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The Role of E-Management in Supporting Sustainable Performance among Telecommunication Organizations in Palestine

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Abstract

The current study aimed at highlighting the role of e-management (Customer relations management, Partner relations management, Digital rights management and Supply chain management) in supporting sustainable performance among telecommunication organizations in Palestine including (Palestine Telecommunications (Paltel), Palestine Cellular Communications Ltd. (Jawwal), Ooredoo Palestine). Quantitative methodology was employed, and an online questionnaire was distributed on a sample of (294) individuals working within the Palestinian telecommunications organizations mentioned earlier. SPSS was used in order to classify and analyze primary data, multiple and linear regression were used and results indicated the acceptance of the main hypothesis which argued that "E-management has a statistically significant influence in supporting sustainable performance among telecommunication organizations in Palestine" with a strong relationship with sustainable performance. In other words, study concluded that e-management can support sustainable performance by implementing strategies that focus on the efficient use of resources, reducing waste and increasing productivity. Here are some ways e-management can support sustainable performance. In summary, e-management can support sustainable performance by embracing digital transformation, leveraging data analytics, using collaboration tools, implementing energy efficiency measures, and optimizing supply chain management, by doing so, organizations can reduce waste, increase productivity, and improve their environmental sustainability. Study recommended the management to be aware that adopting e-management requires the organization to invest more in cyber security. Further recommendations were presented in the study.

Keywords: *E-Management, Customer relations management CRM, Partner relations management PRM, Digital rights management DRM, Sustainable Performance and Supply*

1. Introduction

It is not possible to deny the idea that administrative practices and information are among the most important elements in operating organizations of different sizes, as each activity or task has a specific goal to be accomplished and an opportunity to face different challenges that affect the organization's mechanism of reaching its goals (Eze et al, 2018).

With the development of information technology and its entry into many operating environments such as the medical, educational and commercial environment; Technical development has become indispensable in organizations, and many organizational practices have moved towards an advanced level of technology that has contributed to saving time and effort (Yadav et al, 2020).

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These developments included updates on computers, a revolution in information, analysis, storage and exploration, electronic human resource management, and electronic supply chain management (Kassem et al, 2018). The meeting of these practices together led to the emergence of what is known today as electronic management *aka* E-Management (Faisal and Kisman, 2020).

Nawafleh (2018) argued that E-management plays a vivid role in supporting employees' performance in governmental sector, while Khlif and Ziadi (2020) saw that e-management is able to affect the whole organizational performance attributed to its ability to identify gaps in individuals' performance and amend the error without negatively influencing organizational performance. Elsaadani's (2020) saw the e-management is able to influence employees' performance which leads to a deeper influence on customer satisfaction regarding services and infrastructure. While Mirembe (2022) saw that e-management is beneficial in terms of managing affiliates and partners not to mention its role on presenting better organizational performance. Lin and Wei (2021) indicated to the same idea and adding that e-management can prove its ability to present better results in terms of managing supply chain management that is attributed to better partners' relation management.

Launching from above argument, this current research aimed at examining the role of e-management Customer relations management, Partner relations management, Digital rights management and Supply chain management) in supporting sustainable performance among telecommunication organizations in Palestine including (Palestine Telecommunications (Paltel), Palestine Cellular Communications Ltd. (Jawwal), Ooredoo Palestine).

2. Hypotheses Development

Di Vaio and Varriale (2020) argued that the use of blockchain technology in supply chain management can have a positive impact on sustainable performance in the airport industry. The study found that blockchain technology can improve transparency, traceability, and accountability in the supply chain, which can help reduce waste, improve efficiency, and promote sustainability. The study also highlighted the importance of electronic management systems in facilitating the adoption of blockchain technology. Electronic management systems can help automate and streamline supply chain processes, making it easier to integrate blockchain technology and realize its potential benefits. The study suggested that electronic management systems can help overcome some of the challenges associated with implementing blockchain technology, such as the need for standardized data formats and interoperability between different systems.

Yildiz Çankaya and Sezen (2019) investigated the effects of green supply chain management practices on sustainability performance. While the study did not specifically focus on electronic management, it did highlight the importance of information technology in facilitating green supply chain management practices and improving sustainability performance. The study found that information technology can play a critical role in enabling green supply chain management practices, such as environmental monitoring, supplier collaboration, and eco-design. Electronic management systems can help automate and streamline these processes, making it easier for companies to implement sustainable practices and track their impact.

