

# The State of Information and Communication Technology in Iran

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**Abstract**—The development of information and communication technologies depend on several factors like government policy that encourage investors to spend their money in building IT infrastructure and force business or particular institution to adopt the new technologies to bring the price down and many others. This paper investigates the state of Information and Communication Technology in Iran.

**Keywords**-ICT;Mobile;Iran;

## I. INTRODUCTION

Iran's population is about 70 million according to preliminary data from the decennial census conducted in late 2006; of that number, approximately one-third is rural and two-thirds urban. According to a 2008 estimate, 22.3 percent of Iran's population is 14 years of age or younger, and only 5.4 percent is 65 and older. The median age is 26.4 years. There are 1.03 males for every female. Estimated life expectancy is 70.86 years overall (69.39 years for men, 72.4 years for women). Iran's economy is dominated by the oil industry, which is part of the state sector. In the early 2000s, more than 80 percent of export earnings came from oil and gas. The state also owns and administers several large industries. The private sector includes automobile, textile, metal manufacturing, and food-processing factories as well as thousands of small-scale enterprises such as workshops and farms [1].

Policy initiatives vary from country to country. Some countries have focused on manufacturing of ICT equipment, while others have put more emphasis on the application of ICT technologies. They also differ in their prioritisation and intensity of governmental support. Some countries are providing financial support for project stimulating use or production of ICT, while others focus on creation of a competitive environment e.g. through liberalization of the telecom sector, and the remedies are therefore ranging from direct subsidies, access (price) regulation and tax incentives to other less far reaching facilitation measures such as increasing transparency in the market place. While it is – at present – generally accepted that market forces alone are not providing optimal results in the communications sector, too much governmental intervention is also counterproductive [2]. This paper shows Iran's efforts for improve ICT on the whole country.

## II. IRAN ICT RANK IMPROVES

The ICT Development Index captures the level of advancement of information and communication technologies (ICTs) in more than 150 countries worldwide and compares progress made between 2002 and 2007. Its main objective is to provide policy makers with a useful tool to benchmark and assess their information society developments and to monitor progress that has been made globally to close the digital divide.

Table 1 shows the results of the ICT Development Index (IDI) for two years, 2002 and 2007, ranked by 2007 index values. Data refer to fiscal year-end values.

Overall, all countries (except for one) improved their scores over the five-year period. This is to be expected, as growth in ICT access and usage is globally increasing. Countries with relatively high IDI values in 2002 already had relatively high ICT access values. By 2007, many of these countries had increased their ICT use values. On the other hand, those countries with low IDI values in 2002 mainly increased their ICT access values by 2007 (and not as much the use values). This finding corresponds to the conceptual framework presented in the previous chapter and its sequential nature where ICT access is followed by ICT use.

With the exception of the Republic of Korea, all top ten countries are from Europe. These countries have primarily gained on the sub-index ICT use, having already fairly good ICT access, and top ICT skills, in 2002. In particular, broadband use has increased significantly among the top ten countries. As Chapter 2 of the Report has shown, fixed broadband penetration in Europe has grown steeply during the past few years. Mobile broadband, which practically didn't exist in 2002, has been introduced in most of these countries, rising their ICT use levels significantly.

Countries with low ICT levels (and hence low ranks) are primarily from the developing world. Given the close relationship between ICT level and GDP, many of the poorer countries, in particular the Least Developed Countries, rank further down in the IDI, with little change in ranking since 2002.

