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Digitalization requirements and their role on improving public health services

متطلبات الرقمنة ودورها في تحسين الخدمات العمومية الصحية

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Abstract

The aim of this study was to investigate the role of digitalization requirements in improving public health services at the public hospital "Mohamed Boudiaf" in Medea. To achieve we distribute questionnaires to administrative employees. After analyzing the data using the SPSS software, the study concluded that there is a strong positive correlation of 0.900 between the availability of digitalization requirements and improved health services. Additionally, there was strong impact of improving public health services by providing essential digitalization requirements.

Keywords: digitalization; digitalization requirements; health services; public hospital, Spss.

JEL Classification Codes: I18 ،M15

الملخص

هدفت هذه الدراسة الى معرفة دور متطلبات الرقمنة في تحسين الخدمات الصحية العمومية بالمؤسسة الاستشفائية العمومية محمد بوضياف بالمدية، من خلال توزيع استبيان على الموظفين الإداريين، وخلصت الدراسة بعد تحليل البيانات باستخدام برنامج *spss* الى وجود علاقة ارتباطية موجبة وقوية قدرت 0.900 بين توفر متطلبات الرقمنة وتحسن الخدمات الصحية المقدمة، بالإضافة الى وجود أثر قوي لتحسن الخدمات الصحية العمومية بتوفير متطلبات الرقمنة الأساسية.

الكلمات مفتاحية: الرقمنة، متطلبات الرقمنة، الخدمات الصحية، المؤسسة الاستشفائية العمومية، برنامج Spss.

تصنيف JEL: I18، M15

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1. Introduction

In recent years, nations have been embracing technology to enhance public services. Digitalization is a key driver of this transformation, enabling easy access to information and services through specialized digital infrastructures. Countries, including Algeria, prioritize digitalizing health sectors to improve service delivery. By adopting electronic healthcare solutions, health institutions can provide efficient and accurate care, address long waiting lists, and improve overall quality. This aligns with global trends of leveraging digital technologies to transform public services.

Study Problem

From the preceding, our related question here is:

What is the effect of digitalization requirements on improving public health services?

Several Sub-questions include the following:

- Is there a correlation between the availability of digitization requirements and improving public health services?
- Is there a statistically significant effect of digitization requirements and improving public health services?

Study Hypotheses:

To answer the raised questions, the study's hypotheses can be formulated as follows:

- H1: There is a statistically significant correlation between the digitalization requirements and the improvement of public health services.
- H2: There is a statistically significant effect of digitization requirements and improving public health services.

Study Objective

The study aims to achieve the following objectives:

- Presenting a Theoretical framework for Digitalization and Public Health Services.
- Examining whether digitalization requirements are available at Mohammed Boudiaf Hospital as a public hospital institution in Medea.
- Assessing the quality of health services provided by Mohamed Boudiaf Hospital in Medea.
- Investigate how digitalization can enhance the health services provided at Mohamed Boudiaf Hospital.

Methodology of research:

To achieve the stated objectives and deal with the study's problem, we have relied on an analytical and descriptive approach, using books, articles that interest us in the topic, and data analysis with SPSS.

Previous studies:

Anamarija Cijan's study, How Digitalization Changes the Workplace (Cijin & others, 2019)**,** examines how digitalization affects the workplace. It focuses specifically on job satisfaction, work/life balance, and worker autonomy as three under-researched areas of academic inquiry. It suggests that digitalization improves job satisfaction, blurs work/life balance, and promotes more worker autonomy.

Nils Urbach and Maximilian Röglinger's study, Introduction to Digitalization Cases: How Organizations Rethink Their Business for the Digital Age (Urbach & Roglinger, 2019)**,** reports on best practices and lessons learned from organizations that succeeded in tackling the challenges and seizing the opportunities of the digital economy. It illustrates how twenty-one organizations leveraged their capabilities to create disruptive innovation, develop digital business models, and transform themselves digitally. These cases stem from various industries and countries, covering the many facets that digitalization may have.

