

Algeria's performance in light of the indicators of the Arab digital economy for the year 2022

أداء الجزائر في ظل مؤشرات الاقتصاد الرقمي العربي لسنة 2022

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Abstract:

This study aims to highlight the scientific foundations of the digital economy and its most important constituent elements, This study aims to refer to the Arab Digital economy report for the year 2022 with an explanation of how to measure, it quantitatively Emphasis was also placed on the case of Algeria in the 2022 report, monitoring the indicators adopted in the transformation, Towards the digital economy through digital foundations, innovation, electronic governance and the Internet through the digital economic model and the digital citizen. The study found through the analysis of the data that Algeria has unacceptable ranks and to achieve leadership, it must further expand the degree of use of knowledge transformation Tools.

Keywords: Digital Economy; Indicators Economy; Business Model; Report 2022; Algeria

JEL Classification Codes:L97, O5, H83

ملخص:

الدراسة تهدف إلى إبراز التأسيس العلمي للاقتصاد الرقمي وأهم العناصر المكونة له، وعبرها تم الإشارة إلى تقرير الاقتصاد الرقمي العربي لسنة 2022 مع توضيح كيفية قياسه، كما تم التركيز على حالة الجزائر ضمن تقرير 2022، وذلك خلال رصد المؤشرات المعتمدة في التحول نحو الرقمنة عبر الأسس الرقمية، الابتكار، والحكومة الإلكترونية وشبكات الإنترنت من خلال نموذج الأعمال الرقمية والمواطن الرقمي، وتوصلت الدراسة من خلال تحليل البيانات أن الجزائر جاءت ضمن مراتب مقبولة ولتحقيق الصدارة عليها التوسيع في درجة استخدام أدوات التحول المعرفي بشكل أكثر.

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1. Introduction

Reliance on information and the spread of the use of information and communication technology in various applications, including the economy, Which led to the emergence of the digital economy as a lever and a strategic alternative to economies; The world's economies are experiencing structural transformations resulting from several structural and financial considerations. The result of this transformation has resulted in the use of the fourth technological revolution. In economics, it resulted in the formation of the digital economy, or what is called the digital-based economy. The latter has achieved several surpluses for many countries of the world from the economic aspect because; it is one of the tributaries that work to increase the pace of sustainable economic growth. Based on the duality of creativity and innovation from a technological perspective, many economies have come to view the digital economy as a pillar for achieving quantitative and technical indicators. Because it operates according to reasonable costs and, in return, achieves the greatest return. In addition, it increases the expansion of the search for alternative and new opportunities, given that the digital economy, is linked to the information factor.

Through this study, we find that many Arab countries are rushing to acquire part of this technology and work to integrate it into the economy; and then achieve the indicators through the digital economy because it achieves many benefits in the economic structure ;Based on the above, we decided that the problem of this research paper should be as follows:

'What is the status of digital economy indicators in Algeria according to the 2022 report?

To answer the problem, we pose the following sub-questions:

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- What do we mean by the concept and what are the indicators for measuring it?
- What quantitative method is used to measure it?
- What is Algeria's position among the indicators studied, compared to the countries referred to in the report?

- **Objectives of the study:**

- Interest in the subject, and knowledge of the most important indicators for measuring it;
- Explaining the situation of Algeria and some of the countries that ranked first in the report;
- Clarifying how to measure indicators based on the 2022 report.

2. The digital economy: concepts and measurement elements

The term appeared specifically in 1995 in a book written by a business manager and strategist" Don Tapscott",The book bears the title' 'The Digital Economy: Promise and Peril the Age of Networked Intelligence",This is a natural result of the widespread use of the Internet, interactive sites and social networks,It has a role in achieving economic growth and development(insaf, 2023, p. 227),"It is a global network enabled by technology,Which aims to achieve efficiency and productivity(Abdelkeder, 2022, p. 24),"It is also an economy based on the use of digital technology,It is also known as the Internet economy and the web economy. schwartzreferred to it as"web economics ",Which he saw as the information economy(Amany & shaimaa, 2022, p. 31)".

