OIC OUTLOOK

April 2009

PHARMACEUTICAL INDUSTRY IN THE OIC MEMBER COUNTRIES: PROSPECTS AND CHALLENGES

Attar Sokak No: 4, 06700 GOP, Ankara, TURKEY Tel: +90-312-468 6172 (4 lines) Fax: +90-312-467 3458 E-mail: oicankara@sesric.org Web: www.sesric.org

OIC OUTLOOK

PHARMACEUTICAL INDUSTRY IN THE OIC MEMBER COUNTRIES: PROSPECTS AND CHALLENGES

INTRODUCTION

Today pharmaceuticals have become an indispensible part of health care system around the globe. Historically pharmaceuticals have played a vital role in the human development by improving the quality of life and reducing the time spent in the hospitals. Thanks to innovative pharmaceutical industry that almost all epidemics and chronic diseases are curable today. Due to its direct link with the welfare and well being of human beings pharmaceutical industry is of strategic importance for the development of a healthy and productive nation. Today pharmaceutical industry is considered to be one of the largest and rapidly growing global industries. It is a major source of employment generation and foreign exchange earnings for many countries around the globe.

However, despite all these extraordinary achievements it's a harsh reality that annually more than 2.3 million people die across the world, mostly in low income developing countries, due to unavailability and inaccessibility of necessary medicines (WHO,2004). Many developing countries, including some OIC member countries, has insufficient or no manufacturing capacities in the pharmaceutical industry. Local industry covers a tiny fraction of domestic pharmaceutical demand and they rely heavily on imports and medicinal aid. In addition, the share of medicines in "Out-of-pocket" health payments (i.e. paid by the patient) is ranging from 40% to 60% in these countries. Consequently, medicines are neither available nor accessible to a large fraction of population and hundreds and thousands of people die of preventable and treatable diseases. This outlook report is a humble attempt to investigate the availability of medicines in OIC member countries by focusing on the production, consumption and trade patterns of pharmaceuticals in these countries in the period 2000-2007.

PHARMACEUTICAL PRODUCTION & CONSUMPTION: WORLDWIDE TRENDS

The global pharmaceutical industry has shown rapid growth over the years and emerged as one of the fastest growing industries in the world. However, world pharmaceutical production and consumption is still unevenly dispersed around the world with the developed countries are the leading producers and consumers of pharmaceuticals.

According to IMS Health (an international consulting and data services company), in 2007 world pharmaceutical market was valued at US\$ 712 billion with a growth rate of 6.4% over the previous year at the constant exchange rate (IMS Health, March 2008). Though the volume of pharmaceutical industry has been nearly doubled from US \$ 365 billion in 2000 to US\$ 712 billion in 2007, the industry's growth rate has fallen down to half the growth rate seven years ago as shown in the figure 1 from 11.5% in 2000 to 6.4% in 2007. North America, Europe and Japan accounted for nearly 86% of global market. While the rest of world mostly developing regions with a share of nearly 85% of world population, accounted for only 14 % of global pharmaceutical consumption in 2007 (figure 2). A breakdown of pharmaceutical market in developing world reveals that Asia representing nearly 6%, Latin America 5%, Australia, Middle East and Africa 1 % each of the global Pharmaceutical market.

11,8 11,5 % Constant US\$ Growth rate 10,3 9,50 US \$ Billion Total World Market — Growth Over previous Year

Figure 1: Global Pharmaceutical Market, 2000-2007

Source: IMS Health 2008

According to IMS global Pharmaceutical Survey, in 2008 pharmaceutical market will grow to US\$ 735 billion with a slowing growth rate of 5-6 % compare to 6-7% in 2007. It is also predicted by the experts that for the first time USA and Western Europe will contribute less than 50% of value growth of global pharmaceutical market. On the other hand the value growth share of "Pharmerging!" economies will increase from 26% in 2007 to 33 % in 2008.

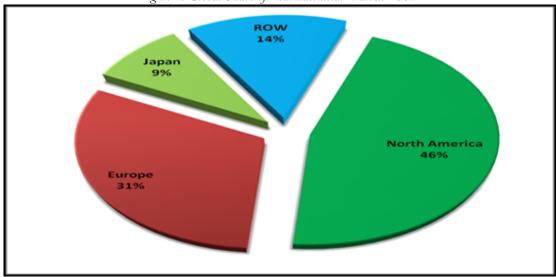


Figure 2: Global Share of Pharmaceutical Market 2007

Source: IMS Health 2008

OIC MEMBER COUNTRIES

Like many other developing countries, the OIC members are facing many socio-economic challenges including the establishment of an efficient and effective health care system. In these economies health sector is suffering from many problems ranging from poor infrastructure to

¹ Pharmerging markets include: China, India, Brazil, Russia, Mexico, Turkey, and South Korea.

insufficient number of medical staff. However the shortage of and inaccessibility to necessary medicines are among the most challenging problems. Due to the unavailability of the relevant data for most of the OIC member countries, comprehensive analysis on production capacity of pharmaceutical industry at the OIC level is not possible. However, an overview of pharmaceutical industry in the OIC member countries, for which data are available², in terms of their geographical regions is given in the following section.

