SSHJ Everant ISSN-2456-2653

Social Science and Humanities Journal

CrossMark

Vol. 05(11). 2021

# Continuous Quality Improvement of Financial Reporting in the Light of Total Quality Management (TQM)

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**Abstarct**

Total quality management (TQM) for state-owned companies has special importance since it performs an influential role of the economic activity. It represents a crucial part to improve quality of financial reporting via greater control over information security which concentrates on aspects that prevent occurrence high risks of deviations or manipulations. In addition to its efficiency, objectivity and activation of quality information can be transmitted. These communication procedures can be auto enabled via information systems which saves and shares information among all parties with setting the sequence of processes. The processes will be codified on the transaction according to activation measures of inputs quality, transactions and financial data outputs and then analyzing control over accounting information. The control levels on the applications in financial information technology environment set to three levels as follows: preventive control, detective control (diagnostic) and corrective control. As already mentioned, a suggested pattern was built which identifies the type of relationship between independent variables (requirements of total quality management) and the dependent (quality of financial reporting) where the total quality management (TQM) has been totally compatible with quality of financial reporting.

**Key words**: Kaizen, quality, quality of financial reporting, concepts of total quality management

## REASEARCH METHODOLOGY

The research contents will be displayed according to the following methodology:

### 1-1 Importance of the Research

The research importance is arising from the significance of both the total quality management (TQM) and financial reporting due to their influence in the activities of economic entities the obligation to the quality activities requires to classify quality costs in accordance with competitive business environment. Therefore, the interest in total quality management (TQM) via the quality of financial reporting will lead to availability of extra new information which will be useful in the planning and control processes in addition to performance evaluation of the economic entities which influence on the continuous improvement,

minimizing costs and improving the products quality consequently reducing decisions making process.

**1-2 Problem of the Research**

When the economic entities do not identify financial reporting quality in the light of concepts of total quality management (TQM) and its disclosure will affect the activity and efficiency of its performance, under the modern environment which is followed by several subsequent changes therefore, the need to new performance indicators and measures has appeared which have to be more suitable with these changes represented by indicators and measures of total quality costs. Which is therefore the study problem can be expressed in the scope of economic entities interest within modern environment under the concept of financial reporting quality and its relationship with total quality management (TQM) in the sense of quality of accounting information.

**1-3 Objectives of the Research**

In terms of the study problem and its importance, Fundamental (Primary)ally the study objective concentrates on diagnosing and identifying the relation and impact of total quality management (TQM) in the financial reporting quality by stating contents and limits of this relation in level of a suggested model in addition to the description of TQM requirements and financial reporting quality to be diagnosed in a suggested model and to identify the costs of financial reporting quality in terms of concepts of total quality management (TQM) via its four elements ( prevention , evaluation, the internal and external failure) in statements of financial reporting disclosure .

**1-4 Hypothesis of the Research**

The study aims to test the following principal hypothesis:

(There is a relationship of positive correlation between total quality management (TQM) and financial reporting quality to achieve continuous improvement in the quality of accounting information)

**Conceptual Framework for Financial Reporting Quality**

**1-2 Concept of Financial Reporting**

The financial reporting quality means the degree of accuracy of financial reporting information to reflect the reality of the company operations as well the reality of its economic position and the outcomes of its operations. Therefore, the quality of accounting information will relate and effect on both the balance sheet and income statement. (Salakjit, 2011: 155- 156)

The conceptual framework of accounting contributes to improve the quality of financial reporting which is considered as a cornerstone in preparing high quality financial reports." the quality of financial reporting will maximize remarkably when the accounting standards as well decisions taken in fulfilling the process relies on logically connected concepts. As we hope via sharing our opinions and experiences with standards setters and others who may have a close relationship with this matter. We have to participate in preparing thoughtful framework of total accounting of high quality which will enable the standard setters and practitioners to better meet the continuous challenges that would face preparing financial reports ". Jan mentioned. (Jan Mc Cahey , 2013: 2) The quality of financial reporting connects with stakeholders especially shareholders involved in this information. The shareholders have to be able to use financial reporting information to make a decision and the more useful of financial information to make a decision, the higher quality of financial information will be.

The quality of financial reporting is defined as "truthful representation for information stated in the financial reports." (Ferrero, 2014:52)

The Financial Analysts Federation defines quality of financial reporting as "clarity and transparency of financial reports and availability of information in proper time ". The special financial reports committee of the American Institute of Certified Public Accountants (AICPA) defines the quality as "the ability to use the information in the field of forecasting and the information suitability to the purpose of obtaining it.

In addition, quality of financial reporting can be defined as" the accuracy there by financial reports can transfer information on transactions in the company including the expected cash flows in order to inform shareholder investors on the information. (Verdi ,2006,:2)

Moreover, quality of financial reporting defined as "activities being prepared to serve the needs of accounting information of the external users who lack the power to identify the financial information needed, and who use information which the management delivered to them.( Lewis & Pendrill , 2001:10)

### 2-2 Objectives of Financial Reporting

The True blood committee issued statement of financial accounting concepts No (1). The statement indicates that external financial reporting process via companies is not a goal by itself, however, it is a source of useful information delivered by the management to financial statements users who can't access the information in another way. It also mentioned that the overall objective for the financial report is to give the users an opportunity to make their choice among alternative practices for limited resources which are considered more important than the needs of the auditors in developing accounting standards.

Whereas the aims of financial reporting are:

A. To provide current and potential investors as well creditors and other users with useful information to make decisions in investment, lending and other wise decisions.

B. To assist current and potential investors as well creditors and other users in estimating the volume, timing, and fluctuation of received cash and other factors which affect liquidity.

C. Providing information of the company's economic resources, as well the source and usage of the resources.

D. Providing information pertaining to show the financial performance of the company via measuring revenues and its elements to assist in estimating the company's expected capabilities.

E. To provide information which deals with how the management bear its responsibility towards shareholders with regard to monitor the company resources.

