THE ROLE OF E-MARKETING IN THE RELATIONSHIP BETWEEN ADVERTISEMENT AND BANKING SERVICE IN LIBYAN BANKING SECTOR

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ABSTRACT

In this study, the primary objective is to determine the effect of E-marketing on the advertisement-banking service relationship of Libyan banks (Alwaha Bank, BNP Paribas Bank, and Sahara Bank). In Libyan banks, there is a general weakness in leveraging E-marketing in the process of advertising, which negatively affects the banks' services. Thus, the present study primarily focuses on the E-marketing usage of Libyan banks. The study population comprised of 4000 employees, from whom data was gathered and analyzed with the help of SPSS 25 and Smart PLS version 3 to determine E-marketing and its effects. The size of the sample was 352 and data was deemed complete for 220 of them. Based on the study findings, there is a direct and positive relationship between Libyan banking advertisement and services. The findings also showed E-marketing to have a significant effect on the relationship between advertisement and banking services. The study recommends that banking services adopt a novel advertising policy and to promote customer-banks communication to determine the issues that are related to customer services. A department should be developed for the purpose of advertising in Libyan banks and such department should be provided with sufficient budget to develop the banking services through advertisements. Future studies are suggested to use both quantitative and qualitative approach to obtain data and reach in-depth conclusions on the services that Libyan banks provide.

Keywords: Advertisement, Banking Services, Al-Waha Bank, BNP Paribas Bank, Sahara Bank

INTRODUCTION

Banking institutions have undergone transformation in their banking services provision, particularly in the last ten years. In this regard, advertisement has risen to the fore as among the top communication types utilized to convince clients and customers concerning the services that banks provide. It is notable that advertisement, as a communication process, influences consumers to avail of the banking services as banks are faced with several issues in providing their services due to the lack of quality of such services. In addition, advertisement facilitates the achievement of marketing objectives in almost every bank, in a way that it plays the role of an essential factor that drives increased sales volume in banks. As a consequence, the banking institutions decision-makers consistently attempt at determining appropriate budget for their marketing activities to attract customers and to achieve the need for services. Advertisements use various ways, preparations and processes to achieve the marketing objectives of the banks (Gait, 2014).

Problem Statement

The problem with Libyan banking institutions is their weakness in advertising for their services and the lack of suitable ways for advertisement development and creation, weak facilities and insufficient budget for marketing and advertisement of the services. Banks are clearly clueless as to the levels and ways to adopt to advertise their services towards different customer levels and ranks (Baej, 2014). The study is related to the recommendations included in the Arab Banking Conference titled, "Foreign Banks Experience in Arabic Countries-Pros and Cons", in Tripoli dated 23rd May 2007. The author identified and clarified the problem statement by conducting interviews with three bank branches, as a result of which, the weakness of the banks lie in their advertisements. This adversely influences their services and such influence is compounded by the time of the advertisement along with the lagging technology utilized (Abulgasem, 2013).

Research Questions

1. What is the extent of the influence of advertising on the banking services among Libyan banks?
2. What is the extent of the influence of the advertising budget on the banking services among Libyan banks?
3. What is the extent of the influence of used technology on the banking services among Libyan banks?
4. What is the extent of the influence of time of advertisement on the banking services among Libyan banks?
5. What is the extent of the influence of E-marketing on the relationship between advertisement, advertising budget, used technology and time of advertisement, and banking services?

Research Objectives

Aligned with the above research questions, this study primarily aims to achieve the following research objectives;

1. To identify the extent of the influence of advertisement on the banking services of Libyan banks.
2. To identify the extent of the influence of advertisement budget on the banking services of Libyan banks.
3. To identify the extent of the influence of used technology on the banking services of Libyan banks.
4. To identify the extent of the influence of timing of advertisement on the banking services of Libyan banks.
5. To determine the influence of E-marketing on the relationship between advertisement, advertisement budget, used technology and timing of advertisement on the banking services of Libyan banks.
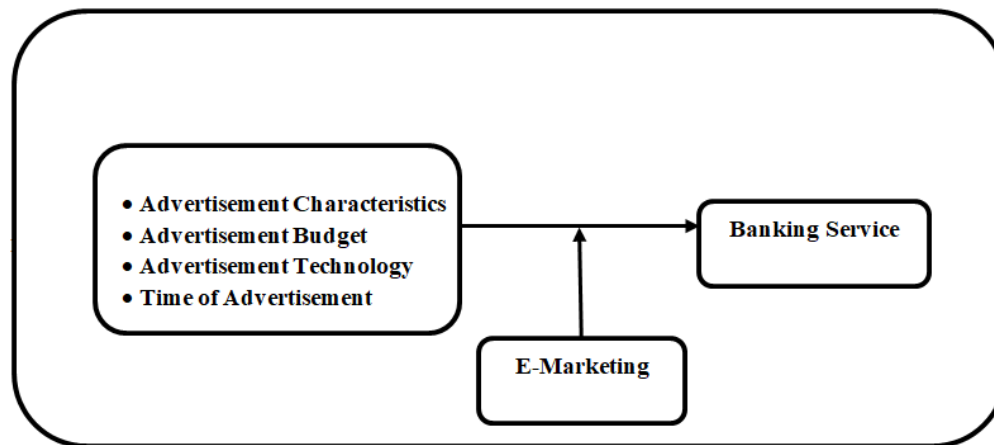
Significance of the Study

The present study has significant to theory as well as practice, with the first theoretical significance being its focus on the framework of E-marketing and its influence on the relationship between advertisement variables (time of advertisement, budget of advertisement, and used technology and the banking services in Libyan banks, specifically Alwaha Bank, Alwaha Bank, BNP Paribas Bank, and Sahara Bank. The study largely depends on the review of literature providing answers that may assist the banking service sector and the marketing sector of Libya and other similar developing nations.