TABLE I. ICT DEVELOPMENT INDEX (IDI) (2002 AND 2007)

Economy	Rank 2007	IDI 2007	Rank 2002	IDI 2002	Economy	Rank 2007	IDI 2007	Rank 2002	IDI 2002
Sweden	1	7.50	1	6.05	Iran (I.R.)	78	2.94	92	1.93
Korea (Rep.)	2	7.26	3	5.83	Palestine	79	2.92	67	2.20
Denmark	3	7.22	4	5.78	Georgia	80	2.91	75	2.13
Netherlands	4	7.14	6	5.43	Libya	81	2.84	78	2.08
Iceland	5	7.14	2	5.88	Ecuador	82	2.75	85	1.97
Norway	6	7.09	5	5.64	Tunisia	83	2.73	94	1.86
Luxembourg	7	7.03	21	4.62	Fiji	84	2.73	83	2.00
Switzerland	8	6.94	7	5.42	Albania	85	2.73	93	1.92
Finland	9	6.79	8	5.38	Azerbaijan	86	2.71	100	1.71
United Kingdom	10	6.78	10	5.27	South Africa	87	2.70	77	2.11
Hong Kong, China	11	6.70	12	5.10	Mongolia	88	2.67	84	1.97
Japan	12	6.64	18	4.82	Syria	89	2.66	102	1.69
Germany	13	6.61	14	5.02	Dominican Rep.	90	2.65	87	1.97
Australia	14	6.58	13	5.02	Philippines	91	2.63	79	2.07
Singapore	15	6.57	16	4.83	Viet Nam	92	2.61	107	1.59
New Zealand	16	6.44	19	4.79	Kyrgyzstan	93	2.61	86	1.97
United States	17	6.44	11	5.25	Egypt	94	2.54	95	1.81
Ireland	18	6.37	26	4.36	Cuba	95	2.53	91	1.94
Canada	19	6.34	9	5.33	Paraguay	96	2.52	82	2.02
Austria	20	6.32	20	4.64	Algeria	97	2.51	105	1.61
Macao, China	21	6.25	23	4.41	Bolivia	98	2.45	80	2.03
Italy	22	6.18	24	4.38	El Salvador	99	2.43	99	1.74
France	23	6.16	25	4.37	Sri Lanka	100	2.38	97	1.75
Belgium	24	6.14	15	4.91	Morocco	101	2.34	111	1.37
Taiwan, China	25	6.04	17	4.82	Honduras	102	2.28	114	1.31
Estonia	26	5.97	31	3.93	Guatemala	103	2.28	106	1.60
Spain	27	5.91	28	4.10	Turkmenistan	104	2.23	89	1.96
Slovenia	28	5.88	22	4.47	Cape Verde	105	2.18	103	1.67
Israel	29	5.60	27	4.24	Tajikistan	106	2.14	96	1.76
Malta	30	5.54	29	4.04	Gabon	107	2.14	110	1.48
Portugal	31	5.47	32	3.87	Indonesia	108	2.13	109	1.54
United Arab Emirates	32	5.29	40	3.27	Botswana	109	2.10	101	1.70
Lithuania	33	5.29	43	3.17	Uzbekistan	110	2.05	98	1.75
Greece	34	5.25	30	3.94	Nicaragua	111	2.03	112	1.37
Hungary	35	5.19	36	3.49	Namibia	112	1.92	108	1.58
Latvia	36	5.01	39	3.30	Swaziland	113	1.73	113	1.32
Cyprus	37	4.97	33	3.78	Ghana	114	1.63	122	1.10
Slovak Republic	38	4.95	35	3.51	Bhutan	115	1.63	118	1.17
Poland	39	4.95	37	3.34	Kenya	116	1.62	116	1.21
Czech Republic	40	4.88	34	3.74	Lao P.D.R.	117	1.60	125	1.08
Brunei Darussalam	41	4.80	41	3.27	India	118	1.59	117	1.19
Bahrain	42	4.69	38	3.30	Myanmar	119	1.57	104	1.64
Croatia	43	4.68	42	3.19	Sudan	120	1.56	131	1.03
Qatar	44	4.44	47	2.84	Cambodia	121	1.53	126	1.07
Bulgaria	45	4.37	51	2.74	Gambia	122	1.49	139	0.96
Romania	46	4.16	60	2.48	Lesotho	123	1.48	119	1.15
Argentina	47	4.12	44	3.06	Yemen	124	1.47	129	1.04
Chile	48	4.00	45	2.97	Cameroon	125	1.46	120	1.12
Uruguay	49	3.88	46	2.90	Zimbabwe	126	1.46	115	1.29
Russia	50	3.83	52	2.71	Pakistan	127	1.46	146	0.89
Ukraine	51	3.80	59	2.50	Côte d'Ivoire	128	1.41	134	1.01
Malaysia	52	3.79	50	2.74	Zambia	129	1.39	124	1.08
Jamaica	53	3.78	48	2.79	Nigeria	130	1.39	123	1.09
Belarus	54	3.76	57	2.53	Senegal	131	1.38	142	0.95
Saudi Arabia	55	3.62	73	2.13	Congo	132	1.37	121	1.10
Trinidad & Tobago	56	3.61	58	2.50	Madagascar	133	1.36	140	0.96
Kuwait	57	3.57	49	2.77	Mauritania	134	1.36	135	1.00
Bosnia	58	3.54	66	2.33	Benin	135	1.28	149	0.76
Turkey	59	3.49	63	2.41	Haiti	136	1.27	127	1.05
Brazil	60	3.48	54	2.55	Togo	137	1.26	130	1.03
Panama	61	3.46	62	2.42	Bangladesh	138	1.26	132	1.02
Mauritius	62	3.45	61	2.45	Nepal	139	1.23	133	1.01
Thailand	63	3.44	70	2.17	Uganda	140	1.21	143	0.92
Lebanon	64	3.43	56	2.53	Malawi	141	1.17	141	0.95
TFYR Macedonia	65	3.42	53	2.65	Comoros	142	1.17	145	0.91
Costa Rica	66	3.41	55	2.54	Rwanda	143	1.17	136	0.99
Venezuela	67	3.34	69	2.18	Papua New Guinea	144	1.14	128	1.05
Moldova	68	3.31	74	2.13	Tanzania	145	1.13	138	0.96
Kazakhstan	69	3.25	68	2.18	Mali	146	1.12	150	0.75
Colombia	70	3.25	72	2.13	Ethiopia	147	1.03	147	0.78
Maldives	71	3.16	88	1.96	Mozambique	148	1.02	148	0.77
Armenia	72	3.12	81	2.03	Eritrea	149	1.00	137	0.96
China	73	3.11	90	1.95	Burkina Faso	150	0.97	151	0.68
Peru	74	3.11	71	2.15	D.R. Congo	151	0.95	144	0.92
Mexico	75	3.09	64	2.38	Guinea-Bissau	152	0.90	153	0.56
Jordan	76	3.06	65	2.36	Chad	153	0.83	152	0.65
Oman	77	3.00	76	2.12	Niger	154	0.82	154	0.51