### 3-2 Quality of Financial Reporting

The quality of any decision depends Fundamental (Primary)ally on quality of information submitted. It is the steering which guides the company and its decision-makers therefore, the accounting information is considered as a link among companies and outside parties since companies submit its financial reports after measuring and processing financial events, consequently, the quality of accounting information flow as outputs to the accounting information system do not represent a subsidiary need but an urgent necessity for the company operation and related in its success and continuity.

Several specialized accounting bodies attempted to identify characteristics and quality of financial reporting. The best results which Financial Accounting Standards Board (FASB) have come up with was to issue the accounting concept No.

(2) (Qualitative Characteristics of Accounting Information) which covered all mechanism of recognition, measurement and reporting on the elements of the financial statements. In order for the outcome accounting information of the information system to have the feature of the required quality, it should have the benefit standard i.e. the information ability to meet the needs of certain resolutions with ongoing assessment to the benefit of the information in terms of its relation to the decision which is made for it.

### 1-3-2 Fundamental (Primary) Characteristics of Accounting Information

The Fundamental (Primary) characteristics related to the benefit of accounting information to make decisions which can be attained by two main conditions (or at least one of them) which are the participation in reducing the cases of uncertainty for the decision-makers and/or the contribution to increase the knowledge to the decision-makers. (IASB / FASB, 2010 :23)

**1-Relevance:** The paragraphs QC6-10 of the conceptual framework issued by the joint project FASB/IASB

Indicates that relevance information is the information which is capable of making change in the decision taken by the users.

According to what is stated in the conceptual framework project, under the feature of relevance, sub-characteristics fall.

**Predicative Value:** financial information involves a predictive value since it can be used as data in the processes which the users use to predict the future results. It's not necessary that the financial information has to be predictable or a report to involve a predictive value. Hence, the financial information that includes a predictive value is used by the users in submitting their own predications and relates to relevant information that can make a difference in resolutions through improving the predicative ability of the decision-maker. (Barua, 2005: 7)

**Confirmatory Value:** as Ferdy mentioned it, which means what confirms the truthfulness of the previous predictions or its correction and is equal to feedback value. The Financial Accounting Standards Board (FASB) and International Accounting Standards Board (IASB) have decided that according to joint project to use the confirmatory value within the relevance feature. (Ferdy & et al, 2009: 9)

**Materiality:** the materiality of accounting information is considered inherent feature and part of relevance feature where in this regard Jon and Kathleen mentions that the joint project submitted a recommendation not to classify the relative importance as a restriction however it should be to the side of relevance feature as it does not restrict the company's capacity to inform on accounting information. Thus, to identify the relative importance as a special item doesn't affect the resolutions of the standard-makers. Kathleen & Jon, 2011: 20)

**Faithful representation:** the second Fundamental (Primary) characteristics of the qualitative accounting information of Faithful representation and as it is mentioned in paragraphs QC12-14 of the conceptual framework issued by the joint project FASB/IASB, it expresses the integrity of the financial statements to display the economic phenomena and it is necessary to make the make the information useful for the decision. In order to truly represent these phenomena, the accounting information has to be complete, Neutrality and error free. (Ying Zhang, 2014: 21)

As one of the researchers (Obaidat, 2007: 28) defined it as the matching or agreement among characteristics. He described the phenomenon that has indications to show in the sense that numbers and description represent the actual availability in addition, Faithful representation

can be improved by supporting the financial statements and reports with facts.

**Substituting Credibility feature with Faithful representation**

The process of substituting credibility feature with Faithful representation has taken long time. As before issuing the bulletin No.(SFAC8), the credibility feature was one of the Fundamental (Primary) characteristics for the quality of accounting information while the Faithful representation characteristic was belonged to the subsidiary characteristics of the credibility feature. However, the definition of credibility feature was not clear enough which caused a misconstruction. The resulted estimates were blamed due to apply the accounting on the basis of fair value because it has no credibility and accuracy. With the publication of bulletin No.8, the term credibility was replaced by Faithful representation by illustrating the implications due to that. Consequently, the substitution will lead to understand the accounting estimates of fair value specifically.

According to what is mentioned in the conceptual framework, the feature of Faithful representation where sub characteristics falls under it. (Juij Renkas, 2016: 3)

**Completion:** In order to make Faithful representation applicable, there has to be a completion where the financial statements and reports have all requisite information for accurate representation of economic phenomena for the user to understand the event.

The whole information not only includes a summary of numeral accounting for the element of accounting but also includes all other facts necessary for financial information user to understand how the number was built and what it signifies.

**Neutrality:** Neutrality refers to that information has to affect its users as well shouldn't prefer the privilege of a group on another one because neutrality stands for all values related to justice.

**Error Free:** The material misstatement means the information is met to the minimum level of accuracy so that the information doesn't deface its representation to the events. It doesn't mean that the information is totally accurate since the majority of the financial data is based on estimates and judgments. ( Stice, 2013 : 25Stice &).

**2-3-2 Second Group: Enhancing (Secondary) Characteristics for the Fundamental (Primary) Characteristics**

The conceptual framework issued by the joint project FASB/IASB identified four qualitative characteristics for the accounting information that enhance and complete the Fundamental (Primary) ones. (Liana , 2012 : 1)

**1. Comparability:** refers to the ability to compare a company's financial statements for a financial period with those for a period or previous financial periods of the same company. Or to compare a company's financial statements with those of other companies for the same financial period. The financial information users utilize of making comparison for the purpose of taking decisions which related to the decisions of investment, funding and to track the company's performance and its financial situation from time to time and to make comparison among other companies.

