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# Achieving Performance Excellence through Cloud Computing Atmosphere -Applied Study at Zain Telecommunications Company- Jordan

**Dr. NAZEM MALKAWI**
Associate Prof. – Economic and Business College- Jadara University- Irbid- Jordan.
Email: n_malkawi@hotmail.com

**Dr. ABDALLAH MISHAEL OBEIDAT**
Assistant Prof. –MIS Department – Economic and Business Collage- Jadara University- Irbid- Jordan.
Email: aabdullahh2000@hotmail.com

**Dr. AZMI HALASA**
Assistant Prof. – Science College- Jadara University- Irbid- Jordan.
Email: A_halasa@hotmail.com

***Abstract***

*This study aimed to know how to achieve performance excellence through Cloud Computing Atmosphere - Applied Study at Zain Telecommunications Company- Jordan. To achieve this, a questionnaire was distributed to the sample of the study at middle and top management levels, (84) valid questionnaires recovered. The study concluded with some results, the most appearant that: Zain Telecommunications Company use Cloud Computing at high rates, performance excellence also at high level, there is a significant statistical effect of Cloud Computing on performance excellence as a whole and on all its indicators (Strategic planning, Operations management, focusing on markets and customer, Workforce, Collaboration and sharing knowledge, Suppliers, and Services development) at ($\alpha \leq 0.00$). Researchers recommend Zain Telecommunications Company management and staff to expand using Cloud Computing in all levels and functions in the company, reinforce using of Cloud Computing in performance excellence with all its areas, and aware employees in the company about how the company can achieve performance excellence by using Cloud Computing tools.*

***Key Words:*** *Performance Excellence, Cloud Computing, Zain Telecommunications Company, Jordan.*

## Introduction

Organizations today realize that if they have to survive and grow, they have to bring in relevant changes within different aspects of its work like marketing, technology, quality, structure, global business and strategy, cost, managing people and leadership. These changes have to be managed efficiently and effectively (Sofat et. al., 2015). The rapid development of network technology has led many institutions to provide their applications over the Internet in what is known as cloud computing, where this technology allowed best features to its users, such as cost savings or provide services for biggest sector of beneficiaries, there is a growing realization that the day will come to consider cloud computing as the fifth

tool after water, electricity, gas and telephone communications, this software tool, like all the other four existing facilities will provide a basic level of computing services that are necessary to meet the daily needs to society in general. sectors have shown, such as e-government, and business electronic banking, health care, electronic and digital libraries are booming in the world where the infrastructure scalable to support it, and from a regional perspective, the Jordanian organizations initiated the introduction of this technology in their work through the creation of an enabling environment for competition, and advanced infrastructure, so this study dealt with the concept of cloud computing features and defects related to it, informational services and applications offered by cloud computing, and its role in the development of the work at Zain Telecommunications Company and the services provided (Al-Alimi& Mursi, 2014).

The emergence of modern variables, such as globalization, information technology, e-government, the Internet, the revolution of knowledge and quality management systems affecting the managerial operation, altering the role of organizations as a result of the accelerated changes in economic, social, political and technical from the traditional role in the administration, and increase using the scientific method in the use of resources to improve performance and raise the level of service provided, and there was a need to reformulate management functions in the light of the new developments, so that it can meet the needs and desires of customers in proportion to the level of services provided. For these challenges facing business environment the term appears which refers to seek to take advantage of critical opportunities, preceded by effective planning and strategic commitment to a common vision and clarity of purpose, adequacy of resources and ensure the performance excellence (Jamer, 2015) which is very important for any organization to compete and survive especially in light of accelerated development in information and communications development, and because cloud computing is the most one for the new business; this research attempts to study how to achieve performance excellence through Cloud Computing atmosphere at.

## Literature Review

### Performance Excellence

The philosophy of the concept of performance excellence is to express the need to combine management elements and the elements of building organizations on superior bases to achieve them high capabilities in dealing with external surrounding variables and conditions, and to ensure coherence and full consistency between there elements and components and manipulating there core competencies, then compete in the markets and achieve benefits to organizations and stakeholders (owners of the organization, employees, its clients and the community as a whole (Jamer, 2015).

Performance is considered one of the common implications in circulation among the leaders of business organizations on the various forms and over the centuries, the reason for interest in this term and frequent use has led to the outputs of this performance which may have caused Serious effects to the financial outturn of the organizations, or it may be the reason for its continuity, performance known the ability of business organization to exploit its resources and potential physical and human cognitive in optimal way that makes it able to achieve its objectives efficiently and effectively. Performance known as an integrated system for the results of work of the organization in light of their interaction with the elements of internal and external environment in terms of: the results of workers in the framework of their specialist organizational unit, the results of organizational units under the overall organization policy, results of the organization in the framework of economic, social, cultural environment, so performance is the outputs or goals relating to profitability and market share, growth, satisfaction and loyalty and brand awareness which will be completed within a certain period of time. There are those who see that the goals of the organization are necessarily trying to achieve the goals of the stakeholders as performance key areas performance measured through it. The focus on performance and its levels is one of the most areas that have attention by scientists, management writers, researchers and practitioners, where importance of performance lies theoretically it represents center of Strategic management, and given that performance serves as a test for

the strategy and its supporting policies, It is used as a tool to judge the success of the various key strategies and processes associated with them, from an administrative point view performance importance appears through interest by the organizations leaders in performance and its outcomes and what is happening in those organizations of drastic changes on performance of the results and achievements (Yaakoob, 2012) (Almadi, 2010).

