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# The impact of national culture on TQM implementation in the Libyan banks

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## Abstract

The main purpose of this study is to explore the impact of national culture on TQM implementation in the Libyan banks. Hofstede's dimensions were used to achieve this aim. Total of (600) questionnaire was distributed to general managers, managers of Middle management and supervisors in the Libyan banks; (455) were useable. The results showed that the level of the implementation of TQM was low in Libyan banks. The results also revealed that the individualism dimension had a positive impact and that the dimensions power distance and masculinity had a negative impact on all the TQM implementation factors in the Libyan banks. Furthermore, the study showed that there were no significant relationships between the dimensions of uncertainty avoidance and long-term orientation and TQM implementation factors in the Libyan banking environment. This study, it is the first exploratory study to have assessed and investigated the influence of national cultural dimensions on TQM implementation in Libya. In addition, the study also provided some recommendations that might help them to improve services quality level and performance in the Libyan banks.

**Keywords:** Total quality management, national culture, Developing countries, Libya.

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**الملخص:-.**

الهدف الرئيسي من هذه الدراسة هو استكشاف تأثير الثقافة الوطنية على تطبيق ادارة الجودة الشاملة. وقد تم استخدام ابعاد هوفستد لتحقيق هذا الهدف. فقد تم توزيع ما مجموعة (600) استبانة على مدراء الإدارة العليا والوسطى والدنيا، وكانت (455) استبانة صالحة للاستعمال. وأظهرت النتائج ان مستوى تطبيق إدارة الجودة الشاملة في المصارف الليبية كان منخفض المستوى. كما كشفت النتائج ان بُعد الفردية كان له تأثير إيجابي، وأن أبعاد مسافة السلطة، والذكورة لها تأثير سلبي على جميع عوامل تطبيق إدارة الجودة الشاملة. وعلاوة على ذلك، أظهرت الدراسة انه لا توجد أي علاقات ذات أهمية إحصائية بين أبعاد تجنب عدم اليقين، والتوجه طويل المدى مع جميع عوامل إدارة الجودة الشاملة في البيئة المصرفية الليبية. هذه الدراسة، هي أول دراسة استطلاعية قامت بتقييم وبحث تأثير أبعاد الثقافة الوطنية على تطبيق إدارة الجودة الشاملة، وبالإضافة إلى ذلك، قدمت بعض التوصيات التي قد تساعدهم في تحسين مستوى جودة الخدمات، والأداء في المصارف الليبية.

**كلمات افتتاحية: إدارة الجودة الشاملة، الثقافة الوطنية، الدول النامية، ليبيا.**

## 2. Introduction

Total quality management (TQM) has played an important role inthe development of contemporary management practices. Quality is considered as akey strategic factor in order to enhance the competitiveposition and improve business performance (Evans and Dean, 2000).TQM to be a philosophy for improving quality, productivity and services, improving all aspects of the organisation's activities, with a focus on meeting the requirements of consumers at present and the future. As a result, the researcher considers TQM to be a comprehensive philosophy, which adopts a strategic overview of quality, creating an organisational culture committed to the continuous improvement process in every aspect of an organisation's activities. This is achieved through the participation of employees, top management commitment, providing products and services of high quality in order to improve the competitiveness of the organisation, and consistently meeting the needs and expectations of customers to achieve customer satisfaction. Given this definition, TQM is reflected as a management philosophy that applies strategies, tools, and appropriate factors for

its implementation through the continuous improvement of the organisation's activities, thanks to the participation of its employees, in order to accomplish customer satisfaction.

Many organizations realized that improving the quality of their products and services was vital to their business activities in order to survive and compete in a fast-moving environment. Therefore, TQM has implemented as a means to achieve better product quality, improve service quality and meet customer needs and expectations, and to be more competitive in the global marketplaces. According to the Deal and Kennedy (1999), the successful implementation of TQM is a measure of change in the values, and culture. Therefore, many organizations seek to shape their cultures as a means of improving and reconciling this culture with new directions in the application of new philosophies. In addition, Tata and Prasad (1998) stated that failure to achieve significant success in implementation is often not seen as a failure of the philosophy of TQM, but due to insufficient attention to cultural variables affecting it. In addition, many studies have indicated that many organizations have failed to achieve the expected benefits of TQM because they are ignorant of cultural factors (Tata and Prasad, 1998; Al Khalifa and Espinol 2000; Prajugu and McDermott , 2005 ; Yong and Pheng 2008; Zou et al., 2010). It is clear, then, that the national culture has an important impact on organisational performance and the implementation of TQM. It is therefore important to understand and define a sound the national culture in order to chart and examine the organisation's readiness to adopt and apply TQM.

