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The Role Of Digital Transformation In Promoting Economic Growth In Iraq 2010-2022

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Abstract. Economic growth is one of the most important goals countries seek to achieve. Now, when the world is witnessing a revolution in information and communication technology, economic growth has become entirely linked to the state's readiness for digital transformation and its degree of reliance on advanced means. The research problem of the present study revolves around the fact that Iraq is one of the countries lagging behind in terms of the use of modern technology due to the extraordinary conditions, which impacted various areas of life, especially the field of information and communication technology, leading to the weak application of the digital transformation process. The present study aims to explore the challenges facing digital transformation in Iraq and determine the extent of hindering economic growth. The SPSS is employed to reveal the correlation between digital transformation indicators and economic growth in Iraq 2010-2022 . The results of the present study indicate that there is a slowdown in digital transformation in Iraq due to lack of infrastructure and reliance on foreign markets in providing information and communication technology resources as a result of not manufacturing them locally . One of the important recommendations of the present study is to spread technical and digital awareness by providing training programs in order to prepare qualified and trained human staff that contribute to the management of the digital transformation process.

Keywords: Digital Transformation, Economic Growth, IT, Iraq

Introduction

The world has recently witnessed a revolution in the field of information and communication technology, which has enhanced the process of digital transformation and its interaction in all sectors and institutions through its contribution to reducing time, effort, and cost and increasing levels of efficiency in the completion of transactions. Technology has occupied the first place in the competition of countries, where production capacity and performance at present are no longer measured by what elements of production institutions have, but rather by their possession of technical knowledge and advanced technology, which is the most important internal factor and an essential part of the law of economic growth.

Problem Statement

Iraq is one of the countries that lagged behind in terms of the use of modern technology due to the extraordinary conditions it experienced, which impacted various areas of life, especially the field of information and communication technology, leading to the weak application of the digital transformation process due to the lack of infrastructure and low awareness of the importance of technical issues.

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The Hypothesis

The influence of the application of digital transformation on the rate of economic growth in Iraq is weak due to the extraordinary conditions of Iraq, which impacted economic prosperity.

The **Objectives**

The present study aims to**:**

A. Defining digital transformation and economic growth.
B. Identifying the challenges facing digital transformation in Iraq.
C. Determining the extent to which digital transformation contributes to economic growth in Iraq.

The Research Methodology

The descriptive analytical approach is adopted in the present study to describe and analyze the process of digital transformation. The SPSS is employed to reveal the correlation between the indicators of digital transformation and economic growth in Iraq 2010-2022.

The Research Structure

The present study is divided into three sections. Section one establishes the theoretical framework. Section two is devoted to the analysis of digital transformation in Iraq. Section three presents the analysis of the correlation between the indicators of digital transformation and economic growth in Iraq 2010-2022.

Section One

The Theoretical Framework

First: Digital Transformation

1. The Concept of Digital Transformation

Digital transformation is one of the modern concepts that have spread in recent times and received great attention due to the rapid development of information and communication technology. There are many definitions of the concept of digital transformation, including the process of making radical changes in the methods of work, relying on modern advanced methods and technologies and employing innovation in order to achieve success, promote the organization, and provide the best services to beneficiaries with the least effort and cost [10,p75]. It is also defined as the process of transitioning from the traditional system to the digital system based on advanced technologies to support, develop, and innovate the services and products that are provided with efficiency and effectiveness that contribute to creating value for the institution [17,p45]

Based upon, digital transformation can be defined as a process of change in the performance of business in various fields by relying on modern digital technology in order to complete the

work as soon as possible with the least effort and cost and provide better and faster services to the beneficiaries.

2. Objectives of Digital Transformation

1. Reducing the time for information to reach the recipient or user from the source.
2. Providing information services using new technologies, such as digital reference services and machine translation [16,p66-67].
3. Developing and streamlining processes and services comprehensively and making them available to customers at affordable prices [22,p542].
4. Encouraging organizations to develop a clear transformation strategy and adopt an approach that clearly anticipates the commitment of all stakeholders.
5. Demonstrating how organizational processes are implemented to deliver a level of innovation, business development, and product services [25,p339].
6. Reducing high costs in transfers between countries.
7. Protecting and preserving digital data and promoting transparency, independence and trust [20,p186].

