

The Knowledge Society and Information and Communication Technologies in MENA countries: Diachrony and comparison

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Abstract

This article contains the result of a documentary research on the evolution throughout the 21st century of the state of the Knowledge Society (KS) in the MENA countries after the expansion of Information and Communication Technologies (ICT) based on observations made since 2001 in research and publications developed in the Spanish, Latin American, Maghreb and Mashreq academic spheres. The aim is to detect the changes that have occurred in the degree of implementation of KS and its link to the right to information, communication, and cyberspace, and its management in these countries. After a theoretical and conceptual tour, it is concluded that the empowerment of ICT is the key resource for strengthening civil society and its access to the KS. In a region with an inestimable demographic potential, however, large gaps remain in terms of the access of citizens in these countries to the KS. As a result, there are social and political relationships of dependency that could lead to the qualification of a new colonialism over knowledge. This study concludes that the empowerment of ICTs is the key resource for strengthening civil society and its access to the KS.

Keywords

MENA countries, Knowledge Society, ICT, digital divide, degree of development.

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Introduction

The purpose of this research is to carry out a documentary review in the aftermath of the Information and communication Technologies (ICT) expansion. Based on observations made since 2001 in the research and publications developed in the Spanish, Latin American, Maghreb and Mashreq academic spheres, the aim is to detect the changes that have occurred in the degree of implementation of Knowledge Society (KS) and its link to the right to information, communication, cyberspace and its management in these countries.

The goal is to determine if the KS is developed in the countries under observation and if citizens have free access to it. We also wonder if, in that case, these societies have a degree of sustainable and equitable economic, political, and cultural development of their population. These questions are intended to be answered throughout this text that analyzes the evolution throughout the 21st century of the state of the KS in the MENA countries.

The emergence of the so-called Arab spring made visible the symbiosis between the field of digital communication and the development of virtual citizenship in areas lacking full civil liberties. ICTs have been an essential and strategic element that has disseminated large flows of information that have facilitated new searches for knowledge and different forms of assimilation that have led to the development of new collective perceptions. The interactive nature of these technologies has drastically changed communication relationships and modes of interaction in recent years, fostering new ways of conceiving the world through technology and innovation in communication.

To do this, first of all, a theoretical explanation of the concepts used here is necessary for the sake of precision. Secondly, the evolution of the implementation of ICTs in the region during the period studied is taken into consideration, which will lead, in a third moment, to expose the aspects related to the social, political and cultural context of these countries and its relationship with the degree of development regarding the implementation, use and appropriation of ICTs. Fourthly, the problem derived from the forms of digital exclusion and its interrelation with the so-called fourth generation human rights is addressed.

This contribution is based on the data provided, among others, by the United Nations Development Program (UNDP), The Sustainable Development Goals (SDGs), UNESCO and its reports on education and culture in a digitized world, the World Bank, the International Telecommunication Union (ITU) or the International Labor Organization (ILO), as well as those theoretical contributions on the object analyzed, referring to the right to communication, information and cyberspace, the relationship of ICTs with human development,

youth and ICT, digital literacy, the evolution of culture in the digital age, or digital communication and social networks, among others.

From the diagnosis offered by the data provided in this research, it is clear that MENA countries need to take into account the need to overcome digital divides in order to advance the democratization of governance and the preservation of human rights.

Conceptual precisions

The Information, Communication and Knowledge Society, or Network Society (Castells, 2006), places us in a space of transformations of a very diverse nature operated in contemporary society and in its social, economic, political and cultural development. There are different definitions for the so-called Information Society, Communication Society, and Knowledge Society. This society, whatever name it is referred to, is linked to the new ways of producing information and knowledge and in which the development, production and management of this knowledge, ICTs and their use in economic, social, political and cultural, are key elements that not only define it, but also refer to its growth and evolution.

That development in contemporary society is related to the degree of implementation of Information and Communication Technologies (ICT) in said societies, since they enable both the Information Society and the Communication Society, which undoubtedly gives rise to the Knowledge Society (Velázquez, 2007, 2010, 2018).

From our perspective, the so-called Information and Communication societies are associated to the information and communication industry (market), whose purpose is to provide the necessary instruments for the acquisition and use of communication products (hardware and software) created for dissemination and exchange of information, communication and culture (Velázquez, 2018).

The possibility of accessing culture and the ability to interpret it for personal and professional growth is a vital issue in the information society. For this reason, the digital inequality experienced in many countries hinders the progress of citizens who suffer from a lack of infrastructure, high connection costs and a lack of training programmes (Vartanova, & Gladkova, 2022).

For the development of this society, it is necessary to establish some type of regulation of electronic communications, the connectivity of networks and platforms and the development of ICT research in areas such as digital content (e-content), electronic learning (e-learning), or the exchange of ideas for this electronic learning, cooperation for research in the field of ICT and Internet access, as well as computer and electronic engineering, education,

law, advertising and marketing and content creation or art, design, psychology or health sciences. These professions require skills that respond to technical, versatile communication and interpersonal skills, collaboration, leadership and the ability to work remotely, among others (Velázquez, 2021).

At this point, we need to talk about the access to the KS or Network Society (NS), which will not only be the one that has implemented, implements and experiments with the instruments and supports that the information and communication industry puts at its disposal, scope, but rather proposes alternatives and new ways of producing activities and knowledge.

