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Role of E-government in Improving the Performance of Egyptian-Banking Sector during Covid19 Pandemic

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Abstract

This paper aims at exploring the role of e-government in improving the performance of Egyptian banking sector. The study population consists of employees working in the Egyptian banking sector as a field for the application of the study in order to know the effect of e-government in improving the performance of the Egyptian-banking sector. Given the difficulty of conducting a comprehensive enumeration of a community, the sampling method was applied through selecting a random sample of employees in various banks in Egypt. The number of respondents to the distributed forms reached (150) forms, and (137) were retrieved. After examining the questionnaire forms, (12) forms were excluded because they were not fit for statistical analysis, and the number of valid forms that were used in the analysis reached 125. The research findings indicated a statistically significant positive correlation relationship between the variable of e-government and the performance of the Egyptian-banking sector during Covid19 pandemic. The research recommends that multiple tools for reinforcing the concept and culture of e-government among all employees of the Egyptian banking system including the establishment of training programs and the issuance of bulletins clarifying developments in the methods and methods of e-government.

Key words: E-government, improving performance, Egyptian banking sector, Covid19 pandemic, CAMELS banking performance evaluation system

Introduction

The concept of e-government has become a focal point for discussion globally within the past decade and has received a wide range of attention among scholars. E-government plays a pivotal role within economic institutions, government institutions, hospitals, and non-profit organizations. Since banks are considered one of the most important sectors in any state, technology manifested by financial transactions and mobile applications, has become so invasive recently (Twizeyimana, J. D., & Andersson, A., 2019). A sector that benefits from public funds must respond to the requirements of society and the labor market, as it faces great pressure to be more effective, which necessitates it to go with more transparency and public accountability in parallel to moving towards independence and ensuring that systems are managed in an effective manner (Twizeyimana, J. D., & Andersson, A., 2019).

The Egyptian government has adopted a modern system using the World Wide Web and the Internet to link governmental institutions to each other. It links the government various services with private institutions and the public in general and makes information accessible by the public to create a transparent relationship characterized by speed and accuracy. The overall aim of embracing technology in the public services is improving the quality of performance in order to raise the level of efficiency and effectiveness of processes and procedures within the government sector, reducing government costs, raising the level of beneficiaries 'satisfaction with the services provided to them, and supporting economic development programs. The Egyptian government completed the automation of the government's

electronic portal during March 2018, which provides all government services to citizens electronically, and also includes traffic, documentation and month services (Choi, T., & Chandler, S. M., 2020). Real estate and electronic coordination for students, in addition to the services of extracting important papers for the citizen, such as national ID cards, birth certificates, and others (Choi, T., & Chandler, S. M., 2020).

The Egyptian e-government program was launched through a partnership between the Ministry of Communications and Information and the Ministry of Local Development. The first phase of this program (2001-2007) has witnessed the integration and approval of the e-government strategic plan, whereas the second phase (2007- 2012) aimed to expand successful and pioneering projects at the national level and to develop the administrative body of the government (Ghareeb, A. M., Darwish, N. R., & Hefney, H. A., 2020). In 2004, the Egyptian e-government portal was launched to comprise of some services such as paying bills and extracting official documents such as birth certificates and others. Although the Ministry of Communications and Information developed the e-government program in 2000, the Ministry of Local Development took the leadership role. Therefore, dissemination of open government data aims to enhance transparency in the implementation of government transactions, as it establishes the principle of accountability within government agencies and facilitates public review and evaluation of government performance. Open data helps in increasing the efficiency of resource use and designing service delivery channels according to the needs of customers (El Kheshin, S. A., & Saleeb, N., 2020), as well as creating more jobs that depend on data analysis. This fostered making decisions based on specific data on the state's general policies, identifying development opportunities, and contributing to

achieving the sustainable development goals set by the United Nations (Ghareeb, A. M., Darwish, N. R., & Hefney, H. A., 2020).