**2. Verifiability:** means the agreement degree among the individuals who conduct the evaluation process using the same evaluation techniques i.e. the extent to which there is a high degree of consensus among accountants when using the same methods of evaluation and coming up with similar results of the economic events to achieve the characteristic of faithful representation too. (Nobes , 2014 : 29)

**3. Timeliness:** this characteristic means to make the accounting and economic information available to decision-maker in a time which makes it able to influence the decision-making process i.e. it has to be accessible to the decision-maker before it loses its importance to affect the decisions. (Beest , 2009 : 2-21)

**4. Understandability:** is considered one of the enhancing characteristics for financial information. To attain this purpose, it is supposed that users have little knowledge in accounting and economic activities and are willing to study the information at acceptable level of care and shouldn't exclude important information which is suitable to the needs of decision-makers which the financial reports must contain based on being not understood by the normal users, as it has sort of complexity and since the conceptual framework is the steering and guide to set the accounting standards. To achieve the characteristic of understandability, is considered as a principal demand to ensure that the standards handle complicated problems and produce a report and clear understood disclosure.

**Limitations or Constraints on Accounting Information Characteristics**

The conceptual framework issued by the joint project FASB/IASB identifies the need to make balance between benefits of financial reporting on accounting information and costs to provide such information. Both Boards have concluded that according to paragraph BC3.47 of the project, the cost is a valid condition on financial reporting and that the standard-makers, providers and users of accounting information should take into account to consider the new and potential benefits for the requirements of financial reporting. As both paragraphs QC35,36 indicate that financial reporting imposes costs and these costs are justified by benefits of financial reporting on them.

**Factors Influencing the Quality of Financial Reporting**

The quality of financial control is affected by many factors however the accounting research has suggested several factors which are likely to affect the quality of financial reporting. The most important of these factors are corporate governance and quality of accounting standards as follows:

**Corporate Governance**

Due to economic collapses and financial crises which many countries of the world have witnessed as well as the financial collapses took place to a number of large companies like Enron Worldcom in America in 2002.therefore, corporate governance has become subject of attention to professionals and academics in the field of accounting to restore the confidence of the dealers in the stock markets. The Organization for Economic Co-operation and Development(OECD) has defined corporate governance as "the direct control system to maximize enterprises value via activating transparency and efficiency mechanisms". (Lu & Chen, 2009, p.3537)

**Quality of Accounting Information**

On 19th July 2002, the European parliament has issued the European union law No.1606 that obliges European Union countries to apply the international standards in preparing International Financial Reporting Standards (IFRS). The International Financial Reporting Standards (IFRS) are issued by the International Accounting Standards Board (IASB) known previously as the International Accounting Standards Committee (IASC). The International Accounting Standards Board (IASB) that basically aims at developing the international accounting standards which will lead to provide information characterized by transparency and comparability to assist financial reports users in making the proper economic decisions as well

the implementation of IFRS will help in minimizing unmatched information between the management and stakeholders. For instance, the international accounting standard No.1 requires "financial statements exposure", the appropriate disclosure of information like assumptions and management's estimations with regard to accounting items especially those which have a high degree of uncertainty. Besides, the disclosure of the estimations that will have a crucial impact on the situation of the financial center and the enterprise outcome. Moreover, the items of financial statements must be identified which are possibly to be affected by accounting estimates. It is necessary that accounting information reflect the future financial aspects and possible implications to the known and expected risks. The adoption of international standards in preparing financial reports will lead to minimize processes of profits management (Latridis, 2010, p.149-195).

**Theoretical Framework to the Concepts of Total Quality Management (TQM)**

**1-3 Concept of Total Quality Management (TQM)**

The concept of Total Quality Management (TQM) is considered relatively recent management concepts, the authors and researchers have been interested in it for more than three decades ago. The quality is no longer restricted to the quality of merchandise provided to them too. In order to give a definition to the concept of (TQM), some of the writers and researchers' opinions have to be reviewed in this respect. (Crosby & Aqularoo,2000:36) sees (TQM)" represents the organized methodology to ensure the activities progress which have been already planned for where it is considered as one of the methods that assists to avoid problems occurrence via work to motivate and encourage the proper managerial behavior to attain the required performance by using material and human resources at high efficiency.

(Aquilano,et.al,2001:260 ) illustrates that it is "organization management as a whole towards upgrading all dimensions for goods and services of customer interest" .

(Heizer&Render,2001:175) define it as "quality assurance that includes all organization parts and whole transactions in the organization that starts from the phase of dealing with suppliers to deliver the merchandise or service to the customer".

(Packand,2002:3) confirms that (TQM) is "process of change for the organization in its culture, values, beliefs as well as its activities pertaining to jobs performance in harmony that makes quality responsibility lies on the shoulders of all employees in accordance with providing outputs of goods and services in accord with customers' requirements".

**2-3 Objectives of Total Quality Management (TQM)**

The are many goals can be accomplished via applying total quality management as (Beer,2003:623) sees that the goal of (TQM) includes: clearly identify customers' requirements and select suppliers who depend on quality. In addition, there are other objectives for (TQM) that are customer's satisfaction and deepening the idea that the customer is the one who runs the bank and making environment that supports and maintains the ongoing improvement and development and not only focusing on the quality of the outputs whether they are goods or services but also the quality of inputs and the quality of operations as well as to confirm the importance of the employees' participation in preparing and implementing the organization's plans to deliver the goods and services to the customers at affordable cost, proper quality and right place.

### 3-3 Principles of Total Quality Management (TQM)

The views of authors and researchers differ in determining the principles that Total Quality Management (TQM) depends on. Each one has his own opinion but they agree on several points that we will attempt as much as possible to illustrate in this aspect. They can be considered as fundamental principles on which integrated system to Total Quality Management can be established as follows: (Knowles,2011:11-12) (Russell & Taylor,2000:87)

**Customer Focus**

If the economic entities would like to a value for their customers, they need to be equal in understanding the customers, their requirements and expectations. The customer represents the axis of the economic entity operation and its back up force whether it is productive or service providing since its existence and progress depend mainly on its customers from the notion that no customers no production. On this basis, each economic entity has to understand the current and future needs and requirements for the customers and trying to meet their needs and expectations.