Comparing the current study with the previous ones:

There are very few studies on the role of digitalization requirements in improving public health services, as most studies have focused on only one variable and its connection to another variable. In our study, we aimed to investigate the role of digitalization requirements on improving public health services.

Sample:

Due to the expected difficulty in collecting data, a small sample was selected. Therefore, the study focused on the 93 administrative staff members at Medea's public hospital, Mohamed Boudiaf. Steven K. Thompson's equation was used to calculate the study sample, which consisted of 50 administrative employees distributed among various departments and main and sub-units in the public hospital. After distributing 50 questionnaires, 40 were retrieved, which means that there was an 80% response rate. The study's results were based on 35 questionnaires after five questionnaires were removed because they were invalid for analysis.

Method and tools:

We designed a questionnaire to examine the correlation between digitalization requirements and the improvement of public health services. The questionnaire was distributed to the administrative employees and was structured around two main themes. The first theme focused on the participants' opinions regarding the availability of digitalization requirements. The second theme explored these requirements' impact on improving public health services. We used a 5-point Likert scale to measure these aspects, with responses ranging from 1 (strongly disagree) to 5 (strongly agree). Then, the data were normalized using spss v. 27

- Descriptive data were generated for all variables.
- Data management and analysis were performed using spss v. 27.
- Reliability was calculated using Cronbach's alpha.
- A Pearson correlation analysis was conducted to assess the strength of the correlation between digitalization requirements and the improvement of public health services.
- A p-value <0.05 was considered significant.

Study variables:

Digitalization requirements were the independent variable

Improving public health services was the dependent variable

2. Conceptual framework of digitalization:

Digitalization has been identified as the most significant technological trend that is changing society and business.

2.1. Definitions of digitalization :

The literature on digitalization appears to be ambiguous in terms of the exact definition of the term, probably due to few articles distinguish between digitalization, digitization, and digitation, which are being sometimes used indistinctly in the literature or at least, there seems to be some confusion regarding the usage of terms.

The following are some definition of digitalization that is summarized in Table 1:

Table 1 : Digitalization definitions

Author(s)	Definition(s)
Maxwell and McCain	Digital technology takes information and breaks it down into its smallest components. By transforming an analogue signal into discrete pieces, digitalization makes it possible to manipulate information, text, graphics, software code, audio, and video in ways

	never before thought of, thus its information, transforming Capabilities (Maxwell & McCain , 1997, p. 147)
Devereux and Vella	Digitalization is the process of spreading a general-purpose technology. The last similar phenomenon was electrification. Digitalization of products and services shortens distances between people and things. It increases mobility. It makes network effects decisive. It allows specific data to such an extent that it permits the satisfaction of individual customer needs, whether consumers or businesses. It opens up ample opportunities for innovation, investment, and the creation of new businesses and jobs. Going forward, it will be one of the main drivers of sustainable growth (Devereux & Vella , 2017, p. 91)
Moreley et al	Digitalization is the growing application of ICT across the economy "encompassing a range of digital technologies, concepts and trends such as artificial intelligence, the "Internet of Things" (IoT) and the Fourth Industrial Revolution (Moreley, Widdicks, & Hazas, 2018, p. 128)
Srai and Lorentz	Digitalization is defined as the way many domains of social life are restructured around digital communication and media infrastructures. In simple terms, digitalization may be defined as the use of digital technologies (Srai & Lorentz, 2018, p. 79)

Based on the previous definitions, it can be concluded that digitalization is the transformation of all traditional administrative tasks and services into electronic operations and services that are executed rapidly and with high accuracy, utilizing the available capabilities.

2.2. requirements of digitalization:

Digitalization requires several essential requirements, which include the following (Rabhi & Lakhal, 2016, p. 243):

- Digital Skills and Talent: Organizations need a skilled workforce to drive digitalization. This includes hiring or upskilling employees with data analytics, artificial intelligence, cloud computing, and digital marketing expertise.

