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#### An assessment Impact the Commercial Banks' Characteristics on Utilize of Performance Evaluation Indicators – Libya Case Gumma Fakhri

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**Abstract:** This study seeks to guarantee the employment of several views of performance measurement indicators in evaluation system within the commercial banks of Libya, and to examine the effect of a number of bank's characteristics of the utilize performance measurement indicators, so, this article classifies the views from the management Accounting literature, and explores the influence of four selected banks' characteristics (e.g. the nature of bank services, top management' desire, size of bank, and banks' ownership structure) on the application of performance measurement indicators. In accordance with a scale survey in a sample of 44 participants from commercial banks working Benghazi city in Libya and the study puts hypotheses regarding the study's objectives, and utilizes descriptive and inferential statistical analysis to find out and examine the fundamental contact of by means of various performance measurement indicators. The main results have show that most of the Libyan commercial banks are greatly adopting financial indicators as main way to assess performance, while some banks are using the non financial indicators, such as they be inclined to employ customer indicators and learning and employee and growth indicators more repeatedly. The paper has also realized that important differences in the exploit of financial and non financial indicators in line with banks' characteristics that guide to have mixed views of the use of performance measurement indicators in the Libyan commercial banks.

**Keywords:** Performance Indicators, Commercial banks sector, Management Accounting, Libyan banks

المستخلص: هدفت هذه الورقة الى التعرف على الأستخدام المتعدد لمؤشرات قياس الأداء في قطاع المصارف التجارية في ليبيا كما هدفت الدراسة لتعرف على تأثير بعض خصائص المصارف التجارية على أستخدام مؤشرات قياس الأداء (طبيعة النشاط المصرفي – ورغبة الإدارة العليا – و حجم المصرف – شكل الملكية)، ولتحقيق هدف الدراسة تم اختيار عينة تكونت من 44 مدير من المصارف التجارية العاملة في مدينة بنغازي، ومن ثم صياغة الفرضيات الدراسة وكذلك استخدام التحليل الوصفي والاستدالي لتعرف على استخدام مؤشرات قياس الاداء المتعددة وتأثير تلك الخصائص علي هذا الأستخدام، وقد توصلت الدراسة الى ان المصارف التجارية الليبية تعتمد الى حد كبير على مؤشرات قياس الأداء المالية في تقييم الأداء كما أن

### مجلة جامعة درنة للعلوم الإنسانية والاجتماعية المجلد الأول

DERNA UNIVERSITY JOURNAL OF HUMANITIES AND SOCIAL SCIENCES





بعض المصارف اعتمدت المؤشرات غير المالية كالمؤشرات الخاصة بمستوى رضاء الزبائن لتقييم الأداء ، كما كشفت الدراسة عن أن هناك تأثير مختلفة للخصائص المصرفية المختارة على مدى استخدام مؤشرات قياس الأداء. وقد أوصت الدراسة الي أهمية اعتماد مزيج من مؤشرات المالية وغير المالية للقياس وتقييم الأداء في المصارف التجارية الليبية.

الكلمات المفتاحية: مؤشرات قياس الأداء - المصارف التجاربة الليبية.

#### 1. Introduction

It could be argued that the consequence of performance measurement route has highlighted on management accounting literature in addition the central function that performance measurement system assists to financial success of the organization, as important resource that supplies useful data about inner activities. (Bhimani et al 2014). Consequently, organizations are adapting the employ of performance indicators to assist executives build essential judgments with the aim of get organizational targets, by the way, performance indicators are central for directors to assess performance for their subunits, in addition to for employees at lower levels to recognize the financial force of their working result (Cheyo, 2015). additionally, Hussain, (2012) the weight of employ modern performance indicators like customer satisfaction, etc derives from the greatly competitive financial business, mainly banking sector, besides in other services and constant of manufacturing organizations. As a result, evaluating the performance of financial and nonfinancial has need of exceptional concern in this exacting type of service organization. While a group have written regarding the want for exact measurement of financial and non financial performance indicators, moreover numerous investigate relating to performance measurement, on the other hand very small is recognized about performance measurement systems in commercial banks especially in Libya as one of most important developing countries. Then, the core idea of this document is to look at the influence of selected characteristics of commercial banks on the utilize of financial and non-financial with exacting location to Libyan commercial Banks.