MIDDLE EAST AND NORTH AFRICA (MENA)

Pharmaceutical market in the MENA region accounted for about 1.8 per cent of the world market, or around \$12bn in 2006 [Pharmaceutical & Biotechnology Middle East (PABME)]. Most of the countries in MENA region are characterized by low domestic pharmaceutical base. According to Arab Organization for Industry and Mining, local production accounts for 45 per cent of consumption, with more than 220 manufacturing units. In MENA region GCC countries have highest per capita medicines consumption estimated at US\$ 52 while in other countries, the figure is estimated at about US\$20 in 2004.

Among the GCC countries **Saudi Arabia** has the largest number of local pharmaceutical manufacturing plants totalling 27 with an investment of US\$ 619 million. As shown in Figure 3, Saudi Arabian pharmaceutical industry produced medicines worth of US\$ 320 million in 2006 compare to US\$ 187 million in 2000 (NCB In Focus Report , December 2007). However, local production satisfies only 15% of the demand and imports account for 85% of the domestic market.

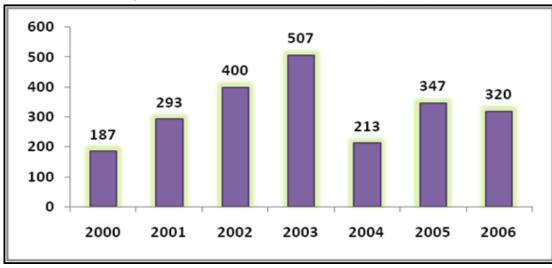


Figure 3: Saudi Arabia: Pharmaceutical Production (US\$ mln)

Source: NCB In Focus Report (2007).

Egyptian pharmaceutical market, which is estimated at around US\$ 1.7 billion in 2007, is one of the major flourishing markets in the MENA region. According to some reports, Egyptian pharmaceutical industry comprised of about 30 companies and local production satisfies more

² Data has been taken from different Studies and Reports prepared by National and International institutions.

than 90% of domestic demand .On the other hand, Egypt is contributing 30% of supply in the MENA pharmaceutical market.

Jordan is another major market in the MENA region. Jordanian pharmaceutical industry consists of 17 factories and accounts for 3.5% of the total workforce employed in the country's industrial sector and is second largest export earning industry after garment manufacturing. In 2005 Jordanian pharmaceutical industry produced US\$ 350 million worth of medicines compare to US\$ 185 million in 2003. Local production satisfies 50 % of domestic market.

In the MENA region, **UAE** is one of the most expensive pharmaceutical markets and per capita medicine expenditure estimated at about US\$ 80. There are eight pharmaceutical manufacturing units in UAE which presently satisfy around 10 % of local demand (Dubai International Pharmaceuticals and Technologies Conference and Exhibition, DUPHAT December 2008).

ASIA

In the Central Asian region, **Turkey** emerged as a promising pharmaceutical market. Today, Turkey is the largest pharmaceuticals producer in the OIC and is ranked 16th among the world's 35 leading producers. There are 134 pharmaceutical companies operating in Turkey and domestic industry meets 90% of local demand. In 2006 Turkey produced US\$ 3947 million worth of medicines compare to US\$ 1932 million in 2000 (Export Promotion Centre of Turkey, 2008). Turkish pharmaceutical industry and market has great growth potential and is placed in a group of countries called "*Pharmerging Markets*" which represents fastest growing pharmaceutical markets in the world.

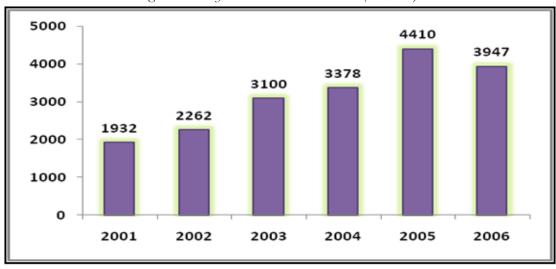


Figure 4: Turkey: Pharmaceutical Production (US\$ mln)

Source: Export Promotion Centre of Turkey (2008).

In the Asia Pacific, **Malaysia** is one of the fastest growing pharmaceutical market valued around US\$ 1027 million in 2007 [Frost & Sullivan estimates 2008]. According to Malaysian Drug Control Authority, in 2006 there were 246 registered pharmaceutical companies in the country and local manufacturer produced about 25-30% of domestic demand. Provided the rich natural resources (flora and fauna), Malysia is envisaged as an important biogeneric (herbal medicines and vitamens) market in the region.

Indonesia is another growing pharmaceutical market in the region estimated at US\$ 1.29 billion in 2006. According to Drug and Food Control Agency (BPOM), Indonesia has a strong pharmaceutical manufacturing industry based on 108 companies. In 2005 local companies accounted for 90% of sales of medicines in the country.

