The Role of Cloud Computing on the Performance of Employees in the Algerian Company -Field Study : Brandt Algerie Company in Setif.

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Abstract:

This research paper aims at studying the relationship between the cloud computing and employees' performance in the Algerian company. The field study was done at Brandt Algerie Company in Setif- Algeria. Therefore, we have relied on a quantitive research, we used the questionnaire as a main research tool for collection and analysis of data and information; and 57 forms were distributed to different users, then, we retrieved 51 forms which represent the sample of study. The data was analyzed by using the SPSS V.25 program.

Finally the results of study showed that, there is a good level of the use of the cloud computing in Brandt Algerian Company; and there is a relationship between the cloud computing and the employees' performance.

Keywords: cloud computing ; employees; performance; users

JEL Classification Codes: P27, M12, M15

ملخص:

تهدف هذه الورقة البحثية إلى دراسة العلاقة بين الحوسبة السحابية وأداء الموظفين في المؤسسة الجزائرية، وقد تمت الدراسة في مؤسسة برانت الجزائر بولاية سطيف، حيث تم الاعتماد على دراسة كمية أين استخدمنا استبيان كأداة أساسية لجمع وتحليل البيانات، وقمنا بتوزيع 57 استمارة تم استرجاع منها 51 استمارة وهي التي تمثل عينة الدراسة، ولتحليل البيانات تم استخدم برمجية SPSS.وفي الاخير أظهرت النتائج وجود مستوى استخدام جيد للحوسبة السحابية في مؤسسة برنت الجزائر، كما أظهرت أيضا وجود علاقة بين الحوسبة السحابية وأداء الموظفين.

كلمات مفتاحية: الحوسبة السحابية، الأداء، الموظفين، المستخدمين.

تصنيفات JEL: P27, M12, M15

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1. Introduction

Cloud computing is an important new technology in the world of information, and it offers computing services that can be accessed over the network from any location that are built on parallel and distributed IS of virtualized computers and storage technologies (Hemlata Gangwar, 2017, p. 15). Cloud computing focuses on providing the services which are requested by users to do the tasks and get required services locally.

Furthermore, most of the companies seek to take advantage of cloud services, security and performance of use of Internet-based computer technology. Large companies, institutions and governments are looking at cloud computing as an important cost saving option to reduce expenditures on all its operations, IT infrastructure, services and ongoing maintenance costs. Cloud computing is particularly interesting for helping organizations meet their needs and accomplish their goals with an innovative way to increase business value and productivity in the workplace. It has the potential to become a veritable platform for innovation that able to develop of new skills and competences in human resources area. (Nabeel Zanoon, 2015), (Sonia Mirrazavi, Gholamreza Hashemzadeh Khoorasgani, 2016, p.280).

In additon, the companies rely on the technology of cloud computing to improve the company's performance that leads us to develop the employees' performance. This performance represents an important objective for companies in order to maintain their business success. On the other hand, employee's performance is influenced by the perception and understanding of organizational culture, climate, and interactions of employees (Gabriela Rusu, 2019, p.59).

1.1 Research Problematic

In this paper, we will focus on the relationship between the cloud computing and employees' performance. We have selected the performance of employees as a kind of company performance to study the role or the impact of cloud computing with its dimension (Information technology infrastructure, Provide Software for users, Communications as a service, Easy applications to use) on the performance of people in Algerian companies. Moreover, we will discover the relationship between the performance of companies and the performance of human resources through the cloud system. For this study, employee's performance was measured from non-financial indicators such as: job satisfcation, competency, innovation, motivation, teamwork, share knowledge, productivity and quality. From this introduction and the problematic of research we ask this big general question:

What is the role of cloud computing on the performance of employees in the Algerian companies?