It also includes elements through which it is measured, which we summarize in the following table:

Table (01): Elements that help in measurement (knowledge)

Research and training	-research and development -Developments pending -Industrial export	-Search level -The ability to innovate and apply technologies
Education and training	-Spending on education -Registration at secondary and university levels	A basic introduction to the knowledge-based economy
information structure	-Investing in communications	An element that includes information through the media and communication
Computer infrastructure	Numbers of Internet users and websites	To evaluate the information base

Source : (Bouragba ., Hasbaia, & Bouragba, 2020, p. 6)

There is a relationship between the digital economy and the economy. Because it achieves economic development, it is the result of the interaction between the trends in the advancement of information and communication technology and the economic system. It also contributes to knowing the impact of the economy on society and diagnosing economic problems in terms of causes and consequences. While contributing to proposing economic and scientific solutions, it also affects the economy through modern approaches related to models and software (Bilal & Farida, 2022, p. 138).

3. Measurement indicators (estimation methods) according to the 2022 report:

The setting of the indicator relies on linear estimation because it is the most appropriate for estimating these data, each missing value is replaced with a value and the following is relied upon: (digital, 2022, p. 55)

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- Average value of views
- A fixed value chosen based on previous research
- Use regression analysis
- Values based on current observations

Within the 2022 edition, the results of the index were according to the following table:

Table (02): Ranking results for countries

Groups (countries)	Results
First group	Ranked from 1 to 6 countries leading in digital transformation
Second group	Countries with high digitization / Promising countries - It is ranked from 7 to 12
Third group	- Countries active in automation (digital transformation) / need to strengthen digital infrastructure capacities. They are ranked from 13 to 22

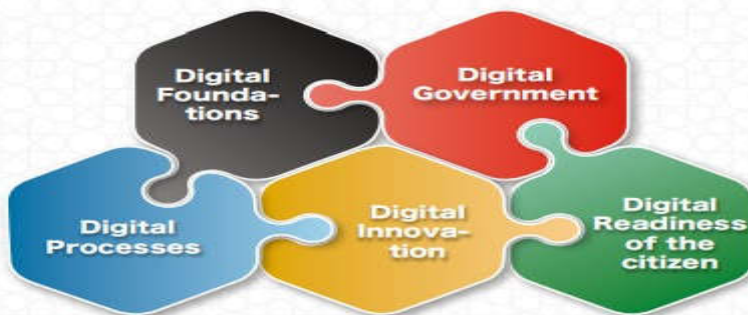
Source: Prepared by researchers based on the report

4. Strategic dimensions of the report's indicators in Algeria

Provides a report on the digital performance of (22) Arab countries, Algeria ranked 12th in the Arab world according to this index, with a score of 46.55 out of 100.

This can be explained in the following figure:

figure (01) : Strategic dimensions of the report 2022



Source : (digital, 2022, p. 46)

Regarding the elements and classification, they are as follows :

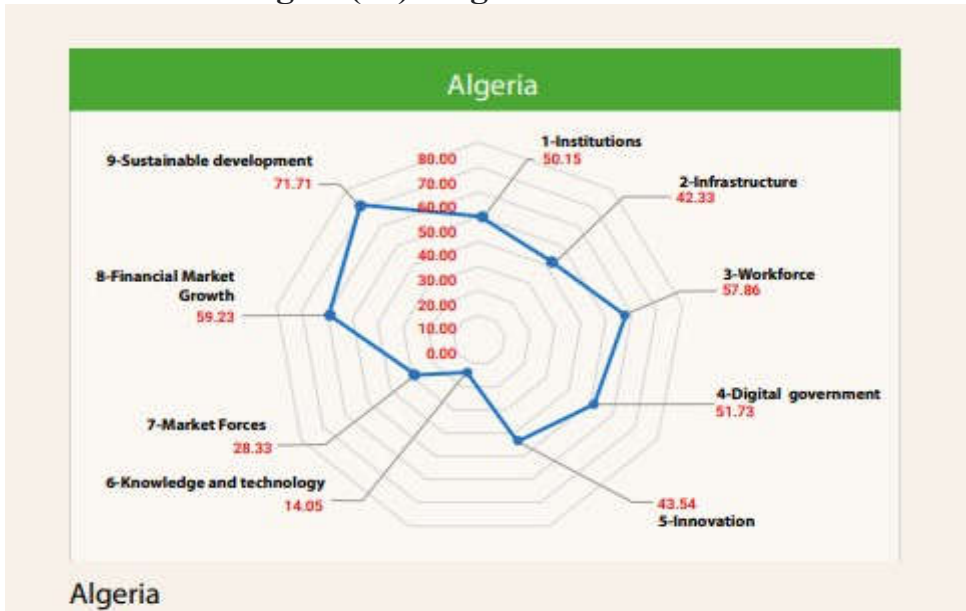
Table (03) : Algeria in light of the digital-basedeconomy (Performance Level)