Gil-Gomez et al (2020) examined the relationship between customer relationship

management (CRM), digital transformation, sustainable business model innovation, and sustainable performance. While the study did not specifically focus on electronic management, it did highlight the importance of digital transformation in enabling sustainable business model innovation and improving sustainability performance. The study found that digital transformation can facilitate sustainable business model innovation by enabling companies to leverage new technologies and business models to create value while reducing their environmental impact. Electronic management systems can play a key role in this process by enabling companies to collect and analyze data on their operations, identify areas for improvement, and optimize their processes to reduce waste and improve efficiency. Furthermore, the study suggested that digital transformation can enable more effective customer relationship management, which can lead to increased customer loyalty and improved sustainability performance. Electronic management systems can facilitate communication and collaboration between companies and their customers, allowing them to share information and feedback on sustainability issues.

Foltean et al (2019) explored the relationship between customer relationship management (CRM) capabilities, social media technology use, and firm performance. While the study did not specifically focus on electronic management and sustainability performance, it did highlight the role of technology in improving overall firm performance. The study found that the use of social media technology can enhance firms' CRM capabilities, leading to improved customer satisfaction, loyalty, and ultimately, firm performance. Social media technology can facilitate communication and engagement with customers, allowing companies to better understand their needs and preferences, and tailor their products and services accordingly. Furthermore, the study suggested that the use of technology can improve firms' overall efficiency and effectiveness, which can contribute to improved sustainability performance. Electronic management systems can help automate and streamline processes, reducing waste and improving efficiency. This, in turn, can contribute to more sustainable practices and better sustainability performance.

Based on literature review and hypotheses development presented earlier, researcher was able to build a model that highlighted the relationship between variables, and from which hypotheses were extracted as following

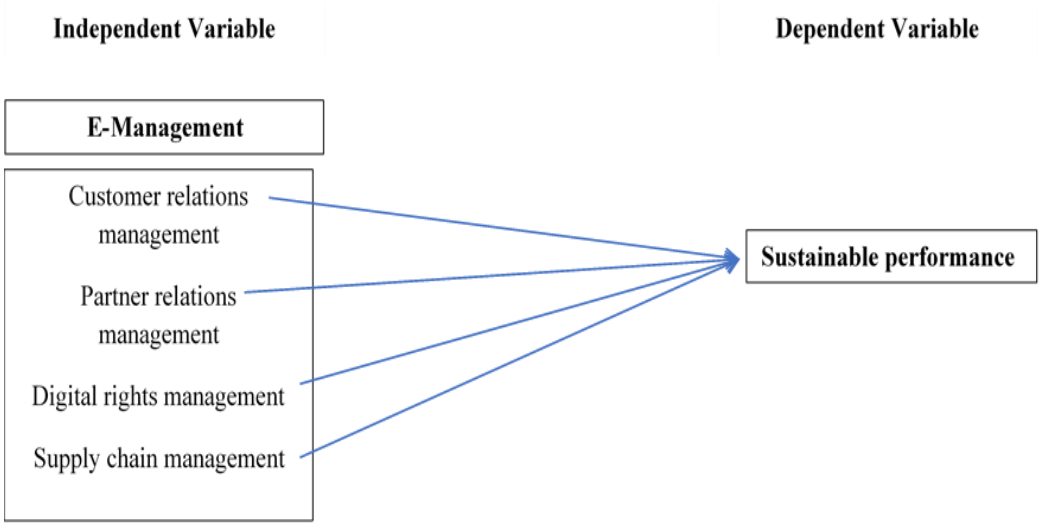

Figure 1: Study Model (Karima and Zohra, 2021).

From above figure 1, following hypotheses were extracted:

Main Hypothesis:

H: *E-management has a statistically significant influence in supporting sustainable performance among telecommunication organizations in Palestine*

Sub-Hypotheses

H1: *CRM has a statistically significant influence in supporting sustainable performance among telecommunication organizations in Palestine*
H2: *PRM has a statistically significant influence in supporting sustainable performance among telecommunication organizations in Palestine*
H3: *DRM has a statistically significant influence in supporting sustainable performance among telecommunication organizations in Palestine*
H4: *SCM has a statistically significant influence in supporting sustainable performance among telecommunication organizations in Palestine*

3. Literature Review

3.1. E-Management

In general, e-management is nothing but the umbrella under which various administrative applications such as e-commerce, e-human resource management, e-business management and e-government gather (Al Shobaki et al, 2018). Vilkaite-Vaitone and Povilaitiene (2022) defined e-management as "mechanization" practices, tasks, and activities of administrative organizations in order to achieve the goals.

