

**ROLE OF TRANSPORT AND TELECOMMUNICATIONS
IN THE ESTABLISHMENT OF AN
ISLAMIC COMMON MARKET**

SESRTCIC

Although setting-up an Islamic Common Market (ICM) remains to be an ultimate goal to achieve among the OIC fora for the last three decades, there has been little progress made so far on it. Transport and Telecommunications are essentially two important sectors that are to strengthen the basis of a well functioning common market. In this context, the paper examines the role of transport and telecommunications in the establishment of the ICM. Moreover, some measures are proposed while the need for joint cooperation projects is emphasized to develop transport and telecommunications in the OIC countries and to accelerate the process that will lead to achieve the long-term goal of establishing the ICM. To shed light on the current situation of OIC countries' transport and telecommunications infrastructure and capacity, available data for the most recent period is used. Finally, the report formulates various policy recommendations as to what strategies the OIC countries may adopt to improve the transport and telecommunications sectors.

1. INTRODUCTION

The idea of setting up an Islamic Common Market dates back to 1974 when it was first debated at the Second Islamic Summit in Lahore. It was then agreed that the idea could at best be a long-term objective requiring careful and comprehensive consideration. Such a conclusion was found to be implicit in all the resolutions adopted by the subsequent Islamic Summits and Conferences of Foreign Ministers (ICFM). Nevertheless, the establishment of such a common market has remained consistently the 'ultimate goal', albeit progress towards its realisation has been slow.

Although thirty years have passed since this first debate, important questions still remain regarding the establishment of an Islamic Common Market. By now, the implications of a common market have

become well-known. However, there are questions over whether all member countries will witness the theoretical benefits therefrom. For example, although various theoretical gains will arise from market enlargement, will the arising competition equally benefit all member countries? How would the liberalisation of trade in goods and services affect those countries that are heavily dependent on customs duties as a source of revenue? Would the free flow of factors of production lead the industries to relocate in the more developed member countries and, thereby, pose an important setback to the industrialisation efforts of the less-developed ones? How would employment in the region be affected given the diversity in wage rates among member countries? In other words, would the formulated and harmonised rules and institutional arrangements be effective in sustaining the common market? Similarly, would the economic structures and levels of development across the member countries be able to converge as desired or would they further diverge, as a portion of the theoretical literature examining the South-South regional integration schemes seems to suggest? Attempts have been made to answer such questions regarding the implications of an Islamic Common Market in earlier SESRTCIC reports¹ and, thus, remain beyond the scope of the current article.

In parallel with the questions surrounding the implications of the common market, there are also the obvious impediments in terms of the high level of diversity and heterogeneity of the OIC member countries. The member countries are diversified in terms of their geography, population, socio-economic structures, economic and political systems, levels and stages of economic development and resource endowments, and international relations, interests and priorities. Moreover, the low level of intra-OIC trade poses a serious handicap to the efforts to form a common market. Thus, such impediments make it politically and economically difficult to form a common market that satisfies all the needs of the member countries in a short span of time. Given that the European Union (EU) countries were a more or less homogenous group and already traded intensively among themselves at the initial formation of the Union, it could be understood that there are preliminary stages to

¹ SESRTCIC (2001), "Practical Steps and Possible Consequences of Establishing an Islamic Common Market", ERT/ACC17/SM2.

SESRTCIC (2003), "Implications of Establishing an Islamic Common Market: Gradual Integration and Possible Consequences", ERT/ICFM30/SM2.

be attained within a feasible framework such as boosting cooperation among member states before reaching the ultimate aim of an Islamic Common Market. Moreover, positive developments such as the adoption in 1981 of the Plan of Action to Strengthen Economic and Commercial Cooperation Among the OIC Member States (POA) and the setting up of the Standing Committee for Economic and Commercial Cooperation (COMCEC) are yet to be employed more fervently to help raise economic cooperation to the desired levels.

As indicated in SESRTCIC's report entitled "Islamic Common Market in the Light of Intra-OIC Trade" (submitted to the Tenth Session of the Islamic Summit Conference) there are various alternative approaches that could be followed such as (a) concentrating on less integrated economic integration schemes considering that less formal arrangements could work better in the case of the developing countries, (b) adopting membership criteria in the initial phase rather than trying to form a common market starting with the simultaneous membership of fifty-seven member states, and (c) concentrating on the cooperation of existing regional integration schemes consisting only of OIC member countries.

Keeping in mind those alternative approaches, the fact that needs to be stressed is that no matter which approach is adopted, the initial step should be to increase cooperation among OIC member countries in the light of the Plan of Action which contains sectoral objectives and programmes of action in food, agriculture and rural development; industry; energy and mining; foreign trade; transport and communications; tourism; money, banking and capital flows; technology and technical cooperation; human resources development and the environment. Needless to say, in the gradual goal of establishing an Islamic Common Market, further cooperation and development in those sectors are necessary. Not only is the idea of forming an Islamic Common Market a gradual goal but also a very complex one owing to the implications and impediments mentioned. Thus, to be able to cooperate in working towards such a goal, the OIC member countries need first to exhibit that they can cooperate effectively and increasingly on a sectoral basis.

As mentioned earlier, the SESRTCIC (2003) report on the Islamic Common Market concentrates on the conditions implied by the state of intra-OIC trade. In this context, the current article could be viewed as a continuation of the mentioned report since it concentrates on transport

and telecommunications which are two important sectors that are to strengthen the basis of a well functioning common market. In this respect, after briefly reviewing the findings of the said report, this article examines in the second section, the importance of developing transport and telecommunications infrastructure which could serve not only as a method of increasing trade but also of integration itself. In the third section, the article examines the current levels of transport and telecommunications infrastructure and capacity in the OIC region as well as the trends observed in recent years. Finally, it tries to formulate various policy recommendations as to what strategies the OIC countries should adopt in those sectors.

2. INTRA-OIC TRADE AND THE NECESSITY TO COOPERATE IN DEVELOPING TRANSPORT AND TELECOMMUNICATIONS INFRASTRUCTURE

The SESRTCIC's (2003) report shows that intra-OIC exports formed 10.9 per cent while intra-OIC imports formed 14.0 per cent of the region's total exports and imports. On average, intra-OIC trade increased by only 1 percentage point during the period 1997-2001.

The mentioned report examines the state of intra-OIC trade in 9 geographical sub-groups within the OIC region. The results show that intra-OIC exports accounted for between 13 and 16 per cent of total trade in the Central Asia, Arabian Peninsula, East Africa, Middle East and South Asia sub-groups, slightly less than 10 per cent in the North Africa and West and Central Africa sub-groups, 6.5 per cent in Southeast Asia and around 1 per cent in the South America sub-region in 2001. Furthermore, intra-OIC exports as a percentage of total exports decreased in the Central Asia, North Africa, East Africa, and the Middle East sub-regions from 1997 to 2001.

In terms of intra-OIC imports, the results show that they accounted for around 28 per cent in South Asia, around 18 per cent in the Arabian Peninsula, 16.4 per cent in Central Asia, between 12 and 15 per cent in North Africa, West and Central Africa, East Africa and the Middle East, 8.5 per cent in Southeast Asia, and 1.6 per cent in South America. Moreover, intra-OIC imports as a percentage of total imports decreased in Central Asia, West and Central Africa and East Africa between 1997 and 2001.

Additionally, the article tries to determine the level of trade among each pair of sub-groups in an attempt to show where trade was minimal, low or non-existent. The results of the matrix formed for this purpose can be found in Box 1.

One view could be that increasing trade among OIC member countries would be an aim of the Islamic Common Market once it is formed. Those which have examined the history of the EU's intra-trade would know that this integration scheme was in fact successful. The intra-group trade between the 15 European countries that later formed the European Union was around 45 per cent in 1950. This increased to around 50 per cent by the next decade and to around 61 per cent in 2000 (Badinger and Breuss 2003, p. 21). Yet, it is clear from those figures that there is one very important distinction between the intra-group trade of the European Union and that of the OIC member countries: the European countries were already trading intensively among each other at the time of the formation of the European Coal and Steel Community while the OIC member countries do not currently have a high level of trade among themselves.

Box 1: Trade Relations Among Various OIC Sub-Regions

No Trade	Low Trade (\$50 million-\$200 million)
East Africa-Central Asia East Africa-West & Central Africa	Arabian Peninsula- West & Central Africa South Asia-North Africa
Minimal Trade (< \$50 million)	South Asia-West & Central Africa South Asia-Central Asia
Central Asia-West & Central Africa Central Asia-North Africa Central Asia-Southeast Asia East Africa-South Asia	East Africa-Southeast Asia East Africa-Middle East East Africa-North Africa East Africa intra-trade

Source: SESRTCIC (2003).

Naturally, this brings to mind the question of whether the formation of an Islamic Common Market could significantly increase intra-group trade taking into account its current state. One popular argument is that the South-South regional integration schemes cannot be successful in this regard and, thus, it is more important to concentrate on the North-

South schemes and increasing openness to trade in general. While this is a plausible view, it does depend greatly on how one defines the South and North. If the South is the developing countries and the North the developed, it could be said that the Islamic Common Market would be a South-South regional integration scheme. Yet, given the size of the OIC, it is not a homogenous group and includes both more developed and less developed members. In this sense, the OIC includes oil-exporting countries and the least-developed countries and there is also a significant number of countries that fall in between.

