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CONTINUOUS QUALITY IMPROVEMENT OF FINANCIAL REPORTING USING TOTAL QUALITY MANAGEMENT

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ABSTRACT. Total quality management (TQM) for state-owned companies is essential since it influences economic activity. Moreover, it represents a crucial part of improving the quality of financial reporting via greater control over information security, which concentrates on aspects that prevent the occurrence of 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 that save and share information among all parties by setting the process sequence. The processes will be codified on the transaction according to activation measures of inputs quality, commerce, and financial data outputs and then analyzed over accounting information. The control levels on the financial information technology environment applications are set to three classes: preventive control, detective control (diagnostic), and corrective power. 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 comprehensive quality management (TQM) has been compatible with the quality of financial reporting.

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Introduction

Total quality management (TQM) and financial reporting are becoming increasingly important as they have an increasing impact on the activities of economic entities. The obligation to perform quality activities necessitates classifying quality costs under the competitive business environment. As a result, increased interest in total quality management (TQM) will result in improved financial reporting, resulting in the availability of additional new information that will be useful in planning and control processes and the evaluation of the performance of economic entities. They influence continuous improvement, cost reduction, and product quality improvement, and as a result, they shorten the time it takes to make decisions. When economic entities fail to identify financial reporting quality in the context of total quality management (TQM) concepts and their disclosure, the activity and efficiency of their

performance will suffer. In today's environment, which is characterized by numerous subsequent changes, the need for new performance indicators and measures has emerged. These indicators and estimates of total quality costs must be more suitable for these changes. Thus, the research topic may be articulated in terms of economic entities' interests in the current environment through financial reporting quality and its link to total quality management (TQM) in terms of accounting information quality.

1. Literature Review

1.1. The Financial Reporting Quality

Financial reporting quality means the degree of accuracy of financial reporting information to reflect the reality of the company's operations, its economic position, and the outcomes of its operations. Therefore, the quality of accounting information will relate and affect both the balance sheet and income statement (Salakjit, 2011: 155- 156). The conceptual framework of accounting contributes to improving the quality of financial reporting. It is considered a cornerstone in preparing high-quality financial reports. The quality of financial reporting will maximize when the accounting standards and decisions are taken in fulfilling the process relies on logically related concepts. We hope to share our opinions and experiences with standards setters and others who may have a close relationship with this matter. We have to prepare a thoughtful framework of total accounting of high quality, which will enable the standard setters and practitioners to meet better the continuous challenges that would face preparing financial reports (Jan Mc Cahey, 2013: 2). The quality of financial reporting connects with stakeholders, especially shareholders involved in this information. The shareholders have to use financial reporting information to make a decision. The more useful financial information to decide, the higher the quality of financial information. The quality of financial reporting is defined as a truthful representation of information stated in the financial reports (Ferrero, 2014:52).

The Financial Analysts Federation defines the quality of financial reporting as “clarity and transparency of financial reports and availability of information in proper time. The unique financial reports committee of the American Institute of Certified Public Accountants (AICPA) defines quality as the ability to use the information in forecasting and the information suitability to obtain it. In addition, the quality of financial reporting can be defined as accuracy. Thereby financial reports can transfer knowledge on transactions in the company, including the expected cash flows, to inform shareholder investors of the information (Verdi,2006, 2). Moreover, quality of financial reporting is 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, 2003:10).

The True blood committee stated financial accounting concepts No (1). The statement indicates that companies' external financial reporting process is not a goal. However, it is a source of valuable information delivered by the management to financial statements users who can't access the data in another way. It also mentioned that the overall objective for the financial report is to allow the users to choose 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, creditors, and other users with helpful information to make decisions in investment, lending, and otherwise.

