E-GOVERNMENT READINESS

The Performance of the OIC Member Countries

Organisation of the Islamic Conference

Statistical Economic and Social Research and Training Centre for Islamic Countries (SESRIC)

E-Government Readiness

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Statistical, Economic and Social Research and
Training Centre for Islamic Countries
(SESRIC)

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1 Introduction

Today we are living in an era of speed due to the technological progress, particularly in information and communication technology (ICT) tools, which has a deep impact on each and every process in both public and private sector. This impact has been felt even in the most remote geographical areas of the World due to the widespread use of ICT tools. These technologies are adopted by the governments to transform the public policy, processes and functions to better serve the needs of their citizens.

Sound infrastructure, improved web technology, and trained human capital have made it possible for the governments to attain high levels of on-line public services (i.e. e-government services). However, in order for governments to maintain a sustainable growth in the use of e-government services with high satisfaction levels of their citizens, it is imperative for them to consolidate all public services under an integrated e-government system. The integrated e-government system available round the clock undoubtedly will tie agencies, processes and systems together in a more efficient and faster way.

In this context, it is worth mentioning that the term "e-government" has not a unique definition. Different definitions have been used by various relevant international organisations as follows:

The United Nations Public Administration Network (UNPAN) defines e-government as: "... *utilizing the internet and the world-wide-web for delivering government information and services to citizen*"[1].

The European Union has adopted the following e-government definition: "... *the use of Information and Communication Technologies in public administrations and the associated processes of organisational change and skills development to enhance democratic processes and contribute to good governance and policy making*"[2].

The Organisation for Economic Co-operation and Development (OECD) gives a definition of e-government as "...*the use of information and communication technologies and particularly the Internet, as a tool to achieve better government*"[3].

The World Bank defines e-government as "*the use by government agencies of information technologies, such as Wide Area Networks, the Internet, and mobile computing, that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions*"[4].

According to the International Telecommunication Union (ITU), e-government means *the use of information and communication technologies in government to provide public services to improve managerial*

[1] http://unpan1.un.org/intradoc/groups/public/documents/UN/UNPAN021547.pdf
[2] http://www.ccegov.eu/?Page=Glossary
[3] OECD (2003), "The e-Government Imperative", p. 11, OECD, Paris.
[4] http://go.worldbank.org/M1JHE0Z280

effectiveness and to promote democratic values and mechanisms; as well as a regulatory framework that facilitates information intensive initiatives and fosters the knowledge society[5].

Brookings Institution Governance Studies Departments define e-government as "*Electronic government offers the promise of utilizing technology to improve public sector performance as well as employing new advances for democracy itself. In its boldest formulation, technology is seen as a tool for long-term system transformation*"[6].

The Business Consulting Services Department at the International Business Machines (IBM) describes e-government as "*a means to make government services available via electronic channels. This may mean anything from placing information about their services on a portal, to providing on-line tax returns*"[7].

These various definitions show that e-government is one aspect of digital government which includes the broad use of all ICT tools in delivering services of the public sector.

The aim of this report is to provide an overview of the current progress of the OIC Member Countries in e-government readiness. In the preparation of this report, the UN e-Government Survey 2008 is used as a main reference document. In this context, this report includes a set of indices from the aforementioned Survey, namely E-Government Readiness Index which is a composite index comprising three sub-indices; i.e. the web measurement index (WMI), the telecommunication infrastructure index (TII), and the human capital index. The comparative analysis has been conducted using the above indices between 2005 and 2007 to compare the E-Government Readiness Performance of the OIC Member Countries with the other regions including the World. Then, a thorough analysis has been done for comparing OIC Sub-Groups and Top-10 OIC Member Countries in each index. Finally, based on the analysis made the Report derives conclusions and policy implications for the OIC Member Countries to achieve a better result in E-Government Readiness to offer a better opportunity for the future generations. Lastly, the Report includes a map for each of the indices visualising the scores of each Member Country based on a performance range.

2 E-Government Readiness

E-government readiness is a term used to reflect the extent of governments' willingness and ability to use ICT to transform conventional government applications to deliver better service to citizens, businesses and even the governments themselves. The term could be also used to reflect the *measure of the quality of a country's ICT infrastructure and the ability of its consumers, businesses and governments to use ICT to their benefit*[8]. UN Public Administration Network (UNPAN), IBM Institute for Business Value in cooperation with the Economist Intelligence Unit (EIU), and Brookings Institution are the three mostly cited sources which undertake regular assessments of e-government readiness of governments around the world.

[5] http://www.itu.int/ITU-D/cyb/app/docs/e-gov_for_dev_countries-report.pdf
[6] http://www.brookings.edu/reports/2008/0817_egovernment_west.aspx
[7] http://www-03.ibm.com/industries/global/files/TheRoleofPostsine-government20040209.pdf
[8] http://www-935.ibm.com/services/us/gbs/bus/pdf/e-readiness_rankings_june_2009_final_web.pdf

3 E-Government Readiness Index (ERI)

The E-Government Readiness Index (ERI) is a composite index comprising three sub-indices; i.e. the web measurement index (WMI), the telecommunication infrastructure index (TII), and the human capital index (HCI)[9]. The average ERI of the OIC countries, as a group, was 0.34 in 2007 compared to 0.31 in 2005 (Figure 1). Though this indicates a very slight improvement in the e-government applications in the OIC countries, the ERI of the OIC countries in 2007 remained quite below the world average (0.45) and the averages of the other regions, except the average of Africa.

Figure 1: E-Government Readiness Index, by Regional Grouping, 2005 vs. 2007

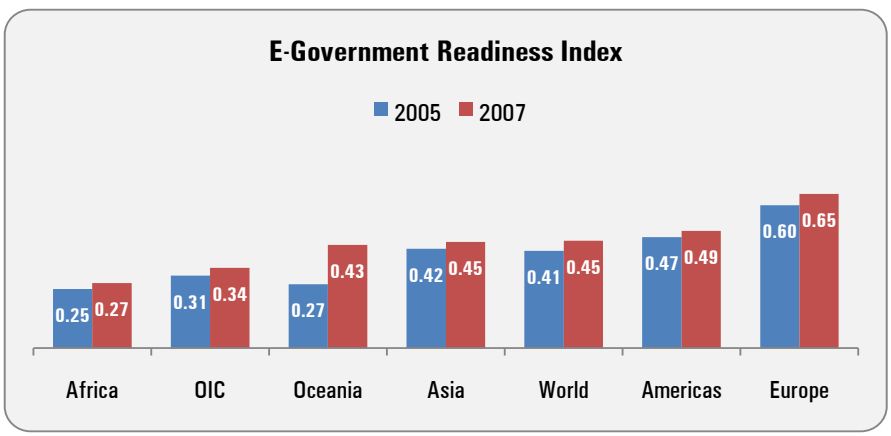
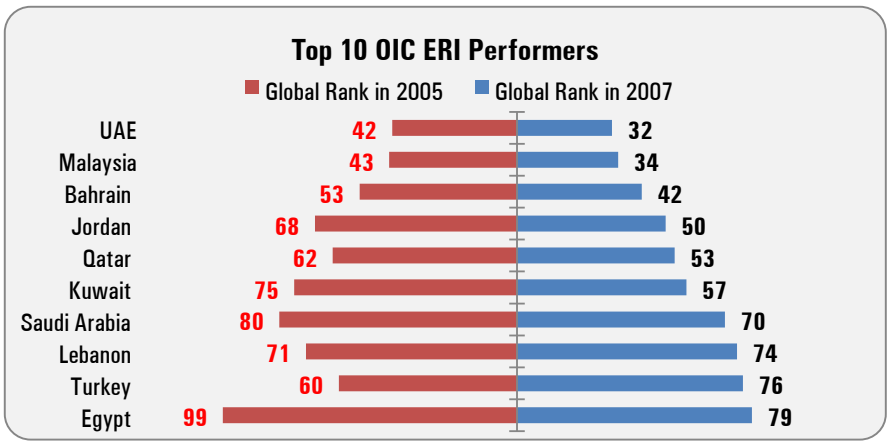


Figure 2 shows the Top 10 OIC Member Countries ranked by the ERI scores in 2005 and 2007. Except Lebanon and Turkey, all OIC Member Countries in the Top 10 list improved their positions in the period 2005-2007. Egypt is the only country in the Top 10 to move up 20 positions from its 2005 rank. Egypt's performance in the ERI is mostly due to its success in increasing its WMI by 0.16 point from 2005 to 2007. Egypt also managed to increase its HCI and TII by 0.11 and 0.02 point respectively in the same period. Jordan and Kuwait showed somewhat similar performance with that of Egypt. The performance of Jordan was due to the increase in its WMI by 0.17 point and, different than the performance patterns of Egypt and Kuwait, an increase in its TII by 0.07 point versus a 0.01 point increase in its HCI. However, the same group of countries still need to enhance their efforts to reach the level of United Arab Emirates, which scored 0.63 in the ERI. United Arab Emirates showed the same performance pattern as Egypt and Kuwait did in the period 2005-2007 with increases of 0.10, 0.05, and 0.02 point in its WMI, HCI, and TII, respectively. Yet, even as the lead country in the Top 10 OIC ERI List, United Arab Emirates ranks 32nd in 2007.

