capital of private sector.

Initially and substantially adopted by the United Kingdom, within the last couple of decades, public-private partnerships (PPPs) - including private participation in infrastructure (PPIs) - today play an important role in provision of public infrastructure and services. It doesn't matter if the country is developed, developing or a least-developed one, governments use various PPP models, ranging from management contracts to Build-Own-Operate model and divestitures, mainly; (1) to attract private finance to their infrastructure projects in face of large budget deficits, (2) to improve efficiency and quality of services provided, and (3) to liberalize their economy.

In fact, the OIC geography has been quite familiar with private participation in large transport infrastructure projects. Opened in 1869, Suez Canal was a typical Build-Operate-Transfer project for which the private operator had obtained a concession to operate the canal for 99 years. Other transportation concessions during the Ottoman Empire era included the Port of Istanbul, Port of Izmir, Istanbul Rail Tunnel, and Istanbul Streetcar (Yılmaz, 1996). Some sources (Tiong, 1990; Handley, 1997; Özdoğan and Birgönül, 2000) cite that even the term Build-Operate-Transfer was coined by Turgut Özal, the former prime minister and the president of Turkey. In the 20th century, the first transport PPI project in the OIC geography was implemented in Indonesia in 1990 and it was followed by a second PPI project in Malaysia in 1991. The first PPI project in OIC-Sub-Saharan Africa and OIC-MENA were implemented in Mozambique in 1993 and in Turkey in 1994. Figure 25 presents the timeline of the initial transport PPI projects in the OIC regions.

Figure 25: Timeline of the initial transport PPI projects in the OIC region



Source: Author from the World Bank PPI Database

However, past experience of the OIC region on PPP applications calls for major improvements. A successful implementation of a PPP project requires; (1) political and economic stability, (2) sound legal framework, (3) institutional capacity, (4) political commitment and support, (5) transparent and competitive tender procedures free from corruption, (6) an organized and developed domestic private entrepreneurship (including financial institutions and construction companies), and (7) public acceptance and support. Unfortunately, the OIC countries generally fail to achieve most of these preconditions.

Distribution of PPI Projects by sector and region

In this section, a brief analysis on the historical PPP trends and what OIC countries have been doing about transportation PPPs/PPIs will provided.

The World Bank PPI database, which covers 139 low and middle-income countries, provides the most comprehensive data on PPI projects and classifies them into 4 main sectors; (1) energy, (2) telecom, (3) transport, and (4) water and sewerage. Table 15 shows that, financial closure of a total of 9,218 PPI projects has been finalized in the world between 1991 and 2017. Energy

sector had the largest share (59.6%) in terms of number of PPI projects and it was followed by transport sector (22.7%).

Table 15: Distribution of PPI projects by infrastructure sectors (1991-2017)

Sectors	Number of PPI projects	Percentage shares
Energy	5.497	59,6%
Telecom	525	5,7%
Transport	2.095	22,7%
Water and sewerage	1.101	11,9%
Total	9.218	100,0%

Source: Author from the World Bank PPI Database

Table 16, which presents the distribution of PPI projects by their PPI-types during the 1991-2017 period shows that some variations in PPI-type exist depending on the characteristics of individual sectors. Table 16 shows that greenfield projects have been the most frequently used PPI type in energy and telecom sectors whereas transport sector mostly adopted brownfield. On the other hand, both energy and telecom sectors applied divestitures more frequently than transport and water and sewerage sectors in both absolute and percentage terms. In addition, water and sewerage sector used management and lease contracts more than any other sector did. Among various PPI types, brownfield projects have been the most common form of PPI investment in the transport sector with a share of 62.3% whereas 29% of the transport PPI projects has been implemented through greenfield schemes. Divestitures and management and lease contracts had relatively lower shares, i.e. 4.1% and 4.7%, respectively.

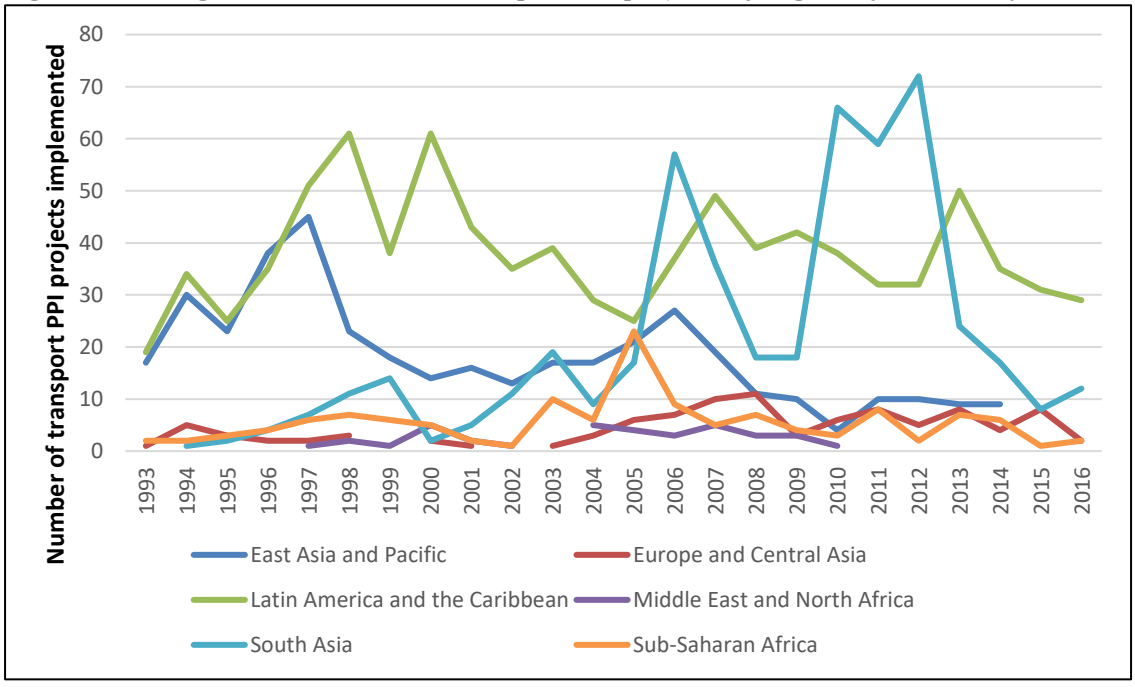
Table 16: Distribution of the PPI projects by PPI-types (1991-2017)

Sector	Brownfield	Divestiture	Greenfield project	Management and lease contract	Total
Energy	1.035	1.017	3.380	65	5.497
Telecom	8	189	318	10	525
Transport	1.306	85	606	98	2.095
Water and sewerage	440	33	449	179	1.101
TOTAL	2.789	1.324	4.753	352	9.218

Source: Author from the World Bank PPI Database

The changes in the number of transport PPI projects by geographic regions in the 1991-2017 period are presented in Figure 26. In terms of using PPI models in transport projects, South Asia - with an increasing trend in recent years - and Latin America and the Caribbean are the two best performing regions whereas Middle East and North Africa and Sub-Saharan Africa remained at the bottom of the figure. Another interesting feature of the figure is its fluctuant pattern as a result of regional and global crises which proves that PPI/PPP implementation has been quite sensitive to economic stability.

Figure 26: Changes in the number of transport PPI projects by regions (1991-2017)



Source: Author from the World Bank PPI Database

With respect to the distribution of transport PPI projects by modes, for roads the PPI projects outnumbered others with a share of 48.4% while seaports, railroads, and airports had the shares of 28.9%, 13%, and 9.7%, respectively. Table 17 provides the global transport PPI project counts and their respective shares with regard to transport modes.

Table 17: Distribution of global transport PPI projects by modes (1991-2017)

Subsector	Project Count	% Project Count	Total Investment Commitments (billion $)	% Total Investment
Airports	204	9,7%	103,81	18%
Railroads	273	13%	117,72	20,4%
Roads	1.015	48,4%	271,4	47%
Seaports	605	28,9%	84,39	14,6%
Total	2.097	100%	577,32	100%

Source: Author from the World Bank PPI Database

6. TELECOMMUNICATIONS

Communication is an essential activity for mankind to survive and progress. Telecommunication has provided individuals with invaluable communication opportunities. Telecommunication is defined as "any transmission, emission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems (International Telecommunication Union, 1982). Invention of technologies like telegraph, telephone, radio, television and more recently computer and internet has radically changed the ways people communicate.

Today, information and communication technologies (ICT), especially internet, are used by almost all sectors for different purposes and trigger technological improvements and innovation. ICT enables the use of physical, social, financial and intangible assets more efficiently and consequently creates productivity gains. ICT based R&D and innovation activities as well as ICT driven transformations in other sectors result in significant economic benefits. Firms and countries who own and utilize these technologies can gain competitive advantage.

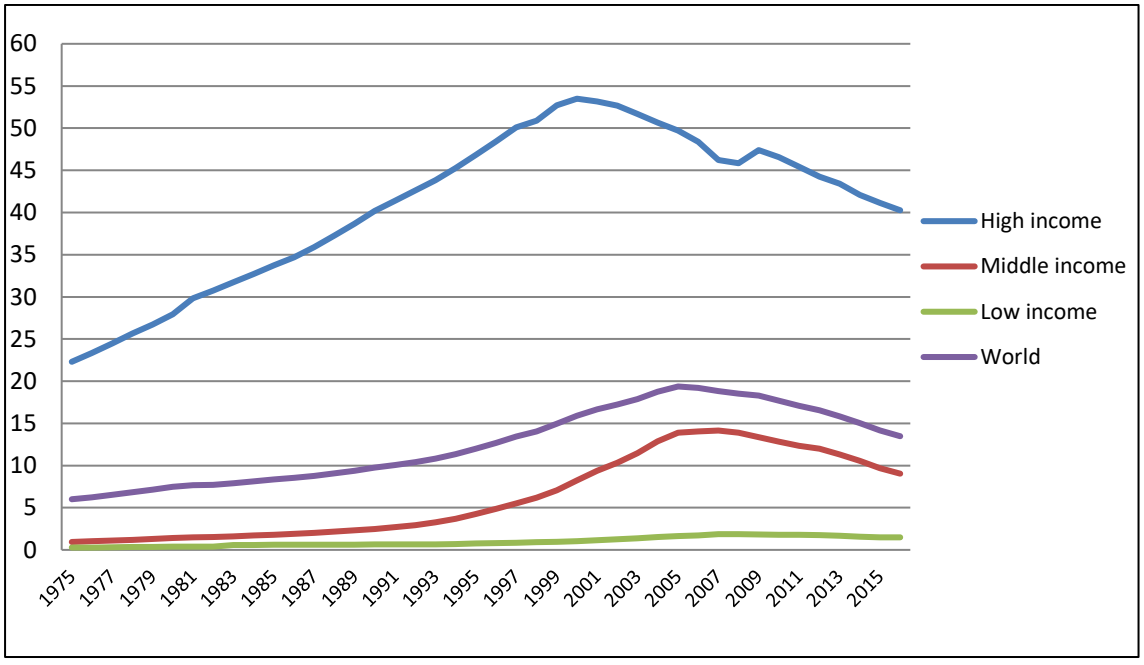
Diffusion of ICT alters business models, organization structures and functioning of the job market. As ICT is widely employed in economic activity, some of the jobs, professions and business activities are either modified or replaced by new ones. Transfer of many transactions and applications to the digital environment and dissemination of new applications such as e-commerce, e-banking, e-health, e-learning, etc. provide significant advantages by removing some of the traditional barriers, especially physical and time constraints. Furthermore, ICT changes people's daily lives including their habits, way of entertainment and communication methods. Similarly, public administration and delivery of public services are affected and improved by diffusion of ICT.

Internet has a special importance among other information and communication technologies. Internet is the main platform on which most of the other ICT products and services operate. Therefore, internet is an essential element for realization of abovementioned transformations and advantages. Internet usage has been rapidly increasing throughout the world. Governments try to develop fixed and mobile internet infrastructures and increase internet usage rates in their countries. However, distribution of both supply of and demand for internet are not evenly distributed across and within countries. Generally, richer countries and regions have higher internet availability and usage rates. As a result, significant differences among individuals, firms and countries in accessing and effectively using ICT, i.e. digital divide, arise.

6.1. Overview of Telecommunications in the World

As significant and rapid technological developments occur, dominant choices for telecommunication change. While fixed telephony was an indispensable way of communication a few decades ago, mobile phones and then the Internet have come into prominence.
As can be seen in Figure 27, fixed telephone subscriptions per 100 people reached its peak globally in 2005 with a value close to 20 percent and then it started to decrease rapidly. This downward trend occurred in all country income groups. While this decrease was observed in high income countries earlier, others followed later.

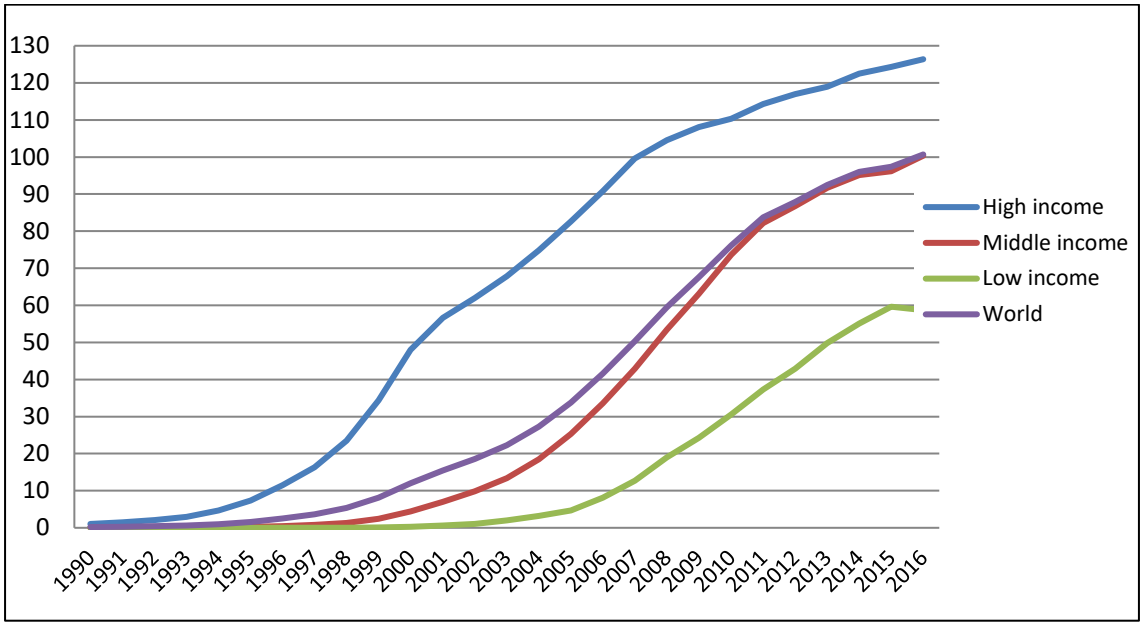
Figure 27: Fixed telephone subscriptions (per 100 people) (1975-2016)



Source: World Bank

As seen in Figure 28, as opposed to downward trend in fixed telephony, there is a steep upward trend in mobile telephony. As of 2016, mobile cellular subscriptions per 100 people were 126, 100 and 58 percent for high, middle and lower income countries respectively.

Figure 28: Mobile cellular subscriptions (per 100 people) (1990-2016)

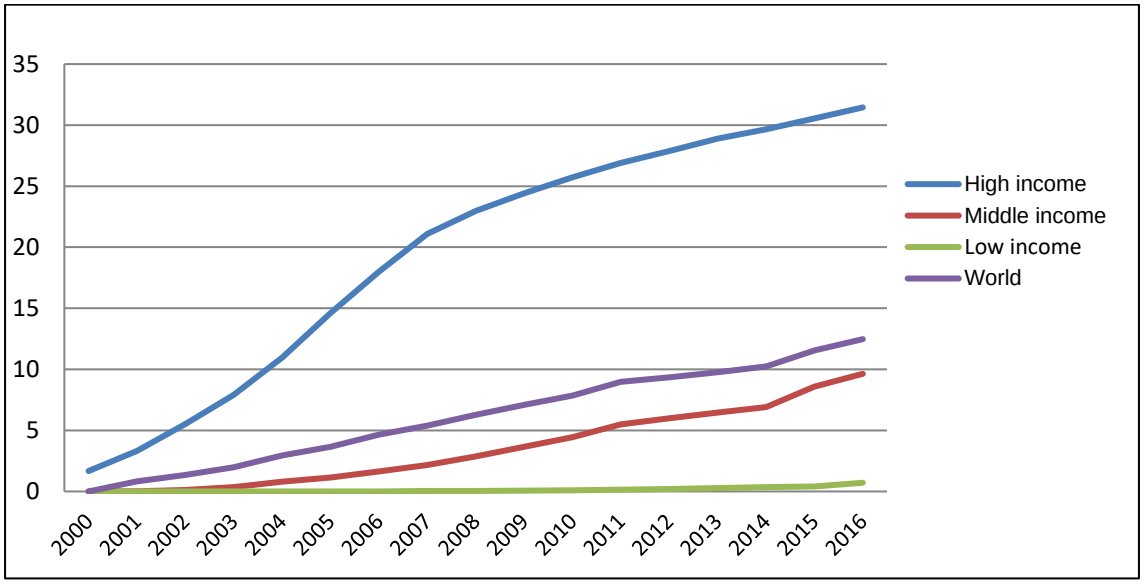


Source: World Bank

In addition to increase in the number of internet users, types and nature of online activities are also continuously changing. New technology and applications such as online video streaming, voice over IP, machine to machine communication and telecommunication trends like convergence result in increased data usage and higher speed requirements. These developments eventually increase the demand for bandwidth, which represents the transmission capacity of a telecommunication device or system, i.e. the amount of data that can be transformed in a given time period. This increasing bandwidth demand creates the need for "broadband" internet.

As Figure 29 illustrates, fixed broadband subscriptions have been rapidly increasing, especially in high income countries. Global average of fixed broadband subscriptions per 100 people was about 12 in 2016 while the same figure was only 4.7 ten years ago. On the other hand, while average broadband subscriptions per 100 people exceeded 31 percent in high income countries, it is just 0.7 percent in low income countries.