- B. To assist current and potential investors and creditors, and other users in estimating the volume, timing, and fluctuation of received cash and other factors that affect liquidity.
- C. Providing information on the company's economic resources and the source and usage.
- D. Providing information about showing the company's financial performance via measuring revenues and its elements to assist in estimating the company's expected capabilities.
- E. To provide information that deals with how the management bears its responsibility towards shareholders regarding monitoring the company resources.

The quality of any decision depends on the Fundamental (Primary)ly on the quality of information submitted. The steering guides the company and its decision-makers; therefore, the accounting information is considered a link among companies and outside parties since companies present their financial reports after measuring and processing economic events. Consequently, the quality of accounting information flow as outputs to the accounting information system does not represent a subsidiary need but an urgent necessity for its operation and success and continuity. Several specialized accounting bodies attempted to identify the characteristics and quality of financial reporting. The best result 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. 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 specific resolutions with ongoing assessment to the benefit of the information in terms of its relation to its decision. The Fundamental (Primary) characteristics related to accounting information to make decisions can be attained by two main conditions (or at least one). These conditions are the participation in reducing the cases of uncertainty for the decision-makers and the contribution to increase the knowledge to the decision-makers (IASB / FASB, 2010:23).

Relevance: The paragraphs QC6-10 of the conceptual framework issued by the joint project FASB/IASB. It Indicates that relevant information is the information capable of making the 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.

Predictive Value: financial information involves a predictive value since it can be used to predict future results in the users' processes. Predictability is not a need for financial information or a financial report. Hence, the users use the financial information that includes a predictive value in submitting their predictions and relates to relevant information that can make a difference in resolutions by improving the decision-makers predictive ability (Barua, 2006:7).

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

Materiality: Accounting materiality is an intrinsic element and a component of the relevance measurement procedure in an accounting information system. Jon and Kathleen mention that the joint project submitted a recommendation not to classify the relative importance as a restriction; however, it should be to the side of the relevance feature as it does not restrict the company's capacity to inform accounting information. Thus, identifying the relative importance as a particular item doesn't affect the resolutions of the standard-makers (Kathleen & Jon, 2011: 20).

Faithful representation: the second Fundamental (Primary) characteristic of the qualitative accounting information of Faithful picture. As 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. Therefore, it is necessary to make the valuable information for the decision. The accounting information must be complete, neutral, and error-free (Ying Zhang, 2014: 21). One of the researchers (Obaidat, 2007: 28) defined it as the matching or agreement among characteristics. He described the phenomenon with indications to show that numbers and descriptions represent the actual availability. In addition, Faithful representation can be improved by supporting the financial statements and reports with facts.

Substituting credibility features with Faithful representation has taken a long time. Before issuing bulletin No. (SFAC8), the credibility feature was one of the Fundamental (Primary) characteristics for the quality of accounting information. In contrast, the Faithful representation characteristic belonged to the subsidiary characteristics of the credibility feature. However, the definition of credibility feature was not clear enough, which caused a misconception. The resulting estimates were blamed for applying the accounting based on 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. Consequently, the substitution will lead to understanding the accounting estimates of fair value. According to what is mentioned in the conceptual framework, the feature of Faithful representation where sub characteristics fall under it (Juij Renkas, 2016: 3).

Completion: To make Faithful representation applicable, there has to be a completion where the financial statements and reports have all requisite information for an accurate representation of economic phenomena for the user to understand the event. The whole information includes a summary of numeral accounting for the element of accounting. In addition, it consists of all other facts necessary for financial information users to understand how the number was built and what it signifies.

Neutrality: Neutrality refers to that information has to affect its users and 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 accurate since most financial data is based on estimates and judgments (Stice, 2013).

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) one (Liana, 2012: 1).

Comparability: refers to comparing a company's financial statements for a financial period with those for a period or previous economic periods of the same company. In addition, it allows comparing a company's financial statements with those of other companies for the same financial period. The financial information users utilize of making comparisons to make decisions related to the findings of investment funding, track the company's performance and its financial situation from time to time, and compare other companies.