**Leadership:** The Total Quality Management (TQM) starts with the commitment of the senior management, without it the quality becomes just a slogan or sign that has no impact or activity to build quality, there is no way but senior management commitment. The economic entity leadership is responsible for setting goals with unified trend of the economic entity in a coherent dimension and integrated at all sides. It has to create a suitable work environment for the employees and maintain it to ensure their active participation and achieving these objectives.

**Involvement of People:** People at all levels are the essence of economic entity and their full involvement enables their abilities and hobbies to be used for the organization's benefit as a result to that.

**Process Approach:** A desired result is achieved more efficiently when activities and related resources of the economic entity are managed as a process model.

**System Approach to Management:** The managing of interrelated processes as integrated system contributes to the effectiveness and efficiency in achieving the objectives as well as performance development and increasing productivity through merging the primary concepts and looking at economic entity a comprehensive view enables to create aspects of compatibility among elements.

**Continual Improvement:** Continual development must be made the constant, permanent and continuous goal of economic entity in all circumstances and situations, in order to improve the processes that lead to quality improvement

**Factual Approach to Decision Making:** Effective decisions i.e. decisions with positive impact are based on reliable data and information as well realistic studies.

**Mutually Beneficial Supplier Relationships:** The development of the qualitative level of the economic entity and its suppliers depends on the availability of mutually beneficial relationship. In order to manage this relationship with required efficiency, enhance the ability to reach a mutual benefit for each party by increasing the added values.

**Strategic Focus:** There must have been a commitment to the strategic quality tool. If the economic entities want to survive and grow, they have to provide a value to their customers and to deal with that as essential element of the strategic goal as well creating and using the strategic vision all over the economic entity to

achieve the aims and the measures interrelated to it and this interest has a long term commitment.

### 4-3 Importance of Quality Management

Today, the economic entities give quality major interest and this interest in quality belongs to its impacts on the economic entity reputation, importance of the quality: (Heizer&Render,2011:223)

**Company Reputation:** any economic entity expects to have a quality reputation (good or bad). The importance of quality can be illustrated in realizing the new products, employees' practices and relations with suppliers.

**Product Liability:** the government holds the economic units that design, produce, or distribute

**Global Implications:** due to technology development, the quality has become a global concern. The competitive economic entities in the government affect the state economy therefore, the competitive economic entities have

competitive situation as well as its legal responsibility for the resulted damages due to usage the product or service. It can be explained in the following points which show the

to produce products of high quality defective products, harmful or harmful services, legal liability for damages resulting from their use.

to meet the global quality desires, design, price expectations. The bad products offend the state's profit and the economic entity as well as affect negatively in the payment balance.

### 5-3 Elements of Total Quality Management (TQM) and its Typology

The majority of the have agreed that costs of Total Quality Management (TQM) consist of prevention, appraisal, internal failure, and external failure costs and it differs from an economic entity to another due to the varieties of its activities which are as follow as:

**Table 1: Elements of prevention costs according to researchers' views**

| Elements of Prevention Costs | Resource | No |
|---|---|---|
| Quality planning-product design-operations costs-quality training-information-extra prevention costs | (Russell & Taylor, 2000:96) | 1 |
| Quality planning-preventive maintenance- product design - training- operations | (Arora,2008:835) | 2 |
| Engineering design - operations design-Equipment's preventive maintenance-quality training- Ensuring to attain the required quality standards | (Horngren,et. al, 2009:693) | 3 |

Resource: prepared by the researcher, based on the indicated resources next to it

**Secondly, Appraisal costs:** In order to identify non-conformance products with standards, the appraisal costs have to be spent that represent the costs of quality standard maintain via formal evaluations means for product quality, or they are the expenses of auditing and testing to make sure the product or process are acceptable with regard to the conformance with the specified quality requirements. (Chase,et.al,2001:269)

Krajewski et al., considers that appraisal costs are those attained costs during the evaluation of the achieved performance level for the quality of processes and products of economic entity. (Krajewski,et.al,2007:207)

As for the appraisal costs elements, they can be illustrated according to some of the researchers' views as stated in Table 2.

**Table 2: Elements of appraisal costs according to researchers' views**

| Elements of Appraisal Costs | Resource | No |
|---|---|---|
| Inspecting raw materials-inspecting production under operation- inspecting completed production – costs of calibration and maintenance of inspection and test instruments | (Drury,2008:549) | 1 |
| Inspecting raw materials –inspecting operations costs and manufacturing products on the production lines- inspection and test completed products | (Horngren,et al.,2009:693) | 2 |
| Inspecting raw materials - inspecting operations during production-final inspection for completed products- extra prevention costs | (Jackson,etal,2009:446) | 3 |

Resource: prepared by the researcher, based on the indicated resources next to it

**Thirdly, Internal Failure Costs:** These internal failure costs happen when the product cannot meet designed quality standards. Juran considers that these costs will disappear in case of there are no defects in the product before shipping it to the customer. Consequently, these costs are interrelated with errors or defects that happen inside economic entity moreover, they are costs that take place to find out a defective product before transfer and delivery to the customer. (Horngren,et.al,2009:662). These defective products are non-conformance to quality standards where the customer can refuse it in case of being delivered to him/her. This defect is discovered during or after production and before delivery to the customer. (Krajewski,et.al,2010:177)

As for the internal failure costs elements, they are consisting of a group of elements that can be illustrated according to some of researchers' opinions in Table 3:

**Table 3: Elements of internal failure costs according to researchers' views**

| Elements Of Internal Failure Costs | Resource | No |
|---|---|---|
| Scrap(Junk)-Remanufacturing- Retesting -Processes failure-Failure analysis-Downtime of production operations | (Russell & Taylor, 2000:96) | 1 |

| | | |
|---|---|---|
| Remanufacturing–Problems solving- Production and material losses- Scrap(Junk)-Time wasted(time lost) to handle the failure-Lowering price | (Stevenson,2007:410) | 2 |
| Scrap(Junk)- Restarting-Malfunctioning maintenance- Engineering operations-Manufacturing related to internal failures | (Horngren,et al.,2009:693) | 3 |

Resource: based on the indicated resources next to it

**Fourthly, External Failure Costs:** These external failure costs happen when the customer is delivered a non-conformance to the standards product and cannot meet his/her needs and expectations. Juran has confirmed that these expenses will disappear when there is no external defect. These expenses are aroused after the customer is delivered a product and they are related to his/her service. Therefore, they are expenses which aroused after a defective product is being delivered to the customer.