The term "performance excellence" refers to an integrated approach to organizational performance management that results in (1) delivery of ever-improving value to customers and stakeholders, contributing to organizational sustainability; (2) improvement of overall organizational effectiveness and capabilities; and (3) organizational and personal learning. The Baldrige Criteria for Performance Excellence provide a framework and an assessment tool for understanding organizational strengths and opportunities for improvement and thus for guiding planning efforts (Hrry, 2010-2012).

**Cloud Computing**

Cloud Computing appeared as a workable solution after the availability of the Internet infrastructure, communication does not became an impediment to business after a massive development in smart phones, which carry with them the Internet connection and the possibility of dealing with the various information and files (saleem, 2011,13). Cloud computing defined as a technology relies on the transfer of processing and storage to the so-called cloud a server which is a device accessed via the Internet, and thus information technology softwares from products into a service, this technology contributes in maintenance and development of information technology programs cost reduction for the companies used to them, cloud computing infrastructure based on advanced data centers, which provide large storage space for users as it provides some of the programs as services to users, based on the possibilities provided by the Web technologies, so according to Almuniry Cloud Computing:Model for storage on the internet where the data is stored on multiple servers, instead of a single server, used in large enterprises with advanced data centers and have large areas to store customers (Almuniry, 2011).

Cloud computing defined also by the National Institute of Standards and Technology (NIST) as a model to provide appropriate access and permanently at any time to the network, to share a wide range of computing resources that can be deployed and provided with minimal effort and interaction with the service provider (Grance & Mell, 2011, 2), whereas (Aumueller, 2010) sees it an investment in infrastructure through the payment of certain amounts and access to services for advanced infrastructure without updating any program or buying any device.

Cloud computing has the potential to increase organizations' productivity and outcomes by providing affordable and up to date access to information and communications technology (ICT). In addition, utilizing cloud-based services improves business innovation in organizations and opens a channel to the global market that gives organizations ability to achieve performance excellence, compete, and be successful (Fakieh; Blount and Busch 2016).

**Types of cloud computing**

National Institute of Standards and Technology NIST determined four models of cloud computing in terms of circulation and is (Ahronovitz et. al., 2010):

**Public cloud computing**

The term public computing cloud does not always mean that it is free although they can be free or relatively cheap to use, but describe cloud computing from a traditional perspective of where resources are avalable according to the basis of self-service via the Internet, and through the application of Web services from a third-party service provider of off-site, on the basis of cloud service.

**Private cloud computing**

This type allows managing data and processes without the bandwidth of the network restrictions, with the detection of security issues and legal requirements that have to use the public cloud computing services, serves of private cloud computing give more control over the infrastructure and improve the security and flexibility of the service provider, because the user the user access to the network and use it is restricted and specified.

**Community cloud computing**

This type of cloud controlled and used by a range of organizations, where they are establishing a joint cloud for a number of organizations with common goals and seek to share infrastructure.

**Hybrid cloud computing**

Is the combination of the interaction between public and private computing, users in this type uses public cloud computing services to address information processing and unvital business processes, while preserving the information and computed business operations under control using private cloud computing. There are three main types of services that can be provided by a cloud service provider to customers which are (Saleem, 2011):

**Infrastructure as a service**

It provides the infrastructure for computer instead of purchasing modems; software, data storage or communication and networks equipment, and customers buy these sources as completely independent a service.

**Platform as a service**

They provide everything needed by developers to build applications, in particular through the provision of developmental tools in a standard environment and this technology platform service take advantage virtual environments in infrastructure platform as a service for the deployment and the provision of developed software in this virtual sources for the infrastructure as a service.

**Software as a service**

Layer of cloud computing is more concerned for the end-user applications such as e-mail systems, customer relationship management systems, common software systems and workflow management, other types of cloud computing services have been developed such as communications as a service, security as a service, and software as a subscription (Audi, 2011). There are several causes shift to cloud computing, including: reducing software maintenance, increase reliability, cost reduction, environment-friendly, and easy access. With so many benefits and pros of cloud computing, but it is not without drawbacks, including: requiring a permanent and fast Internet connection, the quality of the service providers, the limited services provided by the cloud, and data loss (Almuniry, 2011).