SUB-SAHARAN AFRICA (SSA)

The region of SSA accounts for 24% of global burden of disease and represents less than 1% of global health expenditures. Nearly 50% of SSA's total health expenditures are being financed by the patients. According to World Health Survey 2003, the average share of medicines in out-of-pocket health payments in SSA (14 countries) is 37%, while at country level, this share varies from 11% in Chad to 62.2 % in Burkina Faso. In 2006, pharmaceutical market in SSA was valued at US\$ 3.8 billion with a share of 0.6 % of US\$ 649 billion global market. In SSA, 37 out of 44 countries have some pharmaceutical production and local manufacturer account for 25-30% of SSA local demand. However, pharmaceutical production is highly concentrated among a few countries. In 2006 SSA produced US\$ 1.07 billion worth of pharmaceuticals out of which more than 70% (i.e. US\$ 735 million) was contributed in South Africa alone. Nigeria was the second leading producer with a share of 10% (i.e. US\$ 107 million). Among others OIC member countries, Senegal produced US\$ 22 million, Côte d'Ivoire produced US\$ 14 million and Uganda produced US\$ 9 million worth of medicines in 2006 (World Bank Group, IFC).

PHARMACEUTICAL TRADE

Global pharmaceutical trade has shown an upward trend during the period 2000-2007. At current prices, world trade volume increased from US\$ 218 in 2000 to US\$ 738 billion in 2007. Global pharmaceutical exports and imports were valued at US\$ 367 billion and US\$ 371 billion in 2007, respectively. However, like the production, pharmaceutical trade also remained concentrated in developed world and as of 2007 developed countries accounted for about 93 % of world exports and absorbed nearly 84% of imports. The share of developing countries in global pharmaceutical exports and imports remained 7% and 16 %, respectively.

Over the period 2000-2007, the OIC countries, as a group, remained net importer of pharmaceuticals. As shown in the Figure 5, OIC imports increased more than double from US\$ 6.4 billion in 2000 to US\$ 14.8 billion in 2007. While exports of pharmaceuticals were also increased more than double in the same period, in absolute terms, they remained negligible at only US\$ 1.8 billion in 2007. On average, OIC originated exports accounted for only 1 % of the world total and 8% of developing countries' pharmaceutical exports during 2000-2007. During the same period, OIC pharmaceutical imports represented 4.6% of the world total and 29% of developing countries' imports. Due to huge difference of OIC pharmaceutical exports and imports volumes trade deficit of OIC member countries has been also more than doubled from US\$ 5.8 billion in 2000 to US\$ 12.9 billion in 2007.

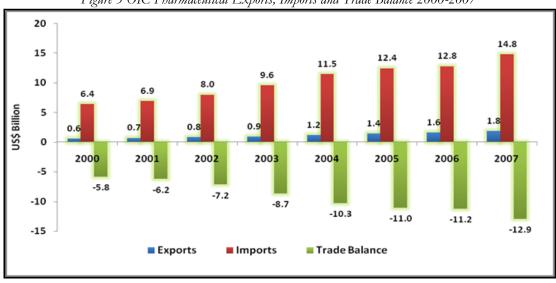


Figure 5 OIC Pharmaceutical Exports, Imports and Trade Balance 2000-2007

Source: Annex Tables 1 and 2.

At the individual OIC country level, pharmaceutical trade is still concentrated in only a few countries. In 2007, approximately 96% of the total OIC pharmaceutical exports were contributed by only ten member countries, with the top three exporters, namely Jordan, Turkey and Malaysia accounted for more than 56% of OIC total pharmaceutical exports (Table1). Similarly, more than 80% OIC pharmaceutical imports were concentrated in top ten exporters and top three importers namely Turkey, Saudi Arabia and Algeria accounted for more than half of OIC pharmaceutical imports in 2007 (table2).

Table 1: OIC Top-10 Pharma Exporters 2007

	1	1	
Rank	Country	Exports (mln US\$)	Share in OIC total Exports(%)
1	Jordan	448	24
2	Turkey	402	22
3	Malaysia	197	11
4	Indonesia	193	10
5	Saudi Arabia	155	8
6	Syria	113	6
7	Pakistan	110	6
8	Egypt	92	5
9	Morocco	51	3
10	Tunisia	21	1

Table 2: OIC Top-10 Pharma Importers 2007

	1	1			
	C		Share in OIC		
R	Country	Imports	total		
Rank	try	(mln US\$)	Imports(%)		
1	Turkey	3838	26		
2	Saudi Arabia	2230	15		
3	Algeria	1469	10		
4	Malaysia	863	6		
5	Sudan	815	6		
6	Kazakhstan	619	4		
7	Lebanon	610	4		
8	Pakistan	493	3		
9	Indonesia	483	3		
10	Egypt	436	3		

Source: Calculated from Annex Tables 1 and 2.

In 2007 only two member countries, namely Syria and Jordan were net exporters of pharmaceutical products with a trade surplus of US\$ 28 million and US\$ 99 million, respectively (Figure 6). While all other member countries were net importers of pharmaceuticals.

200 99 100 28 0 Syria Pakistan **Indone**sia Jordan Egypt -76 -300 -290 -344 -400 -383 -500

Figure 6: Pharmaceutical Trade Balance of Selected OIC MCs 2007

Source: Calculated from Annex Tables 1 and 2.

Among the OIC regional groups, Middle East and North Africa (MENA) remained the top exporting region with a convincing share of 49% of OIC total pharmaceutical exports in 2007. While among the other regions Europe and Central Asia accounted for 23%, East Asia and Pacific 21%, Asia 6% and Sub-Saharan Africa only 1%.