[9] UNPAN (2008), "UN e-Government Survey 2008", p. 14, UN, New York.

Figure 2: Top 10 OIC Member Countries, by ERI Ranks, 2005 vs. 2007



In 2007, the difference in the scores of Sweden (0.92), best performing country in the ERI, and United Arab Emirates (0.63) is approximately 0.29 point. This shows that even the top performing OIC Member Countries in ERI need to take additional measures in enhancing their e-government services and processes. Achieving high rankings in the ERI requires robust broadband network, high market penetration rates of mobile communication means and applications, well-trained human resources and consolidated administration of disperse but attached e-government applications. Shortcomings faced in the fulfilment of those requirements cause the discrepancies between the regions.

Figure 3: Number of Good/Poor OIC ERI Performers, by 2005-2007 Rank Changes

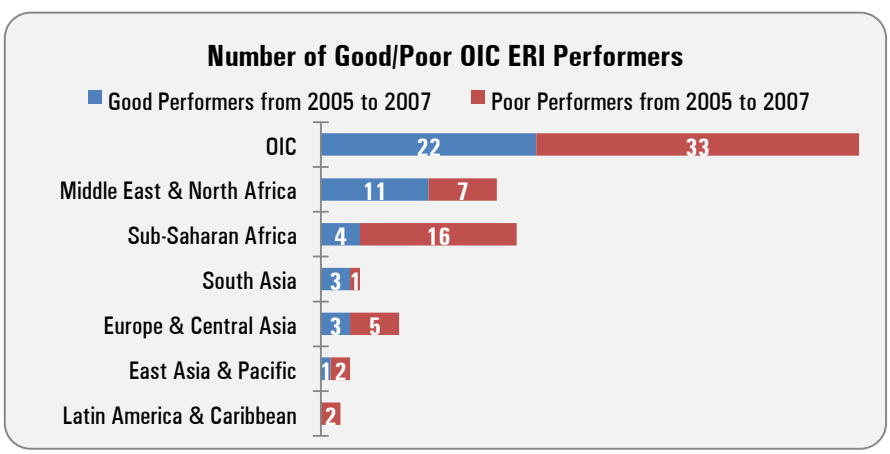


Figure 3 exhibits the OIC Member Countries in terms of their ERI rank changes from 2005 to 2007. Of the 55 OIC Member Countries for which data is available, only 22 managed to move their positions upwards from 2005 to 2007. In 2007, as opposed to other regions, in the Middle East and North Africa (MENA) and South Asia (SA), strong performing OIC Member Countries appear to be more in number than the weak performing ones. 11 out of 18 OIC Member Countries in the MENA and 3 out of 4 OIC Member Countries in the SA regions managed to move their year 2005 ranks upwards in year 2007. All the Member Countries in the Latin America and Caribbean (LAC), 16 out of 20 in the Sub-Saharan Africa (SSA), 5 out of 8 in the Europe and Central Asia (ECA) and 2 out of 3 in the East Asia and Pacific (EAP) moved downwards in year 2007 when compared to their year-2005 ranks.

4 Web Measurement Index (WMI)

The Web Measurement Index (WMI) looks at how governments are providing e-government policies, applications and tools to meet the growing needs of their citizens for more e-information, e-services and e-tools. It measures the online presence of national websites, along with those of the ministries of health, education, welfare, labour and finance of the country[10]. The web measurement index considers a five-stage model[11], which builds upon the previous levels of complexity of a government's online presence. The main online presence is the national portal or the official government home page. The other online presence sites for Ministries/Departments of Health, Education, Social Welfare, Labour and Finance, have also been taken into consideration. If governments can meet the threshold points for infrastructure development, content delivery, business re-engineering, data management, security and customer management, they move up from one stage to another in the model. Thus, the WMI shows the ability and capacity of governments to deliver online services to their citizens.

Figure 4 illustrates that the OIC WMI average slightly increased from 0.20 in 2005 to 0.24 in 2007 which points out that it came about as more OIC Member Countries invested in infrastructure development, citizen-friendly portals, online applications and back office[12] integration. The OIC as a whole achieved the highest index value leap from 2005 to 2007 when compared to other regions with a 0.04 point increase. Except the averages of the World, Europe and Oceania; all the other regions managed to increase their web measurement index values from 2005 to 2007. However, the OIC WMI average is below that of the World by 0.11 points in 2007.

Figure 4: Web Measurement Index, by Regional Grouping, 2005 vs. 2007

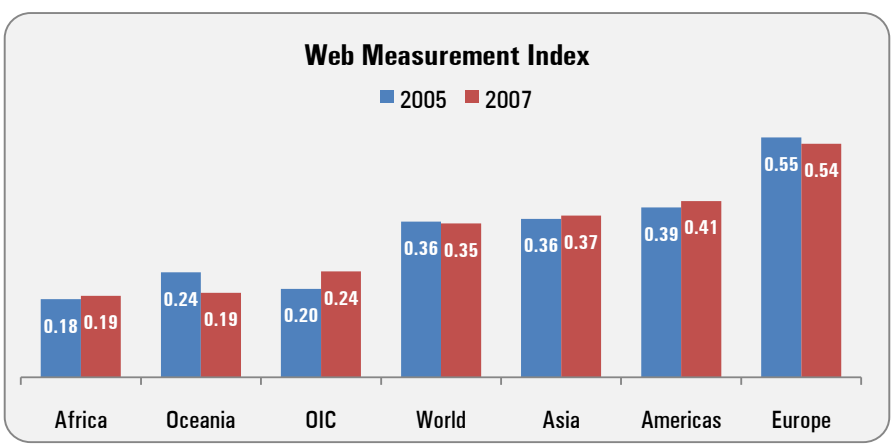


Figure 5 displays the Top 10 OIC Member Countries ranked by the WMI with United Arab Emirates leading the index followed by Malaysia. The United Arab Emirates and Malaysia went up mostly due to the strength of three of their ministries' websites, namely: Social Welfare, Labour and Finance[13]. With 7 countries in the Top 10 List, the MENA is the leading region in the WMI. Malaysia, Pakistan and Turkey

10 ibid, p. 43.
11 Stage I – Emerging, Stage II – Enhanced, Stage III – Interactive, Stage IV – Transactional, Stage V – Connected
12 Back office functions are defined as those areas that support front line delivery of services. See "UN e-Government Survey 2008", p. 126.
13 UNPAN (2008), "UN e-Government Survey 2008", p. 44, UN, New York.

belong to the regions of the EAP, SA and ECA, respectively. None of the OIC Member Countries in the LAC and SSA regions managed to get in the Top 10 WMI Ranking. Except Pakistan and Turkey, the other OIC Member Countries in the Top 10 WMI List improved their positions from year 2005. Among the ones which improved their positions in 2007, Oman withdraws attention as it moved up 76 positions from its 2005 rank. On the other hand, in the same year, when the scores of Denmark, best performing country in the WMI, and that of United Arab Emirates are compared with each other, their index difference is approximately 0.28 point, which indicates there is room for more OIC Member Countries to achieve a better performance in the WMI at the national level.

Figure 5: Top 10 OIC Member Countries, by WMI Ranks, 2005 vs. 2007

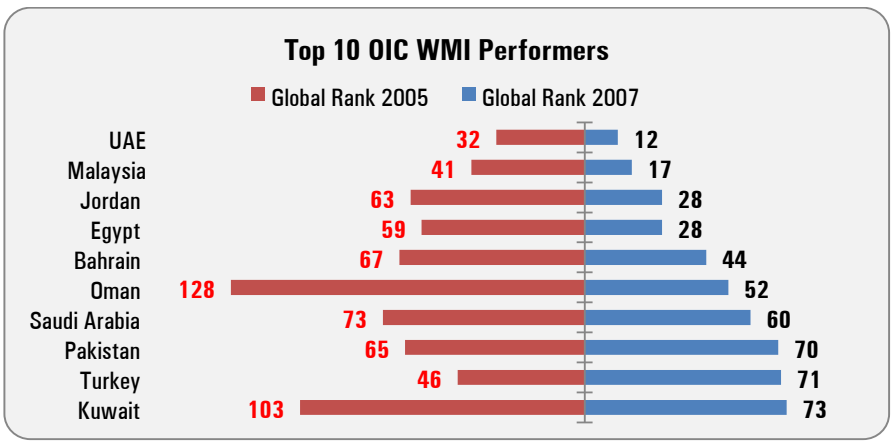
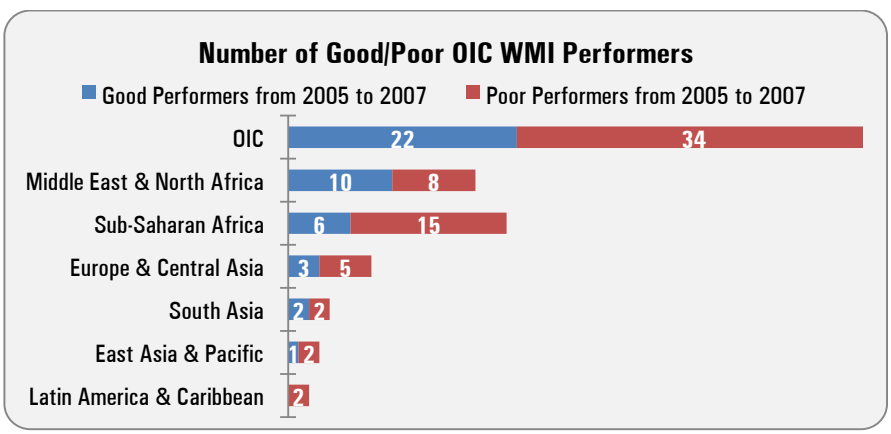