**Related Studies**

Prerna and Sangeeta (2016) This study aimed to identify and verify the unique characteristics of Australian SMEs toward the cloud computing adoption. relatively researchers low adoption of cloud computing services, found less innovative, and limited knowledge about cloud computing and its benefits and hindrances.

According to Jamer (2015) "The impact of the adoption of the institutional model of excellence in developing the performance of government institutions " The study aimed to determine the impact of the adoption of model organizational excellence in the development of the performance of government institutions, and to study the concepts and principles of organizational excellence by focusing on the European excellence model applied on the Sudanese company's thermal generating. Results have shown a positive relationship between the standards (leadership's commitment, strategic orientation, the efficiency of workers, processes and resources, and the nature of the relationship with partners and suppliers) and improving performance of the company. Researcher recommended the adoption of methods and techniques of organizational excellence and quality systems, through leadership, clear strategic direction, and work with an integrated management system ensures achieving the desired outcomes by using optimal resources efficiently and effectively.

The study of (Mahameed, ET. El. 2015) aimed to test the impact of the application of customer relationship management in organizational performance in commercial banks operating in the Jordanian banking sector. The survey found high impact of the application of customers relationship management (focus on senior customers, organizational performance as measured by financial indicators, customer relationship management based on technology, managing customers knowledge) on organizational performance in commercial banks operating in Jordan, and recommended that commercial banks interested in managing its relations with customers electronically and rely on advanced technology in order to improve performance.
(Catalina 2015) "Cloud computing- impact on business" study aimed to identify the impact of cloud computing on business. The study concluded that the use of cloud computing contributes to achieving the goals of the company and its clients. It enhances customer confidence in the company.

(Ying and Shilun 2015) "The Impact of Cloud Computing on Manufacturing Value Chain" study which aimed to analyze the impact of cloud computing on the industrial value in China. The study used a descriptive and analytical approach. The study found that cloud computing allows industrial value in China employing dynamic reboot with high quality, high efficiency, low cost on the one hand and the coordination between the high institutions on the other hand through the cloud base. It leads to increased demand for Chinese industry. Also, cloud computing has changed the added-value related services.

(Dimitrov and Osman, 2014) "The Impact of Cloud Computing on Organizations in Regard to Cost and Security" study that aimed to find out the impact of cloud computing on organizations in terms of cost and safety, to identify the cost and benefits of safety, that is provided by cloud computing to organizations. The data were collected through interviews with specialists in information technology. The study found that cloud computing has benefits such as increasing the security of information, fast retrieval and transfer of information.

(Akin, Matthew and Comfort, 2014) "The Impact and Challenges of Cloud Computing Adoption on Public Universities in Southwestern Nigeria" Studied the effect of the use of cloud computing challenges at public universities in the south- west of Nigeria. It revealed as a result of the findings that the adoption of cloud computing has a significant impact on cost effectiveness, low impact on the environment, reduce the complexities of information technology, mobility, scalability, increase interoperability, and reduce investment in physical assets. There are some concerns facing the adoption of the cloud, such as weak data security, regulatory compliance, and privacy concerns.

(Devasena, 2014) "Impact study of cloud computing on business development" who studied the impact of cloud computing on the evolution of the business. The small and medium-sized companies were considered in this study. The study found that cloud computing helps small and medium-sized companies to reduce costs. (Bharadwaj & Lal, 2012) "Exploring the Impact of Cloud Computing Adoption on Organizational Flexibility: A Client Perspective" study aimed to identify the impact of cloud computing on the organizational flexibility from customer's perspective. The study found that there is the effect of cloud computing on the perceived advantage, comparative advantage, ease of use, and safety. The study found

that there is a relationship between cloud computing, organizational flexibility, resilience functionality and market performance.

(ALjabre, 2012) “Cloud computing for increased business value” study aimed to identify the benefits of cloud computing, and to identify its flaws in business. It also aimed to find the best types of business conditions for the use of cloud computing. The study used Amazon service cloud computing as a model for the study. The study concluded that the best suitable sector to use cloud computing are small businesses and the use of cloud computing plays a role in increasing the value in the business.

(Aqidi and Samurai, 2012) "The future of business intelligence under the cloud computing revolution" aimed to identify the future of business intelligence under the cloud computing revolution. The study found that major companies around the world which began in the current era are seeking to use cloud computing to increase the market share.

(Shivakumar and Raju, 2010), “Emerging role of cloud computing in redefining business operations” discussed the possibilities offered by information technology through cloud computing. It concluded that there is future benefits of cloud computing in terms of its ability to restructure the role of information technology in addition to the flexibility provided for business management.

## Methodology

### Importance of the Study

The output of this research will shows the level of performance excellence and the level of using cloud computing applications at Zain Telecommunications Company, as well as how cloud computing applications benefit performance excellence at these companies, and how to exploit cloud computing applications in developing these companies. This shall help them to understand how to sustain competitive advantage and have innovations.