1.2 The Literature review and Research hypotheses

1.2.1 Ahmed Hussein, Omar Mohamed, (2015), have conducted a research which is entitled « Cloud Computing and its Effect on Performance Excellence at Higher Education Institutions in Egypt (an Analytical Study) ». According to the authors, the

universities are facing problems in providing necessary information technology(IT)support for fulfilling excellence in performance, therefore, this article aimed to explore the effect of using cloud computing in achieving performance excellence at higher education institutions, and clarified the challenges and obstacles that face cloud computing. Furthermore, to reach the study's purposes, the researchers employed a qualitative research methodology for collecting and analyzing data. The results of this research showed that there is a significant relationship between cloud computing and excellence of performance in higher education institutions, and the use of Cloud-Computing solutions at universities supported the improving knowledge in this field.

1.2.2 Sonia Mirrazavi, Gholamreza Hashemzadeh Khoorasgani, (2016), have done a study which is entitled « The Impact of Cloud Computing Technology on Organizational Performance; Financial, Customer, Operational (Case Study: Zarin Iran Porcelain Industries Co. », this study aims at investigating the impact of cloud computing technology on the performance of Zarin porcelain Industries Company. First cloud computing can be referred as using the capabilities such as software, information and shared computing resources can be offered to clients as a web-based Internet service, Also in order to achieve the objective of this research the sample size was calculated 66 persons , and questionnaires have been distributed among them. The results showed that the cloud computing has a positive and significant impact on the dimensions of organizational performance- financial, customer and operational. so, it can be concluded that performance of organization will promote by using cloud computing in the organization.

1.2.3 Ahmed Yass Algrari , (2017), studied « the impact of cloud based information systems on organization's performance ». According the author, the cloud computing and mobile applications today are still important resources in the business strategies of companies. So more and more organizations have adopted and currently are using cloud computing and mobile technologies. On the other hand the technological evolution becomes more and more a daily reality for organizations and individuals who use information systems. This study aims to determine the effect of cloud based information systems in organization's performance. finally the findings showed that The cloud based information systems play a big role in organization business value and it's performance. and Perceived value was represented by the perceived improvements in information system processes indicated by the organization's performance, also the performance measures have proven to be useful in identification of the business value of the information technology and information systems used in the organizations as they provide simple quantifiable indicators.

1.2.4 Hemlata Gangwar, (2017), conducted a study which is entitled « Cloud computing usage and its effect on organizational performance », this article presented an integrative research model that links, environmental, organizational and technological capability constructs, and addressed the potential of cloud computing usage and related with business performance. On the other hand, to reach the purpose of this research the author used a survey study and he based on a sample of 403 manufacturing firms in India. The results indicated that technology resource, human

resource, business resource, change management, organizational culture, vendor support and regulatory support have a direct effect on a cloud computing usage. The findings also indicated that firm size significantly moderates the relation between cloud computing usage and business performance.

Drawing from these arguments of literature review, and in order to investigate the effect of cloud computing on the employees' performance in Algerian company (Brandt Algerie company) we based on the literature, and the variables relevant to the independent (cloud computing) and dependent (employee performance). The researcher propose the following hypotheses.