Source: ITU.

Iran also moved up considerably, 14 places, to rank 78 in the IDI 2007. Starting from very low levels in 2002, mobile penetration reached 42 per 100 inhabitants in 2007, and Internet user penetration 32 per cent. Fixed line penetration increased from 19 to 33 per cent during the five-year period.

#### A. Prices as a percentage of GNI per capita

As highlighted in Table 2, the top ten group of economies with the lowest relative fixed telephone prices is diverse in terms of income levels, development status, and region. The list includes Iran, Taiwan (China), United Arab Emirates, Singapore, Kuwait, the Republic of Korea, Ecuador, and the United States. In most of the European and many high-income economies, fixed telephone services, as measured by the sub-basket, cost one per cent or less of monthly average GNI per capita.

A comparison between the sub-basket for fixed prices on the one hand, and the overall ICT Price Basket on the other hand, highlights that a number of developing countries have relatively low fixed telephone prices as a percentage of GNI per capita. A total of 15 developing countries have a rank difference of 20 or more positions, with relatively lower fixed telephone prices. This includes Iran, which has the relatively cheapest fixed telephony prices and ranks at the top of the list. The list also includes four South American countries (Argentina, Guyana, Ecuador, and Suriname), and four countries from Western Asia (Syria, Yemen, Azerbaijan and Armenia). The countries with the greatest difference between their ICT Price Basket and fixed sub-basket rank are Syria, Yemen, Iran, Suriname, Ecuador and Swaziland.

TABLE II. FIXED TELEPHONE SUB-BASKET 2008 (RANKED BY PERCENTAGE OF MONTHLY GNI PER CAPITA)