- Hardware: This refers to the physical components of computers, networks, systems, and peripherals. Institutions should prioritize acquiring state-of-the-art hardware worldwide to ensure cost-effective continuous development and align computer hardware with evolving software advancements.
- Networks: Networks encompass various electronic connections spanning the Internet, Extranet, and Intranet infrastructures.
- Software: Software consists of diverse instructions that control computers and includes programming languages, application systems, data programs, and programming auditing tools. It effectively harnesses computers' various capabilities.

3. The concept of public health services:

Worldwide, Public Health Services establish a structure for safeguarding and enhancing the health of individuals across all communities. To achieve fairness, Essential Public Health Services actively advocate for policies, systems, and community environments that facilitate optimal health for everyone by eliminating systemic and structural obstacles contributing to health disparities.

3.1. Definitions of Health services:

Health services or medical care refers "to the services provided by healthcare organizations, such as services related to diagnosis, treatment, social and psychological rehabilitation, provided by specialized therapeutic departments and the supporting medical departments. This includes medical services, emergency care, outpatient clinics, radiology, ambulance services, nursing, and pharmaceutical and nutritional services". (Kortel & Boulasbaa, 2013, pp. 246-247)

Health services also define as medical services; refer "to a set of functions that work towards directly satisfying human needs related to survival and well-being. These services are interconnected with other functions of society, such as economic, educational, and social functions, albeit indirectly. They provide individuals with the ability to adapt to their environment by supporting their environmental and psychological capabilities, enabling them to achieve the desired performance". (Al-Dabbagh,, 2007, p. 108). We define health services as the services that encompass a wide range of activities and interventions aimed at promoting, maintaining, and restoring health, as well as preventing and treating illness or injury. These services include medical consultations, diagnostic tests, surgeries, medications, rehabilitation services, preventive care, health education, and other interventions designed to improve the

health and well-being of individuals and communities. Healthcare professionals and institutions provide a broad spectrum of medical, diagnostic, therapeutic, and supportive measures to ensure the highest level of care and patient outcomes. This delivery of healthcare services involves a multidisciplinary approach, with physicians, nurses, allied health professionals, administrators, and support staff working together.

3.2. Characteristics of health services:

Several characteristics distinguish health services, which can be summarized as follows (Makid & Ben Ayad, 2016, p. 11):

- **Personal:** Healthcare services are designed to meet the specific needs of patients through direct interaction between healthcare providers and patients, focusing on personalized care and treatment.

Non-deferrable: Healthcare services are often time-sensitive and cannot be delayed or postponed. Prompt access to healthcare is crucial in addressing acute conditions emergencies, and preventing further complications.

- **Accessibility and availability**: Healthcare services should be readily accessible and available to all individuals, regardless of their socioeconomic status or geographical location. Efforts are made to ensure that healthcare facilities and professionals are easily reachable and that services are geographically distributed.
- **Integration:** Healthcare services are interconnected and integrated with each other. Services such as screening, diagnosis, treatment, prevention, nursing care, hospitality, and administrative services complement and support each other to provide comprehensive and holistic care.
- **Continuous:** Continuous provision of healthcare services is essential for maintaining patient-provider relationships and ensuring ongoing care. This includes follow-up visits, long-term management of chronic conditions, and ongoing support and monitoring.
- **Governed by laws and regulations:** Healthcare services are influenced and regulated by government laws and regulations. Both public and private healthcare institutions, including hospitals, operate within legal frameworks and are subject to government policies and oversight.

These characteristics collectively define the nature and delivery of healthcare services, emphasizing the importance of personalized, accessible, integrated, continuous, and regulated care for individuals and communities.

4. Analysis of the results:

We will summarize and analyze the obtained data, provide an interpretation of these results, and test the validity of the hypotheses.