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).

Timeliness: This characteristic means making the accounting and financial information available to decision-makers in a time that 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).

Understandability: is considered one of the enhancing characteristics for financial information. It is assumed that consumers have little or no understanding of accounting and economics. A reasonable amount of care is expected from users, and they should not exclude information critical to decision-making. It is essential to include this information in financial reports because it is difficult for the average person to understand it. As a result of the fact that the conceptual framework is the driving force and guidance for setting accounting rules, it is complex. Achieving the characteristic of understandability is considered a principal demand to ensure that the standards handle complicated problems and produce a report and clearly understood disclosure.

The conceptual framework issued by the joint project FASB/IASB identifies the need to balance financial reporting benefits 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 reasonable 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 the help of financial reporting justifies these costs. The quality of financial control is affected by many factors; however, accounting research has suggested several factors which are likely to affect the quality of financial reporting.

Due to economic collapses and financial crises, many countries have witnessed and the financial failures of several large companies like Enron Worldcom in America in 2002. therefore, corporate governance has become the subject of attention to professionals and academics in accounting to restore the dealers' confidence 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). 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) aims to develop the international accounting standards, which will lead to providing information characterized by transparency and comparability to assist financial reports users in making the proper economic decisions.

Furthermore, the implementation of IFRS will help minimize unmatched communication 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 regarding accounting items, especially those with a high degree of uncertainty. Besides, the disclosure of the assessments 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 can be affected by accounting estimates. Accounting information must reflect the future financial aspects and potential implications to the known and expected risks. Adopting international standards in preparing financial reports will minimize profits management processes (Latridis, 2010, p.149-195).

1.2. *The Total Quality Management (TQM)*

Total Quality Management (TQM) is considered a relatively recent management concept. The authors and researchers have been interested in it for more than three decades. The quality is no longer restricted to the quality of their merchandise. To define the concept of (TQM), some of the writers' and researchers' opinions have to be reviewed in this respect. Crosby & Aqlaroo (2000:36) indicate that (TQM) represents the organized methodology to ensure the activities progress which has been already planned for where it is considered. It is one of the methods that assist in avoiding 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) illustrate that organization management should upgrade 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. Pack and (2002:3) confirm that (TQM) is the change process for the organization in its culture, values, beliefs, and activities about jobs performance in harmony. Quality responsibility lies on all employees' shoulders while providing outputs of goods and services according to customers' requirements. The many goals can be accomplished via applying total quality management as Beer (2003:623) argues that the purpose of (TQM) includes: identifying customers' requirements and selecting suppliers who depend on quality. In addition, other objectives for Total Quality Management (TQM) include increasing customer happiness, strengthening the belief that the client is the one who controls the bank and creating an atmosphere that encourages and supports continuous improvement and development. In addition to the quality of outputs, whether they be products or services, emphasizes the quality of inputs and the efficiency with which activities are carried out. It highlights the importance of workers' engagement in preparing and implementing the organization's plans to supply goods and services to clients at a reasonable price, with acceptable quality, and at the appropriate location (Russell & Taylor,2000:87).

The authors' points of view differ in establishing the concepts on which Total Quality Management (TQM) is founded. 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 (Knowles,2011:11-12). Therefore, they can be considered as fundamental principles on which integrated system to Total Quality Management can be established as follows:

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 backup force, whether it is productive or service providing, since its existence and progress depend mainly on its customers from the notion that no customers have no production. On this basis, each economic entity has to understand the customers' current and future needs and requirements and try to meet their needs and expectations.

Leadership: Total Quality Management (TQM) starts with the commitment of the senior management. Without it, the quality becomes just a slogan or sign with 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 a 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 ensure their active participation and achievement.

People's involvement at all levels is the essence of an economic entity. In addition, their total involvement enables their abilities and hobbies to be used for the organization's benefit.