Rank	Economy	Fixed sub-basket (US\$)	Fixed sub-basket (PPP)	Fixed sub-basket (% of GNI per capita*)	Rank	Country	Fixed sub-basket (US\$)	Fixed sub-basket (PPP)	Fixed sub-basket (% of GNI per capita*)
1	Iran (I.R.)	0.2	0.6	0.1	76	Barbados	18.4	29.8	2.7
2	Taiwan, China	3.2	5.4	0.2	77	Colombia	7.6	12.6	2.8
3	United Arab Emirates	5.0	7.5	0.3	78	Moldova	3.1	5.8	3.0
4	Singapore	7.1	9.4	0.3	79	Grenada	11.6	17.3	3.0
5	Bahrain	4.7	7.1	0.3	80	Bosnia	9.5	15.8	3.0
6	Kuwait	9.3	11.7	0.4	81	TFYR Macedonia	8.7	17.9	3.0
7	Korea (Rep.)	6.4	8.3	0.4	82	Dominica	10.9	19.2	3.1
8	Hong Kong, China	11.3	16.0	0.4	83	St. Vincent and the Gren.	10.9	18.2	3.1
9	Ecuador	1.1	2.5	0.4	84	Fiji	9.9	10.0	3.1
10	United States	17.2	17.2	0.4	85	Hungary	30.2	35.9	3.1
11	Luxembourg	31.3	22.2	0.5	86	Mexico	22.3	32.4	3.2
12	Finland	19.3	12.8	0.5	87	Indonesia	4.5	8.9	3.3
13	Iceland	24.1	16.4	0.5	88	Tonga	6.4	9.2	3.3
14	Switzerland	29.0	18.5	0.6	89	Bangladesh	1.3	3.8	3.4
15	Japan	18.3	16.2	0.6	90	Poland	28.0	32.2	3.4
16	Norway	37.6	22.1	0.6	91	Botswana	16.9	37.2	3.5
17	Sweden	22.8	15.6	0.6	92	Jordan	8.3	14.6	3.5
18	Denmark	28.5	16.3	0.6	93	Jamaica	10.8	19.0	3.5
19	Saudi Arabia	9.2	13.4	0.7	94	Oman	32.6	53.8	3.5
20	Suriname	2.8	4.6	0.7	95	Viet Nam	2.3	7.3	3.5
21	United Kingdom	27.3	20.9	0.8	96	Sri Lanka	4.8	12.2	3.7
22	Macao, China	9.1	13.5	0.8	97	Chile	27.0	34.2	3.9
23	Austria	28.7	21.6	0.8	98	Micronesia	8.0	10.6	3.9
24	Netherlands	31.2	23.0	0.8	99	Georgia	7.3	13.0	4.1
25	Syria	1.2	2.8	0.8	100	Cape Verde	8.5	8.6	4.2
26	Malta	10.9	12.4	0.9	101	Guatemala	8.7	15.6	4.3
27	Germany	28.8	21.4	0.9	102	El Salvador	10.4	19.9	4.4
28	Australia	27.5	21.0	0.9	103	India	3.5	9.4	4.4
29	Malaysia	5.1	9.5	0.9	104	South Africa	22.4	40.2	4.7
30	Argentina	4.8	9.5	0.9	105	Dominican Rep.	14.4	26.1	4.9
31	Montenegro	4.1	5.9	1.0	106	Pakistan	3.6	11.0	5.0
32	France	30.9	22.3	1.0	107	Samoa	10.3	15.2	5.1
33	Italy	27.4	20.7	1.0	108	Namibia	14.5	24.8	5.2
34	Canada	32.8	27.2	1.0	109	Paraguay	7.2	13.6	5.2
35	Costa Rica	4.6	8.6	1.0	110	Peru	15.4	28.4	5.4
36	Ireland	42.2	27.9	1.1	111	Sudan	4.4	7.9	5.5