In the past, modern economies have never stopped operating without warning; while nowadays, large numbers of workers lost their jobs and their source of income (GOHARY, E. E., 2019). Today consumers and businesses are suffering huge losses of income with the potential for widespread bankruptcies. Pressure is now mounting on the banking system and more debt defaults are imminent. Many expectations indicate that the financial sector will be exposed to a shock of similar magnitude to what we witnessed during the crisis of 2008 (Kasemsap, K., 2020). The world's policymakers gathered, a little over a decade ago, in an unprecedented offer to coordinate efforts to start work on developing an improved regulatory framework for the sector Financial. So, they raised the minimum standards for the quality and size of bank capital and bank liquidity to a large extent, and they succeeded in building a more robust banking system aiming at acquiring preventive reserves higher than the mandatory minimum so that it can be withdrawn safely in crisis situations (GOHARY, E. E., 2019). The national authorities are currently taking a set of measures to provide support from public finances; Central banks are working to open new liquidity lines (Kasemsap, K., 2020). The efforts of the banking sector continue to address the crisis of rampant 'Covid 19' virus, known as the emerging corona. It began with the central bank’s decision to reduce interest rates by 3%, so that it becomes the overnight deposit and lending rate. The main process rate at 9.25% and 10.25%, 9.75%, respectively, and the credit and discount rate at the level of 9.75%. This has been followed by the decision to reduce the interest rates of initiatives to support the industrial private sector, and real estate financing for middle-income people. In addition to the initiative to support the tourism sector to

8%, decreasing, instead of 10%, in order to stimulate the private sector to work, production, and stimulating the performance of the local economy in light of the crisis of the Coronavirus outbreak. The Central Bank also issued a decision to postpone the credit benefits of customers for a period of 6 months, with no additional returns or fines applied to the delay in payment (Yasir, A., Hu, X., Ahmad, M., Rauf, A., Shi, J., & Ali Nasir, S., 2020).

Along with the new package of Central Bank decisions to confront Corona, raising the slogan "Pay online, I hope for you," the Central Bank took a new measure. This measure allowed citizens to obtain prepaid cards for free for a period of six months, provided that the cards are contactless in the event the bank starts issuing them simultaneously with issuing mobile phone wallets for free for a period of six months (Yasir, A., Hu, X., Ahmad, M., Rauf, A., Shi, J., & Ali Nasir, S. , 2020). Along with the new possibility of making transfers, purchases and cash withdrawals from the ATM for free, the Central Bank issued new instructions that include raising the maximum limits when paying using a mobile phone for natural persons to reach 30 thousand pounds per day (Bahaj, S., & Reis, R., 2020). As for the new bank customers who have been identified electronically, 30 thousand pounds per day and 30 thousand pounds per month, while the Central Bank obliges all banks that have a license for acceptance services online, by activating the payment service using the QR Code. In accordance with the state lockdown policy, banks operating in the local market continued to apply precautionary measures to curb the spread of the Coronavirus through reducing while maintain precautionary measures such as wearing masks, using sanitizers, and maintaining proper physical distance between individuals (Bahaj, S., & Reis, R., 2020).

Research problem

The problem of the study stems from the scarcity of theoretical and field research that deals with the issue of e-government and its role in improving the performance of banks in Egypt that are still affiliated with the Central Bank due to its economic and social role and importance. Due to corona virus and its affiliated consequences and precautionary measure, this topic has become more prominent as the pandemic has optimized the need for digitization at large. Therefore, this study tries to be acquainted with some aspects of e-government by providing an overview of this topic, which focused primarily on the ability of banks to apply e-government. The research would primarily investigate the role of e-government in improving the performance of Egyptian banks.

Literature Review

E-government:

The concept of government has become closely interrelated to the field of business on a large scale ever since the economic crisis where more trust was given to the private sector versus less public trust in the government. Since then, governments worldwide started to adopt business-like management systems including public service. Thus, there has been a need for procedural frameworks to enable managers to take result-oriented decisions (GOHARY, E. E., 2019).