4.1. Results:

We are interested in testing the reliability and validity measures of the study variables. Then, we will present the analysis of demographic variables. Finally, we will present the results of inferential statistics.

4.1.1. The validity and reliability of the questionnaire:

❖ **The validity of the questionnaire:**

To assess the consistency of all the questionnaire paragraphs with their respective axes, we calculated the internal consistency validity of the questionnaire paragraphs by looking at the correlation coefficients between each paragraph and the total score of its axis. We also evaluated the questionnaire's construct validity by analyzing the correlation coefficient between each axis and the total score of its paragraphs, as presented in the tables below.

Table 2: Internal validity of the first axis items

	Items	**Correlation coefficient**	**Probability Value**
T1	Modern computer devices are available in the hospital	0.697	0.000
T2	The hospital regularly maintains computer devices, equipment, and related components	0.664	0.000
T3	The number of devices available in the hospital is sufficient to provide services	0.643	0.000
N2	The hospital possesses an internal network that facilitates the exchange of up-to-date information among the staff	0.568	0.000
N2	The hospital where you work exchanges information with other hospitals through an external network	0.776	0.000
N2	There is a high-speed internet flow available in the hospital	0.809	0.000
S1	The facility of operation and use characterizes the software used in the hospital	0.772	0.000
S2	The software used is constantly updated to keep up with technological advancements	0.835	0.000
S3	Specialized software is available in the hospital for managing patient records and employee files	0.674	0.000
D1	In my opinion, the hospital staff are capable and qualified to implement digitization	0.652	0.000
D2	In my opinion, the hospital staff are capable and	0.722	0.000

	qualified to implement digitization		
D3	The hospital has qualified IT technicians who can promptly address any technical issues that may arise	0.809	0.000

Source: Prepared by the researcher based on the outputs of the SPSS program 27

Table 2 shows that all items on the first axis are statistically significant, with a statistical value of less than 0.05. This confirms a strong correlation between the paragraphs of the first axis and the axis itself.

Table 3: Internal validity of the second-axis items

	Items	**Correlation Coefficient**	**Probability value**
Q1	Digital services implemented in hospital reduce the time required to complete the requested services	0.721	0.000
Q2	Digital services implemented in hospital help save effort and resources.	0.809	0.000
Q3	Digital services in hospitals aim to simplify procedures and workflows.	0.502	0.000
Q4	The reliability of digital services in hospitals is commendable	0.928	0.000
Q5	Digital hospital services enhance accuracy and minimize errors	0.896	0.000
Q6	Digital services reduce the need for patients to physically visit the hospital to access them.	0.757	0.000
Q7	Digital services implemented in hospitals are known for their transparency	0.683	0.000
Q8	Digital services help reduce the risks associated with paper-based transactions.	0.392	0.000
Q9	Digital services implemented in hospitals are of high quality	0.496	0.000
Q10	Digital services help reduce daily operational costs, such as paper-based transactions, mail transport, and necessary staff.	0.542	0.000

Source: Prepared by the researcher based on the outputs of the SPSS program 27

It is evident from the results of Table 3 that all items on the second axis are statistically significant, as their p-values are less than 0.05. This confirms a strong correlation between the paragraphs of the second axis and the axis itself.

Table.4: The constructive validity of the questionnaire

Axises	Correlation coefficient	Probability value
First axis: digitalization requirements	0.900	0.000
Second axis: Improving public health services	0.900	0.000

Source: Prepared by the researcher based on the outputs of the SPSS program 27

It is clear from the table above that the correlation coefficients are significant at a significance level of 0.000, as the probability value for each axis is less than 0.05. This demonstrates a very strong correlation between the two axes of the questionnaire and the overall average of its paragraphs. By calculating the internal and constructive validity of the questionnaire, it can be said that it is valid in its final form and that its paragraphs can measure what they were found to measure.