37	Belgium	36.4	26.7	1.1	112	Papua New Guinea	4.0	7.4	5.7
38	Greece	26.7	24.6	1.1	113	Brazil	29.1	34.8	5.9
39	Tunisia	3.0	6.1	1.1	114	Nicaragua	5.1	13.5	6.2
40	Azerbaijan	2.4	4.8	1.1	115	Belize	20.9	34.2	6.6
41	Venezuela	7.0	10.3	1.2	116	Ethiopia	1.5	5.0	8.1
42	Yemen	0.8	2.0	1.2	117	Lao P.D.R.	3.9	11.3	8.2
43	Slovenia	20.5	20.8	1.2	118	Angola	20.2	31.3	9.5
44	Mauritius	5.5	9.6	1.2	119	Ghana	4.7	8.3	9.5
45	Serbia	4.9	8.0	1.2	120	Guinea	3.4	8.0	10.2
46	Estonia	13.7	16.4	1.2	121	Philippines	14.2	27.3	10.5
47	Spain	30.8	27.1	1.3	122	Nepal	3.4	9.1	12.1
48	Cyprus	26.5	41.0	1.3	123	Nigeria	10.3	16.8	13.3
49	New Zealand	34.4	29.0	1.4	124	Cuba	13.2	NA	13.5
50	Latvia	11.9	15.6	1.4	125	S. Tomé & Príncipe	10.6	20.1	14.6
51	Algeria	4.6	8.1	1.5	126	Morocco	27.4	42.6	14.6
52	Maldives	4.1	6.4	1.5	127	Lesotho	12.5	25.9	15.0
53	Albania	4.3	7.3	1.6	128	Gambia	4.0	11.0	15.1
54	Seychelles	12.1	27.2	1.6	129	Benin	7.5	14.7	15.8
55	Portugal	25.7	24.1	1.6	130	Malawi	3.3	10.0	16.1
56	Trinidad & Tobago	19.7	30.4	1.7	131	Vanuatu	25.3	44.3	16.5
57	Lithuania	15.0	20.9	1.8	132	Cameroon	14.8	25.4	16.9
58	Russia	11.7	17.7	1.9	133	Cambodia	8.0	24.1	17.9
59	China	3.7	7.4	1.9	134	Mauritania	12.9	26.3	18.4
60	Croatia	16.4	19.5	1.9	135	Kenya	11.6	22.0	20.4
61	Panama	9.1	17.5	2.0	136	Comoros	11.6	16.7	20.5
62	Ukraine	4.2	9.2	2.0	137	Bolivia	22.7	64.6	21.6
63	Thailand	5.8	11.6	2.0	138	Mali	9.9	17.3	23.7
64	Swaziland	4.8	9.9	2.2	139	Senegal	17.4	28.9	25.4
65	Lebanon	10.9	18.8	2.3	140	Rwanda	7.3	18.3	27.3
66	Egypt	3.0	8.9	2.3	141	Burkina Faso	10.3	22.6	28.7
67	Armenia	5.1	8.5	2.3	142	Côte d'Ivoire	22.8	33.6	30.0
68	Guyana	2.5	5.4	2.4	143	Tanzania	10.9	31.2	32.8
69	Romania	12.2	15.0	2.4	144	Central African Rep.	10.6	17.2	33.4
70	Bhutan	3.5	9.4	2.4	145	Zambia	27.7	35.2	41.6
71	Bulgaria	9.2	18.0	2.4	146	Togo	13.1	25.0	43.6
72	Uruguay	13.0	18.1	2.5	147	Uganda	12.6	30.6	44.5
73	Slovak Republic	24.5	30.1	2.5	148	Niger	13.6	26.0	58.2
74	St. Lucia	11.6	20.4	2.5	149	Mozambique	17.7	35.9	66.2
74	Czech Republic	30.9	35.6	2.6	150	Madagascar	18.3	39.9	68.5