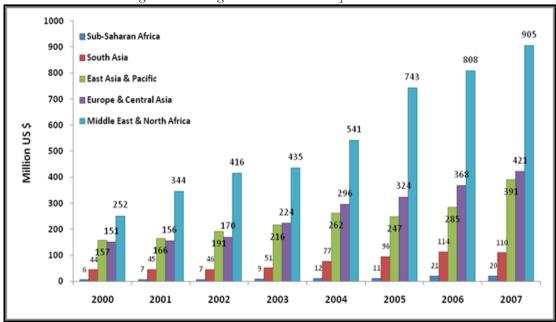


Figure 7: OIC Regions Pharmaceutical Exports 2000-2007

Source: Calculated from Annex Table 1 by using World Bank Regional Classification.

On imports side, Middle East and North Africa region accounted for the highest share i.e. 44% of total OIC pharmaceutical imports in 2007. Europe and Central Asia was the second top importing region (32%) followed by Sub-Saharan Africa (11%), East Asia and Pacific (9%) and South Asia (3%). As of 2007 all OIC regions were net importers of pharmaceuticals.

7 6,5 6,4 South Asia 5,8 5,9 ■ East Asia & Pacific 6 Sub-Saharan Africa 5.0 ■ Europe & Central Asia 5 Middle East & North Africa 4,2 3,8 3,8 Billion US\$ 4 3.3 3 2 0.8 1 2000 2001 2002 2003 2004 2005 2006 2007

Figure 8: OIC Regions Pharmaceutical Imports 2000-2007

Source: Calculated from Annex Table 2 by using World Bank Regional Classification.

At the intra-OIC level, the intra-OIC pharmaceutical trade volume increased from US\$ 531 million in 2000 to US\$ 2296 million in 2007. As shown in Figure 9, Intra-OIC pharmaceutical exports have shown an upward trend during the period 2000-2007 and on average intra-OIC exports account for a share of 50% in the OIC total pharmaceutical exports in this period. Yet, intra-OIC pharmaceutical exports are highly concentrated in few member countries. In 2007 more than 64% of intra-OIC pharmaceutical exports have been contributed by three member countries, namely Jordan (39.5%), Saudi Arabia (14.2%) and Syria (10.6%).

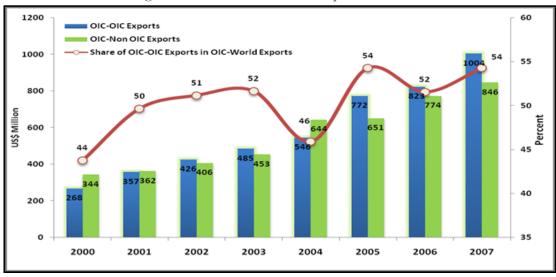


Figure 9: Intra-OIC Pharmaceutical Exports 2000-2007

Source: Calculated from Annex Tables1 and 3

During the period under consideration, intra-OIC pharmaceutical imports have also shown upward trend but intra-OIC imports have represented a tiny share of 5.6% of the OIC total pharmaceutical imports. This indicates that many OIC member countries rely heavily on non-OIC countries to fulfil their domestic pharmaceutical demand (Figure 10). More than 70% of pharmaceuticals produced in OIC member countries have been imported by Sudan (39.5%), Saudi Arabia (19.3%) and Algeria (12%) in 2007.

OIC-OIC Imports OIC-Non OIC Imports Share of OIC-OIC Imports in OIC-World Imports JS\$ Million Percent 5.5 5.3 5.2 4.9 4.9

Figure 10: Intra-OIC Pharmaceutical Imports 2000-2007

Source: Calculated from Annex Tables 2 and 4

CONCLUDING REMARKS

Despite showing rapid growth over the years, global pharmaceutical industry remained highly concentrated in the developed countries, which dominate the global pharmaceutical production, consumption and trade. Although some developing countries emerged as major contributor comparatively, the global pharmaceutical share of developing countries remained very low. OIC countries, as a group, remained net importer of pharmaceuticals and with few exceptions, the majority of them have very low pharmaceutical production base. Considering the relatively high cost of health care, due to unavailability of medicines, many OIC member countries have to make some serious efforts to boost the pharmaceutical industry in their economies. To this end, the following related concluding remarks can be made:

- Pharmaceutical production requires skilled human resources like scientists, pharmacists, biologists and lab technicians. Therefore, OIC member countries should encourage and empower their education system to impart quality knowledge in academic disciplines like Chemistry, Biology, Medicines and other natural sciences. On the other hand member countries should also give due attention to convert the brain drain of highly skilled people into brain gain by facilitating the national Diaspora to return their countries.
- Pharmaceutical industry relies heavily on research and development (R&D) activities.
 Hence proper R&D facilities should be built and researchers and technicians should be provided with necessary financial resources to develop an innovative pharmaceutical industry in the member economies.
- At the intra-OIC level, member countries should collaborate with each other by sharing expertise for the development of pharmaceutical industry. At the same time students mainly from least developed countries can be enrolled in pharmaceutical related academic disciplines in member countries with substantial pharmaceutical base like Turkey, Egypt, Jordan and Malaysia to equip them with necessary knowledge and expertise in this field.
- At the international level, OIC member countries should collaborate with the international agencies like WHO and World Bank to benefit from their expertise and financial contribution to build their domestic pharmaceutical industry.