As for the external failure costs elements, they are consisting of a group of elements that can be illustrated according to some of researchers' opinions in Table 4:

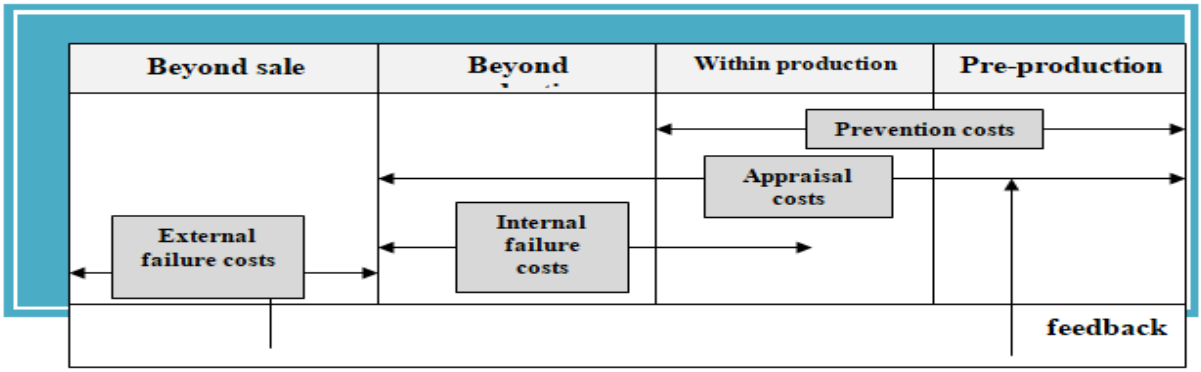
**Table 4: Elements of external failure costs according to researchers' views**

| Elements Of External Failure Costs | Resource | No |
|---|---|---|
| Customer Care-Warranty- Repairing returned Products-Return of lost due to sales loss | (Drury,2008:549) | 1 |
| Customer Care –- Engineering operations & Manufacturing related to external failures-Repairs during the warranty period | (Horngren,et al.,2009:693) | 2 |
| Warranty costs- Replacement of defective parts or Repairing cost - Compensatory claims – Sales loss | (Jackson, et al.,2009:446) | 3 |

Resource: prepared by the researcher, based on the indicated resources next to it.

After getting familiar with the primary elements of Total Quality Management (TQM). Thus, it is possible to illustrate the phases of evolution these costs before, during and after manufacturing as well as after sale. It can be indicated in Fig. 1.

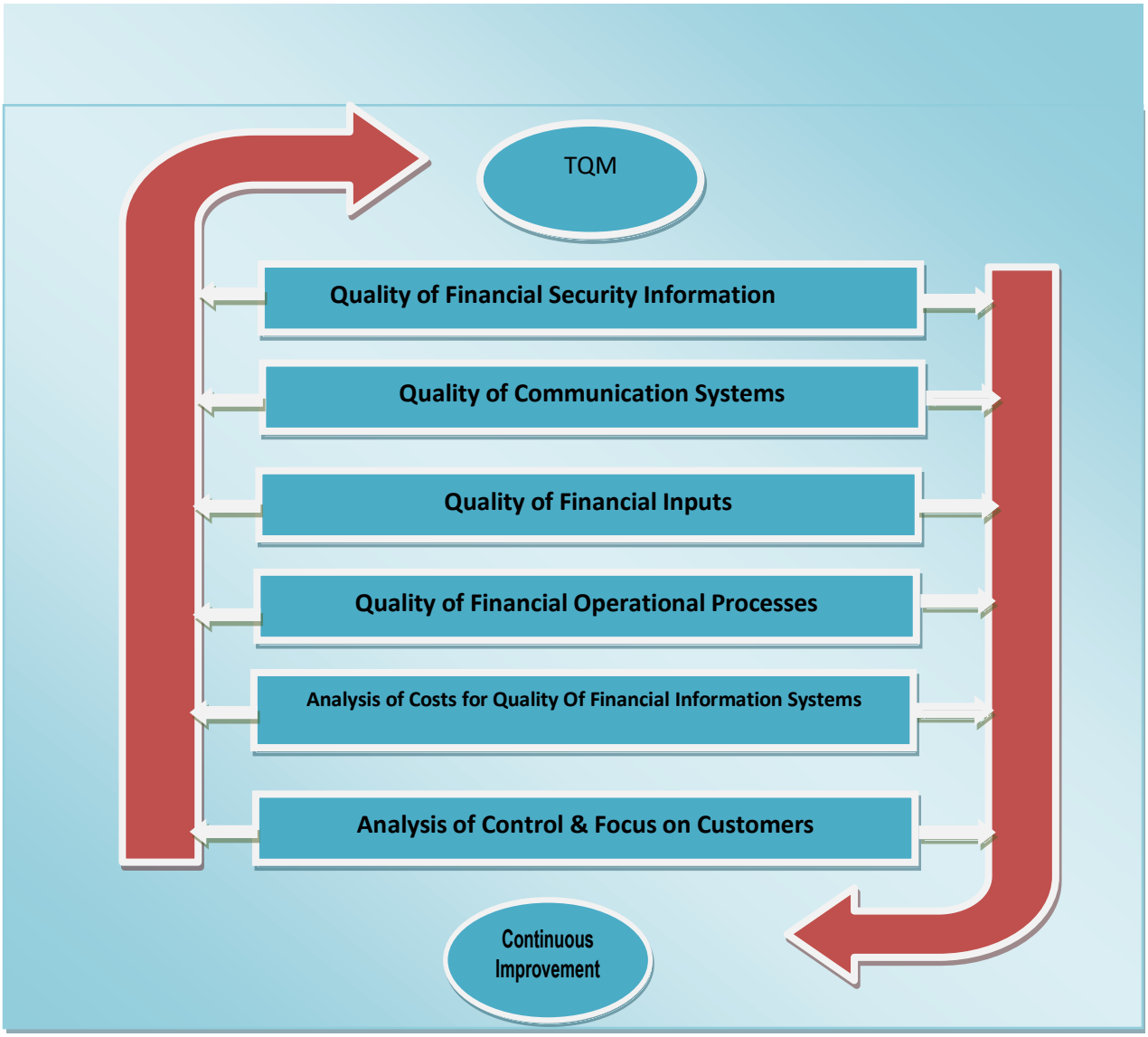
**Figure 1: Phases of evolution of Total Quality Management (TQM)**