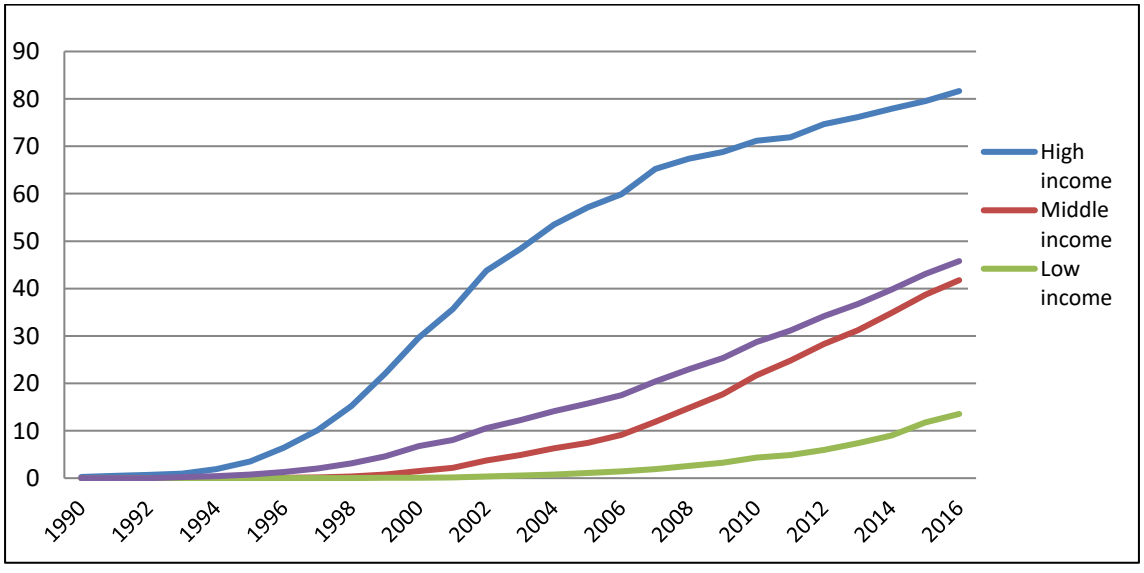
Figure 29: Fixed broadband subscriptions (per 100 people) (2000-2016)



Source: World Bank

Internet usage throughout the globe has been rapidly increasing. While the total number of internet users in the world was about 1 billion in 2005, it reached 3.4 billion in 2016. Internet usage rate reached 81.6 percent in 2016 in high income countries, while it was 41.7 and 13.5 percent for middle and lower income countries respectively. Similar to fixed broadband subscriptions, there is a huge difference between high and low income countries in terms of internet usage and this gap is not diminishing, if not growing. This divide poses a serious threat of deepening existing social and economic inequalities.

Figure 30: Internet users (per 100 people) (1990-2016)



Source: World Bank

6.2. TELECOMMUNICATIONS IN THE OIC MEMBER COUNTRIES

OIC member countries usually have lower telephone and internet penetration rates and tend to stay in the disadvantaged side of digital divide. On the other hand, there are significant differences among OIC countries in terms of penetrations. While there are some OIC countries with rates close to or even above high income countries, others have only a negligible level of telephone and internet penetration. Detailed telecommunication statistics for OIC countries can be seen in Table A.3 in the Appendix.

As Table 18 indicates, Iran is the leading OIC country in terms of fixed-telephone penetration with 38.30 percent and followed by UAE and Kazakhstan.

Table 18: Fixed telephone subscriptions (per 100 people) in top 5 OIC countries

Country	Fixed-telephone subscriptions per 100 inhabitants
Iran	38.30
Developed Countries	38.07
UAE	23.43
Kazakhstan	23.22
Libya	21.49
Lebanon	21.05
World Average	13.57
Developing Countries	8.54
OIC Average	5.94
LDCs	0.90

Source: International Telecommunication Union Statistics, 2016

As seen in Table 19, several OIC countries have much higher mobile cellular penetration rates compared to developed countries' average. Maldives and Bahrain followed by UAE, Jordan and Oman are the OIC countries with the highest mobile cellular penetration rates.

Table 19: Mobile cellular subscriptions (per 100 people) in top 5 OIC countries

Country	Mobile-cellular telephone subscriptions per 100 inhabitants
Maldives	222.99
Bahrain	216.93
UAE	204.02
Jordan	196.31
Oman	159.22
Developed Countries	127.27
World Average	101.53
OIC Average	97.43
Developing Countries	96.25
LDCs	67.67

Source: International Telecommunication Union, 2016

OIC countries are generally in a less favorable position in terms of internet penetration compared to fixed and mobile telephony. Average of fixed broadband penetrations among the OIC countries is just 3.59 percent and this is much lower than world average, which is 12.39 percent. Lebanon, Azerbaijan and Bahrain are the leading OIC countries in terms of fixed broadband subscriptions per 100 people.

Table 20: Fixed broadband subscriptions (per 100 people) in top 5 OIC countries

Country	Fixed-broadband subscriptions per 100 inhabitants
Developed Countries	30.31
Lebanon	25.62
Azerbaijan	18.58
Bahrain	16.82
Kazakhstan	13.68
Turkey	13.55
World Average	12.39
Developing Countries	8.71
OIC Average	3.59
LDCs	0.88

Source: International Telecommunication Union, 2016

Bahrain, Qatar and UAE are the best performing OIC countries in terms of internet usage rates with values above 90 percent. However, average of internet usage rates among OIC countries is still lower than world average as well as developing countries average.

Table 21: Internet users (per 100 people) in top 5 OIC countries

Country	Percentage of Individuals using the Internet
Bahrain	98.00
Qatar	94.29
UAE	90.60
Developed Countries	79.55
Malaysia	78.79
Kuwait	78.37
World Average	45.91
Developing Countries	38.98
OIC Average	30.99
LDCs	15.62

Source: International Telecommunication Union, 2016

7. CONCLUDING REMARKS

This Outlook aims at providing a brief picture of the transport and telecommunication sector in the OIC countries.

The analysis reveals that there is a positive correlation between the LPI scores and international merchandise trade (excluding oil exports) as well as the GCI scores of the OIC countries. This might imply that if an OIC country has a high LPI score this gives it a competitive advantage over those with lower LPI scores as it can facilitate its international trade through its enhanced logistics infrastructure and services. According to the 2016 LPI scores, among the OIC countries, UAE, Qatar, Malaysia, and Turkey come on top of the rankings, while Tajikistan, Sierra Leone, Mauritania, and Somalia come at the bottom.

World Bank's Liner Shipping Connectivity Index (LSCI) scores of the OIC countries, which aims at capturing a country's level of integration into the existing liner shipping network, show that Malaysia (106.8), UAE (70.6), Morocco (64.7), and Egypt (62.5) are well connected to the global shipping network whereas Albania (3.9), Brunei (4), Guinea Bissau (4.5), and Guyana (4.9) are least connected. In terms of average LSCI scores, OIC-MENA region performed better than OIC-Asia region as well as the world starting from 2008. On the other hand, average LSCI scores for OIC-Sub-Saharan Africa region remained well below the world averages.

One implication of this is that the best performing countries have large transhipment ports (e.g. Malaysia, Morocco, and Egypt) and gateway ports (e.g. Malaysia, Saudi Arabia, and Turkey). On the other hand, the least performing countries are either not located on the main liner shipping services or lack the physical and operational capacity to serve large container ships.

With regard to burden of custom procedures, both OIC-Asia and OIC-Sub-Saharan Africa fell below world averages for the 2007-2015 period, whereas OIC-MENA is an exception with its recent progress.

With respect to transport infrastructure, OIC overall and OIC-Sub-Saharan Africa averages fell below the world averages for every transport infrastructure measure according to the Global Competitiveness Report 2016-2017 (WEF, 2016) while OIC-Asia performed better than world averages only in the quality of railroad infrastructure. OIC-MENA, on the other hand, is the best performing OIC region, which outperforms all the world averages except the quality of railroad infrastructure. Five of the seven best performing OIC countries (i.e. UAE, Malaysia, Bahrain, Qatar, Turkey, Saudi Arabia, and Oman) in terms of quality of transport infrastructure are oil producing gulf countries. On the other hand, nine out of eleven worst performing OIC countries (i.e. Benin, Cameroon, Chad, Lebanon, Mali, Mauritania, Mozambique, Nigeria, Senegal, Sierra Leone, and Yemen) in the same measure are from Sub-Saharan Africa.

A large share of the road network in most OIC countries is made up of secondary or regional roads, or other roads. However, on comparing the composition of the road network in the OIC countries as a group to the road networks in the United States, and the European Union as a whole, it is worth noting a big difference in the composition of the road networks in these three categories. It is striking to see that a large percentage of the total road networks in OIC countries are motorways and highways.

In OIC countries the proportion of the road network that is a motorway, highway, main, or national road is almost 12.8% compared to 1.4% for the US, and 6% for the EU. This finding suggests that the OIC Member States, as a group, are investing more in developing motorways and highways, and not investing in developing their secondary, regional and other roads. This focus on developing high-quality and high-volume roads requires large amounts of capital. Given the limited resources that are available in many OIC Member States, it is very likely that this focus results in insufficient resources being allocated to maintenance activities.

Besides, for the OIC as a whole, the length of the road network per USD 10 million GDP is about 27. For the US and the EU this number is 3.9 and 6.4, respectively. This is an important observation insofar that it suggests that many of the OIC countries have road networks that are too large for the size of their economy. Obviously, this has clear implications for the maintenance of the road networks as well, i.e. the resources to properly maintain the road networks in these countries is going to be limited.

Yet at the same time, the OIC countries as a whole have 3.12 km of roads per 1,000 population compared to 20.7 and 11.6 for the US and EU, respectively. This might suggest that the length of the road network is inadequate to serve the population.

Regarding road safety, statistics reveal that, UAE, Qatar, Kuwait, Oman and Saudi Arabia all have road mortality rates that are significantly higher than what would be expected in high-income countries internationally. Of the high-income countries, only Bahrain has a mortality rate marginally below the expected norm. Besides, of the middle-income countries, Libya and Iran have remarkably high road mortality rates. For many OIC countries, road mortality seems high which may offer opportunities to improve safety.

Regarding rail network density, all OIC countries (except Djibouti, Azerbaijan, Tunisia, Bangladesh, Albania, Turkey, Syria, and Pakistan) have fewer than 1,000 km of rail lines per 100,000 km^2 land area, while almost half of the OIC countries have no railway network. Djibouti with its 781 km of rail lines has the highest rail network density, whereas, Kazakhstan, has the largest rail network with 14,329 km.

All OIC countries (except Djibouti, Kazakhstan, Turkmenistan, Gabon, Tunisia, and Azerbaijan) have fewer than 200 km of rail lines per million population. At the individual country level, Djibouti and Kazakhstan registered the highest level of rail network per capita. Average rail network per capita of the OIC countries is equal to 92 km per million population while the world

average is 164 km. This suggests that the length of the rail network is inadequate to serve the OIC population, even without taking into consideration that almost half of the OIC countries have no railway network.

Regarding the rail freight transport, statistics show that rail freight carried in the OIC-Asia region predominantly belongs to Kazakhstan and is far above other regions. In the OIC-MENA region, Iran and Turkey together carried more than two-thirds of region's rail freight.

Regarding total fleet growth, the OIC countries fell below the world average between 1998 and 2016 while container fleet growth has been similar to that of the world during the same period. Nevertheless, the share of shipping companies from the OIC countries, does not reflect OIC's share in global trade. In terms of LSCI scores, despite a decrease in 2016, from 2007 on, OIC-MENA performed better than OIC-Asia and world averages while the last two kept pace with each other throughout the 2004-2016 period.

The container throughput of the OIC countries has reached 101 million TEU in 2014 up from 79.8 million TEU in 2010. The OIC-MENA region outperforms other regions in terms of container port traffic. In the OIC-MENA region UAE, Egypt, and Turkey were the top performers regarding container throughput. For the OIC-Asia region most of the traffic were handled by a few countries such as Malaysia and Indonesia. It should also be underlined that the scope of the container port traffic is very limited in the OIC-Sub-Saharan Africa.

The data shows that the share of OIC countries in the global container throughput has remained flat at around 15% in the 2010-2014 period. Both Malaysia and the UAE show high volume throughput with 22.7 million TEU and 20.9 million TEU, respectively. On the other hand, there are also many OIC countries which are landlocked, i.e. Afghanistan, Azerbaijan, Burkina Faso, Chad, Kazakhstan, Kyrgyz Republic, Mali, Niger, Tajikistan, Uganda, and Uzbekistan. Besides, majority of the OIC countries couldn't even reach the one million TEU threshold.

The container penetration intensity in several OIC countries were many times lower than the rate for the global market and far lower than that of developed countries. Especially, some OIC countries such as Nigeria, Algeria, and Bangladesh show very low container volumes in comparison with the size of their economies and populations.

Regarding air transport, Turkey, Indonesia, and UAE has the highest air passenger traffic. In terms of geographical classification, Turkey, UAE, and Saudi Arabia in the MENA; Nigeria, Togo, and Mozambique in the Sub-Saharan Africa; and Indonesia, Malaysia, and Pakistan in the Asia were the top three OIC member countries with highest air passenger movement. Almost two thirds of the air passengers is carried at MENA region while one third is carried at Asia.

The high per capita air passenger movements in the high-income countries, such as Qatar, UAE, and Bahrain, and in the island countries, such as Brunei Darussalam and Malaysia, are also noteworthy. Thanks to their well-established hub-and-spoke system, large network airlines

such as Turkish Airlines and Emirates can achieve higher economies of scale and thus enjoy higher per capita air passenger traffic.

For the environmental effects of transportation, statistics reveal that OIC countries with high per capita income tend to emit more transport-related CO_2. The OIC countries with higher per capita income are more likely to consume more road sector energy per capita. The top OIC countries (i.e. Qatar, Kuwait, UAE, Saudi Arabia Oman, and Bahrain) with highest per capita income are also the top road sector energy consumers per capita. Such situation is not peculiar given that richer countries have more private cars and thus more personal trips. In addition, lower pump prices for gasoline might stimulate more per capita road sector energy consumption in the OIC geography.

As for privatization of transportation and PPPs/PPIs, brownfield projects has been the most widely used PPI-type in the world. With regard to both project counts and total project costs, road PPI projects outnumbered other transport modes. Middle East and North Africa and Sub-Saharan Africa were the two regions that implemented the fewest number of transport PPI projects.

As the analysis presented in the Outlook suggest, a great diversification exists among the OIC countries. On the one hand, oil producing countries such as Qatar, Kuwait, and UAE are among the top per capita GDP countries. On the other hand, 21 OIC Member States are classified as the least developed countries by the UN. In such a big diversity, adopting a single policy set applicable to all OIC members is almost an impossible task. Therefore, when drafting strategies, policy-makers should also take into account individual needs of members and abstain from adopting "one size fits all" type of policies and strategies.

The diversity of the OIC countries and availability of various experiences within the OIC region also indicate a considerable potential for cooperation in the transport industry. The success of the process heavily depends on the adoption of a sound policy framework, right cooperative approach, institutional capacity and human resources development, and accumulation of expertise. In that context, there is a great scope of cooperation among the OIC countries for sharing their experiences, best practices, and technical assistance especially for policy formulation and capacity development and for attracting more investments from other OIC countries in their transport sector.

Regarding telecommunications, OIC member countries usually have lower telephone and internet penetration rates compared to the rest of the world. However, there are big differences among OIC countries. While there are some OIC countries with penetration rates close to or even above high income countries, others have only a negligible level of telephone and internet penetration.

Iran is the leading OIC country in terms of fixed-telephone penetration with 38.30 percent and followed by UAE and Kazakhstan. Regarding mobile cellular penetration rates, Maldives and

Bahrain are followed by UAE, Jordan and Oman. OIC countries are generally in a less favorable position in terms of internet penetration compared to fixed and mobile telephony. Average of fixed broadband penetrations among the OIC countries is just 3.59 percent and this is much lower than world average, which is 12.39 percent.

Bahrain, Qatar and UAE are the best performing OIC countries in terms of internet usage rates with values above 90 percent. However, average of internet usage rates among OIC countries is still lower than world average as well as developing countries average.

8. REFERENCES

Airports Council International (ACI), Airport Statistics and Data Centre, available at http://www.aci.aero/Data-Centre (last accessed 30 September, 2016).

COMCEC, 2013. Global Trends and Policies in Multimodal Freight Transport (MFT), COMCEC Coordination Office, Ankara.

COMCEC, 2014. Status of the Implementation of MFT among the OIC Member Countries. COMCEC Coordination Office, Ankara.

COMCEC, 2015. Evaluating the Ownership, Governance Structures and Performances of Ports in the OIC Member Countries. COMCEC Coordination Office, Ankara.

COMCEC, 2016. Enhancing Road Maintenance in the OIC Member States. COMCEC Coordination Office, Ankara.

COMCEC, 2016. Improving Road Safety in the OIC Member States. COMCEC Coordination Office, Ankara.

European Commission Web Site, http://ec.europa.eu/transport/strategies/facts-and-figures/transport-matters/index_en.htm (last accessed 21 September 2016).

Eurostat, 2012. Europe in Figures - Eurostat Yearbook 2012. European Union, Belgium.

Handley, P., 1997. A Critical View of the Build-Operate-Transfer Privatization Process in Asia. Asian Journal of Public Administration 19 (2), 203-243.

Hummels, D., 2007. Transportation Costs and International Trade in the Second Era of Globalization. Journal of Economic Perspectives 21 (3), 131–154.

International Energy Agency, 2009. World Energy Outlook 2009. IEA Publications, Paris.

International Telecommunication Union, 1982. International Telecommunication Convention Final Protocol, Additional Protocols, Optional Additional Protocol, Resolutions, Recommendation and Opinions, Nairobi.

International Telecommunication Union Statistics, available at http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx (last accessed 31 August, 2018).

International Transport Forum, 2010. Reducing Transport Greenhouse Gas Emissions: Trends & Data 2010. OECD/ITF, Paris.

Moriarty, E., 2006. Public Private Partnerships in Health. Workshop on Public-Private Partnerships. Ankara.

OECD/International Transport Forum, 2015. ITF Transport Outlook 2015. OECD Publishing/ITF, Paris.

OECD, 2012. Strategic Transport Infrastructure Needs to 2030. OECD Publishing, Paris.

International Energy Agency, 2016. CO_2 Emissions from Fuel Combustion: Highlights. IEA Publications, Paris.

Ozdogan, I.D., Birgonul, M.T., 2000. A Decision Support framework for Project Sponsors in the Planning Stage of Build-Operate-Transfer (BOT) projects. Construction Management and Economics 18 (3), 343-353.

The World Bank Private Participation in Infrastructure Database, available at http://ppi.worldbank.org/ (last accessed 30 September, 2016).

The World Bank World Development Indicators Database, available at http://databank.worldbank.org/ (last accessed 31 August, 2018).

Tiong, R.L.K., 1990. BOT projects: Risks and securities. Construction Management and Economics 8 (3), 315-328.

UNCTAD Statistics Database, available at http://unctadstat.unctad.org/EN/ (last accessed 30 September, 2016).

World Economic Forum, 2016. The Global Competitiveness Report 2016–2017. World Economic Forum, Geneva.

Yılmaz, O., 1996. Yap-İşlet-Devret Modeli ve Türkiye Uygulaması. Expertise Thesis at State Planning Agency of Turkey. DPT, Ankara.

