

BANGLADESH COST ACCOUNTING STANDARDS

BCAS 29

Cost of Quality



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BCAS 29: Cost of Quality

29.1 Introduction

Quality is often referred to as the degree or grade of excellence; thus, it is a relative measure of goodness. Operationally, a quality product or service is one that meets or exceeds customer expectations. Customer expectations relate to attributes such as product performance, reliability, durability, and fitness for use. A quality specification is the specific level of performance planned for a given quality attribute. Customers expect a quality product or service to perform according to specifications. The costs of quality can be substantial and a source of significant savings. As companies implement quality improvement programs, a need arises to monitor and report on the progress of these programs. Managers need to know what quality costs are and how they are changing over time. Reporting and measuring quality performance is absolutely essential to the success of an ongoing quality improvement program. A fundamental prerequisite for this reporting is measuring the costs of quality. But to measure those costs, an operational definition of quality is needed.

29.2 Objectives

- 29.2.1 The objective of this standard is numerous quality-related activities, all of which consume resources that determine the level of quality costs incurred by a firm. Inspecting or testing parts, for example, is an appraisal activity that has the objective of detecting bad products. Detecting bad products and correcting them before they are sent to customers is usually less expensive than letting them be acquired by customers.
- 29.2.2 Another objective of this standard is to find ways to minimize total quality costs. Competitive forces are requiring firms to pay increasing attention to quality. Customers are demanding higher-quality products and services. Improving quality may actually be the key to survival for many firms. Improving process quality and the quality of products and services is a fundamental strategic objective that is part of any well designed Balanced Scorecard. If quality is improved, then customer satisfaction increases; if customer satisfaction increases, then market share will increase; and if market share increases, then revenues will increase. Thus, improving quality can enhance a firm's financial and competitive position.
- 29.2.3 Finally, this standard is to bring uniformity, consistency in the principles, methods of determining and assigning Quality Control cost with reasonable accuracy.

29.3 Scope

- 29.3.1 Quality cost information is needed to help managers controlling quality performance and to serve as input for decision making. It can be used to evaluate the overall performance of quality improvement programs. It can also be used to help improve a variety of managerial decisions, for example, strategic pricing and cost-volume-profit analysis. Perhaps the most important observation is that quality cost information is fundamental in a company's pursuit of continual improvement.
- 29.3.2 Quality is one of the major competitive dimensions for world-class competitors. Many companies now have their dedication to quality certified by an external reporting firm under, for example, ISO 9000 specifications.
- 29.3.3 The standard is to be followed by all public limited companies where cost audit is made mandatory through Government's gazette notification from time to time.

29.4 Key Features: The key features of this standard are given below –

- a) Explain the applicability of quality costing.
- b) Provides the basic principles of quality costing.
- c) Provide Pricing decision & cost-volume profit analysis decision.
- d) Explain the steps & principals of applying quality costing.
- e) List the potential benefit of using quality costing.

29.5 Definitions

Following terms are used in this standard with the meanings specified –

29.5.1 Cost of quality: Quality-linked activities are those activities performed because poor quality may or does exist. The costs of performing these activities are referred to as costs of quality.

29.5.2 Control activities: Control activities are performed by an organization to prevent or detect poor quality. Control activities are made up of prevention and appraisal activities. Control costs are the costs of performing control activities.

29.5.3 Failure activities: Failure activities are performed by an organization or its customers in response to poor quality. If the response to poor quality occurs before delivery of a bad product to a customer, the activities are classified as internal failure activities; otherwise, these are called external failure activities. Failure costs are the costs incurred by an organization because failure activities are performed.

29.5.4 Prevention costs: Prevention costs are incurred to prevent poor quality in the products or services being produced and delivered. As prevention costs increase, we would expect the costs of failure to decrease. Examples of prevention costs are quality engineering, quality training programs, quality planning, quality reporting, supplier evaluation and selection, quality audits, quality circles, field trials, and design reviews.

29.5.5 Appraisal costs: Appraisal costs are incurred to determine whether products and services are conforming to their requirements or customer needs. Examples include inspecting and testing materials, packaging inspection, supervising appraisal activities, product acceptance, process acceptance, measurement equipment, and outside certification.

29.5.6 Internal failure costs: Internal failure costs are incurred because products and services do not conform to specifications or customer needs. This nonconformance is detected prior to shipment or delivery of the products to outside parties. These are the failures detected by appraisal activities. Examples of internal failure costs are scrap, rework, downtime (due to defects), reinsertion, retesting, and design changes. These costs disappear if no defects exist.