Note: \*The GNI per capita is based on the World Bank's Atlas Method.  
 Source: ITU.

It should be noted that the fixed telephone sub-basket does not take into account the cost of the (one-time) connection charge, which is relatively high in some developing countries

(for example, Yemen and Iran). Also, some telecommunication operators, especially with a monopoly status and owned by the Government, continue to subsidize fixed telephone services so that customers receive services below market prices [3].

### III. TELEPHONE SYSTEM

Currently being modernized and expanded with the goal of not only improving the efficiency and increasing the volume of the urban service but also bringing telephone service to several thousand villages, not presently connected

domestic: the addition of new fiber cables and modern switching and exchange systems installed by Iran's state-owned telecom company have improved and expanded the main line network greatly; main line availability has more than doubled to nearly 25 million lines since 2000; additionally, mobile service has increased dramatically serving 43 million subscribers in 2008; combined fixed and mobile-cellular subscribership now exceeds 100 per 100 persons

international: country code - 98; submarine fiber-optic cable to UAE with access to Fiber-Optic Link Around the Globe (FLAG); Trans-Asia-Europe (TAE) fiber-optic line runs from Azerbaijan through the northern portion of Iran to Turkmenistan with expansion to Georgia and Azerbaijan; HF radio and microwave radio relay to Turkey, Azerbaijan, Pakistan, Afghanistan, Turkmenistan, Syria, Kuwait, Tajikistan, and Uzbekistan; satellite earth stations [4].

Telephones - main lines in use: 24.8 million (2008)

Country comparison to the world: 12

Telephones - mobile cellular: 43 million (2008)

Country comparison to the world: 26

Internet hosts: 45,678 (2009)

Country comparison to the world: 85

Internet users: 23 million (2008)

Country comparison to the world: 17

### IV. IRAN SUBSCRIBER GROWTH STILL GOING STRONG, BUT SIGNS OF A SLOWDOWN

The Iranian mobile market continued to grow in the first quarter of 2009, finishing a whisker short of 50m on 49.97m. This left the penetration rate at 70.5%, up from 49.7% a year earlier. Given the increased penetration, it is unsurprising that the quarterly gain of 3.65m was well below the year-earlier figure of 6.15m. Of course, this was still an impressive uplift, and the Q1 08 gain was, moreover, an all-time market record, but this does indicate a gradual slowdown in growth in the Iranian market. Political instability subsequent to the end of the quarter may well have had a further impact on growth.

On an annual basis, there was a 43.6% increase in customers - again an impressive figure, but again significantly down on the year-earlier figure of 103.9%. In fact, this was the lowest annual growth recorded since Q4 04.

For the seventh successive quarter, MTN subsidiary Irancell topped the market for quarterly growth, adding 2.21m to finish on 18.25m. This represented an annual growth rate of 102.2%, maintaining the triple-digit annual growth it has seen in every quarter since its launch in Q4 06. This is one of the strongest performances recorded by any mobile operator in the world in recent years. Nevertheless, Irancell remained more than 10m customers behind market leader TCI Iran at the end of the quarter. The gap of 11.71m was down from 15.48m a year earlier, but this still suggests that it will be some time before Irancell can think about challenging TCI Iran for the lead.