The government framework includes a set of organizational relationships in the institution, auditing, and accounting laws, in addition to the necessity to provide an integrated system of performance measurement standards. Institutions seek, through the government of their internal and external processes, to provide homogeneity between their various administrative units that complement each other. Technology and digitization are major tools for various institutions to keep up with

contemporary information revolution and increase the exchange of information and communication transactions. The integration and interaction of various systems, services and administrative departments, has drawn global attention to the pivotal role of e-government that helps to provide the administrative services available to individuals approaching financial institutions for various purposes (GOHARY, E. E., 2019).

In this regard, many scholars have articulated the concept of e-government including Ashaye, O. R., & Irani, Z. (2019).

- 'E-government is the reinvention of business with new ways of integrating and integrating information and providing an opportunity to access it through a website.'
- It is the ability of sectors to exchange information and provide services between themselves and between citizens and the business sector with high speed and accuracy, and at the lowest possible cost while ensuring the confidentiality and security of information circulating at any time and place.
- 'It is a virtual system that enables the administrative bodies of institutions to fulfill their obligations to all beneficiaries by using advanced electronic technologies, ignoring place and time, while achieving quality, confidentiality and security in information.'
- 'It is a new and advanced method, but rather an information technology revolution that has led to a quantum leap in the advancement of government agencies, private sector agencies and others, from traditional administrations to electronic transactions. In short, e-government is referred to as the application of technologies on the Internet in governmental and non-governmental commercial sectors and activities.

In a previous study, the implementation of e-government and digitization of the public service delivered to the citizens particularly in the sector of civil status office in Egypt, had proven tremendous success during the Covid19 pandemic. The study showed positive correlation relationship between the level of e-government enacted in civil service in improving performance Egyptian Civil Status Office during covid -19 pandemic (Wasef N.H & Abou Seeda, A.A, 2022). This research would apply the same concept to the banking system in Egypt as a financial sector where many financial transactions occur on daily basis and where many digital platforms such as internet and mobile banking are efficiently utilized to optimize citizens' accessibility to financial services.

Commercial banks

Some scholars such as Ali, S. A. S., Eldaw, K. E. H. I., Alsmadi, M. K., & Almarashdeh, I. (2019) have defined commercial banks as any institution whose normal profession is to receive deposits or funds that are typically used for a special account in liabilities, loan operations, or any other financial operations. El Banna, S. M. A., & Labib, N. M. (2019) stated that it is an institution which depends on accepting deposits of individuals and organizations of all kinds, whether on demand or on time, and then reinvesting them for short-term periods, through credit facilities to contribute to the revitalization and development of foreign and domestic trade.

One of the basic functions that commercial banks perform is to act as a financial intermediary between lenders and borrowers as banks collect national savings and direct them towards investment in economic projects in line with the

state's credit policy. According to the McCainon-Shaw theory, an effective contribution to economic growth if the government provides them with an atmosphere of competition and freedom, especially if it allows commercial banks to pay interest on deposits and charge interest on loans in a way that reflects the conditions of the monetary market. Commercial banks today are major stakeholders of the national economy as they sponsor the implementation of large projects, and for its role in financing foreign trade, especially in providing documentary credit that guarantees the rights of exporter. Functions of commercial banks can be summarized as follows Al adawi, L. M. A. P. A., & Leila Mohamed Al-Shawadafi Abdel-Hamid. (2019).

Commercial banks perform multiple monetary functions that can be divided into classic, ancient and modern functions. The classic functions encompass accepting deposits of all kinds and operating the bank's resources in the form of various loans and investments, taking into account the principle of reconciling the liquidity of the bank's assets with their profitability and security. (Ali, S. A. S., Eldaw, K. E. H. I., Alsmadi, M. K., & Almarashdeh, I., 2019).

As for modern jobs, they provide a variety of services such as managing businesses and properties for clients and providing economic and financial advice; besides personal housing finance; credit card services; paying utility bills through accounts opened by the concerned institutions (Ali, S. A. S., Eldaw, K. E. H. I., Alsmadi, M. K., & Almarashdeh, I., 2019).