Moving on to the practical significance, this study aims to identify the direct and indirect relationship between advertisement and banking services and the influence of E-marketing on such relationship in the context of Libyan banks. Based on the interview results, there is minimal usage

of E-marketing in the Libyan banks and this is even slowly decreasing and as such, the present study deems this to be significant to bank managers. Managers can utilized the information in the study to reach logical and practical solutions towards banking services advertisement in Libyan commercial banks. The researcher identified ways of research methodology to shed deeper insight into the advertising phenomenon, and to examine the pros and cons of advertising when it comes to banking services in the quest to attract more customers and clients. The study also adds to banking service advertisement information among Libyan banks to be used to enhance the level of customer satisfaction.

RESEARCH FRAMEWORK

The research framework of the study encapsulates the underpinning theory adopted, which is Ahmadi's (2015) E-banking theory, directed towards identifying banking services among different bank types. There are six variables in the framework, namely detriments characteristics, advertisement budget, advertisement used technology, time of advertisement, E-marketing and banking service. The study is one of a kind in that it focuses on the influence of advertisement on banking services among Libyan commercial banks. The reviewed literature showed lack of studies dedicated to examining the effects of advertisement on the banking services. This study takes the perceptions of Libyan commercial banks professionals concerning the effects of advertisements that could assist in establishing plans and policies initiatives.

FIGURE 1
RESEARCH FRAMEWORK

LITERATURE REVIEW

This study conducted an extensive and robust literature review of the studies relevant to the research topic. Among the studies, Ahmadi, et al., (2015) found a significant effect of advertisement on the banking services, and Gait (2015) revealed a significant relationship between E-marketing and banking services, while Gait (2014) showed other effects on the banking services.

In addition to the above studies, Ahmadi, et al., (2015) highlighted the influence of advertisement technology on the Libyan banking sector and Sikdar (2015) found a direct significant

effect between advertisement time and banking services. Advertisement budget also has a significant effect on such services, with a few authors explaining its importance to effective and quality banking services (Asiyanbi, 2018). According to Al-Tawaty (2017), banking services quality is determined by E-marketing in the banking institutions' department.

Relationship between Advertisement and Banking Services

In the Libyan banking, a few studies reported the relationship between advertisement and banking services and this study follows Asiyanbi (2018), who considered advertisement as the independent variable. The study also used E-banking services. This study proposes the following hypothesis for testing;

H1   There is a positive and direct effect of advertisement on the Libyan banking services.

Relationship between Advertisement Budget and Banking Services

Studies regarding the relationship between advertisement and budget in the context of Libyan banking services included that of Ullah (2013), who considered the variable as an independent variable in their examination. The study also used online banking services. Based on the few studies in literature, this study proposes that;

H2   There is a positive and direct effect of advertisement budget on the Libyan banking services.

Relationship between Advertisement Technology and Banking Services

According to Riaz's (2015) study, there is a significant relationship between advertisement technology used and the banking services of Libyan banks, where advertisement technology is deemed to be the independent variable. Online banking services were also present in the study. The present study proposes the following hypothesis for testing;

H3   There is a positive and direct effect of advertisement technology on the Libyan banking services.

Relationship between Time of Advertisement and Banking Services

The relationship between time of advertisement and banking services in Libyan banks has been evidenced in few studies. For instance, in Sikdar's (2015) study, time of advertisement was considered as the independent variable in the examination of online banking services and as such, this study proposes that;

H4   There is a positive and direct effect of time of advertisement on the Libyan banking services.

Relationship between E-marketing and Banking Services

Studies that evidenced E-marketing as a mediating variable between advertisement and Libyan banking services are few and far between. For instance, Kaur (2015) found the mediating

role of E-marketing in the above relationship and thus, this study proposes the following hypothesis for testing;

> *H5   There is a positive mediating effect of E-marketing on the relationship between advertisement and Libyan banking services.*

Mediating Effect of E-marketing on the Relationship between Advertisement Budget and Libyan Banking Services

Kazmi's (2015) study is one of the few studies that evidenced the mediating effect of E-marketing on the relationship between advertisement budget and banking services in Libyan banking services. This study thus proposes that;

> *H6   There is a positive mediating effect of E-marketing on the relationship between advertisement budget and Libyan banking services.*

Mediating Effect of E-marketing on the Relationship between Advertisement Technology and Libyan Banking Services

Gait (2014) reported that E-marketing has a significant relationship with the association between advertisement technology and banking services. Therefore, this study proposes the following hypothesis for testing;

> *H7   There is a positive mediating effect of E-marketing on the relationship between advertisement technology and Libyan banking services.*

Mediating Effect of E-marking on the Relationship between the Time of Advertisement and Libyan Banking Services

E-marketing was reported to have no significant role on the relationship between the time of advertisement and banking services but because of the lower number of studies that examined the relationship, this study proposes that;

> *H8   There is a positive mediating effect of E-marketing on the relationship between time of advertisement and Libyan banking services.*

RESEARCH METHODOLOGY

The quantitative research approach is adopted in this study to measure the effects of advertisement on the Libyan banking services, specifically, Alwaha Bank, BNP Paribas bank and Sahara Bank. Such approach is utilized to achieve the objectives of the study and to determine the answers to the developed research questions. According to Hair (2016), quantitative research method enables the summary of results using tables, for the eventual results interpretation. The questionnaire was the main data collection instrument adopted to measure the effects between the variables (Ørngreen, 2017).

More specifically, the study uses a descriptive analytical approach to provide a description and to analyze the effects of advertisement on the Libyan commercial banks (Alwaha, BNP Paribas and Sahara) banking services. The study is expected to contribute to providing analytical descriptive results concerning the phenomenon obtained through statistical analysis of the questionnaire data, identifying the extent of advertising effects on the banking services geared towards promotion of services and attraction of customers. Notably, a descriptive analytical approach determines the characteristics of the variables and their relationships through the adopted theoretical framework and hypotheses. It also allows the determination of a logical solution to the issue concerning the effects of advertisement on the banking services.