It is apparent that there is an increasing movement towards recognition of the impact of national culture on the success or failure of TQM implementation. Additionally, Flynn and Saladin (2006) stated that national culture could provide a fruitful area for future research into quality management and performance excellence. Prajogo and McDormant (2005, p. 1118) believe that the effect between TQM and culture would be an interesting topic to study. An examination of the literature that addresses the influence of national culture on the implementation of TQM in developing countries, and particularly in Arab countries reveals that there has been very little empirical research in this area, especially in Libya. In other words, there is a lack of information on the subject of the influence of national culture on TQM implementation in these countries. This study, therefore, seeks to determine the levels of TQM implementation in Libya and to explore the influence of national culture on TQM implementation in Libyan banking. For this purpose, the following questions have been formulated:

1. What is the level of the implementation of TQM in the Libyan banks?
2. Which dimensions of national culture have an impact on TQM factors in the Libyan banks?.

## 2. TQM Implementation factors

Many studies identified TQM implementation factors in developed and developing countries: (e.g. Saraph et al. 1989; Ahire et al. 1996; Flynn et al. 1994; Powell, 1995; Black and Porter, 1996; Badri et al. 1995; Al-khalifa and Aspinwall, 2001; Baidoun, 2003; Al-Marri et al. 2007; Fryer et al. 2007; Salaheldin, 2009). These studies and the models produced by their authors have helped organisations in the adoption of factors for the implementation of TQM. The most obvious conclusion that can be from these studies is that every organisation applies a set of critical success factors vital to its own successful implementation of TQM (Ghobadian and Gallear, 1997). In addition, the present study collated opinions from academics and experts in Libyan banks about these factors, when conducting the pilot study, in order to confirm these factors. Six soft factors have identified as being critical for successful TQM implementation in Libyan banks, namely:

### 2.1 Top management commitment;

According to Hradesky (1995) emphasised that top management is a crucial component in the success of TQM. It supplies direction with vision, mission, and values statements, and supports the actions necessary to meet TQM goals. By continually monitoring progress, and making adjustments when needed, it helps to keep the organisation moving toward its TQM goals. Temtime and Solomon (2002) stress that the success of TQM implementation is often due to the top management of the organisation, which constitutes the driving force behind it, and acts as a motivator for the implementation of TQM by creating values, goals, and systems to satisfy customer expectations and to improve organisational performance.

### 2.2 Customer focus and satisfaction;

"Quality begins and ends with the customer" (Ross, 1995, p. 205). The most successful TQM programmes begin by defining quality based on the customer's needs and expectations. In addition, customer satisfaction is the cornerstone of any successful organisation that is striving to improve its products and services based on feedback from

users. Tsang and Antony (2001, p.133) pointed out that "Understanding, satisfying and surpassing customer needs and expectations on a continuous basis should be the key goal of TQM".

**2.3 Employee training;**

Dale and Bunney (1999) mentioned that there is no doubt that the training and education of all employees in an organisation is vital to ensure that a continuous quality improvement process will be ongoing and that staff perceives and understand the meaning of quality. According to Kanji and Asher (1996), one of the key elements of total quality, that which makes the largest demands on an organisation's human resources is training: therefore, the successful implementation of TQM depends largely extent on how well training is performed.

**2.4 Employee involvement;**

Most of the scholars and practitioners in quality management (such as Crosby, 1979; Ishikawa, 1985) agree that its success TQM implementation depends on employee involvement, illustrated through initiatives such as teamwork, training and development, and participation (Wilkinson et al., 1998).

**2.5 Communication and information systems;**

According to Evans and Dean (2000), communication and information systems are key processes for any organization, which attempts to improve its services quality and performance organizational. Tsang and Antony (2001) observe that communication and information systems are one of the crucial factors in the implementation of TQM.

