An overview of Digital Economy and Digital transformation in Iran

Economic studying Department (ICT Ministry )
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What we mean by digital economy? What are its boundary? Spill over effect

Figure 3: Scoping the digital economy
Source: Authors
The Digital Economy Assessment Framework from the OECD's perspective

According to the International Standard Industrial Classification (ISIC), the economy of the Information and Communication Technology (ICT), which is the basis for measuring the core of digital economy, consists of four sub-sections:

- Telecommunication
- ICT Manufacturing
- IT and other information services
- Software Publishing
Estimating and measuring the four subsectors in the “Core of Digital Sector” based on the classification of the economic activities of ISICv4 in Iran satellite Accounts in 2017

(based on the results of the ICT satellite accounts)
<table>
<thead>
<tr>
<th>growth</th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
<th>2013</th>
<th>2012</th>
<th>Year/sub sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.5%</td>
<td>1.14</td>
<td>1.06</td>
<td>1.07</td>
<td>0.93</td>
<td>1.08</td>
<td>Telecommunication</td>
</tr>
<tr>
<td>8.3%</td>
<td>0.26</td>
<td>0.31</td>
<td>0.24</td>
<td>0.22</td>
<td>0.24</td>
<td>IT and other information services</td>
</tr>
<tr>
<td>57%</td>
<td>0.11</td>
<td>0.11</td>
<td>0.09</td>
<td>0.08</td>
<td>0.07</td>
<td>ICT Manufacturing</td>
</tr>
<tr>
<td>100%</td>
<td>0.02</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>Software Publishing</td>
</tr>
<tr>
<td>7.8%</td>
<td>1.52</td>
<td>1.49</td>
<td>1.41</td>
<td>1.25</td>
<td>1.41</td>
<td>ICT Sector</td>
</tr>
</tbody>
</table>
Share of ICT sector from GDP in Iran

**share of ICT sector from GDP**

- 2012: 1.41
- 2013: 1.41
- 2014: 1.41
- 2015: 1.49
- 2016: 1.52
Some challenges in measuring and defining Digital Economy

- Data and statistics
- Definition and boundary
- Production-oriented of GDP
- Measurement approaches and lack of standard measurement method
- Free digital services
- Societal and well-being effects not captured in GDP
Preparing the National document of roadmap on digital economy and digital transformation

A joint project by ICT Ministry and University of Tehran.

Identify the country’s problems and challenges

Investigating the ICT ecosystem

Identifying and selecting the emerging technologies that we have relative economic advantages in Iran.

The aim is provide strategies and guidelines to foster the digital economy activities in Iran by taking into account the interests and views of main stakeholders through interviews with various experts and professionals.
Due to this fact that service sector has the main share of Iran’s economy and since service sector in comparing with other sectors (such as industry, agriculture, oil) is highly ICT-intensive, therefore ICT and consequently digital economy can have the highest impact on improving the country’s productivity and national output.

This fact can justify the value of paying more attention to digital economy in Iran.
Share of service sector in economy of Iran (%)
Potentials and capacities of Iran for digital economy
Trend of growth of Iranian broadband subscriber (around 85% penetration)

Iran broadband subscribers

<table>
<thead>
<tr>
<th>Year</th>
<th>Subscribers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>4085430</td>
</tr>
<tr>
<td>2013</td>
<td>5868313</td>
</tr>
<tr>
<td>2014</td>
<td>7082016</td>
</tr>
<tr>
<td>2015</td>
<td>27923665</td>
</tr>
<tr>
<td>2016</td>
<td>54374891</td>
</tr>
<tr>
<td>2017</td>
<td>64967156</td>
</tr>
<tr>
<td>2018</td>
<td>74518595</td>
</tr>
</tbody>
</table>

Resource: Regulatory of ICT, 2019
ICT Indexes in Iran-2017

- Percentage of households with a computer: 70%
- Percentage of households with Internet access: 73%
- Percentage of individuals using the Internet (6 years old and more): 64%

Trend of Percentage of individuals using the Internet

<table>
<thead>
<tr>
<th>Year</th>
<th>2008</th>
<th>2010</th>
<th>2013</th>
<th>2015</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12%</td>
<td>15.9%</td>
<td>30%</td>
<td>45.3%</td>
<td>64%</td>
</tr>
</tbody>
</table>
IRAN’S ITU INDEXES

IDI INDEX Ranking in 2017 was 81 out of 167 countries (a little improvement – 4 steps upward)

EGDI INDEX Ranking in 2018 was 86 out of 193 countries (a significant improvement – 20 steps upward)
Population / Human resource

- Young population (15 to 35 years old): 36%
- Adult population (35 to 50 years): 26%
- Children and adolescents (less than 15 years old): 24.5%
- Population over 50 years old: 13.5%

The number of ICT graduated people

Each year 36,000 and 24,000 students will be graduated in average from computer and electric fields respectively, that they would be added to ready to work young population.

In average there are annually about 60,000 graduated students in computer and electric fields. Over the next five years potentially nearly 300,000 students of STEM fields will be graduated.

Reference: Information of the Ministry of Research and Technology-2019
The number of Universities, Research centers, Incubators and Science and Technology Parks

Universities and Research Centers
- 149 universities and high education centers
- 324 non-governmental institutes
- 137 private high education institutes

Incubators
- 179 Incubator centers

Science and Technology parks
- 42 Science and Technology Parks

Source: Ministry of Science and Technology Research(2017)
Knowledge-base companies, VCs, accelerators and Start-ups (2017)

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start-ups</td>
<td>Nearly 4200 start-ups</td>
</tr>
<tr>
<td>Accelerators</td>
<td>60</td>
</tr>
<tr>
<td>VCs</td>
<td>40</td>
</tr>
<tr>
<td>Knowled-base companies</td>
<td>3371</td>
</tr>
</tbody>
</table>

resource

- Vice President of Science and Technology
- isfahanplus.ir
The strengths of the country

1. 60% OF POPULATION IS UNDER 35 YEARS OLD

2. 113% MOBILE PENETRATION

3. 78.2% MOBILE BROADBAND PENETRATION RATE

4. ALL INSTITUTES & ORGANIZATIONS ARE CONNECTED TO NATIONAL INFORMATION EXCHANGE (NIX)
Based on mentioned Iran’s potential and capacities, our country’s main goal is increasing the share of Digital Economy in GDP and also digital economy spill over in all other sectors and as a driver for whole economy.
DIGITAL IRAN’S PILLARS

- Broadband (connectivity)
- Skills set
- E-Services
- E-Governance
- Regulatory & Legislation
- Data
- Security and Privacy (Trust)
- Policy
Goals over a 5-year plan
(IT and other Information services sub-sector)

- Increasing the share of IT services sub-sector in GDP
- Smart government
- IT value added share of GDP (minimum 1.5%)
- Providing 100% of e-government infrastructure
- Offering 100% of e-services by government
Goals over a 5-yearsplan
(Telecom Sub-Sector)

- Providing the e-services infrastructure for 80% of rural areas with a population of more than 20 households
- Average of growth of value added of telecom sub-sector in 2017-2021 (19.4%)
- Annual growth rate of telecom sub-sector’s in 2017-2021 (6.5%)
- Access of 80% of households to broadband (at least 20 Mbps per capita)
- Increasing the broadband penetration
Thanks for your attention