Process Approach: The 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: Managing interrelated processes as an integrated system contributes to the effectiveness and efficiency in achieving the objectives and 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 economic entity's constant, permanent, and continuous goal in all circumstances and situations to improve the processes that lead to quality improvement.

Factual Approach to Decision Making: Effective decisions, i.e., decisions with a positive impact, are based on reliable data and information and 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 relationships. To manage this relationship with the 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. Suppose the economic entities want to survive and grow. Since providing value to consumers is a critical component of every business strategy, companies must include it in all operations to fulfill their goals and implement relevant measures. This interest has a long-term commitment.

Today, economic entities give significant quality interest. This interest in quality belongs to its impacts on the economic entity's reputation, the competitive situation, and its legal responsibility for the resulted damages due to using the product or service (Heizer&Render,2011:223). It can be explained in the following points which show the importance of the quality:

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 defective products, harmful or harmful services, legal liability for damages resulting from their use.

Global Implications: due to technological development, quality has become a global concern. The competitive economic entities in the government affect the state economy; therefore, the competitive financial entities have to produce products of high quality to meet the global quality desires, design, price expectations. On the other hand, the wrong products offend the state's profit and the economic entity and negatively affect the payment balance.

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

No	Resource	Elements of Prevention Costs
1	(Russell & Taylor, 2000:96)	Quality planning-product design-operations costs-quality training-information-extra prevention costs
2	(Arora,2020:835)	Quality planning-preventive maintenance- product design - training- operations
3	(Horngren et al., 2009:693)	Engineering design - operations design equipment's preventive maintenance-quality training- Ensuring to attain the required quality standards

Source: *own compilation*

Secondly, To identify non-conformance products with standards, the appraisal costs have to be spent representing the costs of quality standards maintained via formal evaluation means for product quality. They are the expenses of auditing and testing to ensure the product or process is acceptable about the conformance with the specified quality requirements (Chase et al.,2001:269). Krajewski et al. (2007) consider that appraisal costs are those attained costs during evaluating the achieved performance level for the quality of processes and products of the economic entity (Krajewski et al.,2007:207). According to some of the researchers' opinions, some parts of evaluation costs can be depicted in Table 2.

Table 2. Elements of appraisal costs according to researchers' views

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

Source: *own compilation*

Thirdly, Internal Failure Costs: Internal failure costs happen when the product cannot meet designed quality standards. Juran considers that these costs will disappear if there are no defects in the product before shipping it to the customer. Consequently, these costs are interrelated with errors or defects inside an economic entity; moreover, they are costs to finding 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 if it is delivered to them. This defect is discovered during or after production and before delivery to the customer (Krajewski et al.,2010:177). Several components make up the internal failure costs, which may be shown in Table 3 in the perspective of certain academics:

Table 3. Elements of internal failure cost according to researchers' views

No	Resource	Elements Of Internal Failure Costs
1	(Russell & Taylor, 2000:96)	Scrap(Junk)-Remanufacturing- Retesting -Processes failure-Failure analysis-Downtime of production operations
2	(Stevenson,2007:410)	Remanufacturing–Problems solving- Production and material losses- Scrap(Junk)-Time wasted(time lost) to handle the failure-Lowering price
3	(Horngren et al.,2009:693)	Scrap(Junk)- Restarting-Malfunctioning maintenance-Engineering operations-Manufacturing related to internal failures

Source: *own compilation*

Fourthly, External Failure Costs: These external failure costs happen when the customer is delivered a non-conformance to the standards product and cannot meet their needs and expectations. Juran has confirmed that these expenses will disappear with no external defect. However, after the consumer receives the goods, these costs are incurred and are directly tied to the service they received. Put another way, and these are costs that come up after the buyer

gets their hands on an incorrect item. External failure costs are a collection of components that, according to some academics' beliefs, can be depicted in Table 4:

Table 4. Elements of external failure cost according to researchers' views

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

Source: *own compilation*

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

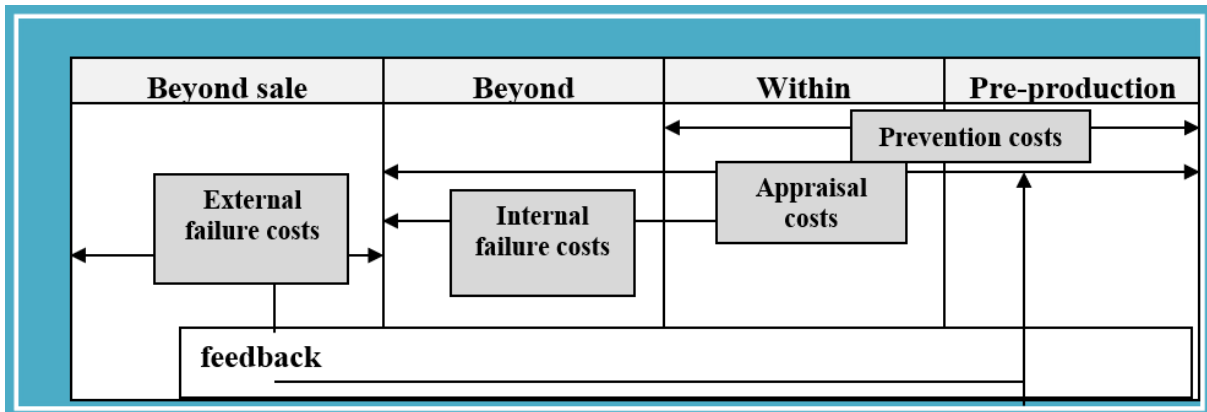


Figure 1. Phases of the evolution of Total Quality Management (TQM)

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 Concepts of Total Quality Management.

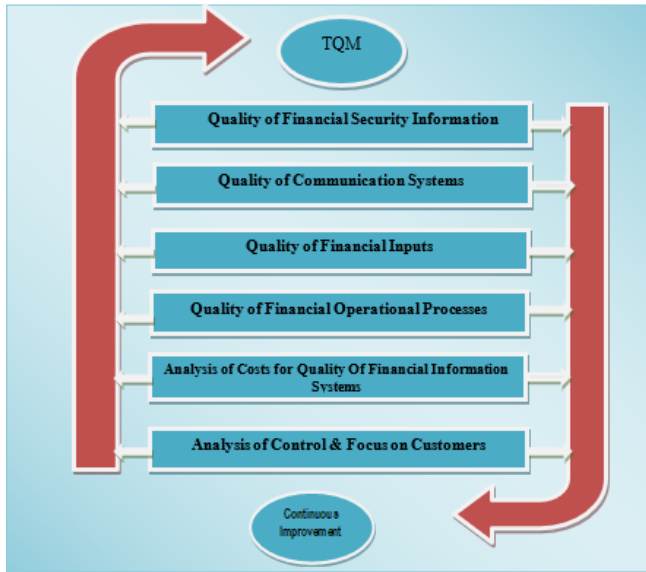


Figure 2. Continuous Improvement for Quality of Financial Reporting under TQM

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 an effective information system can be summarized as the ability of the system to provide information that the organization needs to achieve its strategic and operational objectives. The information must be convenient and be submitted on time.

Confidentiality: this concept has an economic extent as practical information technology should attain the economic feasibility for the organization via making the maximum revenue of investment. It also provides the service within acceptable operational expenses that conform with the organization's ability and needs and best use of material and human resources.

Confidentiality 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 users the minimum level of accessibility. Information accessibility must be based on the user's need for the information according to their job nature and requirements.

Integrity: this concept includes many aspects. The information system is characterized by integrity and independence and maintains the data validity that it 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 canceled by authorized personnel only and without overriding.

