



## The Strategy of the New Digital Economy in the World, Reference of Reality and Prospects in Arab Countries

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### Abstract :

This study aims to define the industrial innovation policy in favor of digitizing the economy in the world, through which we review the theoretical and experimental new aspect that digital technology has contributed to as an innovative tools for the economy in the world, defining the Arab reality in this field, and comparing digital innovation in some countries of the world. The study found that the digital economy is an instrument for innovation and that the degree of global interest and engagement with the new knowledge economy in developed and emerging countries is large and wide in all sectors, as it distinguishes them with a competitive ability in digital creativity. Also, the availability of the appropriate environment in emerging and developed countries to grow up by digitalization has contributed to the development of various activities according to the advanced standards of digitization.

**Key Words:** Digital economy; Information technology; Economic growth; Innovation; Digital empowerment.

**JEL Classification:** L86, F43, O40.

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### Introduction:

The rapid raise of the digital economy causes a new challenges in the world, the most important is the general use of the economic transactions in all over the world, which because more complicated by removing the geographical borders and times, the Asia-Pacific region still one of the fastest growing regions in the world economically and connectivity. In 2017, the users of Internet reached 1.9 billion also, the use and the exchange of border data is important for economic growth in the fourth industrial revolution century, to raise the indices of all sectors. Especially those who on depend directly or indirectly the flows of the global data and statistics, The Cloud Computing is an example of the exploiting the data that's available (Peter Lovelock, 2018). The new estimations of official statistics provide a model of the general role of digital economy of the us, indentified the categories of goods and services as difinited in its program. Indentify the basics and measures of digital economy, so the industrial satellite account of digital economy should all goods and services. Estimating of the economic contribution of the partial goods and services in digital economy in the new challenges, looking to find the way to



expand the estimates to the full satellite account in digital economy (Kevin Barefoot, Dave Curtis, William Jolliff and other, BEA, 2018).

**The importance of the study:** The digital economy is considered as the best way of the economic development in the current and the future century, so, Countries need to collect and organize data of the economic activities, especially those that contribute to their performance, using the technological information, so that the transactions can be achieved in short time and the costs are reduced between the different elements acting in the market. In response of the Fourth Industrial Revolution which has become one of the strategic concerns of countries due to the relationship between digital development and economic growth.

**Research' problematic:** How can the digital innovation be directed in favour of the global economy in order to achieve greatest development of economics in light of the current international challenges? and what is the reality and prospects of the digital economy in the Arab world?

**Hypotheses' research:** In order to be able to answer this problematic, we propose the following:

- The first hypothesis: the new digital innovation contributes to raise the performance of the digital economy in the world and thus the raising of economic.
- The second hypothesis: Arab countries are interested in digital economic activities according to the new global digital system.

**Objectives and methodology:** Studying and analyzing the theory and the practical sides of the digital economy and its role and importance to reorganize the different sectors, the digital economy must be used as reference by saving the basic data to determinate the policy of technological information and its impact as it is the force of the global economy. In addition, approach the global digital economy models of developed countries, modern data and statistics focusing and their effects

**Limitations of the study:** The study focuses on the digital economy due to the innovation of global digital by using models of countries.

**Research' axes:** To analyze the problematic of the study, we refer to the main axes as following:

- The New theories about digital economy.
- The digital innovation and its role in the progress of the digital economy;
- The reality and prospects of digital economy in the world
- The reality of the digital economy in the Arab world;

## **I. New theories on the digital economy:**

The Digital transformation is considered as the main force of development and growth in the present century and the future, so that theories have developed to practice the different digital activities, the most important are: Joseph Schumpeter innovation theory, Varian theory, and Roll Katz and Potalez Kotorubis theory.

### **1. J.SCHUMPETER innovation theory:**

Schumpeter expressed his opinion about the study of economic growth theory in 1911, as he focused on innovation and renewed that depends on modern technology



in economic activity, which increase the national income of the country. He considers that the growth is pushed in acceleration due to the new inventions that enter the commercial field and make new investments which give suddenly an increase in national income (ALTamimi, 2018). Schumpeter developed the theory of creative demolition and considers that the innovation has an advantage to merchandise in terms of the cost criteria or the special product, and exploiting this advantage generates a flow of profits rewarding the expenses and costs but this advantage is temporary until a new it is replaced by a new one, this is the demolition side. Therefore, the technological innovation makes both of creation and destruction of the value, but the balance is positive if the role is played correctly (Spence, 2018).