Source: (Kinney, Michael R. , Prather-Kinsey, Jenice & Raiborn, Cecily "Cost Accounting : Foundations and Evaluation", 6th ed., Thomson South-Western, USA, 2006, p:666) .

A Suggested Pattern for Continuous Improvement for The Quality of Financial Reporting in terms of Concepts of Total Quality Management

**Figure 2: Continuous Improvement for Quality of Financial Reporting in terms of Total Quality Management (TQM)**




Source: Created by researchers

To attain the quality of financial information security, there should be enough requirements on resources of information technology to ensure of providing information to the management that meets seven fundamental standards which are:

**Effectiveness:** it is the ability to make an action to produce a tangible or intangible product whereas the characteristics of effective information system can be summarized to the ability of the system to provide information that the organization need to achieve its strategic and operational objectives. The information must be convenient and to be submitted on time.

**Confidentiality:** this concept has an economic extent as the effective information technology should attain the economic feasibility for the organization via making the maximum revenue of investment in it and providing the service within acceptable operational expenses which are in conformity with ability and needs of the organization as well as the best make use of material and human resources.

**Confidentiality:** this includes the required procedures to prevent unauthorized persons from accessing sensitive or confidential information. Therefore, the organization should realize the information sensitivity and the necessity to adopt the rule to grant the minimum level of accessibility to the users and information accessibility must be on the basis of the user's need to the information according to his/her job's nature and requirements.

**Integrity:** this concept includes many aspects where some of them is that information system is characterized by a level of integrity and independence as well as maintains the data validity which collects and contains. It shouldn't allow any adjustment or breach whether on the systems level or the structure. In addition, the technical team has to have integrity and independence and the data has to be saved, retrieved, modified, and cancelled by authorized personnel only and without overriding.

Moreover, this concept includes the completion, coherent, and unity of information system and provides the accurate information in time and via any channel of data accessibility channels that will give it the reliability for the parties that make use of the information and gives the organization as well its personnel credibility for they information they provide. Otherwise, the information system will be weak and unreliable without verifying the information. To achieve this standard, it has to have a right planning and a complete coordination by leaders, executives and technicians.

**Availability:** this concept includes the ability of information system to provide information for whom who may need it at times and places needed according to work benefit i.e. providing information within formal working hours or twenty-four hours with least amount of interruption in service as well as the ability of technical teams restore readiness after sudden breaks down occur due to several reasons such as technical malfunctioning, operation misuse, remiss of technical teams, or those due to the exhaustion of technical resources and overload them. It can also be due to security breach and disparities …. etc.

Consequently, only the management has to respond and confront these risks with deterrent solutions and right proper planning for the continuation of work at the organization and train the employees on how to handle the various situations that could take place.

**Compliance:** this concept comes to complete the standards of information quality where these standards should be compatible with set of institutional, model and legislative standards. As the information system should first comply with the organization's policies and strategies such as procurement and employment policies, technical strategic interests as well as the compatibility with regulations and legislations which set by official authorities to avoid any enquiries or violations that may negatively affect the organization. The two researchers consider that the organization has to list any current or

upcoming requirements and seek to comply with them to attain the governance of technical information.

**Reliability :** this concept includes integrity and coherence of information system components to make the business base in the organization so as to reply on it in performing daily works and depend on its outputs of data and statistics and reports to serve its operational and strategic business as well as enhancing decisions-making by depending on quantitative data which the information system provides after inputting ,processing and presenting it in templates to serve the strategic planning operations for the organization business. Then, the technology becomes an effective tool for the organization that contributes to achieve the ongoing competitive characteristic. With the escalation of reliance on technology, the concept of reliability has extended to include the ability of the system to expand and cover for the renewable needs for business managements and the extended equilibrium horizontally and vertically in data, applications, supplies, and human staffs due to this inevitable expansion in the activities of the organization. Otherwise, the information system becomes an obstacle to the expansion of the organization's business and activities.

### 5-2 Quality of Information and Communication System

The total and increasing reliance on information and communication systems: the business procedures are mostly manual or semi-manual i.e. they based on measures and business tasks which rely on paper documentation with all of its limitation. The business procedures are defined as the method in which a product is produced or services is provided. It is the recipe in which the inputs are collected and mixed together in order to produce a product whether it is a document or service. After the information technology is used by the organizations, it becomes possible to auto-enable these procedures and it is processed via information systems that save the information and share it among all parties with set of operations sequence and codify procedures to the process in accordance with the requirements as well as codify the use of authority granted to the employees according to regulations via granting and blocking usage authorities in the auto-procedures. However, there are risks of misusing information systems which require to isolate the information out of reach of mischievous persons to attain an acceptable level of information security and it is expressed by integrity, that is, the information is protected and maintained.