No matter what the argument is, there are three simple conclusions that can be drawn from the SESRTCIC (2003) report. These are basically that (a) intra-OIC trade is low, (b) intra-OIC trade has not witnessed a significant improvement in recent years and (c) the existing intra-OIC trade is clustered within or between certain sub-regions within the OIC while it is non-existent, minimal or low between the others. In this context, it could be said that this situation is an impediment to establishing an Islamic Common Market. It is known that, with a few exceptions, the production structures of almost all the OIC countries are not diversified where production and exports depend upon a limited variety of primary commodities. In general, agriculture and oil production are the main productive economic activities that contribute the highest shares to the output of almost half of the OIC countries. This explains why intra-OIC trade is low and has not witnessed significant changes in recent years. It implies that unlike the initial state of the European Union, the OIC region forms a group that is supplier of primary commodities and consumer of final products. Naturally, the demand for most OIC exports comes from outside the region, just as the bulk of its imports originates in non-OIC sources.

Another important reason is the lack of efficient transport and telecommunications infrastructure between the OIC member countries. In other words, there is a potential supply and demand relationship between certain OIC member countries which is not utilised due to the lack of infrastructure and capacity. For this reason, OIC member countries need to increase their cooperation in these sectors in accordance with the objectives and programmes of action set in the Plan of Action. Moreover, in addition to utilising the potential in terms of intra-OIC trade, cooperation and development in the transport and telecommunications sectors would provide positive externalities to

various other sectors such as tourism, human resource development, technology and technical cooperation, etc. In this sense, it could be said that the road to an Islamic Common Market passes through cooperation in transport and telecommunications.

Transport infrastructure development is accepted as a critical factor in the promotion of trade. When infrastructure is not developed and the appropriate policies not in place, transport services become costly which in turn negatively affects trade and overall development. Moreover, increases in tourism also lead to an increase in international traffic and personal mobility. These factors contribute to the fact that the importance of transportation will continue to grow in the long run. Transport is not a barrier to trade in the developed countries. In terms of availability, quality, efficiency and cost, traders in those countries are well served by transport providers. On the other hand, in the majority of OIC countries, traders face various problems relating to logistics in transporting their goods.

Along with the fact that the OIC region has not been able to develop its transport infrastructure to the desired levels, an equally important problem is the variation in transport-related rules and procedures within the region. Needless to say, this situation leads to delays in trade and various indirect costs resulting from documentation. In this context, facilitation measures that aim at simplifying and harmonising procedures can be considered just as important as the development of the infrastructure itself.

As can be deduced, the mentioned problems are especially felt at the national borders and impose a serious impediment by limiting transportation infrastructure capacity. Emphasis should be given to the solution of border crossing problems. It is obvious that the facilitation of trade and traffic flows brought about by infrastructure improvements will be useless if border crossings continue to act as impediments. All efforts have to be made to reduce waiting time at the borders by the introduction of institutional changes and the implementation of best practices and modern technology.

Button (2002) examines in detail the three key ingredients identified as important in removing cross-border problems. These are referred to as 'inter-operability', 'inter-connectivity' and 'inter-modality'.

- *Inter-operability* means that the operating equipment (trucks, trains, ships, etc.) can operate on either side of the border equally efficiently. This means common technical specifications or at least sufficient flexibility in specifications to improve access to all components of the integrated network. It also means common institutions such as licenses, insurance, way-bills, computer and information systems, safety standards and labour laws and practices. Without those features, there is a need for consignments or passengers to change carrier at the border even if the same mode is used on either side. In other words, it means equity of access, on comparable terms, to the entire integrated transportation infrastructure network.
- *Inter-connectivity* is largely, but not exclusively, a technical matter in its relationship to infrastructure. Railways require the same gauge and, with electric locomotion, the same power system on either side of a border to be efficient. Roads must be of comparable engineering quality to carry heavy trucks. The quality of cross-border air service is only as good as the worst air traffic control systems on either side of the boundary. But there are also operational considerations. For example, timetables for public modes of transportation using the integrated infrastructure network need to be coordinated across boundaries for full efficiency.
- The idea of *inter-modality* is not only a trans-border concern but also involves the more generic issue of being able to switch between transportation modes at minimal generalised cost. It concerns efficient inter-change between modes. In some cases, this has little to do with cross-border traffic but becomes particularly relevant when sea and air ports are important elements in that traffic. If these are the main gateways into a country, irrespective of how far they may be from the legal border, then they are the de facto places where goods and people encounter a cross-border situation. To reduce friction at these points and to lubricate the overall transportation system, where a modal change is frequently required, there is a need for efficient consolidation and transshipment facilities and procedures (Button 2002, p. 6-8).

Due to lack of information and data, it is not possible to measure the extent to which each of those key ingredients hamper transportation activities in the OIC countries. Thus, cooperation in this sector needs to

start with an extensive examination of those ingredients and continue with the appropriate institutional and technical coordination to solve the related problems.

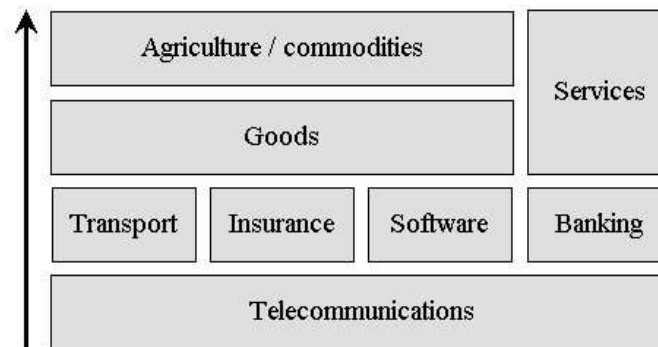
Another crucial aspect of this coordination is that it must also take into account the relation between those problems in transport and the problems faced in the telecommunications sector. In this respect, it is worth mentioning that the development strategies of many nations and regional groupings incorporate transport and telecommunications strategies into one. The same trend is visible in the case of the OIC Plan of Action. The importance of the telecommunications sector both in its relation to transport and to the economy as a whole has increased significantly since the introduction of modern communications in the early 20th century. In today's world, it is impossible to think of a transport system that operates efficiently without utilising the developments in modern telecommunications. A region could have what could be seen as a developed transport network linking certain countries. However, if the region has a weak telecommunications infrastructure, its effects will be felt, especially in the customs, ports and airports, as the slow operation at such facilities will negatively affect the trade in goods and the movement of people. That is why when we talk of a 'modern airport', we are not only interested in the quality of the pavement or the waiting halls but also in whether the airport operates efficiently. Needless to say, an efficient operation would require the efficient use of a modern telecommunications infrastructure.

In today's realities, there is a need for continuous communication and interaction between manufacturing units, suppliers, sales teams, distributors and customers. By facilitating information flow and enhancing communication between those parties, telecommunications increase the efficiency of market operations. It would be unrealistic to claim that a company can survive without a telephone, and many companies already use the facsimile or Internet. Telecommunications between buyers and sellers are especially important when the latter are geographically distant. In this respect, it was already mentioned that geographical dispersion is one of the main difficulties the OIC region faces in establishing a common market.

It could be said that the advances witnessed in information technologies and international information networks have radically

modified the dynamics of international trade. An UNCTAD report issued in 1997 presents how those dynamics have changed since the 1980s. It explains the dynamics by showing that in the 1980s, many analysts and trade policy makers came to realise that the traditional approach to economic development (or the “old paradigm”), in which a country would gradually develop its production structures from agriculture and raw materials to industry and ultimately to services, did not apply to trade. In an increasing number of instances, services have become a prerequisite to conduct international trade.

Figure 1: The New Trade Paradigm



Source: UNCTAD (1997).

In this respect, considering telecommunications as an infrastructure service allowing the emergence of trade-supporting services, which in turn will enable trade in goods and services, underlines the importance of the concept of trade efficiency as a vital element of any trade policy aimed at enhancing national competitiveness on the international markets. As can be seen in Figure 1, in this new paradigm, a hierarchy exists between the sectoral services such as transport, banking, insurance or the software required to collect and transmit trade information on the one hand, and telecommunications on the other. Thus, the new paradigm not only accepts the importance of telecommunications in trade but also makes a clear link between it and transport. In this context, just as we could speculate on the importance of this new paradigm for a single OIC member country in increasing its national competitiveness, we could also speculate that a stronger link in the mentioned components between two OIC member countries would lead to stronger trade ties between them. Similarly, expanding this idea to the level of a stronger network

among OIC member countries would lead to a higher level of intra-OIC trade and a stronger global competitiveness for the region as a whole.

A modern and efficient telecommunications infrastructure also has positive effects on other sectors of the economy through the spillover effects. When the telecommunications infrastructure is built in a nation or region, it is available to all sectors of the economy as a public good. One area where its effects are most obvious is education. It is through high quality education that skilled labour is created. Skilled labour is needed both in the operation of various aspects of transport and telecommunications infrastructures and in the planning of how those infrastructures could best be utilised for the benefit of a country or region. Thus, along with the mentioned interconnection between transport and telecommunications infrastructures, it should also be kept in mind that access to the benefits arising from their modernisation is just as important. Some economists believe that the reality of the 21st century is that we are moving away from a gap concentrating on industrialisation to another concentrating on knowledge. Moreover, taking into account the important relation between knowledge and modern telecommunications technologies, concepts such as the 'knowledge gap' and 'digital divide' have often come to be used in an interrelation. In short, it could be said that the design and operation of a modern transport system requires skilled labour whose creation would be much easier in a setting that makes the most of a modern telecommunications infrastructure. That is why in our analysis of the telecommunications infrastructure of the OIC region, we are not only concerned with the physical infrastructure itself such as the number of telephone lines, personal computers, Internet hosts, etc., but also the level at which people in the region have access to those services.