TCI Iran was on 29.96m at the end of Q1 09 having added 1.36m in the quarter. This compares to 2.96m (its record figure) in Q1 08. In terms of proportionate growth, the 22.2% rate recorded in the twelve months ending 31st March 2009 was down from 59.3% in the prior twelve-month period. In real terms, annual net additions were down from 9.12m to 5.45m. Irancell, on the other hand, improved from 7.95m to 9.23m.

Iran: Quarterly Net Additions (m), Irancell and TCI, Q2 07 – Q1 09

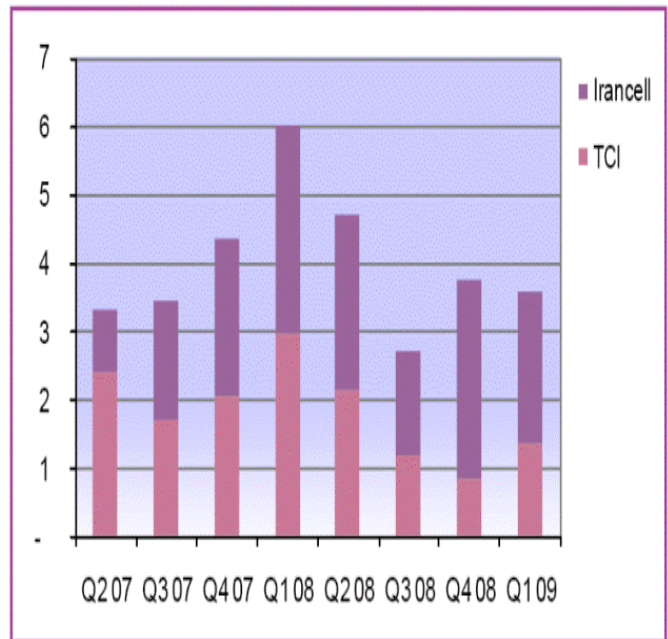


Figure 1. Quarterly Net Additions

The remaining three operators in Iran have little market presence. The largest is Rafsanjan Industrial Complex (Taliya), which was up 39.6% annually to 1.70m, while the other two have fewer than 60k between them [5].

## V. POLITICAL UNCERTAINTIES WON'T HAMPER IRAN'S TELECOM GROWTH

Despite formidable regulatory and legal hurdles, Iran's telecom market will grow to \$12.9 billion by 2014, a CAGR of 6.9 percent, according to a new report from Pyramid Research.

From a revenue point of view, Iran is one of the most attractive markets in the Middle East region given its size - by year-end 2009, it was the fourth-largest market in the region at \$9.2 billion and is expected to grow to \$12.9 billion by 2014 at a CAGR of 6.9 percent, notes Dearbhla McHenry, Senior Analyst at Pyramid Research and author of the report.

"However, regulatory and legal hurdles forbid foreigners from owning majority stakes in telecom companies, and with most of the fixed sector still under the monopoly of the government-owned incumbent, TCI, the Internet sector in particular is still only beginning to enter the growth phase," she adds.

"The country's comparatively late introduction of competition means that the market is still in a rapid-growth phase, with the data segment in particular (both fixed and mobile) developing very fast in terms of number of users and amount of use," says McHenry. "We expect data's share of total revenue to double over the next five years, reaching \$4.5 billion by 2014; important drivers of new growth in both segments will keep the split between fixed and mobile services steady over the forecast period," continues McHenry.

"On the mobile side, Pyramid expects the launch of a third operator to boost adoption and revenue, while on the fixed side, the launch of new WiMax operators will herald the beginning of Iran's broadband era." [6].

## VI. CONCLUSION

Information and communication technology growth indicators such as broadband penetration, e-readiness index, master index, internet penetration, investment in knowledge (software, education, R&D), ICT affordability and ICT exports determine the countries abilities in ICT activities. There is a huge effort in Iran for improving various ICT affordability but they have not reached their expected result. Iran has lock of ICT export and lock of ICT infrastructure like broadband. It needs new dynamic policies to reduce the gap to the other countries.

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