Dimension	Pillars	index	ranking
Digital government	First pillar :institutions	50.15	12
Digital foundation	Second pillar :infrastructure	42.33	8
Citizen’s digital readiness	Thirdpillar: Workforce	57.86	9
Digital government	Fourthpillar: Digital government	51.73	11
Digital innovation	Fifthpillar: Innovation	43.54	12
	Sixthpillar: Knowledge and Technology	14.05	12
Digital Business	Seventhpillar: Market Forces	28.33	12
	Eighthpillar: Financial MarketGrowth	59.23	12
Ninth goal: industry, innovation and infrastructure	Ninthpillar: SustainableDevelopment	71.71	7
Index’s Total Score		46.55	12

Source : (digital, 2022, p. 203)

The above table canbeillustrated in the following figure:

Figure(02) :Algeria in index 2022



Source : (digital, 2022, p. 204)

The performance of Arab countries within the sustainable development goals, which was measured by the Sustainable Development Solutions Network (SDSN); Shows detailed indicators related to prioritizing sustainable development goals for each country, From the perspective of performance related to sustainable development related to Algeria, we explain it in the following table:

Table (04): Algeria’s ranking - according to the Sustainable Development Index (overall performance by SDG)

Indicators	Value
Country ranking	66/165
Contry score	70.9
Statistical performance index (0 worst -100 best)	55.1

Source: Prepared by researchers based on the report

In the part related to the factors that accelerate the technology-based economy project in Algeria. Including the Internet. The American Portulans Institute has published an economic index for 2022. The United States ranked first. While Algeria ranked 100th in terms of classification (insaf, 2023, p. 123)

Regarding the situation of the Internet in Algeria, it was as follows:

Table (05): The Internet in Algeria 2022

Network indicator	Index	Technology	Community	Governance	Impact
39.48	100	33.58	37.92	39.41	47.02

Source: (insaf, 2023, p. 232)

By examining the innovation index for the year 2021, we notice that Algeria fell behind compared to the countries included in the report. It ranked 120th out of 132 countries, with a rate of 19.9 compared to Arab countries. At the global level, the highest rate of innovation was 65.5 for Switzerland. Followed by Sweden and the United States with rates of 63.1 and 61.3. The United Arab Emirates also ranked first in the ranking of Arab countries (33rd place) with a score of 43.0 (nadjjet & soumia, 2023, p. 431)

4. Conclusion :

Through this study, we achieved knowledge of the status of Algeria's indicators through the survey report on the digital economy index 2022. This represented institutions, technological and digital knowledge, and the possibility of digital transformation within the digital citizen project. Knowing the most important dimensions and strategies that must be implemented to achieve a digital economy ensures the achievement of good indicators at the level of global reports. The analysis of Algeria's indicators through the 2022 report ranked among the best compared to Arab countries in terms of some indicators. However, accelerating the generalization of the use of technology and working with it more gives more impetus and progress to indicators based on innovation and technological creativity.

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Result:

- The digital economy has an important role in achieving sustainable economic growth through the indicators studied in the 2022 report.
- The digital economy has contributed to the recovery of many Arab economies through the approach of digitization (digital transformation).
- Algeria was able to improve its ranks and indicators based on the report, and this is due to the trend towards applying the use of modern technology in public administrations and institutions.
- Activating the policy of innovation and creativity in institutions and departments in Algeria.

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