



INVESTIGATING THE ROLE OF ORGANIZATIONAL CULTURE DIMENSIONS ON THE APPLICATION OF ELECTRONIC MANAGEMENT

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Abstract

The purpose of this study is to reveal the role of organizational culture in the application of electronic management, the effectiveness of the communication tools used to convey Organizational values, and the attitudes of employees toward the contribution of corporate values to the organization. Using a structured survey questionnaire based on organizational culture dimensions and Electronic Management Instrument, 450 questionnaires were administered to employees in four commercial banks in Libya. Partial least squares structural equation modeling was used to analyze the data. The study aimed at contributing to the development of electronic management and knowledge in the banking sector in Libya. The findings imply that organizational culture influenced electronic management and the demographic factor of age and level in institutions as an effect in this relationship. The future implications of this research are also discussed.

Keywords: Electronic Management, Information and Communication Technologies, Organizational Culture, Banking sector, Libya

INTRODUCTION

From the late 1990s through the early 2000s, information technology and the associated work practices have been the driving forces in the workplace (Hesmondhalgh and Meier, 2018). Several businesses and economies have seen drastic changes as a result of the proliferation and evolution of computer-based information systems (Wynn, 2022). Global



organizations have acquired huge information systems. New information and communication technologies (ICT) have been used by many businesses across industries as a means of increasing their competitiveness (Lee et al., 2018). Governments have spent billions on infrastructures to support the reliable transfer and efficient management of information, and businesses regularly allocate sizable budgets to adopt, implement, manage and integrate information technologies with business activities to provide better products and/or services (Al-Saleh and Allen, 2019).

New to the field of management, "digital" or "electronic" management emphasizes the use of digital technology and business networks to carry out traditional managerial duties such as strategic planning, organizational leadership, and operational control (production, marketing, financing, personnel, operations and products development) (Schneider and Kokshagina, 2021). Changes in the environment, including market circumstances, new technology, government legislation, and other variables, need a shift in an organization's approach to performance, and sometimes even its culture (Drosos et al., 2021). The cultural norms of a company may make or break the success of using new forms of management software (Fontaine, McCarthy and Saleh, 2019). Organizational culture must be properly formed, nurtured, and preserved if they are to grow into unique business brands.

Despite being one of the richest nations in Africa, the banking industry in Libya is not yet making significant use of technology (Albashir et al., 2018). To fulfil the demands and expectations of their clientele, financial institutions need to use cutting-edge technology solutions. Banks can better tailor their policies and actions by looking at data about clients and what they want. This is accomplished via the use of technological infrastructure, knowledge management, distribution, and information analysis (i.e. data mining) (Kraus et al., 2021; Ebert and Duarte, 2018). There has been a shift from traditional business to electronic business, which benefits from increased communication and collaboration between suppliers, vendors, and consumers. Effective electronic management is crucial to the growth of financial institutions (Saeidi et al., 2019).

Numerous studies and research articles have shown that adopting electronic management in firms is crucial for progress and catching up with developed nations (Gonchar and Kristalova, 2019; Shehata and Montash, 2019). According to the researcher's knowledge, prior local research had examined issues including the significance of electronic management, its need, its practical applications, its function in human resource management, and the level of satisfaction locals had with its services (Tambe et al., 2019). Despite the strong and direct effect of organizational culture on the success of any new strategy adopted by an organization in performing its business, none of these studies addressed the role of organizational culture in the

application of electronic management to perform management works and tasks in the organization to accommodate the modern changes and developments. An organization's capacity to adapt to changing conditions and use cutting-edge techniques in the area of electronic management is greatly aided by a culture that encourages and supports these endeavors (Vahdat, 2021).

The study aimed at contributing to the development of electronic management and knowledge of its challenges in the banking sector in Libya. The use of modern technology in the financial sector in Libya affects and contributes to the development of electronic management, with the need to create an efficient human element in the department. The main purpose of this study to know the role of organizational culture in application of electronic management in Libyan commercial banks.