REFERENCES

World Health Organization (WHO), "The World Medicine Situation" 2004.

IMS Health, Market Prognosis, March 2008.

European Federation of Pharmaceutical Industries and Associations (EFPIA), "The Pharmaceutical Industry in Figures 2008".

NCB in Focus Report: Saudi Health Care Services Sector Review, December 2007.

World Bank Group, IFC "The Business of Health in Africa" and EFPIA "Medicines in developing Countries".

World Health Organization (WHO), "The World Health Report 2008".

Bate Dr. Roger (2008) "Local Pharmaceutical Production in Developing Countries".

European Federation of Pharmaceutical Industries and Associations (EFPIA) "Medicines for Mankind - Medicines for Developing Countries" 2007.

Dara Carr (2004), "Improving the Health of the World's Poorest People" Health Bulletin 1, Population Reference Bureau Washington DC.

Kaplan Warren and Richard Laing (2005), HNP discussion paper "Local Production of Pharmaceuticals: Industrial Policy and Access to Medicines".

House of Commons Health Committee Report 2004-2005 Session, "The Influence of the Pharmaceutical Industry".

ANNEX

Table 1: OIC Pharmaceutical Exports (US\$ Million)

Country/Region	2000	2001	2002	2003	2004	2005	2006	2007
Afghanistan	2000					2003		
Albania	0.3	0.8	0.6	0.8	0.7	0.7	0.4	0.9
Algeria	0.3	0.5	0.6	1.2	1.3	1.3	5.2	2.9
Azerbaijan	0.3	0.4	3.6	1.3	2.2	0.6	0.6	0.5
Bahrain	0.3	0.4	0.2	0.3	0.3	0.3	0.0	0.6
Bangladesh	2.1	4.0	7.0	6.4	19.5	18.2	27.0	
Benin	0.2	0.3	0.2	0.2	0.3	0.3		**
Brunei		0.5	0.2	0.2			1.3	••
Burkina Faso	0.0		0.2	0.2	0.1			***
Cameroon		0.0						••
	0.1	0.1	0.2	0.1	0.1	0.2	0.2	
Chad						••		
Comoros	0.0							
Côte d'Ivoire	0.4	1.3	1.3	2.2	1.9	2.4	3.6	3.4
Djibouti								
Egypt	49.9	50.3	66.0	51.1	43.6	65.1	63.8	92.4
Gabon	0.0	0.0	0.0	0.0	0.0	0.1	0.0	
Gambia	0.0	0.0	0.0	••	0.0	0.0	••	0.0
Guinea	0.0	0.1	0.0			••		••
Guinea Bissau								
Guyana	1.8	2.0	2.1	2.0	1.7	2.1	2.4	2.4
Indonesia	77.9	86.6	99.9	114.8	130.4	112.4	148.2	193.3
Iran	8.7	13.0	23.5	31.6	38.2	66.4	65.8	
Iraq					••			
Jordan	111.6	193.4	217.7	211.4	245.3	295.7	315.9	448.1
Kazakhstan	1.9	1.7	1.1	2.4	3.8	5.4	12.1	16.5
Kuwait	0.7	1.0	0.7	0.2	2.3			**
Kyrgyzstan	0.4	0.1	0.2	0.0	0.5	0.5	0.5	1.4
Lebanon	6.4	5.3	4.4	4.0	6.5	8.6		10.9
Libya								
Malaysia	79.5	78.5	91.3	101.2	131.6	134.8	135.2	197.4
Maldives					0.0	0.0		
Mali	0.6	0.2	0.5	0.3	0.5	0.2	0.3	0.4
Mauritania								
Morocco	14.0	16.9	19.5	20.1	28.6	33.4	39.0	50.9
Mozambique	0.0	0.4	0.0	0.1	0.2	0.0	0.0	0.6
Niger	0.5	0.1	0.0	0.1	0.0	0.1	0.5	0.1
Nigeria		0.0		0.0			0.1	
Oman	1.3	1.1	1.3	0.7	1.7	2.2	3.0	6.6
Pakistan	42.0	41.2	38.6	44.7	57.8	77.7	86.6	110.2
Palestine								
Qatar	0.1		0.4	0.7	0.8	1.8	0.3	0.8
Saudi Arabia	22.3	27.4	31.4	40.3	57.2	118.9	112.4	155.4
Senegal	1.8	2.6	3.1	3.1	6.4	6.5	14.5	12.8
Sierra Leone			0.0					
Somalia								
Sudan	1.2	0.6	0.5	0.0	0.0	0.0	0.2	
Suriname	0.0							
Syria	3.4	0.7	4.5	7.0	12.8	29.6	62.1	113.4
Tajikistan	0.0							
Togo	0.1	0.0	0.1	0.4	0.2	0.1		0.0
Tunisia	4.7	7.1	6.9	8.2	16.1	13.9	14.0	20.6
Turkey	147.7	152.8	164.6	219.6	289.2	316.7	354.5	401.9
Turkmenistan								
Uganda	0.9	1.3	1.2	2.8	2.1	1.4	1.4	2.8
UAE	27.9	27.0	37.9	57.4	85.3	104.8	123.6	
Uzbekistan								
Yemen		0.2	0.5	1.1	1.0	1.2	2.1	2.5
OIC Total	611.5	719.7	832.1	937.9	1190.1	1423.5	1597.2	1849.9
Developing countries	8721.0	9531.2	10240.5	11528.3	13393.2	17030.2	21493.8	26269.5
World	107286.3	132678.7	166367.2	201203.9	246512.9	272948.0	310873.2	366866.6