**2.6 Continuous improvement:**

Most of the literature in quality refers to the concept of TQM is essentially based on continuous improvement, which involves change through a scientific method, and the transition from the current situation to the required state. Stahl (1995) stated that continuous improvement refers to continuous improvement of products, services and regulatory systems.

## 3. National culture:

Hofstede and Hofstede (2005, p.402) define national culture as "the collective programming of the mind acquired by growing up in particular country". He added that national cultures are a part of the mental software, which we acquire during the first ten years of our lives, in the family, in the living environment, and at school and that, this contains most of our basic values.

### 3.1 National culture dimensions:

Hofstede (1980; 1991; 2005) developed five dimensions of national culture: power distance; uncertainty avoidance; individualism; masculinity; and long-term orientation. It is appropriate to use the same national cultural dimensions in this study to measure the impact of these dimensions on the implementation of TQM in Libyan banks. Hofstede also identified the levels of these dimensions in Arab countries and compared them with other countries. Therefore, Hofstede has developed a valid and reliable instrument for the measurement of national cultural dimensions. These advantages provide a strong reason for choosing Hofstede's dimensions over others. (Hofstede, 1991, 1997, and 2005):

#### 3.1.1 Power distance:

Hofstede and Hofstede (2005, p. 46) defined power distance as "the extent to which the less powerful members of organisations and institutions within a county expect and accept that power is distributed unequally". According to Tata and Prasad (1998), where organisations operate high power distance, such as is the case with Arab countries, control over decision-making is more likely to be centralised than in a control-oriented culture. This may lead to the failure of TQM implementation.

#### 3.1.2 Individualism-Collectivism:

Individualism-Collectivism describes the degree to which a culture relies on and hasallegiance to either the self or the group. According to Hofstede and Hofstede (2005) collectivist societies attempt to maintain harmony and direct confrontation is avoided. There are also characterised by high-context communications, and relationships prevail over tasks. Rad, (2006) confirmed that collectivism is characterised by teamwork, which is required for TQM implementation. Therefore, TQM literature emphasises that collectivism is required in

the implementation of TQM through involvement, empowerment, and teamwork. Thus, collectivism leads to a high level of implementation.

### 3.1.3 Masculinity-Femininity:

According to Hofstede and Hofstede (2005, p.402) masculinity is the opposite of femininity; "Masculinity stands for a society in which emotional gender roles are clearly distinct; men are supposed to be assertive, tough, and focused on material success; women are supposed to be more modest, tender, and concerned with the quality of life".

### 3.1.4 Uncertainty Avoidance:

Hofstede and Hofstede (2005, p. 167) defined uncertainty avoidance as "the extent to which the members of a culture feel threatened by ambiguous or unknown situations". According to Tata and Prasad (1998), Arab nations are examples of countries where organisations have high uncertainty avoidance and a control-oriented culture, which is less likely to implement TQM effectively.

### 3.1.5 Long- short-term orientation (LOT):

Hofstede defined long-term orientation, thus: "long-term orientation stands for the fostering of virtues oriented toward future rewards – in particular- perseverance and thrift". Its opposite pole, "short term orientation, stands for the fostering of virtues related to the past and present – in particular, respect for tradition, preservation of face, and fulfilling social obligations"(p. 210). The characteristics of nations with a high score in relation to long-term orientation (LTO) tend to show persistence, thrift and a reliance on relationships dominated by order and the maintenance of stat.

## 3.2 National culture and TQM

Kano (1993) mentioned that culture should be taken into account when implementing TQM. However, he emphasised that culture is not a barrier to the implementation of TQM. Temtime and Solomon (2002) indicated that it is necessary to change attitudes, values, systems, and beliefs if a culture is to be transformed in the way required by TQM. In addition, Juran and Gryna (1993) have argued that TQM implementation does not require a redesign of a country's culture, rather it requires adherence to its principles, practices, and techniques. Krüger (1999) stated that TQM is a philosophy, it can be applied in any country, and that it is not culture-bound. Largrosen (2003) studied the impact of national culture on TQM

implementation within multinational companies. The study revealed that the dimensions of individualism, collectivism and uncertainty avoidance effect on all factors of TQM.Flynn and Saladin (2006) concluded that there was strong evidence of a national culture affecting the implementation of TQM and performance excellence. In addition, they indicated that there is not a universal model for performance excellence and quality management approaches which should be adapted to the local culture, in order to achieve the highest probability of success.