LITERATURE REVIEW

Technology in the Libya banking Sector

Across Libya's many economic subsectors, businesses would benefit greatly from ICT. Businesses in Libya would be better able to connect with one another and compete with international giants if this were to happen. It would allow businesses in Libya to expand their commerce outside the country's borders (Alhasadi and Demirel, 2020).). It also offers a low-cost tool for businesses to find possible partners, allowing them to expand internationally and compete more effectively. Many financial institutions across the globe have found great success in using IT to better serve their clients. In contrast, the financial system in Libya is still operated manually, and digital innovations have not yet reached this industry (Lihniash, Ahmed and Egdair, 2020). Banks still use antiquated, manual methods of interacting with their clients. Customers get access to standard services, such as account balances and basic payroll processing. The number of ATMs in Libyan banks is small, and there is no communication system in place between the central bank and its various branches (Gupta, Yadav and Bhardwaj, 2020). In order to withdraw money from their bank accounts, customers must use a checkbook, which is seldom utilized outside of cashing checks, and stand in long queues. Libya has lately been striving to implement a timely system of electronic money transfers throughout the globe in an effort to catch up to the rest of the world. This is impossible without the country's current level of technological development, communication networks, and technical infrastructure. Libya is also establishing private banking ownership to improve customer service, make banks more competitive, and attract international investment (Alnaas, 2021).

Organizational Culture

An organization's culture consists of its people's shared ideas, norms, and practices on how to behave and interact with one another in the workplace. According to Zakaria et al. (2010) organizational culture includes the following elements:

- Organizational values: are the guiding principles by which employees make decisions about their work-related actions and evaluate the rightness or wrongness of those actions (Lubis and Hanum, 2020).
- Organizational beliefs: In this context refers to the shared assumptions about how work and social interactions are supposed to go down in a given organization or other institution (Lubis and Hanum, 2020).
- Organizational Norms: is an established code of conduct for working together as a group (Taylor et al., 2018).
- Organizational expectations: This is an unspoken agreement between two parties, whether it be a person or an organization. They are determined by the status of an organization, its record of previous accomplishments, its size, and the access privileges offered by the organization (Widarko and Anwarodin, 2022).

A culture inside the company offers a challenge to the reforms. Nonetheless, organizational culture might be useful when e-management is implemented. An organization's values, beliefs, regulatory norms, and expectations can only come to fruition, its plans can only be implemented, and its flexibility, success, and longevity can only be maintained if its culture is managed effectively (Powley and Cameron, 2020). The activities that contribute to the distinctive social and psychological environment of an organization are referred to as its culture.

Electronic Management

Electronic management refers to the process of running a company's operations via the use of the Internet and other forms of electronic technology. This refers to the process of carrying out management activities such as planning, organizing, making decisions, and regulating via the use of the internet and other computer systems. Suppliers, consumers, purchasers, government agencies and organs, and the companies that compete with them are all connected via the usage of information technology (Urban119, 2008).

The combination of computers, databases, and telecommunications, most notably the Internet, gives managers access to many options for improving their firms' operational capabilities. These options may be found on the Internet. It is projected that technology will play a key role in both the operational structure and organizational structure of the company. As a

consequence of this, the administration of an organization requires the management of information and communication technology (ICT). It is not the technology itself that is essential to one's success with technology; rather, it is one's ability to handle it in an efficient manner (Zhang and Feeney, 2020). The organization of unstructured data is the most important step in establishing a technical framework for information management. This step involves addressing concerns such as access controls, system security, storage, as well as monitoring and compliance (Kumari et al., 2019). Combining multiple best practices from numerous frameworks into a single framework is thus one alternative for ensuring proper management practices, particularly for organizations that depend heavily on ICT resources, such as financial institutions.