### Problem Statement

How to sustain competitive advantage at the changing global economy becomes the most important issue in todays, on the other hand technology is changing very fast, one of these new technologies is cloud computing. These applications of cloud computing are becoming popular among organizations, but still our organizations don’t benefit from this technology or don’t use it at all. Research on this topic and explores cloud computing applications and their effect on performance excellence is very important at Zain Telecommunications Company to sustain its competitive advantage.

### Objectives of the Study

The general purpose of this study is to find out the role of cloud computing applications in performance excellence at Zain Telecommunications Company.

This study aims to:

1. Find out the level of performance excellence at Zain Telecommunications Company.
2. Find out the use of cloud computing applications at Zain Telecommunications Company.
3. Explore the role of using cloud computing applications on performance excellence at Zain Telecommunications Company.
4. Give recommendations in this regard.

**Hypothesis:**

**General hypothesis of the study is:** There is a significant positive impact at (α≤0.05) of cloud computing applications on performance excellence at Zain Telecommunications Company.

**Minor hypothesis are:**

P1: There is a significant positive impact at (α≤0.05) of using cloud computing applications on strategic planning at Zain Telecommunications Company.
P2: There is a significant positive impact at (α≤0.05) of using cloud computing applications on operations management at Zain Telecommunications Company.
P3: There is a significant positive impact at (α≤0.05) of using cloud computing applications on focusing on markets and customer a Zain Telecommunications Company.
P4: There is a significant positive impact at (α≤0.05) of using cloud computing applications on workforce at Zain Telecommunications Company.
P5: There is a significant positive impact at (α≤0.05) of using cloud computing applications on collaboration and sharing knowledge at Zain Telecommunications Company.
P6: There is a significant positive impact at (α≤0.05) of using cloud computing applications on suppliers at Zain Telecommunications Company.
P7: There is a significant positive impact at (α≤0.05) of using cloud computing applications on services development at Zain Telecommunications Company.

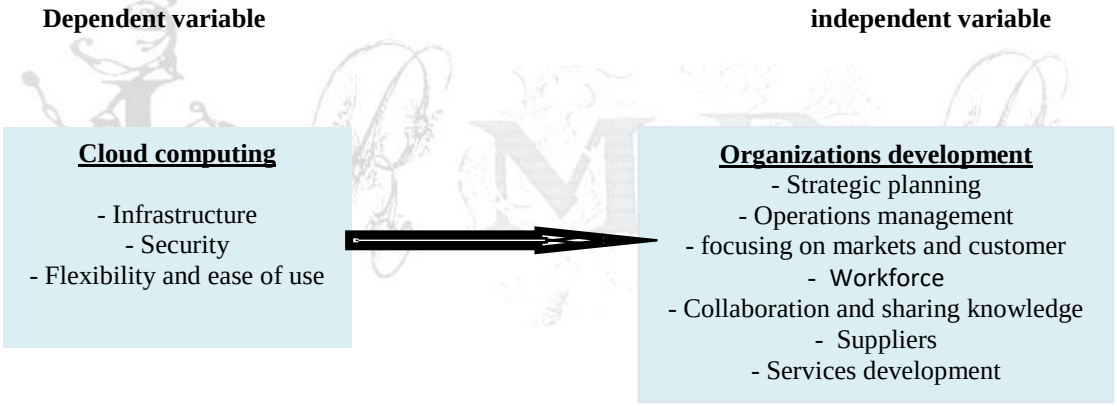


Figure (1) Study model

Hrry, S. Hertz. (2010-2012), Baldrige National Quality Program. Criteria for Performance Excellence.
Devasena, C, "Impact Study of Cloud Computing on Business Development, Operations Research and Applications: An International Journal (ORAJ), Vol. 1, No.1 August 2014.

**Instrument Development**

Depending on validated instruments (10, 13), we prepared the questions of our survey we made some modifica¬tions to fit our topic content and environment. A review of content validity was done by two different groups. The first one contained expert people, who are working in banking sector; and the second group contained faculty members, who are interested in cloud computing. Next, we randomly ordered result items for each construct. The survey instrument is comprised of the 5-point Likert- scale, which has been used for measuring the responses. The Likert-scale was based on 1-5 scale, where 1 = strongly agree and 5 = strongly disagree. For reliability purposes, all items were tested using chronbach's alpha in table1.

The table includes the reliability scores of independent variables used in the survey instruments. The score highlights the extent to which the results obtained by this instrument are reliable and can be generalized.

Table (1) Cronbach's Alpha

| Dimensions | **Cronbach's Alpha** |
|---|---|
| Cloud computing | 0.78 |
| performance excellence | 0.82 |
| Total | 0.84 |

**Sample**

A random sample was selected for data collection. To add more transparency to our study only employees, who are most knowledgeable about cloud computing and performance excellence, were eligible to fill the questionnaire. The number of received completed and valid questionnaires was 84. Table (2) shows demographic information.