Schumpeter theory is one of the explanations of economic development in relation of economic growth, which focused on demolition in sense of dismantling the old economy and replacing it by new economy through advanced industrial innovation that works on reviewing experimental data and statistics of macroeconomic in the new form, which is digitization (GODIN & BENOIT, 2017).

**Table 1: « Schumpeter Principles »**

| <b>Variables Economic</b>   | <b>Schumpeter's original theory(1909)</b>                              | <b>Adaptation in the era of the digital economy</b>                                                                                                          |
|-----------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Innovation</b>           | Introduce new goods                                                    | Introducing new digital products and digital services                                                                                                        |
| <b>Technology</b>           | New roads in production                                                | Digitization of knowledge-based production processes                                                                                                         |
| <b>Customer Orientation</b> | Opening up new markets                                                 | Establishing electronic and digital markets and distribution channels                                                                                        |
| <b>Coordination</b>         | Intensification of new sources of supply                               | B2B-EC implementation of supply chain management                                                                                                             |
| <b>leading businesses</b>   | Company reorganization<br>Risk Strategies<br>Profitability orientation | Developing new management models<br>Development of digital companies and electronic markets<br>Expansion of dotcom companies and emerging internet companies |

**Source:** Anitesh Barua, Karl R. Lang, Anjana Susarla, and Andrew B. Whinston, A Schumpeterian Approach to Explaining Growth in the Digital economy, [gebrcc.nccu.edu.tw/proceedings/APDSI/2000/list/pdf/P-074.PDF](http://gebrcc.nccu.edu.tw/proceedings/APDSI/2000/list/pdf/P-074.PDF), P2.

Through the above table we find that Schumpeter focused on some elements of internal and external environment as economic variables but they are not enough at the current century due to new changes that develop over time, the most important are: resources, environment, security and international cooperation, that concerns the protection of digital economy from cybercrime, those elements



impacts on the digital economy and its performance. Consequently, the theory relies more on social factors by transferring electronically the relationship between the customer and the different companies and organizations, but did not give any interest to the new economic factories.

Focusing on the innovation that is far from economic development is not enough to promote the digital economy to raise its performance as it is considered in many cases one of the factors that cause mondial economic crises and fluctuations. Despite these criticisms the theory is used now days, and determine economic fluctuations.

## **2. Hall Ronald Varian theory:**

Varian explained through a study he did in 2016 five principles ways in which digital technologies work to transform economic activities (D'Souza & David, 2017):

- 2.1. Collection data and analysis:** companies must collect many information about what customers need and use it to predict about their behavior and Improve the offer of services.
- 2.2. Specializing: companies** are required to provide products and services according to what customers expect with availability of information to the trader concerning the voucher purchase register and the address and place of delivery.
- 2.3. Practice and continuous promotion:** group of providing capabilities for companies to be served by large data and algorithms of strong prediction to assume the continuity of their. Systems and take well studied decisions about production and allowed resources.
- 2.4. Innovation in contracting:** companies and customers will be able to follow the activities of the others in contract, control and verify them. That will make easy the undertaking of new types of economics transitions (example: transportation services based on mobile electronic money).
- 2.5. Coordination and communication:** communications tools such as files sharing software, video conferences and wireless mobile devices will allow people to be more flexible wherever they are.

**3. Theory of Raul I katz and Pantelis koutroumpis:** The two researchers in Booz and company ,mondial management investment company, they find digitization depends on the following indicators :

**3.1. Design indicator, methodology approach:** this indicator consists of six elements:

- Absolute existence.
- Ability of supporting costs
- Reliability.
- Quick reaction
- Usability
- Competence.