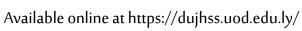
#### 2. Short View of Libyan banking Sector

Al-Arbah, (1995) concluded that banking sector in Libya is one of the main parts furthermore the most structural basics of the economy, and historical data show that the first Libyan banking sector was beginning on the 19<sup>th</sup> century during Ottoman period, after that the branches from foreign banks were joint Libyan banking sector like Barclays Bank on middle of the 20<sup>th</sup> century. Currently the banking sector in Libya includes the Central Bank of Libya, Specialized and Commercial banks. The commercial banks are organizations that contain profitable role and they contain public and private banks both had a major function in the development of the Libyan economy (Central Bank of Libya, 2001).

In period from 1970 to 1991 the Libyan commercial banks were only five banks. In 1970 Libyan government was issued to foreign banks to become Libyan nationals' banks owning more than 51%. In 1970 act No (153) nationalized foreign shares in the commercial banks, raised the share of the Central Bank of Libya to become 51% in banks. To sustain with progress in both the national and international environment was performed in the 1990s to support the private banks to join in running commercial banks (Masoud and Al-Shrif, 2002).

### مجلة جامعة درنة للعلوم الإنسانية والاجتماعية | المجلد الأول

DERNA UNIVERSITY JOURNAL OF HUMANITIES AND SOCIAL SCIENCES





During the period from 1992 to 2011 the banking sector observer central growth. Law No (1) 1993 agreed to private banks to be started plus authorized foreign banks to work in Libya, according to the Law many private like Bank of Commerce and Development and they challenge the public banks and Libyan commercial banks grow to be very effective competitors. In addition CBL set a number of regulations for commercial banks such as international standards to become similar to international progresses and improvements and to work a commercial banks standard to race in the international bank world. Within that time, the Libyan banking sector was not reached the financing increase projects, by reason of Libyan banks met complexities in charging the dangers of loans due to banks faced some problems like dependable standards and information about the financial situations of borrowers, as a result the banks tracked a rule of guilty lending, as result the Libyan banks has stayed heavy resources as liquid assets.

Period after 2011, Central Bank of Libya (2015) argued that Islamic banks Law has issued in 2013 which introduce to replace the traditional Commercial banks Law, however this law has force operating commercial banks to drop an vital supplement of earnings and liquidity and banks were not on the verge of change to deal with the new law. Loans granted by banks to the public and private sectors amounted to 14 billion dinars per year, which is equivalent to 25% of national deposits and 20% of national assets. since 2014 Libyan Audit Bureau, (2016) reported that the local currency has decreased due to the lack of liquidity in banks and corruption of commercial banks operation like documentary credits and external commercial banks transfers has been emerged consequently Libyan banks has record in blacklisted which makes difficult for international organizations and companies to directly deal with Libyan banks. In addition, because of political conflict, the Central Bank has separated into two Central banks in Libya located in the Central Bank in Tripoli in West and Central Bank in Al-Bayda in East that caused trouble for commercial banks operating locally faced difficulties in dealing with the two central banks. This competition among the two central banks has affected the handling of liquidity issues and commercial banks services for citizens which make difficulties in issuing certified instruments and transferring funds.

Compared to international banks, the commercial banks sector in Libya is lagging behind, as the commercial banks system needs modernization to cope with the rapid changes in the international commercial banks system. In 2019, the Central Bank adopted project to develop the commercial banks sector aimed at connecting all banks electronically and providing online services to customers on other hand the project has not been completed the war has caused the destruction of part of this infrastructure. In addition, the employees of the commercial banks sector need to be trained, developed, and re-educated to deal satisfactorily with the customer and adapt to the use of modern technologies.