Source: UN Commodity Trade Statistics Online Database

Table 2: OIC Pharmaceutical Imports (US\$ Million)

Country/Region	2000	2001	2002	2003	2004	2005	2006	2007
Afghanistan								
Albania	17	24	29	44	60	77	94	125
Algeria	466	503	638	766	1005	1105	1210	1469
Azerbaijan	40	24	23	32	28	33	49	93
Bahrain	42	39	50	56	56	76	42	77
Bangladesh	140	125	134	145	150	147	172	
Benin	20	31	39	37	39	35		
Brunei		23	25	30			49	
Burkina Faso	26	23	31	35	41			
Cameroon	45	51	67	76	85	79	89	
Chad								
Comoros	1	1	1	1	2	2	2	1
Côte d'Ivoire	95	106	101	123	155	147	153	179
Djibouti								
Egypt	338	 427	 501	 362	362	 401	 316	436
Gabon	31	31	32	31	40	50	53	
		2	5	5		5		
Gambia	3				5		6	9
Guinea Pissau	23	16	34					
Guinea Bissau		7						
Guyana	12	7	9	10	10	21	20	17
Indonesia	215	184	191	226	285	298	389	483
Iran	387	485	447	642	716	756	294	
Iraq								
Jordan	136	158	176	209	235	263	292	349
Kazakhstan	90	122	162	219	314	421	501	619
Kuwait	12	12	9	10	16			
Kyrgyzstan	22	23	28	38	38	56	50	82
Lebanon	255	293	335	393	435	430		610
Libya				70	67			
Malaysia	341	403	444	475	603	631	740	863
Maldives	4	4	4	4	5	6	7	7
Mali	24	36	42	54	84	56	67	140
Mauritania	1	1	2	1	2	3	8	
Morocco	133	157	181	239	267	294	308	392
Mozambique	15	20	35	26	41	37	48	54
Niger	11	9	12	17	36	20	36	75
Nigeria	136	111	198	141			274	
Oman	66	81	86	1	113	169	112	142
Pakistan	245	231	224	251	272	335	351	493
Palestine								
Qatar	42	54	58	65	77	114	141	154
Saudi Arabia	883	967	1002	1387	1514	1729	1941	2230
Senegal	44	57	65	80	100	103	114	131
Sierra Leone			4					
Somalia								,,
Sudan	56	58	73	85	122	187	184	815
Suriname	7	7	5	9	9	10	10	11
Syria	55	28	71	36	57	73	63	85
Tajikistan	1							
Togo	10	12	15	21	24	30		49
Tunisia	165	195	214	234	281	290	290	359
Turkey	1344	1345	1718	2302	3035	3184	3343	3838
Turkmenistan	30							
Uganda	34	 49	48	 75	 80	 86	 123	 176
			314					
UAE	343	281		413	480	551	683	
Uzbekistan								
Yemen		89	104	120	106	132	160	228
OIC Total	6409	6905	7985	9601	11451	12444	12785	14793
Developing Countries	21897	24625	26045	30404	35784	42538	49318	58091
World Source: UN Comn	110930	132774	173923	211255	253135	283264	316224	371473

Source: UN Commodity Trade Statistics Online Database

Table 3: Intra-OIC Pharmaceutical Exports (US\$ Million)