Research Design

Research design is a reflection of the essential aspects of the study purpose and study unit. This study primarily aims to determine the effects of E-marketing on the relationship between advertisement and banking services and this is done using descriptive analysis, correlation analysis and regression analysis, in SPSS Version 25, and Smart PLS version 3. The system programs are availed from to identify the direct and indirect relationships among the variables.

Population of the Study

The study population comprised of 4000 employees working in three of the Libyan commercial banks under study (Alwaha, BNP Paribas and Sahara), positioned in the marketing departments. This population was selected as they hold the knowledge to the banking services offered in the banks. The population of the Libyan banks covers that of the private and the public banks but this study population was selected as they provide advertisement and banking services to the Libyan citizens and residents.

Sample of the Study

The study sample was determined using statistical and mathematical methods adopted from prior studies. According to the equation proposed by Tomson (2017) compared to that of Sekaran's (2016), this study determined the required study sample, which is 352 employees from the three commercial Libyan banks. The division of the sample went as follows; Alwaha (32 respondents), BNP Paribas (160 respondents) and Sahara bank (160 respondents). Yumane's (1967) method of determining the sample size was followed to ensure the representativeness of the groups through percentage of the original number in the community. The sample size is thus, $N/1+N \ (e)2$. $=352/1+352 \ (4000)2=220$.

Pilot Study

Prior to the actual study, the study tested the instrument by conducting a pilot study involving 30 employees from the study population, with 10 employees selected from each of the 3 examined banks. The pilot study was carried out to measure the validity and reliability of the study.

From the pilot study, Cronbach's alpha coefficient was sufficient and above the 0.70 cut off value, indicating the readiness of the data to be analyzed and interpreted.

Internal Consistency Reliability

The internal consistency reliability test examines the validity of the questionnaire content in light of the consistency between the items and the research axis. Internal consistency reliability can be tested through the coefficient measure of reliability, vertically and horizontally. The table presents the number of axis and items, with the axis achieving 0.70 and above values, and an overall Cronbach's alpha value of 0.721, indicating that data is ready to be statistically analyzed.

Table 1 RELIABILITY COEFFICIENT		
Axis	**Number of Items**	**Alpha Cronbach**
Advertisement	7	0.72
Advertisement Budget	5	0.73
Advertisement Technology	7	0.716
Time of Advertisement	5	0.705
E-marketing	5	0.703
Banking Service	5	0.713
Total	34	0.721

Analysis Tools

The study used several descriptive analysis tools to provide the interpretation of the variables. To begin with, the total mean and standard deviation was obtained as they are basic parts of the descriptive analysis. Moreover, the descriptive analysis also obtains the results and presents them in graphs and tables. The correlation among the variables was examined using Pearson Correlation coefficient using Smart PLS, aside from SPSS, in order to determine the direct and indirect relationships. SEM identifies the effect of E-marketing on the advertisement-banking services relationship among Libyan commercial banks.

Analysis of Responses

Table 2 RESPONSE RATE OF DEMOGRAPHIC VARIABLES				
No	**variable**	**ranking**	**frequency**	**percentage%**
1	Gender	Male	173	78.6
		female	47	21.4
2	Age	30-20	62	28.2
		40-31	73	33.2
		50-41	52	23.6
		51 above	33	15
3	Marital Status	Single	85	38.6
		Married	135	61.3

4	Academic qualification	Primary school	42	19
		Bachelor	135	61.5
		Master	33	15
		PHD	10	4.5
5	Experience frequencies	Less 5 years	39	17.7
		5-Sep	56	25.4
		14-10	47	21.5
		19-15	57	25.9
		More 20 years	21	9.5
6	Job position	Managers	47	21.4
		Employers	173	78.6

The above table displays the demographic characteristics of the study sample and from the table, it is clear that male constituted 78.60% of the total sample, while the remaining 21.40% were female. The highest age group was 31-40 age group achieving 33.2%, while the lowest age group is 51 with 15%. With regards to the respondents' marital status, majority of them (61.30%) were married while the remaining respondents (38.60%) were single. Majority of the respondents also held bachelor degrees (61.50%), and top experience frequency ranged from 15 to 19 years (25.9%) followed by 5-9 years (25.40%). Majority of the respondents were employers constituting 78.60% of the total respondents.

Response Characteristics of the Study Variables

No	Statement	Strongly Agree	Agree	Natural	Disagree	Strongly disagree	Mean	Std	Rank
				Table 3 MEANS AND STANDARD DEVIATIONS OF THE ADVERTISEMENT ITEMS					
1	Advertising on the marketing of banking services is satisfactory in the Libyan banks (Alwaha – PNP Paripas - Trade and Development)	58	117	10	22	13	4.7	1.015	2
2	Advertising on banking services is intensive	61	126	9	16	8	4.8	1.041	1
3	The bank monitors the latest advertising methods in preparation for the service of its customers	75	93	22	19	11	4.5	1.037	4
4	Posters are sent to customers *via* new postal services	87	46	45	13	42	4.3	1.033	6
5	Advertising has a great impact on the customer	2	19	19	61	119	3.9	1.041	7
6	The bank uses modern advertising methods to attract more customers to benefit from banking services	83	83	31	19	4	4.4	1.031	5
7	Large billboards on public roads have full knowledge of banking services	82	102	19	13	4	4.6	1.035	3

Based on the above table, the axis of the advertisement is the first item and it achieved 4.8 mean coefficient, followed by advertisement on marketing of banking services with 4.7 mean coefficient, and large billboards on public roads with 4.6 mean coefficient.

Advertisement budget items is presented in the next table, with the items being, if the ad has the desired effect of introducing banking services, the bank management increases the budget allocated for advertising (4.8 mean), the bank will increase the financial allocation for advertising on bank services at the beginning of each fiscal year and if banking services increase, spending on ads will increase customer visibility, both obtaining 4.7 mean coefficient.