### مجلة جامعة درنة للعلوم الإنسانية والاجتماعية المجلد الأول

DERNA UNIVERSITY JOURNAL OF HUMANITIES AND SOCIAL SCIENCES

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#### 3. Literature Review and Hypothesis' Development

The operate of financial indicators for evaluation performance s has several limitations other than the alteration in business environment outside organizations for example raised competition, so the financial indicators have led to adept confidence on financial indicators for performance measurement. Thus, the writing recommended that organizations should be reflected on the employ of multiple indicators to give managers with sufficient information concerning their generally organization performance (e.g. Ittner and Larcker, 2008; Neely, 2009; Kaplan and Norton, 2011; and Kamilah and Zabri 2016).

#### 3.1. Financial and Non -Financial Indicators:

Financial indicators were utilized with the aim of supply financial information to the internal and external users, moreover to assess effectiveness and efficiency. The most importance financial indicators employed are: return on investment; return on assets; return on capital employed; and earnings per share (Ittner and Larcker, 2013b). While the application of financial indicators only is essential in performance measurement system, however they have various limitations, for instance, Kaplan and Norton, (2006) and Neely, (2009) said that there is concurrence about the restrictions of use only financial indicators for instance, financial indicators are too monetarily become conversant with, inside concern, focusing on inputs more than outputs, and are short term adjusted. These limitations confirm that financial indicators ought to be expanded to integrate the valuation of the company's intangible and intellectual assets such as; high quality products, motivated and skilled employees, responsive and predictable processes, and customer satisfaction to reveal the assets and abilities which are important for achievement in competition (Kaplan and Atkinson, 2008). These kinds of indicators could be classified as non-financial performance indicators, besides, Kaplan and Norton (2006) concluded that measurement system applying single financial indicators may trash an organization's abilities and they suggest that a mixture of financial and nonfinancial indicators are improved apposite for evaluating performance.

Recently numerous researches gave practical confirmation on the optimistic crash of non financial performance indicators on the organizations' financial performance in the long-term (Shannon and William 2019; and Kamilah and Zabri 2016). Non-financial performance indicators supply administrators by way of suitable information concerted on the causes of sensation and could be utilized to propose combined evaluation systems (Hauer et al 2015; Kaplan and Norton, 2006; Kamilah and Zabri 2016). argues that many motivations for the appearance of non-financial performance indicators: the limits of financial performance indicators, competitive force, and the expansion of other programs. As well, Neely (2009) mentioned that there are a number of motivations for using non financial indicators for example rising competition, altering organisational function, and the influence of information technology. This in line has caused the gratitude those financial indicators give up provide a right picture of organisational performance measurement (Tuomas et al 2023). Most researches of non financial performance indicators are involved with manufacturing sector however a little researches concerning including services sector (Kald and Nilsson, 2010). Few studies like Hauer et al 2015; Kaplan and Norton, 2011; Hussain, et al 2012; Lorenzo, 2018 highlighted the need to employ financial and non financial indicators in the banking sector Jelena and Evelina (2012) decided that even though manufacturing sector tends to stress the significance of non-financial indicators,

### مجلة جامعة درنة للعلوم الإنسانية والاجتماعية المجلد الأول

DERNA UNIVERSITY JOURNAL OF HUMANITIES AND SOCIAL SCIENCES





bankers focus on more financial performance indicators. Ostinelli and Toscano (2004) investigate the adaption of non financial indicators i.e. customer satisfaction and improvement in quality management in three Italian banks, they located that there are abilities to combine both financial and non-financial indicators to evaluate performance. Hussain et al (2012) performed study about the role of management accounting practices in non-financial performance indicators in financial sector (including banks) in three countries Finland, Sweden and Japan. Their research concluded that external elements like economic elements have influenced the apple of non financial indicators in the banking sector in three countries. Al-Enizi et al (2016) studied the application of non-financial performance indicators in the Gulf Cooperation Council Countries in four banks, the paper recommended that non financial indicators provide the helpful affect on long-term success. Hussain and Benková et al (2020) checked factors influenced apply of non-financial indicators on performance measurement systems in Japanese banks, they concluded that various organizational characteristics effect the use of performance measurement system including the top management desires, nature of services and bank size. Hussain and Hoque (2012) evaluated the function of management accounting in non-financial indicators along with Japanese banks, they argued that management accounting has an important job in measuring performance in different banks in Japan, but its job in non-financial performance indicators has been fewer important than its job in financial performance indicators, the results reported that the use of non financial indicators are affected by some the contextual factors.