- **The reliability of the questionnaire**:

A measurement tool must possess reliability in addition to internal and constructive validity. A reliable tool produces consistent results when applied repeatedly to individuals under the same conditions. To test reliability, we used Cronbach's alpha coefficient method, the results of which are displayed in the table below.

Table 5: The Cronbach's alpha coefficient of the questionnaire

Total items of the questionnaire	Cronbach's alpha coefficient
22 items	**0.947**

Source: Prepared by the researcher based on the outputs of the SPSS program 27

It is clear from Table 5 that the value of Cronbach's alpha coefficient 0.947 is greater than 0.6, and this confirms that there is strong reliability in the study scale

4.1.2. Analysis of Demographic Variables

The demographic information of the sample follows the following statistical distribution

Table 6: Demographic Variables analysis

Educational level	%	Professional Experience	%	Fonctions	%
medium	8.6	Less than 5 years	11.4	Administrative assistant	31
Secondary	37.1	Between 5 and 10	14.3	monitoring officer	42.9
university	45.7	Between 11 and 20	34.3	administrative Framework	22.9
Another level	8.6	More than 20	40.0	senior administrative framework	2.9

Source: Prepared by the researcher based on the outputs of the SPSS program 27

The table results show that most of the respondents hold a university educational level have significant professional experience of more than 20 and have the function of administrative assistant at least. It can be noted through the characteristics of the respondents that the answers provided by them are reliable and helpful in the analysis, which confirms the previous results of the validity and reliability of the questionnaire.

4.2. Testing the study hypotheses:

Through this element, we will attempt to test the various hypotheses related to the study and analyze the various results obtained from these applied tests.

❖ Testing the first hypothesis:

The first hypothesis addresses the extent to which there is a statistically significant correlation between the digitalization requirements and the improvement of public health services. This hypothesis and its null hypothesis were formulated as follows:

- H0: There is no statistically significant correlation between digitalization requirements and improving public health services in Medea's public hospital 'Mohamed Boudiaf' at the significance level of 0.05.
- H1: There is a statistically significant correlation between digitalization requirements and improving public health services in Medea's public hospital 'Mohamed Boudiaf' at a significance level of 0.05.

To test this hypothesis, we used **the Pearson correlation coefficient**, and the results are represented in the following table:

Table.7: The test of Pearson correlation coefficient

digitalization requirements		
0.900	**Pearson correlation coefficient**	**public health services improvement**
0.000	**p-value**	

Source: Prepared by the researcher based on the outputs of the SPSS program 27

The table results show a strong correlation between the independent variable represented by the digitalization requirements and the dependent variable represented by improving public health services in Medea's public hospital, Mohamed Boudiaf. This correlation was estimated at 0.9, and it is statistically significant as the significance level is less than 0.05.

Hence, we reject the null hypothesis and accept the alternative hypothesis that confirms the existence of a statistically significant correlation

between the availability of digitalization requirements and the improvement of public health services.

- **Testing the second hypothesis:**

The second hypothesis is the causal hypothesis because it addresses the extent of the impact of digitalization requirements on improving public health services in Medea's public hospital 'Mohamed Boudiaf'.This hypothesis and its null hypothesis were formulated as follows:

- H0: There is no statistically significant effect of digitalization requirements on improving public health services in Medea's public hospital 'Mohamed Boudiaf' at the significance level of 0.05.
- H1: There is a statistically significant effect of digitalization requirements on improving public health services in Medea's public hospital 'Mohamed Boudiaf' at the significance level of 0.05.

To test this hypothesis, we used **simple linear regression,** and the results are represented in the following table:

Table.8: The Simple linear regression of the effect of on the level of

Model	R	R-deux	R-deux Ajusté	F	p-value
1	0.900	0.810	0.804	140.318	0.000

Source: Prepared by the researcher based on the outputs of the SPSS program 27

The results of the table above show that there is a very strong positive correlation between the independent variable, digitalization requirements, and the dependent variable, improving public health services, which is estimated at 0.900, while the square of the correlation is estimated at 0.81, which means that digitalization requirements affect on improving public health services in Medea's public hospital 'Mohamed Boudiaf', by an amount equivalent to 81%, while 19% is due to other factors that were not included in the study.