The context of the MENA countries and human development: Politics, economy and culture

Figure 1

MENA countries



Source: Ahman Arouri (2014: 5)

The MENA region² comprises more than 472 million people spread across the Middle East and North Africa (World Bank, 2022). It is a population

² The countries MENA region at its widest geographical extent would be Algeria, Bahrain, Egypt, Djibouti, Iraq, Israel, Iran, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, the Occupied Palestinian Territories, Turkey, Oman, Qatar, Saudi Arabia, Syria, Tunisia, the United Arab Emirates, and Yemen.

numerically close to that of the European Union and that is included in the concept “Middle East and North Africa” as an analytical category that refers to a set of countries that share a historical past and cultural traits but that also contain a great diversity (Sestafe, 2019). The orientalist academic literature has contributed to the gestation of a homogeneous cultural perspective to observe the area and for this reason it is necessary to recognize the complexity and difference of situations to prevent the scientific study of their realities from making areas invisible or events that may be transcended. Since the end of the last century, the name MENA has been extended on the designation of a culture based on the experience of Islam, but also determined by a geostrategy linked to the production and circulation of oil between the Mediterranean Sea and the Indian Ocean mediating the Red Sea.

In the post-pandemic context, many countries in the area had planned to develop Internet-based economic projects to improve health, transport and education, see that without the help of investments, the ICT infrastructure is not capable of promoting the fourth industrial revolution, necessary to advance government and management and production systems (El Saadany, 2021).

There is a clear awareness that digital resources are essential in development prospects but involve complicated processes in MENA countries. The exception to this dynamic is Israel, the Emirates and Qatar according to the Digital Inclusion Index (Low, 2021). In this way, a digital divide is detected, that means that some advanced countries have launched 5G, the fifth generation of mobile networks, while that others are still on 4G.

The pandemic has exacerbated the digital divide in the area and has revealed the lack of capacity of some countries to enable new services online, blocking the improvement of public services and the economy. This technological deficit has meant that in the successive confinements caused by Covid-19, teleworking could not be enabled in many areas. Some authors consider that one of the features of the MENA region is that the digital transformation has been seen as a gap to be resolved and not as a strategic resource for innovation. The advances are located in the public sector and the private initiative has impediments to develop in the digital economy (Khanfir, 2022).

Even so, government institutions in most of MENA have not been prepared to help the most vulnerable people: their systems were not effective in identifying the most vulnerable segments of the population and, therefore, the need to digitize social assistance programs and bureaucratic procedures (Alilja et al, 2022). In an environment that has become even more unstable with the conflict in Ukraine – far in the territory but which has an economic and strategic

impact on the MENA zone, after the Covid-19 crisis – has overlapped this new turbulence of enormous dimensions. These critical periods have highlighted inequalities and deficits in building interconnections between infrastructures and services. This diagnosis should direct action towards considering the economic and health crisis as an opportunity for the countries of the region to make a transition towards new, more sustainable, inclusive and equitable development models (Belaid, 2021).

Demographically, the southern Mediterranean represents a huge consumer market for uses derived from the Internet and the potential for the future is multiplied by the greater activity of the group of young people and adolescents, the main consumers in an area with a very young population. But the companies warn of the difficulties they have due to the absence of regulatory laws that control digital rates. A regulation is necessary that allows countries greater strength when negotiating with large corporations. In any case, electronic transactions have increased in the region and awareness of the importance of digital fees is growing (Abdelsadek, 2021).

The legal update is therefore a challenge, necessary for the local ecosystem to assume new practices and lead innovation dynamics that promote digital entrepreneurship. For this, education must be linked to the initiative so that a mentality that assumes creativity and design thinking can be produced (Sonmez, & Monkachi, 2022). However, the current economic and health crisis provides a unique opportunity for the countries of the region to make a transition towards new models of development.

For this reason, the development of connectivity is vital, for information and the way it circulates are elements of social cohesion and growth of people. Universal access to the internet is an essential requirement for the construction of citizenship in these times. For these reasons, citizens today require full accessibility to ICT and KS. We are, therefore, facing an evolution that supposes a cultural change that transcends the idea of physical borders and that could have the capacity to promote regional integration and good, balanced and stable governance.

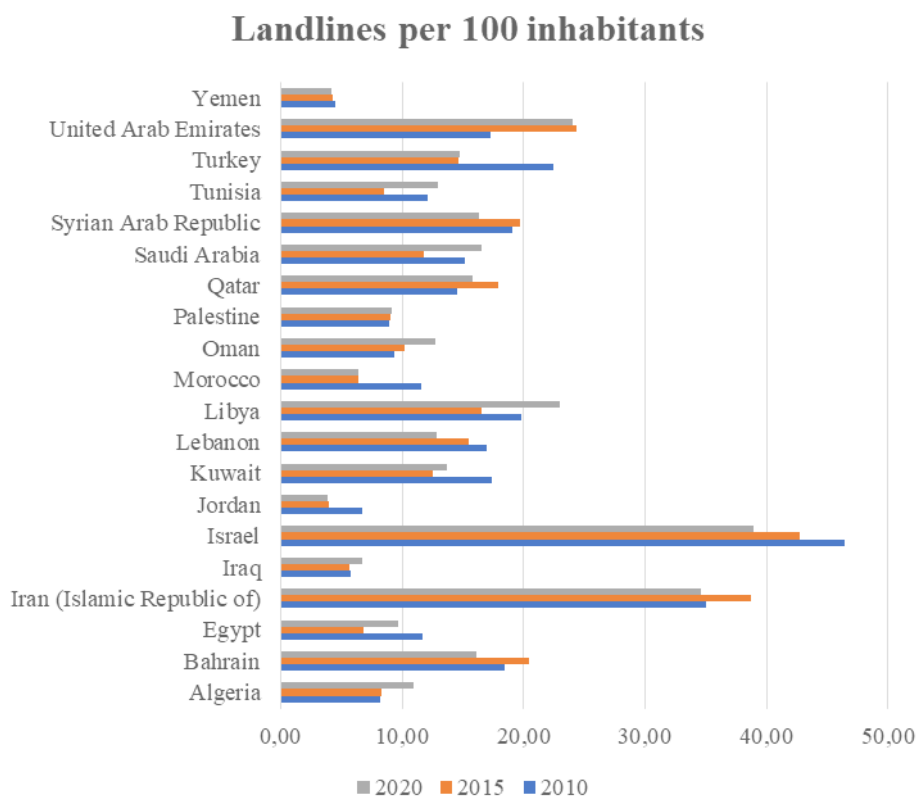
The MENA region, with a rich and diverse historical past, is also facing an identity challenge at a time when globalization is the predominant dynamic. The still latent conflicts exacerbate discourses based on religious and ethnic concepts and it is true that the struggles have led to new identities based on tribal and sectarian criteria in this space. According to the perspective of Allagui and Ayish (2017), the digital virtual environment has provided a space for the circulation of ideas and debates about cultural identities.