3. STATE OF TRANSPORT AND TELECOMMUNICATIONS INFRASTRUCTURES

3.1. State of Road Transport Infrastructure and Capacity in the OIC Region

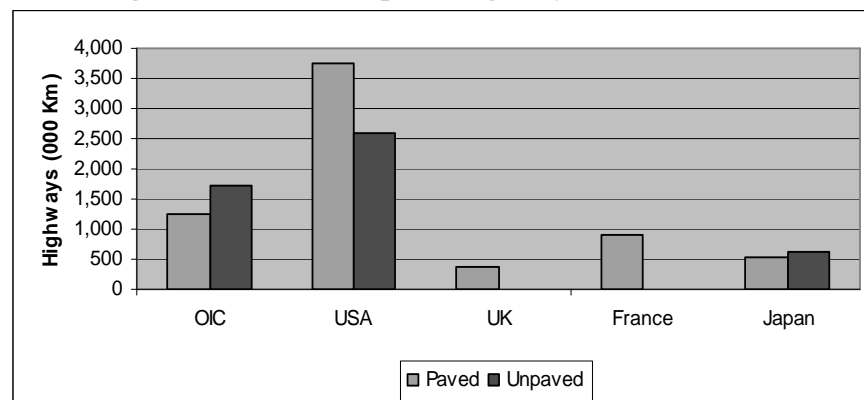
The total land area of the OIC countries is almost 3 times that of the United States, United Kingdom, France and Japan put together. However, the total road network in those four developed countries amounts to more than 8.76 million kilometres, about three times that of the OIC region's of 2.97 million kilometres (Figure 2 and Table A.1).

At the individual country level, the total roads of 7 OIC member countries (Bangladesh, Indonesia, Iran, Nigeria, Pakistan, Saudi Arabia and Turkey) amount to over 1.7 million kilometres and comprise 57.4 per cent of the OIC region's total roads. Those seven countries form around one-fourth of the OIC region's total land area (Table A.1).

The total paved roads of the above four developed countries amount to 5.54 million kilometres in comparison to 1.26 million in the OIC region. Again in the four developed countries, 63.2 per cent of the roads on average are paved in comparison to 42.4 per cent in the OIC region. Paved roads constitute 100 per cent of the total road network in the United Kingdom and France (Figure 2 and Table A.1).

On an individual country basis, the OIC member countries show important differences in terms of the percentages of paved roads in the totals. The percentage of paved roads is over 90 per cent in Qatar, the Kyrgyz Republic, Azerbaijan, Kazakhstan, Brunei, Jordan and the United Arab Emirates. On the other hand, it is lower than 10 per cent in Chad, Uganda, Guyana, Sierra Leone, Niger, Bangladesh, Côte d'Ivoire and Gabon (Table A.1).

Figure 2: Road Transport: Highways (000 Km), 2000



Source: Table A.1.

The total road network of the OIC region increased by 0.8 per cent per annum from 1996 to 2000. However, while the total unpaved roads increased by 1.6 per cent per annum during the said period, the total paved roads decreased by 0.1 per cent (Table A.1).

Table 1: Road Transport: Motorisation Rates, 2000
(Number of passenger cars per thousand persons)

OIC	24.4
United States	751.0
United Kingdom	413.3
France	476.5
Japan	415.7

Source: Table A.1.

An indicator that vividly shows how the OIC region lags behind the developed world in terms of the numbers of road transport is perhaps the motorisation rate which indicates the number of passenger cars per thousand persons. It can be seen from Table 1 that the OIC region's motorisation rate is 24.4 passenger cars per thousand persons which is significantly lower than the rates observed in France, Japan and the United Kingdom, all above 400, and more than 30 times less than the rate observed in the United States (Table 1).

On an individual country basis, 44 OIC countries have motorisation rates of less than 100 passenger cars per thousand persons and half of them have rates lower than 10 passenger cars per thousand persons. On the other hand, rates much higher than those of the majority of OIC countries were observed in Brunei (520.7 passenger cars per thousand persons), Lebanon (382.1), Qatar (353.3), Saudi Arabia (346.3), Kuwait (284.9), Bahrain (245.4), Libya (162.4), Oman (143.2), Suriname (140.8) and the United Arab Emirates (132.9) (Table A.1). Unsurprisingly, the majority of those countries are also the OIC region's wealthiest countries.

3.2. State of Railway Transport Infrastructure and Capacity in the OIC Region

The total railway network of the OIC region is 101,304 kilometres. This is about half the railway network of the United States. The total railway network of the United Kingdom, France and Japan accounts for around 72 per cent of that of the OIC region (Table 2).

Although the Japanese railway network accounts for around 23 per cent of that of the OIC region, the passenger-kilometre capacity

of the Japanese network was around 2.7 times that of the OIC region's in 2000. While the passenger-kilometre capacity of the OIC region grew by 2.4 per cent per annum from 1996 to 2000, this growth was lower than the ones observed in the examined developed countries, with the exception of Japan which experienced a negative growth (Table 2).

On an individual country basis, the majority of passenger traffic in the OIC region was observed in Egypt, Pakistan, Indonesia and Kazakhstan. In 2000, Egypt had a passenger-kilometre capacity of 68.4 billion, forming around 48 per cent of the total OIC traffic of 141.8 billion. Pakistan (19.3 billion), Indonesia (19.2 billion) and Kazakhstan (10.2 billion) together formed around 34 per cent of the total OIC passenger traffic (Table A.2).

Table 2: Railway Transport: Basic Indicators

	Network (Km.)	Passenger-kilometres (millions)		Net ton-kilometres (millions)	
		1996	2000	1996	2000
OIC Countries	101,304	128,853	141,818	173,023	188,469
United States	194,731	8,127	8,974	1,984,654	2,145,632
United Kingdom	16,893	32,135	38,349	15,144	18,409
France	32,682	59,770	69,870	50,500	55,470
Japan	23,168	400,712	384,906	24,991	22,131

Source: Table A.2.

In terms of net ton-kilometres, the OIC capacity grew by 2.2 per cent per annum from 1996 to 2000 and reached 188.5 billion. This amount was around 2.0 times the total of the United Kingdom, France and Japan. However, the capacity of the United States was around 11.4 times that of the OIC region (Table 2).

On an individual country basis, Kazakhstan had a net ton-kilometre capacity of around 125 billion which formed over 66 per cent of the OIC total. Two other OIC countries with significant net ton-kilometre capacity were Iran (14.2 billion) and Turkey (9.9 billion) (Table A.2).

3.3. State of Maritime Transport Infrastructure and Capacity in the OIC Region

As one of the major modes of bulk transportation, maritime transport is of special importance to the OIC region and the OIC countries since the majority of them are mainly suppliers of primary commodities. The OIC region has a coastline of about 109 thousand kilometres and a significant seaport access, and overlooks some major world maritime straits. In addition, with a total inland waterways of more than 85 thousand kilometres, inland shipping is also significant in many OIC countries.

Table 3: Maritime Transport Infrastructure, 2002

	OIC	USA	UK	France	Japan
Coastline (Km)	108,659	19,924	12,429	3,427	29,751
Inland Waterways (Km)	85,528	41,009	3,200	14,932	1,770
Number of Ports	277	22	22	16	21
Number of Ships	2,716	348	295	35	594

Source: Table A.3.

On an individual country basis, Indonesia has a total coastline of 54.7 million kilometres, forming more than half of the OIC total. Similarly, Indonesia's inland waterways form more than one-fourth of that of the OIC region. On the other hand, the OIC includes 9 countries that are land-locked² and 27 others that do not have inland waterways. The OIC countries with the greatest number of ports are Malaysia (18), Iran (14), Algeria (13), Lebanon (12), Morocco (12), Saudi Arabia (11) and the United Arab Emirates (10) (Table A.3).

Table 4: Merchant Fleets as at 31 December 2002

	Gross Registered Tons
OIC Countries	35,483,049
United States	25,057,716
United Kingdom	13,717,975
France	4,731,478
Japan	13,917,948

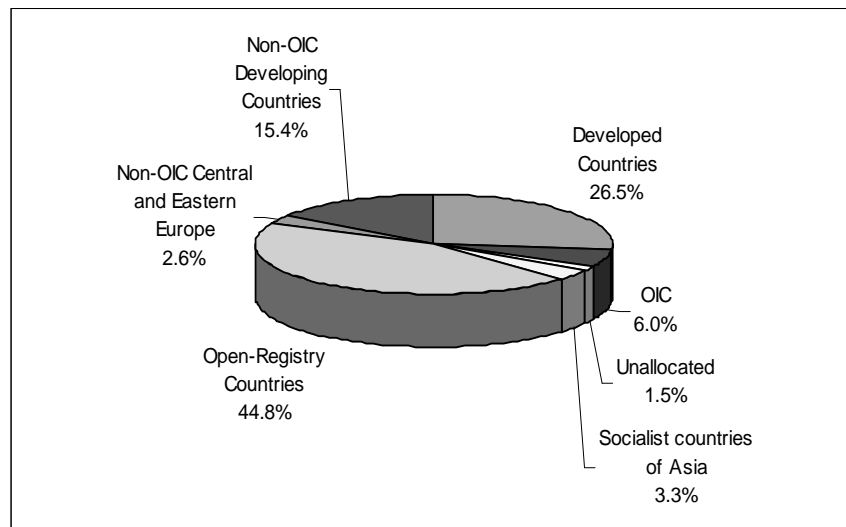
Source: Table A.4.

² Afghanistan, Azerbaijan, Burkina Faso, Chad, Kyrgyz Republic, Mali, Niger, Tajikistan and Uganda.

In terms of the number of ships, the OIC total merchant fleet amounted to 2,716 ships of 1000 GRT or more in 2002. This was more than twice the total number of ships in the four developed countries (Table 3). On an individual country basis, the highest number of ships was observed in Indonesia (710), followed by Turkey (525), Malaysia (366), Egypt (170), Iran (139) and Syria (129). Together, those six countries accounted for over 75 per cent of the total OIC merchant fleet (Table A.3).