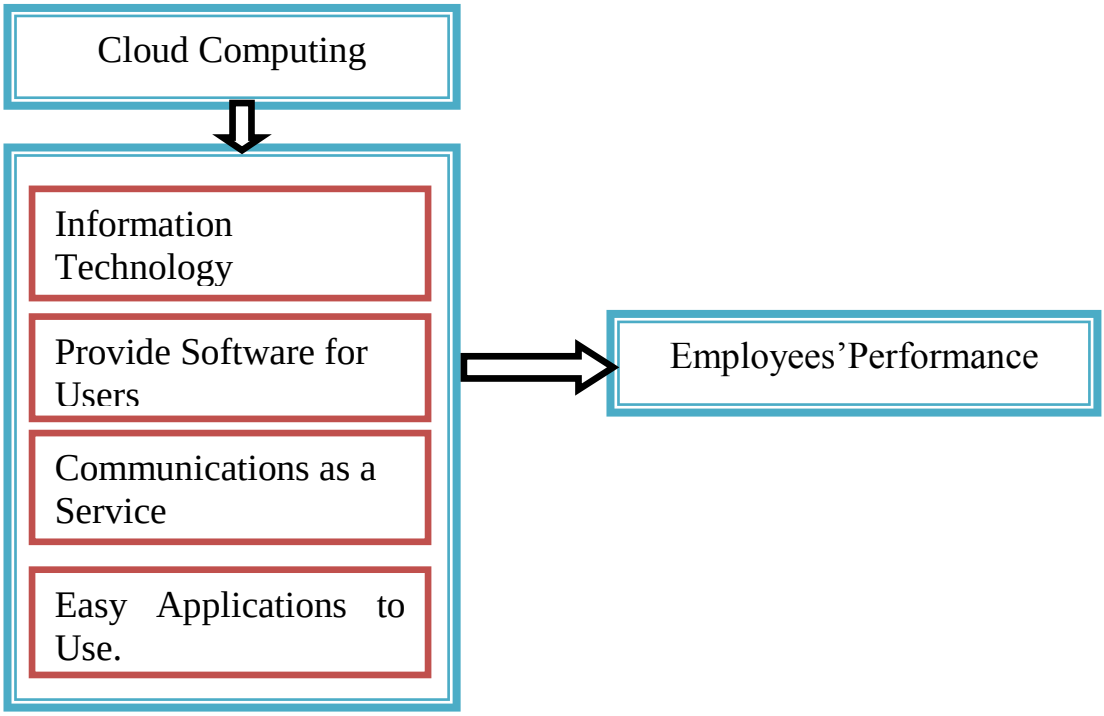
H1 : there is a good level of the use of the cloud computing in Brandt Algerie company

H2 : there is a relationship between the cloud computing and the employees' performance in Brandt Algerie company.

1.3 The Research Model

This paper examines the role of cloud computing in the employees' performance in Algerian company. The cloud computing is the independent variable and the employees 'performance is the dependent variable. The cloud computing is measured by four dimensions of information technology infrastructure, provide software for users, communications as a service, and easy applications to use. The figure 01 shows the research model in this study which has two detailed hypotheses.

Figure 01: research model



Source: by the researcher

2. Cloud computing: Definitions

Multiple definitions and interpretations of clouding computing have emerged. One of the reasons why they exist is that cloud computing does not refer to a specific

technology but rather to a concept comprising a set of combined technologies (Schubert et al., 2010). The definition of Cloud Computing, at best, can be described as imprecise and fuzzy as the edges of the cirrus clouds in the sky, (Ahmed Hussein, Omar Mohamed, 2015, p.165). The first definition by the US National Institute of Standards and Technology defined it as a model for having comprehensive and easy access; and according to the order of a set of configuration-able computing resources such as networks, servers, storing spaces, applications to provide services quickly and through doing the least work or without the need for intervention of service provider (NIST, 2019). Furthermore, Peter and Timothy"s definition states it as a model for enabling ubiquitous, convenient on-demand network access to a shared pool of configurable computing resources (e.g. networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction (Peter Mell , Timothy Grance, 2011, P.2). The second definition by Kim defined Cloud Computing as"being able to access data, programs and third party services from a web browser via the internet that are hosted by a third-party provider" and "paying only for the computing resources and services you used (Kim, 2009, p.65).The first and second definition focus more on the purpose of cloud computing and its components, while the third concentrates more on the resource services from a web browser via internet. In cloud computing technology, users can access to programs, storage spaces, processing and even application development platforms through various tools such as: PCs, laptops, cellphones and PDA, and also through services provided by cloud computing. So, resources are placed on the servers' side instead of users' side, (Sonia Mirrazavi, Gholamreza Hashemzadeh Khoorasgani, 2016, p.280). Cloud Computing refers to both the applications delivered as services over the internet and the hardware and systems software in the datacenters that provide those services.