### 5-1 Quality of Financial Information

**Table 5: Costs of Quality of Financial Reporting in terms of Total Quality Management**

| No | statement | Costs of Quality of Financial Reporting in terms of Total Quality Management |
|---|---|---|
| 1 | **Preventive Costs** | 1- Costs of identifying the needs of the accounting information users<br>2- Costs of training of information system personnel<br>3- Costs of software programs<br>Costs of testing and inspecting system Figure 2: Continuous Improvement for Quality of Financial Reporting in terms of Total Quality Management (TQM)<br>To attain the quality of financial information security, there should be enough requirements on resources of information technology to ensure of providing information to the management that meets seven fundamental |

standards which are:

**Effectiveness:** it is the ability to make an action to produce a tangible or intangible product whereas the characteristics of effective information system can be summarized to the ability of the system to provide information that the organization need to achieve its strategic and operational objectives. The information must be convenient and to be submitted on time.

**Confidentiality:** this concept has an economic extent as the effective information technology should attain the economic feasibility for the organization via making the maximum revenue of investment in it and providing the service within acceptable operational expenses which are in conformity with ability and needs of the organization as well as the best make use of material and human resources.

**Confidentiality:** this includes the required procedures to prevent unauthorized persons from accessing sensitive or confidential information. Therefore, the organization should realize the information sensitivity and the necessity to adopt the rule to grant the minimum level of accessibility to the users and information accessibility must be on the basis of the user's need to the information according to his/her job's nature and requirements.

**Integrity:** this concept includes many aspects where some of them is that information system is characterized by a level of integrity and independence as well as maintains the data validity which collects and contains. It shouldn't allow any adjustment or breach whether on the systems level or the structure. In addition, the technical team has to have integrity and independence and the data has to be saved, retrieved, modified, and cancelled by authorized personnel only and without overriding.

Moreover, this concept includes the completion, coherent, and unity of information system and provides the accurate information in time and via any channel of data accessibility channels that will give it the reliability for the parties that make use of the information and gives the organization as well its personnel credibility for they information they provide. Otherwise, the information system will be weak and unreliable without verifying the information. To achieve this standard, it has to have a right planning and a complete coordination by leaders, executives and technicians.

**Availability:** this concept includes the ability of information system to provide information for whom who may need it at times and places needed according to work benefit i.e. providing information within formal working hours or twenty-four hours with least amount of interruption in service as well as the ability of technical teams restore readiness after sudden breaks down occur due to several reasons such as technical malfunctioning, operation misuse, remiss of technical teams, or those due to the exhaustion of technical resources and overload them. It can also be due to security breach and disparities etc.

Consequently, only the management has to respond and confront these risks with deterrent solutions and right proper planning for the continuation of work at the organization and train the employees on how to handle the various situations that could take place.

**Compliance:** this concept comes to complete the standards of information quality where these standards should be compatible with set of institutional, model and legislative standards. As the information system should first comply with the organization's policies and strategies such as procurement and employment policies, technical strategic interests as well as the compatibility with regulations and legislations which set by official authorities to avoid any enquiries or violations that may negatively affect the organization. The two researchers consider that the organization has to list any current or upcoming requirements and seek to comply with them to attain the governance of technical information.

**Reliability:** this concept includes integrity and coherence of information system components to make the business base in the organization so as to reply on it in performing daily works and depend on its outputs of data and statistics and reports to serve its operational and strategic business as well as enhancing decisions-making by depending on quantitative data which the information system provides after inputting ,processing and presenting it in templates to serve the strategic planning operations for the organization business. Then, the technology becomes an effective tool for the organization that contributes to achieve the ongoing competitive characteristic. With the escalation of reliance on technology, the concept of reliability has extended to include the ability of the system to expand and cover for the renewable needs for business managements and the extended equilibrium horizontally and vertically in data, applications, supplies, and human staffs due to this inevitable expansion in the activities of the organization. Otherwise, the information system becomes an obstacle to the expansion of the organization's business and activities.

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**5-3 Quality of Financial Inputs**

To provide a reasonable assertion that the inputs have been officially approved before processing them on the computer and these inputs have been properly prepared and registered in data files correctly with no loss or addition or duplication or inappropriate alteration and that it has been followed and reviewed correction of fault operations on time.

There is a set of methods for achieving the quality of financial inputs:

1)The use of financial groups via matching the number of transactions being entered with the total.

2)Using formal groups (code) via matching clusters of certain input numbers with specific number.

3)Logical test like testing endurance of the program for more than 24 hours a day.

4)Checking the digital sequence number like the verification of the program's acceptance of invoice numbers that violate the regular upward sequence.

**5-4 Quality of Financial Operational Processes**

The value of operational information. The failure to provide the information or malfunction occurrence in processing data will negatively affect the organization's reputation. The trust in its leadership and managerial teams will be shaken. Consequently, the leaders must pay attention to the necessity of dealing with electronic system in the organization as one of the most strategic assets and they have to support it and provide its technical, human and lead requirements and recognize the importance of its sustainability and protection from various dangers.

There are a set of techniques to achieve the quality of financial operations

1) Data Comparison Process: the data of two or more items must be identical in some cases before making any decision.
2) Files' titles: the files' titles need to be audited to ensure that the files are correct and updated and there should be using all external files' titles that are read by people and the internal ones which are written in a form recognized by the machines and data registry devices.
3) Recalculation of Batch Totals: the batch totals can be recalculated when an action is taken on each transaction registration, and compared with the values in the registry, and if there are any contradictions that may happen then this means that there are errors.
4) Orthogonal Balance Test: this can be calculated by multiple methods such as calculating the sum total, either by adding a column from the sum of the rows or by adding a row from the column totals. These two methods should give the same results.
5) Write protection mechanisms: These mechanisms provide protection against the process of overwriting or erasing data files stored on magnetic media.
6) Safety Procedures of Database Operations: Pre-set databases are used by a person in charge of them and their dictionaries, and a concurrent update is made to ensure the integrity of the operations. The data dictionary ensures that data materials are defined and used consistently.

**5-5 Quality of Financial Outputs**

Provide a reasonable assertion that the results of the processing operations (outputs) are correct and that the presentation of the outputs is restricted to authorized personnel only on time.