It could be argued that TQM can be successfully implemented when a national culture is taken into consideration. This means that we can assert that TQM implementation efforts are significantly related to national culture. TQM may require a culture shift on the part of all employees within an organisation. It seems likely that the best TQM results can be achieved only when an open and cooperative culture is created and supported by top management and employees, based on teamwork and customer focus. To achieve success in TQM, top managers quite possibly need to ensure that the approach is applied to all facets of the organisation through sufficient behavioral modification for employees.

**4. Data Collection Methods:**

In this research, the population consists of three banks (Jumhouri, Sahara, and Wahda), and their branches. The banks were selected over three geographic regions: Tripoli, Benghazi, and Misurata. The cities were chosen for the following reasons: the central headquarters of these banks and many of their branches are located in these cities; over half of the Libyan population lives in these cities; and, finally, the limited time and funds available for the researcher. Comprehensive Survey data were collected from (90) branches in these cities. This survey used questionnaires as the main tool; collecting data through self-administered questionnaires were used as the main data collection method. This method was used because it was the most appropriate tool to suit the Libyan environmental conditions. A total of (600) questionnaire was distributed within the three banks and their branches; the sample comprised all general managers, managers of middle management, and supervisors. (467) questionnaires were returned, (12) of which were unusable (incomplete); therefore, a total of (455) questionnaires were usable. This number equates to a high response rate of (79.42%). All the data in these questionnaires were entered into the SPSS programme for analysis.

## 5. Reliability and Validity Evaluation

The Cronbach alpha showed the validity of the independent and dependent variables, which was the reliability coefficient ranges from (0.780 to 0.895), as shown in the table (1):

**Table (1)** Cronbach's alpha results for independent and dependent variables

| No | Factors | Number of items | Cronbach's Alpha |
|---|---|---|---|
| 1 | Top management Commitment | 6 | 0.884 |
| 2 | Customer focus and satisfaction | 6 | 0.895 |
| 3 | Employee Training | 6 | 0.860 |
| 4 | Employee involvement | 5 | 0.780 |
| 5 | Communication and information system | 5 | 0.889 |
| 6 | Continuous improvement | 7 | 0.849 |
| 7 | National culture | 10 | 0.876 |

Table(1) shows that the reliability coefficients of variables were above 0.70, which is considered acceptable. Those figures indicate that the scales developed were reliable. Consequently, the measuring instrument and the construct developed specifically for research purposes are reliable and have considerable internal consistency reliability. The reliability values indicate that the components of each constructor variable arc all related to the overall construct of the variable and to the overall construct within the domain of each category in which the variable exists.

## 6. Data Analysis and Statistical Methods

The Wilcoxon test was used to determine the levels of TQM implementation in Libyan banking and used a multiple regression analysis to explore the influence of national culture on the level of TQM implementation. To achieve research objectives, the questionnaire was based on the six TQM factors, which included top management commitment, customer focus and satisfaction, employee training, employee involvement, communication and information systems, and continuous improvement. Table (2) summarises the Pearson correlation among these (6) TQM factors as dependent variables:

**Table (2)** Correlations for TQM factors

| Factors | TMC | CFS | ET | EI | CIS | CI |
|---|---|---|---|---|---|---|
| **Top management commitment (TMC)** | **1.000** | | | | | |
| **Customer focus and satisfaction (CFS)** | **.962** .000** | **1.000** | | | | |
| **Employee training (ET)** | **.966** .000** | **.916** .000** | **1.000** | | | |
| **Employee involvement (EI)** | **.985** .000** | **.952** .000** | **.940** .000** | **1.000** | | |
| **Communication and information system (CIS)** | **.952** .000** | **.989** .000** | **.913** .000** | **.935** .000** | **1.000** | |
| **Continuous improvement (CI)** | **.963** .000** | **.950** .000** | **.954** .000** | **.950** .000** | **.949** .000** | **1.000** |