2.1 Cloud computing benefits

Cloud computing is a flexible and cost-effective delivery platform for providing IT services over the internet and it is useful for its numerous applications. You can rapidly deploy and easily scale cloud resources, with all business processes, applications, and services provisioned on demand, regardless of the user location or device. It gives your organization the opportunity to increase service delivery efficiencies, streamline IT management, and better align IT services with dynamic business requirements. It provides support for core business functions along with the capacity to develop and deploy new and innovative services, making them more accessible than ever before (Elisabeth Stahl et al , 2012, P.2).

2.2 Characteristics of Cloud Computing

The following characteristics are according to (NIST, 2011), (Armbrust et al, 2009), and (Schubert et al, 2010), (Sonia Mirrazavi, 2016, p.280):

- On-demand self service: User can ask for one or more services at any time she/he needs them and she/he can pay by using "pay and go" method without the need to interact with people through online control panel (NIST, 2011).

- Availability of "infinite" computing resources: Cloud users do not have to plan the provision of their computing resources in advance as they have the potential to access computing resources on demand.
- Broad Network Access: Resources and services that were placed in regions of different vendors, in a cloud that it can be accessible from a wide variety of places and the computer services are accessed over the network and through standard mechanisms which allow users to connect several devices to the cloud (e.g. laptops, mobile phones).
- Pooling of resources: Providing a set of behavior stimulating resources adopted from a single common source. In other words, the user is not aware and she/he does not need to know about the location of resource provider. This approach helps venders to provide several real or virtual resources in could dynamically.
- Rapid elasticity and adaptability**:** Elasticity is one of the key features of cloud computing. Computing resources can be provisioned in an elastic and rapid way that allows adaptation to changing requirements such as the amount of data supported by a service or the number of parallel users. Users can buy computing services at any time at various granularities. They are able to up- and downscale those services according to their needs.
- Measured Service: Various aspects of cloud should be controlled automatically; monitoring, optimization, and reporting at various levels of abstraction for both vendors and consumers.
- Short-term pay for use: Users are able to pay for their use of cloud services on a short-time basis there by only paying for the time they use the computing resources and release them when they do not need them anymore.
- Elimination of up-front commitment**:** Users of cloud services do not have to make heavy, upfront IT investments allowing companies to start small and to successively increase hardware and software resources only when needed**.**
- Auditability and Certifiability: It is important to provide a report card for services and routes that may assess the degree of regulation and observed policy.

3. Service Models of Cloud Computing

3.1 Software as a Service (SaaS): The capability provided to the consumer is to use the provider's applications running on a cloud infrastructure. The applications are accessible from various client devices through either a thin client interface, such as a web browser (e.g., web-based email), CRM, ERP or a program interface. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, storage, or even individual application capabilities, with the possible exception of limited userspecific application configuration settings. (Ahmed Yass Algrari, 2017, p43), (Peter Mell , Timothy Grance, 2011,p.2)

3.2 Platform as a Service (PaaS) : The capability provided to the consumer is to deploy onto the cloud infrastructure consumer-created or acquired applications created using programming languages like (Java, .NET, Python, Ruby on Rails), libraries, services, and tools supported by the provider.The consumer does not

manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but has control over the deployed applications and possibly configuration settings for the application-hosting environment.(Ahmed Yass Algrari,2017,p.43)

3.3 Infrastructure as a Service (IaaS): The capability provided to the consumer is to provision processing, storage, networks, and other fundamental computing resources where the consumer is able to deploy and run arbitrary software, which can include operating systems and applications. The consumer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, and deployed applications and possibly limited control of select networking components (e.g., host firewalls). (Peter Mell, Timothy Grance, 2011).

4. Different cloud deployment models

When referring to cloud computing, four main deployment models can be distinguished:

1) Private clouds, 2) Public clouds 3) Community clouds, and 4) Hybrid clouds.