As for measuring the overall significance of the model, the analysis of variance showed that the F value estimated at 140.318 is considered statistically significant, as the probability value was estimated at 0.000, which is less than 0.05. Therefore, we say that the regression model is significant, meaning that at least one of the regression coefficients is different from zero.

Hence, we reject the null hypothesis and accept the alternative hypothesis that confirms the existence of a statistically significant effect of the digitalization requirements on improving public health services.

5. Conclusion:

The main objective of our study is to test the correlation and effect of digitalization requirements on improving public health services in Medea's public hospital 'Mohamed Boudiaf'. To achieve this goal, we tried to answer the following question: What is the effect of digitalization requirements on improving public health services in Medea's public hospital, 'Mohamed Boudiaf'? through a theoretical study that included a group of previous studies in addition to the basic concepts of digitalization and its main requirements, we also presented the basic concepts of public health services and their characteristics in public institutions.

As for the applied aspect, we tried to answer the problem through a questionnaire directed to 35 individuals from the administrative employees of Medea's public hospital 'Mohamed Boudiaf' in 2024. These data were analyzed using the SPSS program, where the validity and reliability of the study tool were first addressed through the internal validity of each axis separately and the constructive validity of all axes that were statistically significant, i.e. less than 0.05. Then the Cronbach's alpha coefficient was tested, which was estimated at 0.947, which confirmed the validity of the questionnaire.

Then, to test the hypotheses and analyze the results, the Pearson correlation coefficient was used, confirming a strong and statistically significant correlation between the digitalization requirements on improving public health services in Medea's public hospital 'Mohamed Boudiaf'. That is, it confirms the first hypothesis As for the second hypothesis was confirmed through a simple linear regression test, which confirmed that there was an effect of digitalization requirements as an independent variable of improving public health services as a dependent variable in Medea's public hospital 'Mohamed Boudiaf'.

From the above, we conclude with the following recommendations:

- Extending and speeding up digitalization of the public health sector.
- Strengthening the digitization system through good training for employees and providing public health institutions with the necessary financial capabilities.
- Completing the public health institution digitalization program by providing most important requirements of digitalization.