9. APPENDIX

Table A.1: Classification of OIC countries by region

OIC-Sub-Saharan Africa	OIC-MENA	OIC-Asia
1. Burkina Faso	1. Arab Republic of Egypt	1. Guyana
2. Somalia	2. Jordan	2. Pakistan
3. Nigeria	3. Islamic Republic of Iran	3. Afghanistan
4. Mauritania	4. Bahrain	4. Kyrgyz Republic
5. Benin	5. Morocco	5. Malaysia
6. Cameroon	6. Saudi Arabia	6. Bangladesh
7. Chad	7. Libya	7. Azerbaijan
8. Cote d'Ivoire	8. Algeria	8. Indonesia
9. Djibouti	9. Albania	9. Kazakhstan
10. Gabon	10. Iraq	10. Maldives
11. Guinea	11. Lebanon	11. Tajikistan
12. Guinea-Bissau	12. Tunisia	12. Turkmenistan
13. Mali	13. Turkey	13. Uzbekistan
14. Mozambique	14. Republic of Yemen	14. Brunei Darussalam
15. Niger	15. Qatar	15. Suriname
16. Senegal	16. Oman	
17. Sierra Leone	17. Kuwait	
18. The Gambia	18. Palestine	
19. Sudan	19. United Arab Emirates	
20. Togo		
21. Uganda		
22. Comoros		

Table A.2: LPI scores of the OIC countries

Country	2016	2014	2012	2010	2007
UAE	3.94	3.54	3.78	3.63	3.73
Qatar	3.60	3.52	3.32	2.95	2.98
Malaysia	3.43	3.59	3.49	3.44	3.48
Turkey	3.42	3.50	3.51	3.22	3.15
Bahrain	3.31	3.08	3.05	3.37	3.15
Oman	3.23	3.00	2.89	2.84	2.92
Egypt	3.18	2.97	2.98	2.61	2.37
Saudi Arabia	3.16	3.15	3.18	3.22	3.02
Kuwait	3.15	3.01	2.83	3.28	2.99
Uganda	3.04	-	-	2.82	2.49
Indonesia	2.98	3.08	2.94	2.76	3.01
Jordan	2.96	2.87	2.56	2.74	2.89
Pakistan	2.92	2.83	2.83	2.53	2.62
Brunei Darussalam	2.87	-	-	-	-
Algeria	2.77	2.65	2.41	2.36	2.06
Kazakhstan	2.75	2.70	2.69	2.83	2.12
Burkina Faso	2.73	2.64	2.32	2.23	2.24
Lebanon	2.72	2.73	2.58	3.34	2.37
Mozambique	2.68	2.23	-	2.29	2.29
Guyana	2.67	2.46	2.33	2.27	2.05
Morocco	2.67	-	3.03	-	2.38
Bangladesh	2.66	2.56	-	2.74	2.47
Nigeria	2.63	2.81	2.45	2.59	2.40
Togo	2.62	2.32	2.58	2.60	2.25
Côte d'Ivoire	2.60	2.76	2.73	2.53	2.36
Iran	2.60	-	2.49	2.57	2.51
Comoros	2.58	2.40	2.14	2.45	2.48
Niger	2.56	2.39	2.69	2.54	1.97
Sudan	2.53	2.16	2.10	2.21	2.71
Maldives	2.51	2.75	2.55	2.40	-
Mali	2.50	2.50	-	2.27	2.29
Tunisia	2.50	2.55	3.17	2.84	2.76
Azerbaijan	-	2.45	2.48	2.64	2.29
Benin	2.43	2.56	2.85	2.79	2.45
Albania	2.41	-	2.77	2.46	2.08
Uzbekistan	2.40	2.39	2.46	2.79	2.16
Guinea-Bissau	2.37	2.43	2.60	2.10	2.28
Guinea	2.36	2.46	2.48	2.60	2.71
Senegal	2.33	2.62	2.49	2.86	2.37
Djibouti	2.32	2.15	1.80	2.39	1.94
Libya	2.26	2.50	2.28	2.33	-
Gambia, The	-	2.25	2.46	2.49	2.52
Turkmenistan	2.21	2.30	-	2.49	-
Gabon	2.19	2.20	2.34	2.41	2.10

Country	2016	2014	2012	2010	2007
Yemen, Rep.	-	2.18	2.89	2.58	2.29
Chad	2.16	2.53	2.03	2.49	1.98
Kyrgyz Republic	2.16	2.21	2.35	2.62	2.35
Cameroon	2.15	2.30	2.53	2.55	2.49
Iraq	2.15	2.30	2.16	2.11	-
Afghanistan	2.14	2.07	2.30	2.24	1.21
Tajikistan	2.06	2.53	2.28	2.35	1.93
Sierra Leone	2.03	-	2.08	1.97	1.95
Mauritania	1.87	2.23	2.40	-	2.63
Somalia	1.75	1.77	-	1.34	2.16

Source: The World Bank World Development Indicators

Table A.3: Telecommunication Statistics for OIC Member Countries (2016)

Country	Fixed-telephone subscriptions per 100 inhabitants	Mobile-cellular telephone subscriptions per 100 inhabitants	Fixed-broadband subscriptions per 100 inhabitants	Percentage of Individuals using the Internet
Afghanistan	0.35	66.00	0.03	10.60
Albania	7.65	105.06	8.23	66.36
Algeria	8.24	117.02	6.92	42.95
Azerbaijan	17.52	106.28	18.58	78.20
Bahrain	20.80	216.93	16.82	98.00
Bangladesh	0.48	77.88	3.77	18.25
Benin	1.12	79.65	0.81	11.99
Brunei	17.11	120.67	8.33	75.00
Burkina Faso	0.35	83.63	0.05	13.96
Cameroon	4.38	68.11	0.19	25.00
Chad	0.10	44.48	0.07	5.00
Comoros	1.66	57.66	0.36	7.94
Cote d'Ivoire	1.33	126.01	0.63	26.53
Djibouti	2.73	37.82	2.96	13.13
Egypt	7.11	113.70	5.20	39.21
Gabon	1.06	144.17	0.73	48.05
Gambia	1.87	139.63	0.18	18.50
Guinea	0.00	85.33	0.01	9.80
Guinea-Bissau	0.00	70.26	0.04	3.76
Guyana	18.86	66.43	7.64	35.66
Indonesia	4.01	149.13	1.89	25.37
Iran	38.30	100.07	11.58	53.23
Iraq	5.53	82.18	0.01[3]	21.23
Jordan	4.55	196.31	5.84	62.30
Kazakhstan	23.22	149.99	13.68	76.80
Kuwait	10.96	146.55	2.76	78.37
Kyrgyz Rep.	6.59	131.38	4.08	34.50
Lebanon	21.05	96.37	25.62	76.11
Libya	21.49	119.78	2.64	20.27
Malaysia	14.50	141.17	8.74	78.79
Maldives	5.80	222.99	7.22	59.09
Mali	1.20	120.31	0.03	11.11
Mauritania	1.27	86.52	0.25	18.00
Morocco	6.02	120.72	3.65	58.27
Mozambique	0.30	66.25	0.14	17.52
Niger	0.56	48.87	0.07	4.32
Nigeria	0.08	81.82	0.01	25.67
Oman	9.80	159.22	6.19	69.82
Pakistan	1.60	71.39	0.86	15.51
Palestine	9.26	76.81	6.87	61.18

[3] 2010 data

Country	Fixed-telephone subscriptions per 100 inhabitants	Mobile-cellular telephone subscriptions per 100 inhabitants	Fixed-broadband subscriptions per 100 inhabitants	Percentage of Individuals using the Internet
Qatar	19.34	147.10	10.77	94.29
Saudi Arabia	11.96	157.60	10.81	73.75
Senegal	1.86	98.68	0.64	25.66
Sierra Leone	0.26	97.62	N/A	11.77
Somalia	0.42	58.12	0.80	1.88
Sudan	0.34	68.63	0.06	28.00
Suriname	16.10	145.94	12.88	45.40
Tajikistan	5.31	106.68	0.07	20.47
Togo	0.46	74.91	0.61	11.31
Tunisia	8.59	125.82	5.65	50.88
Turkey	14.30	96.87	13.55	58.35
Turkmenistan	12.23	157.67	0.07	17.99
Uganda	0.89	55.07	0.26	21.88
UAE	23.43	204.02	13.30	90.60
Uzbekistan	11.34	77.33	9.13	46.79
Yemen	4.65	67.17	1.65	24.58

Source: World Bank

OIC
COUNTRY FACTSHEETS[4]

[4] Compiled and calculated from:
World Development Indicators, World Bank
Global Competitiveness Index, World Economic Forum
UNCTAD Statistical Database, UNCTAD
World Road Statistics, International Road Federation
ITU Statistics, International Telecommunication Union
Private Participation in Infrastructure (PPI) Database, World Bank
Energy Efficiency Indicators, World Energy Council
Airport Statistics, Airports Council International
Statistical Indicators, Palestinian Central Bureau of Statistics

Afghanistan

Population (million people)	32.5	2015
GDP (current million US$)	19,199	2015
GDP per capita, PPP (constant 2011 international $)	1,820	2015
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)	2.14	2016
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index		
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships		
Merchant fleet by flag of registration, tonnage		
Container penetration (incl. transhipment) TEU/1,000 capita	Landlocked	
Motorways (Km)		
Highways, main or national roads (Km)	16,388	2010
Secondary or regional roads (Km)		
Other roads (Km)	6,745	2010
Total length of roads (Km)	23,133	2010
Paved roads (%)	36	2010
Paved roads (Km)	8,419	2010
Non-paved roads (Km)	14,714	2010
Length of roads by GDP per capita (Km/$)	41	2010
Road network density (km/1,000 population)	0.71	2010
Density of roads (Km/Km2)	0.04	2010
Vehicle ownership (vehicle/1,000 population)	21	2013
Estimated road deaths annually	4,734	2013
Mortality rate [deaths/100,000 population]	15.5	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	33.1	2015
Air transport, passengers carried	1,929,908	2015
Per capita air passengers	0.059	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)		
Fixed-telephone subscriptions per 100 inhabitants	0.35	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	66.00	2016
Fixed-broadband subscriptions per 100 inhabitants	0.03	2016
Percentage of individuals using the Internet	10.60	2016

Albania

Population (million people)	2.9	2015
GDP (current million US$)	11,456	2015
GDP per capita, PPP (constant 2011 international $)	10,397	2015
Global Competitiveness Index	4.06	2016
Logistics performance index: Overall (1=low to 5=high)	2.41	2016
Quality of overall infrastructure, 1-7 (best)	4.11	2016
Quality of roads, 1-7 (best)	4.35	2016
Quality of railroad infrastructure, 1-7 (best)	1.35	2016
Quality of port infrastructure, 1-7 (best)	4.22	2016
Quality of air transport infrastructure, 1-7 (best)	4.36	2016
Liner shipping connectivity index	3.37	2016
Burden of customs procedure, (7=extremely efficient)	3.53	2015
Container port traffic (TEU: 20 foot equivalent units)	99,000	2014
Merchant fleet by flag of registration, number of ships	21	2016
Merchant fleet by flag of registration, tonnage	73	2016
Container penetration (incl. transhipment) TEU/1,000 capita	34	2014
Motorways (Km)	0	2002
Highways, main or national roads (Km)	3,220	2002
Secondary or regional roads (Km)	4,300	2002
Other roads (Km)	10,480	2002
Total length of roads (Km)	18,000	2002
Paved roads (%)	39	2002
Paved roads (Km)	7,020	2002
Non-paved roads (Km)	10,980	2002
Length of roads by GDP per capita (Km/$)	12	2002
Road network density (km/1,000 population)	6.23	2002
Density of roads (Km/Km2)	0.63	2002
Vehicle ownership (vehicle/1,000 population)	141	2013
Estimated road deaths annually	478	2013
Mortality rate [deaths/100,000 population]	15.1	2013
Rail lines (total route-km)	423	2013
Rail network density (km/100,000 km2 land area)	1,544	2013
Rail network density (km/1 million population)	146	2013
Railways, goods transported (million ton-km)	46	2014
Railways, passengers carried (million passenger-km)	32	2014
Air transport, freight (million ton-km)	0.0	2015
Air transport, passengers carried		
Per capita air passengers	0.000	2015
CO2 emissions of transport per capita	0.88	2014
CO2 emissions from transport (% of total fuel combustion)	67.3	2013
Fixed-telephone subscriptions per 100 inhabitants	7.65	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	105.06	2016
Fixed-broadband subscriptions per 100 inhabitants	8.23	2016
Percentage of individuals using the Internet	66.36	2016

Algeria

Population (million people)	39.7	2015
GDP (current million US$)	166,839	2015
GDP per capita, PPP (constant 2011 international $)	13,823	2015
Global Competitiveness Index	3.98	2016
Logistics performance index: Overall (1=low to 5=high)	2.77	2016
Quality of overall infrastructure, 1-7 (best)	3.29	2016
Quality of roads, 1-7 (best)	3.24	2016
Quality of railroad infrastructure, 1-7 (best)	2.97	2016
Quality of port infrastructure, 1-7 (best)	3.17	2016
Quality of air transport infrastructure, 1-7 (best)	3.24	2016
Liner shipping connectivity index	5.55	2016
Burden of customs procedure, (7=extremely efficient)	3.24	2015
Container port traffic (TEU: 20 foot equivalent units)	360,522	2014
Merchant fleet by flag of registration, number of ships	44	2016
Merchant fleet by flag of registration, tonnage	1,394	2016
Container penetration (incl. transhipment) TEU/1,000 capita	9	2014
Motorways (Km)		
Highways, main or national roads (Km)	29,468	2010
Secondary or regional roads (Km)	24,108	2010
Other roads (Km)	60,079	2010
Total length of roads (Km)	113,655	2010
Paved roads (%)	77	2010
Paved roads (Km)	87,607	2010
Non-paved roads (Km)	26,048	2010
Length of roads by GDP per capita (Km/$)	26	2010
Road network density (km/1,000 population)	2.87	2010
Density of roads (Km/Km2)	0.05	2010
Vehicle ownership (vehicle/1,000 population)	186	2013
Estimated road deaths annually	9,337	2013
Mortality rate [deaths/100,000 population]	23.8	2013
Rail lines (total route-km)	4,175	2014
Rail network density (km/100,000 km2 land area)	175	2014
Rail network density (km/1 million population)	105	2014
Railways, goods transported (million ton-km)	1,253	2014
Railways, passengers carried (million passenger-km)	1,141	2014
Air transport, freight (million ton-km)	24.7	2015
Air transport, passengers carried	5,910,836	2015
Per capita air passengers	0.149	2015
CO2 emissions of transport per capita	0.95	2014
CO2 emissions from transport (% of total fuel combustion)	32.8	2013
Fixed-telephone subscriptions per 100 inhabitants	8.24	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	117.02	2016
Fixed-broadband subscriptions per 100 inhabitants	6.92	2016
Percentage of individuals using the Internet	42.95	2016

Azerbaijan

Population (million people)	9.7	2015
GDP (current million US$)	53,047	2015
GDP per capita, PPP (constant 2011 international $)	16,695	2015
Global Competitiveness Index	4.55	2016
Logistics performance index: Overall (1=low to 5=high)	-	2016
Quality of overall infrastructure, 1-7 (best)	4.80	2016
Quality of roads, 1-7 (best)	4.44	2016
Quality of railroad infrastructure, 1-7 (best)	4.15	2016
Quality of port infrastructure, 1-7 (best)	4.31	2016
Quality of air transport infrastructure, 1-7 (best)	5.32	2016
Liner shipping connectivity index		
Burden of customs procedure, (7=extremely efficient)	3.20	2015
Container port traffic (TEU: 20 foot equivalent units)		2014
Merchant fleet by flag of registration, number of ships	189	2016
Merchant fleet by flag of registration, tonnage	708	2016
Container penetration (incl. transhipment) TEU/1,000 capita		
Motorways (Km)		
Highways, main or national roads (Km)	4,645	2013
Secondary or regional roads (Km)	14,357	2013
Other roads (Km)		
Total length of roads (Km)	19,002	2013
Paved roads (%)	99	2013
Paved roads (Km)	18,841	2013
Non-paved roads (Km)	161	2013
Length of roads by GDP per capita (Km/$)	2.4	2013
Road network density (km/1,000 population)	1.97	2013
Density of roads (Km/Km2)	0.22	2013
Vehicle ownership (vehicle/1,000 population)	121	2013
Estimated road deaths annually	943	2013
Mortality rate [deaths/100,000 population]	10	2013
Rail lines (total route-km)	2,068	2014
Rail network density (km/100,000 km2 land area)	2,502	2014
Rail network density (km/1 million population)	214	2014
Railways, goods transported (million ton-km)	8,212	2014
Railways, passengers carried (million passenger-km)	591	2014
Air transport, freight (million ton-km)	42.0	2015
Air transport, passengers carried	1,803,112	2015
Per capita air passengers	0.187	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)	24.8	2013
Fixed-telephone subscriptions per 100 inhabitants	17.52	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	106.28	2016
Fixed-broadband subscriptions per 100 inhabitants	18.58	2016
Percentage of individuals using the Internet	78.20	2016

Bahrain

Population (million people)	1.4	2015
GDP (current million US$)	32,221	2015
GDP per capita, PPP (constant 2011 international $)	44,182	2015
Global Competitiveness Index	4.47	2016
Logistics performance index: Overall (1=low to 5=high)	3.31	2016
Quality of overall infrastructure, 1-7 (best)	5.18	2016
Quality of roads, 1-7 (best)	5.14	2016
Quality of railroad infrastructure, 1-7 (best)	N/A	2016
Quality of port infrastructure, 1-7 (best)	5.09	2016
Quality of air transport infrastructure, 1-7 (best)	4.87	2016
Liner shipping connectivity index	26.48	2016
Burden of customs procedure, (7=extremely efficient)	4.92	2015
Container port traffic (TEU: 20 foot equivalent units)	373,628	2014
Merchant fleet by flag of registration, number of ships	24	2016
Merchant fleet by flag of registration, tonnage	99	2016
Container penetration (incl. transhipment) TEU/1,000 capita	274	2014
Motorways (Km)		
Highways, main or national roads (Km)	563	2013
Secondary or regional roads (Km)	656	2013
Other roads (Km)	3,055	2013
Total length of roads (Km)	4,274	2013
Paved roads (%)	83	2013
Paved roads (Km)	3,544	2013
Non-paved roads (Km)	730	2013
Length of roads by GDP per capita (Km/$)	0.2	2013
Road network density (km/1,000 population)	3.10	2013
Density of roads (Km/Km2)	5.62	2013
Vehicle ownership (vehicle/1,000 population)	409	2013
Estimated road deaths annually	107	2013
Mortality rate [deaths/100,000 population]	8	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	240.1	2015
Air transport, passengers carried	5,313,756	2015
Per capita air passengers	3.858	2015
CO2 emissions of transport per capita	2.48	2014
CO2 emissions from transport (% of total fuel combustion)	11.7	2013
Fixed-telephone subscriptions per 100 inhabitants	20.80	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	216.93	2016
Fixed-broadband subscriptions per 100 inhabitants	16.82	2016
Percentage of individuals using the Internet	98.00	2016