There are a set of methods for achieving quality financial outputs

| | | |
|---|---|---|
| | | 1. Matching the outputs of computers with the manual control totals.<br>2. Compare the number of units that were run with the number of units that were submitted for processing.<br>3. Compare a sample of processing outputs with the original input documents.<br>4. Correct the dates and number of processing times to determine which process is out of sequence.<br>**5-6 Analysis Costs of Quality of Financial Information**<br>4- The quality of financial information requires a cost: Adopting the quality of financial reporting requires a cost, which is the cost of devices, tools, equipment, software, employees' costs, operation and training as shown in Table 5.components<br>5- Costs of programs maintenance |
| **2** | **Appraisal Costs** | 1- Costs of checking and evaluating processes related to measure collecting and data entry<br>2- Costs of checking and evaluating operation processes<br>3- Costs of internal control of the information system outputs to ensure of its conformance to users' needs<br>4- Costs of program test |
| **3** | **Internal Failure Costs** | 1- Costs of maintaining duplicated data to be saved<br>2- Costs of maintaining incorrect data<br>3- Costs of debugging errors, re-start, reproduce reports and costs of rechecking, auditing to ensure of being correct |
| **4** | **External Failure Costs** | 1- Costs of handling complaints of system users<br>2- Costs of judicial and professional accountability due to unfair and incorrect outputs which the users rely on<br>3- Costs of losing the system its users due to shifting to alternative resources.<br>4- Costs of rebuild confidence to the system and convincing the users to return to the system |

## 5-7 Analysis of Control and Focus on Users

The levels of control on the applications in information technology environment are classified into three levels which are preventive control, detective control (diagnostic), and corrective control.

### Preventive Controls

It represents the first defensive line of the control structure and it helps to prevent the technologies negative impacts which were designed and aimed at minimizing repetition of undesired accidents occurrence. The strength of this control lies in commitment to the stipulated or required procedures then stay away from irregular events (undesired ones). It has to be taken into consideration in designing the control procedures (an ounce of prevention is worth a pound of cure) i.e. Prevention of errors and fraud is more effective as far as cost than discovering and correcting problems after they occur. On this level, the majority of undesired events can be prevented.

### Detective Control (Diagnostic)

It is the second line of defense after preventive control. It represents the devices, technologies, and measures aiming at identifying and detecting out undesired events that penetrate preventive control. This control detects certain types of errors by comparing between actual events and standards specified in advance. When a difference is detected, the alarm sound goes off to draw attention to the problem.

### Corrective Controls

It represents the procedures taken to stop the errors effects which have been detected. It is important to distinguish between the detective control and the corrective one. The detective control identifies the undesired events and draw attention to it whereas the corrective control fixes problems of all the errors which have been detected. Marshall & Steinbart consider that corrective control works on solving detected control problems via the followed measures to identify the cause of the problem then correcting the errors as well the difficulties due then adjusting the system to reduce the problem in the future or disappear them.

**Conclusions and Recommendations**

**These conclusions will be displayed as follows:**

1- There are several methods to develop information systems and improve quality of financial reporting, one of them is the continuous improvement and there should be a compatibility in the infrastructure of the information technology and a strategy to guarantee the success of total quality management.

2- Focusing attention of the parties who organize the profession and in charge of issuing the accounting standards on illustrating the measuring process and financial reporting so that makes the interest is far from technical aspects for accounting work to cover the future aspects of the process in terms of concepts of total quality management for its direct impact on qualitative characteristics to the quality of financial reporting in its disclosure of the financial statements and its reliance.

3- The quality of financial reporting in terms of concepts of total quality management relies on what the accounting information are categorized with qualitative characteristics which depend on the existence of coherent intellectual framework.

4- The total quality management complies all with quality of information systems as a cultural revolution because of the change it has made in the way of thinking of management and employees with regard to the focus on customer, practicing continuous improvement, managerial lead, interest in employees' participation as well as the interest in training and learning the techniques of total quality management.

5- The primary activities of the economic entities rely on information technology and information systems. Therefore, the reengineering of information systems includes total quality management which is considered as work priorities.

**The most important points recommended by the research as follows:**

1. The continuous improvement for accounting information system repeatedly and detect any developments take place in work environment in the light of concepts of total quality management. There must be an observation of the changes in the hardware, software and the documents or the measures to correct the errors, and to meet the new requirements or to improve the work efficiency.
2. The necessity of interest in the quality of financial reporting in terms of concepts of total quality management with no harm of competitive center of the organization because the disclosure of important information to the users will increase the confidence of the information users in the organization and raises it value and effect positively on the share price and the need for accounting standards to pay attention to developing information through concepts of goal orientation, business reporting.
3. Enhancing the quality of financial reporting in terms of concepts of total quality management that all different parties to

conduct their tasks with high effectiveness and efficiency by concentrating on the following:

- Pay more attention to information security which focuses on the fields that prevent high risks of deviations or manipulations as well as it has the efficiency, objectivity, and follows counter-measures to neutralize its practices.
- Activate the quality of information delivery, which has become enabling these access procedures automatically and this is done through information systems that retain and share information among all parties and with controlling the sequence of operations and codifying procedures on the transaction in accordance with the measures.
- To activate the quality of the inputs of the financial statements by providing reasonable assertion that the inputs have been officially approved before processing them on the computer.
- Activating the quality of operations in the financial statements through dealing with the electronic system in the organization as one of the most important strategic assets and they must support it and provide its technical, human and leadership requirements, and realize the importance of its sustainability and protection from various risks.

4. The necessity of spreading a culture of reliance on technology and the familiarity of professionals in modern technology methods, as well as trying to inform investors of the minimum level of this technology, which facilitates interaction with it and an understanding of the results provided by financial information in a way that achieves the total quality.
5. The professional and academic parties should seek to apply total quality management in the financial statements and its various tools to solve sophisticated accounting problems in financial reporting.

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