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

Availability: this concept includes the ability of an information system to provide information for whom who may need it at times and places required according to work benefit providing information within formal working hours or twenty-four hours with the 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 breaches and disparities etc. Consequently, only the management has to respond and confront these risks with deterrent solutions and correct 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 information quality standards where these standards should be compatible with institutional, model, and legislative measures. The information system should first comply with the organization's policies and strategies such as procurement and employment policies, technical, strategic interests. The compatibility with regulations and legislations set by official authorities to avoid any inquiries 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 reply to it in performing daily works and depend on its outputs of data, statistics, and reports to serve its operational and strategic business. It helps to enhance decision-making based on quantitative data. The information system provides after inputting, processing, and presenting it in templates to serve the strategic planning operations for the organization's business. Then, the technology becomes an effective tool for the organization to achieve the ongoing competitive characteristic. Furthermore, 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 management and the extended equilibrium horizontally and vertically in data, applications, supplies, and human staff due to this inevitable expansion in the activities of the organization. Otherwise, the information system becomes an obstacle to expanding the organization's business and activities.

2. Research Methodology

The study aims to diagnose and characterize the relationship and influence of total quality management (TQM) on the quality of financial reporting. It describes the contents and limitations of this relationship at the level of a recommended model and the TQM requirements and financial reporting quality to be diagnosed by the suggested model. Additionally, it tries to quantify and identify the costs of financial reporting quality in terms of total quality management (TQM) ideas through its four aspects (prevention, assessment, internal and external failure) in financial reporting disclosure statements.

3. Results and Discussion

The total and increasing reliance on information and communication systems: the business procedures are mostly manual or semi-manual, i.e., they are based on measures and business tasks that rely on paper documentation with all of its limitations. Business procedures are defined as how a product is produced or services are provided. It is the recipe in which the inputs are collected and mixed to create a product, whether it is a document or service. After the organizations use the information technology, it becomes possible to auto-enable these procedures. It is processed via information systems that save the information and share it among all parties with a set of operations sequence and codify practices to the process under the requirements. According to regulations, they codify the use of authority granted to the

employees via giving and blocking usage authorities in the auto-procedures. However, there are risks of misusing information systems that require isolating the information out of reach of mischievous persons to attain an acceptable level of information security. It is expressed by integrity. That is, the data is protected and maintained.

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	<p>Costs of identifying the needs of the accounting information users</p> <p>Costs of training of information system personnel</p> <p>Costs of software programs</p> <p>Costs of testing and inspecting system</p> <p>Figure 2: Continuous Improvement for Quality of Financial Reporting in terms of Total Quality Management (TQM)</p> <p>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:</p> <p>Effectiveness: it is the ability to make an action to produce a tangible or intangible product, whereas the characteristics of an effective information system can be summarized as the ability of the system to provide information that the organization needs to achieve its strategic and operational objectives. The information must be convenient and be submitted on time.</p> <p>Confidentiality: this concept has an economic extent as practical information technology should attain the economic feasibility for the organization via making the maximum revenue of investment. It also provides the service within acceptable operational expenses that conform with the organization's ability and needs and the best use of material and human resources.</p> <p>Confidentiality 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 users the minimum level of accessibility. Information accessibility must be based on the user's need for the information according to their job nature and requirements.</p> <p>Integrity: this concept includes many aspects. The information system is characterized by integrity and independence and maintains the data validity that it 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 canceled by authorized personnel only and without overriding.</p> <p>Moreover, this concept includes the completion, coherence, and unity of the information system. It provides accurate information in time and via any channel of data accessibility channels that will give it the reliability for the parties that use the information and give the organization and its personnel credibility for the information they provide. Otherwise, the information system will be weak and unreliable without verifying the data. To achieve this standard, leaders, executives, and technicians have the proper planning and complete coordination.</p> <p>Availability: this concept includes the ability of an information system to provide information for those who may need it at times and places required according to work benefit, i.e., providing information within formal working hours or twenty-four hours with the 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 breaches and disparities etc.</p> <p>Consequently, only the management has to respond and confront these risks with deterrent solutions and correct 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.</p>