The pervious conversation concludes that there are somewhat little experiential researches taken in developing countries but not in Libya which investigate the use of financial and non financial indicators for performance measurement functions in the banking sector. Moreover, the above researchers offer two main arguments about the use of financial and non financial indicators. Primary argument said that the use of financial indicators is more employ than non financial indicators on the organizations. The second issued argudes that non financial indicators have better use with financial indicators in performance measurement systems, due to non financial indicators are healthier indicators to giving future financial performance, and they replicate the value of long term parts. Above decade, the employ of financial and non financial indicators together have powerfully recommended by scholars (e.g. Kaplan and Norton 2006). Therefore it could be concluded that if financial indicators are still fundamental for performance measurement in the Libyan commercial banks context, as a result this paper puts the following hypothesis:

**H.1** The Libyan commercial banks be inclined to use financial indicators more than nonfinancial indicators frequently.

As a result, to understand the performance measurement systems, it is necessary to appreciate that performance indicators are used at each organizational level. This paper concerns explicitly on financial and non financial performance indicators.

#### 3.2. Commercial banks individualities that affecting Performance Indicators

In 1980s, many research have cracked down on diverse portions of management accounting applications mainly in performance measurement for instance their association with appropriate issues (e.g. size of organization, nature of organization, organization' ownership category and more others). The different aspects of the literature would currently be explored within more clarification.

### مجلة جامعة درنة للعلوم الإنسانية والاجتماعية المجلد الأول

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#### a) The Impact of Size of bank

In respond to economic forces, management accounting practices develop into adaptive to their environment with diverse points of awareness, however the characteristics of the organization (e.g. size and type) are a important aspects to the extent of probable adaptation and change to the economic forces (Dahal R. K. 2022; and Hussain and Gunasekaran, 2012). Consider to influence of size of organization of design and use of performance measurement systems, numerous previous research (Theriou et al 2017.

; Deilami et al 2016) suggest that direction in huge companies adept to put into operation a range of performance indicators however tiny companies to prompt directors of different accountability cores, such as Theriou et al (2017) argues that size certainly influences the drawing of performance measurement systems: bigger firms utilize more difficult performance evaluation systems and be subject to set up non financial indicators. Moreover, organizational size might impact the design of control systems used which be likely to be more complicated in larger companies than minor (Libby and Waterhouse, 2006; Speckbacher et al, 2013). In in view of the influence of size on the employ of financial and non financial in the commercial banks, this research argues that the size of bank's services may influence the implement of financial and non financial indicators in the Libyan commercial banks. Previous studies have showed that size really effect the shape of performance measurement systems: superior organizations utilize more stylish performance evaluation systems (Theriou et al 2017) and lean to set up non financial indicators ( Hoque & James 2010). thus this study set the following hypothesis:

**H.2** Size of bank is associated with the employ of financial and non financial performance indicators.

#### b) The Impact Of top management desires

Zaidia (2007) argues that in order to employ approach or technique it is necessary to have a desire to senior management acceptance, therefore management has the power to influence the employees and to provide the senior management with the necessary financial support for the cost of applying the system, as Al-Abidi and Al-Baghdadi (2016) add Dargham and Fidda (2009) and Al-Da'our (2013) that there are a number of basic rules for implementing the new plan, including the ones that must that the senior management adopt the application of the system, with that support must be clear to all employees of the institution. In view of the importance of the support and desire of the senior management to implement the system, the study put this factor as one of the administrative requirements that may affect the extent of the application of the performance measurement system in Libyan banks.