Abusef and Tarofder (2021) defined it as relying on information technology in the conduct of administrative operations by reducing and eliminating dependence on paper and pen, simplifying procedures and changing administrative routines. Somantri (2021) found that e-management is an administrative process that stems from the various capabilities of the Internet and the activation of technology in

directing efforts towards planning, control and core capabilities. As for Jain (2021), it was found that e-management is the completion of various works, depending on technological means.

To simplify these definitions, it was found by Mukred and Yusof (2020) that e-management is an administrative style that expresses the absence of a direct relationship between the employee and the customer, whereby electronic means are relied upon to obtain the service instead of the traditional methods.

3.2. Elements of E-Management

In the current study, electronic administration is the employment of information and communication technology in conducting administrative work in all Palestinian telecommunications companies and providing services electronically in order to improve efficiency and quality, simplify procedures, reduce costs, and make decisions based on accurate and up-to-date information focusing on (Customer relations management, Partner relations management, Digital rights management and Supply chain management), which was used through the study Karima and Zohra (2021) and Juanamasta et al (2019) as following:

3.2.1. Customer Relations Management

One of the methods of electronic management is customer relationship management, which stems from being a database of customers in which all information related to customers is exploited, classified, analyzed and saved for later use in areas related to the evaluation or development of products or services. In addition, CRM guarantees the highest level of privacy for customer information and emphasizes the importance of protecting their privacy in order to maintain and develop relationships with them in the long term (Hashem,2012; Hashem, 2021).

3.2.2. Partner Relations Management

Or as it is called PRM refers to systems, activities and practices adopted by the organization in order to build strong relationships with suppliers and partners and build strong working relationships with them. PRM stems from the idea that the relationship between the organization and its suppliers is extremely important in maintaining a high level of services related to the supply chain, in addition to relying on technological means in managing this relationship and ensuring effective communication between the organization and its suppliers.

3.2.3. Digital Rights Management

DRM refers to the organization's commitment to activate its website that supports electronic browsing and e-commerce in order to sell services and goods electronically through physical media. This leads to the organization's need to protect its digital intellectual property, and this is what DRM does.

3.2.4. Supply Chain Management

It refers to the sum total of practices such as decision making, execution and managing the flow of resources, raw materials and funds in order to meet customer requirements. The coordination and management of supply chains in an electronic technical manner is considered one of the most important methods affecting customer relations by combining supply chain management, customer relationship management, and partner relationship management to reach a stage where the organization is able to meet the requirements and

desires of customers (Hashem,2020).

3.3. Sustainable Performance

When looking at the concept of sustainability individually, it is a term used in many fields such as environment, economics and management and refers to the state in which a certain thing can be preserved over time without change or damage (Ögmundarson et al, 2020).At the environmental level, sustainability refers to the ability of the work environment to preserve environmental resources through conscious and responsible use and to preserve them for future generations, and it is an integral part of the environmental responsibility of organizations (Farley and Smith, 2020; Nishant et al, 2020).

In short, despite the strong link between sustainability and the environment, the development of the business environment and the intellectual approach has led to what is known today as sustainability in business, which refers to adopting a responsible approach in managing businesses and organizations so that they have positive outcomes on all environmental levels, societal, and economic, in other words, for the organization to be sustainable means to be fully aware of the importance of its practices and activities having positive environmental, societal and economic impacts by taking into account these three components (Kamble et al, 2020).

Based on the word sustainability, sustainable performance refers to the organization's ability to sustain outstanding performance over a period of not less than 3 years (Mousa and Othman, 2020), while Di Vaio and Varriale (2020) defined sustainable performance as achieving outstanding performance within a short period, on the other hand, Jabbour et al (2020) have defined sustainable performance as a performance that creates value for the organization for its societal contributions by maximizing positive practices and reducing negative practices on society, the environment and the economy.

Asadi et al (2020) pointed out that sustainable performance is actually the ability of the organization to organize, plan and monitor its environmental, social and economic performance, and excellence in performance to the stage of reaching distinguished performance outputs.