6. Annexes:

Corrélations

		T1	T2	T3	N1	N2	N3	S1	S2	S3	D1	D2	D3	adigitalization
T1	Corrélation de Pearson	1	,561**	,250	,158	,501**	,652**	,453**	,705**	,493**	,287	,453**	,652**	,697**
	Sig. (bilatérale)		,000	,147	,365	,002	,000	,006	,000	,003	,094	,006	,000	,000
	N	35	35	35	35	35	35	35	35	35	35	35	35	35
T2	Corrélation de Pearson	,561**	1	,327	,067	,437**	,540**	,434**	,529**	,596**	,248	,434**	,540**	,664**
	Sig. (bilatérale)	,000		,055	,703	,009	,001	,009	,001	,000	,151	,009	,001	,000
	N	35	35	35	35	35	35	35	35	35	35	35	35	35
T3	Corrélation de Pearson	,250	,327	1	,629**	,518**	,413*	,414*	,446**	,297	,371*	,414*	,413*	,643**
	Sig. (bilatérale)	,147	,055		,000	,001	,014	,013	,007	,083	,028	,013	,014	,000
	N	35	35	35	35	35	35	35	35	35	35	35	35	35
N1	Corrélation de Pearson	,158	,067	,629**	1	,560**	,298	,289	,482**	,143	,582**	,289	,298	,568**
	Sig. (bilatérale)	,365	,703	,000		,000	,082	,092	,003	,414	,000	,092	,082	,000
	N	35	35	35	35	35	35	35	35	35	35	35	35	35
N2	Corrélation de Pearson	,501**	,437**	,518**	,560**	1	,645**	,474**	,559**	,349*	,463**	,474**	,645**	,776**
	Sig. (bilatérale)	,002	,009	,001	,000		,000	,004	,000	,040	,005	,004	,000	,000
	N	35	35	35	35	35	35	35	35	35	35	35	35	35
N3	Corrélation de Pearson	,652**	,540**	,413*	,298	,645**	1	,653**	,672**	,594**	,443**	,653**	1,000**	,809**
	Sig. (bilatérale)	,000	,001	,014	,082	,000		,000	,000	,000	,008	,000	,000	,000
	N	35	35	35	35	35	35	35	35	35	35	35	35	35
S1	Corrélation de Pearson	,453**	,434**	,414*	,289	,474**	,653**	1	,497**	,338*	,401*	1,000**	,653**	,722**
	Sig. (bilatérale)	,006	,009	,013	,092	,004	,000		,002	,047	,017	,000	,000	,000
	N	35	35	35	35	35	35	35	35	35	35	35	35	35
S2	Corrélation de Pearson	,705**	,529**	,446**	,482**	,559**	,672**	,497**	1	,641**	,573**	,497**	,672**	,835**
	Sig. (bilatérale)	,000	,001	,007	,003	,000	,000	,002		,000	,000	,002	,000	,000
	N	35	35	35	35	35	35	35	35	35	35	35	35	35
S3	Corrélation de Pearson	,493**	,596**	,297	,143	,349*	,594**	,338*	,641**	1	,396*	,338*	,594**	,674**
	Sig. (bilatérale)	,003	,000	,083	,414	,040	,000	,047	,000		,019	,047	,000	,000
	N	35	35	35	35	35	35	35	35	35	35	35	35	35
D1	Corrélation de Pearson	,287	,248	,371*	,582**	,463**	,443**	,401*	,573**	,396*	1	,401*	,443**	,652**
	Sig. (bilatérale)	,094	,151	,028	,000	,005	,008	,017	,000	,019		,017	,008	,000
	N	35	35	35	35	35	35	35	35	35	35	35	35	35
D2	Corrélation de Pearson	,453**	,434**	,414*	,289	,474**	,653**	1,000**	,497**	,338*	,401*	1	,653**	,722**
	Sig. (bilatérale)	,006	,009	,013	,092	,004	,000	,000	,002	,047	,017		,000	,000
	N	35	35	35	35	35	35	35	35	35	35	35	35	35
D3	Corrélation de Pearson	,652**	,540**	,413*	,298	,645**	1,000**	,653**	,672**	,594**	,443**	,653**	1	,809**
	Sig. (bilatérale)	,000	,001	,014	,082	,000	,000	,000	,000	,000	,008	,000		,000
	N	35	35	35	35	35	35	35	35	35	35	35	35	35
adigitalization	Corrélation de Pearson	,697**	,664**	,643**	,568**	,776**	,809**	,722**	,835**	,674**	,652**	,722**	,809**	1
	Sig. (bilatérale)	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	
	N	35	35	35	35	35	35	35	35	35	35	35	35	35

**. La corrélation est significative au niveau 0.01 (bilatéral).

*. La corrélation est significative au niveau 0.05 (bilatéral).