Figure 6 presents the number of OIC Member Countries in terms of their WMI rank changes from 2005 to 2007. 22 out of 56 OIC Member Countries with available data moved their positions upwards from 2005 to 2007. The remaining 34 Member Countries had a degraded performance. Except MENA, all regions had more countries with moving down positions according to the 2007 rank list. 10 out of 18 OIC Member Countries in the MENA moved their year 2005 ranks upwards in year 2007. All Member Countries in the LAC, 15 out of 21 of the OIC Member Countries in the SSA, 5 out of 8 of the OIC Member Countries in the ECA, 2 out of 3 of the OIC Member Countries in the EAP, and half the OIC Member Countries in the SA weakly performed in year 2007 when compared to their year 2005 ranks. In 2007, nearly one-third of the weakly performing OIC Member Countries was from the SSA region.

Figure 6: Number of Good/Poor OIC WMI Performers, by 2005-2007 Rank Changes

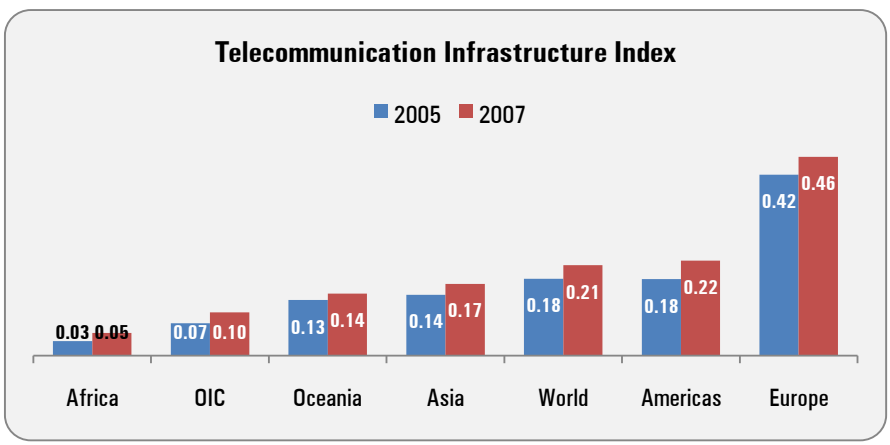


Government sites enable the governments to provide their citizens with the services they need. A further step in this process would be to consolidate separate government services under a single portal. Many countries, including the OIC Member Countries, have difficulty in reaching high scores in the WMI which prevent them to realize the e-transformation. Thus, countries which will outperform their benchmark in WMI will be in a better position to provide state-of the-art services to its citizens in e-government.

5 Telecommunication Infrastructure Index (TII)

In recent years the mankind has witnessed significant improvement in the growth and adoption of the ICT tools. This led to an increase in the number of telephone lines, PCs, cellular subscribers which all had a considerable impact in the growth of the Internet. According to the ITU data[14], between 1991 and 2003 telephone lines doubled and the availability of personal computers grew fivefold. In the last 12 years, cellular subscribers increased by 83 times while the increase in the global Internet users was a whopping 151 times. In the last few years, there was exceptional growth in the use of the Internet among all regions of the World and especially in the developing regions.

Figure 7: Telecommunication Infrastructure Index, by Regional Grouping, 2005 vs. 2007



The Telecommunication Infrastructure Index (TII) was constructed as a composite measure of PCs, Internet users, telephone lines, cellular subscribers and broadband per 100 relating them to a country's infrastructure capacity as they relate to the delivery of e-government services and assigns each variable a 20% weight[15].

As with the same trend in the WMI, the OIC TII average has slightly increased from 0.07 in 2005 to 0.10 in 2007 (Figure 7). Despite the OIC as a group showed improvement in the period 2005-2007 in the TII, the OIC TII average is still behind that of the World by 0.11 points. Only the averages of Europe and Americas surpassed the World average in the period 2005-2007.

[14] ITU World Telecommunication Indicators, 2003 projected figures.
[15] UNPAN (2008), "UN e-Government Survey 2008", p. 219, UN, New York.

Figure 8 shows the Top 10 OIC Member Countries ranked by the TII with United Arab Emirates as the index leader in the whole of OIC. However, when the global TII is taken into consideration, the OIC TII leader, United Arab Emirates, is approximately by 0.43 points behind the Netherlands, the global TII leader. The TII performance at the regional level shows that with 6 countries in the Top 10 List, the MENA is the leading region in the TII. Malaysia, Brunei, Turkey and Maldives which are the other OIC Member Countries to have taken place in the Top 10 TII List are from the regions of EAP (the first two), ECA and SA, respectively. None of the OIC Member Countries in the LAC and SSA regions took a position in the Top 10 TII List. Except Maldives, the other OIC Member Countries in the Top 10 TII List couldn't improve their positions from year 2005. Turkey and Saudi Arabia maintained their same positions in 2007. Maldives is the only country in the Top 10 to move 28 positions upwards from its 2005 rank. The TII performance of Maldives is mostly due to its success in increasing both its Cellular and PC Indices by 0.45 and 0.08 point, respectively from 2005 to 2007. Maldives also managed to increase its Broadband and Main Telephone Lines Indices by 0.02 and 0.01 point respectively in the same period. A slight decrease was however observed in the Internet Index for Maldives for the mentioned period.

Figure 8: Top 10 OIC Member Countries, by TII Ranks, 2005 vs. 2007

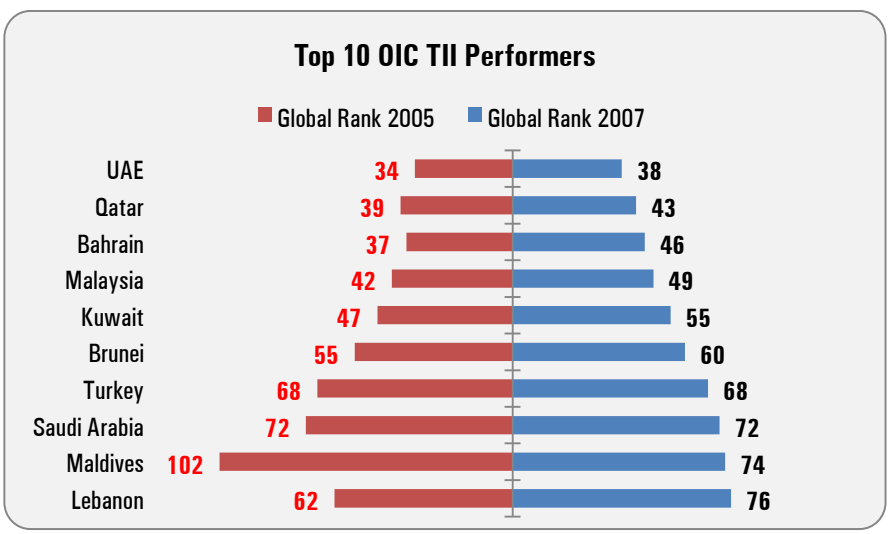
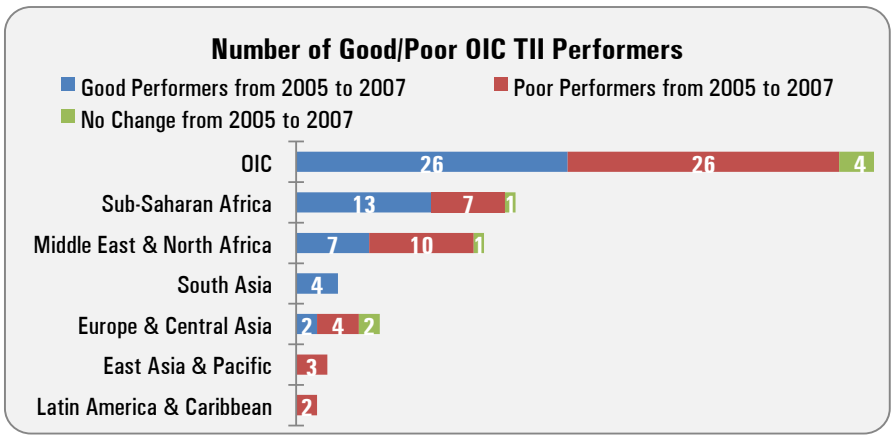


Figure 9 shows the number of OIC Member Countries in terms of their TII rank changes in the period 2005-2007. 26 out of 56 OIC Member Countries with available data moved their positions upwards from 2005 to 2007. The remaining 26 of the Member Countries showed a weak performance, whereas 4 of the Member Countries showed no rank change. All regions, except the SSA and SA, had more OIC Member Countries with positions moving down than the ones with positions moving up in the 2007 rank list. All OIC Member Countries in the SA and 13 out of 21 of the OIC Member Countries in the SSA increased their 2005 ranks in year 2007. All OIC Member Countries in the LAC and EAP, 10 out of 18 of the OIC Member Countries in the MENA and 4 out of 8 of the OIC Member Countries in the ECA weakly performed in 2007 when compared to their year 2005 ranks. The success of the OIC Member Countries in the SSA is mostly based on increasing number of PCs per 100 persons and the big increase in cellular phone penetration.