Country	2000	2001	2002	2003	2004	2005	2006	2007
Afghanistan								
Albania		0.02						
Algeria	0.26	0.09	0.17	0.35	0.50	0.72	0.77	1.84
Azerbaijan	0.08	0.18	0.12	0.16	0.21	0.12	0.08	0.08
Bahrain	0.26	0.48	0.20	0.29	0.33	0.26	0.16	0.45
Bangladesh	0.66	0.64	0.61	0.70	2.85	1.61	1.50	
Benin	0.16	0.25	0.23	0.22	0.27	0.30		
Brunei		0.15	0.16	0.12			0.47	
Burkina Faso	0.02	0.01	0.01	0.02	0.05			
Cameroon	0.02		0.04	0.01	0.00	0.03	0.03	
Chad								
Comoros								
Côte d'Ivoire	0.18	0.24	0.88	0.27	0.19	0.13	0.34	0.29
Djibouti								
Egypt	40.25	38.55	54.29	39.92	34.18	53.15	47.07	72.87
Gabon		0.01		0.00	0.01	0.04	0.01	
Gambia			0.00		0.00			
Guinea	0.00							
Guinea Bissau	••							
Guyana	0.00	0.03	0.03	0.02	0.01	0.04	0.07	0.14
Indonesia	25.14	19.96	29.08	28.37	34.94	22.74	25.17	31.07
Iran	7.34	10.58	21.21	29.00	33.34	47.15	53.24	
Iraq								
Jordan	106.04	169.81	196.49	188.79	220.59	260.19	275.52	396.32
Kazakhstan	0.33	0.55	0.64	1.45	3.20	3.58	7.80	13.94
Kuwait	0.65	0.98	0.70	0.22	2.20			
Kyrgyzstan	0.30	0.05	0.11	0.03	0.31	0.42	0.32	1.17
Lebanon	4.37	4.98	3.37	2.84	4.73	6.74		9.02
Libya								
Malaysia	12.83	14.30	19.34	23.85	24.69	37.84	30.10	48.99
Maldives					0.01			
Mali	0.26	0.17	0.32	0.19	0.23	0.06	0.21	0.35
Mauritania								
Morocco	8.46	10.15	13.60	9.88	13.53	12.74	15.27	17.56
Mozambique		•		0.01			***	
Niger	0.41	0.07	0.00	0.09	0.00	0.02	0.19	0.02
Nigeria				0.01				
Oman	1.24	0.94	0.70	0.43	1.47	1.91	2.86	5.70
Pakistan	19.48	18.36	22.05	22.91	30.60	37.88	38.50	53.66
Palestine								
Qatar	0.11	0.00	0.26	0.22	0.32	1.11	0.25	0.66
Saudi Arabia		25.19		35.58		115.76	101.73	142.76
Senegal	0.73	1.17	1.06	1.29	4.96	4.20	7.73	9.40
Sierra Leone								
Somalia								
Sudan		0.01	0.07			0.01		
Suriname	2.0							100.00
Syria	3.39	0.71	4.48	6.68	12.38	28.82	58.18	106.60
Tajikistan Togo	0.07	0.03	0.04	0.36	0.21	0.06		0.01
Tunisia	2.58	3.41	3.46	4.97			 10.73	
Turkey	13.50	15.39	22.72	4.97	11.58 45.55	9.44 53.27	59.63	16.61 72.29
Turkey								
Uganda	0.03	0.02	0.09	 0.21	0.05	0.03	0.31	0.29
UAE	18.45	19.97	28.58	39.56	62.46	71.52	84.50	
Uzbekistan								
Yemen			0.55	0.53	0.38	0.82	0.73	1.99
Intra-OIC Total	267.60	357.42	425.65	484.59	546.33	772.71	823.47	1004.09
Source: UN Comm				404.33	340.33	//2./1	043.47	1004.03

Source: UN Commodity Trade Statistics Online Database

Table 4: Intra-OIC Pharmaceutical Imports (US\$ Million)