Moreover, in shaping the digital agenda of youth, common frameworks are formed in social networks. Some studies suggest that these ideas and information from abroad are represented in the context of their interpretation in connection with their local realities (Dunas, Babyna, Salikhova, & Gladkova 2023).

The overview of ICT development in the MENA region

In relation to communication infrastructures, a graph that shows fixed telephone lines per 100 inhabitants in the years 2010, 2015, and 2020 can be show (*Graph 1*).

Graph 1



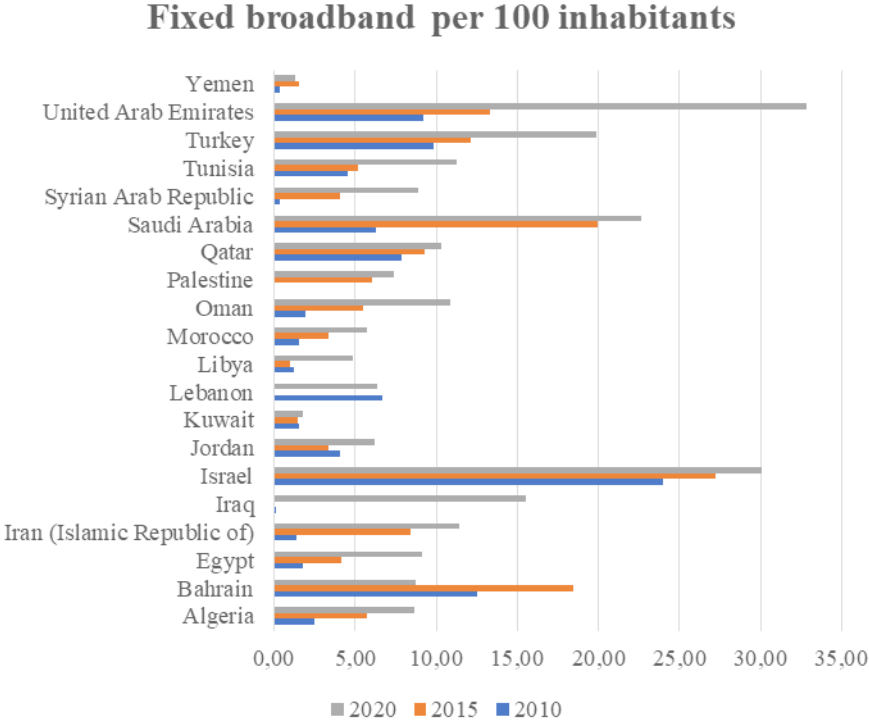
Source: Own elaboration based on ITU data³

Graph 1 shows the decrease in fixed telephony infrastructures precisely in the countries that lead the advance in digital implementation, such as Israel, the Emirates and Qatar. This is due to the fact that they have other resources that

³ URL: <https://www.itu.int/itu-d/reports/statistics/2021/11/15>

are progressively supplying the fixed telephone lines. These, however, continue to grow in nations that have suffered recent periods of instability such as Egypt, Libya, Algeria or Iraq.

Graph 2



Source: Own elaboration based on ITU data⁴

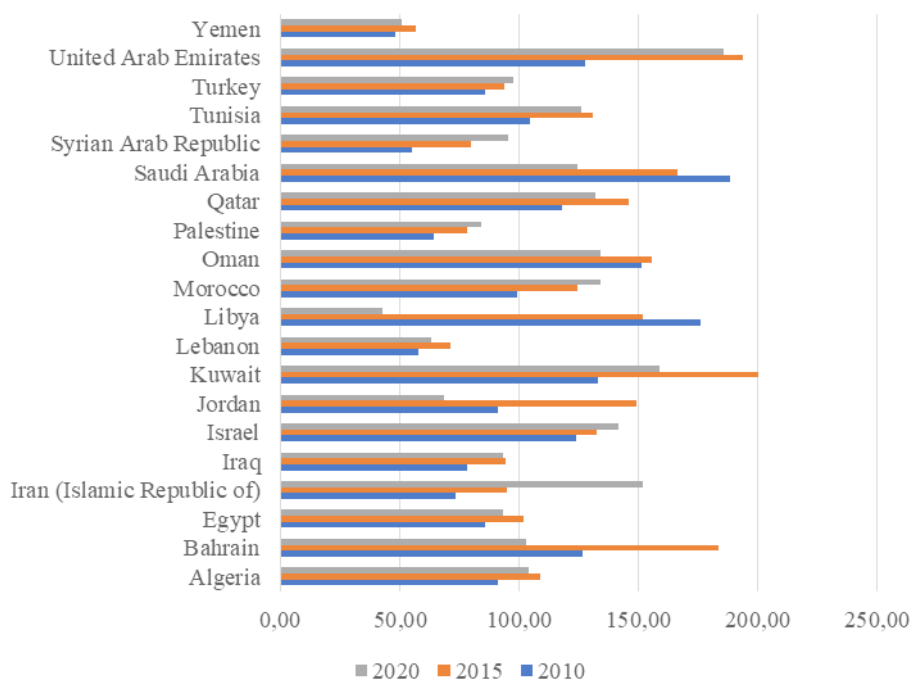
On the other hand, *Graph 2* shows the importance of having broadband households: the Emirates and Israel have the largest distribution, far apart from the rest of the countries. This supremacy coincides with the outstanding positions in the indicators of greatest progress in digital applications in different fields (Internet Society, 2020).