Figure 9: Number of Good/Poor OIC TII Performers, by 2005-2007 Rank Changes

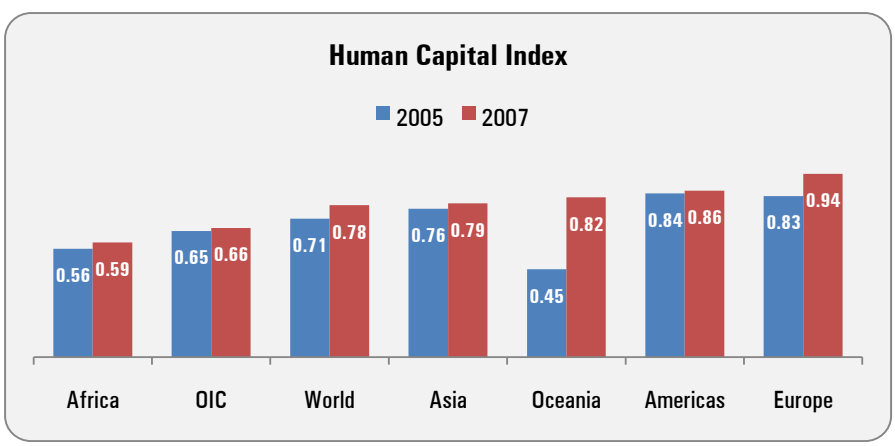


6 Human Capital Index (HCI)

The Human Capital Index (HCI) is a composite of the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio, with two thirds weight given to the adult literacy rate and one third to the gross enrolment ratio[16]. The HCI also shows to what extent the citizens of the OIC Member Countries are ready for e-transformation since it is also measured by how much the OIC Member Countries invested in the education of their citizens to embrace the e-government transformation process in the fast moving digital age.

The OIC HCI average has increased by 0.01 point in the period 2005-2007. Despite the fairly minor improvement in the score, the OIC group as a whole was behind the World average by 0.12 point in 2007. Unlike the HCI averages of the OIC and Africa, the averages of Europe, Americas, Oceania and Asia have surpassed the World average in the same period (Figure 10).

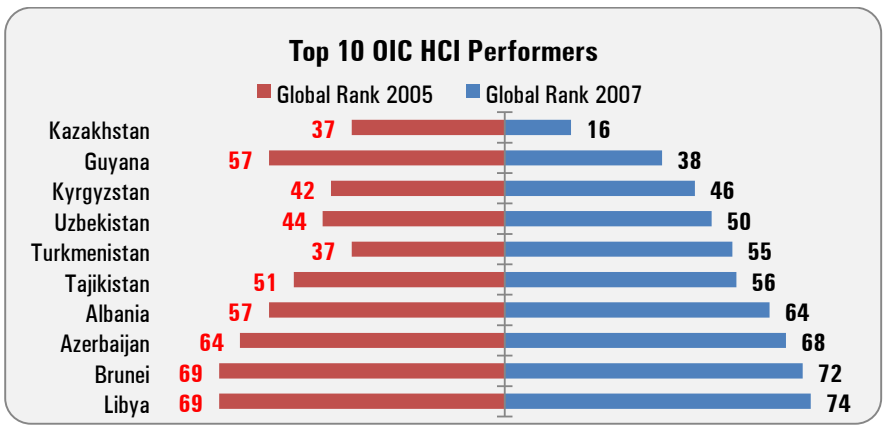
Figure 10: Human Capital Index, by Regional Grouping, 2005 vs. 2007



[16] ibid, p. 17.

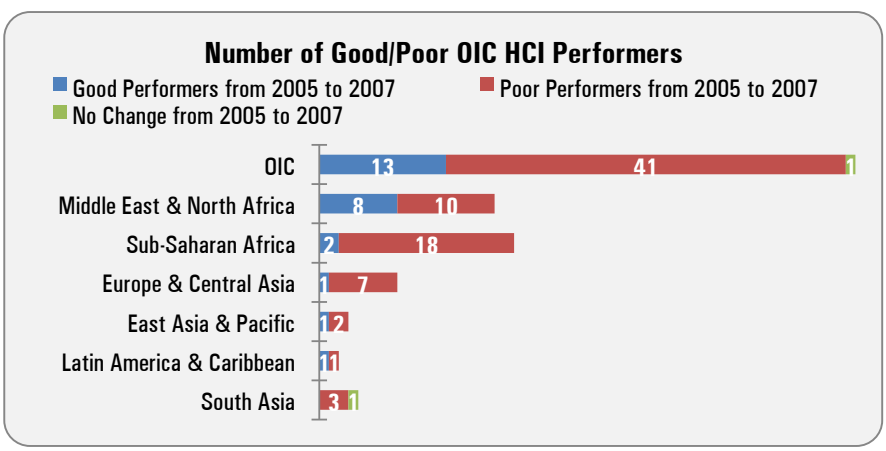
Figure 11 illustrates the Top 10 OIC Member Countries ranked by the HCI with Kazakhstan leading the index. With 7 countries in the Top 10 List, the ECA is the leading region in the HCI. Guyana, Brunei and Libya are the other OIC Member Countries from the regions of LAC, EAP and MENA, respectively taking place in the Top 10 HCI List. None of the member countries in the SA and SSA regions took a position in the Top 10 HCI List. Except Kazakhstan and Guyana – the only country from the LAC region to enter the Top 10 List – the other OIC Member Countries in the Top 10 Rank List couldn't improve their positions from year 2005. Kazakhstan, the OIC HCI leader, was only 0.02 point behind the global HCI leaders; i.e. Australia, Denmark, Finland and New Zealand with a 0.99 HCI score.

Figure 11: Top 10 OIC Member Countries, by HCI Ranks, 2005 vs. 2007



The number of OIC Member Countries in terms of their HCI rank changes in the period 2005-2007 is exhibited in Figure 12. 13 out of 55 OIC Member Countries for which the data are available showed a progress in their positions from 2005 to 2007. The remaining 41 OIC Member Countries did not succeed in improving their performance, whereas 1 Member Country showed no rank change. The majority of the Member Countries in all regions, except the LAC, performed weakly in the 2007 rank list. 1 out of 2 OIC Member Countries in the LAC increased its year-2005 rank in year 2007. 3 out of 4 OIC Member Countries in the SA, 18 out of 20 Member Countries in the SSA, 10 out of 18 OIC Member Countries in the MENA, 7 out of 8 OIC Member Countries in the ECA and 2 out of 3 OIC Member Countries in the EAP poorly performed in year 2007 when compared to their year-2005 ranks.

Figure 12: Number of Good/Poor OIC HCI Performers, by 2005-2007 Rank Changes



Although there is notable improvement on average in the ERI of the OIC Member Countries in the period 2005-2007, there remains to be much done at the national level to achieve higher index scores to reach a level both above the OIC and World averages. To ensure the sustainability of e-government programs in the OIC Member Countries, governments must develop policies that invest firstly in human capital, because computerisation of the government processes alone cannot be an automatic remedy for accumulated problems and service productivity. The investment into human capital will also enhance the capacity of public agencies and enable public administrations to deliver e-government services to the citizens in a more efficient and timeless way.

7 Conclusion and Recommendations

The origins of e-government stem from the usage of Internet as a platform for new organisational structuring and as a medium for public services dissemination. In this regard, the rapid technological revolution withdraws the attention of the decision-makers to improve the public sector performance. E-readiness not only plays a critical role in the lives of citizens, business community, government employees and government agencies as it creates interaction among them but also helps them to benefit from government services in a transparent, efficient and a timeless way.

Initiatives taken on e-readiness will be instrumental in preparing societies to adapt to the changes in this rapidly moving digital age. In order to benefit from the progress of technology on a broader scale, governments need to invest in human capital, implement e-government programs that are oriented towards promoting the use of ICT, enhance ICT infrastructure and create the necessary regulatory framework for employing next generation networks. This will promote the use of Internet and help set the foundations for information societies which will participate more actively in rapidly evolving local and global economy. Countries which lack an appropriate infrastructure for promoting ICT use, have a weak legal and regulatory framework to make ICT work for a wider segment of the society, and lack the necessary human capital are likely to face challenges in the evolving digital economy and thus will have great difficulty in achieving transformation to e-government. Therefore, it is necessary to meet the challenges in e-government services which will lead to creating a transparent economy in which the government provides e-services to the citizens on a single portal and enable them to complete their transactions online with satisfaction.

The OIC Member Countries as a group increased their ERI slightly from 0.31 in 2005 to 0.34 in 2007. Although the OIC ERI average is still less than the World average, it is an undeniable fact that the e-government transformation requires sustainable development and sound economic structure to which most of the OIC Member Countries have hard time in reaching. The three components of the ERI; i.e. WMI, TII and HCI have shown a slight increase in the case of OIC as a group in the period 2005-2007.