Corrélations

		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	bservices
Q1	Corrélation de Pearson	1	,714**	,288	,681**	,689**	,519**	,324	,149	,306	,249	,721**
	Sig. (bilatérale)		,000	,094	,000	,000	,001	,058	,392	,073	,149	,000
	N	35	35	35	35	35	35	35	35	35	35	35
Q2	Corrélation de Pearson	,714**	1	,590**	,690**	,737**	,572**	,535**	,100	,220	,267	,809**
	Sig. (bilatérale)	,000		,000	,000	,000	,000	,001	,568	,203	,121	,000
	N	35	35	35	35	35	35	35	35	35	35	35
Q3	Corrélation de Pearson	,288	,590**	1	,454**	,347*	,262	,241	,254	-,104	,233	,502**
	Sig. (bilatérale)	,094	,000		,006	,041	,128	,163	,141	,553	,177	,002
	N	35	35	35	35	35	35	35	35	35	35	35
Q4	Corrélation de Pearson	,681**	,690**	,454**	1	,862**	,619**	,611**	,361*	,380*	,568**	,928**
	Sig. (bilatérale)	,000	,000	,006		,000	,000	,000	,033	,024	,000	,000
	N	35	35	35	35	35	35	35	35	35	35	35
Q5	Corrélation de Pearson	,689**	,737**	,347*	,862**	1	,633**	,573**	,255	,462**	,330	,896**
	Sig. (bilatérale)	,000	,000	,041	,000		,000	,000	,140	,005	,053	,000
	N	35	35	35	35	35	35	35	35	35	35	35
Q6	Corrélation de Pearson	,519**	,572**	,262	,619**	,633**	1	,708**	,085	,313	,360*	,757**
	Sig. (bilatérale)	,001	,000	,128	,000	,000		,000	,626	,067	,034	,000
	N	35	35	35	35	35	35	35	35	35	35	35
Q7	Corrélation de Pearson	,324	,535**	,241	,611**	,573**	,708**	1	,110	,174	,249	,683**
	Sig. (bilatérale)	,058	,001	,163	,000	,000	,000		,529	,316	,150	,000
	N	35	35	35	35	35	35	35	35	35	35	35
Q8	Corrélation de Pearson	,149	,100	,254	,361*	,255	,085	,110	1	,257	,249	,392*
	Sig. (bilatérale)	,392	,568	,141	,033	,140	,626	,529		,136	,149	,020
	N	35	35	35	35	35	35	35	35	35	35	35
Q9	Corrélation de Pearson	,306	,220	-,104	,380*	,462**	,313	,174	,257	1	,237	,496**
	Sig. (bilatérale)	,073	,203	,553	,024	,005	,067	,316	,136		,171	,002
	N	35	35	35	35	35	35	35	35	35	35	35
Q10	Corrélation de Pearson	,249	,267	,233	,568**	,330	,360*	,249	,249	,237	1	,542**
	Sig. (bilatérale)	,149	,121	,177	,000	,053	,034	,150	,149	,171		,001
	N	35	35	35	35	35	35	35	35	35	35	35
bservices	Corrélation de Pearson	,721**	,809**	,502**	,928**	,896**	,757**	,683**	,392*	,496**	,542**	1
	Sig. (bilatérale)	,000	,000	,002	,000	,000	,000	,000	,020	,002	,001	
	N	35	35	35	35	35	35	35	35	35	35	35

**. La corrélation est significative au niveau 0.01 (bilatéral).

*. La corrélation est significative au niveau 0.05 (bilatéral).

Corrélations

		adigitalization	bservices
adigitalization	Corrélation de Pearson	1	,900**
	Sig. (bilatérale)		,000
	N	35	35
bservices	Corrélation de Pearson	,900**	1
	Sig. (bilatérale)	,000	
	N	35	35

**. La corrélation est significative au niveau 0.01 (bilatéral).

Statistiques de fiabilité

Alpha de Cronbach	Nombre d'éléments
,947	22

Récapitulatif des modèles

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation
1	,900[a]	,810	,804	,20901

a. Prédicteurs : (Constante), adigitalization

ANOVA[a]

Modèle		Somme des carrés	ddl	Carré moyen	F	Sig.
1	Régression	6,130	1	6,130	140,318	,000[b]
	Résidus	1,442	33	,044		
	Total	7,571	34			

a. Variable dépendante : bservices

b. Prédicteurs : (Constante), adigitalization

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