No	Statement	Strongly Agree	Agree	Natural	Disagree	Strongly disagree	Mean	Std	Rank
	Table 4 MEANS AND STANDARD DEVIATIONS OF THE ADVERTISEMENT BUDGET ITEMS								
1	The ad budget allocated by the bank is sufficient for visual ads	80	101	21	13	5	4.6	1.015	3
2	The Bank will increase the financial allocations for advertising on banking services at the beginning of each fiscal year	66	106	20	24	4	4.7	1.041	2
3	Spending is made equally on the video, audio and video ads in the bank	94	97	14	14	1	4.5	1.037	4
4	If banking services increase, spending on ads will increase customer visibility	81	106	15	8	10	4.7	1.033	2
5	If the ad has the desired effect of introducing banking services, the bank's management increases the budget allocated for advertising	86	110	8	10	6	4.8	1.041	1
	Total						4		

No	Statement	Strongly Agree	Agree	Natural	Disagree	Strongly disagree	Mean	Std	Rank
	Table 5 MEANS AND STANDARD DEVIATIONS OF THE ADVERTISEMENT TECHNOLOGY ITEMS								
1	The technology used in the bank helped attract customers	86	95	18	13	8	4.8	1.015	2
2	I feel comfortable with the level of technology services used	99	104	11	2	4	4.9	1.041	1
3	The Bank has advanced equipment and equipment	13	56	30	81	40	4.6	1.037	4
4	The bank uses modern technological means in marketing banking services	11	48	40	95	26	4.4	1.033	6
5	The technology used in the banking services reflects the evolution of banking services provided by the bank	13	48	41	92	26	4.5	1.041	5
6	The Bank updates the required information about the banking services every time period	16	40	33	110	21	4.3	1.031	7
7	Technology plays a big role in answering most of the questions and inquiries of the customers used	93	86	30	8	3	4.7	1.035	3
	Total						430		

Moving on to the advertisement technology axis, item, I feel comfortable with the level of technology, achieved a mean coefficient of 4.9, item, The technology used in the bank helped attract customers, achieved a mean coefficient of 4.8, and item, Technology plays a big role in answering most of the questions and inquiries of the customers, achieved a mean coefficient of 4.7.

No	Statement	Strongly Agree	Agree	Natural	Disagree	Strongly disagree	Mean	Std	Rank
Table 6 **MEANS AND STANDARD DEVIATIONS OF THE TIME OF ADVERTISEMENT ITEMS**
1	The advertisement design style is well suited to ad timing	64	113	17	20	6	4.7	1.015	2
2	Advertisement delivery time is very appropriate	71	111	26	6	6	4.6	1.041	3
3	The advertisement continues to run on holidays and holidays without interruption	6	5	27	111	71	4.4	1.037	5
4	The Bank deliberately publishes the advertisement in times that take into consideration the times of employees and businessmen	41	124	28	23	4	4.8	1.033	1
5	The timing of an ad's broadcast will be as interesting as it can attract customers	34	57	88	31	10	4.5	1.015	4
	Total						4.28		

From the above table, the item that obtained 4.8 mean coefficient is, The bank deliberately publishes the advertisement in times that take into consideration the times of employees and businessmen, and this if followed by the item, The advertisement design style is well-suited to ad-timing, with mean coefficient of 4.7.

No	Statement	Strongly Agree	Agree	Natural	Disagree	Strongly disagree	Mean	Std	Rank
Table 7 **MEANS AND STANDARD DEVIATIONS OF THE E-MARKETING ITEMS**
1	There are enough e-marketing specialists in the bank	10	31	88	57	34	4.5	1.015	5
2	The bank is following the latest developments in the electronic marketing tools, making it more ready to serve its customers	31	95	63	24	7	4.6	1.041	4
3	When the customer makes any inquiries through the social networks, the bank responds quickly	35	92	41	39	13	4.7	1.037	3
4	Advertising online banking attracts many customers	38	119	44	17	2	4.8	1.033	2
5	E-marketing contributes to increasing customer satisfaction with banking services	47	125	31	8	9	4.9	1.041	1
	Total						4.1		

With regards to the E-marketing axis, the first item obtained a mean coefficient of 4.9 (*i.e.,* E-marketing contributes to increasing customer satisfaction with banking services), followed by the item that achieved a mean coefficient of 4.8 (*i.e.,* Advertising online banking attracts many customers, and mean coefficient of 4.7 (*i.e.,* When the customer makes any inquiries through social networks, the bank responds quickly).

In the next table is the results of banking services axis; the first item that achieved mean coefficient of 4.9 is, The bank provides online and online banking inquiries, followed by the second item that achieved mean coefficient of 4.8, which is, Bank employees respond to customer's needs immediately and quickly. The third item obtained a mean coefficient of 4.7 and it reads, Bank staff understands the needs of clients and seeks to achieve them.

Table 8
MEANS AND STANDARD DEVIATIONS OF THE BANKING SERVICES ITEMS

No	Statement	Strongly Agree	Agree	Natural	Disagree	Strongly disagree	Mean	Std	Rank
1	Service delivery is done on time	32	115	50	20	3	4.6	1.015	4
2	Banking operations are conducted quickly	32	115	50	20	3	4.6	1.041	4
3	Bank employees respond to customer needs immediately and quickly	36	114	44	21	5	4.8	1.037	2
4	Bank staff understand the needs of clients and seek to achieve them	25	122	53	14	6	4.7	1.033	3
5	The bank provides online and online banking inquiries	43	125	28	23	43	4.9	1.041	1
	Total						4.3		

Data Screening and Preliminary Analysis

Missing Values and Outliers

The results indicated neither missing values nor outliers. The study population consisted of 4000 respondents, from which 352 were selected to the study sample. The questionnaire was designed to suit the Libyan commercial banks of Alwaha, BNP Paribas and Sahara Bank in Libya.