Country 2000 Afghanistan Albania 0.26 Algeria 29.26 Azerbaijan 5.57 Bangladesh 3.56 Benin 0.30 Brunei 0.00 Burkina Faso 0.35 Cameroon 1.24 Chad Comoros Côte d'Ivoire 4.31 Djibouti Egypt 5.50 Gabon 0.45 Gambia 0.04 Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	 0.23 34.65 1.44	0.32 55.83 1.65	 0.64 66.49	 0.41 86.37	0.79 97.11	2006 0.96 115.59	2007 2.77 155.17
Albania 0.26 Algeria 29.26 Azerbaijan 2.28 Bahrain 5.57 Bangladesh 3.56 Benin 0.30 Brunei 0.00 Burkina Faso 0.35 Cameroon 1.24 Chad Comoros Côte d'Ivoire 4.31 Djibouti Egypt 5.50 Gabon 0.45 Gambia 0.04 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	0.23 34.65 1.44	0.32 55.83	0.64 66.49	0.41	0.79	0.96	2.77
Algeria 29.26 Azerbaijan 2.28 Bahrain 5.57 Bangladesh 3.56 Benin 0.30 Brunei 0.00 Burkina Faso 0.35 Cameroon 1.24 Chad Comoros Côte d'Ivoire 4.31 Djibouti Egypt 5.50 Gabon 0.45 Gambia 0.04 Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	34.65 1.44	55.83	66.49				
Azerbaijan 2.28 Bahrain 5.57 Bangladesh 3.56 Benin 0.30 Brunei 0.00 Burkina Faso 0.35 Cameroon 1.24 Chad Comoros Côte d'Ivoire 4.31 Djibouti Egypt 5.50 Gabon 0.45 Gambia 0.04 Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	1.44						
Bahrain 5.57 Bangladesh 3.56 Benin 0.30 Brunei 0.00 Burkina Faso 0.35 Cameroon 1.24 Chad Comoros Côte d'Ivoire 4.31 Djibouti Egypt 5.50 Gabon 0.45 Gambia 0.04 Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18			3.01	2.82	3.35	4.49	7.59
Bangladesh 3.56 Benin 0.30 Brunei 0.00 Burkina Faso 0.35 Cameroon 1.24 Chad Comoros Côte d'Ivoire 4.31 Djibouti Egypt 5.50 Gabon 0.45 Gambia 0.04 Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	5.30	6.56	5.35	7.45	10.15	9.06	13.05
Benin 0.30 Brunei 0.00 Burkina Faso 0.35 Cameroon 1.24 Chad Comoros Côte d'Ivoire 4.31 Djibouti Egypt 5.50 Gabon 0.45 Gambia 0.04 Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	2.25	2.01	1.91	4.11	1.31	4.34	
Brunei 0.00 Burkina Faso 0.35 Cameroon 1.24 Chad Comoros Côte d'Ivoire 4.31 Djibouti Egypt 5.50 Gabon 0.45 Gambia 0.04 Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	0.36	0.73	2.04	1.51	1.51		
Burkina Faso 0.35 Cameroon 1.24 Chad Comoros Côte d'Ivoire 4.31 Djibouti Egypt 5.50 Gabon 0.45 Gambia 0.04 Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	10.39	11.73	15.10			23.45	
Cameroon 1.24 Chad Comoros Côte d'Ivoire 4.31 Djibouti Egypt 5.50 Gabon 0.45 Gambia 0.04 Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	0.70	0.94	1.38	0.21		6.14	
Chad Comoros Côte d'Ivoire 4.31 Djibouti Egypt 5.50 Gabon 0.45 Gambia 0.04 Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	1.68	2.49	3.29	5.21	5.79	0.02	
Comoros Côte d'Ivoire 4.31 Djibouti Egypt 5.50 Gabon 0.45 Gambia 0.04 Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18							
Côte d'Ivoire 4.31 Djibouti Egypt 5.50 Gabon 0.45 Gambia 0.04 Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	0.00	0.01	0.01	0.07	0.04	7.26	0.01
Djibouti Egypt 5.50 Gabon 0.45 Gambia 0.04 Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	3.43	3.54	3.47	7.16	7.00	9.26	8.48
Egypt 5.50 Gabon 0.45 Gambia 0.04 Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18							
Gabon 0.45 Gambia 0.04 Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	3.91	10.15	4.52	3.15	9.50	1.50	6.29
Gambia 0.04 Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	1.08	0.00	0.83	1.16	1.90	0.08	
Guinea 0.09 Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	0.04	0.03	0.02	0.25	0.18	0.05	0.87
Guinea Bissau Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	0.23	0.29					
Guyana 0.02 Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18							
Indonesia 1.23 Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	0.03	0.00	0.05	0.10	0.01	16.30	0.16
Iran 5.09 Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	0.96	1.93	2.31	5.00	6.68	0.61	11.42
Iraq Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	8.84	7.83	14.45	18.04	26.40	23.29	
Jordan 6.46 Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18							
Kazakhstan 3.51 Kuwait 1.08 Kyrgyzstan 0.18	12.16	8.06	11.00	11.57	12.39	20.07	26.52
Kuwait 1.08 Kyrgyzstan 0.18	4.22	7.04	10.62	14.22	17.06	3.27	21.30
Kyrgyzstan 0.18	0.70	0.84	0.75	0.92			
, 0,	0.37	0.45	0.81	1.36	1.58	10.78	5.48
Lebanon 5.70	11.09	13.16	16.67	21.35	23.61		43.24
Libya			8.31	12.66			
Malaysia 4.36	4.36	4.73	7.47	11.29	8.23	0.88	9.10
Maldives 0.55	0.51	0.67	0.70	0.83	0.86	3.55	0.89
Mali 1.68	0.98	2.67	2.47	2.81	2.72	0.45	5.91
Mauritania 0.03	0.03	0.10	0.14	0.32	0.60	4.73	
Morocco 1.10	1.47	2.07	5.61	5.97	4.61	0.37	8.40
Mozambique 0.14	0.13	0.27	0.71	0.25	0.20	1.53	0.40
Niger 0.54	0.61	0.52	0.82	1.00	2.19	19.81	1.74
Nigeria 2.03	1.10	2.10	2.90			29.42	
Oman 10.92	15.22	13.73	1.36	17.12	18.58	12.65	40.51
Pakistan 4.76	6.85	5.99	8.66	8.48	11.34	15.11	13.57
Palestine			••				
Qatar 6.41	8.08	8.16	7.20	8.63	12.58	270.80	16.70
Saudi Arabia 94.92	103.26	130.50	151.34	164.11	234.94	3.33	250.55
Senegal 0.88	1.64	2.03	2.10	2.92	2.41	82.35	3.90
Sierra Leone 15.31		0.37					
Somalia							
Sudan	17.40	24.16	34.42	43.64	56.95	0.17	510.70
Suriname 0.00	0.00	0.01	0.50	0.05	0.03	7.09	0.21
Syria 3.80	3.35	2.38	6.06	2.35	4.72	6.33	8.83
Tajikistan							
Togo 0.20	0.26	0.61	0.47	0.91	0.77		2.58
Tunisia 4.52	5.83	6.63	5.06	6.83	6.43	1.81	9.78
Turkey 2.68	1.35	1.49	0.87	1.43	1.32	2.20	2.97
Turkmenistan 1.96							
Uganda 1.58	2.38	2.28	2.72	2.04	2.02	37.22	2.51
UAE 29.22	2.30	2.20					
Uzbekistan	19.57	21.57	24.53	28.54	31.30	64.74	
Yemen		21.57	24.53 			64.74 	
Intra-OIC Total 264.06 Source: UN Commodity T	19.57	21.57	24.53	28.54			

Source: UN Commodity Trade Statistics Online Database

Note: (..) shows unavailability of data while (0.0) shows very small value.