**H.3** Top management'desire tend to influence the employ of financial/non financial indicators more frequently.

#### c) Nature of bank services

It could be said that the nature of banking industry is financial service that relied on human resources in addition this nature made bank's administration to be extremely conscious regarding attaining a greater altitude of quality, satisfaction's customer, employee satisfaction and reliability in modify of business environment. Hussain and Gunasekaran, (2012) argue that the nature of banking industry is believed to be one of the reasons for utilizing variety of performance indicators as showed by their study's findings. Shahid M. B, (2018) report that

### مجلة جامعة درنة للعلوم الإنسانية والاجتماعية المجلد الأول

DERNA UNIVERSITY JOURNAL OF HUMANITIES AND SOCIAL SCIENCES





activities of bank such as bad loans have affected on perform of non financial performance indicators. Furthermore, Mills and Morris (1996) conclude that customer of services organizations is necessary to the creation activities, thus, several non financial indicators (like quality) may be decided only in manufacturing sector, on the other hand in service organizations like bank, it is complicated to evaluate the quality of banks' services since of their temporary and intangible nature. In this case Simth's (2008) reveal that estimation of the quality of service organisations is externally hard. It could be noted that, nature of banks' services shape a performance measurement systems. In regard as the affect of the nature of financial industry crash on use of non financial performance indicators is examined. This hypothesis occurred from pervious argument and there was no paradoxical proof. Hence, the following hypothesis is:

**H.4** "The nature of bank service is one of important factors that shape the use of financial/non financial indicators more frequently.

#### d) The Impact Of The Banks' Ownership Structure.

Abdoum (2016) concluded that the information systems in organizations that are characterized by a high proportion of state ownership are weak when compared with the systems of organizations that are characterized by a high percentage of private ownership, and that the systems in these companies will improve significantly in the event of an increase in the percentage of foreign ownership. Nassif, Al-Khalayleh (2007) indicated that there is no statistically significant relationship between state ownership and performance indicators, and the study results showed that there is no statistically significant relationship between foreign ownership and performance indicators. On the other hand, there is a relationship between private ownership and performance indicators. In other words, financial performance indicators are affected by the ownership structure of banks. Therefore, this study aims to supply evidence regarding to the impact of ownership structure (state, private ownership) on the performance measurement system of Libyan banks.

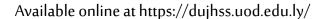
**H.5** There is no difference between ownership structure is one of the major motives that affect the use of financial/non financial indicators more frequently.

#### 4. Research Approach and Survey Tool

The study has been conducted during a survey headed by a preliminary massage to clarify the targets and goals of the study. The sample contains 44 managers from diverse Libyan commercial banks that locating in Benghazi city. Amongst this group of banks, the study called directors with the purpose of chooses a list of banks arranged to assist with the study. The questionnaire was done by driving survey in March 2023. Later than some follow ups by phone calls made to non answers to raise survey reply rate, 62 respondents then (44 usable) were launched back. The last reply rate of about 71% represents an acceptable target when the survey employs top and middle management levels. The questionnaire was expanded and processed as follows: nearly all objects in the performance indicators and banks' characteristics were used from previous studies. A first draft of the survey was argued with colleagues from University of Benghazi and Libyan Academy of Benghazi to appraise the content strength former to direct testing; and a pilot test was conducted with a group of five branches, whose inputs were used to progress the clarity, depth and weight of the questionnaire instrument. Especially the survey was arranged in two divisions. In the primary part participants were requested to give the general information and to

### مجلة جامعة درنة للعلوم الإنسانية والاجتماعية المجلد الأول

DERNA UNIVERSITY JOURNAL OF HUMANITIES AND SOCIAL SCIENCES





show on a five point Likert scale – from 1 (not at all important/used), through 3 (moderately), up to 5 (extensively) the extent to which they used a set of performance indicators coming from academic/practitioner management accounting literature (Kaplan & Norton 2006, 2010; Tripathi and Jha, 2018). The other section listed some characteristics like top management desire, the nature of commercial banks, size of banks, and banks' ownership category.