Table (2) Frequency and percentage for demographic information (n=84).

| **Variable** | | **Frequency** | **Percentage** |
|---|---|---|---|
| Gander | Male | 58 | 0.69 |
| | Female | 26 | 0,31 |
| | **Total** | 84 | 100.00 |
| Qualification | Bachelor or less (BA) | 57 | 0.67 |
| | Postgraduate | 27 | 0.33 |
| | **Total** | 84 | 100.00 |
| Managerial level | Top Management | 23 | 0.27 |
| | Middle Management | 51 | 0.73 |
| | **Total** | 84 | 100.00 |

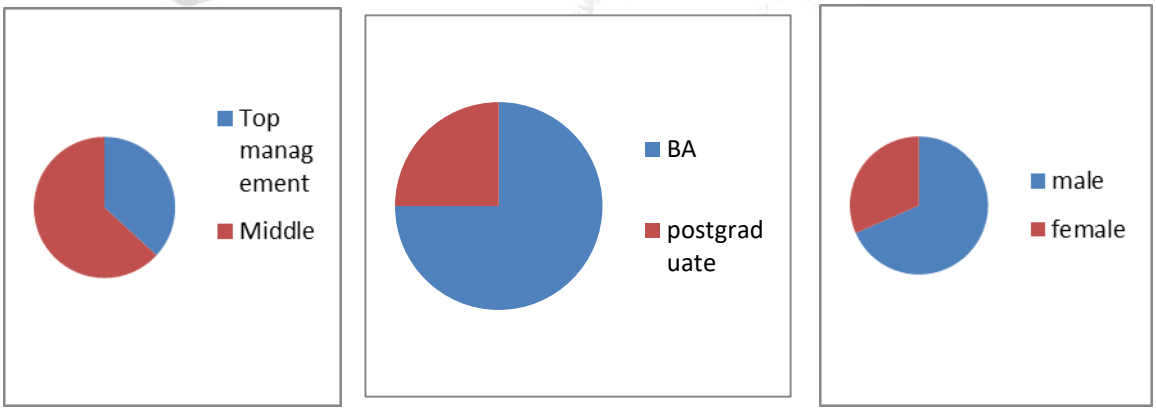


Figure (2) demographic information

## Results related to the main question of the study

What is the role of cloud computing in performance excellence in the Jordanian business organizations in Zain?

To answer this question, the researcher extracted the arithmetic means and standard deviations of the areas of study tool, as shown in the following table:

Table (2) Arithmetic means and standard deviations of the areas of study tool

| number | Area | Average | Standard Diviasion |
|---|---|---|---|
| 1 | Providing the infrastructure for the company and provides adequate storage space | 4.25 | 0.51 |
| 2 | Using cloud computing provides security, integrity, confidentiality, reliability, and availability | 4.00 | 0.82 |
| 3 | Flexibility and Ease of Use | 4.00 | 0.64 |
| **Cloud computing** | | 4.06 | |
| 4 | Using cloud computing facilitates strategic Planning | 4.00 | 0.66 |
| 5 | Using cloud computing facilitates operations Management | 3.80 | 0.65 |
| 6 | Using cloud computing enables Focus on the market and customers | 3.83 | 0.81 |
| 7 | Using cloud computing enables focus on workforce | 4.10 | 0.66 |
| 8 | Using cloud computing enables cooperation and sharing of knowledge | 3.96 | 0.71 |
| 9 | Using cloud computing enables focus on suppliers | 3.88 | 0.75 |
| 10 | Using cloud computing facilitates service design | 4.00 | 0.68 |
| **performance excellence** | | 3.87 | |

We can see from the above table that the averages for all areas of study are high. The highest arithmetic average for - Providing infrastructure for the company and provide adequate storage space with a mean (4.25), while in last place was the area came the - Operations Management with an arithmetic mean (3.8), figure (3) summarizes results.