4. Methodological Procedures

4.1. Methodological Approach

The current research study depended on the quantitative method in order to reach the hypotheses previously set and to determine the chances of accepting them based on numerical results derived from the outputs of the quantitative method in the societal research.

4.2. Tool of Study

The study tool was the questionnaire, which consisted of two parts, the first dealt with the demographic information of the sample members, which included (gender, age, qualifications and experience), while the second part dealt with questions measuring the study variables (Data management, Analytics, Business performance management, Information delivery) based on previous studies. The questionnaire was built on a five-point Likert scale (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree).

The questionnaire was built and presented before a group of specialized academics in the

field for the sake of arbitration; the final version of the questionnaire consisted of (25) statement as according to the following table:

Table 1. Statements' Distribution.

Variable	# of Statements
E-Management	
Customer relations management	5
Partner relations management	5
Digital rights management	4
Supply chain management	4
Sustainable Performance	7

The questionnaire was uploaded to Google Forms platform in order to collect the responses of the respondents within a period of 4 consecutive weeks.

4.3. Population and Sampling

The study sample consisted of all employees working within Palestinian telecommunication organizations during the year 2021-2022 as according to table 2 below forming (4500) employee until 2022. A sample consisting of (350) employees was taken in order to respond to a questionnaire that was uploaded electronically in line with the laws of COVID 19 which was in favor of social distancing. After application process, researcher was able to retrieve (294) questionnaires valid for statistical analysis which indicated a response rate of (84%) as statistically accepted.

***Table 2:** Study Population.

Organization	Number of Employees
Palestine Telecommunications (Paltel)	1600
Palestine Cellular Communications Ltd. (Jawwal)	900
Ooredoo Palestine	2000
Total	**4500**

***Source:** Organizations' Websites.

4.4. Statistical Processing

Statistical Package for Social Sciences (SPSS) was adopted in order to analyze and read the results of the questionnaire, Cronbach's alpha was used to assess scale reliability; the accompanying table 3 demonstrated that alpha values over the threshold of 0.60 indicate a valid and reliable scale. Among the statistical tests adopted are the following:

- Frequency and percentage
- Cronbach's Alpha Test
- Mean and standard deviation
- Multiple and linear regression

Table 3. Alpha Value.

variable	Alpha value
Customer relations management	0.717

Partner relations management	0.781
Digital rights management	0.687
Supply chain management	0.782
Sustainable performance	0.82

5. Results and Discussion

5.1. Demographic Results

Frequency and percentages were employed in order to calculate descriptive information of study respondents, it appeared from analysis that majority of the sample were males forming (63.9%) of total sample, in addition to that, it was seen that majority of sample held MA degree forming (67.3%) of the total sample. Regarding experience, it was calculated that majority of the sample had an experience that ranged between 6-9 years forming (38.8%) of total sample.

5.2. Questionnaire Analysis

Mean and standard deviation were calculated in order to test individuals' attitudes towards questionnaire of study. As it appeared in table 5 below, individuals had positive attitudes regarding statements of questionnaire as they all scored higher than mean of scale 3.00. On variables' level, the highest mean was scored by "digital rights management" with mean of 4.23/5.00 compared to the least mean scored by "supply chain management" which was 3.99/5.00. Going deeper into analysis, it was seen that the highest mean was scored by the statement articulated" description of goods and services online matches reality" with mean of 4.32/5.00 compared to the least statement scoring mean of 3.51/5.00 and articulated" all customer data are gathered, classified and analyzed based on interest and desires". Generally speaking, all statements were positively received as they all scored higher than mean of scale 3.00.

Table 4. Questionnaire Analysis.

Statement	Mean	Std. Deviation
CRM database relies in well-built ITC	4.11	.81
all customer data are gathered, classified and analyzed based on interest and desires	3.51	1.32
Customers' data is protected and secured	4.24	.76
CRM is able to sustain and improve customer relations	4.22	.88
CRM is able to provide valid interaction with products and services	4.27	.89
CRM	4.07	.65
relations with suppliers, distributors and partners are run through IT tools	3.90	1.12
the organization maintains a good database for distributors and suppliers	4.30	.80
tools are utilized to exchange information and data between the organization and its partners	4.18	.83
well-built communication network is used between the organization and its partners	4.29	.75
all suppliers and distributors data are gathered, classified and analyzed based affiliation	4.18	.83
PRM	4.17	.64
the organization has a working website on the internet	4.20	.89
description of goods and services online matches reality	4.32	1.05