At the same time, it is interesting to observe the number of mobiles per 100 inhabitants, a proportion that is reflected in *Graph 3* and that demonstrates not only a diversification of digital tools, but also in areas with limited economic development, the increase in the use of mobile devices can be seen.

⁴ URL: <https://www.itu.int/itu-d/reports/statistics/2021/11/1>

Graph 3

Mobile subscription per 100 inhabitants



Source: Own elaboration based on ITU data⁵

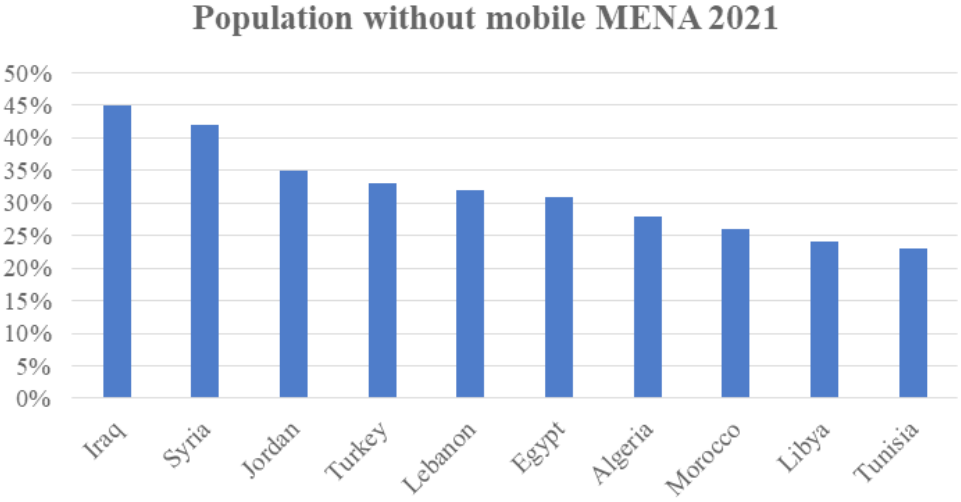
The graph shows that the great emergence of mobile telephony has already been taking place in the last ten years in the MENA zone, even in less developed countries such as Jordan, Algeria or Yemen. The trend of increasing new subscribers continues, however, growing, and according to the data provided and shown in the graph, a hypothetical forecast of 45 million subscribers in 2025 in this region can be calculated, which would mean the concentration here of a third of new users registering worldwide.

This would lead us to deduce that the growth in demand for mobile telephony is related to the nature of the demographics of the MENA region, which, unlike Europe, has a very young population for the most part. This age group consumes telephony as an essential commodity for their communication and circumvents the limitations of connectivity in their homes by going, for example, to cybercafés, which are real hubs for socializing in this area.

⁵ URL: <https://www.itu.int/itu-d/reports/statistics/2021/11/15>

Next, with *Graph 4* we make a comparison between the countries with data from the year 2021 in which we intend, from another perspective, to determine the population that does not have a mobile.

Graph 4

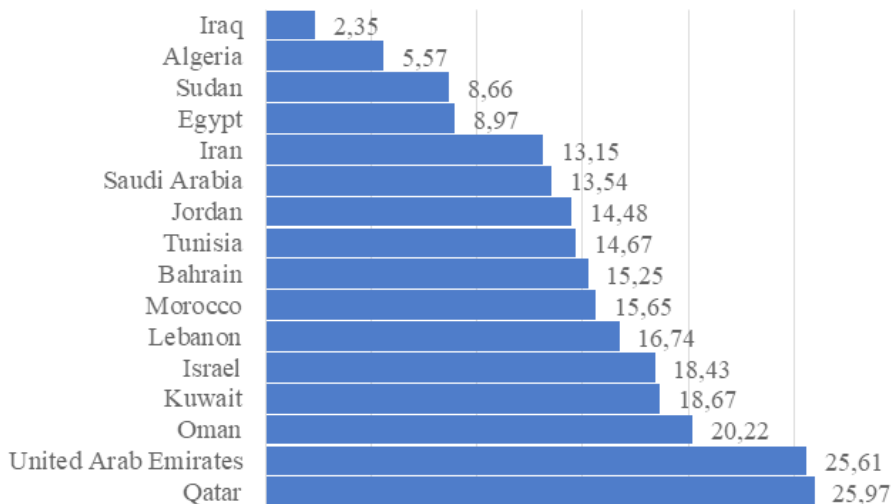


Source: Own elaboration based on Statista data⁶

The graph shows how the highest value is found in countries with developmental difficulties and that have been experiencing armed conflicts and political instability: Iraq and Syria head the list which the more of the 40% of the population without at mobile. Afterwards, the differences are no longer pronounced in the rest of the countries.