29.5.7 External failure costs: External failure costs are incurred because products and services fail to conform to requirements or satisfy customer needs after being delivered to customers. Of all the costs of quality, this category can be the most devastating one. Costs of recalls, for example, can run into the hundreds of millions of dollars. Other examples include lost sales because of poor product performance, returns and allowances because of poor quality, warranties, repair, product liability, customer dissatisfaction, lost market share, and complaint adjustment. External failure costs, like internal failure costs, disappear if no defects exist.

29.5.8 **Reworks:** Defectives which can be brought up to the standards by putting in additional resources are reworks. Rework includes repairs, reconditioning and refurbishing.

29.5.9 **Rejects:** Defectives which cannot meet the quality standards even after putting in additional resources are rejects. Rejects may be disposed off as waste or sold for salvage value or recycled in the production process.

29.5.10 **Imputed Costs:** As defined in BCAS 6.5.11.

29.6 Standards

29.6.1 Quality cost incurred in-house shall be the aggregate of the cost of resources consumed in the quality control activities of the entity. The cost of resources procured from outside shall be determined at invoice or agreed price including duties and taxes, and other expenditure directly attributable thereto net of discounts (other than cash discounts), taxes and duties refundable or to be credited by the Tax Authorities. Such cost shall include: cost of conformance to quality: (a) prevention cost; and (b) appraisal cost and cost of nonconformance to quality: (c) internal failure cost; and (d) external failure cost.

29.6.2 Identification of quality costs shall be based on traceability in an economically feasible manner.

29.6.3 Quality costs shall be determined on the basis of amount incurred in connection therewith.

29.6.4 Finance costs incurred in connection with the self-generated or procured resources shall not form part of quality cost.

29.6.5 Quality costs shall not include imputed costs.

29.6.6 Any Subsidy/Grant/Incentive or any such payment received/receivable with respect to any quality cost shall be reduced for ascertainment of the cost of the cost object to which such amounts are related.

29.6.7 Any abnormal portion of the quality control cost where it is material and quantifiable shall not form part of the cost of quality.

29.6.8 Penalties, damages paid to statutory authorities or other third parties shall not form part of the quality cost.

29.6.9 Any change in the cost accounting principles applied for the measurement of the quality cost shall be made only if, it is required by law or for compliance with the requirements of a cost accounting standard, or a change would result in a more appropriate preparation or presentation of cost statements of an organization.

29.7 Recording and Reporting

29.7.1 Organization should have a quality cost control team consisting of members from every division who will be involved in finding the cost of quality.

29.7.2 Organization should have a mechanism of setting quality cost with reference to particular department.

29.7.3 Organization should have a formal communication process of preparing and reporting of quality costing information.

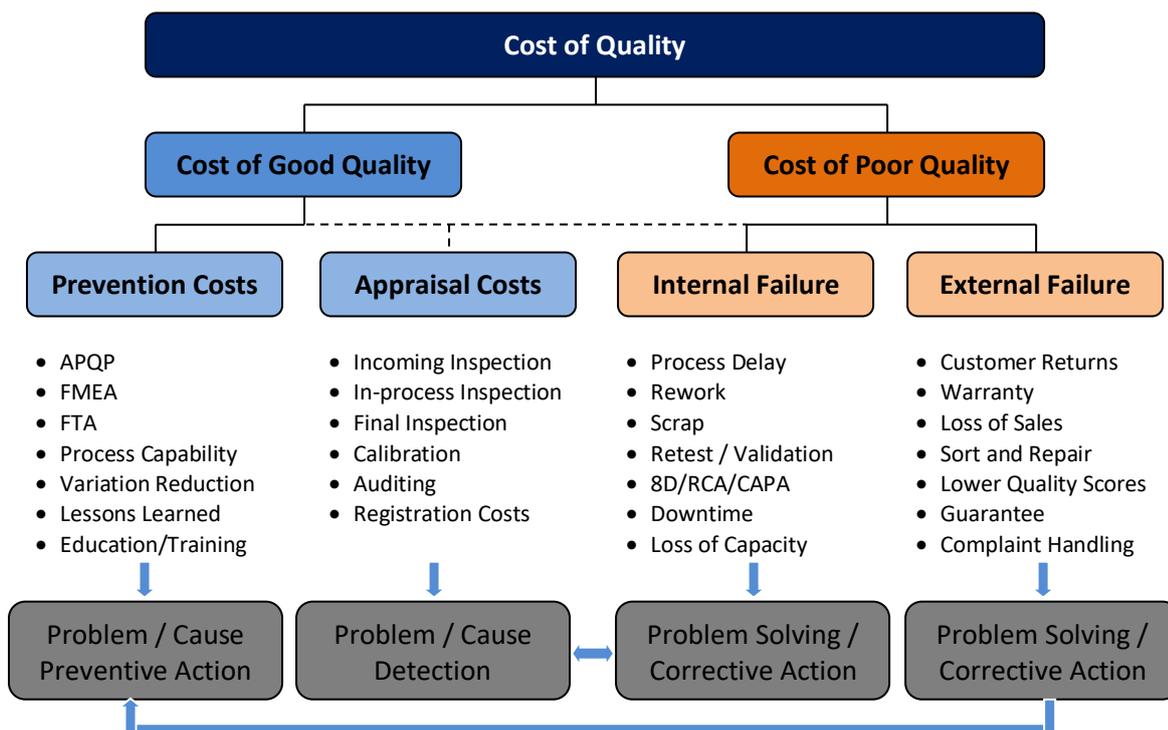
29.7.4 Organization should identify critical factors related to quality costs control.