#### 4.1. Sample features

Collected data was analyzed by SPSS package v23.0. Internal consistency was established using Cronbach's Alpha it was equal (.715) in addition the reliability of the survey was also verified. The first empirical evidence of the survey is shown displayed through the use of descriptive statistics.

Table (1) provides number for general information such as date of level of education and position for participants moreover date of establishment of bank, ownership typology, and the total of assets of bank.

Table (1) Description of bank covered by the classification of survey

	Classification of participators by level of educatiox								
Number (%)	less undergraduate 4 (9%) Undergraduate 32 (73%) Postgraduate 8 (1								
	Classification of participators by position								
Number (%)	General Manager 3 (7%)	General Manager 3 (7%) Director 18 (41%) Branch Manager 23 (529)							
	Classification of banks by date of establishing								
Number (%)	before 1990 30 (68%)	Period 1990	0-2011 14 (32%)	After 2011 0 (%)					
	Classification of banks by ownership type								
Number (%)	rumber (%) Public 32 (73%) Private 12 (27%)								
	Classification of banks by total of assets								
Number (%)	Small banks 10 (23%) Large banks 34 (77%)			ge banks 34 (77%)					

Table 2 shows the division of participants by the assessment of the substance to bank achievement and the amount of present used of performance indicators. Furthermore change these indicators as date of establishment, ownership typology, and the total of assets of bank.

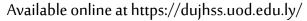
Table (2) the extent of use of performance indicators

			Comparisons of survey by classifications of banks								
Indicators	Mean	Std. D	Estab	lished	Owners	ship type	Total of assets				
mulcators	Wiean	Std. D	Befor 1990	1990- 2011	Public	Private	Small	Large			
Financial	3.87	0.74	3.66	3.87	3.85	3.95	3.70	3.81			
Customer	2.98	0.82	2.88	2.99	2.43	2.97	2.91	2.87			
Employee	2.67	0.77	2.55	2.67	2.41	2.89	2.57	2.65			
Quality	2.84	0.68	2.53	2.89	2.71	2.92	2.65	2.87			
Community	2.21	0.55	2.22	2.11	2.33	2.15	2.32	2.41			

Table 3 appears allocation of respondents' views regarding to the importance of elements of the top management desire and ranks these elements' as date of establishment, ownership typology, and the total of assets of bank.

### مجلة جامعة درنة للعلوم الإنسانية والاجتماعية المجلد الأول

DERNA UNIVERSITY JOURNAL OF HUMANITIES AND SOCIAL SCIENCES





#### Table (3) the Top management desire

	Т	he level	of			Comparisons of survey by classifications of b					
	importance top				Std.	Established		Ownership type		Total of assets	
Item	mana	gement (	desire	e Mean S		Befor	1990-			~	
	1/2	3	4/5			1990	2011	Public	Private	Small	Large
The top management desire's in banks is a critical factor that affects the use of performance indicators	70.6	26.5	2.9	2.118	0.76	2.345	2.765	2.314	1.543	2.765	2.052
The banks check its top management desire regularly although it requests high cost to obtain	76.4	23.5	0	1.897	.75	1.345	2.454	2.089	1.29	2.754	2.002
Bank workers believe that the top management desire's is key factor that affect the use of performance indicators	47.1	35.3	17.6	2.588	1.01	2.009	3.017	2.853	1.887	2.132	2.007
There is increasing change in the top management desire's attitude regarding the bank sector	1.5	51.4	47.1	3.60	0.76	3.657	3.550	3.431	3.112	3.210	3.331

Table (4) gives data about the respondents' views concerning the importance of nature of commercial banks services which measured by there elements, these elements adjust as date of establishment, ownership typology, and the total of assets of bank.

