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IMPACT OF INTENTION TO ADOPT CLOUD-BASED HUMAN
RESOURCE MANAGEMENT ON INNOVATION BEHAVIOUR: THE
MEDIATING ROLE OF LEADERSHIP SUPPORT IN SMES IN JORDAN

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ABSTRACT

This study aimed to identify the impact of the adoption of a cloud-based human resource management on the innovative behavior of the presence of leadership support as a mediating variable in SMEs in Jordan. This study included companies in the information and communications sector with fewer than 100 full-time employees. The sample size for this study was 354. Descriptive measures indicated a high level of innovative behavior and leadership support in small and medium-sized companies in Jordan. The study also found that the effect of the intent to adopt cloud computing for human resource management on leadership support was significant. And that the effect of leadership support on innovation behavior was significant. Moreover, the effect of intent to adopt cloud computing for human resource management was on innovation behavior, indicating that there was a significant effect of the independent variable on the dependent without a mediation effect. The results showed that leadership support partially mediated the relationship between intent to adopt cloud-based human resource management and innovation behavior.

INTRODUCTION

Developments in cloud computing have accelerated over the past decade and different types of its applications have emerged (Adjei, 2015), where companies resort to the cloud to gain competitive advantages and benefit from the advantages they achieve. Several studies have indicated that the application of

cloud computing contributes to increasing work efficiency and reducing operating expenses for companies, as it does not require much support for information technology (Adiyasa et al., 2018). The development of vital and effective information systems requires small and medium-sized companies to make some use of cloud computing technologies, as cloud computing allows companies to store, access and use abundant data via the cloud to improve systems efficiency, reduce operational costs and ultimately achieve sustainability (Wang et al., 2016). Cloud computing is an innovative model that enables companies to access the network everywhere (Alotaibi et al., 2021). Organizations tend towards cloud-based HR systems because HR data is massive and must be easily stored and accessed (Abdullah et al., 2020). Cloud-based HR systems enhance decision-making, reduce administrator efforts, speed up response time, improve user services, and increase productivity (Shukur et al., 2021). Cloud computing allows obtaining the required resources whenever desired, integrating user data, and providing data on worker performance (Ergen, 2020). Kinanga (2012) reported a positive relationship between accessible IT, IT adoption, and human resource performance; However, there is a lack of information on the impact of IT adoption or cloud computing adoption and human resource performance in Jordan.

Technology impacts business and human resources significantly and strategically (Turulja & Bajgorić, 2017). Also, the utilization of technology for Human Resources is increasing, and the roles and functions of HRM are evolving. Human resources management is responsible for executing cost reduction strategies, time management, reducing employee turnover, and improving performance. From this perspective, Cloud-based HRS represents a paradigm shift that provides HR management with the opportunity to complete their tasks using decentralized applications, services, and networks accessible across the world via any mobile device with Internet access (Low et al., 2011). Cloud computing has been introduced in HRM to create innovative solutions for increasing a company's sustainability (Rashmi Bhadani, 2014). The collaboration of the HR and cloud computing models helps boost the innovativeness and has been adopted (Willcocks et al., 2013).

Advances in technology create a need for a new form of management. At the same time, changes in workforce quality and education are increasing the importance of human resource management. Human resource management depends on manpower planning, provides employees to the company, manages performance and wages, organizes necessary training, ensures health and safety of employees, and performs many activities to improve the organization (Ergen, 2020). Human Resource Management covers many topics such as recruitment, training and rewards. After globalization and technology trends, human resource management requires constant control of actions (Cai & Chen, 2021). Every aspect of the management process can now be implemented digitally (Zraqat, 2020).

Contemporary organizations, with their different types, activities, and objectives, live in an important civilized stage, differing in their dimensions and components from the previous stages. , and the accompanying rapid and tremendous development in the advancement of technology, communications

and information systems (Al-Hawamdeh, 2020), and this requires those in charge of these organizations to provide all the necessary means and requirements to successfully overcome this new stage to reach the organization to safety and achieve its goals effectively and excellence. Hence, administrative innovation has become an urgent and essential requirement for any organization that seeks excellence, survival and competition, and this will not come unless the appropriate organizational climate is provided to motivate and motivate to highlight such creative capabilities.