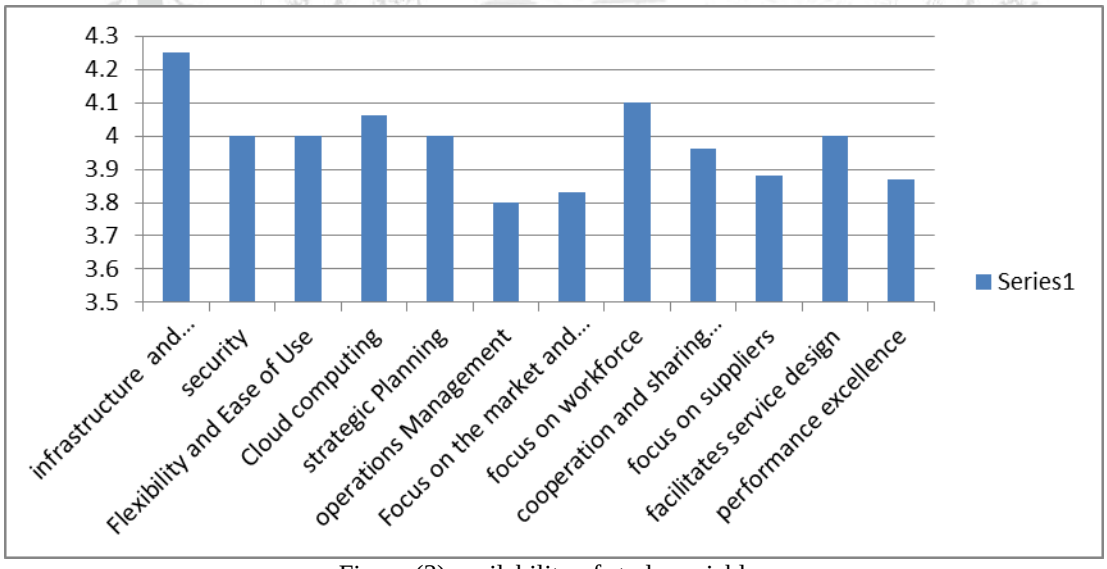


Figure (3) availability of study variables

**This part including the results of study depends on its hypotheses:**

**General hypotheses:** Cloud computing has a significant positive effect on performance excellence.

**Minor hypothesis:**

To test this hypothesis (Multiple Regression) was applied, table (4) shows that:

Table (4) Results of Multiple regression between cloud computing and performance excellence

| Independent variables | Beta | T | Sig. | R | R Square | Adjusted R Square | F | Sig. |
|---|---|---|---|---|---|---|---|---|
| Infrastructure | 0.61 | 8.73 | 0.00 | 0.73 | 0.532 | 0.526 | 38.63 | 0.00 |
| Security | 0.52 | 7.92 | 0.00 | | | | | |
| Ease of use | 0.54 | 8.57 | 0.00 | | | | | |

Predictors: (Constant), Infrastructure, Security, Ease of use
Dependent Variable: Performance Excellence

Table (4) shows:

1. There is a significant positive impact at (α≤0.05) of Infrastructure on performance excellence at Zain Telecommunications Company, where the values of (Beta, T) reached (0.61, 8.73), reached, Sig. (0.00).
2. There is a significant positive impact at (α≤0.05) of Security on performance excellence. Where the values of (Beta, T) reached (0.52, 7.92), Sig. (0.00).
3. There is no significant impact at (α≤0.05) of flexibility and ease of use on performance excellence. Where the values of (Beta, T) reached (0.54, 8.57), Sig. (0.00).
4. There is a significant positive impact at (α≤0.05) of Cloud Computing applications on performance excellence, Where the values of (R, R Square, adjusted R Square, and F) reached (0.73, 5.32, 0.526 and 38.63), Sig. (0.00) Therefore the General hypothesis accepted.

Results of multiple linear regression analysis in Table 4 show the Adjusted R Square = 0.526, which means that the model explicated 0.526% of the variance in performance excellence. The whole model was significant based on calculations of F = 38.63 and P = 0.00, Therefore the General hypothesis accepted.

Moreover effect of cloud computing on performance excellence indicators (minor hypothesis H1, H2, H3, H4, H5, H6, and H7) was tested as indicated in table (5).

Table (5): Results of Simple Regression Relationship between Cloud Computing and Performance Excellence Indicators.

| **dependent variables** | **Beta** | **T** | **R** | **$R^2$** | **F** | **Sig.** | **Acceptance** |
|---|---|---|---|---|---|---|---|
| H1: Strategic planning | 0.460 | 7.310 | 0.682 | 0.465 | 22.434 | 0.00 | Accepted |
| H2: Operations management | 0.542 | 8.871 | 0.693 | 0.480 | 35.567 | 0.00 | Accepted |
| H3: focusing on markets and customer | 0.431 | 4.422 | 0.642 | 0.412 | 12.866 | 0.00 | Accepted |
| H4: focusing on Workforce | 0.387 | 4.654 | 0.732 | 0.535 | 11.931 | 0.00 | Accepted |
| H5: Collaboration and sharing knowledge | 0.352 | 6.376 | 0.791 | 0.625 | 7.745 | 0.01 | Accepted |
| H6: focusing on Suppliers | 0.416 | 8.322 | 0.723 | 0.522 | 14.734 | 0.00 | Accepted |
| H7: Services development | 0.338 | 7.680 | 0.584 | 0.341 | 13.601 | 0.00 | Accepted |
| **H; performance excellence (Total)** | 0.375 | 3.852 | 0.730 | 0.532 | 38.812 | 0.00 | Accepted |

Independent: Cloud Computing

The table highlights the $R^2$ = 0.532, which means that the model explicated 53% of the variance in performance excellence interpreted by Cloud Computing adoption. The whole model was significant based on calculations of F = 38.812 and P = 0.00. Moreover, cloud computing effect on each performance

excellence variable was tested for significance. Depending on this test, all seven minor hypotheses H1, H2, H3, H4, H5, H6, and H7 are supported in general. Table (5) shows the significance of constructs and supported hypotheses.