Table (4) the nature of commercial banks services

	The level of importance nature of commercial bank services				Comparisons of survey by classifications of banks						
				Std. D	Established		Ownership type		Total of assets		
Item			Mean		Befo	1990			G N	_	
	1/2	3	4/5			r 1990	2011	Public	Private	Small	Large
The commercial banks are influenced by tha change in the level of develop in IT services	17.6	78	4.4	2.236	0.793	2.200	2.272	2.353	1.882	2.111	2.020
It is exteremely difficult to predict arother bank competitive move	29.4	69.1	1.5	1.98	0.782	1.943	2.032	1.982	2.015	2.541	2.300
It is intricate to predict and keep up with changes in the central bank of Libya regulations	47.1	52.9	0.0	1.53	0.604	1.457	1.721	1.667	1.353	2.117	2.111
Commercial bank attributes and methods of services are constantly and therefore unpredictable	22.1	69.1	8.8	2.026	0.890	1.771	2.662	2.392	1.647	2.225	2.008

#### 5. Findings of hypotheses testing

#### 5.1. The use of financial and non financial indicators

To examin H1(*The Libyan commercial banks be inclined to use financial indicators more than nonfinancial indicators frequently*), it has been ranked financial and non financial performance indicators by means to amount which participants have ordered indicators as central to achievement of long term and are utilizing them in evaluation functions.

### مجلة جامعة درنة للعلوم الإنسانية والاجتماعية

DERNA UNIVERSITY JOURNAL OF HUMANITIES AND SOCIAL SCIENCES





It seems from table (2) that the overall various indicators, the columns emphasize this marker that computes by average standardized rating of significance and utilizing for each type (financial and non financial indicators). This marker illustrates that if the level of overall different measures is equal to 3 that suggests banks employ different sets of performance indicators at a high level, on the other hand if the rate is less than 3 if means if is not a high level of employ for different performance indicators. It could be observed from the table that Libyan commercial banks are still depending on financial indicators more than non financial indicators. The rate of general different measures column is categories financial indicators by mean (3.87) however non financial indicators are ranked less than the rate of absence. Thus H1 is allowed.

#### 5.2. The affect of banks' characteristics on performance indicators

A factor analysis test is carried out to organize the indicators into types and to discover the essential subjects between the 8 points. Principal Component Analysis in table (5) discloses two interpretable factors with Eigen values bigger than 1 that justify 64% of the difference. The two factors are ticketed as follow: top management desires (4 items) and nature of commercial banks services (4 items).

To examine the remain hypotheses a correlation test has done among the four factors, two of them issue from the Principal Component Analysis (The top managements desires, and the nature of commercial banks services), although other factors (ownership structure and size of bank) are tested from general information that classify the respondents to large and small banks consistent with total of assets and private and public banks.

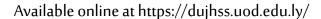
Table (5) Factor analysis (Rotated Factor Matris for 8 Itema)

	Components				
Item	Nature of Commercial Bank	Top Management Desires			
The commercial banks are influenced by tha change in the level of develop in IT services	0.5778				
It is exteremely difficult to predict arother bank competitive move	0.6464				
It is intricate to predict and keep up with changes in the central bank of Libya regulations	0.8329				
Commercial bank attributes and methods of services are constantly and therefore unpredictable	0.8654				
The top management desire's in banks is a critical factor that affects the use of performance indicators		0.6326			
The banks check its top management desire regularly although it requests high cost to obtain		0.7431			
Bank workers believe that the top management desire's is key factor that affect the use of performance indicators		0.5878			
There is increasing change in the top management desire's attitude regarding the bank sector		0.6231			

From table (6) it could be noted that according to Kendall's tau (t) association coefficients assist to find out if there are relations between four factors. These estimation are came with by p-values from statistical significance tests. Financial and non financial performance indicators are positively correlated with the size of bank but it is not significant. Hence, H2 has been confirmed.

### مجلة جامعة درنة للعلوم الإنسانية والاجتماعية المجلد الأول

DERNA UNIVERSITY JOURNAL OF HUMANITIES AND SOCIAL SCIENCES





Positively correlated is found among the nature of commercial banks services with financial and most non financial (quality, employee, and customer indicators respectively, however less correlated with community indicators. Thus it could be concluded the idea that the nature of commercial banks services tend to use more non financial indicators. Hence H3 is accepted.