3. Digital Transformation Requirements

The success of the digital transformation process depends on the availability of a set of key requirements, including:

1. **Infrastructures [18,p237-238]**; It includes a set of basic elements, namely:

- **Technologies**; It is intended to provide the technological requirements for building digital transformation using the technology environment, the hardware, data and storage ecosystem , and the software that operates in the data center, the most important of which are social application technologies, mobile technologies, big data analysis, and cloud computing infrastructure.
- **Operations;** This includes the establishment of an effective technical structure that allows improving the performance at the internal and external levels of institutions and companies, to ensure the optimal application of digital transformation, including policies and procedures that cover all the company's activities, interrelated operations, developed technologies, and processed data.
- **Data; To** enter into the process of digital transformation and its success, data must be managed and analyzed regularly and effectively to provide reliable and complete qualitative data and to provide and develop appropriate tools for statistical analysis, data

mining, and future forecasting. Data must be monitored continuously to ensure that it is continuously flowed and used in line with the objectives and expectations of the institution.

2. **Resources;** It refers to all activities that contribute to securing new and additional resources for the organization, in addition to the best use of existing resources and maximizing them. The provision of resources is very important for any organization as it ensures the continued provision of services to customers, supports organizational sustainability, and allows to improve and expand the range of products and services provided by the organization [21,p27].
3. **Digital Security;** This is an ongoing requirement for investment in IT defense mechanisms. The emergence of a digital security network enables independent security solutions to work together and improve the security situation of the organization [24,p216].
4. **Obstacles of Digital Transformation**

There are many obstacles that hinder the process of digital transformation within institutions, including [19,p13-14]:

1- Concerns about information security risks stemming from the use of technology are among the biggest challenges to successful digital transformation.
2- Lack of competent staff within the organization to lead digital transformation programs.
3- Lack of dedicated budget for digital transformation.
4- Rural areas lack ICT-enabled infrastructure, skilled technical staff, and stable internet connections .
5- Due to economic poverty, low levels of education, and general instability, there are no institutions with sufficient expertise to build a digital information infrastructure.

Section Two

The Concept of Economic Growth and Its Influencing Factors

1. The Concept of Economic Growth

It is a process in which real income accumulates and increases over a quarter of a century period of time at a greater rate than the rate of population growth, while providing productive and social services, protecting renewable resources from pollution, and protecting non-renewable resources from depletion[26,p8]. It is also defined as an increase in the amount of goods and services produced in a given economy. These goods are produced using the main factors of production, namely land, labour, capital, and organization. Moreover, economic growth is the increase over time in the market value of the goods and services produced by the economy[27,p18]. It is also considered one of the most important economic indicators. It is

also defined as the total added value of all production units in various production sectors, such as agriculture, mining, and industry in a particular economy.

2. Factors Affecting Economic Growth

Several factors influence economic growth (https://www1.equiti.com.(15/3/2024)):

1- **Human Resources**; The quality and quantity of human capital available in a country directly affects economic growth. Human capital is determined by skills, creativity, training and education. Therefore, the quantity of the workforce is not important, but the quality of the workforce is also important.

2- **Natural Resources**; Natural resources include those produced by nature above or below ground, as well as resources above ground, including plants, water resources, and landscapes. As for underground resources, they include oil , natural gas, minerals , and metals. Natural resources in any country depend on climatic and environmental conditions. Natural resources depend to a large extent on the effective use of natural resources or their development by human resources and the technology used , which affects the economic growth of the country.

3- **Capital Formation**; Capital formation includes land, buildings, machinery, energy, transport, and means of communication. Capital formation increases by providing more capital to each worker, which increases the ratio of capital to labor, which increases worker productivity, ultimately leading to increased production and economic growth [9,p1].

4- **Technology Development**; Technology includes the application of scientific methods and modern production techniques. Technological development helps to increase productivity with limited resources because countries engaged in technological development are developing rapidly. Choosing the right technology plays a certain role in economic growth. Conversely, choosing the wrong technology increases production costs [4,p31].