The OIC Member Countries in the MENA, ECA and EAP regions have taken the Top 10 positions in the assessments done for the OIC as a region. Despite this fact; for all sub-indices of the ERI, the number of OIC Member Countries which failed to improve their ranks in the 2005-2007 period is more than the

number of OIC Member Countries succeeded in improving their ranks in the same period. The main reason for this is the ever-changing nature of the technology which requires the financial capacity to acquire the latest innovations and high calibre human resources to make the best use of the two factors in the e-government transformation. It should be remembered that an e-government portal which seemed unique in 2005 could become an ordinary and average portal in 2007 unless the most recent trends in transaction based secure applications and citizen-friendly portal interfaces are adopted.

It is noteworthy to mention that although the OIC Member Countries in the MENA region mainly occupy the Top 10 OIC Rank Lists in the WMI and TII, the Top 10 OIC HCI Rank List mainly consists of countries from the ECA. As the OIC Member Countries in the Central Asia possess strong human capital, they are likely to maintain a sustainable growth in e-government services if the e-government programs successfully overcome the challenges in the other indices. In general, the HCI appears to be a formidable challenge for most OIC Member Countries. Thus, those OIC Member Countries which achieved relatively high scores in the HCI appear to be at a very advantageous position with respect to the others. As a matter of fact, when the population's level of education and skills increases, the population is more likely to access and use modern ICT tools at increasing rates to facilitate their day-to-day activities. In particular, the OIC Member Countries in the SSA are lagging in the HCI in comparison to other regions and in the case of the WMI they show relatively weak performance compared to the other regions, thus when such facilitation is achieved at the OIC level, this will also bring greater economic benefits to those countries and increase public sector efficiency as well as strengthen prospects of e-government in those countries. The strikingly low scores in the Internet and Broadband Indices of the OIC Member Countries in the SSA region point out to inadequate telecommunications infrastructure which is a barrier to maintain and promote e-government services.

Although only 2 OIC Member Countries in the SSA region improved their rank positions in the HCI in 2007 compared to 2005, the scores of the OIC Member Countries in the SSA region remained in the range between 0.25 and 0.81 which point out that intensive work towards enhancing prospects in education have been ongoing for some time in those countries but more recently they have been showing poor performance. On the other hand, a reverse situation holds for the same countries in the TII as their scores in that index appear to be very low in spite of the fact that half of the Member Countries that improved their ranks in the period 2005-2007 are from the SSA region. All in all, the OIC Member Countries in the SSA region have comparatively weak performances in human capital yet they will not be severely handicapped by this outcome if they take adequate actions to use their human capital for achieving a desired outcome in e-government services. This can be accomplished if those countries reverse the falling performance in the HCI. In fact, the growth in the demand for cellular and main telephone lines in the SSA region will increase more and more with the spread in the use of the Internet. Furthermore, broadband services will make the prospects in the e-government transformation much better for them as high speed connections will provide more efficient services in e-government by enhancing the ease of access to the e-government applications. Consequently, the OIC Member Countries can achieve higher scores in the ERI by taking action in the delivery of vital public services; and fostering citizen's access to public and official information through Internet access which requires using modern ICT tools on a broader scale.

Given this state of affairs, the following recommendations are suggested for making e-government initiatives successful at the OIC level. The first set of recommendations deal with setting the foundation for the e-government transformation. These act as guidelines for the OIC Member Countries that lack human capital and technologic infrastructure and/or whose e-government programs are still in an early phase. The second set of recommendations focus on the efforts for shaping an effective and sustainable e-government environment in the public sector of the OIC Member Countries that are relatively more experienced in e-government applications. Finally, the third set of recommendations express the cooperation methods at the OIC level to enhance the capacity building of the Member Countries in e-government applications, and increase the productivity and quality of the e-government applications in the OIC Member Countries.

1) The Recommendations for Setting the Foundation for the E-Government Transformation:
    a. Human capital emerges as a priority area for development in most OIC Member Countries to prepare their nations for e-government transformation. Therefore, a legal and regulatory framework should exist to ensure that education attainment in schools include teachings on ICT use to ensure that future generations are adept with technological advancements.
    b. The OIC Member Countries should enhance their efforts to increase computer penetration rates to bridge the gap in digital divide. For the Member Countries without regular supply of electricity needed to operate those computer systems, alternative energy sources should be taken into consideration. Furthermore, Internet service providers should be supported with subsidies so that they can invest in the ICT infrastructure to offer high speed Internet connection at competitive prices.
    c. Careful and comprehensive studies should be carried out for the technology selection for the nation. It should be kept in mind that the computers are not the only factors to be considered but also the people need to be equipped with adequate training and at the same time have a broad vision to complete the process of e-government transformation.
2) The Recommendations for an Effective and Sustainable E-Government Environment:
    a. The OIC Member Countries should have a strategic plan which will be accepted as a roadmap to lead their efforts in making their e-government programs successful and serve as a clear methodology for the current and prospective e-government programs. With a developed strategic plan, the decision makers in charge of carrying out e-government projects can track their progress on carrying the current applications to the digital platform. Staff with high technical aptitudes should take part in the development of the strategic plan. In addition, e-government system development should also involve employees in all levels as this will set the foundation for a more productive and innovative e-government structure as the employees can contribute to the e-government strategic plan development with their own experiences which stem as a result of their interaction with the citizens for the provision of government services.
    b. The requests of the citizens, businesses and civil servants should be taken into consideration when an e-government system is being developed. The e-government

applications developed should embrace citizens from various educational backgrounds by providing user friendly applications. The local cultural context should also be observed during the development of e-government applications. In this regard, before putting an e-government application on-line several tests including the look and feel of the user interface, and user experiences from various computer literacy levels should be conducted.

c. The public institutions which want to provide their services through an e-government channel need to have an understanding of each administrative process on a step by step basis in order to maintain transparency. The process steps should be documented in Business Understanding Documents (BUD) which will inform the decision makers about the administrative context and give them the ability to make informed choices while transforming paper-based processes into digital and online applications. The civil servants should also be informed about the BUDs to have a shared understanding of all processes. This can also be a jumping point for the new innovations.

d. Life-long learning should be an integral part of the sustainable e-government environment. As technology develops, it will affect people and processes. To overcome the uncertainties which come with this change, the decision makers should create a learning environment where all the staff shares their experiences and contributes to the creation of a knowledgebase or a common memory to sustain the e-government environment.

e. Policy makers should also formulate and implement an ICT strategy in line with the e-government strategy of the government. The ICT strategic plan requires the ICT department in each public institution to play an active role in the formulation of e-government planning and get involved in the decision making process. The ICT strategy should include the rules and procedures to manage ICT planning, capacity allotment, software development, competitive remuneration scheme for the key IT staff, the education and service rendering for e-government initiatives.

f. The OIC Member Countries should build a capacity to control resources and IT abilities to develop and carry out e-government services based on the needs of related stakeholders. As a result, both technical and managerial/organisational expertise together with high-calibre IT staff is needed to provide e-government services.

g. Policy makers should take the necessary measures to provide a secure e-government experience for the end users. The IT security of the e-government systems should be recorded in a "Digital Security and Business Continuity Document". From the end user side, security should be provided with affordable authentication technologies of electronic and/or mobile signatures for making online transactions more reliable in e-government portals.

h. The OIC Member Countries should calculate the total cost of ownership of both the proprietary and open source based technologies for the e-government environment. The systems offering long term inexpensive total cost of ownership should be considered for being acquired.

i. To promote the use of e-government services, citizens should be provided with incentives to carry out their transactions online.

3) The Recommendations for Cooperation and Sharing of Experiences at the OIC Level:
    a. The OIC Member Countries need to apply performance measures to ensure that e-government services are implemented effectively and overcome challenges in e-government through establishing both real and virtual dialogue environments among stakeholders at the national, regional and OIC levels.
    b. The e-government experiences of the Member Countries should be shared on a common platform on a regular basis which will pave the way for successful and effective e-government applications among the OIC Member Countries and establishing a dialogue environment between e-government experts of the OIC Member Countries. On this platform, the OIC Member Countries should be able to discover answers for their problems and any other arising issues in their e-government initiatives. In this connection, SESRIC invites the decision makers of OIC Member Countries in e-government initiatives to the "International Conference on e-Government: Sharing Experiences" (eGOVsharE2009) which will take place on December 8-11, 2009 in Antalya, Turkey. The main objective of the eGOVsharE2009 Conference is to provide a platform for leaders, public managers and professionals, researchers as well as academics to share their ideas and research results. However, the conference also will explore collaboration potentials through the exchange of practical experiences in e-government project implementations within the OIC region as well.
    c. In addition to the aforementioned common platform for sharing e-government experiences among the OIC Member Countries, an electronic network should be established to assist the exchange of information, technologies, and experiences on e-government strategies and initiatives.
    d. To foster overall capacity-building of the OIC Member Countries in their e-government initiatives, a review at the OIC level should be made to bring out the training needs for the technical and non-technical public sector staff. In this respect, the Training and Technical Cooperation Department of the SESRIC can organise activities oriented towards e-Government Capacity Building through its Capacity Building Programme (CBP) based on the aforementioned review.