**Correlation is significant at the 0.01 level (2-tailed)

Table (2) shows that all correlations were highly positive and statistically significant. The table also shows that the highest correlation of (0.989) was for the correlation between communication and information systems and customer focus and satisfaction, while the lowest correlation, (0.913), was for the correlation betweencommunication and information systems and employee training. The correlation matrix shows that there is a very high positive correlation between TQM factors. The Pearson correlation coefficient is statistically significant at the (0.01) level. The level of implementation of TQM was measured by a group of questions built on a five-point Likert scale (1=Strongly disagree, 2=Disagree, 3=Neither Agree nor Disagree, 4= Agree, 5=Strongly Agree). The respondents were asked to answer to what extent they agreed or disagreed with the given statements. The extension is determined by 5-1= 4. In order to identify the length of each scale (statement) 4/5 = 0.80 is computed (Diamond and Jefferies, 2001). Adding (0.80) then determines the upper limit for each cell to the code of Strongly Agree, Agree, Neither Agree nor Disagree, Disagree and Strongly Disagree. The following table (3) shows the range of each scale:

**Table (3)** Summary of the range of scales

| Degree of agreement | Points | Level of implementation | Scale range |
|---|---|---|---|
| **Strongly disagree** | **1** | **Very low** | **From 1 to 1.80** |
| **Disagree** | **2** | **Low** | **181 to 2.60** |
| **Neither agree nor disagree** | **3** | **Medium** | **2.61 to 3.40** |
| **Agree** | **4** | **High** | **3.41 to 4.20** |
| **Strongly agree** | **5** | **Very high** | **4.21 to 5** |

Source: Designed by the researcher

In addition, to achieve the first objective, the Wilcoxon test was used to examine the following hypotheses for measuring the level of TQM implementation in Libyan banks:

1. TQM implementation is very low when:

- **$H_0$: median<=1.80**
  **$H_1$: median >1.80**

2. TQM implementation is low when:

- **$H_0$: median<=2.6**
  **$H_1$: median>2.6**

3. TQM implementation is medium when:

- **$H_0$: median<=3.40**
  **$H_1$: median >3.40**

4. TQM implementation is high when:

- **$H_0$: median<=4.20**
  **$H_1$: median> 4.20**

5. TQM implementation is very high medium when:

- **$H_0$: median<= 5**

**$H_1$: median> 5**

Table (4) shows descriptive statistics and the Wilcoxon test used to identify the level of TQM implementation in Libyan banks:

**Table (4)** TQM implementation level in Libya banks

| TQM Factors | Descriptive statistics of TQM factors | | Very low implementation $H_1$: median>1.8 | | low implementation $H_1$:median>2.6 | |
|---|---|---|---|---|---|---|
| | Mean | SD | Wilcoxon | p-value | Wilcoxon | p-value |
| Top managementCommitment | 2.522 | .8226 | 92798 | .000 | 45249 | .991 |
| Customer focus and satisfaction | 2.549 | .8802 | 91915 | .000 | 88048 | .913 |
| Employee training | 2.524 | .8554 | 90992 | .000 | 45284 | .991 |
| Employee involvement | 2.503 | .8032 | 83477 | .000 | 31995 | .992 |
| Communication and information system | 2. 509 | .9109 | 84220 | .000 | 44845 | .794 |
| Continuous improvement | 2.549 | .7992 | 92819 | .000 | 48878 | .857 |
| Total | 2.523 | .8047 | 92794 | .000 | 47349 | .946 |

Descriptive statistics reveal that the level of TQM implementation in Libyan banks is low. The distribution of the mean scores for this indicator and for all (6) factors is divided into five bands: very high (score of 4.21 to 5), high (score of 3.41 to 4.20), medium (2.61 to 3.4), low (1.81 to 2.6), and very low (1 to 1.8), derived from the measurement instrument scales. In addition, this table illustrates the low level of implementation of top management commitment in Libyan banking. The mean of all items for Top Management Commitment was (2.522), which was in the range (1.81 to 2.6), indicating a low level of implementation. In addition, Customer Focus and Satisfaction had a mean of (2.549) whileEmployee Training (2.524), Employee Involvement (2.503), Communication and Information Systems (2.509) and Continuous Improvement (2.549) all had means in the low range. The overall mean (2.523) shows that TQM was implemented in Libyan banking at a low level.