3. The Correlation Between Digital Transformation and Economic Growth

Digital technology infrastructures help to increase operations and scalability in both public and private sectors, enabling economic sectors to grow rapidly by relying on advanced technologies instead of traditional means [7,p31]. Technological development has become an important source of economic growth as it contributes to changes in production processes and the introduction of new products and services to the market due to the fact that advanced technologies contribute to increasing productivity and raising production as well as quality [9, p2). Those in charge of communication technology are working to discover the best means so that institutions can produce and market in modern ways and get rid of the problems of time, effort, and speed in order to improve their level of productivity to enable them to compete in global markets [5,p251].The theory of internal growth has explained that technological

progress, including digital transformation, is the product of economic efficiency and that the knowledge resulting from digital transformation promotes growth because ideas can be updated and reused and are not subject to the law of diminishing returns. This theory also explains that the transition from a resource-based economy to a knowledge-based economy would push towards economic progress and thus increase economic growth [14,p15].

Section Two

Analyzing Digital Transformation in Iraq

First; Analyzing the indicators of digital transformation and the rate of economic growth in Iraq 2010-2022

First; Fixed Phone Indicator

Table (1) shows the indicators of digital transformation, including the index of fixed telephone penetration (landline) per 100 people in Iraq 2010-2022. The highest subscription rate was in 2017 with (8,172) subscribers , while the lowest rate was in 2016 with (5.248) subscribers. This indicator began to decline as a result of the scientific and technological development that resulted in the Internet and mobile phone, which led to a decrease in fixed telephone use.

Second; Mobile Indicator

Table (1) reveals that the percentage of mobile phone subscribers continues to rise from 2010 to 2022, reaching the highest percentage of (98.184) subscribers in 2022, while the lowest percentage was in 2010 with (74.410) subscribers, which indicates a significant increase in mobile phone use in Iraq as a result of the flexibility and ease of use it provides compared to the fixed phone.

Third; Internet Usage Index

This indicator is one of the most important indicators of digital transformation as a result of the advantages it provides in the field of information and communication technology. Table (1) indicates that the percentage of Internet subscription from the total population in Iraq during the study period is constantly increasing. In 2010, it reached (2.5) subscribers. Then, it reached (78.715) subscribers in 2022, which is the highest percentage during the study period.

Fourth; Economic Growth Rates in Iraq

Iraq achieved the highest economic growth rate during the study period, reaching (13,936) in 2012. Then, the rate decreased during (2013 and 2014) as a result of the political and security instability in the country due to the entry of criminal gangs (ISIS) and the decline in international oil prices, which had a negative impact on the Iraqi economy. Then, it improved in 2016, reaching (13,787), taking into account the disparity between the decline and the rise

during the remaining years, especially in 2020, where the economic growth rate reached (-12.036) due to the Corona pandemic, which caused the global closure.

Table (1) Indicators of Digital Transformation and Economic Growth Rates in Iraq 2010-2022

Source:https://data.albankaldawli.org/indicator/IT.NET.USER.MA.ZS?view=chart (18/12/2023)

Second; Challenges and Requirements** of **Digital Transformation in Iraq

First; The Challenges of Digital Transformation in Iraq

The report of the Arab digital economy (2022) indicates that the index of technological spread in Iraq has reached (33.64%) [1,p205], ranking (13) among other indicators, such as e-government , digital citizen, digital business, digital foundations, digital innovation, etc. in addition to its sub-indices, but it remains low if compared with other countries, especially the UAE, which topped the Arab countries by (71.37%), followed by Saudi Arabia by (66.07%),

Rates of Economic Growth	Internet Subscriber Ratio of total population	Rate of mobile subscribers per 100 people	Fixed Telephone Subscriber Ratio per 100 people	Year
402	2.5	410.	.503	2010
7.546	5	815	.540	2011
13.936	7.1	.009	.524*	2012
628	9.2	91.455	.354	2013
0.197	13.21	804	5.300	2014
722	15.2	879	5 288	2015
787	19.9	.430	248	2016
.819	26	337	172	2017
633**	33.9	989	.664	2018
513	326.	561	878	2019
036.	786	059	343	2020
1.583	917	604	5 837	2021
.008	.715	184	5.376	2022

and Bahrain by (64.89%), which indicates that Iraq suffers from a great delay in the digital field and does not keep pace with the global or even the Arab world, due to the challenges it

faces in the field of information and communication technology. The most important of these challenges include:

1- Significant lack of ICT infrastructure.
2- Weak investment in the field of information and communication technology, whether at the local or foreign level [12,p42].
3- Low level of digital content indicators in Iraq [11,p55].
4- Lack of awareness of the importance of information development and not knowing how to include it among the priorities represented in the digital progress reached by other countries [2,p33].
5- Weak funding for the technical and knowledge sector, which contributes to the inability to support research, development, and knowledge generation [8,p17].
6- Lack of digital culture among citizens, or so-called cognitive illiteracy, is a feature of the Iraqi society because of its isolation from global developments in the digital field.
7- Lack of legislation to deal with ICT [15,p24].

Second; Requirements of Digital Transformation in Iraq

1- Monitoring the development in the ICT sector, especially the Internet, in terms of coverage, speed, and price competitiveness [6,p1].
2- Encouraging investment in modern technologies and supporting research and development programs [3,p14].
3- Encouraging policies and regulatory measures that contribute to the deployment of ICT infrastructure, especially the Internet, in rural and isolated areas [23,p105].
4- Developing supportive laws for the digital transformation project in Iraq.
5- Spreading the culture of digital awareness and the need to educate society about various technologies and applications of digital transformation [13,p334].
6- Increasing public expenditure allocations to the ICT sector and giving great importance to research and development centers in the technical field [28,p30].

Section Three

Analysis of the Correlation Between Indicators of Digital Transformation and Economic Growth 2010-2022

The correlation between digital transformation and economic growth in Iraq is examined through the least squares method and testing the research hypothesis using the multiple regression test by SPSS

1	$Y= B_o + B_1X_1+B_2X_2+B_3X_3$

Equation (1) reveals that economic growth is a function of digital transformation. The interpretation of the model is as follows:

(Y)) Modified economic growth, (Bo) The truncated part of the vertical axis, (B) The slope of the straight line and represents the degree of impact , (X1) Percentage of Internet subscribers ,(X2)Percentage of mobile subscribers,(X3) Percentage of fixed telephone subscribers

Table (2) Correlations

Fixed Telephone Subscriber Ratio	Rates of mobile subscribers	Rates of Internet subscribers	Growth Rates	
332- 234 .015 1.000	- 308 751 1.000 .015	-122 1.000 751 .234	1.000 -122 - 308 332	Growth Rates Percentage of Internet subscribers pearson Correlaion mobile subscriber ratio Fixed Telephone Subscriber Ratio

Table (2) of the correlation coefficient shows that there is a weak correlation between the variables understudy. The correlation coefficient between growth rates and other independent variables appeared to be very weak, but it appeared to be very strong among the independent variables.

Table (3) Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Changed Statistics				
					R Square	magka baliktad	df1	df2	Sig. magka baliktad
1	.554a	.307	.076	4.3584292	.307	1.327	3	9	325.

a. Predictors: (Constant), Percentage of fixed telephone subscribers, Percentage of mobile telephone subscribers, Percentage of Internet subscribers

b. Dependent Variable: growth rates

Table (3) shows the coefficient of determination for interpreting the correlation between digital transformation indicators and growth rates in Iraq. The coefficient of determination (R2) (0.307)% appeared to be relatively low.

Table (4) ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	611	3	.204	1.327	.325b
	Residual	.170	9	996		
	Total	574	12			

a. Dependent Variable: Growth Rates

b. Predictors: (Constant), percentage of fixed phone subscribers, percentage of mobile phone subscribers, percentage of Internet subscribers.

Table (4) shows the analysis of variance or (F) test, which is the quality of the model as well as the quality of the correlation between the variables understudy. The division of (F) calculated at a significant level of (0.05) and a degree of freedom of (9) is about(1.327) and then compared with the tabular F value, which is about (3.8625). It is noticed that the tabular value is greater than the calculated value, which means that the model is not significant. Therefore, the alternative hypothesis indicating that there is a correlation between the variables is rejected and the null hypothesis indicating that there is no correlation between the variables is accepted.