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STATISTICAL APPENDIX

Statistical Appendix

Table A.1: E-Government Readiness Index Values and Ranks of the OIC Member Countries, 2005 vs. 2007

Country	Region	E-Government Readiness Index (ERI)				
		ERI, 2007	Rank, 2007	ERI, 2005	Rank, 2005	Rank Change
Afghanistan	South Asia	0.2048	167	0.1490	168	▲1
Albania	Europe & Central Asia	0.4670	86	0.3732	102	▲16
Algeria	Middle East & North Africa	0.3515	121	0.3242	123	▲2
Azerbaijan	Europe & Central Asia	0.4609	89	0.3773	101	▲12
Bahrain	Middle East & North Africa	0.5723	42	0.5282	53	▲11
Bangladesh	South Asia	0.2936	142	0.1762	162	▲20
Benin	Sub-Saharan Africa	0.1860	171	0.2309	151	▼20
Brunei	East Asia & Pacific	0.4667	87	0.4475	73	▼14
Burkina Faso	Sub-Saharan Africa	0.1542	176	0.1329	172	▼4
Cameroon	Sub-Saharan Africa	0.2734	149	0.2500	145	▼4
Chad	Sub-Saharan Africa	0.1047	182	0.1433	169	▼13
Comoros	Sub-Saharan Africa	0.1896	170	0.1974	155	▼15
Côte d'Ivoire	Sub-Saharan Africa	0.1853	173	0.1820	160	▼13
Djibouti	Middle East & North Africa	0.2279	157	0.2381	149	▼8
Egypt	Middle East & North Africa	0.4767	79	0.3793	99	▲20
Gabon	Sub-Saharan Africa	0.3228	129	0.2928	131	▲2
Gambia	Sub-Saharan Africa	0.2253	159	0.1736	163	▲4
Guinea	Sub-Saharan Africa	0.1402	180	0.1396	170	▼10
Guinea-Bissau	Sub-Saharan Africa	0.1521	177	0.1336	180	▲3
Guyana	Latin America & Caribbean	0.4375	97	0.3985	89	▼8
Indonesia	East Asia & Pacific	0.4107	106	0.3819	96	▼10
Iran	Middle East & North Africa	0.4067	108	0.3813	98	▼10
Iraq	Middle East & North Africa	0.2690	151	0.3334	118	▼33
Jordan	Middle East & North Africa	0.5480	50	0.4639	68	▲18
Kazakhstan	Europe & Central Asia	0.4743	81	0.4813	65	▼16
Kuwait	Middle East & North Africa	0.5202	57	0.4431	75	▲18
Kyrgyzstan	Europe & Central Asia	0.4195	102	0.4417	76	▼26
Lebanon	Middle East & North Africa	0.4840	74	0.4560	71	▼3
Libya	Middle East & North Africa	0.3546	120	0.3091	180	▲60
Malaysia	East Asia & Pacific	0.6063	34	0.5706	43	▲9
Maldives	South Asia	0.4491	95	0.4321	77	▼18
Mali	Sub-Saharan Africa	0.1591	175	0.0925	173	▼2
Mauritania	Sub-Saharan Africa	0.2028	168	0.1723	164	▼4
Morocco	Middle East & North Africa	0.2944	140	0.2774	138	▼2
Mozambique	Sub-Saharan Africa	0.2559	152	0.2448	146	▼6
Niger	Sub-Saharan Africa	0.1142	181	0.0661	174	▼7
Nigeria	Sub-Saharan Africa	0.3063	136	0.2758	139	▲3
Oman	Middle East & North Africa	0.4691	84	0.3405	112	▲28
Pakistan	South Asia	0.3160	131	0.2836	136	▲5
Qatar	Middle East & North Africa	0.5314	53	0.4895	62	▲9
Saudi Arabia	Middle East & North Africa	0.4935	70	0.4105	80	▲10
Senegal	Sub-Saharan Africa	0.2531	153	0.2238	153	▲0
Sierra Leone	Sub-Saharan Africa	0.1463	178	0.1639	167	▼11
Somalia	Sub-Saharan Africa	N/A	183	0.0024	180	▼3
Sudan	Sub-Saharan Africa	0.2186	161	0.2370	150	▼11
Suriname	Latin America & Caribbean	0.3472	123	0.3449	110	▼13
Syria	Middle East & North Africa	0.3614	119	0.2871	132	▲13
Tajikistan	Europe & Central Asia	0.3150	132	0.3346	117	▼15
Togo	Sub-Saharan Africa	0.2191	160	0.2274	152	▼8
Tunisia	Middle East & North Africa	0.3458	124	0.3310	121	▼3
Turkey	Europe & Central Asia	0.4834	76	0.4960	60	▼16
Turkmenistan	Europe & Central Asia	0.3262	128	0.3225	180	▲52
Uganda	Sub-Saharan Africa	0.3133	133	0.3081	125	▼8
United Arab Emirates	Middle East & North Africa	0.6301	32	0.5718	42	▲10
Uzbekistan	Europe & Central Asia	0.4057	109	0.4114	79	▼30
Yemen	Middle East & North Africa	0.2142	164	0.2125	154	▼10

Table A.2: Web Measurement Index Values and Ranks of the OIC Member Countries, 2005 vs. 2007

Country	Region	Web Measurement Index (WMI)				
		WMI, 2007	Rank, 2007	WMI, 2005	Rank, 2005	Rank Change
Afghanistan	South Asia	0.2676	119	0.1769	124	▲5
Albania	Europe & Central Asia	0.3913	80	0.1615	136	▲56
Algeria	Middle East & North Africa	0.2241	129	0.2462	104	▼25
Azerbaijan	Europe & Central Asia	0.3946	78	0.1808	123	▲45
Bahrain	Middle East & North Africa	0.5201	44	0.4192	67	▲23
Bangladesh	South Asia	0.3512	89	0.0731	158	▲69
Benin	Sub-Saharan Africa	0.1237	151	0.2385	108	▼43
Brunei	East Asia & Pacific	0.2642	121	0.2462	105	▼16
Burkina Faso	Sub-Saharan Africa	0.1940	137	0.2327	109	▼28
Cameroon	Sub-Saharan Africa	0.1371	149	0.0962	150	▲1
Chad	Sub-Saharan Africa	0.0134	186	0.0077	179	▼7
Comoros	Sub-Saharan Africa	0.0268	183	0.0538	166	▼17
Côte d'Ivoire	Sub-Saharan Africa	0.0635	170	0.0538	167	▼3
Djibouti	Middle East & North Africa	0.1137	152	0.1731	125	▼27
Egypt	Middle East & North Africa	0.6054	28	0.4462	59	▲31
Gabon	Sub-Saharan Africa	0.0769	163	0.0923	154	▼9
Gambia	Sub-Saharan Africa	0.1739	142	0.0962	151	▲9
Guinea	Sub-Saharan Africa	0.0702	166	0.0385	173	▲7
Guinea-Bissau	Sub-Saharan Africa	0.0234	184	0	180	▼4
Guyana	Latin America & Caribbean	0.2375	127	0.1846	122	▼5
Indonesia	East Asia & Pacific	0.3344	92	0.2962	84	▼8
Iran	Middle East & North Africa	0.2575	123	0.2962	83	▼40
Iraq	Middle East & North Africa	0.1070	156	0.0538	168	▲12
Jordan	Middle East & North Africa	0.6054	28	0.4346	63	▲35
Kazakhstan	Europe & Central Asia	0.3211	95	0.4500	58	▼37
Kuwait	Middle East & North Africa	0.4147	73	0.2500	103	▲30
Kyrgyzstan	Europe & Central Asia	0.2977	105	0.3654	75	▼30
Lebanon	Middle East & North Africa	0.3913	80	0.3423	77	▼3
Libya	Middle East & North Africa	0.0803	161	0	180	▲19
Malaysia	East Asia & Pacific	0.6756	17	0.5769	41	▲24
Maldives	South Asia	0.2943	106	0.3115	82	▼24
Mali	Sub-Saharan Africa	0.1773	139	0.0615	162	▲23
Mauritania	Sub-Saharan Africa	0.0602	175	0.0692	159	▼16
Morocco	Middle East & North Africa	0.2074	134	0.2385	106	▼28
Mozambique	Sub-Saharan Africa	0.3110	97	0.2788	91	▼6
Niger	Sub-Saharan Africa	0.0736	164	0.0115	178	▲14
Nigeria	Sub-Saharan Africa	0.2241	129	0.2231	113	▼16
Oman	Middle East & North Africa	0.4849	52	0.1731	128	▲76
Pakistan	South Asia	0.4247	70	0.4269	65	▼5
Qatar	Middle East & North Africa	0.3913	80	0.3269	79	▼1
Saudi Arabia	Middle East & North Africa	0.4649	60	0.3769	73	▲13
Senegal	Sub-Saharan Africa	0.3077	99	0.2538	96	▼3
Sierra Leone	Sub-Saharan Africa	0.0569	176	0.0962	152	▼24
Somali	Sub-Saharan Africa	0	190	0	180	▼10
Sudan	Sub-Saharan Africa	0.0635	170	0.1615	135	▼35
Suriname	Latin America & Caribbean	0.0368	179	0.0500	170	▼9
Syria	Middle East & North Africa	0.2408	125	0.0654	161	▲36
Tajikistan	Europe & Central Asia	0.0368	179	0.0615	163	▼16
Togo	Sub-Saharan Africa	0.0870	157	0.0308	174	▲17
Tunisia	Middle East & North Africa	0.1304	150	0.1538	139	▼11
Turkey	Europe & Central Asia	0.4214	71	0.5231	46	▼25
Turkmenistan	Europe & Central Asia	0.0468	177	0	180	▲3
Uganda	Sub-Saharan Africa	0.2676	119	0.2154	117	▼2
United Arab Emirates	Middle East & North Africa	0.7157	12	0.6115	32	▲20
Uzbekistan	Europe & Central Asia	0.2742	114	0.2731	93	▼21
Yemen	Middle East & North Africa	0.0736	164	0.0962	153	▼11