## Discussion and Implications

We believe that Telecommunications Companies in general and Zain Telecommunications Company in particular in the last decade realize the role of cloud computing in the new business, and adopt performance excellence as a competitive necessity for survival and leading in this sector. Clear understanding and alignment of Cloud Computing for performance excellence is essential to realize the potential benefits to the company.

This research examined the application of Cloud Computing for performance excellence in Zain Telecommunications Company. We presented an initial implementation of a Cloud Computing tools for Telecommunications Companies. These tools are to be seen as an important step towards a sophisticated support for Strategic planning, Operations management, focusing on markets and customer, Workforce, Collaboration and sharing knowledge, suppliers, and services development, which are the bases for performance excellence.

In this study, we examined the effect of independent variables (Cloud Computing) on the dependent variable (performance excellence). The findings of this study indicate that Cloud Computing applications are used with high level at Zain Telecommunications Company- Jordan, performance excellence also high. There is a significant positive impact of Cloud Computing on performance excellence in all its variables (Strategic planning, Operations management, focusing on markets and customer, Workforce, Collaboration and sharing knowledge, Suppliers, Services development). Zain Telecommunications Company is aware of the benefits, which can be gained once they convert to Cloud Computing. Furthermore, they were convinced if they adopted Cloud Computing, it will give them a competitive edge, depending on competition intensity. On the other hand, the company realize the role of performance excellence in today's business.

So the first implication of this study is that Cloud Computing is the key to success in performance excellence in all its indicators: Strategic planning, Operations management, focusing on markets and customer, Workforce, Collaboration and sharing knowledge, Suppliers, and Services development, this would lead successfully to facilitate Cloud Computing adoption. Secondly, because expected benefits have a positive impact on the adoption of Cloud Computing and performance excellence, Zain Telecommunications Company should seek to convert those opportunities into reality and maximize exploiting Cloud Computing tools in achieving performance excellence, in order to ensure fruitful results alongside the shift towards Cloud Computing. Thirdly, because of competitive pressure, Zain Company should take into consideration that Cloud Computing and performance excellence adoption will give them a competitive advantage. In order to exploit this opportunity, they have to move forward to expand using Cloud Computing and aware employees about benefits of this strategy adoption, which is the main implication of this study.

From the above researchers can say; the originality of this paper comes from analyzing an important issue whether better assimilation of performance excellence can exist triggered by the Cloud Computing adoption. It is unique in its broad analysis of the tow related terms – Cloud Computing and performance excellence- in an important sector in the economy which is Telecommunications.

## Recommendations

Researchers recommend Zain Telecommunications Company management and staff to expand using Cloud Computing in all levels and functions in the company, reinforce using of Cloud Computing in performance

excellence with all its areas (Strategic planning, Operations management, focusing on markets and customer, Workforce, Collaboration and sharing knowledge, Suppliers, Services development), and aware employees in the company about how the company can achieve performance excellence by using Cloud Computing tools.

## Conclusion

Following our study model, future research can be conducted on the same sector (Telecommunications) and other sectors like banks, health, insurance etc. After a while to determine their developments in adoption of Cloud Computing and performance excellence. For performance excellence, future research may use different indicators with more clarification to investigate the real effect on performance excellence. Also, future research may use many different factors as moderators.