Each indicator consists of 24 sub-indicators to measure the concrete informations according to perceived digital criteria

**3.2. Assets indicator:** The indicator indicates that countries are grouped digitally or emerging or advanced in different degrees of contribution of digitalization growth. The indicator is used to evaluate the state of Latin America as their transition in societies digitally advanced, in this context the areas that should be focused on are identified in order to create the digital board business.

**3.3. Indicator of digital ability:** most of indicators which measure the degree of new digital progress focused on tools that contribute to the development of wired and wireless information technology such as access and adopt a large broadband.

The two researchers indicate that these indicators and even those that are more comprehensive (the network index by economic world forum or the digital opportunities by international telecommunication union) are only a small part of the current changement that the world knows.

## **II. The digital innovation and its role in the performance of the economy:**

The digital technology is considered like the fourth industrial revolution. Its aims is digitalizing all sectors, the most important is economic sector and the economic digitalization depends on the ability of digital creativity of activities by converting all data, informations, transactions and relationship between the different active parts in market to digital obtained with minimal cost and fastest time:

The transfert to the digital economy is based on industrial creativity concerning the digitalization that is possible by the availability of seven factors (Policy, 2016).

### **1. advanced information and communication technology infrastructure:**

Countries are characterized by having an advanced infrastructure of digital creativity through the indicators that measure all of development of information and communication technology, number of subscribers of wired and wireless internet, the rate of sign in internet, percentage of having computer for each person and percentage of users of internet.

### **2. Investment in the research and development sector:**

Investment in the research and development sector is measured by indicators related to the percentage of spending on research and development of informations and communication technology in the gross domestic product, which shows much the state is interest in the sector, number of patents in the field of research and development of information communication.

### **3. Adopting informations and communication technology:**

by put in it in general use in all strategic and secondary sectors, including the following:



**3.1 The SNS service:** using the SNS service which helps to create digital content from images and pieces of video and the participations which inform the users about the activities and the interests of moral and physical persons and allows the relationships between them in different areas that interests them and helping persons to find information, products, services or resources in relation with them.

**3.2 B2B information and communication technology:** Use of B2B information and communication technology that is a digital platform relating between persons and business with information technology in large web which provides to consumers and companies digital ways to access a large range of products and services within multiple markets, and allowed many parties to engage in an electronic commerce, so that the demand of products and services will rise and generates big value of multiple users same as the owner of the platform. The experts of digital industry put conditions to protect the platform B2B and secure them, so they require six principles to build the basic system, it's resumed in the following chart:

**Fig.1: «Principles of Protected B2B Platforms »**



**Source:** WORLD ECONOMIC FORUM, Digital Transformation Initiative: Unlocking B2B Platform Value, GENEVE, March 2017, P8.

From the above figure, we note that the principles of protected B2B platform are:

**a. security (platform protection):** providing security to protect it from Hackers because the platform participate in the network infrastructure and deal in an increase value of transactions, the annual cost of damage caused by Hackers and breaches is around 3 trillion dollars in all over the world. accounting figure in the three main elements:

- The platform must be confident and works according to the target program, for example responding to all requests and proposing services in short time.
- Activities of platform must work legally according to the law of market challenges.
- Platform operators should be responsible in case of failure and maintain their promises, so that accounting provide less common problems and reduce risks and encourage users to have more confidence in main system.

**b. Transparency:** means providing important methods to understand relationship and results, for this reason individuals need sufficient informations to structure relationships and create data resumming what happening in the market and make transactions easier. Transparency requires the ability and undercontrol using algorithms through and across the platform to confirm that the results delivered are accurate and bias (intended or unintended) is irregular.



**c. Auditability and revising:** auditing means monitoring transactions and data flows across a group of stake holders and specialties, and generates trust between parties by facilitating transactions and resolves dispute efficiently and ability to answer various questions such as how data is formulated, who has the right to use it, how where and what is produced from these transactions? So, the auditing generate trust and legal to the platform.

**d. Fairness (justice):** the meaning of equality in platform is not to take part of any parties (organizers and consumers) and those who take in charge the justice are agencies of protection and programs.