CAMELS banking performance evaluation system

The US Federal Bank launched the CAMELS method in the beginning of 1980, as this method is represented in a set of indicators through which the financial

function of any bank is analyzed, and the degree of its classification is known. This method is considered one of the direct supervisory methods practiced by the supervisory authorities on banks, The CAMELS banking evaluation system consists of six components: (Capital Adequacy -Asset Quality - Management Quality - Earning Management - Liquidity Position - Sensitivity to Market Risk) Saeed, H., Shahid, A., & Tirmizi, S. M. A. (2020).

The purpose of using the CAMELS evaluation system is to identify the banking risks that constitute weaknesses in the financial, operational and administrative operations of the bank, which require special supervisory attention and setting the necessary control priorities, or the intervention of the monetary authority to address the matter Saeed, H., Shahid, A., & Tirmizi, S. M. A. (2020). CAMELS has proven to be an effective oversight tool for uniformly assessing the strength of financial institutions, and it has proven effective in identifying institutions that need special attention (Dabaghie, M. N., & Rajha, K. S., 2019). One of the major functions of CAMELs is producing a comprehensive classification of the banking system as a whole according to a unified approach. Additionally, it is responsible for analyzing the results horizontally for homogeneous banks and vertically for each of the six banking performance elements referred to for the banking system as a whole (Al Ali, M. S., & Al-Yatama, S., 2019). To reach sound and accurate results of our analysis, the unified evaluation system requires a numerical classification for each bank based on the six basic elements, and for each element a numerical classification is determined from (1 to 5) where the rating is (1) the best, and the rating is (5) the lowest. The final classification of the bank is determined based on the evaluations of each of the aforementioned main elements, which take into account all the factors affecting the evaluations of the constituent

elements, and therefore the banks whose classification is (4) or (5) indicate the existence of serious and important problems in them that require supervision. It is a serious matter and a remedial procedure of its own. If the bank is exposed to a threat to its solvency, it becomes necessary to direct administrative and supervisory attention, with consideration being given to the compulsory liquidation or reorganization of the bank (Shaddady, A., & Moore, T., 2019). As for the banks whose classification is (3), they generally face some weaknesses, and require taking the necessary measures to correct them within a reasonable time frame. This may lead to the emergence of prominent problems in solvency and liquidity, which requires the central bank to take appropriate administrative measures and provide clear instructions to management. To identify and avoid the mentioned weaknesses (Shaddady, A., & Moore, T., 2019). As for the banks with a composite rating (1 and 2), they are basically sound in most respects, and are considered well-managed, and their ability to withstand challenges is good, except for severe economic fluctuations. However, this requires supervisory supervision as a minimum to ensure the continuity and validity of basic banking integrity (Shaddady, A., & Moore, T., 2019).

Application Framework

Population and Sample Study

The study population consists of workers in banks operating in the Egyptian banking sector as a field of application to determine the effect of e-government in improving the performance of the Egyptian-banking sector. Given the difficulty of conducting a comprehensive enumeration of a community, the sampling method has been applied by selecting a random sample of workers in banks. The Egyptian banker, and

the number of distributed forms reached (150) forms, and (137) were retrieved from them, and after examining the questionnaire forms, (12) forms were excluded because they were not fit for statistical analysis, and the number of valid forms that were used in the analysis reached (125).

Study Tool

The author has used the form of questionnaires as a tool for the field study based on the theoretical framework of the research and previous studies related to the subject of the study. The questionnaire included two axes, namely (the e-government axis and the banking sector performance axis). The use of a five-point Likert scale consisting of strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1) in answering the questions of the axes of the questionnaire.

Validation of the Study Tool

1- **Arbitration Honesty:**

The author presented the questionnaire in its initial form to (5) of the arbitrators to express an opinion on their agreement to the axes of the questionnaire terms and to find out their opinions and observations about the subject of the study. In other words, a pilot sample has of five respondents was enacted to test the extent of clarity and accuracy the questions posed to the respondents and make necessary changes if needed.

2- Self-honesty:

The reliability factor of the questionnaire was calculated, and then the self-validity factor of the questionnaire was calculated through the following equation:

Validity factor = $\sqrt{\text{reliability facto}}$

The validity factor of the questionnaire = $\sqrt{0.839}$ = 0.916

The value of the self-validity coefficient of the questionnaire shows that it has a high degree of validity and is suitable for application to individuals of the study sample.