the organization makes sure to protect its digital intellectual property	4.13	.92
the organization makes sure that there is a proper use of digital content between consumer and producer	4.26	.83
DRM	4.23	.66
implementation and decision-making flows smoothly according to needs	4.04	.85
e-inventory is done within the organization for products and services	3.89	.89
Material, information and funds are registered on daily bases	4.02	.91
the organization makes sure to coordinate products and services provided by different organizational units and suppliers to provide a better experience	4.02	.81
SCM	3.99	.67
the organization is intact with its social responsibility	4.30	.72
the organization is intact with its environmental responsibility	4.26	.73
sustainable employment through E-HRM is vivid in the organization	4.17	.98
there is a vivid public acceptance of the organizational products, services, and ideology	4.27	.83
there is a positive impact of the organization on the society	4.21	.83
the organization is in control regarding its financial activities	4.21	.81
the organization is in control regarding its non-financial performance	4.18	.89
Sustainable Performance	4.23	.58

5.3. Multicolleniarity Test

The following outcomes were observed when VIF and Tolerance calculations were performed on the independent variables to check for multicollinearity. The absence of multicollinearity was demonstrated by the fact that the VIF values in the above table are all less than 10 and the Tolerance values are all larger than 0.10. (Gujarati & Porter,2009)

Table 5: Multicolleniarity.

variable	Tolerance	VIF
Customer relations management	.300	3.332
Partner relations management	.189	5.287
Digital rights management	.308	3.244
Supply chain management	.559	1.790

5.4. Hypotheses Testing

Main hypothesis was tested depending on multiple regression, as in table 7 below, it was seen that F value= 88.313 was significant at 0.05 level, that meant "E-management has a statistically significant influence in supporting sustainable performance among telecommunication organizations in Palestine". Also it was found that r= 0.742 reflected high level of correlation as well as the independent variables explained 55% of the variance in the dependent variable.

As can be seen in the table of coefficients, the t-values for all of the variables are statistically significant at the 0.05 level, signifying:

- CRM has a statistically significant influence in supporting sustainable performance among telecommunication organizations in Palestine, since t- value =2.08 is significant at 0.05 level
- PRM has a statistically significant influence in supporting sustainable performance among telecommunication organizations in Palestine, since t- value =2.833 is significant

at 0.05 level

- DRM has a statistically significant influence in supporting sustainable performance among telecommunication organizations in Palestine, since t- value =2.179 is significant at 0.05 level
- SCM has a statistically significant influence in supporting sustainable performance among telecommunication organizations in Palestine, since t-value =7.854 is statistically significant at the 0.05 level and has the greatest influence on sustainable performance (as measured by beta=0.415.(

Table 6. Main Hypothesis Testing.

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			R	R Square
1	(Constant)	1.260	.165		7.660	.000	.742	.550
	CRM	.132	.064	.150	2.080	.038		
	PRM	.232	.082	.257	2.833	.005		
	DRM	.181	.072	.193	2.179	.041		
	SCM	.354	.045	.415	7.854	.000		

5.5. Discussion

Current research study aimed at examining how e-management is able to present better sustainable performance among telecommunications organizations in Palestine. Variables of E-management included (Customer relations management, Partner relations management, Digital rights management and Supply chain management). Quantitative methodology was adopted, and an online questionnaire was distributed on a convenient sample of (294) employees working within Palestinian telecommunication organization including (Palestine Telecommunications (Paltel), Palestine Cellular Communications Ltd. (Jawwal), Ooredoo Palestine). SPSS was employed in order to manage, tackle and analyze primary data, depending on multiple and linear regression study was able to reach following findings:

- Respondents seemed to have a good level of awareness regarding e-management as they were able to answer the questionnaire with minimum help. In addition to that, it seemed that the level of e-management adoption within (Palestine Telecommunications (Paltel), Palestine Cellular Communications Ltd. (Jawwal), Ooredoo Palestine) was acceptable in terms of E-CRM, and E-PRM.
- The main hypothesis was accepted and there appeared a strong relationship with the dependent variable, from that it can be said that e-management is able to support a sustainable performance among organizations under study.
- Variables of e-management were chosen included Customer relations management, Partner relations management, Digital rights management and Supply chain management, in the first rank "supply chain management" came with t-value =7.854
- In the 2nd rank, "partnership relations management" came with t- value =2.833
- 3rd rank was for digital rights management with t- value =2.179
- In the lowest rank came customer relationship management with t- value =2.08

Study was able to confirm that e-management can support sustainable performance by improving efficiency, promoting collaboration, enhancing data collection and analysis, enabling real-time monitoring and reporting, and increasing transparency and accountability.