These results were confirmed using the Wilcoxon test. For top management commitment, **$H_1$ ($H_1$: median>1.80)** is accepted since its p-value=.000, which means that the level of TQM implementation is not very low. The p-value is not significant at the .05 level, which indicates that the level of top management commitment is low in the Libyan banking sector. **$H_1$ ($H_1$: median>2.6)** is therefore rejected, which shows that the level of TQM implementation is low. In the same vein, the table also shows **$H_1$ ($H_1$: median>2.6)** for all TQM factors, meaning that the level of TQM implementation is low for all TQM factors, namely customer focus and satisfaction, employee training, employee involvement, communication and information system and continuous improvement, which were not significant at the .05 level. The findings show that the level of TQM implementation factors

in the Libyan banking was low. The overall conclusion is that the level of TQM implementation factors in the Libyan banks was low, which was proven through the findings from the questionnaire. This low level of TQM implementation may be due to the weakness of organisational culture, or to the influence of national culture, or to the barriers or other constraints present in the Libyan environment. The following is a summary of the results of the evaluation of TQM factors in Libyan banks:

**1. Top management commitment**:

It was concluded that there was a low level of top management commitment towards TQM implementation in the Libyan banks. Thus, it could be argued that top management commitment appears to be a limiting factor in achieving progress towards a high level of TQM implementation in Libyan banks. This result revealed that most Libyan banks were still operating using a traditional management style.

**2. Focus on customer and satisfaction:**

This study revealed that customer focus and satisfaction was at a low level in Libyan banks. The Libyan banks appear to devote little attention to customers and their satisfaction.

**3. Employee training:**

This study revealed that poor employee training was a factor impeding, to a high degree, the level of TQM implementation in the Libyan banks. This can be seen as an indication of a lack of commitment and seriousness from the banks towards the development of a quality culture. The results also indicated that training methods were not well enough designed to cover the TQM implementation process, and the training needs were also not well defined.

**4. Employee involvement:**

The results showed that employee involvement in TQM implementation was found to be at a low level amongst Libyan banks. The findings revealed that the departments in Libyan banks did not encourage their employees to give suggestions, were not involved in decision-making, and were not involved in quality-related activities; thus, managers did not play a contributory role to promote the achievement of successful employee involvement in the successful implementation of TQM.

**5. Communication and information systems**

The findings show that the Libyan banks surveyed lacked an effective communication and information system for the implementation of TQM. In addition, the results showed that the levels of communication and information sharing were low. This represented an obstacle to TQM implementation, in the form of both weak communications between top management and employees and between the banks and their customers.

**6. Continuous improvement**

The findings showed that there were low levels of continuous improvement in the operations of Libyan banks. Despite, The Libyan banks also were trying to implement continuous improvement through employee training and by updating technology, but they continued to suffer from a slow pace of services improvement**.**

**7. The impact of national culture on TQM implementation**

Multiple regression used to explore the impact of national culture on TQM implementation factors. For this purpose, the following hypotheses were formulated below.

**$H_0$: National culture dimensions have no effect on TQM implementation factors.**

**$H_1$: National culture dimensions have an effect on TQM implementation factors.**

Pearson's correlation coefficients between national culture and TQM implementation factors were calculated, as shown in Table (5), as a first step towards the multiple regression analysis:

**Table (5):** Results of the correlation between national culture dimensions and TQM factors

| Factors | TMC | CFS | ET | EI | CIS | CI | PDI | IDV | UAI | MAS | LTO |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Top management commitment (TMC)** | **1.000** | | | | | | | | | | |
| **Customer focus and satisfaction (CFS)** | **.962**** | **1.000** | | | | | | | | | |
| **Employee training (ET)** | **.966**** | **.916**** | **1.000** | | | | | | | | |
| **Employee involvement (EI)** | **.985**** | **.952**** | **.940**** | **1.000** | | | | | | | |
| **Communication and information system (CIS)** | **.952**** | **.989**** | **.913**** | **.935**** | **1.000** | | | | | | |
| **Continuous improvement** | **.963**** | **.950**** | **.954**** | **.950**** | **.949**** | **1.000** | | | | | |
| **Power distance (PDI)** | **-.116*** | **-.143**** | **-.110*** | **-.124**** | **-.129**** | **-.103*** | **1.000** | | | | |
| **Individualism (IDV)** | **.243**** | **.218**** | **.257**** | **.221**** | **.209**** | **.260**** | **.135**** | **1.000** | | | |
| **Uncertainty avoidance (UAI)** | **.005** | **-.032** | **..013** | **-.004** | **-.027** | **.002** | **.159**** | **.273**** | **1.000** | | |
| **Masculinity (MAS)** | **-.208**** | **-.239**** | **-.183**** | **.224**** | **-.234**** | **-.192**** | **.007*** | **.151**** | **.113*** | **1.000** | |
| **Long term orientation (LTO)** | **.008** | **.002** | **.001** | **.013** | **-.007** | **.002** | **.122**** | **.207**** | **.296**** | **.091** | **1.000** |

**Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

The correlation in Table (5) shows that there was a positive correlation between the TQM factors and the individualism dimension. The correlation coefficient was statistically significant at the (.05) level. In addition, there was a negative correlation between the TQM factors and the power distance and masculinity dimensions. On the other hand, the table shows that there was no relationship or correlation between the dimensions uncertainty avoidance and long-term orientation with TQM implementation factors. There was no statistically significant correlation between the TQM factors and uncertainty avoidance and long-term orientation dimensions. Consequently, these variables are excluded from the analysis. This result represents a contribution to knowledge in this area, particularly in Arab countries and North Africa.

Multiple regression was used to test the influence of the remaining national culture dimensions (power distance, individualism, and masculinity) on all TQM implementation factors. The regression Model 1 in Table (6) shows that three independent variables (power distance, individualism, and masculinity) had a significant contribution (p-values=.000) to themodel. In addition, the Variance Inflation Factor (VIF) values were (1.019), (1.042), and

(1.023), which is below 10. There was, therefore, no multicollinearity problem needing correction in the model with independent variables. The results of the model are shown in Table (6):

**Table (6)** Coefficient results for TQM implementation factors Coefficient (a)

| Dependent Variables TQM Factors Model 1 | Independent Variables: National Culture Dimensions | | | | | | | | | Model Summary | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Power distance | | | Individualism | | | Masculinity | | | | |
| | Beta | t | p-value | Beta | t | p-value | Beta | t | p-value | $R^2$ | Adj-$R^2$ |
| Top management Commitment | -.155 | -3.526 | .000 | .302 | 6.797 | .000 | -.252 | -5.718 | .000 | 0.144 | .138 |
| customer focus and satisfaction | -.180 | -4.108 | .000 | .294 | 6.439 | .000 | -.280 | -6.404 | .000 | 0.155 | .149 |
| Employee Training | -.150 | -3.401 | .000 | .311 | 6.976 | .000 | -.229 | -5.174 | .000 | 0.138 | .132 |
| Employee involvement | -.161 | -3.651 | .000 | .282 | 6.340 | .000 | -.266 | -6.021 | .000 | 0.142 | .136 |
| Communication and information systems | -.165 | -3.738 | .000 | .273 | 6.131 | .000 | -.274 | -6.213 | .000 | 0.145 | .139 |
| Continuous improvement. | -.144 | -3.280 | .000 | .316 | 7.097 | .000 | -.239 | -5.419 | .000 | 0.143 | .137 |

The regression model in Table (6), shows that the value of the multiple coefficients of determination were R2= (14.4 %), (15.5%), (13.8%), (14.2%), (14.5%), and (14.3), which means that the variation in top management commitment, customer focus and satisfaction, employee training, employee involvement, communication and information systems, and continuous improvement respectively can be explained by the variation in power distance, individualism, and masculinity dimensions.

The table also shows that there was a statistical significance at the 0.001 level (p=.000), meaning that individualism had a positive influence on top management commitment, customer focus and satisfaction, employee training, employee involvement, communication and information systems, and continuous improvement respectively whilst power distance and masculinity had a negative influence on all TQM factors.

In addition, individualism had the largest impact on top management commitment, customer focus, and satisfaction, employee training, employee involvement, communication and information systems, and continuous improvement based on the size of its standardized coefficients were (beta=0.302, 0.294, 0.311, 0.282, 0.273, and 0.316) respectively, which was larger than power distance and masculinity dimensions.

The ANOVA results shown in Table (7) shows that the values of F-statistical, which was statistically significant at the .001 level (p=0.000). Power distance, individualism, and masculinity dimensions therefore had an influence on all TQM implementation factors.