Bangladesh

Population (million people)	161.0	2015
GDP (current million US$)	195,079	2015
GDP per capita, PPP (constant 2011 international $)	3,137	2015
Global Competitiveness Index	3.80	2016
Logistics performance index: Overall (1=low to 5=high)	2.66	2016
Quality of overall infrastructure, 1-7 (best)	2.82	2016
Quality of roads, 1-7 (best)	2.92	2016
Quality of railroad infrastructure, 1-7 (best)	2.65	2016
Quality of port infrastructure, 1-7 (best)	3.54	2016
Quality of air transport infrastructure, 1-7 (best)	3.25	2016
Liner shipping connectivity index	12.62	2016
Burden of customs procedure, (7=extremely efficient)	3.20	2015
Container port traffic (TEU: 20 foot equivalent units)	1,655,365	2014
Merchant fleet by flag of registration, number of ships	73	2016
Merchant fleet by flag of registration, tonnage	1,497	2016
Container penetration (incl. transhipment) TEU/1,000 capita	10	2014
Motorways (Km)	0	2003
Highways, main or national roads (Km)	22,378	2003
Secondary or regional roads (Km)	81,670	2003
Other roads (Km)	135,178	2003
Total length of roads (Km)	239,226	2003
Paved roads (%)	10	2003
Paved roads (Km)	22,726	2003
Non-paved roads (Km)	216,500	2003
Length of roads by GDP per capita (Km/$)	250	2003
Road network density (km/1,000 population)	1.49	2003
Density of roads (Km/Km2)	1.66	2003
Vehicle ownership (vehicle/1,000 population)	13	2013
Estimated road deaths annually	21,316	2013
Mortality rate [deaths/100,000 population]	13.6	2013
Rail lines (total route-km)	2,835	2014
Rail network density (km/100,000 km2 land area)	2,178	2014
Rail network density (km/1 million population)	18	2014
Railways, goods transported (million ton-km)	710	2014
Railways, passengers carried (million passenger-km)	7,305	2014
Air transport, freight (million ton-km)	182.7	2015
Air transport, passengers carried	2,906,799	2015
Per capita air passengers	0.018	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)	13.8	2013
Fixed-telephone subscriptions per 100 inhabitants	0.48	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	77.88	2016
Fixed-broadband subscriptions per 100 inhabitants	3.77	2016
Percentage of individuals using the Internet	18.25	2016

Benin

Population (million people)	10.9	2015
GDP (current million US$)	8,476	2015
GDP per capita, PPP (constant 2011 international $)	1,986	2015
Global Competitiveness Index	3.47	2016
Logistics performance index: Overall (1=low to 5=high)	2.43	2016
Quality of overall infrastructure, 1-7 (best)	2.41	2016
Quality of roads, 1-7 (best)	2.91	2016
Quality of railroad infrastructure, 1-7 (best)	1.56	2016
Quality of port infrastructure, 1-7 (best)	3.71	2016
Quality of air transport infrastructure, 1-7 (best)	3.23	2016
Liner shipping connectivity index	18.34	2016
Burden of customs procedure, (7=extremely efficient)	3.29	2015
Container port traffic (TEU: 20 foot equivalent units)	408,146	2014
Merchant fleet by flag of registration, number of ships		
Merchant fleet by flag of registration, tonnage		
Container penetration (incl. transhipment) TEU/1,000 capita	39	2014
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	19,000	2004
Paved roads (%)	10	2004
Paved roads (Km)	1,805	2004
Non-paved roads (Km)	17,195	2004
Length of roads by GDP per capita (Km/$)	37	2004
Road network density (km/1,000 population)	1.75	2004
Density of roads (Km/Km2)	0.17	2004
Vehicle ownership (vehicle/1,000 population)	3	2013
Estimated road deaths annually	2,855	2013
Mortality rate [deaths/100,000 population]	27.7	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	0.8	2015
Air transport, passengers carried	112,392	2015
Per capita air passengers	0.010	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)	69.7	2013
Fixed-telephone subscriptions per 100 inhabitants	1.12	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	79.65	2016
Fixed-broadband subscriptions per 100 inhabitants	0.81	2016
Percentage of individuals using the Internet	11.99	2016

Brunei Darussalam

Population (million people)	0.4	2015
GDP (current million US$)	15,492	2015
GDP per capita, PPP (constant 2011 international $)	66,647	2015
Global Competitiveness Index	4.35	2016
Logistics performance index: Overall (1=low to 5=high)	2.87	2016
Quality of overall infrastructure, 1-7 (best)	4.14	2016
Quality of roads, 1-7 (best)	4.70	2016
Quality of railroad infrastructure, 1-7 (best)	N/A	2016
Quality of port infrastructure, 1-7 (best)	3.67	2016
Quality of air transport infrastructure, 1-7 (best)	4.08	2016
Liner shipping connectivity index	3.86	2016
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)	128,026	2014
Merchant fleet by flag of registration, number of ships	11	2016
Merchant fleet by flag of registration, tonnage	27	2016
Container penetration (incl. transhipment) TEU/1,000 capita	307	2014
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	3,167	2013
Paved roads (%)	89	2013
Paved roads (Km)	2,831	2013
Non-paved roads (Km)	336	2013
Length of roads by GDP per capita (Km/$)	0.1	2013
Road network density (km/1,000 population)	7.48	2013
Density of roads (Km/Km2)	0.55	2013
Vehicle ownership (vehicle/1,000 population)		
Estimated road deaths annually		
Mortality rate [deaths/100,000 population]		
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	115.1	2015
Air transport, passengers carried	1,150,003	2015
Per capita air passengers	2.717	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)	19.4	2013
Fixed-telephone subscriptions per 100 inhabitants	17.11	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	120.67	2016
Fixed-broadband subscriptions per 100 inhabitants	8.33	2016
Percentage of individuals using the Internet	75.00	2016

Burkina Faso

Population (million people)	18.1	2015
GDP (current million US$)	11,099	2015
GDP per capita, PPP (constant 2011 international $)	1,562	2015
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)	2.73	2016
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index		
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships		
Merchant fleet by flag of registration, tonnage		
Container penetration (incl. transhipment) TEU/1,000 capita	Landlocked	
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	15,304	2013
Paved roads (%)	24	2013
Paved roads (Km)	3,642	2013
Non-paved roads (Km)	11,662	2013
Length of roads by GDP per capita (Km/$)	22	2013
Road network density (km/1,000 population)	0.85	2013
Density of roads (Km/Km2)	0.06	2013
Vehicle ownership (vehicle/1,000 population)	91	2013
Estimated road deaths annually	5,072	2013
Mortality rate [deaths/100,000 population]	30	2013
Rail lines (total route-km)	622	2014
Rail network density (km/100,000 km2 land area)	227	2014
Rail network density (km/1 million population)	34	2014
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	0.1	2015
Air transport, passengers carried	122,589	2015
Per capita air passengers	0.007	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)		
Fixed-telephone subscriptions per 100 inhabitants	0.35	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	83.63	2016
Fixed-broadband subscriptions per 100 inhabitants	0.05	2016
Percentage of individuals using the Internet	13.96	2016

Cameroon

Population (million people)	23.3	2015
GDP (current million US$)	29,198	2015
GDP per capita, PPP (constant 2011 international $)	2,939	2015
Global Competitiveness Index	3.58	2016
Logistics performance index: Overall (1=low to 5=high)	2.15	2016
Quality of overall infrastructure, 1-7 (best)	2.20	2016
Quality of roads, 1-7 (best)	2.50	2016
Quality of railroad infrastructure, 1-7 (best)	2.36	2016
Quality of port infrastructure, 1-7 (best)	2.96	2016
Quality of air transport infrastructure, 1-7 (best)	2.66	2016
Liner shipping connectivity index	15.01	2016
Burden of customs procedure, (7=extremely efficient)	3.41	2015
Container port traffic (TEU: 20 foot equivalent units)	367,332	2014
Merchant fleet by flag of registration, number of ships	3	2016
Merchant fleet by flag of registration, tonnage	428	2016
Container penetration (incl. transhipment) TEU/1,000 capita	16	2014
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	49,751	2010
Paved roads (%)	10	2010
Paved roads (Km)	5,011	2010
Non-paved roads (Km)	44,740	2010
Length of roads by GDP per capita (Km/$)	43	2010
Road network density (km/1,000 population)	2.13	2010
Density of roads (Km/Km2)	0.1	2010
Vehicle ownership (vehicle/1,000 population)		
Estimated road deaths annually	6,136	2013
Mortality rate [deaths/100,000 population]	27.6	2013
Rail lines (total route-km)	976	2014
Rail network density (km/100,000 km2 land area)	206	2014
Rail network density (km/1 million population)	42	2014
Railways, goods transported (million ton-km)	1,056	2014
Railways, passengers carried (million passenger-km)	494	2014
Air transport, freight (million ton-km)	0.0	2015
Air transport, passengers carried	267,209	2015
Per capita air passengers	0.011	2015
CO2 emissions of transport per capita	0.15	2014
CO2 emissions from transport (% of total fuel combustion)	52.0	2013
Fixed-telephone subscriptions per 100 inhabitants	4.38	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	68.11	2016
Fixed-broadband subscriptions per 100 inhabitants	0.19	2016
Percentage of individuals using the Internet	25.00	2016

Chad

Population (million people)	14.0	2015
GDP (current million US$)	10,889	2015
GDP per capita, PPP (constant 2011 international $)	1.73	2015
Global Competitiveness Index	2.62	2016
Logistics performance index: Overall (1=low to 5=high)	N/A	2016
Quality of overall infrastructure, 1-7 (best)	2.04	2016
Quality of roads, 1-7 (best)	2.95	2016
Quality of railroad infrastructure, 1-7 (best)	2.95	2016
Quality of port infrastructure, 1-7 (best)	2.16	2016
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index	2.38	2016
Burden of customs procedure, (7=extremely efficient)	0.0	2015
Container port traffic (TEU: 20 foot equivalent units)	-	
Merchant fleet by flag of registration, number of ships		
Merchant fleet by flag of registration, tonnage		
Container penetration (incl. transhipment) TEU/1,000 capita	Landlocked	
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	2,044	2006
Paved roads (%)	1,086	2006
Paved roads (Km)	0.000	2006
Non-paved roads (Km)	0.01	2006
Length of roads by GDP per capita (Km/$)		
Road network density (km/1,000 population)	0.15	2006
Density of roads (Km/Km2)	49	2006
Vehicle ownership (vehicle/1,000 population)	3,089	2013
Estimated road deaths annually	24.1	2013
Mortality rate [deaths/100,000 population]		
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	40,000	2015
Air transport, passengers carried	1	2015
Per capita air passengers	334	2015
CO2 emissions of transport per capita	33,066	2014
CO2 emissions from transport (% of total fuel combustion)	37	2013
Fixed-telephone subscriptions per 100 inhabitants	0.10	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	44.48	2016
Fixed-broadband subscriptions per 100 inhabitants	0.07	2016
Percentage of individuals using the Internet	5.00	2016

Comoros

Population (million people)	0.8	2015
GDP (current million US$)	624	2014
GDP per capita, PPP (constant 2011 international $)		
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)	2.58	2016
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index	5.38	2016
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships		
Merchant fleet by flag of registration, tonnage		
Container penetration (incl. transhipment) TEU/1,000 capita		
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	880	2000
Paved roads (%)	77	2000
Paved roads (Km)	673	2000
Non-paved roads (Km)	207	2000
Length of roads by GDP per capita (Km/$)	2.3	2000
Road network density (km/1,000 population)	1.12	2000
Density of roads (Km/Km2)	0.47	2000
Vehicle ownership (vehicle/1,000 population)		
Estimated road deaths annually		
Mortality rate [deaths/100,000 population]		
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)		
Air transport, passengers carried		
Per capita air passengers		
CO2 emissions of transport per capita	0.13	2014
CO2 emissions from transport (% of total fuel combustion)		
Fixed-telephone subscriptions per 100 inhabitants	1.66	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	57.66	2016
Fixed-broadband subscriptions per 100 inhabitants	0.36	2016
Percentage of individuals using the Internet	7.94	2016

Cote d'Ivoire

Population (million people)	22.7	2015
GDP (current million US$)	31,753	2015
GDP per capita, PPP (constant 2011 international $)	3,290	2015
Global Competitiveness Index	3.86	2016
Logistics performance index: Overall (1=low to 5=high)	2.60	2016
Quality of overall infrastructure, 1-7 (best)	4.24	2016
Quality of roads, 1-7 (best)	4.70	2016
Quality of railroad infrastructure, 1-7 (best)	2.67	2016
Quality of port infrastructure, 1-7 (best)	5.17	2016
Quality of air transport infrastructure, 1-7 (best)	5.24	2016
Liner shipping connectivity index	22.01	2016
Burden of customs procedure, (7=extremely efficient)	4.09	2015
Container port traffic (TEU: 20 foot equivalent units)	783,102	2014
Merchant fleet by flag of registration, number of ships		
Merchant fleet by flag of registration, tonnage		
Container penetration (incl. transhipment) TEU/1,000 capita	35	2014
Motorways (Km)	142	2007
Highways, main or national roads (Km)	7,000	2007
Secondary or regional roads (Km)	8,240	2007
Other roads (Km)	66,614	2007
Total length of roads (Km)	81,996	2007
Paved roads (%)	8	2007
Paved roads (Km)	6,502	2007
Non-paved roads (Km)	75,494	2007
Length of roads by GDP per capita (Km/$)	72	2007
Road network density (km/1,000 population)	3.61	2007
Density of roads (Km/Km2)	0.25	2007
Vehicle ownership (vehicle/1,000 population)	29	2013
Estimated road deaths annually	4,924	2013
Mortality rate [deaths/100,000 population]	24.2	2013
Rail lines (total route-km)	639	2014
Rail network density (km/100,000 km2 land area)	201	2014
Rail network density (km/1 million population)	28	2014
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	4.7	2015
Air transport, passengers carried	359,261	2015
Per capita air passengers	0.016	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)	29.8	2013
Fixed-telephone subscriptions per 100 inhabitants	1.33	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	126.01	2016
Fixed-broadband subscriptions per 100 inhabitants	0.63	2016
Percentage of individuals using the Internet	26.53	2016

Djibouti

Population (million people)	0.9	2015
GDP (current million US$)	1,589	2014
GDP per capita, PPP (constant 2011 international $)		
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)	2.32	2016
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index	29.41	2016
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)	773,141	2014
Merchant fleet by flag of registration, number of ships	1	2016
Merchant fleet by flag of registration, tonnage	3	2016
Container penetration (incl. transhipment) TEU/1,000 capita	882	2014
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	3,065	2000
Paved roads (%)	45	2000
Paved roads (Km)	1,379	2000
Non-paved roads (Km)	1,686	2000
Length of roads by GDP per capita (Km/$)	4	2000
Road network density (km/1,000 population)	3.45	2000
Density of roads (Km/Km2)	0.13	2000
Vehicle ownership (vehicle/1,000 population)		
Estimated road deaths annually	216	2013
Mortality rate [deaths/100,000 population]	24.7	2013
Rail lines (total route-km)	781	2005
Rail network density (km/100,000 km2 land area)	3,369	2005
Rail network density (km/1 million population)	880	2005
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)		
Air transport, passengers carried		
Per capita air passengers		
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)		
Fixed-telephone subscriptions per 100 inhabitants	2.73	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	37.82	2016
Fixed-broadband subscriptions per 100 inhabitants	2.96	2016
Percentage of individuals using the Internet	13.13	2016

Egypt, Arab Republic of

Population (million people)	91.5	2015
GDP (current million US$)	330,779	2015
GDP per capita, PPP (constant 2011 international $)	10,250	2015
Global Competitiveness Index	3.67	2016
Logistics performance index: Overall (1=low to 5=high)	3.18	2016
Quality of overall infrastructure, 1-7 (best)	3.14	2016
Quality of roads, 1-7 (best)	3.04	2016
Quality of railroad infrastructure, 1-7 (best)	2.61	2016
Quality of port infrastructure, 1-7 (best)	4.33	2016
Quality of air transport infrastructure, 1-7 (best)	4.77	2016
Liner shipping connectivity index	62.5	2016
Burden of customs procedure, (7=extremely efficient)	3.80	2015
Container port traffic (TEU: 20 foot equivalent units)	8,810,990	2014
Merchant fleet by flag of registration, number of ships	217	2016
Merchant fleet by flag of registration, tonnage	3,122	2016
Container penetration (incl. transhipment) TEU/1,000 capita	98	2014
Motorways (Km)	836	2010
Highways, main or national roads (Km)	23,143	2010
Secondary or regional roads (Km)	113,451	2010
Other roads (Km)		
Total length of roads (Km)	137,430	2010
Paved roads (%)	0.92	2010
Paved roads (Km)	126,724	2010
Non-paved roads (Km)	10,706	2010
Length of roads by GDP per capita (Km/$)	49	2010
Road network density (km/1,000 population)	1.50	2010
Density of roads (Km/Km2)	0.14	2010
Vehicle ownership (vehicle/1,000 population)	86	2013
Estimated road deaths annually	10,466	2013
Mortality rate [deaths/100,000 population]	12.8	2013
Rail lines (total route-km)	5,195	2014
Rail network density (km/100,000 km2 land area)	522	2014
Rail network density (km/1 million population)	57	2014
Railways, goods transported (million ton-km)	1,592	2014
Railways, passengers carried (million passenger-km)	40,837	2014
Air transport, freight (million ton-km)	397.5	2015
Air transport, passengers carried	10,159,464	2015
Per capita air passengers	0.111	2015
CO2 emissions of transport per capita	0.55	2014
CO2 emissions from transport (% of total fuel combustion)	24.5	2013
Fixed-telephone subscriptions per 100 inhabitants	7.11	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	113.70	2016
Fixed-broadband subscriptions per 100 inhabitants	5.20	2016
Percentage of individuals using the Internet	39.21	2016