29.7.5 Organization should report cost of quality information across all the four categories as per the format prescribed in appendix or in a different format which may disclose more information with a quality of better understandability of the users.

29.8 Effective Date: This standard will be effective from January 1, 2020.

Appendix 29A

Graphical presentation of Quality Costs



Appendix 29B

Illustration of a COQ Report

COQ report of ABC Company is a small mid-western manufacturing company with annual sales of around Tk. 9 million in year 2. The company operates in a highly competitive environment and has been experiencing increasing pressures from new and existing competitors to raise quality and lower cost.

	Year 2 (Tk.)	% of Sales	Year 0 (Tk.)	% of Sales	% Change in Cost
Prevention Costs					
Training	90,000		20,000		350%
Quality planning	86,000		20,000		330
Other quality improvement	60,000		40,000		50
Supplier evaluation	40,000		30,000		33
Total	276,000	3.07%	110,000	1.38%	151
Appraisal Costs					
Testing	120,000		100,000		20
Quality performance measurement	100,000		80,000		25
Supplier monitoring	60,000		10,000		500
Customer surveys	30,000		10,000		200
Total	310,000	3.44%	200,000	2.50%	55
Internal Failure Costs					
Rework and reject	55,000		150,000		(63)
Re-inspection and testing	35,000		30,000		16
Equipment failure	30,000		50,000		(40)
Downtime	20,000		50,000		(60)
Total	140,000	1.56%	280,000	3.50%	(50)
External Failure Costs					
Product liability insurance	70,000		250,000		(72)
Warranty repairs	100,000		1200,000		(17)
Customer losses	600,000		1,400,000		(57)
Total	<u>770,000</u>	<u>8.55%</u>	<u>1,770,000</u>	<u>22.12%</u>	<u>(56)</u>
Total Quality Costs	<u>1,496,000</u>	<u>16.62%</u>	<u>2,360,000</u>	<u>29.50%</u>	<u>(37)</u>
Total Sales	<u>\$9,000,000</u>	<u>100.00%</u>	<u>\$8,000,000</u>	<u>100.00%</u>	

The report shows that the external failure costs for items such as warranty claims, customer dissatisfaction, and loss of market share accounted for 75 percent of the total COQ in year 0, (22.12% / 29.5%). That is huge for ABC Company to concern about. The market share can be fall down rapidly because of such kind of failure.

To be more competitive and to increase market share, ABC Company began a corporatwide three-year TQM process. The firm started with substantial increases in prevention and appraisal expenditures. The investment started to pay off in year 2. Internal failure, external failure, and total quality costs have all decreased. COQ reports over time can help document these improvements. COQ report of ABC Company's current year's quality costs to those of a base year. Alternative bases for comparisons can be the budgeted amounts, flexible budget costs, or long-range goals.

To better communicate results, the accountant can transform time-series data, such as the data presented in COQ report of ABC Company into one or more histograms. Based on before-and-after histograms, managers are more able to see improvement in overall COQ spending that has occurred over time. The visual representation of the histograms also enables managers to better evaluate trade-offs, such as increased spending in prevention and appraisal with the expectation of reductions in failure costs. This process of feedback and evaluation makes COQ more than just an accounting scheme—it becomes a financial investment justification tool.