The importance of innovation and the organizations need for it increases in light of the transformations imposed by the successive and rapid global changes, and this will push organizations of all kinds and activities to adopt innovation as an approach in the course of their work, to be able to adapt to these global changes, and to exploit resources and material and human capabilities in an optimal way to achieve competitive advantage, and achieve individuals excellence within the organization (Alharafsheh et al., 2021). If any organization wants to excel or even continue its performance in light of these changes, it must adopt innovation in its organizational strategies and policies. Focusing on innovation behavior is positively related to the existence of a culture of development that links the role of human resources in creating organizational development behavior (Hussien et al., 2017). This means that the development of an innovative mindset falls within the areas of human resource development. This leads to the emergence of a contradictory view towards the managerial aspect of innovation which is related to the managerial aspects of the organization and includes organizational structures, administrative treatment and human resources (De Massis et al., 2013). HRM practices have a direct impact on the innovation behavior of companies, especially when they are aligned with decentralization, delegation, knowledge sharing, and financial and non-financial incentives (Salampasis et al., 2015).

Much of the management literature suggests that leaders are the key to an innovation drive, because by demonstrating positive and supportive leadership behaviors, they encourage employees to be more innovative. They can motivate employees to generate new ideas by rewarding, appreciating and appreciating their efforts. Leadership behaviors are likely to be the main antecedents for innovative behavior (Zaitouni & Ouakouak, 2018). Support from co-workers also enhances organizational engagement, job satisfaction, and worker well-being and retention (Alfes et al., 2013). This indicates that leadership support enables employees to become more productive, creative and innovative.

Hence, this study aims to identify the mediating role of leadership support in the impact of the intention to adopt a cloud-based human resources system on the innovation behavior of small and medium-sized companies in Jordan. The theoretical contributions of this study at the scientific level lies in its attempt to link important variables that have not been tested extensively in the literature. Which is one of the basic and supportive pillars of the Jordanian economy, and it is hoped that the results that this study will reach, and the recommendations that it will present, will enable officials in the Jordanian companies under study to reach the elimination of many of the problems facing small and medium-sized companies by improving the level of Innovative behavior of employees.

LITERATURE REVIEW

Human Resource Management (HRM)

Information technology continues to play an important and continuing role in human resource management functions (Huselid, 2011). Today, HR is a formal, internal structure that is responsible for all aspects of people management. HR functions in the value chain include recruitment; compensation and incentives; employee relations; work's relationships; Staff training and organizational development (Piwowar-Sulej, 2021). Each HR function is categorized under different HR roles. Where the human resource department is responsible for managing human talent, managing change, and supporting organizational goals (Anwar & Abdullah, 2021). Kumar and Pandya (2012) presented strategies for leveraging HR technology to improve organizational performance and improve leaders' decision-making. Zakaria (2013) used five factors from the categories of innovative HRM practice that contribute to organizational performance and competitive advantage including training and development, reward systems, performance appraisal, recruitment, communication and information exchange. Zakaria (2013) posits that small and medium-sized organizations must engage in innovative human resource management practices as part of the corporate culture in order for the organization to remain relevant and long-term.

The expansion of the role of human resources and the development of technology led to the introduction of the human resources information system and electronic human resources management. Human resource information systems are the technical tools that collect, store, maintain and retrieve the data of an organization's employees (Karimidizboni, 2013). It can help organizations manage talent and foster innovation orientation (Messersmith & Guthrie, 2010). Dhamija (2012, p. 33) stated, “e-HRM is a way of implementing HRM strategies, policies, and practices in an organization through a directed support of web technology-based channels”.

HR departments in organizations should have databases of employee information, including information related to employment, compensation and benefits, and demographic and national data. Companies must adjust their HR practices to attract, develop, maintain and retain high-performing talent for sustainability and success, including having an HRIS accessible anytime, anywhere. Cloud computing is a tool that allows HR managers to streamline functional and service-delivery responsibilities to focus on more strategic roles including fostering innovation (Cai & Chen, 2021).