Gabon

Population (million people)	1.7	2015
GDP (current million US$)	14,340	2015
GDP per capita, PPP (constant 2011 international $)	18,832	2015
Global Competitiveness Index	3.79	2016
Logistics performance index: Overall (1=low to 5=high)	2.19	2016
Quality of overall infrastructure, 1-7 (best)	2.92	2016
Quality of roads, 1-7 (best)	2.80	2016
Quality of railroad infrastructure, 1-7 (best)	2.80	2016
Quality of port infrastructure, 1-7 (best)	3.23	2016
Quality of air transport infrastructure, 1-7 (best)	3.62	2016
Liner shipping connectivity index	9.38	2016
Burden of customs procedure, (7=extremely efficient)	3.53	2015
Container port traffic (TEU: 20 foot equivalent units)	197,998	2014
Merchant fleet by flag of registration, number of ships	2	2016
Merchant fleet by flag of registration, tonnage	1	2016
Container penetration (incl. transhipment) TEU/1,000 capita	117	2014
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	9,170	2007
Paved roads (%)	12	2007
Paved roads (Km)	1,098	2007
Non-paved roads (Km)	8,072	2007
Length of roads by GDP per capita (Km/$)	1.1	2007
Road network density (km/1,000 population)	5.32	2007
Density of roads (Km/Km2)	0.03	2007
Vehicle ownership (vehicle/1,000 population)	117	2013
Estimated road deaths annually	383	2013
Mortality rate [deaths/100,000 population]	22.9	2013
Rail lines (total route-km)	810	2014
Rail network density (km/100,000 km2 land area)	314	2014
Rail network density (km/1 million population)	469	2014
Railways, goods transported (million ton-km)	2,447	2014
Railways, passengers carried (million passenger-km)	109	2014
Air transport, freight (million ton-km)	0.0	2015
Air transport, passengers carried	137,331	2015
Per capita air passengers	0.080	2015
CO2 emissions of transport per capita	0.32	2014
CO2 emissions from transport (% of total fuel combustion)	19.8	2013
Fixed-telephone subscriptions per 100 inhabitants	1.06	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	144.17	2016
Fixed-broadband subscriptions per 100 inhabitants	0.73	2016
Percentage of individuals using the Internet	48.05	2016

Gambia, The

Population (million people)	2.0	2015
GDP (current million US$)	851	2014
GDP per capita, PPP (constant 2011 international $)		2014
Global Competitiveness Index	3.47	2016
Logistics performance index: Overall (1=low to 5=high)	-	2016
Quality of overall infrastructure, 1-7 (best)	3.70	2016
Quality of roads, 1-7 (best)	3.92	2016
Quality of railroad infrastructure, 1-7 (best)	N/A	2016
Quality of port infrastructure, 1-7 (best)	4.03	2016
Quality of air transport infrastructure, 1-7 (best)	4.13	2016
Liner shipping connectivity index	6.04	2016
Burden of customs procedure, (7=extremely efficient)	4.47	2015
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships	1	2016
Merchant fleet by flag of registration, tonnage	1	2016
Container penetration (incl. transhipment) TEU/1,000 capita		
Motorways (Km)	0	2004
Highways, main or national roads (Km)	1,652	2004
Secondary or regional roads (Km)	1,300	2004
Other roads (Km)	790	2004
Total length of roads (Km)	3,742	2004
Paved roads (%)	19	2004
Paved roads (Km)	723	2004
Non-paved roads (Km)	3,019	2004
Length of roads by GDP per capita (Km/$)	9	2004
Road network density (km/1,000 population)	1.88	2004
Density of roads (Km/Km2)	0.33	2004
Vehicle ownership (vehicle/1,000 population)	29	2013
Estimated road deaths annually	544	2013
Mortality rate [deaths/100,000 population]	29.4	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	0.1	2015
Air transport, passengers carried	3,036	2015
Per capita air passengers	0.002	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)		
Fixed-telephone subscriptions per 100 inhabitants	1.87	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	139.63	2016
Fixed-broadband subscriptions per 100 inhabitants	0.18	2016
Percentage of individuals using the Internet	18.50	2016

Guinea

Population (million people)	12.6	2015
GDP (current million US$)	6,699	2015
GDP per capita, PPP (constant 2011 international $)	1,135	2015
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)	2.36	2016
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index	8.92	2016
Burden of customs procedure, (7=extremely efficient)	3.32	2015
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships	1	2016
Merchant fleet by flag of registration, tonnage	3	2016
Container penetration (incl. transhipment) TEU/1,000 capita		
Motorways (Km)		
Highways, main or national roads (Km)	7,625	2012
Secondary or regional roads (Km)	15,525	2012
Other roads (Km)	20,373	2012
Total length of roads (Km)	43,348	2012
Paved roads (%)	10	2012
Paved roads (Km)	4,342	2012
Non-paved roads (Km)	40,006	2012
Length of roads by GDP per capita (Km/$)	88	2012
Road network density (km/1,000 population)	3.44	2012
Density of roads (Km/Km2)	0.18	2012
Vehicle ownership (vehicle/1,000 population)	3	2013
Estimated road deaths annually	3,211	2013
Mortality rate [deaths/100,000 population]	27.3	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)		
Air transport, passengers carried		
Per capita air passengers		
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)		
Fixed-telephone subscriptions per 100 inhabitants	0.00	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	85.33	2016
Fixed-broadband subscriptions per 100 inhabitants	0.01	2016
Percentage of individuals using the Internet	9.80	2016

Guinea-Bissau

Population (million people)	1.8	2015
GDP (current million US$)	1,057	2015
GDP per capita, PPP (constant 2011 international $)	1,367	2015
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)	2.37	2016
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index	3.97	2016
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships		
Merchant fleet by flag of registration, tonnage		
Container penetration (incl. transhipment) TEU/1,000 capita		
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	3,455	2002
Paved roads (%)	28	2002
Paved roads (Km)	965	2002
Non-paved roads (Km)	2,490	2002
Length of roads by GDP per capita (Km/$)	11	2002
Road network density (km/1,000 population)	1.87	2002
Density of roads (Km/Km2)	0.1	2002
Vehicle ownership (vehicle/1,000 population)	37	2013
Estimated road deaths annually	468	2013
Mortality rate [deaths/100,000 population]	27.5	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)		
Air transport, passengers carried		
Per capita air passengers		
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)		
Fixed-telephone subscriptions per 100 inhabitants	0.00	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	70.26	2016
Fixed-broadband subscriptions per 100 inhabitants	0.04	2016
Percentage of individuals using the Internet	3.76	2016

Guyana

Population (million people)	0.8	2015
GDP (current million US$)	3,166	2015
GDP per capita, PPP (constant 2011 international $)	7,064	2015
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)	2.67	2016
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index	4.52	2016
Burden of customs procedure, (7=extremely efficient)	3.57	2015
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships	17	2016
Merchant fleet by flag of registration, tonnage	42	2016
Container penetration (incl. transhipment) TEU/1,000 capita		
Motorways (Km)	0	2013
Highways, main or national roads (Km)	486	2013
Secondary or regional roads (Km)	81	2013
Other roads (Km)	889	2013
Total length of roads (Km)	1,455	2013
Paved roads (%)	39	2013
Paved roads (Km)	566	2013
Non-paved roads (Km)	889	2013
Length of roads by GDP per capita (Km/$)	0.4	2013
Road network density (km/1,000 population)	1.90	2013
Density of roads (Km/Km2)	0.01	2013
Vehicle ownership (vehicle/1,000 population)	20	2013
Estimated road deaths annually	138	2013
Mortality rate [deaths/100,000 population]	17.3	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)		
Air transport, passengers carried		
Per capita air passengers		
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)		
Fixed-telephone subscriptions per 100 inhabitants	18.86	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	66.43	2016
Fixed-broadband subscriptions per 100 inhabitants	7.64	2016
Percentage of individuals using the Internet	35.66	2016

Indonesia

Population (million people)	257.6	2015
GDP (current million US$)	861,934	2015
GDP per capita, PPP (constant 2011 international $)	10,385	2015
Global Competitiveness Index	4.52	2016
Logistics performance index: Overall (1=low to 5=high)	2.98	2016
Quality of overall infrastructure, 1-7 (best)	3.79	2016
Quality of roads, 1-7 (best)	3.86	2016
Quality of railroad infrastructure, 1-7 (best)	3.82	2016
Quality of port infrastructure, 1-7 (best)	3.91	2016
Quality of air transport infrastructure, 1-7 (best)	4.52	2016
Liner shipping connectivity index	27.19	2016
Burden of customs procedure, (7=extremely efficient)	3.90	2015
Container port traffic (TEU: 20 foot equivalent units)	11,900,763	2014
Merchant fleet by flag of registration, number of ships	1,712	2016
Merchant fleet by flag of registration, tonnage	17,287	2016
Container penetration (incl. transhipment) TEU/1,000 capita	47	2014
Motorways (Km)		
Highways, main or national roads (Km)	38,570	2013
Secondary or regional roads (Km)	53,642	2013
Other roads (Km)	415,788	2013
Total length of roads (Km)	508,000	2013
Paved roads (%)	57	2013
Paved roads (Km)	287,926	2013
Non-paved roads (Km)	220,074	2013
Length of roads by GDP per capita (Km/$)	146	2013
Road network density (km/1,000 population)	1.97	2013
Density of roads (Km/Km2)	0.27	2013
Vehicle ownership (vehicle/1,000 population)	417	2013
Estimated road deaths annually	38,279	2013
Mortality rate [deaths/100,000 population]	15.3	2013
Rail lines (total route-km)	4,684	2014
Rail network density (km/100,000 km2 land area)	259	2014
Rail network density (km/1 million population)	18	2014
Railways, goods transported (million ton-km)	7,166	2014
Railways, passengers carried (million passenger-km)	20,283	2014
Air transport, freight (million ton-km)	747.5	2015
Air transport, passengers carried	88,685,767	2015
Per capita air passengers	0.344	2015
CO2 emissions of transport per capita	0.54	2014
CO2 emissions from transport (% of total fuel combustion)	31.9	2013
Fixed-telephone subscriptions per 100 inhabitants	4.01	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	149.13	2016
Fixed-broadband subscriptions per 100 inhabitants	1.89	2016
Percentage of individuals using the Internet	25.37	2016

Iran, Islamic Republic of

Population (million people)	79.1	2015
GDP (current million US$)	425,326	2014
GDP per capita, PPP (constant 2011 international $)		2014
Global Competitiveness Index	4.12	2016
Logistics performance index: Overall (1=low to 5=high)	2.60	2016
Quality of overall infrastructure, 1-7 (best)	3.96	2016
Quality of roads, 1-7 (best)	4.07	2016
Quality of railroad infrastructure, 1-7 (best)	3.48	2016
Quality of port infrastructure, 1-7 (best)	3.93	2016
Quality of air transport infrastructure, 1-7 (best)	3.43	2016
Liner shipping connectivity index	24.63	2016
Burden of customs procedure, (7=extremely efficient)	3.29	2015
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships	233	2016
Merchant fleet by flag of registration, tonnage	17,838	2016
Container penetration (incl. transhipment) TEU/1,000 capita	66	2014
Motorways (Km)	2166	2012
Highways, main or national roads (Km)	34,203	2012
Secondary or regional roads (Km)	44,454	2012
Other roads (Km)	195,775	2012
Total length of roads (Km)	276,597	2012
Paved roads (%)	64	2012
Paved roads (Km)	176,272	2012
Non-paved roads (Km)	100,325	2012
Length of roads by GDP per capita (Km/$)	42	2012
Road network density (km/1,000 population)	3.50	2012
Density of roads (Km/Km2)	0.16	2012
Vehicle ownership (vehicle/1,000 population)	347	2013
Estimated road deaths annually	24,896	2013
Mortality rate [deaths/100,000 population]	32.2	2013
Rail lines (total route-km)	8,560	2014
Rail network density (km/100,000 km2 land area)	526	2014
Rail network density (km/1 million population)	108	2014
Railways, goods transported (million ton-km)	24,461	2014
Railways, passengers carried (million passenger-km)	16,272	2014
Air transport, freight (million ton-km)	107.2	2015
Air transport, passengers carried	15,003,958	2015
Per capita air passengers	0.190	2015
CO2 emissions of transport per capita	1.38	2014
CO2 emissions from transport (% of total fuel combustion)	23.7	2013
Fixed-telephone subscriptions per 100 inhabitants	38.30	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	100.07	2016
Fixed-broadband subscriptions per 100 inhabitants	11.58	2016
Percentage of individuals using the Internet	53.23	2016

Iraq

Population (million people)	36.4	2015
GDP (current million US$)	168,607	2015
GDP per capita, PPP (constant 2011 international $)	14,018	2015
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)	2.15	2016
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index	4.88	2016
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships	29	2016
Merchant fleet by flag of registration, tonnage	307	2016
Container penetration (incl. transhipment) TEU/1,000 capita		
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	59,623	2012
Paved roads (%)	86	2012
Paved roads (Km)	40,764	2012
Non-paved roads (Km)	6,636	2012
Length of roads by GDP per capita (Km/$)	9	2012
Road network density (km/1,000 population)	1.64	2012
Density of roads (Km/Km2)	0.14	2012
Vehicle ownership (vehicle/1,000 population)	134	2013
Estimated road deaths annually	6,826	2013
Mortality rate [deaths/100,000 population]	20.2	2013
Rail lines (total route-km)	2,138	2014
Rail network density (km/100,000 km2 land area)	492	2014
Rail network density (km/1 million population)	59	2014
Railways, goods transported (million ton-km)	249	2014
Railways, passengers carried (million passenger-km)	99	2014
Air transport, freight (million ton-km)	10.8	2015
Air transport, passengers carried	484,804	2015
Per capita air passengers	0.013	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)	25.7	2013
Fixed-telephone subscriptions per 100 inhabitants	5.53	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	82.18	2016
Fixed-broadband subscriptions per 100 inhabitants	0.01	2010
Percentage of individuals using the Internet	21.23	2016

Jordan

Population (million people)	7.6	2015
GDP (current million US$)	37,517	2015
GDP per capita, PPP (constant 2011 international $)	10,240	2015
Global Competitiveness Index	4.29	2016
Logistics performance index: Overall (1=low to 5=high)	2.96	2016
Quality of overall infrastructure, 1-7 (best)	4.50	2016
Quality of roads, 1-7 (best)	4.33	2016
Quality of railroad infrastructure, 1-7 (best)	2.53	2016
Quality of port infrastructure, 1-7 (best)	4.51	2016
Quality of air transport infrastructure, 1-7 (best)	5.33	2016
Liner shipping connectivity index	29.27	2016
Burden of customs procedure, (7=extremely efficient)	4.47	2015
Container port traffic (TEU: 20 foot equivalent units)	797,624	2014
Merchant fleet by flag of registration, number of ships	22	2016
Merchant fleet by flag of registration, tonnage	197	2016
Container penetration (incl. transhipment) TEU/1,000 capita	121	2014
Motorways (Km)	0	2013
Highways, main or national roads (Km)	2,754	2013
Secondary or regional roads (Km)	1,894	2013
Other roads (Km)	2,651	2013
Total length of roads (Km)	7,299	2013
Paved roads (%)	100	2013
Paved roads (Km)	7,299	2013
Non-paved roads (Km)	0	2013
Length of roads by GDP per capita (Km/$)	1.4	2013
Road network density (km/1,000 population)	0.96	2013
Density of roads (Km/Km2)	0.08	2013
Vehicle ownership (vehicle/1,000 population)	174	2013
Estimated road deaths annually	1,913	2013
Mortality rate [deaths/100,000 population]	26.3	2013
Rail lines (total route-km)	509	2014
Rail network density (km/100,000 km2 land area)	573	2014
Rail network density (km/1 million population)	67	2014
Railways, goods transported (million ton-km)	344	2014
Railways, passengers carried (million passenger-km)	503	2014
Air transport, freight (million ton-km)	169.1	2015
Air transport, passengers carried	3,065,145	2015
Per capita air passengers	0.404	2015
CO2 emissions of transport per capita	0.97	2014
CO2 emissions from transport (% of total fuel combustion)	31.2	2013
Fixed-telephone subscriptions per 100 inhabitants	4.55	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	196.31	2016
Fixed-broadband subscriptions per 100 inhabitants	5.84	2016
Percentage of individuals using the Internet	62.30	2016

Kazakhstan

Population (million people)	17.5	2015
GDP (current million US$)	184,361	2015
GDP per capita, PPP (constant 2011 international $)	24,353	2015
Global Competitiveness Index	4.41	2016
Logistics performance index: Overall (1=low to 5=high)	2.75	2016
Quality of overall infrastructure, 1-7 (best)	4.00	2016
Quality of roads, 1-7 (best)	3.02	2016
Quality of railroad infrastructure, 1-7 (best)	4.26	2016
Quality of port infrastructure, 1-7 (best)	3.13	2016
Quality of air transport infrastructure, 1-7 (best)	4.01	2016
Liner shipping connectivity index		
Burden of customs procedure, (7=extremely efficient)	4.22	2015
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships	24	2016
Merchant fleet by flag of registration, tonnage	371	2016
Container penetration (incl. transhipment) TEU/1,000 capita		
Motorways (Km)		
Highways, main or national roads (Km)	23,494	2011
Secondary or regional roads (Km)	73,661	2011
Other roads (Km)		
Total length of roads (Km)	97,155	2011
Paved roads (%)	89	2011
Paved roads (Km)	86,217	2011
Non-paved roads (Km)	10,938	2011
Length of roads by GDP per capita (Km/$)	9	2011
Road network density (km/1,000 population)	5.54	2011
Density of roads (Km/Km2)	0.04	2011
Vehicle ownership (vehicle/1,000 population)	239	2013
Estimated road deaths annually	3,983	2013
Mortality rate [deaths/100,000 population]	24.2	2013
Rail lines (total route-km)	14,329	2014
Rail network density (km/100,000 km2 land area)	531	2014
Rail network density (km/1 million population)	817	2014
Railways, goods transported (million ton-km)	235,845	2014
Railways, passengers carried (million passenger-km)	18,498	2014
Air transport, freight (million ton-km)	37.7	2015
Air transport, passengers carried	5,081,632	2015
Per capita air passengers	0.290	2015
CO2 emissions of transport per capita	0.79	2014
CO2 emissions from transport (% of total fuel combustion)	5.6	2013
Fixed-telephone subscriptions per 100 inhabitants	23.22	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	149.99	2016
Fixed-broadband subscriptions per 100 inhabitants	13.68	2016
Percentage of individuals using the Internet	76.80	2016