Table **(**5**)** Coefficients

Model		Unstandardized Coefficients		standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	325.	.809		2.094	.066
	Percentage of Internet subscribers	.104	.092	.512	1.130	.288
	Rates of mobile subscribers	485	.306	700	1 588	147.
	Fixed Telephone Subscriber Ratio	417?	1.561	.463	548	156

a. Dependent Variable: Growth Rates

Table (5) shows that the effect or the (T) test is significant. It indicates a lack of significance between the variables. The calculated (T-value) is about (2.094) and the lowest value is about (-1.58). When compared with its tabular value at a level of significance of (0.05) and a degree of freedom of (9). This means that the tabular value of (T) is greater than its calculated value,

noting that some of the values of the (T) test appeared with a negative signal, which indicates a low impact for the independent variables on the dependent variable. Therefore, the alternative hypothesis indicating that there is a direct correlation between the variables is rejected and the null hypothesis indicating that there is no correlation between these variables, but there is a correlation, even if it is low, between growth rates and the percentage of Internet subscribers is accepted.

After estimating the regression model, the following estimated equation is obtained:

2	Y= 60.325 + 0.104X1-0.485X2-2.417X3

From the estimation of the multiple regression model, equation (2) shows the following:

1- There is a direct correlation between the independent variable (X1), the percentage of Internet subscribers and the dependent variable (Y), the growth rate, as the degree of impact is about (0.104). This is consistent with the logic of the hypothesis that there is a direct correlation between the independent and dependent variables. Therefore, the null hypothesis indicating that there is no correlation between the variables is rejected and the alternative hypothesis that shows a direct correlation between the dependent variable and the independent variable is accepted. This positive influence is due to the association of the Internet system in the Ministry of Communication. The Ministry's supervisory role on Internet companies is clear. Thus, the rate of collection of Internet wages from subscribers and companies is high.

2- There is an inverse correlation between the independent variable (X2) and the percentage of mobile phone subscribers and the dependent variable(Y) growth, as the degree of impact is about (0.485-). This is inconsistent with the logic of the hypothesis indicating that there is a direct correlation between the independent variable and the dependent variable. Therefore, the alternative hypothesis indicating that there is a correlation between the variables is rejected and the null hypothesis indicating that there is no direct correlation between the dependent variable and the independent variable is accepted. This is due to the weak role of government control over the mobile phone sector in the economy and its lack of correlation in the Ministry of Communications directly, which impacts the revenue side.

3- There is an inverse correlation between the independent variable (3x) and the percentage of fixed telephone subscribers and the dependent variable(Y) growth, as the degree of impact is about (2.417-). This is inconsistent with the logic of the hypothesis that there is a direct correlation between the independent variable and the dependent variable. Therefore, the alternative hypothesis indicating that there is a correlation between the variables is rejected and

the null hypothesis indicating that there is no direct correlation between the dependent variable and the independent variable is accepted.

Conclusion

1. The success of digital transformation is based on the availability and maintenance of ICT infrastructure, ensuring its management and speed of access, and improving the quality of service.
2. Technological development is a strong driver of economic growth, especially if the appropriate and modern technologies are chosen.
3. The digital transformation in Iraq has slowed down due to the challenges it faces in the field of ICT, including the lack of infrastructure and dependence on foreign markets in providing ICT resources as a result of not manufacturing them locally.
4. The indicators of digital transformation in Iraq are still in the early stages compared to the Arab countries as a result of the unstable situation in the country, which has negatively affected all economic sectors, including the ICT sector.
5. The results show that there is no correlation between the indicators of digital transformation and the rates of economic growth in Iraq, which indicates the weak contribution of this sector to GDP.

Recommendations

1- Paying attention to research and development programs in the field of information and communication technology in order to reduce the digital divide.
2- Encouraging investment in the field of information and communication technology, which leads to establishing a good information environment.
3- Involving the private sector in the process of digital transformation through the adoption of a partnership approach between the public and private sectors in order to build digital infrastructure and expand the scope of digital services in Iraq.
4- Creating a legal and legislative environment that regulates and protects the work of the ICT sector.
5- Spreading technical and digital awareness by providing training programs in order to prepare qualified and trained human staff that contribute to managing the digital transformation process properly.

References

Arab Federation for Digital Economy. (2022). Arab Digital Economy Index 2022: Post-Covid-19 and prospects for Arab economic recovery and growth. Council of Arab Economic Unity of the League of Arab States, United Arab Emirates.