Private clouds, as their name indicates, refers to data centres that are typically owned or leased by one company with the underlying hardware, software and network infrastructure not shared with others. They can be located on the company's sites or off-site (OECD, 2014). It may be owned, managed, and operated by the organization comprising multiple consumers (Peter Mell, Timothy Grance, 2011). Public clouds, in contrast, make the data centre publicly available or to a large industry group. The cloud infrastructure is provisioned for open use by the general public. It may be owned, managed, and operated by a business, academic, or government organization, or some combination of them. It exists on the premises of the cloud provider (Niloofar Khanghahi & Reza Ravanmehr, 2013, pp. 31-34), (NIST, 2011). Community clouds, occurs where several organizations have the same needs and they seek to enjoy benefits of cloud computing by sharing infrastructure (Sonia Mirrazavi, Gholamreza Hashemzadeh Khoorasgani, 2016, p.280). It can be categorised into private or public community clouds. Private community clouds are shared by a community which has common concerns (e.g. smaller organisations or research institutes) and public community clouds are provided by cloud service resellers that bundle services of different cloud providers and resell them (Schubert, Jefferey et. al., 2010). Finally, hybrid clouds he cloud infrastructure is a composition of two or more distinct cloud infrastructures (private, community, or public) that remain unique entities. Hybrid clouds are typically employed when only part of the data is supposed to be outsourced in order to keep full control of sensitive data and, at the same time, take advantage of higher flexibility through outsourcing.

These different deployment models combined with the above mentioned service models present an almost endless variety of potential benefits, use cases, data elements, types of users and possible risks. While cloud computing services may be definable, asa range of common elements and concepts, actual deployments do not

lend themselves to any one-size-fits-all model so that benefit and challenges depend on the concrete cloud computing model in use (OECD, 2014).

5.The Performance of Cloud Computing

According to ISO 25010, the performance of a Cloud Computing system is determined by analysis of the characteristics involved in performing an efficient and reliable service that meets requirements under stated conditions and within the maximum limits of the system parameters. The performance efficiency concept proposed in ISO 25010 has three sub concepts: 1) time behavior, 2) resource utilization, and 3) capacity, while the reliability concept has four sub concepts: 1) maturity, 2) availability, 3) fault tolerance, and 4) recoverability (Bautista L., Abran A. and April A., 2012, p.71). Performance is among the advantages that should be available in the cloud services because performance has an impact on users and service providers (Nabeel Zanoon, 2015). To evaluate performance, we must take into account several criteria to evaluate the factors that affect the performance of cloud computing, including the average response per unit time and the average waiting time per unit time and others in the properties of performance measures of the cloud like The average time of processing, Percentage of CPU utilization, the number of requests executed per unit tim, the number of requests per unit time buffer, the number of rejected requests per unit time provider (Niloofar Khanghahi & Reza Ravanmehr, 2013, pp. 31-34).

6. Cloud Computing and Performance of Human Resources

Human resources are another influential variable in the development of technological capabilities which further enhance the organizational performance. A number of studies in information technology adoption have witnessed valid role of Human resource in creating value to the firm. It is related to employee's inquisitiveness to gain knowledge about technical aspects of cloud computing. For this, they strive to learn Internet capabilities at their own and gain knowledge related to virtualization, open-source tools and collaboration tools, etc (T. Ravichandran and C. Lertwongsatien, 2005, p.246), (Hemlata Gangwar, 2017). It is perceived that managing IT services in the cloud computing requires to move away from existing IT infrastructure and to extend existing skills and capabilities. For example, capability of managing virtual storage and the virtualization of servers are needed to adjust for functioning within a private or public cloud that further facilitates customization of the provider cloud offerings.Also, they share knowledge and information about developments as collaborative and cooperating environment with their friends and learn from each other, So some of the first descriptions of knowledge clouds depicted such developments as collaborative and cooperating environment, with structure that enable to provide services to knowledge producers and consumers such as computing, networking and storage services (Depeige and D. Doyencourt, 2015, p.8). Knowledge sharing is an important activity that enhanced an individual capability to retrieve new data and resources for the purpose of learning, problem solving, and self-improvement (Din and Haron, 2012, pp. 1043- 1050). The success of knowledge sharing in business is not only technological but also related to behavioral factors. As