Kuwait

Population (million people)	3.9	2015
GDP (current million US$)	112,812	2015
GDP per capita, PPP (constant 2011 international $)	67,113	2015
Global Competitiveness Index	4.53	2016
Logistics performance index: Overall (1=low to 5=high)	3.15	2016
Quality of overall infrastructure, 1-7 (best)	4.22	2016
Quality of roads, 1-7 (best)	4.40	2016
Quality of railroad infrastructure, 1-7 (best)	N/A	2016
Quality of port infrastructure, 1-7 (best)	4.06	2016
Quality of air transport infrastructure, 1-7 (best)	3.64	2016
Liner shipping connectivity index	8.89	2016
Burden of customs procedure, (7=extremely efficient)	3.50	2015
Container port traffic (TEU: 20 foot equivalent units)	1,277,674	2014
Merchant fleet by flag of registration, number of ships	80	2016
Merchant fleet by flag of registration, tonnage	9,221	2016
Container penetration (incl. transhipment) TEU/1,000 capita	340	2014
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	7,321	2013
Paved roads (%)	85	2013
Paved roads (Km)	4,887	2013
Non-paved roads (Km)	862	2013
Length of roads by GDP per capita (Km/$)	0.1	2013
Road network density (km/1,000 population)	1.88	2013
Density of roads (Km/Km2)	0.41	2013
Vehicle ownership (vehicle/1,000 population)	547	2013
Estimated road deaths annually	629	2013
Mortality rate [deaths/100,000 population]	18.7	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	275.8	2015
Air transport, passengers carried	3,655,366	2015
Per capita air passengers	0.939	2015
CO2 emissions of transport per capita	3.70	2014
CO2 emissions from transport (% of total fuel combustion)	15.3	2013
Fixed-telephone subscriptions per 100 inhabitants	10.96	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	146.55	2016
Fixed-broadband subscriptions per 100 inhabitants	2.76	2016
Percentage of individuals using the Internet	78.37	2016

Kyrgyz Republic

Population (million people)	6.0	2015
GDP (current million US$)	6,572	2015
GDP per capita, PPP (constant 2011 international $)	3,225	2015
Global Competitiveness Index	3.75	2016
Logistics performance index: Overall (1=low to 5=high)	2.16	2016
Quality of overall infrastructure, 1-7 (best)	2.96	2016
Quality of roads, 1-7 (best)	2.49	2016
Quality of railroad infrastructure, 1-7 (best)	2.37	2016
Quality of port infrastructure, 1-7 (best)	1.48	2016
Quality of air transport infrastructure, 1-7 (best)	2.88	2016
Liner shipping connectivity index		
Burden of customs procedure, (7=extremely efficient)	3.53	2015
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships		
Merchant fleet by flag of registration, tonnage		
Container penetration (incl. transhipment) TEU/1,000 capita	Landlocked	
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	34,000	2007
Paved roads (%)	91	2007
Paved roads (Km)	16,835	2007
Non-paved roads (Km)	16,650	2007
Length of roads by GDP per capita (Km/$)	47	2007
Road network density (km/1,000 population)	5.71	2007
Density of roads (Km/Km2)	0.17	2007
Vehicle ownership (vehicle/1,000 population)	173	2013
Estimated road deaths annually	1,220	2013
Mortality rate [deaths/100,000 population]	22	2013
Rail lines (total route-km)	417	2014
Rail network density (km/100,000 km2 land area)	217	2014
Rail network density (km/1 million population)	70	2014
Railways, goods transported (million ton-km)	922	2014
Railways, passengers carried (million passenger-km)	75	2014
Air transport, freight (million ton-km)	0.1	2015
Air transport, passengers carried	625,294	2015
Per capita air passengers	0.105	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)	44.4	2013
Fixed-telephone subscriptions per 100 inhabitants	6.59	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	131.38	2016
Fixed-broadband subscriptions per 100 inhabitants	4.08	2016
Percentage of individuals using the Internet	34.50	2016

Lebanon

Population (million people)	5.9	2015
GDP (current million US$)	47,103	2015
GDP per capita, PPP (constant 2011 international $)	13,117	2015
Global Competitiveness Index	3.84	2016
Logistics performance index: Overall (1=low to 5=high)	2.72	2016
Quality of overall infrastructure, 1-7 (best)	2.34	2016
Quality of roads, 1-7 (best)	2.77	2016
Quality of railroad infrastructure, 1-7 (best)	N/A	2016
Quality of port infrastructure, 1-7 (best)	3.78	2016
Quality of air transport infrastructure, 1-7 (best)	4.09	2016
Liner shipping connectivity index	35.1	2016
Burden of customs procedure, (7=extremely efficient)	3.04	2015
Container port traffic (TEU: 20 foot equivalent units)	1,210,400	2014
Merchant fleet by flag of registration, number of ships	183	2016
Merchant fleet by flag of registration, tonnage	1,947	2016
Container penetration (incl. transhipment) TEU/1,000 capita	266	2014
Motorways (Km)	300	2013
Highways, main or national roads (Km)	457	2013
Secondary or regional roads (Km)	1,379	2013
Other roads (Km)	4,550	2013
Total length of roads (Km)	6,686	2013
Paved roads (%)	95	2013
Paved roads (Km)	6,033	2013
Non-paved roads (Km)	318	2013
Length of roads by GDP per capita (Km/$)	0.7	2013
Road network density (km/1,000 population)	1.14	2013
Density of roads (Km/Km2)	0.64	2013
Vehicle ownership (vehicle/1,000 population)	348	2013
Estimated road deaths annually	1,088	2013
Mortality rate [deaths/100,000 population]	22.6	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	53.9	2015
Air transport, passengers carried	2,583,275	2015
Per capita air passengers	0.442	2015
CO2 emissions of transport per capita	1.28	2014
CO2 emissions from transport (% of total fuel combustion)	24.6	2013
Fixed-telephone subscriptions per 100 inhabitants	21.05	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	96.37	2016
Fixed-broadband subscriptions per 100 inhabitants	25.62	2016
Percentage of individuals using the Internet	76.11	2016

Libya

Population (million people)	6.3	2015
GDP (current million US$)	29,153	2015
GDP per capita, PPP (constant 2011 international $)	13,321	2015
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)	2.26	2016
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index	4.86	2016
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)	456,773	2014
Merchant fleet by flag of registration, number of ships	32	2016
Merchant fleet by flag of registration, tonnage	244	2016
Container penetration (incl. transhipment) TEU/1,000 capita	73	2014
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	83,200	2000
Paved roads (%)	57	2000
Paved roads (Km)	47,590	2000
Non-paved roads (Km)	35,610	2000
Length of roads by GDP per capita (Km/$)	13	2000
Road network density (km/1,000 population)	13.25	2000
Density of roads (Km/Km2)	0.05	2000
Vehicle ownership (vehicle/1,000 population)	573	2013
Estimated road deaths annually	4,554	2013
Mortality rate [deaths/100,000 population]	73.4	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	3.8	2015
Air transport, passengers carried	2,566,466	2015
Per capita air passengers	0.409	2015
CO2 emissions of transport per capita	4.06	2014
CO2 emissions from transport (% of total fuel combustion)	50.5	2013
Fixed-telephone subscriptions per 100 inhabitants	21.49	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	119.78	2016
Fixed-broadband subscriptions per 100 inhabitants	2.64	2016
Percentage of individuals using the Internet	20.27	2016

Malaysia

Population (million people)	30.3	2015
GDP (current million US$)	296,218	2015
GDP per capita, PPP (constant 2011 international $)	25,308	2015
Global Competitiveness Index	5.16	2016
Logistics performance index: Overall (1=low to 5=high)	3.43	2016
Quality of overall infrastructure, 1-7 (best)	5.48	2016
Quality of roads, 1-7 (best)	5.46	2016
Quality of railroad infrastructure, 1-7 (best)	5.06	2016
Quality of port infrastructure, 1-7 (best)	5.44	2016
Quality of air transport infrastructure, 1-7 (best)	5.70	2016
Liner shipping connectivity index	106.79	2016
Burden of customs procedure, (7=extremely efficient)	5.19	2015
Container port traffic (TEU: 20 foot equivalent units)	22,718,784	2014
Merchant fleet by flag of registration, number of ships	621	2016
Merchant fleet by flag of registration, tonnage	16,791	2016
Container penetration (incl. transhipment) TEU/1,000 capita	760	2014
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	180,882	2012
Paved roads (%)	78	2012
Paved roads (Km)	141,195	2012
Non-paved roads (Km)	39,687	2012
Length of roads by GDP per capita (Km/$)	17	2012
Road network density (km/1,000 population)	5.96	2012
Density of roads (Km/Km2)	0.55	2012
Vehicle ownership (vehicle/1,000 population)	802	2013
Estimated road deaths annually	7,129	2013
Mortality rate [deaths/100,000 population]	24	2013
Rail lines (total route-km)	2,250	2014
Rail network density (km/100,000 km2 land area)	685	2014
Rail network density (km/1 million population)	74	2014
Railways, goods transported (million ton-km)	3,071	2014
Railways, passengers carried (million passenger-km)	3,293	2014
Air transport, freight (million ton-km)	2006.0	2015
Air transport, passengers carried	50,347,150	2015
Per capita air passengers	1.660	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)	27.4	2013
Fixed-telephone subscriptions per 100 inhabitants	14.50	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	141.17	2016
Fixed-broadband subscriptions per 100 inhabitants	8.74	2016
Percentage of individuals using the Internet	78.79	2016

Maldives

Population (million people)	0.4	2015
GDP (current million US$)	3,143	2015
GDP per capita, PPP (constant 2011 international $)	11,892	2015
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)	2.51	2016
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index	7.59	2016
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)	83,778	2014
Merchant fleet by flag of registration, number of ships	11	2016
Merchant fleet by flag of registration, tonnage	52	2016
Container penetration (incl. transhipment) TEU/1,000 capita	234	2014
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	88	2005
Paved roads (%)	100	2005
Paved roads (Km)	88	2005
Non-paved roads (Km)	0	2005
Length of roads by GDP per capita (Km/$)	0.03	2005
Road network density (km/1,000 population)	0.22	2005
Density of roads (Km/Km2)	0.29	2005
Vehicle ownership (vehicle/1,000 population)	178	2013
Estimated road deaths annually	12	2013
Mortality rate [deaths/100,000 population]	3.5	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)		
Air transport, passengers carried		
Per capita air passengers	0.000	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)		
Fixed-telephone subscriptions per 100 inhabitants	5.80	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	222.99	2016
Fixed-broadband subscriptions per 100 inhabitants	7.22	2016
Percentage of individuals using the Internet	59.09	2016

Mali

Population (million people)	17.6	2015
GDP (current million US$)	13,100	2015
GDP per capita, PPP (constant 2011 international $)	2,285	2015
Global Competitiveness Index	3.46	2016
Logistics performance index: Overall (1=low to 5=high)	2.50	2016
Quality of overall infrastructure, 1-7 (best)	2.40	2016
Quality of roads, 1-7 (best)	3.23	2016
Quality of railroad infrastructure, 1-7 (best)	2.19	2016
Quality of port infrastructure, 1-7 (best)	2.27	2016
Quality of air transport infrastructure, 1-7 (best)	3.51	2016
Liner shipping connectivity index		
Burden of customs procedure, (7=extremely efficient)	3.18	2015
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships		
Merchant fleet by flag of registration, tonnage		
Container penetration (incl. transhipment) TEU/1,000 capita	Landlocked	
Motorways (Km)	0	2013
Highways, main or national roads (Km)	14,102	2013
Secondary or regional roads (Km)	7,052	2013
Other roads (Km)	67,870	2013
Total length of roads (Km)	89,024	2013
Paved roads (%)	7	2013
Paved roads (Km)	6,209	2013
Non-paved roads (Km)	82,815	2013
Length of roads by GDP per capita (Km/$)	124	2013
Road network density (km/1,000 population)	5.06	2013
Density of roads (Km/Km2)	0.07	2013
Vehicle ownership (vehicle/1,000 population)	19	2013
Estimated road deaths annually	3,920	2013
Mortality rate [deaths/100,000 population]	25.6	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)		
Air transport, passengers carried		
Per capita air passengers		
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)		
Fixed-telephone subscriptions per 100 inhabitants	1.20	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	120.31	2016
Fixed-broadband subscriptions per 100 inhabitants	0.03	2016
Percentage of individuals using the Internet	11.11	2016

Mauritania

Population (million people)	4.1	2015
GDP (current million US$)	5,442	2014
GDP per capita, PPP (constant 2011 international $)		
Global Competitiveness Index	2.94	2016
Logistics performance index: Overall (1=low to 5=high)	1.87	2016
Quality of overall infrastructure, 1-7 (best)	1.56	2016
Quality of roads, 1-7 (best)	2.28	2016
Quality of railroad infrastructure, 1-7 (best)	1.97	2016
Quality of port infrastructure, 1-7 (best)	2.87	2016
Quality of air transport infrastructure, 1-7 (best)	2.38	2016
Liner shipping connectivity index	6.26	2016
Burden of customs procedure, (7=extremely efficient)	3.10	2015
Container port traffic (TEU: 20 foot equivalent units)	84,665	2014
Merchant fleet by flag of registration, number of ships	1	2016
Merchant fleet by flag of registration, tonnage	9	2016
Container penetration (incl. transhipment) TEU/1,000 capita	21	2014
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	11,790	2012
Paved roads (%)	36	2012
Paved roads (Km)	4,258	2012
Non-paved roads (Km)	7,532	2012
Length of roads by GDP per capita (Km/$)	11	2012
Road network density (km/1,000 population)	2.90	2012
Density of roads (Km/Km2)	0.01	2012
Vehicle ownership (vehicle/1,000 population)	107	2013
Estimated road deaths annually	952	2013
Mortality rate [deaths/100,000 population]	24.5	2013
Rail lines (total route-km)	728	2014
Rail network density (km/100,000 km2 land area)	71	2014
Rail network density (km/1 million population)	179	2014
Railways, goods transported (million ton-km)	7,536	2014
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	0.0	2015
Air transport, passengers carried	248,159	2015
Per capita air passengers	0.061	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)		
Fixed-telephone subscriptions per 100 inhabitants	1.27	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	86.52	2016
Fixed-broadband subscriptions per 100 inhabitants	0.25	2016
Percentage of individuals using the Internet	18.00	2016

Morocco

Population (million people)	34.4	2015
GDP (current million US$)	100,360	2015
GDP per capita, PPP (constant 2011 international $)	7,361	2015
Global Competitiveness Index	4.20	2016
Logistics performance index: Overall (1=low to 5=high)	2.67	2016
Quality of overall infrastructure, 1-7 (best)	4.49	2016
Quality of roads, 1-7 (best)	4.36	2016
Quality of railroad infrastructure, 1-7 (best)	3.92	2016
Quality of port infrastructure, 1-7 (best)	4.82	2016
Quality of air transport infrastructure, 1-7 (best)	4.73	2016
Liner shipping connectivity index	64.72	2016
Burden of customs procedure, (7=extremely efficient)	4.22	2015
Container port traffic (TEU: 20 foot equivalent units)	3,070,000	2014
Merchant fleet by flag of registration, number of ships	21	2016
Merchant fleet by flag of registration, tonnage	92	2016
Container penetration (incl. transhipment) TEU/1,000 capita	91	2014
Motorways (Km)	1398	2011
Highways, main or national roads (Km)	11,364	2011
Secondary or regional roads (Km)	10,091	2011
Other roads (Km)	35,844	2011
Total length of roads (Km)	58,698	2011
Paved roads (%)	71	2011
Paved roads (Km)	41,419	2011
Non-paved roads (Km)	17,279	2011
Length of roads by GDP per capita (Km/$)	19	2011
Road network density (km/1,000 population)	1.71	2011
Density of roads (Km/Km2)	0.13	2011
Vehicle ownership (vehicle/1,000 population)	100	2013
Estimated road deaths annually	6,870	2013
Mortality rate [deaths/100,000 population]	20.8	2013
Rail lines (total route-km)	2,109	2014
Rail network density (km/100,000 km2 land area)	473	2014
Rail network density (km/1 million population)	61	2014
Railways, goods transported (million ton-km)	5,976	2014
Railways, passengers carried (million passenger-km)	4,819	2014
Air transport, freight (million ton-km)	47.8	2015
Air transport, passengers carried	6,786,850	2015
Per capita air passengers	0.197	2015
CO2 emissions of transport per capita	0.47	2014
CO2 emissions from transport (% of total fuel combustion)	30.0	2013
Fixed-telephone subscriptions per 100 inhabitants	6.02	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	120.72	2016
Fixed-broadband subscriptions per 100 inhabitants	3.65	2016
Percentage of individuals using the Internet	58.27	2016

Mozambique

Population (million people)	28.0	2015
GDP (current million US$)	14,689	2015
GDP per capita, PPP (constant 2011 international $)	1,116	2015
Global Competitiveness Index	3.13	2016
Logistics performance index: Overall (1=low to 5=high)	2.68	2016
Quality of overall infrastructure, 1-7 (best)	2.59	2016
Quality of roads, 1-7 (best)	2.43	2016
Quality of railroad infrastructure, 1-7 (best)	2.43	2016
Quality of port infrastructure, 1-7 (best)	3.51	2016
Quality of air transport infrastructure, 1-7 (best)	3.41	2016
Liner shipping connectivity index	9.51	2016
Burden of customs procedure, (7=extremely efficient)	3.46	2015
Container port traffic (TEU: 20 foot equivalent units)	328,200	2014
Merchant fleet by flag of registration, number of ships	4	2016
Merchant fleet by flag of registration, tonnage	8	2016
Container penetration (incl. transhipment) TEU/1,000 capita	12	2014
Motorways (Km)		
Highways, main or national roads (Km)	10,919	2012
Secondary or regional roads (Km)	19,412	2012
Other roads (Km)		2012
Total length of roads (Km)	30,331	2012
Paved roads (%)	21	2012
Paved roads (Km)	6,303	2012
Non-paved roads (Km)	24,028	2012
Length of roads by GDP per capita (Km/$)	66	2012
Road network density (km/1,000 population)	1.08	2012
Density of roads (Km/Km2)	0.04	2012
Vehicle ownership (vehicle/1,000 population)	21	2013
Estimated road deaths annually	8,173	2013
Mortality rate [deaths/100,000 population]	31.7	2013
Rail lines (total route-km)	3,116	2014
Rail network density (km/100,000 km2 land area)	396	2014
Rail network density (km/1 million population)	111	2014
Railways, goods transported (million ton-km)	1,193	2014
Railways, passengers carried (million passenger-km)	246	2014
Air transport, freight (million ton-km)	5.1	2015
Air transport, passengers carried	686,893	2015
Per capita air passengers	0.025	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)	69.8	2013
Fixed-telephone subscriptions per 100 inhabitants	0.30	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	66.25	2016
Fixed-broadband subscriptions per 100 inhabitants	0.14	2016
Percentage of individuals using the Internet	17.52	2016

Niger

Population (million people)	19.9	2015
GDP (current million US$)	7,143	2015
GDP per capita, PPP (constant 2011 international $)	897	2015
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)		
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index		
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships		
Merchant fleet by flag of registration, tonnage		
Container penetration (incl. transhipment) TEU/1,000 capita	Landlocked	
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	19,710	2013
Paved roads (%)	21	2013
Paved roads (Km)	4,225	2013
Non-paved roads (Km)	15,485	2013
Length of roads by GDP per capita (Km/$)	47	2013
Road network density (km/1,000 population)	0.99	2013
Density of roads (Km/Km2)	0.02	2013
Vehicle ownership (vehicle/1,000 population)	18	2013
Estimated road deaths annually	4,706	2013
Mortality rate [deaths/100,000 population]	26.4	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	0.0	2015
Air transport, passengers carried	15,243	2015
Per capita air passengers	0.001	2015
CO2 emissions of transport per capita	0.06	2014
CO2 emissions from transport (% of total fuel combustion)	59.5	2013
Fixed-telephone subscriptions per 100 inhabitants	0.56	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	48.87	2016
Fixed-broadband subscriptions per 100 inhabitants	0.07	2016
Percentage of individuals using the Internet	4.32	2016