The capacity of the OIC merchant fleet amounted to 35.5 million Gross Registered Tons (GRT) at the end of 2002 (Table 4). This accounted for 6 per cent of the world's total fleet (Figure 3). Moreover, although the total number of ships in the OIC region was more than that in the four developed countries, the latter's merchant fleet was 1.6 times larger in terms of GRT (Table 4).

**Figure 3: Merchant Fleets as at 31 December 2002
(% of World Total)**



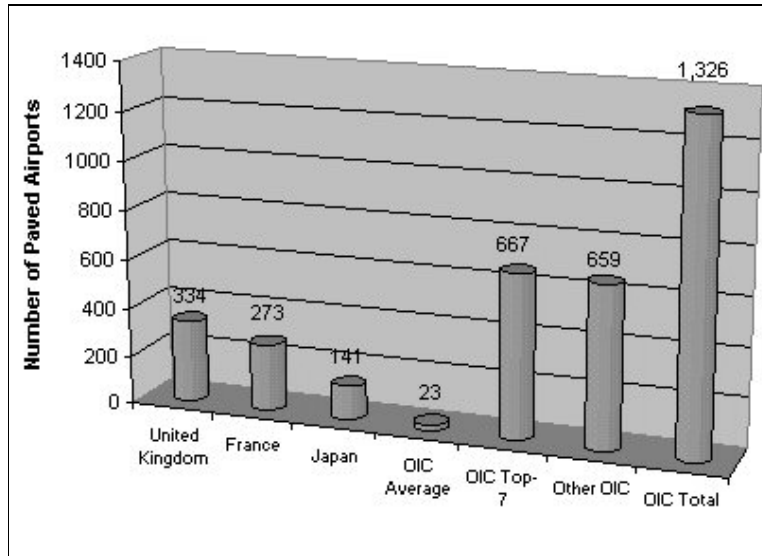
Source: Table A.4.

On an individual country basis, the largest merchant fleets in terms of GRT belong to Malaysia (7.08 million), Turkey (5.66 million), Indonesia (4.5 million) and Iran (4.3 million). Together, those four countries accounted for more than 60 per cent of the OIC total (Table A.4).

3.4. State of Air Transport Infrastructure and Capacity in the OIC Region

The number of airports in the OIC region is 4,485, of which only less than 30 per cent have paved runways. The number of paved runways in the United States is almost 4 times that of the OIC region's. 71 per cent of the airports in the United Kingdom and 82 per cent in Japan have paved runways (Table A.5).

Figure 4: Number of Airports With Paved Runways, 2000



Source: Table A.5.

Note: OIC average is the simple average of the OIC total.

On an individual country basis, Indonesia comes first in terms of airports with paved runways (153) followed by Iran (122), Pakistan (87), Turkey (86), Iraq (77), Egypt (71) and Saudi Arabia (71). The total number of airports with paved runways in those seven countries accounts for more than half of the OIC total. On the other hand, the OIC average is as low as 23 airports per member country (Table A.5 and Figure 4).

Even though the total number of airports with paved runways in the United Kingdom, France and Japan accounted for 56 per cent of the total

observed in the OIC region in 2000, the capacity of those three countries in terms of kilometres flown, passengers carried, passenger-kilometre and total ton-kilometre was greater. The kilometres flown in the OIC region were 1,554 million, i.e. 6 times less than those of the United States and 1.8 times less than those of the other three developed countries (Table 5).

The total number of passengers carried in the OIC region was 107.6 million. This was less than the total observed in Japan (109.1 million), and the total of the United Kingdom and France together (122.7 million), and 6 times less than that of the United States (661.5 million). Similarly, the capacity in terms of passenger-kilometres in the OIC region was 207 billion, 5 times less than that of the United States and half that of the other three developed countries (Table 5).

Table 5: Civil Aviation: Traffic Indicators, 2000

	Kilometres Flown (million)	Passengers Carried (000s)	Passenger-km (million)	Total ton-km (million)
OIC Countries	1,554	107,675	207,136	27,016
% of World	6.2	6.5	6.9	6.7
World	25,155	1,655,164	3,014,211	400,740
United States	10,386	661,461	1,105,728	133,937
United Kingdom	1,013	70,115	170,388	21,839
France	961	52,581	113,438	15,639
Japan	878	109,123	174,149	23,868

Source: Table A.5.

The OIC region's capacity in terms of total ton-kilometres was also low compared to that of the developed countries. The amount observed was 27 billion, which was less than half the total observed in the United Kingdom, Japan, and France together and 5 times less than the total observed in the United States (Table 5).

On an individual country basis, the highest number of kilometres flown in the OIC region was observed in Malaysia (220 million), Turkey (142 million), Indonesia (138 million), Saudi Arabia (133 million) and the United Arab Emirates (123 million). The total observed in those five countries accounted for nearly half of the kilometres flown in the OIC region as a whole (Table A.5).

In terms of the number of passengers carried, the highest numbers were observed in Malaysia (16.6 million), Saudi Arabia (12.6 million), Turkey (11.5 million), Indonesia (9.9 million), Iran (8.7 million) and the United Arab Emirates (6.9 million). The total of those six countries accounted for more than 60 per cent of the OIC total (Table A.5).

The highest passenger-kilometres were observed in Malaysia (37.9 billion), the United Arab Emirates (22.7 billion), Saudi Arabia (20.2 billion), Indonesia (16.8 billion), Turkey (16.5 billion) and Pakistan (12.1 billion). Those six countries accounted for more than 60 per cent of the OIC total (Table A.5).

In terms of total ton-kilometre capacity, the highest numbers were observed in Malaysia (5.3 billion), the United Arab Emirates (3.6 billion), Saudi Arabia (2.8 billion), Indonesia (1.9 billion), Turkey (1.9 billion), Pakistan (1.5 billion) and Egypt (1.1 billion). Those seven countries accounted for 67 per cent of the OIC total (Table A.5).

3.5. State of Telecommunications Infrastructure and Capacity in the OIC Region

There are around 79 million telephone lines in the OIC region. This number is higher than that of Canada and Japan. However, given the size of the population of the OIC region in comparison to the mentioned countries, there is a major gap in terms of the number of telephone lines per 100 inhabitants between the OIC and the developed world. There are 6.27 telephone lines per 100 inhabitants in the OIC region. This is lower than the world average of 17.9 and extremely lower than the average in Europe (41.34), Japan (55.83), Canada (63.55) and the United States (64.58) (Table 6).

On an individual country basis, 27 OIC member countries have less than 4 telephone lines per 100 inhabitants, of which 13 have less than 1. On the other hand, much higher ratios are observed in Kuwait (20.38), Brunei (25.57), Bahrain (26.31), Turkey (28.12), Qatar (28.94) and the United Arab Emirates (31.35) (Table A.6).

There are around 83 million cell phone subscribers in the OIC region. This is equivalent to 6.60 subscribers per 100 inhabitants. As can be seen, this is also lower than the world average of 19.07 and a huge

gap exists between the OIC region and the developed world in this respect (Tables 6 and A.6).

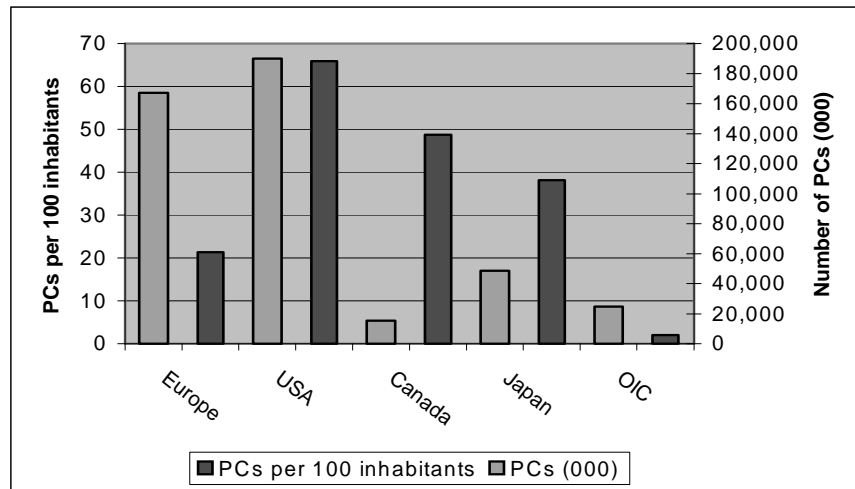
Table 6: Main Telephone Lines and Cell Phone Subscribers, 2002

	Main Telephone Lines (000)	Main Telephone Lines per 100 inhabitants	Cell Phone Subscribers (000)	Cell Phone Subscribers per 100 inhabitants
OIC	78,742.1	6.27	82,861.4	6.60
% of World	7.2		7.1	
World	1,091,575.7	17.90	1,162,674.6	19.07
Europe	329,462.5	41.34	408,507.6	51.26
USA	186,232.3	64.58	140,766.8	48.81
Canada	19,962.1	63.55	11,849.0	37.72
Japan	71,149.0	55.83	81,118.4	63.65

Source: Table A.6.

On an individual country basis, 14 OIC member countries have more than 20 cell phone subscribers per 100 inhabitants, which is a more optimistic indicator in comparison to the main telephone lines per 100 inhabitants. In fact, cell phone subscribers per 100 inhabitants in Turkey (34.75) and Malaysia (37.68) are close to the number observed in Canada (37.72). Moreover, Brunei (40.06) and Qatar (43.80) have a higher number of cell phone subscribers per 100 inhabitants in comparison to Canada; Kuwait (51.90) and Bahrain (58.33) have higher rates than the USA and Europe; and the United Arab Emirates (69.61) has a higher rate than Japan. On the other hand, 18 OIC member countries have less than 2 cell phone subscribers per 100 inhabitants (Table A.6).