Organizational Culture and Electronic Management

According to OC, the introduction and management of technology constitute an essentially social process of change (Jarrah and Almatarneh, 2021). Significant scholars have examined the impact of culture on ICT at the national, organizational, and subunit levels (Moreno-Monsalve, Delgado-Ortiz and García, 2021). Ziemba (2019) conclude in their extensive evaluation that the majority of contributions pertain to four major research streams: culture and information systems development; culture and ICT adoption and dissemination; culture and ICT usage and results; and culture, ICT management and strategy. Some studies examine the influence of OC on ICT usage and the success or failure of ICT implementation independently (Gadeyne et al., 2018; Müller et al., 2019). We believe that OC should be investigated concurrently in terms of its effects on ICT management. As illustrated in Figure 1, the purpose of this article is to analyze the influence of various OC elements on electronic management. It is also essential for organizations to establish an organizational culture in their offices to maintain appropriate policies for implementing shared values, visions, beliefs, risk tolerance hierarchy, and operational governance for electronic management (Adeinat & Abdulfatah, 2019; Harrison & Stone, 2018). So organizations need to pattern empirically all the factors including personal factors such as age, gender, academic qualification year of service and job level that are responsible for directly or indirectly influencing electronic management. For example, age (Guillén-Gámez et al., 2019), gender (Sánchez Prieto et al., 2020.), academic qualification (Msallam et al., 2019), years of service (Areeprayolkij, Thanyaphongphat and Tumphasuwan, 2021) and Job level (Jony et al., 2022) have been found to be positively associated with organizational commitment.

Theoretical Framework

Based on the literature examination, Figure 1 proposes the theoretical framework.

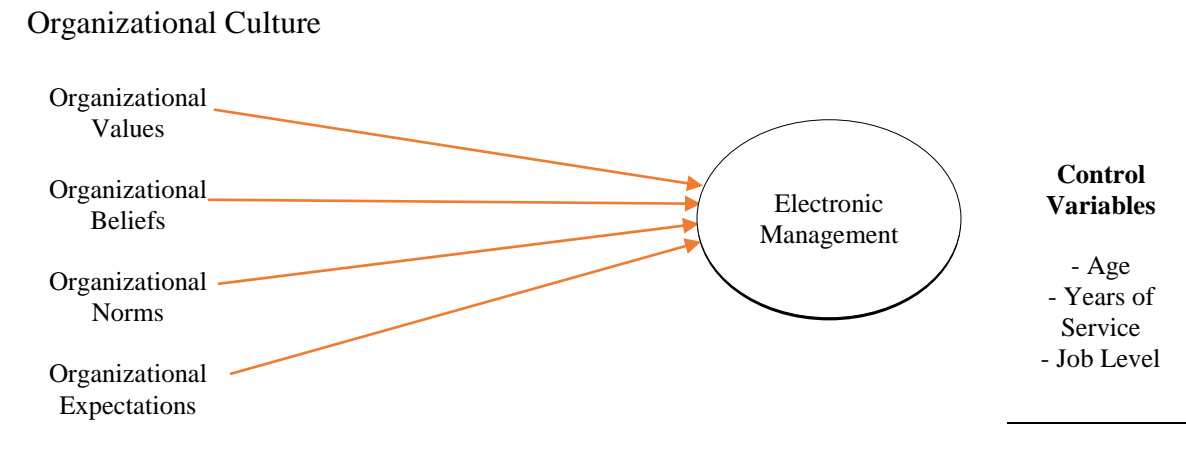


Figure 1: Conceptual Framework

On the basis of the proposed conceptual framework different hypotheses are proposed for this current study:

H1: Organizational Values positively impact Electronic management

H2: Organizational beliefs positively impact Electronic management

H3: Organizational norms positively impact Electronic management

H4: Organizational expectations positively impact Electronic management

RESEARCH METHOD

Research Design

This study utilized a quantitative approach using a structured paper-form questionnaire to collect data from the target population. The target population consisted of employees from four different commercial banks in Libya. This questionnaire has two main sections: demographic characteristics of respondents: research questions for organizational culture and electronic management variables. This descriptive research helps researcher gain a comprehensive description of the variables and hypothesized relationships.