Preliminary Assumption

Normality of Data

According to the analysis outcome, data has a normal distribution, and in the next table, the results of Kalmanogrov-Semanrov test achieving 0.000 is presented, while taking into account the normal data distribution. The Shapiro Winck test was used to test the formulated hypotheses in terms of normal data distribution and a significant 0.000 was obtained, indicating normal distribution of data.

Table 9 TESTS OF NORMALITY						
	Kolmogorov-Smirnova			**Shapiro-Wilk**		
	Statistic	**Df**	**Sig.**	**Statistic**	**Df**	**Sig.**
Banking Service	0.153	220	0	0.929	220	0
a. Lilliefors Significance Correction						

Multicollinearity Test

Table 10 TOLERANCE AND VIF		
Axis	**VIF**	**Tolerance**
Advertisement	0.62	1.315
Advertisement Budget	0.619	1.614
Advertisement Technology	0.77	1.299
Time of Advertisement	0.725	1.379
E-marketing	0.745	1.343
Banking Service	0.756	1.323

The previous table indicates the absence of multcollinearity issue in the data, with VIF coefficient below 10, and tolerance below 5. Data is free of multicollinearity and based on the variables and the linear mulitiplicity test, data is devoid of linear multiplicity.

Descriptive Analysis of the Variables

Table 11 DESCRIPTIVE ANALYSIS OF THE STUDY VARIABLES		
Variables	**Mean**	**Std. Deviation**
Advertisement	4.3872	0,79763
Advertisement Budget	4	.0,79114
Advertisement Technology	4.2863	0,92100
Time of Advertisement	4.3	1.2949
E-marketing	4.1231	0,81222
Banking Service	4.3	0,89481

The table contains the outcome of the descriptive analysis test, with the average mean of axis ranging from 4.00 to 4.38. The Likert Scale shows acceptable axis is achieved from 3-5 and thus, advertising, advertising budget, time of advertising, technology of advertising, E-marketing and banking services had acceptable axes for analysis.

Correlation Analysis

<table>
<tr><td colspan="8" align="center">Table 12
CORRELATIONS</td></tr>
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		Banking Service	Advertisement Budget	Advertisement Technology	Time of Advertisement	E-marketing	Advertisement
Banking Service	Pearson Coeffieicent	1					
	. (2-tailed)						
	N	220					
Advertisement Budget	Pearson Coeffieicent	0.424**	1				
	. (2-tailed)	0					
	N	220	220				
Advertisement Technology	Pearson Coeffieicent	0.342**	0.358**	1			
	. (2-tailed)	0	0				
	N	220	220	220			
Time of Advertisement	Pearson Coeffieicent	0.316**	0.294**	0.421**	1		
	. (2-tailed)	0	0	0			
	N	220	220	220	220		
E-marketing	Pearson Coeffieicent	0.256**	0.480**	0.082	.206**	1	
	. (2-tailed)	0	0	0.223	0.002		
	N	220	220	220	220	220	
Advertisement	Pearson Coeffieicent	0.412**	0.555**	0.131	0.426**	0.679**	1
	. (2-tailed)	0	0	0.053	0	0	
	N	220	220	220	220	220	220
**.Correlation in (2-tailed) 0.01							

The above coefficient table tabulates the correlation values between advertisement variables (banking, E-marketing, technology used, time of advertisement and budget of advertisement) and they remained less than 0.7. For lack of natural distribution, it is necessary that all the correlations between the variables should not exceed 0.7.

Reliability Test

Reliability was confirmed through the Cronbach's Alpha Coefficient test, with the rule of thumb followed being that the value should exceed 0.70. In this study, the Cronbach's Alpha Coefficients ranged from 0.71 to 0.85, indicating that data is suitable to be move on to further analysis.

Table 13 TEST	
Variables	**Cronbach's Alpha coefficient**
Advertisement	0.711
Advertisement Budget	0.853
Advertisement Technology	0.808
Time of Advertisement	0.712
E-marketing	0.852
Banking Service	0.817
Cronbach Alpha Test	0.814

Evaluation of the Model Quality

The model analysis is divided into two namely convergent and discriminant validity analysis. The measurement model's validity is shown by the values presented by the above table, and the rule of thumb requires the AVE to be 0.50 and over, the Composite Reliability (CR) and Cronbach's Alpha values to be at least 0.70. The analysis was conducted using Smart PLS 3.

Beginning with convergent validity confirmation to verify the level of affinity of the variables with each other, values of Coefficient Alpha exceeded 0.70 which indicates that data is valid. The same was found for Composite Reliability (CR) (exceeded 0.70). As for AVE, it was 0.518 for advertisement axis, 0.517 for technology axis, 0.545 for E-marketing axis, and 0.520 for banking services axis. Notably, the later axis of announcement obtained 0.555, for the third technology axis, it was 0.625, and the last one achieved 0.631. The first and second axes of E-marketing were 0.629 and the last one was 0.685. Hair (2016) explained that the coefficient loading of less than 0.7 but greater than 0.4 may be acceptable in cases of high contrast composite latent change and thus, it is acceptable to increase the CR value of the axis to over 0.80.