consequences of learning process, technology evaluation enables them to comprehend benefits of cloud computing and results in effectively developing technical capability towards cloud computing usage and deployment. It further influences the competitive advantage by enabling them to perform daily work activities more effectively and efficiently (Hemlata Gangwar, 2017, p.15). Cloud computing can be defined as "a modality, (…) for delivering a range of IT services through software and virtual hardware provisioned by data centers owned and operated by cloud providers and/or end users) according to user demands and requirements and delivered remotely". Referring to that definition, it becomes possible for a number of IT companies to provide knowledge services through different types of clouds (public, private, hybrid clouds): the knowledge delivered will then be consumed by organizations and end users that are clients of the providing organization (Depeige and D. Doyencourt, 2015, p.08). The employees' performance influenced by innovation through the cloud computing.So inovvation activities according to Walker, Damanpour and Devece, (2010) improve administrative process, increase efficiencies and make work management more effective (Suriati Osman & al, 2016, pp. 571_579).

On the other hand, Mathis and JacKson suggest that employees' performance refers to the contribution employees to the organization. The standard of each employee can be seen through the quantity of output and the quality of output, the output time period, attendance at work and cooperative attitude (Saarce Elsye Hatane, 2015, pp. 619 – 628). Employee performance is an important factor that contributes to increase outcomes, improve positive behavior, and characteristics of employees, as well as helping to increase the productivity of organization (Zahargier, M. S, Balasundrama, N, 2011, pp. 9_15). Performance can be described as an effective effort performed for reaching a goal, or a success of fulfilling a job effectively, of execution and completion. Performance is a quantitative and qualitative expression, where the person, group or business doing the work can reach for intended destination related to this work. Performance is a concept describing how a person can use its own potential or real knowledge, skills and abilities in order to able to reach its own goals or expectations (Erkut Altındağ,Yeliz Kösedağı, 2015, pp. 270-282). Employee performance can be affected by some conditions like job satisfaction, working environment, motivation and stresses (Ömür Hakan Kuzu, Derya Özilhan, 2014, pp. 1370 – 1374).

7. Research Methodology (DATA & METHODOLOGY)

7.1 Methodology

In this study we depend on descriptive approach or method in order to describe the relationship between the independent variable (cloud computing) and the dependent variable (employees's performance); and from this description we will arrive to interpret this relationship.

7.2 Society& Sample

The population of this study includes the Brandt Algerie Company in Setif-Algeria and perhaps the main reason of choice this company as a population of

study is due to the size of company and the availability of information technology tools. The sample of study consists 51 persons which we chose them randomly.

7.3 Data Sources, Tools & Software

A questionnaire was used to measure the reality of use the cloud computing and for studying the relationship between variables. Furthermore, our questionnaire is based on Likert scale of seven degrees. In addition, 57 forms were distributed to different users, then, we retrieved 51 forms which represent the sample of study. The questionnaire contains 36 questions divided by three axis or dimension according to the variables of study. Finaly, we relied on SPSS software V24.

8. Data analyses

8.1 Reliability analysis

In order to test the reliability of research tool, we used Cronbach Alfa value of the variables. In this part of research, reliability analyses were carried out on the dimensions of the cloud computing, and employees' performance concept by using of Cronbach's Alpha.