When the number of personal computers (PCs) is considered, it can be seen that there are around 25 million PCs in the OIC region, which make up around 4 per cent of the world total. However, the number of PCs in Iran (4.9 million), Malaysia (3.6 million), Saudi Arabia (3.0 million), Turkey (3.0 million) and Indonesia (2.5 million) adds up to around 17 million, which forms over 68 per cent of the OIC total (Table A.6).

Figure 5: PCs per 100 inhabitants and Number of PCs, 2002

Source: Table A.6.

The OIC region has 2.09 PCs per 100 inhabitants in comparison to 9.91 for the world (Table A.6). The gap observed between the OIC region and the developed world in the number of telephone lines is also visible in the number of PCs per 100 inhabitants (Figure 5). Moreover, in 26 OIC member countries, there are less than 2 PCs per 100 inhabitants. Only Kuwait, the United Arab Emirates, Saudi Arabia, Malaysia, Bahrain and Qatar have more than 10 PCs per 100 inhabitants. Given the size of their populations, Iran, Turkey and Indonesia, which were mentioned as being among the countries with the highest number of PCs in the OIC region, had 7.50, 4.46, and 1.19 PCs per 100 inhabitants respectively (Table A.6).

The total number of Internet hosts in the OIC region is 458,432, which forms only 0.3 per cent of the world total. Needless to say, a huge gap exists in terms of this indicator between the OIC region and the developed world. The number of hosts in the OIC region is equivalent to 3.76 per 10,000 inhabitants in comparison to 258.61 for the world (Table 7). In 41 OIC member countries, there are less than 10 Internet hosts per 10,000 inhabitants and in 30 of them, there is less than 1 Internet host per 10,000 inhabitants. With the exception of Brunei and the United Arab Emirates (246.25 and 150.03 respectively), in terms of

Internet hosts per 10,000 inhabitants, there is an extraordinary gap between the developed world and the majority of the OIC members (Table A.6).

Table 7: Internet Hosts and Users, 2002

	Internet Hosts	Hosts per 10,000 inhabitants	Users (000)	Users per 10,000 inhabitants
OIC	458,432	3.76	36,266	288.54
% of World	0.3		5.8	
World	157,581,802	258.61	623,023	1,021.99
Europe	18,358,407	230.38	172,481	2,164.47
USA	115,311,958	3,998.77	159,000	5,513.77
Canada	2,993,982	953.07	16,110	5,128.29
Japan	9,260,117	726.65	57,200	4,488.56

Source: Table A.6.

There are over 36 million Internet users in the OIC region making up 5.8 per cent of the world's total. The number per 10,000 inhabitants in the OIC region is 288.54 in comparison to 1,021.99 in the world. When the developed world is considered, it is noticed that in the United States and Canada, more than half the population are Internet users (Table 7). On an individual country basis, in 22 OIC countries, there are less than 100 users per 10,000 inhabitants. On the other hand, there are higher numbers of Internet users per 10,000 inhabitants in comparison to the world average in Brunei (1,023.39), Kuwait (1,057.53), Qatar (1,147.54), Lebanon (1,171.30) and Guyana (1,422.07) and to Europe in Bahrain (2,474.66), Malaysia (3,196.89) and the United Arab Emirates (3,370.46) (Table A.6).

4. STRATEGY IN THE TRANSPORT AND TELECOMMUNICATIONS SECTORS AND CONCLUDING REMARKS

Despite the fact that the OIC region surpasses the mentioned developed countries in terms of the land area, coastline, inland waterways, number of ports, etc., its transport and telecommunications infrastructure and capacity are considerably lower than the world figures (See Table 8). Moreover, it is observed that in each mode of transportation, there exists a major gap between the infrastructures of a few OIC member countries

and the remaining majority. For example, it is observed that seven OIC member countries have more airports with paved runways than the remaining 50 members. Similarly, the paved roads of 7 member countries account for 57 per cent of the OIC total. In addition, there are the mentioned problems of poor linkages and varying procedures at border crossings that prevent even this current capacity of transportation from being used efficiently.

Table 8: Share of the OIC Countries in the World in terms of Basic Transport and Telecommunications Indicators

	OIC	World	OIC as % of World
Merchant Fleets as at 31 December 2002 (Gross Registered Tons)			
Total fleet	35,483,049	591,704,137	6.0
Oil tankers	12,928,367	179,819,924	7.2
Bulk carriers	6,924,362	171,628,160	4.0
General cargo	6,972,508	89,727,245	7.8
Container ships	2,374,899	72,206,406	3.3
Other	6,282,912	78,322,402	8.0
Civil Aviation Traffic, 2000			
Kilometres flown (millions)	1,554	25,155	6.2
Passengers carried (000)	107,675	1,655,164	6.5
Passenger km	207,136	3,014,211	6.9
Total ton-km	27,016	400,740	6.7
Main Telephone Lines, Cell Phone Subscribers, Personal Computers, Internet Hosts, Internet Users, 2002			
Main telephone lines (000)	78,742	1,091,576	7.2
Main telephone lines per 100 inhabitants	6.27	17.9	
Cell phone subscribers (000)	82,861	1,162,675	7.1
Cell phone subscribers per 100 inhabitants	6.6	19.07	
PCs (000)	24,877	587,518	4.2
PCs per 100 inhabitants	2.09	9.91	
Internet hosts	458,432	157,581,802	0.3
Hosts per 10,000 inhabitants	3.76	258.61	
Users (000)	36,266	623,023	5.8
Users per 10,000 inhabitants	288.54	1,021.99	

Source: Tables A.4 through A.6.

Massive investment is needed to rehabilitate the existing transport and telecommunications infrastructure and facilities in the OIC member countries and develop new networks and technology to improve the

quality of such services provided to businessmen. Many of those countries need investment for modernising railway tracks, building roads and purchasing vehicles for the carriage of goods and the installation of efficient telecommunications systems.

In this context, the first requirement is to create the necessary conditions to induce private sector investments in this area. One necessary condition in this regard is to offer a credible regulatory environment in the transport and telecommunications sectors when this is lacking. In part, this has to do with the effectiveness of the general legal and judicial systems concerning business. It also depends on the deregulation and liberalisation of those two sectors which traditionally have elements of natural monopoly.

Another requirement in inducing private sector participation would be to restructure the transport and telecommunications sectors in a way that meets the needs of the markets. In this respect, while many OIC member countries may have network structures designed to operate efficiently according to national priorities, these could still need revision, taking into consideration the regional realities, needs and capacities. They would also be designed to promote cooperation towards the ultimate aim of gradually establishing an Islamic Common Market. Such a restructuring would not only enable greater cooperation but also allow for greater competition within the OIC member countries which would serve in turn to increase efficiency at the national and regional levels.

General satisfaction with the regulatory environment and organisational structure within the OIC member countries would encourage investments relating to transport and telecommunications infrastructure. Similarly, the harmonisation of regulations among the OIC member countries in line with the needs of the business sector would facilitate cooperation and undertaking joint ventures in infrastructure development. In this respect, once an investment is made, various actions could be taken by the transport providers themselves to ensure efficient operation. Needless to say, any infrastructure development would be meaningless if the necessary will of efficient operation and maintenance does not exist. For these reasons, transport providers need to identify and eliminate non-productive areas and identify fields of action to increase efficiency and competitiveness. Furthermore, attention should be given to increasing the training of the

involved staff and modernising recruitment methods. Moreover, attention should be given to the various relationships between the parties involved in trade to identify the level of satisfaction between buyers and sellers and actions to be taken to increase efficiency and satisfaction in the transport and telecommunications sectors.

In the light of the fact that substantial investment is needed in the transport sector, one view could be that the first task must be to increase the utilisation and performance of the existing infrastructure and facilities with the aim of facilitating transport and trade. In this respect, the two main areas of interest would be harmonisation and simplification. Perhaps the simplest way of reaching harmonisation among the OIC member countries would be to become signatory to the same international conventions relating to trade and transport, adopt similar documentation methods and install similar data handling and electronic data interchange methods. These efforts would simplify customs procedures and reduce border-crossing delays, which would in turn give the OIC member countries time to gather the necessary capital and introduce the relevant regulatory changes while at the same time facilitating transport and trade. Additionally, it would be useful to develop bodies for the promotion of transport and trade and provide training in these fields both at the national and regional levels.

Along with efforts in harmonisation, a related area of concern is the state of transport links between OIC member countries. The lack of direct air and maritime links and the absence of quality land links among them are further obstacles in the path of regionalisation and integration. In air transport, for example, the only way to travel between certain OIC member countries is to follow more lengthy and costly routes by going through major airports in developed countries. This situation weakens the interest of entrepreneurs who would rather invest in areas to which they can easily travel. Moreover, the fact that links between certain OIC countries pass through non-OIC developed countries also implies that the latter's air and shipping companies could reap the benefits, although the aim is to enhance cooperation among OIC members.

The article also shows that there are low service coverage and penetration in the telecommunications sector in the majority of the OIC member countries. Therefore, allocating more resources to this purpose and attracting private capital will play an important role in the

development of the telecommunications infrastructure. The already mentioned methods of harmonisation will also allow greater cooperation among the OIC member countries.

The use of advanced information technologies will encourage more communications among the peoples of the OIC member countries. This will in turn help build stronger business and social ties among them. However, efforts could be made to set more balanced and competitive tariffs for both national and international communications. Furthermore, to promote a closer relationship among the OIC member countries, a tariff re-balancing could be arranged to make the price of intra-OIC calls less costly compared to other international calls.