MEASUREMENT MODEL

Convergent Validity

Table 14 INDIVIDUAL ITEM RELIABILITY (ITEM LOADINGS)					
The Model	**Items**	**Outer Loading**	**AVE Average Variance Extracted**	**CR Composite Reliability**	**Alpha Cronbach**
Advertisement	ADV1	0.828	0.518	0.878	0.711
	ADV2	0.76			
	ADV3	0.775			
	ADV4	0.795			
	ADV5	0.714			
	ADV6	0.727			
	ADV7	0.607			
Advertisement Budget	BUD1	0.706	0.538	0.846	0.853
	BUD2	0.822			
	BUD3	0.723			

	BUD4	0.823			
	BUD5	0.835			
Time of Advertisement	TIME1	0.596	0.524	0.824	0.808
	TIME2	0.785			
	TIME3	0.835			
	TIME4	0.736			
	TIME5	0.77			
Advertisement Technology	TEC1	0.777	0.517	0.873	0.712
	TEC2	0.845			
	TEC3	0.838			
	TEC4	0.878			
	TEC5	0.861			
	TEC6	0.81			
	TEC7	0.82			
E-marketing	INT1	0.751	0.545	0.85	0.852
	INT2	0.821			
	INT3	0.782			
	INT4	0.818			
	INT5	0.676			
Banking Service	SER1	0.847	0.52	0.841	0.817
	SER2	0.893			
	SER3	0.789			
	SER4	0.805			
	SER5	0.861			

Discriminant Validity

According to Hair, et al., (2016), there are two methods to confirm differentiation validity or discriminant validity and they are cross-loadings and Fornell-Larcker Criterion. Based on the rule of thumb, discriminant validity should be 0.7 and above between variables (vertical and horizontal). For advertising, the value is 0.749, for E-marketing it is 0.853, and for technology used it is 0.742. With regards to the value of banking services, it is 0.784, advertisement budget is 0.784 and advertisement time is 0.743.

Table 15 FORNELL-LARCKER CRITERION						
Variables	Advertisement	E-marketing	Advertisement Technology	Banking Service	Advertisement Budget	Time of Advertisement
Advertisement	0.749					
E-marketing	0.645	0.853				
Advertisement Technology	0.499	0.738	0.742			
Banking Service	0.56	0.511	0.439	0.818		
Advertisement Budget	0.546	0.511	0.496	0.588	0.784	
Time of Advertisement	0.588	0.724	0.719	0.565	0.475	0.743

The cross-loading table shows the items values, with the rule of thumb followed being 0.7 and above. Nevertheless, items that achieved values between 0.4 and 0.7 were not dropped from the model because their axes resulted from the composite reliability value of 0.80. The table shows that the cross-loadings value of items varied from 0.577 to 0.828 for advertisement it ranged from 0.720 to 0.833 for advertisement budget, from 0.787 to 0.885 for E-marketing, 0.615 to 0.753 for technology used, 0.723 to 0.914 for banking services, and for time of broadcast, cross-loading values varied from 0.626 to 0.830.

The Model	Items	Advertisement	E-marketing	Advertisement Technology	Banking Services	Advertisement Budget	Time of Advertisement
						Table 16 CROSS LOADINGS		

The Model	Items	Advertisement	E-marketing	Advertisement Technology	Banking Services	Advertisement Budget	Time of Advertisement
Advertisement	ADV1	0.828	0.395	0.276	0.278	0.174	0.23
	ADV2	0.76	0.503	0.393	0.482	0.312	0.508
	ADV3	0.775	0.531	0.361	0.465	0.402	0.464
	ADV4	0.795	0.531	0.401	0.52	0.32	0.511
	ADV5	0.714	0.526	0.362	0.546	0.515	0.546
	ADV6	0.727	0.313	0.363	0.208	0.378	0.317
	ADV7	0.607	0.354	0.363	0.289	0.382	0.296
E-marketing	INT1	0.365	0.751	0.425	0.478	0.468	0.339
	INT2	0.432	0.821	0.443	0.584	0.422	0.452
	INT3	0.441	0.782	0.367	0.393	0.364	0.36
	INT4	0.317	0.818	0.296	0.219	0.386	0.289
	INT5	0.396	0.676	0.204	0.318	0.171	0.232
Advertisement Technology	TEC1	0.352	0.588	0.777	0.221	0.337	0.614
	TEC2	0.471	0.738	0.845	0.515	0.422	0.827
	TEC3	0.048	0.056	0.838	0.045	0.081	0.745
	TEC4	0.531	0.643	0.878	0.516	0.42	0.891
	TEC5	0.523	0.576	0.861	0.484	0.36	0.862
	TEC6	0.4	0.721	0.81	0.371	0.423	0.671
	TEC7	0.465	0.708	0.82	0.39	0.406	0.727
Banking Services	SER1	0.384	0.59	0.354	0.847	0.345	0.582
	SER2	0.336	0.597	0.456	0.893	0.403	0.566
	SER3	0.432	0.637	0.37	0.789	0.447	0.501
	SER4	0.244	0.435	0.439	0.805	0.239	0.32
	SER5	0.215	0.313	0.413	0.861	0.109	0.162
Advertisement Budget	BUD1	0.599	0.354	0.354	0.572	0.706	0.701
	BUD2	0.486	0.456	0.754	0.43	0.822	0.646
	BUD3	0.451	0.37	0.637	0.343	0.723	0.669
	BUD4	0.487	0.439	0.618	0.256	0.823	0.49
	BUD5	0.303	0.413	0.278	0.147	0.835	0.67
Time of Advertisement	TIME1	0.357	0.248	0.29	0.373	0.37	0.596
	TIME2	0.414	0.424	0.277	0.322	0.369	0.785
	TIME3	0.327	0.187	0.105	0.33	0.205	0.835
	TIME4	0.344	0.438	0.346	0.212	0.316	0.736
	TIME5	0.505	0.432	0.436	0.024	0.674	0.77

Structural Model

Direct and indirect effects among the variables were presented in Table and Figure. The study followed the rule of thumb of hypothesis significance is from 0.000 to 0.005. Accordingly, positive relationship was found between advertisement and banking services, budget and banking services, technology of advertisement and banking services and time of advertisement and banking services of Libyan commercial banks.