**e. Ethics:** Ethics means having honesty and integrity for the person who setup platform and programs in one side and provide correct informations and date for products and services, where honesty, ethics and integrity are essential to digitalize various economic activities, in the case of lack of professional conscience or failure to provide right data by wrong decision and uncertain (unethical, legal or unfair) they can harm in bad way the platform and brands.

use of informations and communications technology B2B: the meaning is to prepare platform appropriate for electronic commerce for direct use for the customer.

**3.3 Lanching of digital activity:** the following element are required to start digitalization:

- Follow-up opportunities.
- Opportunities for improvement.
- Availability of the latest technology.
- Availability of investment capital.
- Time of departure.
- Procedures of departure

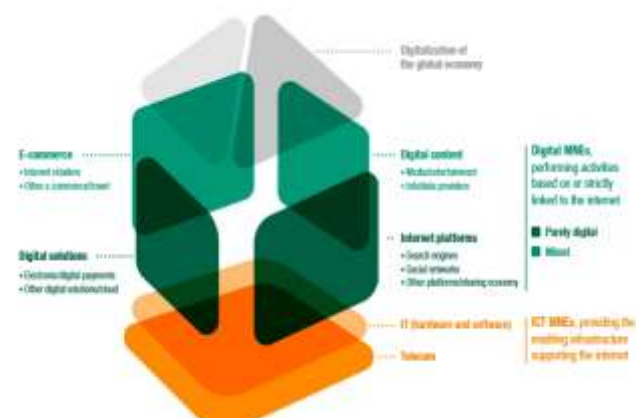
**3.4. Human Resources:** Working to exploit human resources to serve the new information technology:

- Work to develop human resources to serve advanced digital creativity.
- The exploitation of brains in the technological innovation of information and communication in all specialties.
- Providing an environment to attract researchers and scientists.
- Developing methods of education and scientific research.

**3.5. The legal system:** preparing the legal system, decrees and regulations that define the different relationships, transactions and rights in this field that protect intellectual property, and protect sectors from different abuses and breaches.

**4. Establishing the information and communication market:**

It is composed of different actors in the development of products and new services and its prices and competitive advantage, in addition an important element which is export competitiveness, which contribute to sweep local and global market. The elements of digital economy are summarized as the follows:

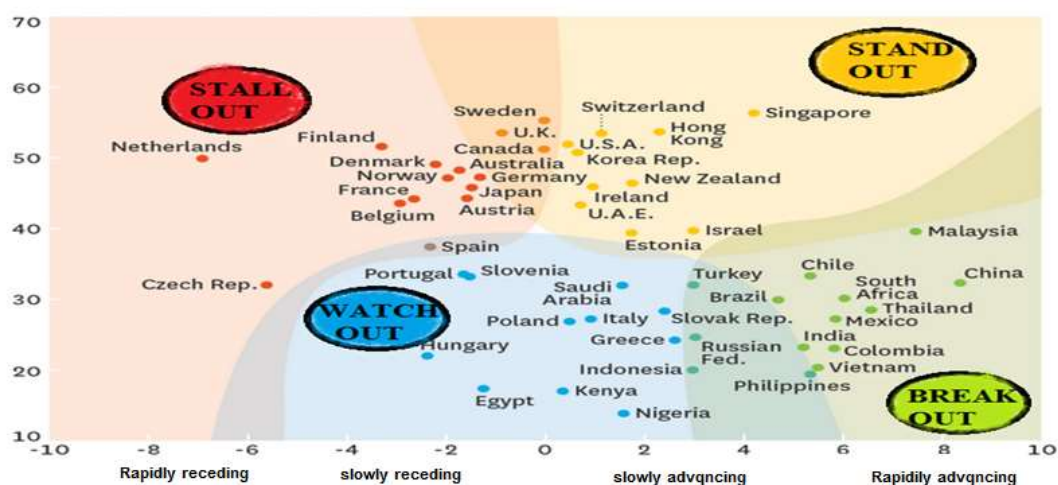
**Fig.2: «Components of the Digital Economy»**

**Source:** United Nations, Conference on Trade and Development, World Investment Report 2017: Investment and the Digital Economy, Investment and the Digital Economy, United Nations Publication, Geneva, 2017, P167.