Measurement items

Organizational culture comprising of four sub variables: Organizational values; organizational belief, organizational norms and organizational expectation was measured with five item each and adapted from Almutair (2014) study. Electronic management was also

measured with five items adapted from Almutair (2014) study. All questions are based on a 5 point Likert scale, ranging from 1– strongly disagree to 5–strongly agree

Sampling and Data Collection

In this research, judgmental sampling was utilized as the sampling technique. When "the researcher chooses representative or instructional characteristics of the population to study" (Alhazaimeh & Alzoubi, 2020). The respondents of the poll will be employees of commercial banks in the state of Libya. This study included 450 participants from four different commercial banks in Libya, each with a unique job description. The management of each bank was sent with a letter that detailed the objectives of the research and requested permission to collect data. The management gave the researcher permission to gather data on their behalf. The employee was informed that their involvement was optional, but strongly encouraged, and that upper management had given their stamp of approval.

Data Analysis

Smart PLS 3.0 was used to evaluate the measurement and structural model. PLS-SEM, which stands for partial least squares structural equation modeling, is recommended for use in the hospitality business since it does not need the normal distribution of data (Ramayah et al., 2018). Second, the sample size for the study was very small, and PLS-SEM is recommended for use with such small sample sizes and advanced models (Sarstedt and Cheah, 2019). In this work, Smart PLS 3.0 used to assess the reliability and convergent validity of constructs, discriminant validity of construct and regression of the proposed framework.

RESULTS

Demographics

There were 24.4% females and 75.6% males that participated in the survey. Also, 34.7% of respondents in this study were under the age of 25 to 35 years, while 45.6% were between the ages of 36 and 45, 17.5% were in the 46 to 55 age group, 2.2% were in the 56 and above age group. There were 68.4 respondents who are married, 26.7% are single, 2.7% are divorced, 2.2% are widowed. 27.8% of respondents in this study has a 5 years and below years of service for their respective organization, 51.1% of respondents has 6 to 11 years of service, 17.8% of respondents with 12 to 17 years of service and 3.3% with 18 years and above years of service. 27.3% of respondents has a OND/HND/NCE, 72.7% of respondents has a Bsc/B.A./B.Eng/B.Edu. 91.3% of respondents are Libyan while 8.3% are non-Libyan. Over 27.8% of respondent has an annual income of less than 9,000LD to 25,999LD, 48.9% of respondent with 26,000LD to 45,

999LD, 20% of respondent with 46,000LD to 61,999LD, 3.8% of respondents with 62,000LD and above. About 51.1% of respondent are in the operational level of financial institution, 23.3% of respondent are in the marketing level, 15% of respondents are in supervisory and head of operation role, 10% of respondents are in the management and branch head role.

Table 1: Respondent Demographics

Items	MCQ	N	%
Gender	Male	340	75.6
	Female	110	24.4
Age	<25-35 years	156	34.7
	36-45 years	205	45.6
	46-55 years	79	17.5
	56 years & above	10	2.2
Marital Status	Single	120	26.7
	Married	308	68.4
	Divorced	12	2.7
	Widowed	10	2.2
Years of Service	< 5 years	125	27.8
	6 – 11 years	230	51.1
	12 – 17 years	80	17.8
	18years & above	15	3.3
Educational Qualification	OND/HND/NCE	123	27.3
	Bsc/B.A./B.Eng/B.Edu.	327	72.7
Nationality	Libyan	411	91.3
	Non-Libyan	39	8.3
Annual Income Level	< 9,000LD – 25,999LD	123	27.3
	26,000LD – 45, 999LD	220	48.9
	46,000LD – 61,999LD	90	20
	62,000LD and above	17	3.8
Level in Financial Institution	Operations	230	51.1
	Marketing	105	23.3
	Supervisory/Head of operations	70	15.6
	Management/Branch Head	45	10