Hypotheses Testing by Bootstrapping Method

Hypothesis Development by Bootstrapping

Table 17							
SUMMARY OF THE DIRECT HYPOTHESES RESULTS							
Hypothesis	**Relationship**	**Beta coefficient**	**Sample mean (M)**	**standard deviation**	**T statistics**	**P value**	**Decision**
H1	Advertisement on Banking Service	0.645	0.652	0.044	14.659	0	Accepted
H2	Budget on Banking Service	0.419	0.431	0.067	6.254	0	Accepted
H3	Technology on Banking Service	0.227	0.226	0.075	3.027	0.003	Accepted
H4	Time of Advertisement on Banking Service	0.389	0.378	0.106	3.669	0	Accepted

Table 18							
SUMMARY OF THE INDIRECT HYPOTHESES RESULTS							
Hypothesis	**Relationship**	**Beta coefficient**	**Sample mean (M)**	**Standard deviation**	**T statistics**	**P value**	**Decision**
H5	Advertisement on Banking Service Through E-marketing	0.141	0.143	0.05	2.82	0.005	Accepted
H6	Budget on Banking Service Through E-marketing	0.256	0.26	0.051	5.019	0	Accepted
H7	Technology on Banking Service Through E-marketing	0.18	0.182	0.047	3.829	0	Accepted
H8	Time of Advertisement on Banking Service Through E-marketing	0.238	0.233	0.059	4.033	0	Accepted

The above table shows the results of the tested indirect effect of E-marketing on the relationship between the independent and dependent variables. As mentioned, the hypothesis is deemed to be significance if it achieves 0.000 to 0.005. As a result, E-marketing was found to have an indirect significant effect on the advertisement-banking services relationship, between budget of advertisement-banking service relationship, between technology used-banking services relationship, and between advertisement time-banking service relationship.
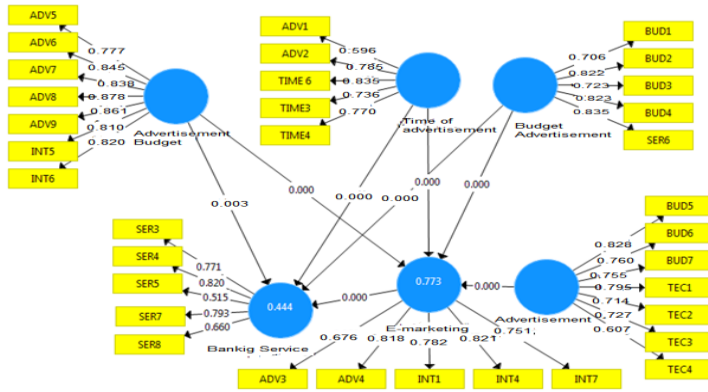
FIGURE 2
DIRECT AND INDIRECT EFFECTS AMONG THE VARIABLES

Coefficient of Determination

Table 19 R COEFFICIENT			
Variables	**R2**	**R2 square**	**Decision**
Banking Services	0.444	0.521	Upper intermediate
E-marketing	0.733	0.555	

The R-coefficient value of the dependent variable is 0.444 and in this regard, Dorbala (2019) explained that the average R coefficient should be 10% or less, while Lombardo(2016) indicated that the rule of thumb for R-coefficient is 67% is high, 33% is average, while 19% is stressed and rejected. On the above basis, R-coefficient value of the dependent variable is considered to be average to high.

Effect Size

Effect size analysis indicate the effect of each variable on its own and based on Lombardo (2016), if the analysis results is 35% it is considered large, between 0.15 and 0.35 is average and between 0.02 and 0.15 is small, with less than 0.02 deemed to have no effect at all. The results of the f-square analysis are displayed in the following table, where the axis value of advertisement is 0.46 (average), budget is 0.40 (average), technology used is 0.39 (Moderated), and time of advertisement is 0.21 (Moderated).

Table 20 EFFECT SIZE ANALYSIS		
Variables	**F Square**	**The Degree of Effects**
Advertisement	0.46	intermediate
Advertisement Budget	0.4	intermediate
Time of Advertisement	0.21	intermediate
Advertisement Technology	0.39	intermediate

Construct Cross Validated Redundancy

Moving on to the testing of predictive relevance (Q2) to examine the model's ability to predict dependent variable, the table shows the value to be higher than zero (0.192) and is thus, deemed to be acceptable.

Table 21
CONSTRUCT CROSS VALIDATED REDUNDANCY

Variables	SSO	SSE	Q2(=1-SSE/SSO)
Advertisement	1540	1540	
Advertisement Technology	1540	1540	
Banking Service	1100	889.187	0.192
Advertisement Budget	1100	1100	
Time of Advertisement	1100	1100	

Goodness of Fit of the Model (GoF)

Goodness of fit is used to gauge the study model's reliability and the following equation is used to calculate it;

GOF=R2 * AVE and as thus, Gof=0.55 (small to medium reliability)

SUMMARY

This study primarily aimed to determine the effect of E-marketing on the advertising of banking services in the Libyan banks (Alwaha bank, BNP Paribas and Sahara Bank). The study problem discusses the lack of banking services to base the advertising policy on in order to meet the consumers' demand of the services. The study adopted the analytical descriptive method to provide a description of and to analyze banking services advertisements in Libyan banks operating with the use of E-marketing.

This study is important owing to its focus on advertisement development and the related factors like budget of advertising, technology used in advertising, and time of broadcasting the advertisement. The study population totalled 4000 employees working in the commercial banks, from which 320 respondents were selected in all the three banks. SPSS 24 was used for data analysis with Smart PLS. Banking services in Libyan commercial banks were found to require advertising policy and communication between customers and banks to pinpoint the issues that are faced by the former. It is recommended that a department is created for advertising the services and such department should have the available funds and financial support to market the banking services.

DISCUSSION OF THE STUDY RESULTS

The study has several major findings which are discussed in the following paragraphs.

First, the study found a significant statistical direct relationship between advertising and banking services. Another major finding is the significant effect of E-marketing on the relationship between advertising and banking services.