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# Appendix

**Survey Questionnaire Items**

| No. | Paragraph | Average | Stnd. Deviation | level |
|---|---|---|---|---|
| 1 | Cloud computing Facilitating access to software | 4.46 | 0.62 | high |
| 2 | Cloud computing platform allows the company to provide various applications | 4.38 | 0.48 | high |
| 3 | Cloud computing provides adequate information to customers | 4.32 | 0.76 | high |
| 4 | Cloud computing provide enough storage for data | 4.28 | 0.84 | high |
| 5 | Cloud computing provides extensive services to its customers | 4.21 | 0.72 | high |
| 6 | Working to provide advanced technology and sufficient equipment | 4.13 | 0.77 | high |
| 7 | Cloud computing works to provide effective communication networks | 4.00 | 0.90 | high |
| **infrastructure for the company and provide adequate storage space** | | 4.30 | | high |
| 1 | Systems upon which cloud computing has a high reliability and precision | 4.13 | 0.77 | high |
| 2 | The use of cloud computing ensures not deny service from the other party | 4.10 | 0.79 | high |
| 3 | Using cloud computing is credible | 4.00 | 1.20 | high |
| 4 | Cloud computing reserve customer privacy | 3.90 | 1.1 | high |
| 5 | Cloud computing works to save the information safely and effectively | 3.84 | 0.92 | high |
| **security (integrity, confidentiality, reliability, availability)** | | 4.00 | | high |
| 1 | The use of cloud computing reduces costs and reduces manpower | 4.32 | 0.85 | high |
| 2 | Information provided through the cloud available at any time and any where | 4.10 | 0.80 | high |
| 3 | Cloud computing enable the completion of a greater number of transactions | 4.12 | 0.77 | high |
| 4 | Cloud computing allows more knowledge and information | 4.05 | 0.76 | high |
| 5 | Using cloud computing save time and effort | 4.10 | 0.89 | high |
| 6 | Cloud computing is flexible and ease to use | 3.90 | 0.93 | high |
| 7 | Cloud computing available to all individuals in the company | 3.76 | 0.98 | high |
| **area of flexibility and ease of use** | | 3.88 | | high |
| **Cloud computing** | | 4.06 | | high |
| 1 | Cloud computing works to identify everything new | 4.26 | 0.87 | high |
| 2 | Cloud computing helps to organize the business quickly | 4.14 | 0.82 | high |
| 3 | Cloud computing facilitates environmental scanning of the company | 4.05 | 0.86 | high |
| 4 | Using cloud computing facilitates strategic planning | 3.97 | 1.20 | high |
| 5 | Cloud computing works to assist managers in planning | 3.80 | 0.93 | high |
| 6 | Cloud computing controls the quality of work | 3.72 | 0.88 | high |
| **strategic planning** | | 3.77 | | high |
| 1 | The use of cloud computing contributes to manage operations effectively | 3.84 | 0.83 | high |
| 2 | Cloud computing enables in providing applications and systems serving operations in the company | 3.89 | 0.87 | high |
| 3 | Business organizations rely on cloud computing in managing operations | 3.61 | 0.95 | high |

| | | | | |
|---|---|---|---|---|
| 4 | The cloud computing adjusts processes in business organizations | 3.62 | 0.96 | high |
| **Operations management** | | 3.87 | | high |
| 1 | Cloud computing helps to know the customer's needs | 3.90 | 0.94 | high |
| 2 | The use of cloud computing focuses on the adoption of client and market policy first | 3.85 | 0.84 | high |
| 3 | The use of cloud computing contribute in the search for the customer and market requirements | 3.82 | 0.96 | high |
| 4 | Cloud computing focuses on dealing with customers and markets | 3.76 | 1.22 | high |
| **field to focus on the market and the customer** | | 3.83 | | high |
| 1 | Wokingforce in business organizations is the cornerstone of success angle | 4.12 | 0.66 | high |
| 2 | Organizations care about employee training and raise their efficiency | 4.06 | 0.84 | high |
| 3 | Cloud computing contributes to provide workers with everything new. | 4.13 | 1.30 | high |
| 4 | Workers are trained on how to deal with cloud computing. | 3.90 | 0.76 | high |
| **Field of workforce** | | 3.87 | | high |
| 1 | Using cloud computing care about brainstorming for widespread knowledge generation | 4.06 | 1.21 | high |
| 2 | Cloud computing contribute in the sharing of knowledge among employees | 3.94 | 0.73 | high |
| 3 | Top management arranging scientific educational meetings for all employees and directors | 3.82 | 0.82 | high |
| 4 | Cloud computing contribute in sharing knowledge with other companies | 4.00 | 0.92 | high |
| 5 | Cloud computing contribute to the distribution of opinions and ideas between staff and management | 3.92 | 0.84 | high |
| 6 | Cloud computing facilitates generation of new knowledge | 3.81 | 1.13 | high |
| **The scope of cooperation and sharing of knowledge** | | 3.89 | | high |
| 1 | cloud computing care about collaboration with suppliers and managing policies about sales strategies | 3.94 | 0.98 | high |
| 2 | Cloud computing concentrates on suppliers and their needs | 3.87 | 0.95 | high |
| 3 | Within a cloud computing suppliers is an integral part of improvement plans of the company | 3.79 | 0.71 | high |
| **The field to focus on suppliers** | | 3.87 | | 3.87 |
| 1 | Top management is aware of how important it is to rely on cloud computing in the service design | 4. 15 | 0.92 | high |
| 2 | Cloud computing is interested in improving the quality of service provided | 4.09 | 0.87 | high |
| 3 | Cloud computing is interested in speeding up service delivery | 3.92 | 0.86 | high |
| 4 | Cloud computing contributes to the service design as a whole | 3.91 | 0.84 | high |
| 5 | Cloud computing bother necessary improvements to the service on an ongoing basis | 3.61 | 0.81 | Med ium |
| **The service area design** | | 3.99 | | high |
| **Organizations development** | | 3.87 | | high |