3- Constructive Validity:

The constructive validity of the questionnaire was verified, as the study tool was distributed to a preliminary sample consisting of (20) individuals out of the study population. This step aims to determine the extent of the internal homogeneity of the study tool, by verifying the correlation coefficients between each statement and the degree of the statement that the axis contains.

The first axis: e-government:

Table (1) Correlation coefficients between the score for each phrase and the total score for the axis

N.	Correlation coefficient	P-value
1	**0.762	0.00
2	**0.753	0.000
3	**0.728	0.00
4	**0.733	0.000
5	**0.736	0.00
6	**0.711	0.000
7	**0.653	0.00
8	**0.731	0.000
9	**0.745	0.000
10	**0.799	0.000
11	**0.692	0.000
12	**0.664	0.000
13	**0.758	0.000
14	**0.649	0.000
15	**0.619	0.000

****Statistically significant at the level of significance (α = 0.01)**

The second axis: banking sector performance

Table (2) correlation coefficients between the score for each phrase and the total score for the axis

N.	Correlation coefficient	P-value
1	**0.747	0.000
2	**0.725	0.000
3	**0.631	0.000
4	**0.772	0.000
5	**0.736	0.000
6	**0.664	0.000
7	**0.761	0.000
8	**0.693	0.000
9	**0.745	0.000
10	**0.699	0.000
11	**0.622	0.000
12	**0.603	0.000
13	**0.653	0.000
14	**0.719	0.000
15	**0.741	0.000

****Statistically significant at the level of significance (α = 0.01)**

From the previous tables, it can be noted that all correlation coefficients for all questionnaire items were statistically significant at the level of significance α = (0.01), and this means that the tool has structural validity and is valid for the purposes of the study.

Stability of the Study Tool

The stability of the axes of the questionnaire was calculated using the Kornenbach alpha coefficient for internal consistency, and the results were as follows:

Table (3): Stability coefficient of the survey axis

Axis	Alpha Kornbach	number of elements
e-government	0.833	15
banking sector performance	0.849	15
Total questionnaire	0.839	30

The Alpha Kornbach coefficient was calculated for the elements of the axes of the questionnaire. The results indicate that the value of the stability factor Alpha for the axes of the questionnaire form is greater than 0.60, which is a strong stability factor that confirms the validity and correlation of the elements of the axes of the questionnaire form, as well as indicates the stability of the questionnaire.

Data Analysis:

First: Demographic Characteristics of the Sample

Table (4) Distribution of the study sample

Characteristics	Categories	N	%
Gender	**Male**	**75**	**60**
	female	**50**	**40**
Age	**25 and younger**	**11**	**8.8**
	From 26 - 35 years	**54**	**43.2**
	From 36 – 45 years	**31**	**24.8**
	46 years and older	**29**	**23.2**

Scientific degree	**Bachelor**	**74**	**59.2**
	Master	**34**	**27.2**
	PhD	**17**	**13.6**
Employment Status	**Officer**	**49**	**39.2**
	Manager	**53**	**42.4**
	Head of Section	**23**	**18.4**
Years of experience	**5-10 years**	**45**	**36**
	From 11 to 16 years old	**44**	**35.2**
	17 years and over	**36**	**28.8**

Source: Study sample data

Second: the axes of study

The study questions will be answered by analyzing the answers of the study sample individuals on the phrases of the study axes, and the mean, the relative weight and the standard deviation will be relied upon to measure them as follows:

The first axis (e-government):

Table (5) Phrases of the first axis

N.	Phrase	Strongly agree %	Agree %	Neutral %	Disagree %	Strongly disagree %	Mean	S.D	Relative weight	Degree	Arrangement
1	**E-government provides accurate information without errors.**	24	44	20	4	8	3.720	0.715	0.744	High	9