⁶ URL: <https://www.statista.com/statistics/1273919/mena-share-without-mobile-subscriptions-by-country>

Internet connection speed in MENA 2020, in Mbits

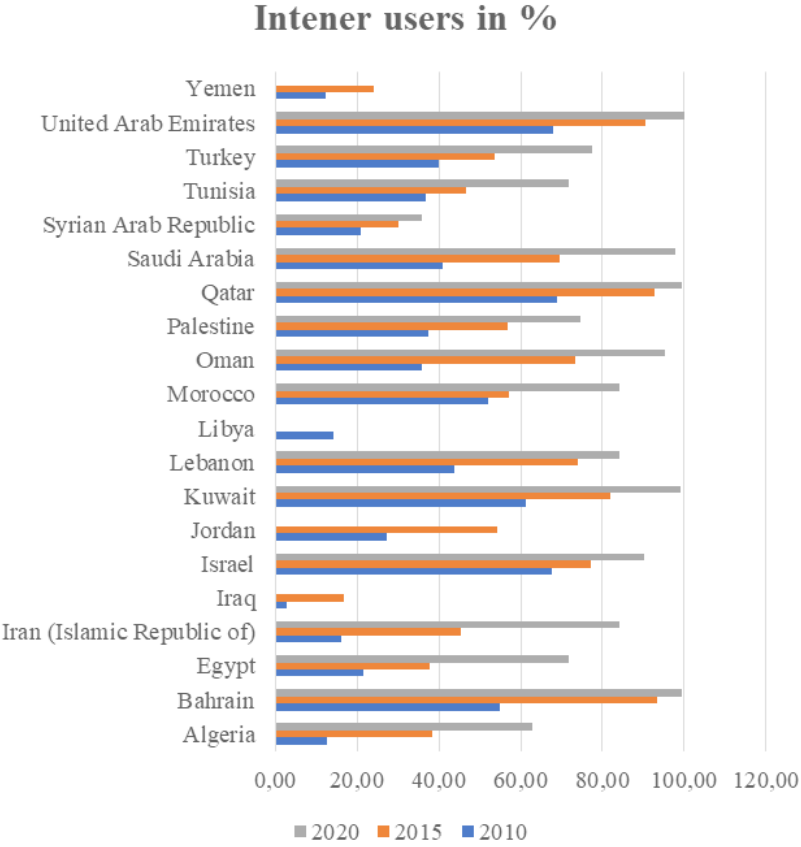


Source: Own elaboration based on Statista data⁷

Graph 5 shows the ranking of high-speed internet connection. In this case, the countries of the MENA zone with the greatest economic development clearly head the list. In addition, the extreme differences between countries are visualized, and from there it follows directly that the extension of digitization and its applications coincide with greater economic development. From these fixed and mobile telephony instruments and infrastructures, we go on to see the per cent of Internet users in these countries:

⁷ URL: <https://www.statista.com/forecasts/1169154/internet-connection-speed-in-mena-by-country>

Graph 6



Source: Own elaboration based on ITU data⁸

The graph shows that the use of the internet is extensively in the MENA countries. We must warn that there are no data from Yemen and Libya; but with this exception, the rest of the nations are in the range of 70 to 80 internet users per hundred inhabitants; a proportion that is linked to the use of social networks.

Forms of exclusion in a KS and fourth generation rights

In order to be part of the KS, it is necessary to have access to information and communication technologies and competence in their use because, otherwise, the so-called fourth generation rights, such as those related to information, communication and cyberspace, are violated. Another aspect to take into account in this context is that there are not only exclusions in access to technology, but also in the content that could be of interest to young people: topics related to

⁸ URL: <https://www.itu.int/itu-d/reports/statistics/2021/11/15>

youth policies are not given priority attention in many of the official authorised accounts of social networks (Gureeva, & Kireeva, 2023).

In this sense, we find substantial differences between the different countries that make up the MENA region. In this study, we intend to show the degree of governance and democratic freedoms and relate them to the levels of extension and use of the Internet. These aspects are reflected in the data collected in the following section.

Rights of access to the KS in MENA countries

In order to be able to freely use the resources of digitality, it is necessary for countries to have a clear commitment in their defense of human rights: firstly, political, economic and cultural rights and secondly, the rights to information, communication and cyberspace, the so-called fourth generation rights.

From this position we intend to determine the situation in which the different countries find themselves in relation to the fulfillment of human rights.

Table 1

Democracy freedom scores, year 2022

Country	Total score and status	Democracy percentage	Democracy score	Country Sort descending
Algeria	n/d	n/d	n/d	n/d
Bahrain	30 not free	16	8	6
Egypt	26 not free	12	10	4
Iran	16 not free	8	5	3
Iraq	41 partly free	11	16	14
Israel	n/d	n/d	n/d	n/d
Jordan	47 partly free	13	17	17
Kuwait	n/d	n/d	n/d	n/d
Lebanon	51 partly free	11	22	18
Libya	48 partly free	7	25	16
Morocco	53 partly free	15	22	16
Oman	n/d	n/d	n/d	n/d
Qatar	n/d	n/d	n/d	n/d
Saudi Arabia	n/d	n/d	n/d	n/d
Syria	n/d	n/d	n/d	n/d
Tunisia	63 partly free	16	28	19
Turkey	34 not free	15	10	9
United Arab Emirates	27 not free	12	9	6
Yemen	n/d	n/d	n/d	n/d