In short, the policy recommendations given in this article emphasise the need for developing transport and telecommunications infrastructure for the establishment of an Islamic Common Market. These sectors are of strategic importance especially in terms of their inter-industry linkages and relations to all other sectors, in particular trade and tourism.

The state of transport and telecommunications infrastructure reflected in the article does not readily support an easy and rapid adoption of an ICM scheme. Rather, it supports the idea that there is a number of prerequisites to be met by the OIC member countries on the way towards establishing an Islamic Common Market. Therefore, as foreseen in the OIC Plan of Action and other important documents adopted at various OIC fora, the results of the article also support the idea that an ICM will be realised through a gradual integration of the economies of the OIC countries on a step-by-step basis.

To this goal, there is a need for the promotion of joint cooperation in the development of transport and telecommunications systems including land, maritime and air transport and information technologies. Furthermore, trade and investment regimes are to be harmonised and simplified so as to facilitate exchanges in these fields. In this connection, an expert group meeting on transport and telecommunications needs to be convened to determine the joint cooperation projects to be carried out within the framework of the OIC Plan of Action.

The OIC member countries should not wait for the establishment of an Islamic Common Market to witness greater cooperation and

development in their region. Just the opposite, increasing cooperation among them within the framework of the OIC Plan of Action will contribute extensively to the formation of an Islamic Common Market. It provides the necessary framework to pave the way in this direction. Furthermore, the launching of the first round of trade negotiations for establishing a Trade Preferential System among the OIC member countries (TPS-OIC), on 6-9 April 2004, in Antalya, Turkey, is another important step towards the formation of higher forms of economic integration, such as a free trade area, customs union and common market, among the OIC member countries. In this context, if the other OIC members who have not yet signed and ratified the Framework Agreement of TPS-OIC do so and join the first round of trade negotiations, this will be a further encouraging step towards the establishment of higher and more intensive forms of integration.

Nevertheless, the questions posed in the introduction section of this article still need careful examination. Just as there are questions in terms of the extent to which each OIC member country will reap benefits from the formation of a common market, there are also questions as to how each of them will be able to successfully develop its telecommunications and transport infrastructure and to what extent cooperation among them will be successful. In this respect, while the strategy put forward in this section regarding transport and telecommunications infrastructure development and integration is straightforward, its contribution to the formation of an Islamic Common Market will ultimately depend on its successful implementation.

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Table A.1: Total Area, Motorisation Rates and Highways

	Total area (sq. km)	Motorisation rates (2000)	Highways 1995-1996 (km)			Highways 1999-2000 (km)		
			Total	Paved	Unpaved	Total	Paved	Unpaved
Afghanistan	647,500	0.3	21,000	2,793	18,207	21,000	2,793	18,207
Albania	28,750	36.5	18,000	5,400	12,600	18,000	5,400	12,600
Algeria	2,381,740	56.7	102,424	70,570	31,854	104,000	71,656	32,344
Azerbaijan	86,600	41.3	24,981	23,057	1,924	24,981	23,057	1,924
Bahrain	620	245.4	3,103	2,374	729	3,261	2,531	730
Bangladesh	144,000	0.5	204,022	25,095	178,927	207,486	19,773	187,713
Benin	112,620	1.2	6,787	1,357	5,430	6,787	1,357	5,430
Brunei	5,770	520.7	1,150	399	751	2,525	2,525	0
Burkina Faso	274,200	2.3	12,506	2,001	10,505	12,506	2,001	10,505
Cameroon	475,440	7.8	34,300	4,288	30,012	34,300	4,288	30,012
Chad	1,284,000	1.1	33,400	267	33,133	33,400	267	33,133
Comoros	2,170		880	673	207	880	673	207
Côte d'Ivoire	322,460	6.7	50,400	4,889	45,511	50,400	4,889	45,511
Djibouti	22,000	21.4	2,890	364	2,526	2,890	364	2,526
Egypt	1,001,450	26.6	64,000	49,984	14,016	64,000	49,984	14,016
Gabon	267,670	19.1	7,670	629	7,041	8,464	838	7,626
Gambia	11,300	4.6	2,700	956	1,744	2,700	956	1,744
Guinea	245,860	2.8	30,500	5,033	25,467	30,500	5,033	25,467
Guinea-Bissau	36,120	2.9	4,400	453	3,947	4,400	453	3,947
Guyana	214,970	12.3	7,970	590	7,380	7,970	590	7,380
Indonesia	1,919,440	14.4	342,700	158,670	184,030	342,700	158,670	184,030
Iran	1,648,000	14.7	162,000	81,000	81,000	167,157	94,109	73,048
Iraq	437,072	29.6	47,400	40,764	6,636	45,550	38,399	7,151
Jordan	89,213	52.1	8,000	8,000	0	7,245	7,245	0
Kazakhstan	2,717,300	67.2	141,000	104,200	36,800	81,331	77,020	4,311
Kuwait	17,820	284.9	4,450	3,587	863	4,450	3,587	863
Kyrgyz Rep.	198,500	39.0	18,500	16,854	1,646	18,500	16,854	1,646
Lebanon	10,400	382.1	6,270	6,270	0	7,300	6,198	1,102
Libya	1,759,540	162.4	83,200	47,590	35,610	83,200	47,590	35,610
Malaysia	329,750	15.1	94,500	70,970	23,530	65,877	49,935	15,942
Maldives	300	1.1						
Mali	1,240,000	1.6	15,100	1,827	13,273	15,100	1,827	13,273
Mauritania	1,030,700	3.7	7,660	866	6,794	7,720	830	6,890
Morocco	446,550	42.2	60,626	30,556	30,070	57,707	32,547	25,160
Mozambique	801,590	4.4	30,400	5,685	24,715	30,400	5,685	24,715
Niger	1,267,000	2.4	10,100	798	9,302	10,100	798	9,302
Nigeria	923,770	0.5	51,000	26,000	25,000	194,394	60,068	134,326
Oman	212,460	143.2	32,800	9,840	22,960	34,965	9,673	25,292
Pakistan	803,940	7.8	224,774	128,121	96,653	254,410	109,396	145,014
Qatar	11,000	353.3	1,230	1,107	123	1,230	1,107	123
Saudi Arabia	1,960,582	346.3	162,000	69,174	92,826	151,470	45,592	105,878
Senegal	196,190	11.1	14,576	4,271	10,305	14,576	4,271	10,305
Sierra Leone	71,740	4.4	11,700	1,287	10,413	11,330	895	10,435
Somalia	637,660	1.4	22,100	2,608	19,492	22,100	2,608	19,492
Sudan	2,505,810	1.3	11,900	4,320	7,580	11,900	4,320	7,580
Suriname	163,270	140.8	4,530	1,178	3,352	4,492	1,168	3,324
Syria	185,180	11.1	41,451	9,575	31,876	43,381	10,021	33,360
Tajikistan	143,100	19.0	13,700	11,330	2,370	27,767	22,963	4,804
Togo	56,790	8.0	7,520	2,376	5,144	7,520	2,376	5,144
Tunisia	163,610	54.0	23,100	18,226	4,874	18,997	12,310	6,687
Turkey	780,580	67.7	382,397	95,599	286,798	385,960	131,226	254,734
Turkmenistan	488,100		24,000	19,448	4,512	24,000	19,448	4,512
Uganda	236,040	2.2	27,000	1,800	25,200	27,000	1,809	25,191
UAE	75,581	132.9	4,835	4,835	0	1,088	1,088	0
Uzbekistan	447,400		81,600	71,237	10,363	81,600	71,237	10,363
Yemen	527,970	20.8	64,725	5,243	59,482	67,000	7,705	59,295
OIC TOTAL	32,069,188	24.4	2,871,927	1,266,384	1,605,503	2,969,967	1,260,003	1,709,924
USA	9,629,091	751.0	6,420,000	3,903,360	2,516,640	6,334,859	3,737,567	2,597,292
UK	244,820	413.3	372,000	372,000	0	371,913	371,913	0
France	547,030	476.5	892,900	892,900	0	894,000	894,000	0
Japan	377,835	415.7	1,160,000	859,560	300,440	1,161,894	534,471	627,423

Source: UN (2003), World Factbook (1999, 2003). Motorisation rates were calculated using UN (2003).