### III. The reality and prospects of digital economy in the world:

In this section, we will approach to the forms of the digital economy in the world and its indicators in some countries of the world as follows:

**1. Forms of the Digital Economy in the World:** the Industrial and technological developments participate through the history to classify and naming countries with terms that refer to economic situation. After they were classified according to the growth indicator only, this indicator has become related to the ability of countries to adapt to the new global developed system which contributes to promote its sectors with new methods, which is digitalization; the following map demonstrates the classifications of countries in terms of technological progress.

**Fig.3: «The Digital Evolution Map»**

**Source:** Bhaskar chakravorti, ravishan karchaturvedi, digital planet 2017: how competitiveness and trust in digital economies vary across the world, The Fletcher School, Tufts University, July 2017, p8.



Based on the previous, the countries of the world are classified in terms of digital progress according to the map above to the following (Chakravorti & Ravi Shankar Chaturvedi, July 2017, p. 19):

**1.1 Notable countries (COUNTRIES STAND OUT):** They are the countries that have reached an advanced step of technology production and developing it due to their specialize knowledge industry in the world, which made them acquire high capacity in digital creativity and lead innovation, as they are owners of qualities to produce effective methods for developing various activities and have contribute to the expansion as long as possible in all circumstances, which know renewed risky phenomena, for this reason they work hardly to keep the innovation for longest time. So the condition to keep their own innovation highly to save their position, having new demand, otherwise they will lose their market position.

**1.2 Stall out countries:** These countries have a high degree of digital progress but with slow power that reflects challenges to save their growth and they need more efforts to require increasing digital technology by eliminating obstacles to digital innovation, so that they can reach the leading countries.

**1.3 Breakout countries (BREAK OUT COUNTRIES):** about breaking out countries, they have actually low level of digital but they progress rapidly and their growing rate interest investors of information technology, which may help them to maintain developed innovation.

**1.4 Watch out countries:** these countries face hard challenges with decrease of their rate of digital exchange in sometimes they move down in degree of digital transformation.

**Table 2: «Evolution of digitalization indicators in the world (DEI •) in 2017»**

| Japan          | N<br>land<br>s | Can<br>ada  | Austr<br>alia | Brita<br>in | Hon<br>g<br>Kon<br>g | USA                     | N/<br>KOR<br>EA | Singa<br>pore | Finl<br>and | Denm<br>ark  | Swit-<br>Zerla<br>nd | Swed<br>en  | Norw<br>ay    |
|----------------|----------------|-------------|---------------|-------------|----------------------|-------------------------|-----------------|---------------|-------------|--------------|----------------------|-------------|---------------|
| 3.52           | 3.55           | 3.55        | 3.55          | 3.61        | 3.66                 | 3.67                    | 3.68            | 3.69          | 3.72        | 3.72         | 3.74                 | 3.79        | 3.79          |
| Saudia         | chile          | Braz<br>il  | pakist<br>an  | Mali<br>zia | Spai<br>n            | portu<br>gal            | Uae             | Mexic<br>o    | Fran<br>ce  | camer<br>oon | belgi<br>um          | Germ<br>any | Irland        |
| 2.80           | 2.81           | 2.24        | 1.69          | 2.91        | 2.95                 | 3.01                    | 3.22            | 2.23          | 3.25        | 1.61         | 3.32                 | 3.36        | 3.41          |
| Bangla<br>desh | Alge<br>ria    | Nige<br>ria | S/kor<br>ea   | Tail<br>and | Jord<br>an           | Russi<br>a <sup>1</sup> | Egyp<br>t       | Turke<br>y    | Chin<br>a   | India        | Italy                | Moro<br>cco | Indon<br>esia |
| 1.51           | 1.64           | 1.72        | 2.33          | 2.35        | 2.41                 | 2.44                    | 1.74            | 2.49          | 2.49        | 1.85         | 2.58                 | 2.12        | 2.25          |

**Source:** Bhaskar hakravorti, ravi Shankar chaturvedi, digital planet 2017: how competitiveness and trust in digital economies vary across the world, The Fletcher School, Tufts University, July 2017, p19.