Nigeria

Population (million people)	182.2	2015
GDP (current million US$)	481,066	2015
GDP per capita, PPP (constant 2011 international $)	5,639	2015
Global Competitiveness Index	3.39	2016
Logistics performance index: Overall (1=low to 5=high)	2.63	2016
Quality of overall infrastructure, 1-7 (best)	2.32	2016
Quality of roads, 1-7 (best)	2.62	2016
Quality of railroad infrastructure, 1-7 (best)	1.48	2016
Quality of port infrastructure, 1-7 (best)	2.82	2016
Quality of air transport infrastructure, 1-7 (best)	3.20	2016
Liner shipping connectivity index	21.93	2016
Burden of customs procedure, (7=extremely efficient)	2.80	2015
Container port traffic (TEU: 20 foot equivalent units)	1,062,389	2014
Merchant fleet by flag of registration, number of ships	261	2016
Merchant fleet by flag of registration, tonnage	4,924	2016
Container penetration (incl. transhipment) TEU/1,000 capita	6	2014
Motorways (Km)	0	2004
Highways, main or national roads (Km)	15,688	2004
Secondary or regional roads (Km)	18,715	2004
Other roads (Km)	158,797	2004
Total length of roads (Km)	193,200	2004
Paved roads (%)	15	2004
Paved roads (Km)	28,980	2004
Non-paved roads (Km)	164,220	2004
Length of roads by GDP per capita (Km/$)	299	2004
Road network density (km/1,000 population)	1.06	2004
Density of roads (Km/Km2)	0.21	2004
Vehicle ownership (vehicle/1,000 population)	33	2013
Estimated road deaths annually	35,641	2013
Mortality rate [deaths/100,000 population]	20.5	2013
Rail lines (total route-km)	3,528	2007
Rail network density (km/100,000 km2 land area)	387	2007
Rail network density (km/1 million population)	19	2007
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	22.4	2015
Air transport, passengers carried	3,223,460	2015
Per capita air passengers	0.018	2015
CO2 emissions of transport per capita	0.11	2014
CO2 emissions from transport (% of total fuel combustion)	39.3	2013
Fixed-telephone subscriptions per 100 inhabitants	0.08	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	81.82	2016
Fixed-broadband subscriptions per 100 inhabitants	0.01	2016
Percentage of individuals using the Internet	25.67	2016

Oman

Population (million people)	4.5	2015
GDP (current million US$)	70,255	2015
GDP per capita, PPP (constant 2011 international $)	35,983	2015
Global Competitiveness Index	4.28	2016
Logistics performance index: Overall (1=low to 5=high)	3.23	2016
Quality of overall infrastructure, 1-7 (best)	4.88	2016
Quality of roads, 1-7 (best)	5.51	2016
Quality of railroad infrastructure, 1-7 (best)	N/A	2016
Quality of port infrastructure, 1-7 (best)	4.58	2016
Quality of air transport infrastructure, 1-7 (best)	4.74	2016
Liner shipping connectivity index	47.35	2016
Burden of customs procedure, (7=extremely efficient)	4.35	2015
Container port traffic (TEU: 20 foot equivalent units)	3,620,364	2014
Merchant fleet by flag of registration, number of ships	39	2016
Merchant fleet by flag of registration, tonnage	711	2016
Container penetration (incl. transhipment) TEU/1,000 capita	855	2014
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	64,051	2013
Paved roads (%)	51	2013
Paved roads (Km)	32,605	2013
Non-paved roads (Km)	31,446	2013
Length of roads by GDP per capita (Km/$)	2.9	2013
Road network density (km/1,000 population)	14.26	2013
Density of roads (Km/Km2)	0.21	2013
Vehicle ownership (vehicle/1,000 population)	298	2013
Estimated road deaths annually	924	2013
Mortality rate [deaths/100,000 population]	25.4	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	412.2	2015
Air transport, passengers carried	6,365,784	2015
Per capita air passengers	1.418	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)	21.3	2013
Fixed-telephone subscriptions per 100 inhabitants	9.80	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	159.22	2016
Fixed-broadband subscriptions per 100 inhabitants	6.19	2016
Percentage of individuals using the Internet	69.82	2016

Pakistan

Population (million people)	188.9	2015
GDP (current million US$)	269,971	2015
GDP per capita, PPP (constant 2011 international $)	4,745	2015
Global Competitiveness Index	3.49	2016
Logistics performance index: Overall (1=low to 5=high)	2.92	2016
Quality of overall infrastructure, 1-7 (best)	3.45	2016
Quality of roads, 1-7 (best)	3.83	2016
Quality of railroad infrastructure, 1-7 (best)	3.08	2016
Quality of port infrastructure, 1-7 (best)	3.73	2016
Quality of air transport infrastructure, 1-7 (best)	3.99	2016
Liner shipping connectivity index	36.58	2016
Burden of customs procedure, (7=extremely efficient)	3.36	2015
Container port traffic (TEU: 20 foot equivalent units)	2,597,395	2014
Merchant fleet by flag of registration, number of ships	14	2016
Merchant fleet by flag of registration, tonnage	706	2016
Container penetration (incl. transhipment) TEU/1,000 capita	14	2014
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	263,415	2013
Paved roads (%)	69	2013
Paved roads (Km)	182,900	2013
Non-paved roads (Km)	80,515	2013
Length of roads by GDP per capita (Km/$)	207	2013
Road network density (km/1,000 population)	1.39	2013
Density of roads (Km/Km2)	0.33	2013
Vehicle ownership (vehicle/1,000 population)	50	2013
Estimated road deaths annually	25,781	2013
Mortality rate [deaths/100,000 population]	14.2	2013
Rail lines (total route-km)	7,791	2014
Rail network density (km/100,000 km2 land area)	1,011	2014
Rail network density (km/1 million population)	41	2014
Railways, goods transported (million ton-km)	1,757	2014
Railways, passengers carried (million passenger-km)	20,619	2014
Air transport, freight (million ton-km)	183.2	2015
Air transport, passengers carried	8,467,828	2015
Per capita air passengers	0.045	2015
CO2 emissions of transport per capita	0.22	2014
CO2 emissions from transport (% of total fuel combustion)	28.5	2013
Fixed-telephone subscriptions per 100 inhabitants	1.60	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	71.39	2016
Fixed-broadband subscriptions per 100 inhabitants	0.86	2016
Percentage of individuals using the Internet	15.51	2016

Palestine

Population (million people)	4.7	2015
GDP (current million US$)	7,463	2015
GDP per capita, PPP (constant 2011 international $)		
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)		
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index		
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships		
Merchant fleet by flag of registration, tonnage		
Container penetration (incl. transhipment) TEU/1,000 capita		
Motorways (Km)		
Highways, main or national roads (Km)	733	2013
Secondary or regional roads (Km)	1,243	2013
Other roads (Km)	1,545	2013
Total length of roads (Km)	3,521	2013
Paved roads (%)	100	2013
Paved roads (Km)	3,521	2013
Non-paved roads (Km)	0	2013
Length of roads by GDP per capita (Km/$)	1.3	2013
Road network density (km/1,000 population)		
Density of roads (Km/Km2)	0.58	2013
Vehicle ownership (vehicle/1,000 population)		
Estimated road deaths annually		
Mortality rate [deaths/100,000 population]		
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)		
Air transport, passengers carried		
Per capita air passengers		
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)		
Fixed-telephone subscriptions per 100 inhabitants	9.26	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	76.81	2016
Fixed-broadband subscriptions per 100 inhabitants	6.87	2016
Percentage of individuals using the Internet	61.18	2016

Qatar

Population (million people)	2.2	2015
GDP (current million US$)	166,908	2015
GDP per capita, PPP (constant 2011 international $)	135,322	2015
Global Competitiveness Index	5.23	2016
Logistics performance index: Overall (1=low to 5=high)	3.60	2016
Quality of overall infrastructure, 1-7 (best)	5.07	2016
Quality of roads, 1-7 (best)	5.14	2016
Quality of railroad infrastructure, 1-7 (best)	N/A	2016
Quality of port infrastructure, 1-7 (best)	5.53	2016
Quality of air transport infrastructure, 1-7 (best)	6.20	2016
Liner shipping connectivity index	5.2	2016
Burden of customs procedure, (7=extremely efficient)	5.41	2015
Container port traffic (TEU: 20 foot equivalent units)	445,845	2014
Merchant fleet by flag of registration, number of ships	130	2016
Merchant fleet by flag of registration, tonnage	6,597	2016
Container penetration (incl. transhipment) TEU/1,000 capita	205	2014
Motorways (Km)		
Highways, main or national roads (Km)	1,018	2013
Secondary or regional roads (Km)	967	2013
Other roads (Km)	7,607	2013
Total length of roads (Km)	9,592	2013
Paved roads (%)	90	2013
Paved roads (Km)	1,107	2013
Non-paved roads (Km)	123	2013
Length of roads by GDP per capita (Km/$)	0.1	2013
Road network density (km/1,000 population)	4.29	2013
Density of roads (Km/Km2)	0.83	2013
Vehicle ownership (vehicle/1,000 population)	299	2013
Estimated road deaths annually	330	2013
Mortality rate [deaths/100,000 population]	15.2	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	7563.3	2015
Air transport, passengers carried	25,263,224	2015
Per capita air passengers	11.302	2015
CO2 emissions of transport per capita	5.63	2014
CO2 emissions from transport (% of total fuel combustion)	16.2	2013
Fixed-telephone subscriptions per 100 inhabitants	19.34	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	147.10	2016
Fixed-broadband subscriptions per 100 inhabitants	10.77	2016
Percentage of individuals using the Internet	94.29	2016

Saudi Arabia

Population (million people)	31.5	2015
GDP (current million US$)	646,002	2015
GDP per capita, PPP (constant 2011 international $)	50,284	2015
Global Competitiveness Index	4.84	2016
Logistics performance index: Overall (1=low to 5=high)	3.16	2016
Quality of overall infrastructure, 1-7 (best)	4.89	2016
Quality of roads, 1-7 (best)	4.87	2016
Quality of railroad infrastructure, 1-7 (best)	2.99	2016
Quality of port infrastructure, 1-7 (best)	4.64	2016
Quality of air transport infrastructure, 1-7 (best)	4.88	2016
Liner shipping connectivity index	61.79	2016
Burden of customs procedure, (7=extremely efficient)	4.44	2015
Container port traffic (TEU: 20 foot equivalent units)	6,326,861	2014
Merchant fleet by flag of registration, number of ships	246	2016
Merchant fleet by flag of registration, tonnage	13,989	2016
Container penetration (incl. transhipment) TEU/1,000 capita	205	2014
Motorways (Km)	3891	2005
Highways, main or national roads (Km)	9,705	2005
Secondary or regional roads (Km)	33,924	2005
Other roads (Km)	173,852	2005
Total length of roads (Km)	221,372	2005
Paved roads (%)	21	2005
Paved roads (Km)	47,529	2005
Non-paved roads (Km)	173,843	2005
Length of roads by GDP per capita (Km/$)	17	2005
Road network density (km/1,000 population)	7.02	2005
Density of roads (Km/Km2)	0.1	2005
Vehicle ownership (vehicle/1,000 population)	229	2013
Estimated road deaths annually	7,898	2013
Mortality rate [deaths/100,000 population]	27.4	2013
Rail lines (total route-km)	1,412	2014
Rail network density (km/100,000 km2 land area)	66	2014
Rail network density (km/1 million population)	45	2014
Railways, goods transported (million ton-km)	1,852	2014
Railways, passengers carried (million passenger-km)	297	2014
Air transport, freight (million ton-km)	1783.1	2015
Air transport, passengers carried	32,778,828	2015
Per capita air passengers	1.039	2015
CO2 emissions of transport per capita	4.35	2014
CO2 emissions from transport (% of total fuel combustion)	26.4	2013
Fixed-telephone subscriptions per 100 inhabitants	11.96	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	157.60	2016
Fixed-broadband subscriptions per 100 inhabitants	10.81	2016
Percentage of individuals using the Internet	73.75	2016

Senegal

Population (million people)	15.1	2015
GDP (current million US$)	13,780	2015
GDP per capita, PPP (constant 2011 international $)	2,288	2015
Global Competitiveness Index	3.74	2016
Logistics performance index: Overall (1=low to 5=high)	2.33	2016
Quality of overall infrastructure, 1-7 (best)	2.82	2016
Quality of roads, 1-7 (best)	4.03	2016
Quality of railroad infrastructure, 1-7 (best)	2.17	2016
Quality of port infrastructure, 1-7 (best)	4.43	2016
Quality of air transport infrastructure, 1-7 (best)	4.06	2016
Liner shipping connectivity index	12.77	2016
Burden of customs procedure, (7=extremely efficient)	4.15	2015
Container port traffic (TEU: 20 foot equivalent units)	450,008	2014
Merchant fleet by flag of registration, number of ships	2	2016
Merchant fleet by flag of registration, tonnage	2	2016
Container penetration (incl. transhipment) TEU/1,000 capita	31	2014
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	15,609	2013
Paved roads (%)	36	2013
Paved roads (Km)	5,604	2013
Non-paved roads (Km)	10,005	2013
Length of roads by GDP per capita (Km/$)	15	2013
Road network density (km/1,000 population)	1.03	2013
Density of roads (Km/Km2)	0.08	2013
Vehicle ownership (vehicle/1,000 population)	28	2013
Estimated road deaths annually	3,844	2013
Mortality rate [deaths/100,000 population]	27.2	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	3.1	2015
Air transport, passengers carried	115,356	2015
Per capita air passengers	0.008	2015
CO2 emissions of transport per capita	0.17	2014
CO2 emissions from transport (% of total fuel combustion)	38.8	2013
Fixed-telephone subscriptions per 100 inhabitants	1.86	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	98.68	2016
Fixed-broadband subscriptions per 100 inhabitants	0.64	2016
Percentage of individuals using the Internet	25.66	2016

Sierra Leone

Population (million people)	6.5	2015
GDP (current million US$)	4,475	2015
GDP per capita, PPP (constant 2011 international $)	1,497	2015
Global Competitiveness Index	3.16	2016
Logistics performance index: Overall (1=low to 5=high)	2.03	2016
Quality of overall infrastructure, 1-7 (best)	2.40	2016
Quality of roads, 1-7 (best)	2.79	2016
Quality of railroad infrastructure, 1-7 (best)	N/A	2016
Quality of port infrastructure, 1-7 (best)	3.01	2016
Quality of air transport infrastructure, 1-7 (best)	2.69	2016
Liner shipping connectivity index	7.61	2016
Burden of customs procedure, (7=extremely efficient)	3.21	2015
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships	2	2016
Merchant fleet by flag of registration, tonnage	5	2016
Container penetration (incl. transhipment) TEU/1,000 capita		
Motorways (Km)	0	2002
Highways, main or national roads (Km)	2,138	2002
Secondary or regional roads (Km)	1,950	2002
Other roads (Km)	7,212	2002
Total length of roads (Km)	11,300	2002
Paved roads (%)	8	2002
Paved roads (Km)	904	2002
Non-paved roads (Km)	10,396	2002
Length of roads by GDP per capita (Km/$)	41	2002
Road network density (km/1,000 population)	1.75	2002
Density of roads (Km/Km2)	0.16	2002
Vehicle ownership (vehicle/1,000 population)	11	2013
Estimated road deaths annually	1,661	2013
Mortality rate [deaths/100,000 population]	27.2	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)		
Air transport, passengers carried		
Per capita air passengers		
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)		
Fixed-telephone subscriptions per 100 inhabitants	0.26	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	97.62	2016
Fixed-broadband subscriptions per 100 inhabitants	N/A	2016
Percentage of individuals using the Internet	11.77	2016

Somalia

Population (million people)	10.8	2015
GDP (current million US$)	5,953	2015
GDP per capita, PPP (constant 2011 international $)		
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)	1.75	2016
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index	6.52	2016
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships		
Merchant fleet by flag of registration, tonnage		
Container penetration (incl. transhipment) TEU/1,000 capita		
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	22,100	2000
Paved roads (%)	12	2000
Paved roads (Km)	2,608	2000
Non-paved roads (Km)	19,492	2000
Length of roads by GDP per capita (Km/$)	N/A GDP	2000
Road network density (km/1,000 population)	2.05	2000
Density of roads (Km/Km2)	0.03	2000
Vehicle ownership (vehicle/1,000 population)	6	2013
Estimated road deaths annually	2,664	2013
Mortality rate [deaths/100,000 population]	25.4	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)		
Air transport, passengers carried		
Per capita air passengers		
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)		
Fixed-telephone subscriptions per 100 inhabitants	0.42	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	58.12	2016
Fixed-broadband subscriptions per 100 inhabitants	0.80	2016
Percentage of individuals using the Internet	1.88	2016

Sudan

Population (million people)	40.2	2015
GDP (current million US$)	84,067	2015
GDP per capita, PPP (constant 2011 international $)	3,927	2015
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)	2.53	2016
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index	18.41	2016
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)	565,811	2014
Merchant fleet by flag of registration, number of ships	4	2016
Merchant fleet by flag of registration, tonnage	22	2016
Container penetration (incl. transhipment) TEU/1,000 capita	14	2014
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	11,900	2000
Paved roads (%)	36	2000
Paved roads (Km)	4,320	2000
Non-paved roads (Km)	7,580	2000
Length of roads by GDP per capita (Km/$)	33	2000
Road network density (km/1,000 population)	0.30	2000
Density of roads (Km/Km2)	0.005	2000
Vehicle ownership (vehicle/1,000 population)	8	2013
Estimated road deaths annually	9,221	2013
Mortality rate [deaths/100,000 population]	24.3	2013
Rail lines (total route-km)	4,313	2014
Rail network density (km/100,000 km2 land area)	182	2014
Rail network density (km/1 million population)	107	2014
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)	7	2014
Air transport, freight (million ton-km)	13.2	2015
Air transport, passengers carried	496,178	2015
Per capita air passengers	0.012	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)	60.9	2013
Fixed-telephone subscriptions per 100 inhabitants	0.34	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	68.63	2016
Fixed-broadband subscriptions per 100 inhabitants	0.06	2016
Percentage of individuals using the Internet	28.00	2016