Table A.2: Railways: Basic Indicators

	Railways (km)	Passenger kilometers (millions)					Net ton-kilometers (millions)				
		1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
Afghanistan	25										
Albania	447	168	95	116	121	183	42	23	25	26	28
Algeria	3,973	1,826	1,360	1,163	1,069	1,142	2,194	2,892	2,174	2,033	1,980
Azerbaijan	2,122	558	491	533	422	493	2,778	3,515	4,702	5,052	5,770
Bangladesh	2,706	3,333	3,754	3,855	3,678	3,678	689	782	804	896	896
Benin	578	117	121	111	108	100	178	218	219	204	89
Brunei	13										
Burkina Faso	622										
Cameroon	1,008	306	283	292	311	311	869	850	888	916	916
Côte d'Ivoire	660	156	156	156	156	156	505	505	505	505	505
Djibouti	100										
Egypt	5,105	55,888	60,617	64,077	68,423	68,423	4,117	3,969	4,012	3,464	3,464
Gabon	814	85	85	85	88	88	493	493	493	1,611	1,611
Guinea	1,115										
Guyana	187										
Indonesia	6,458	15,223	15,518	16,970	17,820	19,228	4,700	5,030	4,963	5,035	4,997
Iran	7,201	7,044	6,103	5,637	6,451	7,128	13,638	14,400	12,638	14,082	14,179
Iraq	1,963										
Jordan	505	1	2	2	2	2	735	625	596	585	671
Kazakhstan	13,601	14,188	12,802	10,668	8,859	10,215	112,688	106,425	103,045	91,700	124,983
Kyrgyz Rep.	420	92	93	59	31	44	481	472	466	354	338
Lebanon	401										
Malaysia	2,418	1,370	1,492	1,397	1,313	1,220	1,397	1,336	992	908	917
Mali	729	223	223	223	210	210	258	258	258	241	241
Mauritania	717										
Morocco	1,907	1,776	1,856	1,875	1,880	1,956	4,757	4,835	4,827	4,795	4,650
Mozambique	3,123										
Nigeria	3,557	170	179	179	179	179	114	120	120	120	120
Pakistan	8,163	19,114	18,771	18,979	18,761	19,292	4,538	4,444	3,939	3,612	3,799
Saudi Arabia	1,392	170	192	222	224	224	691	726	856	938	938
Senegal	906	78	78	78	78	63	441	441	441	435	435
Sierra Leone	84										
Sudan	5,978	174	174	174	120	120	1,586	1,586	1,586	1,654	1,654
Suriname	166										
Syria	2,743	454	294	182	187	197	1,864	1,472	1,430	1,577	1,568
Tajikistan	482	95	129	121	61	73	1,719	1,384	1,458	1,282	1,326
Togo	525										
Tunisia	2,152	988	1,094	1,133	1,196	1,258	2,329	2,338	2,349	2,365	2,274
Turkey	8,607	5,229	5,840	6,161	6,146	5,833	9,018	9,717	8,466	8,446	9,895
Turkmenistan	2,440										
Uganda	1,241	25	5	0	0	0	184	148	148	200	210
Uzbekistan	3,950	2	2	2	2	2	20	17	16	14	15
OIC TOTAL	101,304	128,853	131,809	134,450	137,881	141,818	173,023	169,021	162,416	153,050	188,469
USA	194,731	8,127	8,317	8,573	8,515	8,974	1,984,654	1,974,337	2,015,138	2,098,066	2,145,632
UK	16,893	32,135	34,660	36,270	38,349	38,349	15,144	16,949	17,369	18,409	18,409
France	32,682	59,770	61,830	64,460	66,590	69,870	50,500	54,820	55,090	54,350	55,470
Japan	23,168	400,712	301,510	391,073	384,943	384,906	24,991	18,661	23,136	22,676	22,131

Source: UN (2003) and World Factbook (2003). Data in italics are missing data for which the actual data in the closest year were used.

Table A.3: Maritime Infrastructure Indicators, 2002

	Coastline (km)	Inland waterways (km)	Major ports	Number of ships
Afghanistan	Landlocked	1200	2	0
Albania	362	43	4	13
Algeria	998	-	13	69
Azerbaijan	Landlocked	-	1	55
Bahrain	161	-	3	7
Bangladesh	580	5150	4	40
Benin	121	-	2	0
Brunei	161	209	5	8
Burkina Faso	Landlocked	-	0	0
Cameroon	402	2090	5	0
Chad	Landlocked	2000	0	0
Comoros	340	-	3	28
Côte d'Ivoire	515	980	4	0
Djibouti	314	-	1	0
Egypt	2,450	3500	9	170
Gabon	885	1600	7	0
Gambia	80	400	1	0
Guinea	320	1295	3	0
Guinea-Bissau	350	-	4	0
Guyana	459	5900	5	2
Indonesia	54,716	21579	8	710
Iran	3,180	904	14	139
Iraq	58	1015	3	18
Jordan	26	-	1	9
Kazakhstan	2,909	3900	5	1
Kuwait	499	-	6	39
Kyrgyz Rep.	Landlocked	600	1	0
Lebanon	225	-	12	56
Libya	1,770	-	9	21
Malaysia	4,675	7296	18	366
Maldives	644	-	2	15
Mali	Landlocked	1815	1	0
Mauritania	754	-	5	0
Morocco	1,835	-	12	39
Mozambique	2,470	3750	6	3
Niger	Landlocked	300	0	0
Nigeria	853	8575	6	44
Oman	2,092	-	3	3
Pakistan	1,046	-	2	18
Palestine	-	-	1	0
Qatar	563	-	3	23
Saudi Arabia	2,640	-	11	71
Senegal	531	897	7	0
Sierra Leone	402	800	3	2
Somalia	3,025	-	5	0
Sudan	853	5310	7	4
Suriname	386	1200	6	2
Syria	193	870	4	129
Tajikistan	Landlocked	-	0	0
Togo	56	50	2	2
Tunisia	1,148	-	7	14
Turkey	7,200	1200	9	525
Turkmenistan	1,768	-	1	2
Uganda	Landlocked	-	3	3
UAE	1,318	-	10	61
Uzbekistan	420	1100	1	0
Yemen	1,906	-	7	5
OIC Total	108,659	85,528	277	2,716
USA	19,924	41,009	22	348
UK	12,429	3,200	22	295
France	3,427	14,932	16	35
Japan	29,751	1,770	21	594

Source: World Factbook (2003).

Table A.4: Merchant Fleets as at 31 December 2002
(Gross Registered Tons)

	Total fleet	Oil tankers	Bulk carriers	General cargo	Container ships	Other
Albania	48,740			47,478		1,262
Algeria	936,072	32,428	172,695	188,784		542,165
Azerbaijan	633,189	177,425		98,983		356,781
Bahrain	345,939	131,348	42,963	17,121	96,308	58,199
Bangladesh	469,795	98,327	5,672	283,158	45,193	37,445
Benin	1,003					1,003
Brunei	866,542	480,572		2,018		383,952
Cameroon	16,673			652		16,021
Comoros	407,206	273,455	59,223	63,670		10,858
Côte d'Ivoire	8,876	789				8,087
Djibouti	2,691			299		2,392
Egypt	1,274,990	222,907	511,701	356,087	48,146	136,149
Gabon	12,541	652		4,165		7,724
Gambia	2,183					2,183
Guinea	11,784			808		10,976
Guinea-Bissau	6,459			1,414		5,045
Guyana	15,169	125		7,033		8,011
Indonesia	4,532,185	1,636,221	324,173	1,590,956	171,702	809,133
Iran	4,324,545	2,325,149	1,072,708	576,331	154,201	196,156
Iraq	261,629	128,127		60,098		73,404
Jordan	69,695	10,452		53,200	5,097	946
Kazakhstan	11,845			3,832		8,013
Kuwait	2,571,624	1,881,849	17,012	142,675	214,436	315,652
Lebanon	238,252	7,866	82,665	138,741		8,980
Libya	164,901	6,509		68,959		89,433
Malaysia	7,082,284	2,554,892	1,508,882	594,039	736,543	1,687,928
Maldives	63,068	9,284		48,846		4,937
Mauritania	47,647			499		47,148
Morocco	501,723	84,497		99,446	40,830	276,950
Mozambique	37,205			5,901		31,304
Nigeria	410,552	294,383		42,804		73,365
Oman	40,289	14,953		4,289		21,047
Pakistan	264,540	65,170		150,517	31,707	17,146
Qatar	662,664	253,070	141,617	58,054	170,152	39,771
Saudi Arabia	1,767,231	946,717		376,050	149,368	295,096
Senegal	46,586	274		1,145		45,167
Sierra Leone	22,733	9,436		490		12,807
Somalia	6,343	851		2,802		2,690
Sudan	33,287	832		30,236		2,219
Suriname	5,021	1,823		2,525		673
Syria	476,048	5,213	60,669	398,589	7,580	3,997
Togo	13,321			2,603		10,718
Tunisia	185,536	50,185	17,066	9,404		108,881
Turkey	5,658,754	815,071	2,904,220	1,333,776	289,200	316,487
Turkmenistan	45,693	6,156	2,613	16,966		19,958
UAE	877,996	401,359	483	87,065	214,436	174,653
OIC TOTAL	35,483,049	12,928,367	6,924,362	6,972,508	2,374,899	6,282,912
OIC as % of world	6.0	7.2	4.0	7.8	3.3	8.0
World Total	591,704,137	179,819,924	171,628,160	89,727,245	72,206,406	78,322,402
Developing C.	120,137,098	37,242,708	34,951,810	20,705,302	12,416,860	14,820,418
OIC as % of DCs	29.5	34.7	19.8	33.7	19.1	42.4
Developed	162,487,444	54,010,316	30,117,385	20,118,747	24,643,442	33,597,554
USA	25,057,716	10,577,808	4,601,721	1,626,509	4,796,972	3,454,706
UK	13,717,975	3,856,757	1,587,666	1,329,066	3,247,496	3,696,990
France	4,731,478	2,059,779	353,904	268,944	658,448	1,390,403
Japan	13,917,948	3,369,636	2,771,912	1,930,611	593,665	5,252,124

Source: UNCTAD (2003).