Through the Digital Development Index for the year 2017, we find that European countries are the most developed in the world, led by Norway and Sweden, in addition to the rest of the European countries and emerging countries, Japan and the United Arab Emirates classified directly after Australia with an index of 3.22, as it is classified in the list of prominent countries; As for the rest of African countries, they did not get the right level of digital development which made them among the watching countries.



#### IV. The reality of digital economy in the Arab world:

To measure how far the Arab world has progress to transform into digital economy, we will focus on six basic sides related to digital development that is the (Commission, New York,):

- The information and communication technology sector: innovation and financial aspects.
- The infrastructure of information and communication technology and the strongness of supporting costs .
- human capacity and research.
- use of information and communication technology by individuals, companies and governments.
- The economic impact.
- social impact.

The following table demonstrate the components of the general indicator of digital empowerment in the Arab countries for the year 2018. Which is calculated according to the following :

**Digital Enablement Indicator Organization)**



(Digital Size + Digital Infrastructure + Digital Communication + Digital Knowledge + ORGANIZATION)

5

**Table3: «General index of digital empowerment and its subcomponents in the Arab countries in 2018 (measurement = 100 points + global ranking) »**

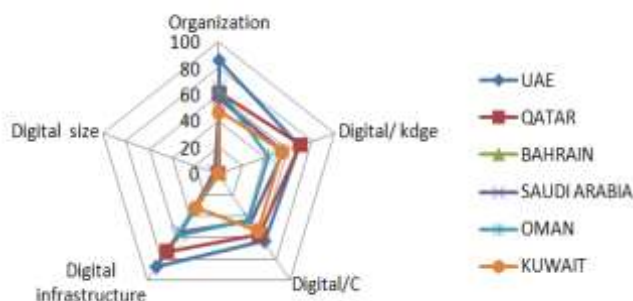
| COUNTRY      | Elements of digital empowerment |              |           |                        |              | General Index of Digital Empowerment 2018 | Global Digital Empowerment Ranking |      |
|--------------|---------------------------------|--------------|-----------|------------------------|--------------|-------------------------------------------|------------------------------------|------|
|              | Organization                    | Digital/kdge | Digital/C | Digital infrastructure | Digital size |                                           | 2017                               | 2018 |
| UAE          | 86.0                            | 69.5         | 63.7      | 88.0                   | 1,9          | 61.8                                      | 24                                 | 24   |
| QATAR        | 61.0                            | 70.5         | 56.7      | 73.4                   | 0.7          | 52.5                                      | 33                                 | 32   |
| BAHRAIN      | 66,9                            | 54,6         | 64,8      | 61,4                   | 0,2          | 49,6                                      | 38                                 | 38   |
| SAUDI ARABIA | 56.8                            | 55.0         | 44.4      | 54.7                   | 4.1          | 43.0                                      | 50                                 | 52   |
| OMAN         | 65.2                            | 42.8         | 42.7      | 58.0                   | 0.5          | 41.8                                      | 53                                 | 53   |
| JORDAN       | 40.7                            | 46.2         | 53.4      | 49.0                   | 0.6          | 38                                        | 64                                 | 65   |
| KUWAIT       | 47                              | 54.5         | 54.5      | 32.8                   | 0.6          | 37.9                                      | 65                                 | 61   |
| MOROCCO      | 31.8                            | 33.9         | 66.5      | 31.4                   | 2.1          | 33.1                                      | 77                                 | 76   |
| Lebanon      | 42.3                            | 36.1         | 42.7      | 43.9                   | 0.5          | 33                                        | 78                                 | 77   |
| EGYPT        | 23.9                            | 55.9         | 45.5      | 28.4                   | 4.2          | 31.6                                      | 80                                 | 83   |
| TUNISIA      | 30.1                            | 26.7         | 58.7      | 36.4                   | 0.6          | 30.5                                      | 83                                 | 82   |
| ALGERIA      | 25.8                            | 38.3         | 28.4      | 32.9                   | 2            | 25.5                                      | 92                                 | 93   |

**Source:** Mahamoud Islam, Georges Dib, LudovicSubran, MEASURING DIGITAGILITY the Enabling Digitalization Index (EDI): Which Countries is Digital Friendly? Euler Hermes, MARCH 2018, P10-11.