Table 01: Reliability analyses

variables	Dimensions	Number of Items	Alpha coefficient
Cloud Computing	(Information technology infrastructure	7	0,964
	Provide Software for users	7	0,939
	Communications as a service	6	0,821
	Easy applications to use	6	0,848
Employees' Performance		8	0,872
overall reliability			0,889

Source : by the researcher depend on software of SPSS V.24

According to the table above, the independent variable is divided into four dimensions. The reliability of the cloud computing and their dimensions is 0,893 (Cronbach's α) on 26 questions and Employee Performanceis 0,872 (Cronbach's α) on 08 questions. Therefore Alpha coefficient in the overall reliability analysis including two variables (cloud computing, and employees performance) is 0,889. So, this number is well above 0,700 that is the threshold. This result shows that the questions of questionnaire are clearly understood by employees and it has internal consistency and accuracy.

8.2 Normality Test and Hypothesis testing

Our sample exceeds 50 respondents, so we have 51 respondents for analysis; therefore, we have tested the normality of distribution of the data in order to identify the type of tests used to test the hypothesis.

Table 02: Tests of Normality

Shapiro-Wilk			Kolmogorov-Smirnov[a]			
Sig.	Df	Statistic	Sig.	df	Statistic	
,004	51	,927	,019	51	,136	clouding

Source: by the researcher depending on software of SPSS V.24

The table (02) shows that the sig ratio is less than 0, 05 (sig<0, 05) and this means that the data don't folow the normality of distribution for the independent variable (cloud computing).

9. Result and Discussions (Hypotheses testing)

This research paper aims to study the reality of the use of the cloud computing and to discover is there a relationship between the cloud computing and the functional performance.

9.1 Test of the first hypothesis: the reality of the use of the cloud computing

H0: there is no a good level of the use of the cloud computing in Brandt Algerie company. If **sig > 0,05.**

H1: there is a good level of the use of the cloud computing in Brandt Algerie Company.

If sig < 0, 05.

In order to examine the hypothesis number one of the study, we rely on the technique of the one sample in non-parametric tests for analysis because the data of the independent variable (**cloud computing**) don't follow the normality of distribution. Thus, we used the Wilcoxon test and the table below shows the result of test the first hypothesis.

Table 03 :one sample

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The median of cloud equals 3	One-Sample Wilcoxon Signed Rank Test	,000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is ,05.

Source : by the researcher depend on software of SPSS V.24

The table above shows that **Sig** is less than 0, 05 (sig<0, 05) and is significant at the 0,05 level of significance. Therefore, the decision is very clear in the table (03), where we reject the null hypothesis **H0** and we accept the alternative

hypothesis **H1**, so we can say that there is a good level of the use of the cloud computing in Brandt Algerie Company in the median of cloud equals 5.
In order to support the acceptance of the first hypothesis we will analyse the descriptive variables in the table below.

Table 04 : level of use of the independent variable's dimensions

Dimensions of cloud	**Nbr**	**mean**	**Std.deviation**	**Sig. (bilatéral)**
Information technology infrastructure	**01**	5.66	1.08	.000
Provide Software for users	**02**	5.86	1.02	.000
Communications as a service	**03**	5.95	0.78	.000
Easy applications to use	**04**	5.82	1.21	.000

Source : by the researcher depend on software of SPSS V.24

According to data from the table (04) which has a relationship with computing cloud's dimensions in the enterprise of field study is clear to us that, the mean's indicator of computing cloud's dimensions has higher than the middle point value of the Likert scale ; because all the values of the independent variable's mean are higher than 5. Starting by the mean of information technology infrastructures axis, it reached mean value (5.66) and Std.deviation value (1.08) which means the Brandt company takes a greet care for infrastructure of IT. Furthermore, the descriptive analysis shows that mean value of providing software for users was (5.86) with SD value (1.02). Then, the mean value for communications as a service was (5.95) with SD value (0.78), in the other hand the mean value of easy applications to use was (5.82) with SD value (1.21), which means that the computing cloud dimensions are able and significant to represent the good level of the use of the cloud computing in Brandt Algerie company.