Table A.5: Number of Airports and Civil Aviation Traffic Indicators, 2000

	Number of airports			Kilometers flown (millions)	Passengers carried (000s)	Passenger km	Total ton-km
	Total	Paved	Unpaved				
Afghanistan	47	10	37	3	150	143	21
Albania	12	4	8	3	137	101	9
Algeria	136	54	82	34	2,997	3,051	287
Azerbaijan	71	27	44	10	546	503	93
Bahrain	4	3	1	28	1,382	3,185	510
Bangladesh	18	15	3	25	1,331	3,988	632
Benin	5	1	4	3	77	216	32
Brunei	2	1	1	25	864	3,001	410
Burkina Faso	33	2	31	4	144	253	35
Cameroon	49	11	38	6	312	646	115
Chad	50	7	43	3	77	216	32
Comoros	4	4					
Côte d'Ivoire	36	7	29	3	108	242	34
Djibouti	13	3	10				
Egypt	89	71	18	64	4,522	8,828	1,085
Gabon	57	10	47	8	447	847	135
Gambia	1	1					
Guinea	15	5	10	1	59	94	10
Guinea-Bissau	28	3	25		20	10	1
Guyana	51	8	43	2	73	299	30
Indonesia	631	153	478	138	9,916	16,764	1,865
Iran	309	122	187	66	8,722	8,202	801
Iraq	150	77	73				
Jordan	17	15	2	37	1,282	4,207	591
Kazakhstan	488	60	428	15	461	1,208	133
Kuwait	6	3	3	37	2,113	6,134	805
Kyrgyz Rep.	68	18	50	6	241	423	44
Lebanon	8	5	3	20	806	1,484	223
Libya	136	58	78	4	601	409	33
Malaysia	114	35	79	220	16,561	37,939	5,346
Maldives	5	2	3	6	315	425	54
Mali	26	7	19	3	77	216	32
Mauritania	26	10	16	4	185	275	37
Morocco	63	26	37	64	3,671	7,185	722
Mozambique	165	22	143	6	260	376	41
Niger	27	9	18	3	77	216	32
Nigeria	70	36	34	7	507	565	57
Oman	139	6	133	32	2,118	4,148	549
Pakistan	124	87	37	76	5,294	12,054	1,452
Palestine	2	1	1				
Qatar	4	2	2	48	2,673	6,042	823
Saudi Arabia	209	71	138	133	12,566	20,229	2,836
Senegal	20	9	11	3	98	222	32
Sierra Leone	10	1	9	1	19	93	18
Somalia	60	6	54				
Sudan	63	12	51	6	414	748	101
Suriname	46	5	41	6	233	1,151	130
Syria	92	24	68	15	750	1,422	149
Tajikistan	66	13	53	4	168	286	29
Togo	9	2	7	3	77	216	32
Tunisia	30	14	16	27	1,908	2,690	284
Turkey	120	86	34	142	11,513	16,492	1,865
Turkmenistan	76	13	63	20	1,284	1,466	144
Uganda	27	4	23	2	39	215	40
UAE	41	22	19	123	6,893	22,691	3,649
Uzbekistan	273	27	246	39	1,745	3,732	417
Yemen	44	16	28	16	842	1,588	179
OIC TOTAL	4,485	1,326	3,159	1,554	107,675	207,136	27,016
% of World				6.2	6.5	6.9	6.7
World Total				25,155	1,655,164	3,014,211	400,740
USA	14,801	5,131	9,670	10,386	661,461	1,105,728	133,937
UK	470	334	136	1,013	70,115	170,388	21,839
France	477	273	204	961	52,581	113,438	15,639
Japan	172	141	31	878	109,123	174,149	23,868

Source: UN (2003) and World Factbook (2003).

Table A.6: Main Telephone Lines, Cell Phone Subscribers, Personal Computers, Internet Hosts, Internet Users (2002)

	Main telephone lines (000)	Main telephone lines per 100 inhabitants	Cell phone subscribers (000)	Cell phone subscribers per 100 inhabitants	PCs (000)	PCs per 100 inhabitants	Internet hosts	Hosts per 10,000 inhabitants	Users (000)	Users per 10,000 inhabitants
Albania	220.0	7.14	851.0	27.63	36	1.17	172	0.56	12	38.96
Algeria	1,908.0	6.1	400.0	1.28	242	0.77	821	0.26	500	159.78
Azerbaijan	923.8	11.35	870.0	10.69			1,139	1.40	300	368.51
Bahrain	175.4	26.31	389.0	58.33	107	16.04	1,339	20.08	165	2,474.66
Bangladesh	682.0	0.51	1,075.0	0.81	450	0.34	2	-	204	15.32
Benin	62.7	0.92	218.8	3.22	15	0.22	574	0.84	50	73.52
Brunei	90.0	25.57	137.0	40.06	27	7.67	8,668	246.25	35	1,023.39
Burkina Faso	64.3	0.54	89.9	0.75	19	0.16	409	0.34	25	20.90
Cameroon	110.9	0.7	675.7	4.27	90	0.57	439	0.28	60	37.90
Chad	11.8	0.15	34.2	0.43	13	0.17	11	0.01	15	19.06
Comoros	10.3	1.35			4	0.55	12	0.16	3	41.99
Côte d'Ivoire	336.1	2.04	1,027.1	6.23	154	0.93	4,397	2.67	90	54.58
Djibouti	10.1	1.54	15.0	2.29			498	7.59	5	68.60
Egypt	7,430.0	11.04	4,494.7	6.68	1,120	1.66	3,061	0.45	1,900	282.26
Gabon	32.1	2.47	279.3	21.50	25	1.92	79	0.61	25	192.46
Gambia	38.4	2.8	100.0	7.29	19	1.38	568	4.14	25	182.22
Guinea	26.0	0.34	90.8	1.18	42	0.55	251	0.33	35	45.66
Guinea-Bissau	11.2	0.89					20	0.16	5	39.90
Guyana	80.4	9.15	87.3	9.93	24	2.73	63	0.72	125	1,422.07
Indonesia	7,750.0	3.65	11,700.0	5.52	2,519	1.19	61,279	2.89	8,000	377.16
Iran	12,200.2	18.66	2,187.0	3.35	4,900	7.50	3,491	0.53	3,168	484.64
Jordan	674.5	12.66	1,219.6	22.89	200	3.75	4,116	7.72	308	576.97
Kazakhstan	2,081.9	13.04	1,027.0	6.43			16,562	10.37	250	156.56
Kuwait	481.9	20.38	1,227.0	51.90	285	12.06	3,261	13.79	250	1,057.53
Kyrgyz Rep.	394.8	7.75	53.1	1.04	65	1.27	5,930	11.64	152	298.33
Lebanon	678.8	19.88	775.1	22.70	275	8.05	7,199	21.08	400	1,171.30
Libya	660.0	11.83	70.0	1.26	130	2.34	83	0.15	125	225.02
Malaysia	4,669.9	19.04	9,241.4	37.68	3,600	14.68	86,285	35.18	7,841	3,196.89
Maldives	28.7	10.2	41.9	14.91	20	7.12			15	533.81
Mali	56.6	0.53	52.6	0.50	15	0.14	158	0.15	25	23.52
Mauritania	31.5	1.18	247.2	9.22	29	1.08	79	0.29	10	37.28
Morocco	1,127.4	3.8	6,198.7	20.91	700	2.36	2,680	0.90	700	236.14
Mozambique	83.7	0.46	254.8	1.40	82	0.45	1,925	1.06	30	16.99
Niger	22.4	0.19	16.6	0.14	7	0.06	119	0.10	15	12.77
Nigeria	702.0	0.58	1,607.9	1.34	853	0.71	1,030	0.09	420	34.98
Oman	227.6	8.39	464.9	17.15	95	3.50	676	2.49	180	663.96
Pakistan	3,655.0	2.5	1,238.6	0.85	600	0.42	12,707	0.87	1,500	102.77
Palestine	301.6	8.73	320.0	9.26	125	3.62			105	303.91
Qatar	176.5	28.94	267.2	43.80	110	18.03	171	2.80	70	1,147.54
Saudi Arabia	3,317.5	14.39	5,008.0	21.72	3,003	13.02	14,788	6.41	1,419	615.30
Senegal	224.6	2.23	553.4	5.49	200	1.98	761	0.76	105	104.20
Sierra Leone	24.0	0.48	66.3	1.34			277	0.56	8	16.16
Sudan	671.8	2.06	190.8	0.59	200	0.61			84	25.82
Suriname	78.7	16.35	108.4	22.52	20	4.55	24	0.50	20	415.67
Syria	2,099.3	12.32	400.0	2.35	330	1.94	11	0.01	220	129.11
Tajikistan	237.6	3.73	13.2	0.21			302	0.47	4	5.49
Togo	51.2	1.05	170.0	3.49	150	3.08	80	0.16	200	410.42
Tunisia	1,148.0	11.74	503.9	5.15	300	3.07	341	0.35	506	516.81
Turkey	18,914.9	28.12	23,374.4	34.75	3,000	4.46	154,585	22.98	4,900	728.39
Turkmenistan	374.0	7.71	8.2	0.17			2,020	4.16	8	16.55
Uganda	55.0	0.22	393.3	1.59	82	0.33	2,242	0.91	100	40.49
UAE	1,093.7	31.35	2,428.1	69.61	450	12.90	52,332	150.03	1,176	3,370.46
Uzbekistan	1,681.1	6.65	186.9	0.74			281	0.11	275	108.74
Yemen	542.2	2.78	411.1	2.11	145	0.74	113	0.06	100	51.30
OIC	78,742.1	6.27	82,861.4	6.60	24877	2.09	458,432	3.76	36,266	288.54
OIC as % of World	7.2		7.1		4.2		0.3			5.8
World	1,091,575.7	17.9	1,162,674.6	19.07	587,518	9.91	157,581.8	258.61	623,023	1,021.99
Europe	329,462.5	41.34	408,507.6	51.26	167,130	21.40	18,358.40	230.38	172,481	2,164.47
USA	186,232.3	64.58	140,766.8	48.81	190,000	65.89	115,311.9	3998.77	159,000	5,513.77
Canada	19,962.1	63.55	11,849.0	37.72	15,300	48.70	2,993,982	953.07	16,110	5,128.29
Mexico	14,941.6	14.67	25,928.3	25.45	8,353	8.20	1,107,795	108.74	10,033	984.82
Japan	71,149.0	55.83	81,118.4	63.65	48,700	38.22	9,260,117	726.65	57,200	4,488.56

Source: ITU, <http://www.itu.int/ITU-D/ict/statistics/>