Compliance: this concept comes to complete the information quality standards where these standards should be compatible with institutional, model, and legislative measures. Because the information system must first comply with the organization's policies and strategies, such as procurement and employment policies, technical, strategic interests, and compliance with regulations and legislation, the information system must first comply with the organization's policies and strategies. Official authorities establish them to avoid investigations or infractions that might harm the company. 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 rely on it in performing daily works. These components depend on its outputs of data and statistics and reports to serve its operational and strategic business and enhance decision-making by depending on quantitative data provided by the information system after inputting, processing, and presenting it in templates to serve the strategic planning operations of the organization business. Then, the technology becomes an effective tool for the organization to achieve the ongoing competitive characteristic. Furthermore, 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 management and the extended equilibrium horizontally and vertically in data, applications, supplies, and human staff due to this inevitable expansion in the activities of the organization. Otherwise, the information system becomes an obstacle to expanding 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 are based on measures and business tasks that rely on paper documentation with all of its limitations. Business procedures are defined as how a product is produced or services are provided. It is the recipe in which the inputs are collected and mixed to create a product, whether it is a document or service. After the organizations use the information technology, it becomes possible to auto-enable these procedures. It is processed via information systems that save the information and share it among all parties with a set of operations sequence and codify practices to the process under the requirements. They as codify the use of authority granted to the employees according to regulations via giving and blocking usage authorities in the auto-procedures. However, there are risks of misusing information systems that require isolating the information out of reach of mischievous persons to attain an acceptable level of information security. It is expressed by integrity. That is, the data is protected and maintained.

5-3 Quality of Financial Inputs

To provide a reasonable assertion that the inputs have been officially approved before processing them on the computer. These inputs have been adequately prepared and correctly registered in data files with no loss, addition, duplication, or inappropriate alteration. 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) Using financial groups by matching the number of transactions entered with the total.
- 2) Using formal groups (code) via matching clusters of certain input numbers with a specific number.
- 3) Logical tests like testing the program's endurance for more than 24 hours a day.
- 4) Checking the digital sequence number like verifying 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 in processing data will negatively affect the organization's reputation. The trust in its leadership and executive teams will be shaken. Consequently, the leaders must pay attention to the necessity of dealing with an electronic system in the organization as one of the most strategic assets. 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

Data Comparison Process: the data of two or more items must be identical in some cases before making any decision.

Files' titles: the files' tags need to be audited to ensure that the files are correct and updated. There should be using all external files titles that are read by people and the internal ones written in a form recognized by the machines and data registry devices.

Recalculation of Batch Totals. The batch totals can be recalculated when an action is taken on each transaction registration and compared with the registry values. If any contradictions may happen, then this means that there are errors.

Orthogonal Balance Test: this can be calculated by multiple methods such as calculating the 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.

Write protection mechanisms: These mechanisms protect the process of overwriting or erasing data files stored on magnetic media.

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 provides 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 creations is restricted to authorized personnel only on time.

There are a set of methods for achieving quality financial outputs

Matching the outputs of computers with the manual control totals.

Compare the number of units that were run with the number of teams submitted for processing.

Compare a sample of processing outputs with the original input documents.

Correct the dates and number of processing times to determine which process is out of sequence.