Source: Own elaboration based on data from Freedom House⁹

⁹ URL: <https://freedomhouse.org/countries/freedom-world/scores>

Table 2

Democracy freedom scores, year 2022 (continued)

Country	Total score and status	Political rights	Civil liberties
Algeria	32 not free	10	22
Bahrain	12 not free	2	10
Egypt	18 not free	6	12
Gaza Strip*	11 not free	3	8
Iran	14 not free	4	10
Iraq	29 not free	16	13
Israel	76 free	34	42
Jordan	33 not free	11	22
Kuwait	37 partly free	14	23
Lebanon	42 partly free	13	29
Libya	9 not free	1	8
Morocco	37 partly free	13	24
Oman	24 not free	6	18
Qatar	25 not free	7	18
Saudi Arabia	7 not free	1	6
Syria	1 not free	-3	4
Tunisia	64 partly free	26	38
Turkey	32 not free	16	16
United Arab Emirates	17 not free	5	12
Yemen	9 not free	1	8

Source: Own elaboration based on data from Freedom House¹⁰

¹⁰ Ibid.

Table 3

Internet freedom scores, year 2022

Country	Total score and status	Obstacles to access	Limits on content	Violations of user rights
Algeria	n/d	n/d	n/d	n/d
Bahrain	30 not free	16	8	6
Egypt	26 not free	12	10	4
Iran	16 not free	8	5	3
Iraq	41 partly free	11	16	14
Israel	n/d	n/d	n/d	n/d
Jordan	47 partly free	13	17	17
Kuwait	n/d	n/d	n/d	n/d
Lebanon	51 partly free	11	22	18
Libya	48 partly free	7	25	16
Morocco	53 partly free	15	22	16
Oman	n/d	n/d	n/d	n/d
Qatar	n/d	n/d	n/d	n/d
Saudi Arabia	n/d	n/d	n/d	n/d
Syria	n/d	n/d	n/d	n/d
Tunisia	63 partly free	16	28	19
Turkey	34 not free	15	10	9
United Arab Emirates	27 not free	12	9	6
Yemen	n/d	n/d	n/d	n/d

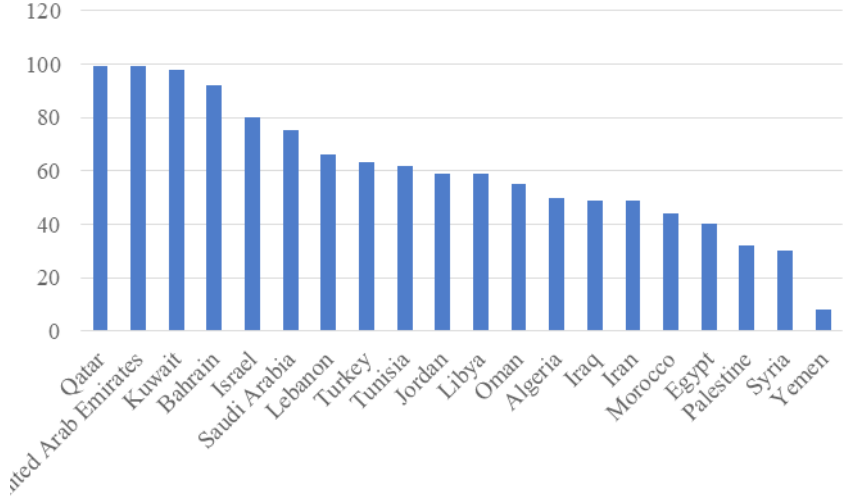
Source: Own elaboration based on data from Freedom House¹¹

Tables 1, 2 and 3 offer us indicators that point to the fact that the MENA zone continues with large areas of instability and that some countries are witnessing processes of worsening of their situation with an increase in violence and advances by anti-democratic forces. This is the case of Egypt, Syria, Bahrain, and Lebanon. The Middle East and North Africa, in the world comparison, offer us the worst proportional percentages regarding civil liberties. We have contrasted this finding with the data referring to the state of the active penetration of social networks in the MENA countries.

¹¹ Ibid.

Graph 7

Active social media penetration in MENA countries 2018, in %



Source: Own elaboration based on data from Statista¹²

Graph 7 shows that the upper part of the table is occupied by a good part of the Gulf countries and by Israel, a strip that coincides with the most economically advanced countries. However, the lower part houses Yemen, Syria, Palestine and Egypt, countries that are experiencing evident difficulties in their governance. In Syria, for example, reports confirm government control of telecommunications and this limits the free expression of groups such as journalists and human rights activists, which would limit communicative participation in the digital sphere (Davila-Ruhaak, Guruli, & Samaro, 2021). In this sense, social networks are virtual communities in which citizens show their opinions as a way of reinforcing or influencing the attitudes and thoughts of the rest of the community (Velázquez, & Simelio 2022).