Table A.3: Telecommunication Infrastructure Index Values and Ranks of the OIC Member Countries, 2005 vs. 2007

Country	Region	Telecommunication Infrastructure Index (TII)				
		TII, 2007	Rank, 2007	TII, 2005	Rank, 2005	Rank Change
Afghanistan	South Asia	0.0158	169	0.0020	190	▲21
Albania	Europe & Central Asia	0.1251	97	0.0680	106	▲9
Algeria	Middle East & North Africa	0.1230	100	0.0365	133	▲33
Azerbaijan	Europe & Central Asia	0.1077	104	0.0712	104	⇵0
Bahrain	Middle East & North Africa	0.3346	46	0.3152	37	▼9
Bangladesh	South Asia	0.0246	153	0.0055	180	▲27
Benin	Sub-Saharan Africa	0.0363	145	0.0142	158	▲13
Brunei	East Asia & Pacific	0.2653	60	0.2264	55	▼5
Burkina Faso	Sub-Saharan Africa	0.0126	173	0.0060	174	▲1
Cameroon	Sub-Saharan Africa	0.0266	151	0.0139	159	▲8
Chad	Sub-Saharan Africa	0.0075	180	0.0023	188	▲8
Comoros	Sub-Saharan Africa	0.0137	171	0.0082	166	▼5
Côte d'Ivoire	Sub-Saharan Africa	0.0391	140	0.0223	149	▲9
Djibouti	Middle East & North Africa	0.0202	162	0.0211	151	▼11
Egypt	Middle East & North Africa	0.0886	116	0.0717	103	▼13
Gabon	Sub-Saharan Africa	0.0973	109	0.0662	109	⇵0
Gambia	Sub-Saharan Africa	0.0530	132	0.0248	145	▲13
Guinea	Sub-Saharan Africa	0.0056	186	0.0102	164	▼22
Guinea-Bissau	Sub-Saharan Africa	0.0159	168	0.0107	163	▼5
Guyana	Latin America & Caribbean	0.1375	93	0.1209	80	▼13
Indonesia	East Asia & Pacific	0.0702	122	0.0494	119	▼3
Iran	Middle East & North Africa	0.1747	80	0.1079	88	▲8
Iraq	Middle East & North Africa	0.0127	172	0.0164	155	▼17
Jordan	Middle East & North Africa	0.1693	82	0.0971	91	▲9
Kazakhstan	Europe & Central Asia	0.1306	96	0.0638	111	▲15
Kuwait	Middle East & North Africa	0.2777	55	0.2694	47	▼8
Kyrgyzstan	Europe & Central Asia	0.0475	135	0.0398	129	▼6
Lebanon	Middle East & North Africa	0.1930	76	0.1857	62	▼14
Libya	Middle East & North Africa	0.1170	101	0.0573	113	▲12
Malaysia	East Asia & Pacific	0.3022	49	0.3048	42	▼7
Maldives	South Asia	0.1959	74	0.0748	102	▲28
Mali	Sub-Saharan Africa	0.0171	167	0.0060	174	▲7
Mauritania	Sub-Saharan Africa	0.0590	126	0.0278	140	▲14
Morocco	Middle East & North Africa	0.1349	95	0.0637	112	▲17
Mozambique	Sub-Saharan Africa	0.0206	161	0.0057	177	▲16
Niger	Sub-Saharan Africa	0.0036	191	0.0069	170	▼21
Nigeria	Sub-Saharan Africa	0.0492	133	0.0143	157	▲24
Oman	Middle East & North Africa	0.1559	87	0.1385	75	▼12
Pakistan	South Asia	0.0540	131	0.0238	147	▲16
Qatar	Middle East & North Africa	0.3549	43	0.3116	39	▼4
Saudi Arabia	Middle East & North Africa	0.2110	72	0.1445	72	⇵0
Senegal	Sub-Saharan Africa	0.0559	128	0.0275	142	▲14
Sierra Leone	Sub-Saharan Africa	0.0038	190	0.0056	179	▼11
Somalia	Sub-Saharan Africa	0.0144	170	0.0073	169	▼1
Sudan	Sub-Saharan Africa	0.0664	124	0.0293	138	▲14
Suriname	Latin America & Caribbean	0.1600	84	0.1148	82	▼2
Syria	Middle East & North Africa	0.0923	111	0.0458	123	▲12
Tajikistan	Europe & Central Asia	0.0172	166	0.0422	125	▼41
Togo	Sub-Saharan Africa	0.0364	144	0.0313	136	▼8
Tunisia	Middle East & North Africa	0.1636	83	0.0993	89	▲6
Turkey	Europe & Central Asia	0.2191	68	0.1648	68	⇵0
Turkmenistan	Europe & Central Asia	0.0382	141	0.0375	132	▼9
Uganda	Sub-Saharan Africa	0.0184	164	0.0090	165	▲1
United Arab Emirates	Middle East & North Africa	0.3813	38	0.3639	34	▼4
Uzbekistan	Europe & Central Asia	0.0381	142	0.0510	116	▼26
Yemen	Middle East & North Africa	0.0286	149	0.0413	127	▼22

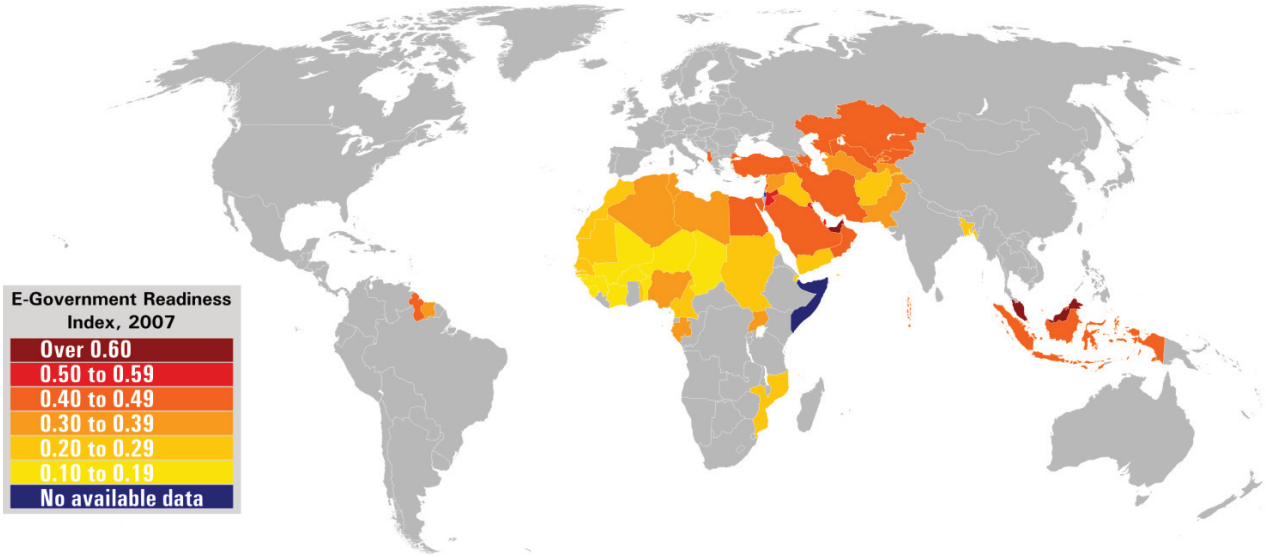
Table A.4: Human Capital Index Values and Ranks of the OIC Member Countries, 2005 vs. 2007