9.2 Test of the second hypothesis: the correlation between the cloud computing and the employees' performance

H0: there is no relationship between the cloud computing and the employees' performance in Brandt Algerie company. **If sig > 0, 05.**
H1: there is a relationship between the cloud computing and the employees' performance in Brandt Algerie company. **If sig < 0, 05.**
From the table below, we could know the correlation between the cloud computing and the functional performance in Brandt Algerie company, and for

testing the second hypothesis, we are going to use the Pearson correlation coefficient in our variables of study.

Table 05 : correlation between the cloud computing and the employees' performance.

Pearson Correlation	R	R Square	Significant Level	Result
correlation between the cloud computing and the employees' performance	.303[a]	.074	0,000	Correlation is significant at the 0.05 level (2-tailed).

Source : by the researcher depend on software of SPSS V.24

According to the table (05) the value of correlation coefficient R is estimated at 30, 3 %. This percentage is considered acceptable, which indicates a correlation between the independent variable (cloud computing) and the dependent variable (employees' performance). Furthermore, the value of variance in the independent variable(R square) equal to 7,4 % and it is significant at the 0,05 level of significance, that means the variance of cloud computing explain the rate of 7,4 from the variance of the dependent variable employees' performance. Therefore from the table above, we reject the null hypothesis **H0** and we accept the alternative hypothesis **H1**, so we can say that there is a relationship between the clouds computing and the employees' performance in Brandt Algerian Company.

10.Conclusions

The major purpose of this study is to investigate the role of the cloud computing on the employees' performance in the Algerian company. Using cloud computing as a new technology in companies leads them to increase its performance, productivity, meeting their needs, reaching the business goals, and improving the employees' performance.

This paper emphasizes on the role of cloud computing in the daily life of the Algerian company. Therefore, our study revealed the reality of the level of using of the cloud computing in Brandt Algerian company and the relationship between the cloud computing and the performance of employees.

In some previous researches, our literature review the variable of Cloud Computing and its impact on the performance (Organizational Performance, organizations and individuals) play a big role in organization business value. Therefore, the results indicated that technology resources, human resources, and business resources have a direct relationship with cloud computing usage.

From our research, we developed a theoritical framework through gathering two variables (cloud computing, employees performance). This blend of using cloud and performance is an added value in our theoretical study. So that's why we thought to joint these two variables of study.

To sum up, from analysis of these results and from tested questionnaires with SPSS software, it is clearly showed that:

- **The Results of hypothesis I** showed that it is accepted and there is a good level of the use of the cloud computing in Brandt Algerian Company in the median of cloud equals 5. According to the current research, it was shown a clear evidence that the mean's indicator of cloud computing's dimensions is higher than the middle point value of the Likert scale.
- **The Results of hypothesis II** showed that it is accepted and there is a relationship between the cloud computing and the employees' performance in Brandt Algerian company. According to the value of correlation coefficient R is estimated at 30, 3 %. This percentage is considered acceptable.

- **Results (Findings)**

We concluded that the findings of this research are:

- There is a significant relationship between the cloud computing with their four dimensions (dimensions of information technology infrastructure, provide software for users, communications as a service, and easy applications) and the employees' performance in the company of study.
- The company of field study interest in the cloud computing because the evidence is very clear, where mean of cloud ' dimensions reached 5.82 with a standard deviation of 0.648.

- **Recommendations**

Our findings can serve as a starting point for other researchers, so the paper proposed some recommendations:

- Conducting training courses and awareness sessions for employees about the applications and gates owned by the company in order to clarify the employees performance through the use of the cloud computing.
- The Brandt Company can rely on community clouds. It can be categorised into private or public community clouds in order to reduce the costs of private clouds
- Giving the employees the freedom to complete their work at home through cloud computing technologies

The most important **limitation** of this study is that the use of cloud computing in Algeria is in its first stages.

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