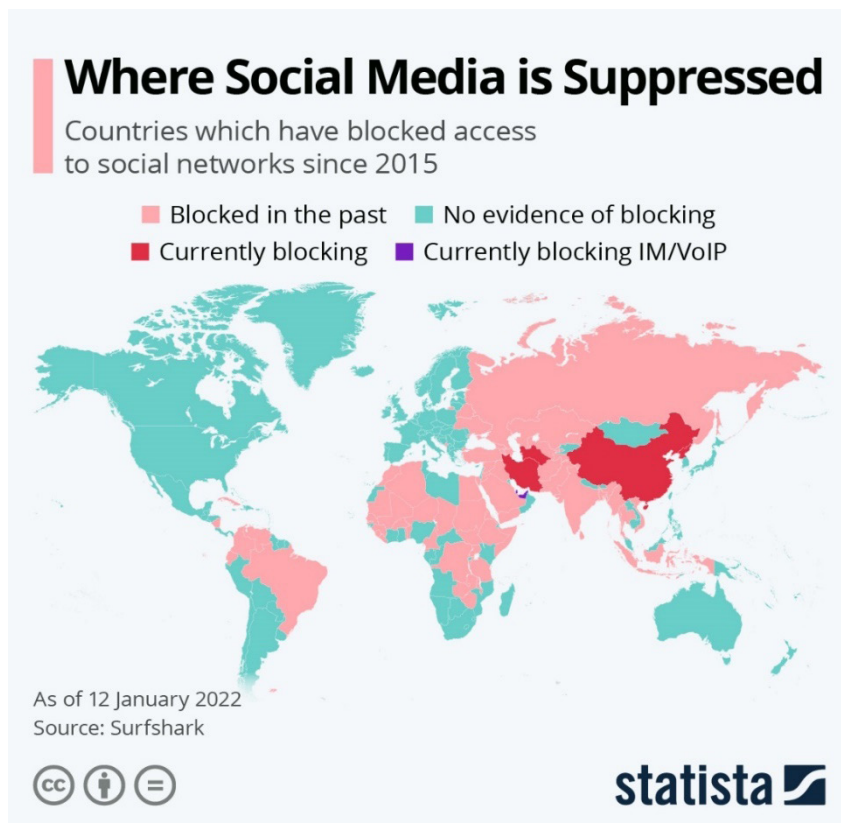
The media system is embedded in society with a structural component nature and contributes to maintaining public order and balance. For this function to be fulfilled harmoniously, freedom of expression is required. Another scenario is found in situations of violence: in cases of military attacks, for example, respect for freedom or diversity take a back seat to the ideal of national security (Vartanova, Gladkova, & Dunas, 2023). For this reason, it seems essential to us

¹² URL: <https://www.statista.com/statistics/309668/active-social-media-penetration-in-arab-countries/>

that opinions can flow freely, always within respect and the appropriate forms of expression.

We believe it is interesting in this vein to present a map of social networks blocking in the world:

Figure 2



Source: Statista¹³

It appears that there are no situations of direct censorship in social networks in MENA countries. However, pondering the map of freedom in the world and affecting a basic right such as freedom of expression, we see that in a large part of the region the limitations on rights persist to varying degrees. In this situation, evidence emerges that the potential of digitalization to increase the well-being of people is diminished, since the Internet can only become a tool for

¹³ URL: <https://www.statista.com/chart/23804/countries-blocking-social-media/>

empowerment if the following rights are recognized: universal Internet access, freedom of expression and association, access to knowledge, sharing of learning and creation of free software, privacy, network governance and awareness, protection and realization of one's own rights (Del Rio, 2012: 17) These aspects that the author points out seem to us to summarize clearly and precisely what must be followed to avoid exclusion from the KS for the citizens of the MENA countries. You can have access to the Internet, but if there is no freedom to use it, the effectiveness is null.

Gender perspective: the place of women in access to KS in the MENA countries

Faced with the opportunities for expansion that digital technologies contain, we must admit that they represent great potential for the realization of women's rights in the MENA zone; Internet access is a capital resource for their empowerment.

However, gender is a substantial category in our analysis; since the lack of opportunities to have digital services and the cultural contexts that place the use of technologies in male roles converge to build the digital gender gap. This concept is defined by the difference in opportunities to use ICT (Plan International, 2022) The constancy of this discrimination limits the possibilities it has become a tool to achieve real equality and the achievement of rights for women; including the digital ones (Kapiyo, 2002) We should not forget that in the world there are still almost 3 billion people who do not connect to the Internet and of them, the majority are women. The gender divide remains particularly pronounced in Africa (35% of men compared to 24 per cent of women) and the Arab States (68% of men compared to 56% of women) (ITU, 2021). In this way, gender, education, income and place of residence are presented as determining indicators in the use of the Internet; factors that tend to mean fewer opportunities for women (After Access, 2018).

On the other hand, the stereotypes about technology referring to it being a masculinized field discourage girls and some move away from digital tools for fear of being discriminated against (Samir, 2021). Some studies confirm that the digital divide disproportionately affects the MENA region, where the proportion of women who do not regularly use the internet reaches 56%, as we have seen previously (Raz, 2020).

This difference further deepens the problem of the separation of women from the world of work; MENA is the global region with the lowest rate of labor market insertion, a situation aggravated by the COVID-19 crisis. There, despite educational progress, there is an overrepresentation in precarious or unpaid

sectors such as domestic work. It is a priority to promote the inclusion of women in paid jobs and in the digital economy (ONU Women, 2021).

In this regard, it seems interesting to us to make a note about the importance of the presence of the issue of women in the thematic agenda built by the media, and in its hierarchy, as long as what is not talked about or reported, does not exist. Media treatment is a key element when creating opinion states on any topic of interest to society. It has been verified in a study carried out in the press of different countries of the Mediterranean basin (North, South and East [Algeria, Egypt, Spain, France, Italy, Morocco, United Kingdom, Syria and Tunisia]), 16 headers of newspapers for two weeks. The sample of informative units was 3985 corresponding to two periods (2009 [1,254, 7.3%] and 2013 [2,731, 4.2%]).