Thable (6) Correlation Matrix (Tau (t) Kendall association measure

Indicators	Size of banks	The nature of bank services	The top management desires	Ownership structure
Financial	0.079	0.065	0.334**	0.138
Customer	0.129*	0.122	0.282**	0.358**
Employee	0.432**	0.001	0.330**	0.454**
Quality	0.578**	0.032	0.370**	0.498**
Community	0.407**	0.133	0.210*	0.403**

<sup>\*\*</sup> correlation is significant at the 0.01 level (two-tailed)

According to next factor there is positively correlated even value is not statistically significant amongst top management desires and the use of financial and non financial performance indicators. Accordingly H4 is not confirmed.

In the other hand public banks are negative correlated with non financial performance indicators only even if this value is statistically significant) while private banks are positively correlated with all performance indicators. Generally the findings show sound with the view provided that public banks are negatively correlated with use of non financial performance indicators while, however private banks are positively correlated at the opposite. Consequently, H5 has been confirmed.

#### 6. The findings

#### 6.1. The use of financial and non financial measure

From the above analysis, it could be argued that the use of financial and non financial indicators this work gives fact regarding the Libyan banks is still dependence on financial indicators with little awareness for a few non financial indicators. The outcome is in agreement with results for figure of previous researches like Mohamed and Hussain 2015; Ong and Teh 2019; Ismail 2017; Kamilah and Zabri 2016; Simmons, 2020; Akinyi and Moturi 2015). This study supposes the reasons for pervious finding is Libyan commercial banks still adopt old accounting system in addition the control of Central Bank as supervisor issued regulations which keep Libyan commercial banks out by needing authorization to develop new internal modify.

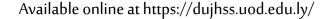
#### 6.2. The impact of bank size of the use of financial and non financial measure

The result shows that the size of bank as calculated by total of assets is appeared as important reason supporting the use of financial and non financial indicators. This result shows that an important association can be noted between size of bank with the level of using financial and non financial performance indicators. This result has already supported by some of previous studies like Verbeeten, 2014.

<sup>\*</sup> correlation is signifant at the 0.05 level (two-tailed)

### مجلة جامعة درنة للعلوم الإنسانية والاجتماعية المجلد الأول

DERNA UNIVERSITY JOURNAL OF HUMANITIES AND SOCIAL SCIENCES





# 6.3. The influence of top management desires on the use of financial and non financial measure

The analysis indicates that there is a slight association connecting top management desires and the extent of using financial indicators and not relationship with non financial performance indicators. The chick of Literature The study did not find support for this finding, so it could be said that this result is unique for this study.

# 6.4. The affect of nature of commercial banks services on the use of financial and non financial measure

According to the nature of the commercial banks services it could be concluded that this characteristic leading to the use of financial and non financial indicators. This finding is consistent with previous findings or statements in the literature (see, such as Shahid, 2018 and Hussain and Gunasekaran, 2012).

# 6.5. The impact of ownership structure on the use of financial and non financial measure

The results verify that there is a relationship but not a significant between ownership structure and the extent of using financial and non financial performance indicators. The study did not find support for this finding in the literature. so it could be said that other finding of this study is unique.

#### 7. Limitations of the study

This paper target is to provide a good understanding of the use of different performance indicators banks' managers. Specifically the study raises the existing theory, founds associations between bank's characteristics and the use of performance indicators with contingency theory and confirms several finding that it would be concerning to improve further studies. Nevertheless, three limitations could be listed; firstly the opinion is came from Libyan commercial banks' sample without give chance for other perspectives (e.g., specialized banks, other financial services). Secondly the study does not look at how associations can affect on bank performance. Thirdly this study also does not show what groups of performance indicators could cause progress financial results and bank activities with extra standard employment.

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### مجلة جامعة درنة للعلوم الإنسانية والاجتماعية المجلد الأول

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