5-6 Analysis Costs of Quality of Financial Information

The quality of financial information requires a cost: Adopting the quality of financial reporting requires a price, which is the cost of devices, tools, equipment, software, employees' expenses, operation, and training, as shown in Table 5. Components Costs of programs maintenance

2	Appraisal Costs	<p>Costs of checking and evaluating processes related to measuring collecting and data entry</p> <p>Costs of checking and evaluating operation processes</p> <p>Costs of internal control of the information system output to ensure its conformance to users' needs</p> <p>Costs of program test</p>
3	Internal Failure Costs	<p>Costs of maintaining duplicated data to be saved</p> <p>Costs of keeping data incorrect</p> <p>Costs of debugging errors, re-start, reproduce reports and costs of rechecking, auditing to ensure of being correct</p>
4	External Failure Costs	<p>Costs of handling complaints of system users</p> <p>Costs of judicial and professional accountability due to unfair and incorrect outputs which the users rely on</p> <p>Costs of losing the system its users due to shifting to alternative resources.</p> <p>Costs of rebuilding confidence in the system and convincing the users to return to the system</p>

5-7 Analysis of Control and Focus on Users

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

- **Preventive Controls**

It represents the first defensive line of the control structure. It helps prevent the technology's negative impacts, designed to minimize the repetition of undesired accidents. The strength of this control lies in the commitment to the stipulated or required procedures then staying away from rare events (undesired ones). It has to be considered 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 to identify and detect undesired events that penetrate preventive control. This control detects specific errors by comparing 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 effects of the error detected. It is essential to distinguish between the detective control and the corrective one. The detective control identifies the undesired events and draws attention to them, whereas the disciplinary authority 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, correct the errors and the difficulties due, and then adjust the system to reduce the situation in the future or disappear them.

Conclusions

There are numerous approaches for developing information systems and enhancing the quality of financial reporting; one of them is continuous improvement. The infrastructure of information technology and a plan for ensuring the success of comprehensive quality management should be compatible. Concentrating the attention of those who organize the profession and those responsible for issuing accounting standards on illustrating the measurement process and financial reporting. Therefore, the interest is shifted away from technical aspects of accounting work toward future aspects of the process in terms of total quality management concepts for their direct impact on qualitative characteristics of financial reporting in its disclosure of the financial statement. The quality of financial reporting in terms of overall quality management is determined. The accounting data is classified qualitatively, contingent upon the availability of a cohesive conceptual framework. Total quality management is a cultural revolution. It has altered how management and employees think about customer focus, continuous improvement, managerial leadership, employee participation, and training and learning quality management techniques. Economic entities' principal activities are dependent on information technology and information systems. As a result, reengineering information systems entails overall quality management, prioritized in terms of effort. The following are the most critical procedures that need to be taken:

- The constant improvement of accounting information systems and any changes in the work environment under overall quality management standards. There must be

monitoring changes in hardware, software, and documentation to remedy errors, meet new standards, and increase job efficiency.

- The necessity of taking an interest in the quality of financial reporting in terms of total quality management without jeopardizing the organization's competitive position because disclosing critical information to users increases their confidence in the organization increases its value, and positively affects its share price. The necessity for accounting standards to pay attention to developing information through concepts of goal orientation.
- Enhancing the quality of financial reporting in terms of comprehensive quality management ideas by focusing on the following:
 - Increase your focus on information security, which focuses on areas prone to deviations or manipulations and is efficient, objective, and adheres to countermeasures to neutralize its practices.
 - Activate the quality of information delivery, which has evolved into automatically enabling these access procedures. It is accomplished through information systems that retain and share information among all parties and by controlling the sequence of operations and codifying practices for transactional transactions according to the measures.
 - To ensure the quality of financial statement inputs by giving reasonable assurance that they have been appropriately approved before computer processing.
 - Activating the financial statement's operational quality through dealing with the electronic system in the organization is one of the most critical strategic assets. They must support it and meet its technical, human, and leadership requirements. They must also recognize the essential nature of its sustainability and protection from various risks.
 - The importance of instilling a culture of technology reliance and familiarity among professionals with modern technology methods and educating investors about the bare minimum level of this technology enables interaction with it and an understanding of the results provided by financial information in a manner that achieves total quality.
 - Professional and academic stakeholders should strive to implement overall quality management in financial statements and their many instruments to resolve complex accounting challenges in financial reporting.

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