Innovation Behaviour

Innovation behaviour refers to an employee's conduct in applying new ideas, processes, products, technology, and employees' role in the organization (Yuan & Marquardt, 2015). Innovative behavior is seen as a process, as it has been defined as “a mental activity that organizational members resort to to invent new work methods, or to create products and services that keep pace with the aspirations and desires of customers, in order to maintain the organization’s position in the market” (Firuzjaeyan et al., 2014). As for the aspect that focuses

on innovative thinking, production and problem solving, innovative behavior is defined as “the process through which new ways and means are developed and introduced to carry out tasks within the organization, and to provide better products and services, and innovation can occur at the level of the individual or the work team.” Or the organization as a whole (Anderson et al., 2014) Innovative behavior can also be seen as “the management of activities and processes of brainstorming, technical development, manufacturing and marketing of new products and raw materials, and the assimilation and implementation of innovative ideas and processes (Trott, 2005).

The importance of the innovative behavior of individuals and institutions emerges as a clear advantage of organizational change, which in turn can provide a key to achieving change in all aspects of the organization, in order to achieve organizational effectiveness and thus the ability to survive and grow (Zhou & Hoever, 2014). Organizational change is closely linked to innovation, and the core axis of creative contemporary organizations is based on their development of an organizational environment, and work on crystallizing innovative trends in an intellectual and scientific approach, based on values, standards and functional practices that are reflected in improving the performance of employees in the organization. A flexible administrative system, an organizational climate of trust between employees and based on information flow and problem solving, would affect innovative behavior and improve the performance of the organization (Karavasilis, 2019). The ability to change is one of the elements of innovative behavior, which is represented by the organization’s ability to make changes in the objectives and policies of the administration or in any other element of the organizational work in order to adapt the conditions of the organization and the management’s work methods and activities with changes and new conditions in the surrounding environment, or to create organizational conditions and administrative methods And new areas of activity that give the organization an advantage over other organizations (Nghah et al., 2020).

The development of an employee's innovation behaviour is critical for an organization because it must adapt to technological changes with increased completion and technological developments. Previous studies have found a positive correlation between technology implementation and innovative behaviours (Al-Khattab & Saeed 2016). Litwin (2011) found that new technologies offer an important avenue by which the company can improve HRM performance. While much research has found a connection between HRM and innovation (Messersmith & Guthrie, 2010; Bos-Nehles et al., 2017). HRM influences and shapes the attitudes, behaviours, and knowledge of individuals, and studies have linked HRM to innovation on the organizational level. Nonetheless, individual innovative behaviour remains fundamental to innovative organizational capacity because individuals serve as the keystone of every innovation.

Leadership Support

Several theories exist regarding leadership or the role of the leader such as the great man theory, situational leadership, and transactional leadership (Nahavandi, 2011). This review focuses on leadership support as it relates to

human resource management and technology implementation. HR leaders play a multifaceted role as a management expert and change agent towards innovation (Alhawamdeh et al., 2020). Achievements and innovations should be the focus of leadership. Therefore, leadership support focuses on inspiring and developing others to achieve common goals and they are innovative thinkers who are able to identify new ways to solve old problems (Zraqat, 2019). Leaders show significant change when implementing technology, as leadership support, understanding of technological complexity, and employee reaction to implementing the technology in question determine the success or failure of the organization (Demircioglu & Van der Wal, 2021). Innovative approaches to human resource management technology are often emphasized by leaders. This makes leaders the primary influencers for the formulation and implementation of innovative technology such as cloud computing (Ford et al., 2021). Leadership support contributes to increasing employee satisfaction, productivity, retention and innovation by inspiring employees to improve performance and reach organizational goals (Al-Hawamdeh, 2019).

The connection between human resources and technology is the basis for individual and organizational effectiveness (Okoye & Ezejiolor, 2013). Leadership roles are not limited to the implementation of specific tasks, but rather includes the ability to support employees to make them able to highlight their creativity (Cyrus, 2010). Human resource management is no longer limited to employee-related tasks, but the human resource manager has become involved in making operational decisions directly related to organizational growth and productivity by supporting employees and managing change for employees to accept new technology such as cloud computing (Cai & Chen, 2021). Leadership support allows the organization to align HR initiatives with business strategy. Loshali and Krishnan (2013) argue that management support contributes to directing employees towards innovation and development.

Cloud Computing and Human Resources

Cloud computing is a paradigm shift for distributed applications and infrastructures that can be accessed through any mobile device with Internet access (Alotaibi et al., 2021). This provides HR leaders with the opportunity to carry out their tasks on an ongoing basis (Cai & Chen, 2021). However, the lack of leadership support may limit the adoption of cloud computing in human resources, but cloud-based computing services can be used to reduce time and capacity constraints, reduce costs and provide anytime, anywhere connectivity, and scalability without responsibility for Maintenance or updates (Rader, 2012). Sanjeev and Natrajan (2020) note that small and medium-sized businesses can benefit from lower capital expenditure when embracing cloud computing in human resource management.