By implementing electronic management systems, companies can improve their sustainability performance and contribute to a more sustainable future, which agreed with Di Vaio and Varriale (2020).

Results of study also indicated that e-management, including Customer Relations Management (CRM), Partner Relations Management (PRM), Digital Rights Management (DRM), and Supply Chain Management (SCM) can play a crucial role in supporting sustainable performance. Here are some ways in which each of these areas can contribute to sustainability, the highest influence appeared to be by customer relationship management which argued that CRM can help companies improve their sustainability performance by enabling them to better understand and meet the needs of their customers. By collecting data on customer preferences and behaviors, companies can tailor their products and services to meet customer demands for sustainable practices. Results agreed with Yildiz Çankaya and Sezen (2019) who argued that CRM can facilitate communication and engagement with customers, allowing companies to share information on their sustainability initiatives and receive feedback on their performance.

Partner Relations Management also appeared to be influential as it companies promote sustainability by working closely with their partners, including suppliers and distributors. By collaborating with partners on sustainability initiatives, companies can ensure that their entire supply chain is aligned with sustainable practices. Digital Rights Management in e-management help companies promote sustainability by protecting intellectual property related to sustainable practices. By ensuring that patents, trademarks, and other forms of intellectual property related to sustainability are protected, companies can encourage innovation and investment in sustainable technologies and practices which agreed with Gil-Gomez et al (2020).

Overall, electronic management, including CRM, PRM, DRM, and SCM, can support sustainable performance by improving communication and collaboration, promoting sustainable practices throughout the supply chain, protecting intellectual property related to sustainability, and facilitating data collection and analysis to identify areas for improvement. By leveraging these tools and technologies, companies can improve their sustainability performance and contribute to a more sustainable future which was also referred to by Foltean et al (2019).

6. Conclusion and Recommendations

Electronic management is only an expected response to the adoption of advanced technology and devices in the management of the business environment. The transition towards electronic management is inevitable and cannot be avoided in order to reach more flexible and effective administrative methods in managing the business environment away from traditional methods, and this is what was found mechanism of the current study.

The study proved that there is an effect of electronic management on sustainable performance, and this effect was positive at all levels. The study proved that the adoption of electronic management has an effective role in the sustainability of the organization's performance due to the advantages of electronic management, which were represented in the "mechanization" of work and moving away from paper and pen, which led to the sustainability of the environmental performance of organizations by mitigating the remnants

of their various activities.

6.1. Practical and Theoretical Contributions

Examining the role of e-management in supporting sustainable performance can have both practical and theoretical contributions. As for the practical contributions, study indicated that e-management has the ability to present an improved organizational performance by incorporating sustainable practices into operations which can result in increased efficiency, reduced costs, and improved reputation among customers and stakeholders. Also, e-management can present better decision making through providing real-time data and insights that can aid decision-making processes, enabling organizations to make more informed and sustainable choices. In terms of theoretical contributions, examining the role of e-management can contribute to the development of theoretical frameworks that explain how technology can be used to support sustainable performance. The examination of e-management can also contribute to the understanding of how organizational culture and practices can influence the adoption and success of sustainable practices. The study can also contribute to the identification of best practices for e-management that can be adopted by organizations across various industries.

6.2. Originality/Value

The role of e-management in supporting sustainable performance has been a topic of interest in the fields of administration and accounting, and several contributions have been made to the advancement of the theory in this area. Some of the notable contributions include conceptualizing e-management, examining the impact of e-management on organizational performance, developing e-management strategies, identifying challenges and barriers to e-management and analyzing the role of e-management in promoting sustainability.

Based on results, discussion and conclusion of current study; researcher recommended the following:

- It is necessary to focus on the idea that the awareness of senior management of the importance of electronic management is invaluable
- Enhancing the organizational culture in order to positively influence the acceptance of e-management in organizations is essential
- Adopting electronic management requires the organization to invest in cyber security

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