2	**The e-government saves the time and effort required to complete the service.**	32	48	4	12	4	3.920	0.702	0.784	High	7
3	**The e-government provides services in various languages.**	40	48	4	8	0	4.200	0.656	0.840	High	3
4	**The e-government achieves and meets the banking needs of customers in a highly effective manner.**	36	56	8	0	0	4.280	0.650	0.856	High	1
5	**The e-government is characterized by high quality when providing banking services**	48	32	8	12	0	4.160	0.669	0.832	High	5
6	**E-government contributes to increasing the efficiency of the banking sector**	36	48	12	4	0	4.160	0.707	0.832	High	5

7	**E-government contributes to easy access to information related to banking services provided by the banking sector**	36	52	8	4	0	4.200	0.677	0.840	High	3
8	**E-government contributes to facilitating the banking services provided by the banking sector**	44	44	4	8	0	4.240	0.553	0.848	High	2
9	**The e-government provides support service for customers who deal with electronic services in the banking sector**	40	32	12	16	0	3.960	0.598	0.792	High	6
10	**The e-government contributes to providing electronic banking**	40	48	8	4	0	4.240	0.697	0.848	High	2

	service throughout the day										
11	**The e-government contributes to providing the electronic banking service quickly and effectively**	24	48	20	8	0	3.880	0.721	0.776	High	8
12	**The e-government does not allow the misuse of personal information of customers in the banking sector**	36	56	4	4	0	4.240	0.667	0.848	High	2
13	**E-government contributes to increasing levels of safety in completing banking operations.**	36	52	4	8	0	4.160	0.698	0.832	High	5
14	**The e-government contributes to increasing the bank's ability to deal**	32	48	4	12	4	3.920	0.661	0.784	High	7

	with customer complaints										
15	**The e-government helps in solving any problem that customers may face when completing electronic banking operations.**	40	48	4	8	0	4.200	0.687	0.840	High	4

Source: Study sample data

According to table no. (5), it is evident that the level of e-government implementation in the Egyptian banking sector has increased from the point of view of the study sample, as the average value of the axis expressions reached 4.099.

The second axis (banking sector performance):

Table (6) Phrases of the second axis

No.	Phrase	Strongly agree %	Agree %	Neutral %	Disagree %	Strongly disagree %	Mean	S.D	Relative weight	Degree	Arrangement
1	**Regulations and laws in the banking sector give shareholders the right to obtain profits in proportion to their contribution.**	32	52	12	4	0	4.120	0.598	0.824	High	3

2	**Regulations and laws in the banking sector give shareholders the right to equal treatment**	**32**	**56**	**8**	**4**	**0**	**4.160**	**0.697**	**0.832**	**High**	**2**
3	**Regulations and laws in the banking sector give shareholders the right to review the minutes of board meetings.**	**28**	**36**	**28**	**8**	**0**	**3.840**	**0.667**	**0.768**	**High**	**7**
4	**The banking sector provides all services that meet customer needs efficiently and effectively**	**44**	**36**	**12**	**8**	**0**	**4.160**	**0.698**	**0.832**	**High**	**2**
5	**The banking sector aims to provide all banking services and products in an efficient and effective manner**	**40**	**52**	**4**	**4**	**0**	**4.280**	**0.661**	**0.856**	**High**	**1**
6	**The banking sector enjoys flexibility in all banking dealings with customers**	**28**	**52**	**12**	**8**	**0**	**4.000**	**0.721**	**0.800**	**High**	**5**
7	**The banking sector provides a high degree of security and confidentiality**	**20**	**52**	**16**	**12**	**0**	**3.800**	**0.667**	**0.760**	**High**	**8**

	in all banking dealings										
8	**The banking sector works to raise the efficiency of the performance of employees and increase the level of their skills**	**20**	**60**	**8**	**12**	**0**	**3.880**	**0.698**	**0.776**	**High**	**6**
9	**The banking sector is keen that all banks provide integrated services to their customers**	**32**	**56**	**8**	**4**	**0**	**4.160**	**0.661**	**0.832**	**High**	**2**
10	**The banking sector works to reduce the cost of services that customers bear**	**24**	**40**	**20**	**16**	**0**	**3.720**	**0.703**	**0.744**	**High**	**9**
11	**The banking sector works by applying the latest technological methods in financial and banking transactions**	**28**	**60**	**0**	**12**	**0**	**4.040**	**0.687**	**0.808**	**High**	**4**
12	**The banking sector is keen that banks provide all information with transparency and clarity.**	**32**	**52**	**12**	**4**	**0**	**4.120**	**0.672**	**0.824**	**High**	**3**
13	**The banking sector is concerned that banks**	**28**	**36**	**28**	**8**	**0**	**3.840**	**0.667**	**0.768**	**High**	**7**