The integration of cloud computing with the human resource management system leads to reducing the cost of human resource management for the company, improving the efficiency of the company's human resource management, and helping the company to get rid of the restrictions of size and capital (Cai & Chen, 2021). Therefore, cloud HRMS has the advantage of differentiation, high efficiency and low cost (Qin & Chen, 2016). Cloud HRMS

adopts the migration of the company's in-house isolated HRMS to the cloud, a new application that creates challenges for traditional HR management and the company. This migration will greatly affect the human resource management, and one of the most important challenges facing companies in migrating human resource management processes to the cloud is the acceptance of new technology. The second work is perceived ease of use, this factor reflects individual opinion about how easy it is to use cloud computing (Qin & Chen, 2016). Innovations appear at many levels when adopting cloud computing, including operational innovations, business process innovations, and market innovations (Willcocks et al., 2013). Additional benefits of cloud-based computing include efficient use of resources, instant scalability, no hardware or software maintenance, security, and data recovery (Cai & Chen, 2021).

Cloud-based human resource management is also linked to innovative behavior through the contribution of cloud computing to facilitating the adoption of the scientific method in diagnosing innovation obstacles and trying to remove them. It enables the management of human resources based on cloud computing by increasing attention to workers and their needs, enhancing administrative empowerment to them, giving them confidence, and creating their commitment to the organizations in which they work, which leads to increased loyalty and loyalty by employees to their organizations, and pushes them to unleash their innovative capabilities (Lv et al., 2018). Cloud-based human resource management also enhances the ability to adapt to change by considering it inevitable. This is because change needs to make an effort to deal with it and requires finding innovative means, tools and methods, and then the change works to develop the ability to innovate in methods, form and content (Xu & Mahenthiran, 2021).

Malkawi & Abu Rumman (2016) considered that the most important factors that need attention and special care to stimulate the innovative state of workers is the deepening of the concept of time and its importance in life, and that it is the only element of work that cannot be controlled or retrieved, the deeper the sense of the importance of time And the need to make the most of it, whenever innovators develop certain feelings and pressures that push them to work and innovate, in addition to developing the skill and ability to have a holistic perception, and granting rewards, whether material or moral (Navimipour et al., 2015). There are several axes in which innovative capabilities can be developed through cloud-based human resource management, including: adopting a system of participation in the organization, imposing training and paying attention to research and studies, securing objective criteria for performance evaluation to attract creators, ensuring integration with the surrounding environment, and consolidating the role of administrative leadership in Creating an organizational climate for innovation.

Study Hypotheses

By reviewing the previous literature, the following hypotheses can be formulated:

H01: There is no effect of cloud-based human resource management on innovative behavior within SMEs in Jordan.

H02: There is no effect of cloud-based human resource management on leadership support within SMEs in Jordan.

H03: There is no effect of leadership support on innovative behavior within SMEs in Jordan.

H04: There is no effect of cloud-based human resource management on innovative behavior within SMEs in Jordan through the mediating role of leadership support.

STUDY METHODOLOGY

This study is classified by nature as applied, and by purpose it is explanatory, as it works to discover the effect of intent to adopt cloud-based human resource management (the independent variable) on innovative behavior (the dependent variable), in the presence of leadership support (the mediating variable).

Population and Sample

The level of the analysis was individuals. Those individuals include human resource management employees and IT staff within SMEs across the capital of Jordan, Amman, who know cloud computing services (Tarhini et al., 2017). The information and communication sector were selected from official a database of the department of statistics, Jordan. This study included companies in the Information and Communication sector that employed less than 100 full-time employees. The total number of employees working in the information and communications sector reached 11,661 employees. The number of employees in the Human Resources and the Information Technology staff in small and medium-sized companies reached 4461 employees. According to Krejcie and Morgan (1970) the size must be reasonable enough for a valid sample. Therefore, this study's sample size, which is 354. Surveys were sent to 531 respondents out of which. A total of 336 surveys were available for analysis for an effective response rate of 63.3%.

RESULTS

Descriptive Analysis

The mean, standard deviation (SD), minimum, maximum and correlations among variables are represented in table (1).