Suriname

Population (million people)	0.5	2015
GDP (current million US$)	4,878	2015
GDP per capita, PPP (constant 2011 international $)	15,970	2015
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)		
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index	4.98	2016
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships	2	2016
Merchant fleet by flag of registration, tonnage	2	2016
Container penetration (incl. transhipment) TEU/1,000 capita		
Motorways (Km)	0	2003
Highways, main or national roads (Km)	0	2003
Secondary or regional roads (Km)	4,304	2003
Other roads (Km)		
Total length of roads (Km)	4,304	2003
Paved roads (%)	26	2003
Paved roads (Km)	1,130	2003
Non-paved roads (Km)	3,174	2003
Length of roads by GDP per capita (Km/$)	1.6	2003
Road network density (km/1,000 population)	7.93	2003
Density of roads (Km/Km2)	0.03	2003
Vehicle ownership (vehicle/1,000 population)	384	2013
Estimated road deaths annually	103	2013
Mortality rate [deaths/100,000 population]	19.1	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	29.3	2015
Air transport, passengers carried	259,682	2015
Per capita air passengers	0.478	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)		
Fixed-telephone subscriptions per 100 inhabitants	16.10	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	145.94	2016
Fixed-broadband subscriptions per 100 inhabitants	12.88	2016
Percentage of individuals using the Internet	45.40	2016

Tajikistan

Population (million people)	8.5	2015
GDP (current million US$)	7,853	2015
GDP per capita, PPP (constant 2011 international $)	2,616	2015
Global Competitiveness Index	4.12	2016
Logistics performance index: Overall (1=low to 5=high)	2.06	2016
Quality of overall infrastructure, 1-7 (best)	4.17	2016
Quality of roads, 1-7 (best)	4.05	2016
Quality of railroad infrastructure, 1-7 (best)	3.74	2016
Quality of port infrastructure, 1-7 (best)	2.01	2016
Quality of air transport infrastructure, 1-7 (best)	4.34	2016
Liner shipping connectivity index		
Burden of customs procedure, (7=extremely efficient)	3.89	2015
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships		
Merchant fleet by flag of registration, tonnage		
Container penetration (incl. transhipment) TEU/1,000 capita	Landlocked	
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	27,767	2000
Paved roads (%)	83	2000
Paved roads (Km)	11,330	2000
Non-paved roads (Km)	23,700	2000
Length of roads by GDP per capita (Km/$)	200	2000
Road network density (km/1,000 population)	3.27	2000
Density of roads (Km/Km2)	0.19	2000
Vehicle ownership (vehicle/1,000 population)	50	2013
Estimated road deaths annually	1,543	2013
Mortality rate [deaths/100,000 population]	18.8	2013
Rail lines (total route-km)	621	2014
Rail network density (km/100,000 km2 land area)	444	2014
Rail network density (km/1 million population)	73	2014
Railways, goods transported (million ton-km)	554	2014
Railways, passengers carried (million passenger-km)	24	2014
Air transport, freight (million ton-km)	0.1	2015
Air transport, passengers carried	802,470	2015
Per capita air passengers	0.095	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)	10.0	2013
Fixed-telephone subscriptions per 100 inhabitants	5.31	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	106.68	2016
Fixed-broadband subscriptions per 100 inhabitants	0.07	2016
Percentage of individuals using the Internet	20.47	2016

Togo

Population (million people)	7.3	2015
GDP (current million US$)	4,003	2015
GDP per capita, PPP (constant 2011 international $)	1,374	2015
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)	2.62	2016
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index	30.29	2016
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships		
Merchant fleet by flag of registration, tonnage		
Container penetration (incl. transhipment) TEU/1,000 capita		
Motorways (Km)	0	2007
Highways, main or national roads (Km)	3,067	2007
Secondary or regional roads (Km)	0	2007
Other roads (Km)	8,585	2007
Total length of roads (Km)	11,652	2007
Paved roads (%)	21	2007
Paved roads (Km)	2,447	2007
Non-paved roads (Km)	9,205	2007
Length of roads by GDP per capita (Km/$)	27	2007
Road network density (km/1,000 population)	1.60	2007
Density of roads (Km/Km2)	0.21	2007
Vehicle ownership (vehicle/1,000 population)	9	2013
Estimated road deaths annually	2,123	2013
Mortality rate [deaths/100,000 population]	31.1	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	0.0	2015
Air transport, passengers carried	769,905	2015
Per capita air passengers	0.105	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)	77.2	2013
Fixed-telephone subscriptions per 100 inhabitants	0.46	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	74.91	2016
Fixed-broadband subscriptions per 100 inhabitants	0.61	2016
Percentage of individuals using the Internet	11.31	2016

Tunisia

Population (million people)	11.1	2015
GDP (current million US$)	43,015	2015
GDP per capita, PPP (constant 2011 international $)	10,726	2015
Global Competitiveness Index	3.92	2016
Logistics performance index: Overall (1=low to 5=high)	2.50	2016
Quality of overall infrastructure, 1-7 (best)	3.66	2016
Quality of roads, 1-7 (best)	3.50	2016
Quality of railroad infrastructure, 1-7 (best)	2.81	2016
Quality of port infrastructure, 1-7 (best)	3.31	2016
Quality of air transport infrastructure, 1-7 (best)	3.87	2016
Liner shipping connectivity index	5.35	2016
Burden of customs procedure, (7=extremely efficient)	3.09	2015
Container port traffic (TEU: 20 foot equivalent units)	600,986	2014
Merchant fleet by flag of registration, number of ships	12	2016
Merchant fleet by flag of registration, tonnage	303	2016
Container penetration (incl. transhipment) TEU/1,000 capita	55	2014
Motorways (Km)	356	2013
Highways, main or national roads (Km)	4,746	2013
Secondary or regional roads (Km)	6,496	2013
Other roads (Km)	7,842	2013
Total length of roads (Km)	19,440	2013
Paved roads (%)	78	2013
Paved roads (Km)	15,090	2013
Non-paved roads (Km)	4,350	2013
Length of roads by GDP per capita (Km/$)	5	2013
Road network density (km/1,000 population)	1.75	2013
Density of roads (Km/Km2)	0.12	2013
Vehicle ownership (vehicle/1,000 population)	158	2013
Estimated road deaths annually	2,679	2013
Mortality rate [deaths/100,000 population]	24.4	2013
Rail lines (total route-km)	3,835	2014
Rail network density (km/100,000 km2 land area)	2,468	2014
Rail network density (km/1 million population)	345	2014
Railways, goods transported (million ton-km)	2,024	2014
Railways, passengers carried (million passenger-km)	1,113	2014
Air transport, freight (million ton-km)	10.4	2015
Air transport, passengers carried	3,496,190	2015
Per capita air passengers	0.315	2015
CO2 emissions of transport per capita	0.59	2014
CO2 emissions from transport (% of total fuel combustion)	25.6	2013
Fixed-telephone subscriptions per 100 inhabitants	8.59	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	125.82	2016
Fixed-broadband subscriptions per 100 inhabitants	5.65	2016
Percentage of individuals using the Internet	50.88	2016

Turkey

Population (million people)	78.7	2015
GDP (current million US$)	718,221	2015
GDP per capita, PPP (constant 2011 international $)	18,959	2015
Global Competitiveness Index	4.39	2016
Logistics performance index: Overall (1=low to 5=high)	3.42	2016
Quality of overall infrastructure, 1-7 (best)	4.98	2016
Quality of roads, 1-7 (best)	5.04	2016
Quality of railroad infrastructure, 1-7 (best)	3.03	2016
Quality of port infrastructure, 1-7 (best)	4.49	2016
Quality of air transport infrastructure, 1-7 (best)	5.41	2016
Liner shipping connectivity index	49.61	2016
Burden of customs procedure, (7=extremely efficient)	3.78	2015
Container port traffic (TEU: 20 foot equivalent units)	7,622,559	2014
Merchant fleet by flag of registration, number of ships	1,540	2016
Merchant fleet by flag of registration, tonnage	27,951	2016
Container penetration (incl. transhipment) TEU/1,000 capita	100	2014
Motorways (Km)	2127	2013
Highways, main or national roads (Km)	31,341	2013
Secondary or regional roads (Km)	32,155	2013
Other roads (Km)	323,043	2013
Total length of roads (Km)	388,666	2013
Paved roads (%)	91	2013
Paved roads (Km)	355,220	2013
Non-paved roads (Km)	33,446	2013
Length of roads by GDP per capita (Km/$)	35	2013
Road network density (km/1,000 population)	4.94	2013
Density of roads (Km/Km2)	0.5	2013
Vehicle ownership (vehicle/1,000 population)	239	2013
Estimated road deaths annually	6,687	2013
Mortality rate [deaths/100,000 population]	8.9	2013
Rail lines (total route-km)	10,087	2014
Rail network density (km/100,000 km2 land area)	1,311	2014
Rail network density (km/1 million population)	128	2014
Railways, goods transported (million ton-km)	11,145	2014
Railways, passengers carried (million passenger-km)	4,393	2014
Air transport, freight (million ton-km)	2882.2	2015
Air transport, passengers carried	96,604,665	2015
Per capita air passengers	1.228	2015
CO2 emissions of transport per capita	0.75	2014
CO2 emissions from transport (% of total fuel combustion)	19.7	2013
Fixed-telephone subscriptions per 100 inhabitants	14.30	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	96.87	2016
Fixed-broadband subscriptions per 100 inhabitants	13.55	2016
Percentage of individuals using the Internet	58.35	2016

Turkmenistan

Population (million people)	5.4	2015
GDP (current million US$)	37,334	2015
GDP per capita, PPP (constant 2011 international $)	15,527	2015
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)	2.21	2016
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index		
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships	20	2016
Merchant fleet by flag of registration, tonnage	78	2016
Container penetration (incl. transhipment) TEU/1,000 capita		
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	24,000	2000
Paved roads (%)	81	2000
Paved roads (Km)	19,488	2000
Non-paved roads (Km)	4,512	2000
Length of roads by GDP per capita (Km/$)	37	2000
Road network density (km/1,000 population)	4.47	2000
Density of roads (Km/Km2)	0.05	2000
Vehicle ownership (vehicle/1,000 population)	162	2013
Estimated road deaths annually	914	2013
Mortality rate [deaths/100,000 population]	17.4	2013
Rail lines (total route-km)	3,115	2014
Rail network density (km/100,000 km2 land area)	663	2014
Rail network density (km/1 million population)	580	2014
Railways, goods transported (million ton-km)	11,992	2014
Railways, passengers carried (million passenger-km)	1,811	2014
Air transport, freight (million ton-km)	0.0	2015
Air transport, passengers carried	2,138,390	2015
Per capita air passengers	0.398	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)	12.8	2013
Fixed-telephone subscriptions per 100 inhabitants	12.23	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	157.67	2016
Fixed-broadband subscriptions per 100 inhabitants	0.07	2016
Percentage of individuals using the Internet	17.99	2016

Uganda

Population (million people)	39.0	2015
GDP (current million US$)	26,369	2015
GDP per capita, PPP (constant 2011 international $)	1,718	2015
Global Competitiveness Index	3.69	2016
Logistics performance index: Overall (1=low to 5=high)	3.04	2016
Quality of overall infrastructure, 1-7 (best)	3.38	2016
Quality of roads, 1-7 (best)	3.48	2016
Quality of railroad infrastructure, 1-7 (best)	1.59	2016
Quality of port infrastructure, 1-7 (best)	2.50	2016
Quality of air transport infrastructure, 1-7 (best)	3.19	2016
Liner shipping connectivity index		
Burden of customs procedure, (7=extremely efficient)	4.02	2015
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships		
Merchant fleet by flag of registration, tonnage		
Container penetration (incl. transhipment) TEU/1,000 capita	Landlocked	
Motorways (Km)	0	2003
Highways, main or national roads (Km)	13,620	2003
Secondary or regional roads (Km)	27,126	2003
Other roads (Km)	30,00	2003
Total length of roads (Km)	70,746	2003
Paved roads (%)	23	2003
Paved roads (Km)	16,272	2003
Non-paved roads (Km)	54,474	2003
Length of roads by GDP per capita (Km/$)	300	2003
Road network density (km/1,000 population)	1.81	2003
Density of roads (Km/Km2)	0.29	2003
Vehicle ownership (vehicle/1,000 population)	33	2013
Estimated road deaths annually	10,280	2013
Mortality rate [deaths/100,000 population]	27.4	2013
Rail lines (total route-km)	259	2004
Rail network density (km/100,000 km2 land area)	129	2004
Rail network density (km/1 million population)	7	2004
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	0.0	2015
Air transport, passengers carried	41,812	2015
Per capita air passengers	0.001	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)		
Fixed-telephone subscriptions per 100 inhabitants	0.89	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	55.07	2016
Fixed-broadband subscriptions per 100 inhabitants	0.26	2016
Percentage of individuals using the Internet	21.88	2016

United Arab Emirates (UAE)

Population (million people)	9.2	2015
GDP (current million US$)	370,293	2015
GDP per capita, PPP (constant 2011 international $)	66,102	2015
Global Competitiveness Index	5.26	2016
Logistics performance index: Overall (1=low to 5=high)	3.94	2016
Quality of overall infrastructure, 1-7 (best)	6.34	2016
Quality of roads, 1-7 (best)	6.50	2016
Quality of railroad infrastructure, 1-7 (best)	N/A	2016
Quality of port infrastructure, 1-7 (best)	6.38	2016
Quality of air transport infrastructure, 1-7 (best)	6.75	2016
Liner shipping connectivity index	70.57	2016
Burden of customs procedure, (7=extremely efficient)	6.00	2015
Container port traffic (TEU: 20 foot equivalent units)	20,900,567	2014
Merchant fleet by flag of registration, number of ships	815	2016
Merchant fleet by flag of registration, tonnage	1,549	2016
Container penetration (incl. transhipment) TEU/1,000 capita	2,300	2014
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	4,080	2008
Paved roads (%)	100	2008
Paved roads (Km)	1,088	2008
Non-paved roads (Km)	-	2008
Length of roads by GDP per capita (Km/$)	0.1	2008
Road network density (km/1,000 population)	0.45	2008
Density of roads (Km/Km2)	0.05	2008
Vehicle ownership (vehicle/1,000 population)	286	2013
Estimated road deaths annually	1,021	2013
Mortality rate [deaths/100,000 population]	10.9	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	16647.5	2015
Air transport, passengers carried	84,738,480	2015
Per capita air passengers	9.254	2015
CO2 emissions of transport per capita	3.45	2014
CO2 emissions from transport (% of total fuel combustion)	18.8	2013
Fixed-telephone subscriptions per 100 inhabitants	23.43	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	204.02	2016
Fixed-broadband subscriptions per 100 inhabitants	13.30	2016
Percentage of individuals using the Internet	90.60	2016

Uzbekistan

Population (million people)	31.3	2015
GDP (current million US$)	66,733	2015
GDP per capita, PPP (constant 2011 international $)	5,643	2015
Global Competitiveness Index		
Logistics performance index: Overall (1=low to 5=high)	2.40	2016
Quality of overall infrastructure, 1-7 (best)		
Quality of roads, 1-7 (best)		
Quality of railroad infrastructure, 1-7 (best)		
Quality of port infrastructure, 1-7 (best)		
Quality of air transport infrastructure, 1-7 (best)		
Liner shipping connectivity index		
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)		
Merchant fleet by flag of registration, number of ships		
Merchant fleet by flag of registration, tonnage		
Container penetration (incl. transhipment) TEU/1,000 capita	Landlocked	
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	81,600	2000
Paved roads (%)	87	2000
Paved roads (Km)	71,237	2000
Non-paved roads (Km)	10,363	2000
Length of roads by GDP per capita (Km/$)	146	2000
Road network density (km/1,000 population)	2.61	2000
Density of roads (Km/Km2)	0.18	2000
Vehicle ownership (vehicle/1,000 population)		2013
Estimated road deaths annually	3,240	2013
Mortality rate [deaths/100,000 population]	11.2	2013
Rail lines (total route-km)	4,192	2014
Rail network density (km/100,000 km2 land area)	985	2014
Rail network density (km/1 million population)	134	2014
Railways, goods transported (million ton-km)	22,686	2014
Railways, passengers carried (million passenger-km)	3,437	2014
Air transport, freight (million ton-km)	114.3	2015
Air transport, passengers carried	2,486,673	2015
Per capita air passengers	0.079	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)	7.2	2013
Fixed-telephone subscriptions per 100 inhabitants	11.34	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	77.33	2016
Fixed-broadband subscriptions per 100 inhabitants	9.13	2016
Percentage of individuals using the Internet	46.79	2016

Yemen, Republic of

Population (million people)	26.8	2015
GDP (current million US$)		
GDP per capita, PPP (constant 2011 international $)		
Global Competitiveness Index	2.74	2016
Logistics performance index: Overall (1=low to 5=high)		
Quality of overall infrastructure, 1-7 (best)	2.09	2016
Quality of roads, 1-7 (best)	2.52	2016
Quality of railroad infrastructure, 1-7 (best)	N/A	2016
Quality of port infrastructure, 1-7 (best)	2.59	2016
Quality of air transport infrastructure, 1-7 (best)	2.22	2016
Liner shipping connectivity index	5.76	2016
Burden of customs procedure, (7=extremely efficient)		
Container port traffic (TEU: 20 foot equivalent units)	862,079	2014
Merchant fleet by flag of registration, number of ships	20	2016
Merchant fleet by flag of registration, tonnage	562	2016
Container penetration (incl. transhipment) TEU/1,000 capita	33	2014
Motorways (Km)		
Highways, main or national roads (Km)		
Secondary or regional roads (Km)		
Other roads (Km)		
Total length of roads (Km)	71,300	2005
Paved roads (%)	9	2005
Paved roads (Km)	6,203	2005
Non-paved roads (Km)	65,097	2005
Length of roads by GDP per capita (Km/$)	86	2005
Road network density (km/1,000 population)	2.66	2005
Density of roads (Km/Km2)	0.14	2005
Vehicle ownership (vehicle/1,000 population)	49	2013
Estimated road deaths annually	5,248	2013
Mortality rate [deaths/100,000 population]	21.5	2013
Rail lines (total route-km)		
Rail network density (km/100,000 km2 land area)		
Rail network density (km/1 million population)		
Railways, goods transported (million ton-km)		
Railways, passengers carried (million passenger-km)		
Air transport, freight (million ton-km)	0.0	2015
Air transport, passengers carried	1,388,000	2015
Per capita air passengers	0.052	2015
CO2 emissions of transport per capita		
CO2 emissions from transport (% of total fuel combustion)	34.7	2013
Fixed-telephone subscriptions per 100 inhabitants	4.65	2016
Mobile-cellular telephone subscriptions per 100 inhabitants	67.17	2016
Fixed-broadband subscriptions per 100 inhabitants	1.65	2016
Percentage of individuals using the Internet	24.58	2016