Country	Region	Human Capital Index (HCI)				
		HCI, 2007	Rank, 2007	HCI, 2005	Rank, 2005	Rank Change
Afghanistan	South Asia	0.3293	178	0.2680	175	▼3
Albania	Europe & Central Asia	0.8869	64	0.8900	57	▼7
Algeria	Middle East & North Africa	0.7114	131	0.6900	130	▼1
Azerbaijan	Europe & Central Asia	0.8822	68	0.8800	64	▼4
Bahrain	Middle East & North Africa	0.8640	87	0.8500	84	▼3
Bangladesh	South Asia	0.5033	164	0.4500	159	▼5
Benin	Sub-Saharan Africa	0.4000	173	0.4400	162	▼11
Brunei	East Asia & Pacific	0.8769	72	0.8700	69	▼3
Burkina Faso	Sub-Saharan Africa	0.2549	182	0.1600	178	▼4
Cameroon	Sub-Saharan Africa	0.6604	140	0.6400	137	▼3
Chad	Sub-Saharan Africa	0.2959	179	0.4200	164	▼15
Comoros	Sub-Saharan Africa	0.5334	158	0.5300	148	▼10
Côte d'Ivoire	Sub-Saharan Africa	0.4570	168	0.4700	158	▼10
Djibouti	Middle East & North Africa	0.5531	151	0.5200	150	▼1
Egypt	Middle East & North Africa	0.7323	129	0.6200	141	▲12
Gabon	Sub-Saharan Africa	0.8015	109	0.7200	125	▲16
Gambia	Sub-Saharan Africa	0.4504	169	0.4000	167	▼2
Guinea	Sub-Saharan Africa	0.3469	177	0.3700	174	▼3
Guinea-Bissau	Sub-Saharan Africa	0.4209	172	0.3900	169	▼3
Guyana	Latin America & Caribbean	0.9435	38	0.8900	57	▲19
Indonesia	East Asia & Pacific	0.8299	99	0.8000	101	▲2
Iran	Middle East & North Africa	0.7923	111	0.7400	117	▲6
Iraq	Middle East & North Africa	0.6922	134	0.9300	37	▼97
Jordan	Middle East & North Africa	0.8677	85	0.8600	77	▼8
Kazakhstan	Europe & Central Asia	0.9759	16	0.9300	37	▲21
Kuwait	Middle East & North Africa	0.8714	81	0.8100	100	▲19
Kyrgyzstan	Europe & Central Asia	0.9171	46	0.9200	42	▼4
Lebanon	Middle East & North Africa	0.8706	82	0.8400	89	▲7
Libya	Middle East & North Africa	0.8749	74	0.8700	69	▼5
Malaysia	East Asia & Pacific	0.8390	97	0.8300	92	▼5
Maldives	South Asia	0.8617	89	0.9100	44	▼45
Mali	Sub-Saharan Africa	0.2823	180	0.2100	176	▼4
Mauritania	Sub-Saharan Africa	0.4934	165	0.4200	164	▼1
Morocco	Middle East & North Africa	0.5437	153	0.5300	148	▼5
Mozambique	Sub-Saharan Africa	0.4345	170	0.4500	159	▼11
Niger	Sub-Saharan Africa	0.2668	181	0.1800	177	▼4
Nigeria	Sub-Saharan Africa	0.6480	143	0.5900	145	▲2
Oman	Middle East & North Africa	0.7659	122	0.7100	126	▲4
Pakistan	South Asia	0.4659	167	0.4000	167	▬0
Qatar	Middle East & North Africa	0.8521	96	0.8300	92	▼4
Saudi Arabia	Middle East & North Africa	0.8056	108	0.7100	126	▲18
Senegal	Sub-Saharan Africa	0.3940	174	0.3900	169	▼5
Sierra Leone	Sub-Saharan Africa	0.3810	175	0.3900	169	▼6
Somalia	Sub-Saharan Africa	N/A	183	0.0000	179	▼4
Sudan	Sub-Saharan Africa	0.5307	159	0.5200	150	▼9
Suriname	Latin America & Caribbean	0.8542	93	0.8700	69	▼24
Syria	Middle East & North Africa	0.7549	125	0.7500	113	▼12
Tajikistan	Europe & Central Asia	0.8993	56	0.9000	51	▼5
Togo	Sub-Saharan Africa	0.5381	155	0.6200	141	▼14
Tunisia	Middle East & North Africa	0.7498	126	0.7400	117	▼9
Turkey	Europe & Central Asia	0.8116	106	0.8000	101	▼5
Turkmenistan	Europe & Central Asia	0.9019	55	0.9300	37	▼18
Uganda	Sub-Saharan Africa	0.6553	141	0.7000	129	▼12
United Arab Emirates	Middle East & North Africa	0.7908	112	0.7400	117	▲5
Uzbekistan	Europe & Central Asia	0.9088	50	0.9100	44	▼6
Yemen	Middle East & North Africa	0.5446	152	0.5000	154	▲2

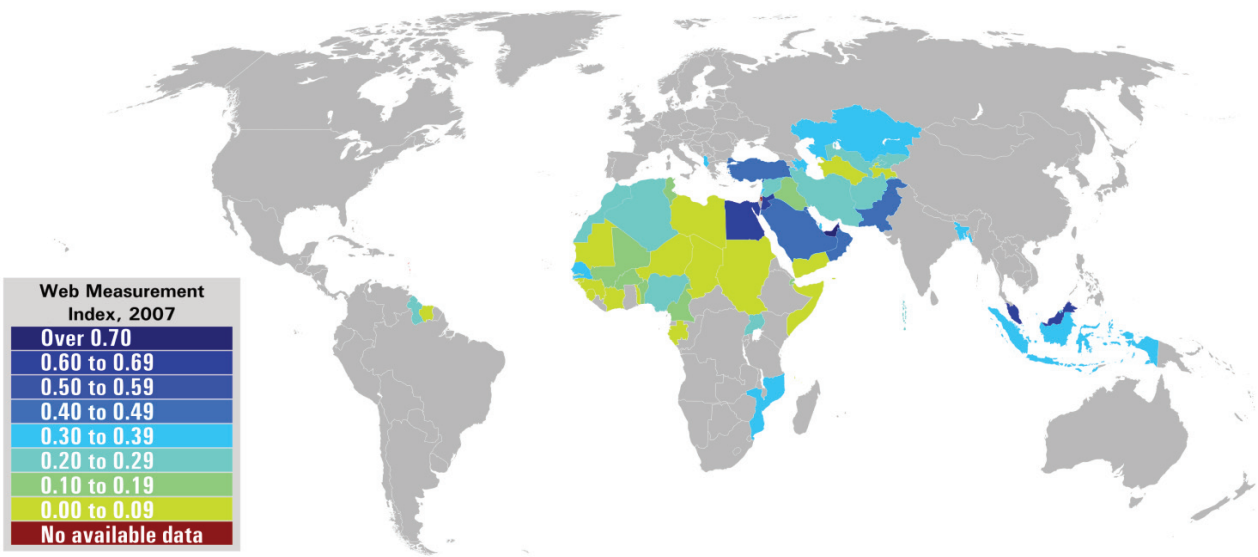
MAPS

Maps

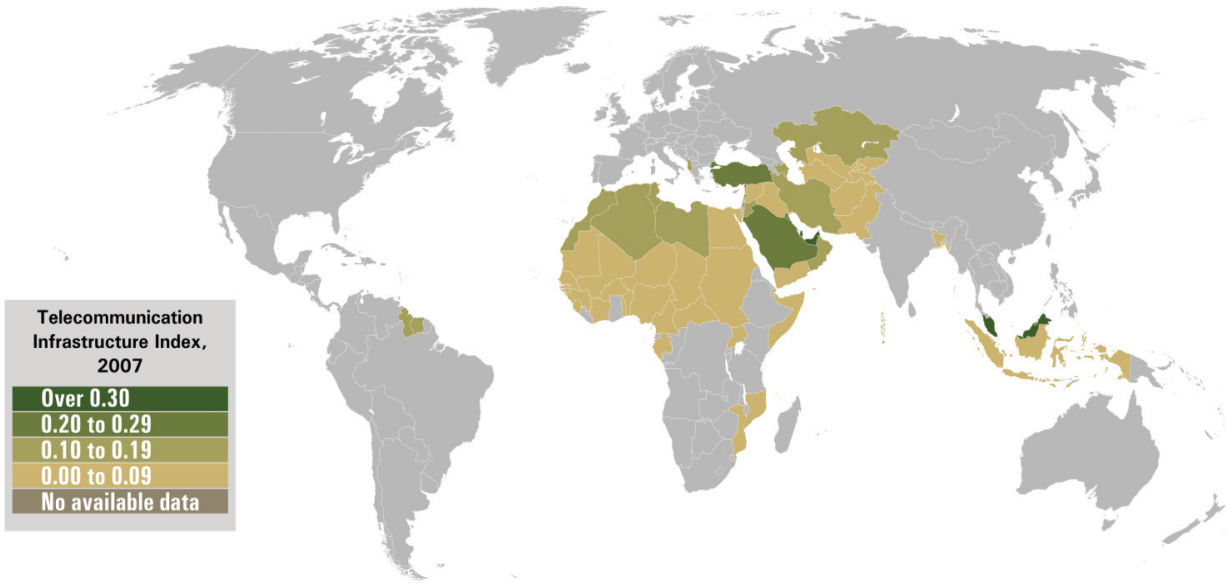
Map 1: E-Government Readiness Index of the OIC Member Countries, by Index Value Grouping, 2007



Map 2: Web Measurement Index of the OIC Member Countries, by Index Value Grouping, 2007



Map 3: Telecommunication Infrastructure Index of the OIC Member Countries, by Index Value Grouping, 2007



Map 4: Human Capital Index of the OIC Member Countries, by Index Value Grouping, 2007