Table (1): Descriptive Statistics and Correlation Coefficient

	Mean	SD	Min	Max	Correlation		
					CCHRM	INNBEH	LEADSUPP
CCHRM	4.137	0.724	3.333	5.000	1.000		
INNBEH	4.170	0.668	3.000	5.000	0.779**	1.000	
LEADSUPP	4.155	0.737	3.131	5.000	0.626**	0.729**	1.000

** Correlation is significant at the 0.01 level (2-tailed).

The descriptive measures indicated that innovation behavior (INNBEH) was with highest mean (4.170), while leadership support (LEADSUPP) was with mean (4.155). Moreover, the lowest mean was for cloud computing of human resources management (CCHRM), (4.137). The correlation coefficient values indicated that there was a significant relationship among model variables. These results indicate that small and medium-sized companies in Jordan are adopting cloud computing in human resource management, and there may be an increasing trend in adopting cloud computing in companies as a result of the outbreak of the Corona pandemic, as employees tend to work from home as a result of the restrictions imposed on movement. This is a great support from companies' initiatives to adopt cloud computing, as it is the best option in light of the Corona pandemic. Also, such restrictions have allowed employees to demonstrate their creativity because they spend a lot of time working from home.

Confirmatory Factor Analysis

The results of confirmatory factor analysis (CFA) are shown in table (2)

Table (2): CFA Results

Measure	CMIN/DF	CFI	GFI	NFI	RMSEA
Threshold value	<5	>0.90	>0.90	>0.90	<0.10
Result	3.72	0.95	0.93	0.95	0.07

The above table showed that CFA measures represent a good fit as CFI = 0.95, GFI = 0.93, NFI = 0.95, and RMSEA = 0.07 are all acceptable range.

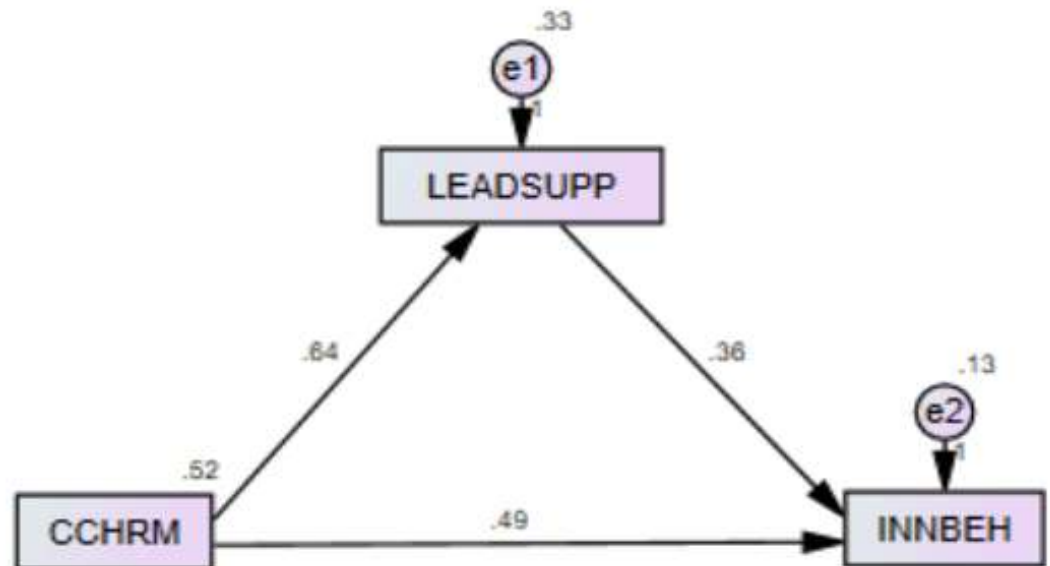


Fig. 1: The results estimated through AMOS

RESULTS AND DISCUSSION

Table (3): Regression Analysis Results

	Estimate (β)	S.E.	C.R.	p-value
CCHRM \rightarrow LEADSUPP	0.637	0.043	14.682	0.000
LEADSUPP \rightarrow INNBEH	0.360	0.035	10.399	0.000
CCHRM \rightarrow INNBEH	0.489	0.035	13.899	0.000

Regression results indicated that the effect of (CCHRM) on (LEADSUPP) was significant ($\beta = 0.637, p = 0.000$), so there is a significant relation between independent and mediator variable. Also, the effect of (LEADSUPP) on (INNBEH) was significant ($\beta = 0.360, p = 0.000$), which means there is relation between mediator and dependent variable. Moreover, the effect of (CCHRM) on (INNBEH) was significant ($\beta = 0.489, p = 0.000$), which indicates there is a significant effect of independent variable on dependent without a mediation effect.