Third, the findings also supported a significant relationship between time of advertisement and banking services, and fourth, a significant mediating role of E-marketing on the relationship between time of advertisement and banking services.

The fifth major finding is the significant relationship between technology of advertisement used and banking services, with E-marketing as the mediating variable. Sixth, budget of advertisement also has a significant and direct relationship with banking services, with E-marketing mediating such relationship.

Seventh, E-marketing was found to have a significant direct relationship with banking services and eighth, the findings indicated that the top influential item in the advertisement axis is visual advertising. This shows that the banks should adopt the latest advertising method to market the services to the customers, and that banners should be hung on public highways and roads to inform the potential customers of the services offered by the banks.

Ninth, one of the major findings is the statistical relationship between budget of advertisement and the banking services, with the advertisement in line with the desired definition of the services marketed. Libyan banks need to increase their allocated budget for advertising, both visual and audiovisual means. It is evidenced that challenges present the meeting of the right amount of financial allocations for the banking services and this has to be resolved if the customer is to get attracted to the well-defined services. The result concerning this relationship is consistent with that of prior studies, like Yousaf (2018), who found a positive advertising budget-banking services relationship.

The tenth major finding is the significant and statistical relationship between technology used in advertising and banking services. The effect of modern technology is reflected in the banking services marketing approaches and the efficiency of the service delivery. Technology usage clarifies the level to which the banking services progress. The respondents are of the consensus that the extent of the provided technological services and the usage of state of the art equipments is what boost the information update of Libyan banks that is required for their effective banking services provision. This study finding is consistent with the prior studies' findings, particularly Yousaf (2018), who revealed a positive statistical relationship between technology used in advertising and banking services.

The eleventh major finding of the present study is the significant statistical relationship between advertisement timing and the banking services. Management of Libyan banks should continuously advertise their services without interruption in order to occupy suitable times for the consumers to pay attention to them and to be attracted to the services marketed. Libyan banks need to advertise at the right time to attract potential customers. This finding is similar to those reported by Qashou (2013), who found a positive statistical time of advertisement-banking services relationship.

Finally, this study found a statistical significant relationship between E-marketing and banking services. Notably, the Libyan banks forward their service advertisements online, through e-mails, to their customers, and queries sent online to the banks are taken care of in a timely fashion. The online banking services advertisements online have managed to attract customers so it is imperative for the banks to provide clear and accurate statements. This is in consistent with the results reported by Noorbehbahani (2019), who supported a positive statistical relationship between E-marketing and banking services advertisements. Also, Qashou's (2018) study revealed the key role that E-marketing plays in the advertising-banking services relationship.

STUDY CONTRIBUTIONS

In the banking sector, advertisement initiatives is key to spreading and disseminating banking services to attract more customers through the services offered. This study is focused on the extent of technology used in advertisement to promote banking services, more specifically *via* E-marketing, and to determine the suitable advertisement broadcasting times for different demographic members. This is expected to contribute to the promotion of banking services using the appropriate approaches and techniques. The study contributes to the promotion of banking services through the use of modern technology, and to the identification of the other significant aspects to reach the main objective. The study also highlighted the need to allocate the right budget for advertisement for the promotion of banking services.

In terms of methodological contribution, this study delved into the role of E-marketing in proposing advertising initiatives for banking services. The study also contributed to methodology as to how to resolve issues using suitable statistical methods to meet the study objectives and to test the hypotheses formulated. The following can be concluded from the study;

1. It is important for the commercial banks in Libya, namely Alwaha, BNP Paribas and Sahara bank, which are directly under the Board of Directors' management, to appropriate a department responsible for advertising initiatives.
2. The announcement and advertisement of banking services in the three banks should be reformulated and reviewed to make the most optimum impact.
3. Focus should be laid on the principle of intensive advertising in the hopes of retaining the current customers and attracting potential ones.
4. Banking services announcement should contain the message of the intention of Libyan banks towards development and its contribution towards it.
5. Development and expansion initiatives should clarify the extensive dissemination of services.
6. Banks should determine trends, tendencies and preferences and customers' behaviours to guarantee that the advertising tools utilized are suitable and can reach the highest number of customers to be convinced to avail of the banking services.
7. Although Libya is currently facing several crises, the spirit of optimism should be spread throughout the country to encourage people to become bank clients.
8. Ongoing staff training on E-marketing should be provided to increase the quality of customer service.
9. Modern and high tech approaches to advertising should be adopted in the Libyan banks.
10. The study results may be referred to by the banks to implement E-marketing in Libyan banking Libya system.
11. New advertising policy should be adopted in all three commercial banks examined for the proactive promotion of the banking services.
12. Employees-management coordination should be established when it comes to the proposed declaration, and the Board of Directors should take charge in resolving issues as they arise throughout the banking services advertisement formulation.

LIMITATIONS OF THE STUDY

The present study is an attempt to extend prior studies in literature, focusing on examining banking services advertisements through E-marketing, in three specific Libyan banks. The study's objective was not to touch upon the impact on sustainable development and marketing management. The working banks in Libya is too many to count and a study that encapsulates the entire banking institutions in Libya would be invaluable in providing re-adjustment initiatives for the advertising

policy used by the banks for their services and in providing financial allocations as well as technological methods. Several factors influence banking services but this study only focused on advertisement. The study is also confined to a quantitative study approach to achieve the study objectives and to determine the answers to the research questions.

RECOMMENDATIONS FOR FUTURE RESEARCHES

Future studies are recommended to examine banking services advertisement in both government and private banks in Libya. They are also recommended to adopt a qualitative approach or a mixed approach (quantitative and qualitative), involving interviews and questionnaire to delve deeper into the development of advertising policies. Because technology is one of the significant variables that contribute to banking services promotion and marketing, both quantitative and qualitative approaches are recommended to determine more feasible and accurate solutions for such promotion.

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