From the above table, we observe that there are Arab countries that follow the changement of global economy which are transformation to global digital economy and other countries still far from this tendency.

**Fig. 4: «The reality of digital empowerment in the Gulf countries»**



**Source:** Prepared by researchers based on Table 3 data

From Table 3, we note that several Gulf countries are leaders in digital creativity, especially the United Arab Emirates which ranked 24<sup>th</sup>, due to the best exploitation of the resources serving knowledge and technological research. As it provide the infrastructure for digital creativity in all fields. The UAE is classified the first comparing with arab countries, gulf countries and leader countries.

as the shart number 4,followed by Bahrain, Qatar, KSA and the rest og gulf countries which have a large degree of digital development, as a digital consumption sector get a large use of smart phones and social media. In these countries, citizens contribute themselves to the leadership of digital transformations. from the side of the large use of digital we find that UAE, Qatar, Bahrain are the leader in the world with percentage of 100% of smart phone usage and the rate usage of social media reached more than 70%, this rates are more than those usage in USA.

Despite this large use of digital tools by the individuals, companies and governments have not adapted the same trend. the Mckinsey indicatorof digital transformation in these countries is the first initiative to assess the digital transformation and its impact in nine countries which are : Bahrain, Egypt, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

### 1. The reality of digital empowerment in:

Jordan, Lebanon and Egypt The Jordanian Minister of Digital Economy and Entrepreneurship announced that the digital economy in Jordan is growing at a rate of 6 times the growth of the traditional economy (the Kingdom, the digital economy in Jordan is growing at a rate of 6 times the traditional growth, update: 12/19/2019). The Jordan Chamber of Commerce also confirmed that the economy The digital economy in Jordan represntes 12% of the GDP (the Kingdom, the digital economy constitutes 12% of the GDP, without history). In order to achieve the previous results, the Jordanian government made efforts to activate digital economy like (Channel and the Kingdom, Updated 01/14/2020):



Digital infrastructure: The government is working to continue developing access to Internet access to reach the rate of 100% by 2021.

**1.1. Digital payments and developing national skills:** The Jordanian government is working to increase non-cash payments from 33% to 50% by 2020, and digitizing 80% of government payments to citizens by 2021, and developing digital skills by training 35,000 person in the twenty-first century and generalized the use of digital skills in public schools by training 300,000 by 2022. As for Lebanon, the digital economy began with it 20 years ago, but the question is:

How did the digital technology contribute to the Lebanese economy? Considering that telecommunications is one of the basic pillars of the digital economy, Lebanon has an acceptable communications network for a basic uses such as scrolling pages Home Banking, reservations and company offers and other simple operations....

The main obstacle of the net users in Lebanon in the digital economy comes from weakness that connects Lebanon with the web, for information there is a very quickly line neary of Tripoli but leban is not linked to it.

In the intern side the communication knows a growth of number of users , that leads a loss of accuracy in sensitive operations suchs as payment via Internet or buying from stock exchange or daing a complex operations of the type of commerce, and electronic operations are limited to a payments using visa cards or master Card.

The steps that must be taken for the transition of the Lebanon economy to a digital economy are the following points:

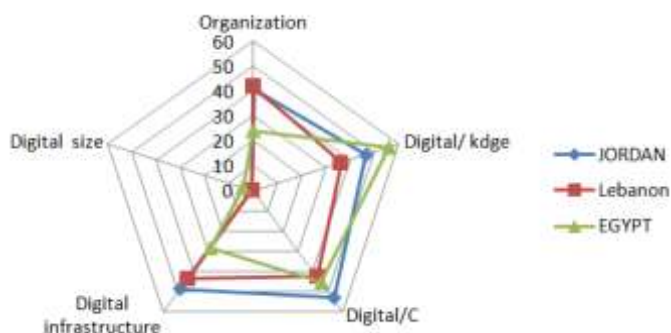
- Improving the Internet by connecting Lebanon to the Internet via Tripoli fiber line and adopting the partnership between the private and public sectors to develop the internal network, which requires a political decision from the government.
- Motivating the companies to move to the technology systems in their businesses by adopting technology in production.
- Updating the laws and regulations to take in considerations the new data mentioned previously above. In addition, the law on the protection of intellectual property must be developed in order to apply it to the new methods used in the economy.