It was concluded that the gender issue is dealt with only in 11.5% of the units analyzed and it is mostly linked to discrimination and/or exclusion; oppression/submission; violence; abuses; integration into political life; integration in socioeconomic life; policies for equality; other; activism; female figure recognition (personal, professional, artistic...); women's rights; and prostitution. This leads to the conclusion that the states, currents and climates of opinion derived in relation to the treatment of the issue of women and their role as actors in public life were not very present in the thematic agendas of the press in the Mediterranean region. Although after 2017 and with the rise of the feminist movement worldwide, these aspects have been slightly corrected, so it is desirable and necessary that the media address and make visible the gender objectives and recommendations proposed by international organizations (Velázquez, 2019).

On the contrary, the digital transformation is removing some of the barriers that traditionally limited the initiatives of women in the Middle East and North Africa. This positive perception, however, is accompanied by evidence that Internet access is still difficult for many of them, and the main obstacle is the high cost of connections and computers. The second, the lack of coverage in many areas (OECD, 2022).

Digital resources are helping to reduce the gender gap in terms of the insertion of women from the MENA region in the economic public space. Some studies point to a greater confidence of women in the region in the cashless economy to create benefits for their business initiatives. In total, 81% of female entrepreneurs in the region have a digital presence in their companies compared to 68% of their male counterparts. In North Africa and the Middle East, the number of women entrepreneurs who have a website for their business is 71%, a figure higher than that of the presence on social networks, which is 55% (MasterCard, 2022). This positive perception, however, is accompanied by

evidence that Internet access is still difficult for many of them, and the main obstacle is the high cost of connections and computers. The second, the lack of coverage in many areas (OECD, 2022).

Also, in conclusion, the civil and political participation of women in the digital age has increased throughout the Western Mediterranean, and especially in Algeria, Egypt, Morocco and Tunisia. Women's use of new technologies has boosted their activism, and this has had a special impact on broader social changes. But without a doubt, digital educational extension work is necessary to help them insert themselves more effectively into the economic world (Moghadam, 2019). This momentum is also vital to the goal of improving women's political participation; the MENA region registers the lowest levels (Geha, 2022). The enjoyment of the rights, including digital rights, requires the presence of women in public life as well because a fully democratic society needs the participation of all its members. Access to digital resources is one of the tools to achieve this goal, which is necessary for any progress project.

Table 5

Gender Development Index 2021			
Human Development Index			
VERY HIGH HUMAN DEVELOPMENT			
HDI rank	Country	HDH Female	HDH Male
22	Israel	0.915	0.922
26	United Arab Emirates	0.877	0.921
35	Bahrain	0.829	0.894
35	Saudi Arabia	0.826	0.901
42	Qatar	0.866	0.850
48	Türkiye	0.806	0.860
50	Kuwait	0.831	0.824
54	Oman	0.752	0.835
HIGH HUMAN DEVELOPMENT			
76	Iran (Islamic Republic of)	0.704	0.800
91	Algeria	0.680	0.773
97	Egypt	0.666	0.755
97	Tunisia	0.697	0.748
102	Jordan	0.663	0.748
104	Libya	0.708	0.726
106	Palestine, State of	0.655	0.735
112	Lebanon	0.650	0.737
MEDIUM HUMAN DEVELOPMENT			
121	Iraq	0.585	0.728
123	Morocco	0.621	0.722
150	Syrian Arab Republic	0.503	0.610
LOW HUMAN DEVELOPMENT			
183	Yemen	0.263	0.529

Source: Own elaboration based on data from PNUD (2022): Latest Human Development composite indices tables. Table 4. Gender Development Index (<https://hdr.undp.org/data-center/documentation-and-downloads>)

Table 5 shows that even though a difference in percentages persists globally, mostly in favor of men, it is clear that the gender gaps are deeper when the general level of human development decreases.

Conclusion

After exposing and analyzing the key elements to determine the degree of implementation of the KS in MENA, it is concluded that there are consistent differences in access to digital resources between the different areas of the region. Technological extension and its applications run parallel to greater economic development. However, political and social instability must also be considered as an element slowing down digital expansion.

From a gender perspective, we observe that the digital divide persists, so that even in the most technologically advanced countries there is not complete equality of access and use between men and women. While KS is an inclusive element in societies, our study shows that the empowerment of ICTs is the key resource for strengthening civil society and access to it. In an area with an inestimable demographic potential, these access deficits have repercussions on the possibilities of achieving citizenship in the KS, considering this status as the full enjoyment of rights.

On the other hand, our study confirms the upward trend of new mobile phone users in a considerable proportion even in areas with economic or governance problems. The interest in communication resources and immersion in digitalization however, finds that despite there being no evidence of direct censorship in social networks in most of the MENA area, they are significant deficits in compliance with human rights.

In this situation, evidence emerges that the potential of digitalization to increase the well-being of the people is diminished, since the Internet can only become a tool for empowerment if the following rights are recognized: universal Internet access, freedom of expression and association, access to knowledge, sharing of learning and creation of free software, privacy, network governance and awareness, protection and realization of their own. As a result, there are social and political relationships of dependency that could lead to the qualification of a new colonialism on information and knowledge.

Faced with these potential forms of new oppression and in order to prevent and avoid them, it would be of great interest, from our point of view, to review the theoretical fields that supported the research prior to KS. Thus, these theories could be updated and redefined in such a way that they allow us to understand the new contexts that this interconnected world provides us. It is about promoting universal accessibility, to avoid the growth of the digital divide.

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