Measurement model

PLS-SEM was utilized in the study to investigate both measurement and structural models. The measuring approach was validated based on construct reliability and validity, as indicated Kamis et al (2020) and Wong (2019). (2019). Table 2 illustrates the factor loading results, composite reliability (CR), and average variance extracted (AVE). The required factor

loading threshold value is 0.60. (Khoi & Ngan, 2019). For internal consistency, the composite dependability was applied, and it was also greater than the threshold value of 0.70. (Purwanto and Sudargini, 2021). Convergent and discriminant validity were employed to investigate the construct validity. AVE was applied to assess convergent validity, and the data reveal that the value of AVE exceeds the 0.50 threshold level (Khoi & Ngan, 2019; Hamid et al., 2017).

Table 2: Reliability and Convergent Validity of Constructs

Scale items	Factor loading (FL)	Cronbach's α	Composite reliability (CR)	Average extracted (AVE)
Organizational Culture				
<u>OV</u>		0.89	0.90	0.71
OV1	0.86			
OV2	0.85			
OV3	0.81			
OV4	0.87			
OV5	0.86			
<u>OB</u>		0.90	0.91	0.68
OB1	0.84			
OB2	0.85			
OB3	0.75			
OB4	0.87			
OB5	0.85			
<u>ON</u>		0.89	0.93	0.72
ON1	0.87			
ON2	0.84			
ON3	0.81			
ON4	0.89			
ON5	0.79			
<u>OE</u>		0.88	0.90	0.70
OE1	0.84			
OE2	0.81			
OE3	0.82			
OE4	0.80			
OE5	0.83			
Electronic Management				
EM1	0.88	0.83	0.92	0.69
EM2	0.90			
EM3	0.89			
EM4	0.75			
EM5	0.91			

To ensure convergent validity, factor loadings (standardized estimates), average variance extracted (AVE), and composite reliability were assessed (CR). Table 2 displays the results. Cronbach alpha values were more than 0.83 for all constructions, above the recommended minimum of 0.70 (Pratiwi et al., 2022). The factor loading varied from 0.75 to 0.91, which was higher above the advised threshold of 0.60 (Kamis et al., 2020). The composite reliability ranged from 0.93 to 0.96, which was higher than the required criterion of 0.70, indicating good consistency (Khoi & Ngan, 2019). The AVEs are more than 0.65, which is greater than the recommended criterion of 0.50, implying a higher CR of 0.70 and greater construct dependability (Hamid et al., 2017). Fornell-Larker approach was used to measure discriminant validity. The measuring model's results revealed that it had strong discriminant validity (Table 3).

Table 3: Discriminant validity of construct

Construct	1	2	3	4	5
OV	0.81				
OB	0.58	0.78			
ON	0.61	0.62	0.80		
OE	0.57	0.61	0.61	0.72	
EM	0.63	0.56	0.55	0.51	0.77

Hypotheses Testing

Accordingly, in model 1 of this study, we examined how the age, number of years of service, and job level of all participants influenced EM. We kept this relationship the same, and then in model 2, we looked at the main effects of OV, OB, ON, and OE on EM (Table 4). Also, the results show that age ($\gamma = .28$, $P < .01$) and job level ($\gamma = .20$, $P < .05$) have significant effects on EM. However, years of work did not have a significant influence on EM. Collectively, the control factors accounted for 48% of the difference in EM. Lastly, the interaction term in model 2 of the study showed that organizational values (OV) have a positive effect on electronic management (EM) ($\beta = 0.69$, $p < 0.01$). Based on the path coefficients, we can therefore conclude that hypothesis 1 is supported. The second hypothesis demonstrated that organizational beliefs have a positive impact on electronic management ($\beta = 0.58$, $p < 0.01$). Thus, based on the path coefficients, we conclude that the second hypothesis is supported. Organizational norms positively influence electronic management ($\beta = 0.47$, $p < 0.01$). We can therefore conclude, based on the path coefficients, that hypothesis 3 is supported. Organizational expectations (OE) have a positive impact on electronic management (EM) ($\beta =$

0.51; $p < 0.001$), according to Hypothesis 4. Thus, hypothesis 4 is accepted based on path coefficients.