Al-Zamili, I. (2019). Foundations and pillars of building a knowledge economy and challenges of success. Al-Kifah Publishing.

United Nations. (2017). The digital economy and the transformation towards smart societies in the Arab region. ESCWA.

Hawass, A., & Zarwat, F. (2015). Institutions and economic growth. Journal of Economics, Management, and Commercial Sciences, 13.

Abdulwahab, B., & Zainab, I. (2010). The impact of media and communication technology on driving development. Researcher Journal.

World Bank. (2018). A new economy.

League of Arab States. (2020). Arab vision for the digital economy.

Alami, H. (2013). Investing in information and communication technology to achieve sustainable development: A comparative study between Malaysia, Tunisia, and Algeria. Faculty of Economics and Commercial Sciences, Ferhat Abbas Setif University, Algeria.

Ismail, M., et al. (2022). Sources of economic growth in the Arab countries. Economic Studies, Arab Monetary Fund, 106.

Abbas, R., et al. (2022). Reflection of the application of the digital transformation strategy on the organizational agility of the Iraqi Ministry of Communications. Journal of the University College of Heritage, 34, 75.

Hussein, R. (2018). The Iraqi state and the possibility of restoring the knowledge economy. Al-Hikma Press.

Muhammad, S. (2018). Iraq between the advanced and underdeveloped economy under the new globalization. Legal Publishing Press.

Abdulzahra, Z., & Hisham, B. (2023). The reality of enhanced digital transformation for sustainable development in the Arab countries. Iraqi Journal of Economic Sciences, Special Issue of the Proceedings of the Sixth and Seventeenth Annual International Scientific Conference.

Hammad, S. (2005). Knowledge and investment in information architecture. In First Arab Conference (Cairo, Egypt).

International Monetary Fund. (2020). Digital economy in the Arab countries.

Farhat, F. (2020). The role of digital transformation in improving the performance of public relations functions in the Algerian public institution. (MA Thesis, Al-Arabi Bin Mahidi University - Umm Al-Bawaki, pp. 66-67).

Amin, M. (2018). Digital transformation in Egyptian universities as a requirement for achieving the knowledge society. Journal of Educational Administration, 19.

Mashhour, N., & Youssef, S. (2021). The impact of digital transformation on the competitiveness and added value of the tourism sector. Journal of the Union of Arab Universities for Tourism and Hospitality, 21(3), Giza, Egypt.

Mari, Y. (2019). The importance of digital transformation in the banking sector: A field study applied to Al-Rajhi Bank in the Kingdom of Saudi Arabia. In 24th Crisis Research Conference: Managing digital transformation to implement Egypt's Vision 6131AD (Faculty of Education, Ain Shams University, Egypt).

Ebert, C., & Duarte, C. H. C. (2018). Digital transformation. IEEE Software, 35(4).

Eden, A. B., Jones, V., & Draheim, M. (2019). Digital transformation requires workforce transformation. MIS Quarterly Executive, 18(1).

Goerzing, D., & Bauernhahs, T. (2018). Enterprise architectures for the digital transformation of small and medium-sized enterprises. In 11th CIRP Conference on Intelligent Computation in Manufacturing Engineering.

International Telecommunication Union Development Sector. (2020). How broadband, global econometric modeling, digitization, and ICT regulation impact the global economy.

Fuchs, C., & Hess, T. (2018). Becoming agile in the digital transformation: The process of a large-scale agile transformation. In ICIS 2017 Proceedings (p. 216).

Matt, C., Hess, T., & Benlian, A. (2015). Digital transformation strategies. Business & Information Systems Engineering, 57(5).

Meadows, D. H. (2004). Limits to growth: The 30-year update. Chelsea Green Publishing.

International Monetary Fund. (2012, October). Statistics on the growth of the global gross domestic product (GDP) from 2003 to 2013.

Matar, Z. (2024, January 21). Globalization demolished the old economy. Islam Online. Retrieved from https://www.islamonline.net

Factors affecting economic growth. (2024, March 15). Retrieved from https://www1.equiti.com/ae-ar/newsroom/articles/factors-affecting-economic-growth

World Bank. (2023, December 18). Global digital economy data. Retrieved from https://data.albankaldawli.org/indicator/IT.NET.USER.MA.ZS?view=chart