As for Egypt, there are many challenges defined accelerate the digital transformation like (El- Bahnassi, 2019):

- Supporting the planning of digital transformation instead of a clear strategy.
- A culture of rejecting of change.
- devaluation of the currency against the dollar.
- Actual practices do not support talents.
- Escaping of qualified Egyptian workers abroad.
- Establishment training centers.
- Increase the financial chargers on companies.



**Fig. 5: «The reality of digital empowerment in: Jordan, Lebanon and Egypt in 2018».**



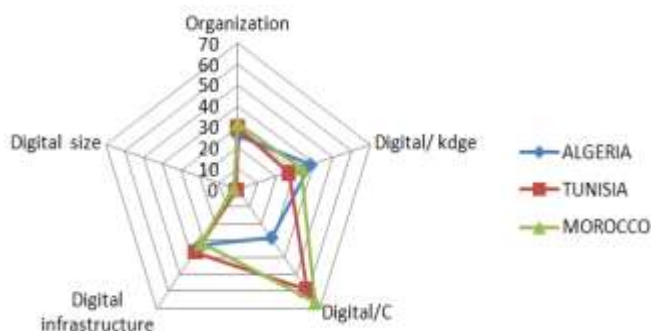
**Source:** Prepared by researchers based on data Table 3

**1.2. The reality of digital empowerment in some countries of the Maghreb, Morocco, Tunisia and Algeria:** The countries of the Maghreb are classified in the last ranking according to the General Index of Digital Empowerment, Table No. (03), where Morocco ranked 77, Tunisia ranked 83, Algeria ranked 92.

- **Algeria:** Algeria adopted project of the electronic in 2000 to reach the digital revolution, It created by Algeria Telecom and the post and telecommunications regulatory, about opening the market foreign operators: Dzezzzy, Ooredoo, and local operator by Mobilis Algerian (current subsidiary of Algeria Telecommunication).
- **Tunisia:** Tunisia is relied on the new development model, which is based on the digital economy in its various forms, which has become a strategic choice, so that the legislative aspects and the infrastructure are modernized. Tunisia is seeking to transform digital economy from 8% of the national product to 15 Between 2020 and 2022, the transformation necessitated the renewal of the legal framework. The infrastructure, and the facilitation of financing the digital economy in order to renew the platform of Tunisia inside and outside, but it still in the last ranking.
- **Morocco:** Morocco made many efforts to gradually expand progressively in digital economy, including:
  - Enhancing skills and innovation as part of the digital strategy.
  - Progress has been made with regard of e-government and data management, despite of the lack of trust and high mondial confidentiality measures, but they still in the rank of last countries according to the mondial indicator Digital Empowerment.



**Fig. 6: «The reality of digital empowerment in the following Maghreb countries: Algeria, Tunisia and Morocco in 2018».**



**Source:** Prepared by researchers based on Table 3 data

### Conclusion:

Digital creativity contributes to chand development challenges and resalves problems by obtaining informations about all sectors and accelerating different transactions by taking the best decisions based on correct information and data, at the lowest cost and fastest time if the necessary mechanisms are available to protect these sectors from hackers and cybercrime, also, the Digital creativity works to raise the rate of economic growth, especially the knowledge economy, because the digitization of the various active elements in the economic activity of the trading sector, industry, tourism services and others, participates to raise the national product by facilitating the payment and control the commercial transactions, that allowed the government to obtain financial flows of large amount at fast and control the public funds (the most of them tax and customs in which the concerning people are unable to justify these interdiction activities are digitalized and providing for the all raison that the protection from money laundering due to the effective availability data).

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