Table (4): Direct, indirect and total effect model of mediation analysis

	Direct Effect			Indirect Effect			Total Effect
	CCHRM	LEADSUPP	CCHRM	LEADSUPP	CCHRM	LEADSUPP	
LEADSUPP	0.637 (0.010)	0.000	0.000	0.000	0.637 (0.010)	0.000	
INNBEH	0.489 (0.010)	0.360 (0.010)	0.229 (0.010)	0.000	0.718 (0.010)	0.360 (0.010)	

The results of above table showed that (LEADSUPP) partially mediated the relation between (CCHRM) and (INNBEH). The mediation effect is significant as indirect effect ($\beta = 0.229, p = 0.010$) of (CCHRM) on (INNBEH) is due to the mediator. Therefore, in the total effect ($\beta = 0.718, p = 0.010$) of (CCHRM) on (INNBEH). These results are consistent with the literature that indicates the association of cloud-based human resource management with innovative behavior. As it was found that human resource management based on cloud computing enhances innovative behavior through its contribution to diagnosing innovation obstacles and trying to remove them. Cloud-based human resource management also contributes to giving workers confidence, creating commitment and motivating them to unleash their innovative capabilities (Lv et al., 2018). The management of human resources based on cloud computing enhances the ability to adapt to change by finding innovative means, tools and methods, and then the change develops the ability to innovate in methods, form and content (Xu & Mahenthiran, 2021).

The results also indicate that the role of leaders is considered a pivotal role when implementing technology, as supporting leadership, understanding technological complexity, and employee reaction to implementing the relevant technology is of great importance (Demircioglu & Van der Wal, 2021). The focus on innovative methods in human resource management technology by

leaders makes them the primary influencers for the formulation and implementation of cloud computing. Leadership support promotes employee innovation by inspiring employees to improve performance and reach organizational goals.

CONCLUSION

This study aimed to identify the impact of the adoption of a cloud-based human resource system on the innovative behavior of the presence of leadership support as a mediating variable in small and medium-sized companies in Jordan. This study included companies in the information and communications sector with fewer than 100 full-time employees. The total number of workers in the information and communication sector reached 11,661. The number of people working in human resources and information technology in small and medium-sized companies reached 4,461 employees. The sample size for this study was 354.

The results of the study showed an effect of the intention of adopting cloud human resources management in enhancing the innovative behavior of employees in small and medium-sized companies in Jordan. It was also shown that there is a role for leadership support in promoting innovative behavior. This is due to the importance of HR in the organization's commitment to work efficiently and effectively and with tools and data to make the right decisions and demonstrate value, as HR professionals are now among the most dynamic people in the senior workforce. By gaining a deeper understanding of the cloud and digital technology, they can make significant contributions to creating and maintaining a productive workplace using HR management systems in the cloud. To align with the business, HR must modernize and transform. To play the role of a change agent, HR needs to choose the right HR system in the cloud to manage the entire employee lifecycle. For disparate solutions in which core HR functions, such as payroll and benefits, are processed in separate cloud-based HR systems, they are not integrated with solutions used for talent management, workforce optimization, and learning. This disconnect is a barrier to usability, reduces the value of the user experience, and makes it difficult to analyze data for valuable insights.

The study recommends the need for Jordanian small and medium-sized companies to adopt a unified plan and procedures for the use of cloud computing technologies, especially with regard to human resource management and to the development of work in general, and to include disclosure reports in companies to the extent of their application and use of cloud computing technologies. As well as calling on the Jordanian legislator to enact legislation for the use of cloud computing technologies, or to amend legislation related to cybersecurity or electronic transactions by adding legal texts related to regulating the use of cloud computing technologies. As well as continuing to adopt innovative behaviors through cloud computing, as the results of the study showed that there is a role for the use of cloud computing in human resources management in improving innovative behavior, with emphasis on the importance of providing all means and procedures that ensure information security, especially since human resources data It is considered sensitive and confidential data, and therefore needs high protection measures.

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