**Table(7)** TQM implementation factors ANOVA result

| Dependent Variables TQM Factors Model 3 | F | Sig |
|---|---|---|
| **Top management commitment** | **25.264** | **.000a** |
| **customer focus and satisfaction** | **27.513** | **.000a** |
| **Employee Training** | **24.102** | **.000a** |
| **Employee involvement** | **24.852** | **.000a** |
| **Communication and information system** | **25.003** | **.000a** |
| **Continuous improvement.** | **25.101** | **.000a** |

a. Predictor (constant), masculinity, power distance, individualism

b. Dependent variable: TQM implementation factors

Through multiple regression, analysis clearly shows that one of the independent variables (individualism) had a positive influence on all TQM implementation factors. This analysis also shows that two of the independent variables (power distance and masculinity) had a negative influence on all TQM implementation, with a regression coefficient that was statistically significant at the (.001) level.

## 8. Conclusions:

Many organisations in developed and developing countries have started to implement TQM as a way of improving the quality of products and services in order to gain customer satisfaction, improving performance, and enabling them to compete in global markets.

This first objective of this study was to evaluate the level of TQM implementation in Libyan banks. To achieve this, the hypotheses were formulated based on the literature review and previous research in order to meet the objectives of the study and find possible explanations for the investigated relationships among variables.In addition, the hypotheses were tested through the Wilcoxon test for the same purpose. The overall conclusion is that the level of TQM implementation in the Libyan banks was at a low level.

To achieve the second objective, Hofstede's dimensions (1980, 1991, and 2005) were selected to explore the impact of the national culture dimensions on TQM implementation in Libyan banks. The findings showed there was a positive relationship between the dimension 'individualism' and TQM implementation factors. In addition, there was a negative relationship between the dimensions 'power distance' and 'masculinity'; and TQM implementation factors. Furthermore, the findings illustrated that there was no relationship between the dimensions 'uncertainty avoidance' and 'long term orientation' across all the TQM implementation factors in the Libyan banks. In addition, the study found that the individualism dimension had a positive influence on all the TQM implementation factors in the Libyan banks. This study also found the dimensions power distance and masculinity had a negative influence on all TQM implementation factors in Libyan bank**s.**

## 9. Practical recommendations for Libyan banks

Based on the conclusions above, the following are the main recommendations, which might be of use in raising the level implementation of TQM in the Libyan banks:

1. Top management should recognise that TQM could achieve tangible business advantages, and so strive to achieve the several benefits of TQM implementation to benefit the organisation. This belief should be the driving force informing top management commitment and involvement, which should then be achieved through the development of a comprehensive quality policy, promoting a quality culture among employees, and improving their skills, as-well-as providing a clear strategic vision for the organisation.

2. A focus on customer satisfaction is a vital factor in TQM implementation; thus, Libyan banks require a better understanding of their customers' needs and expectations. They also should pay more attention to how to satisfy these customers.

3. Libyan banks should determine the training needs of their employees systematically, and put more emphasis on training in TQM for employees at all levels, which will lead to continuous improvement in their processes.

4. Employee involvement is an important factor in the implementation of TQM. Libyan banks should pay more attention to promoting employee involvement in the decision-making process, and delegation of authority and responsibilities. This will make all employees feel they have the responsibility and authority to participate in decision-making and problem solving at the appropriate operating levels.

5. Libyan banks should be encouraged to appreciate the importance of effective communication across functions and work units, focusing on increasing and encouraging communication between different departments, sections and units to increase efficiency in the workplace and meet customer needs. It is ideal to adopt information systems and new technology for this purpose

6. Continuous improvement is an important factor in TQM. The Libyan banks need to give this factor further consideration to affect a constant improvement to products, services, and organisational systems.

7. Libyan banks should appreciate that effective implementation of TQM requires an organisational culture that encourages open communication and employee involvement to facilitate change and provides the resources necessary for continuous improvement. This requires a change in the culture, behaviour, attitudes and working practices of employees.

8. Managers in Libyan banks should also appreciate that implementing TQM takes time, effort and requires change throughout the entire organisation. A cultural and behavioural shift in the mind-set of management in the Libyan banks, especially top management, is necessary if Libyan banks want to successful implement TQM with high levels of implementation.

9. This study confirms that attempts to implement TQM in Arab countries, especially in Libya, should take account of the influence of national cultures before the implementation **of** TQM.

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