	publish financial statements in accordance with local and international standards.										
14	**The banking sector is concerned that the management of the bank enjoys independence in taking decisions**	**44**	**36**	**12**	**8**	**0**	**4.160**	**0.698**	**0.832**	**High**	**2**
15	**The banking sector is keen that members of the bank's management are committed to not conflict of interests with the bank when carrying out their business**	**40**	**52**	**4**	**4**	**0**	**4.280**	**0.661**	**0.856**	**High**	**1**

Source: Study sample data

According to table no. (6), the high level of performance of the Egyptian banking sector is evident from the point of view of the study sample, as the average value of the axis statements is 4.037.

The hypothesis of study: There is statistically significant effect of the e-government in improving performance Egyptian banking sector during covid-19 pandemic

The research hypothesis that there is significant statistically significant effect of the e-government in improving performance Egyptian banking sector during covid-19

pandemic and when performing the statistical test to find out the validity of the hypothesis, the research used the method of correlation coefficient Pearson, and the results were as follows:

Table (7) the correlation between the variable of the level of the e-government in improving performance Egyptian banking sector during covid- 19 pandemic

Variable	Level of performance Egyptian banking sector
Level of e-government	**0.784

****Statistically significant at the level of significance (α = 0.01)**

It is evident from the previous table that there is statistically significant, positive correlation relationship between the independent variable of the level of e-government on the dependent variable of the performance of Egyptian banking sector within covid -19 pandemic. The level of significance is 0.01, which substantially validates the research hypothesis through the positive effect of the level of e-government in improving performance Egyptian-banking sector, which means that performance is proportionally related to the government reliance on technology.

To estimate the value of this correlation, a simple regression equation was calculated between both the variables of the level of e-government as an independent variable and the variable of the level of performance Egyptian banking sector as a dependent variable. The results show as follows:

Table (8) the effect of the level of e-government on the level of performance Egyptian banking sector

hypothesis	b	t	F	P-VALUE

Main hypothesis	**0.79**	**9.14****	**83.54****	**0.000**

****Statistically significant at the level of significance (α = 0.01)**

The significance of the model as a whole was shown in the value of F being significant at the level of 0.01. The significant effect of the level of e-government on the level of performance Egyptian banking sector demonstrates that the higher the level e-government rate by 1%, the higher the level of performance Egyptian banking sector by 0.79%.

Conclusions

It can be concluded that the more the government implement digitization and modern technology in the Egyptian banking sector, the better the performance of employees in the Egyptian banks. This has been identified by the statistically significant positive correlation between the research independent and dependent variables within the research specified time frame of Covid-19 pandemic. Thus, it is evident that when the level of e-government increases, the level of the banking sector's performance would increase. Finally, the higher the level e-government rate by 1%, the higher the level of performance Egyptian banking sector by 0.79%. The overall research findings considerably support the role of digitization and technology in optimizing institutional performance represented by the banking sector.

Recommendations

There is a necessity for mainstreaming the use of technology in other sectors that serve the public interest simultaneously with providing adequate training for employees to ensure introducing efficient and errorless service. From the public perspective, there is a need for increasing the level of citizens' awareness of e-

government applications and services and introducing them to the extent of benefit that they can obtain through e-government transactions using mass media, social media, and posted instructions in government institutions. Additionally, the Egyptian government need to supply its institutions with required logistics in order to maintain the efficiency of performing various tasks. At the academic level, academics and those interested in the banking field are highly encouraged to conduct numerous research on the application of e-government on other sectors. Further research is needed to determine how the public perceive the use of technology for obtaining governmental services and what the possible challenges they might face are and how to overcome them.

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