Table 4: Regression

	Electronic Management	
	Model 1	Model 2
Control Variables		
Age	.13*	0.28**
Years of Service	.06	.09
Job Level	.10	0.20**
Independent Variables		
OV		.69***
OB		.58***
ON		.47***
OE		.51***
R-square	.23	.48
R-square Change	.25	.27
F	121.82***	141.19***

Note: Standardized beta coefficients are provided; * $p < .05$; ** $p < .01$; and *** $p < .001$.

CONCLUSION AND IMPLICATIONS

As shown in Table 4, the organizational culture dimensions impact application of electronic management. Thus hypothesis 1, 2, 3, 4, are accepted while age and job level in the institution as control variables does have significant effects on EM. Results supported hypothesis one by showing that OV has a positive influence on EM. Other research has demonstrated that OV, in turn increases EM in organizations (Adeinat & Abdulfatah, 2019; Harrison & Stone, 2018). Results supported hypothesis two by showing that OB has a positive influence on EM. Isensee et al. (2020) research has demonstrated that OB, increases digital management among employees in enterprises. Results confirmed hypothesis three showing that ON has a positive influence on EM. Previous research has demonstrated that ON will in turn increase EM in organizations (Gadeyne et al., 2018; Müller et al., 2019). Results supported hypothesis four by showing that OE has a positive influence on EM. Moreno-Monsalve, Delgado-Ortiz and García (2021) demonstrated that a substantial effect in digital transformation and management in organizations. Lastly, the findings showed that age and job level in the institution has a significant influence on the relationship between the outcomes of organizational culture (i.e., OV, OB, ON, OE) and Electronic management. Hence, the years of service as a control variable had no impact on the findings. This finding is somewhat in agreement with previous studies, where supportive cultures and ICT management were moderating influence by

personal factors like age (Guillén-Gámez et al., 2019; Panagou, Fruggiero and Lambiase, 2021).

The practical implications of the research are discussed. This research helps advance electronic management and organizational culture necessary to improve the administrative operations of Libya's banking industry. The growth of electronic management is influenced by the widespread use of cutting-edge technologies within Libya's banking industry, as is the need of training competent staff to operate within the sector. The Central Bank of Libya has also made an attempt to improve the structure of the banking industry on both the Central Bank and Commercial Bank levels by activating improvements in electronic management and information technology (Saeed & Bampton, 2013; Darbi & Khanfar, 2020). The research ended with many suggestions, including the need to develop a system to stimulate motivation and morale among the department's staff working on electronic management; the need to provide the structure for the constant development of electronic management; the need to constantly adapt modern technology; and the need to provide financial support. It was found that there is a link between electronic management and the growth of the corporate culture. This link is statistically significant. The research stressed the significance of employing electronic management, and the importance of working to invest in the talents of producers to develop computer workers. Also, the need to use specialized experts in the field of electronic administration, and spread a culture of acceptance and cooperation among employees.

As a result, financial institutions and their staff need to place a greater emphasis on electronic administration to boost efficiency and output. Consequently, financial institutions must foster an innovative corporate culture that encourages and promotes the use of modern technology and ICT. Therefore, it is crucial for banking management to publicly state their commitment to fostering an environment that encourages the use of new technologies to boost efficiency and effectiveness.

LIMITATIONS AND FURTHER RESEARCH

Despite its substantial contributions, this study has limitations that should be noted for future research. First, the survey was limited to Libya commercial bank workers. Thus, future research should focus on vast, diversified societies and various financial sectors. The study used quantitative research. The adoption of a qualitative technique, which provides the opportunity for workers to be observed more expressively, will give the research more substance and provide an in-depth grasp of the subject.

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