

## Strategic Cost Accounting

M. Com (Semester IV)  
Topic- Quality Costing

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### What is Quality Costing?

Cost of Quality is the total expenses incurred by an organization in achieving and maintaining good quality as well as in managing poor quality throughout its line of operations with an aim of attaining the highest level of customer satisfaction. Therefore, quality costing technique has become as one of the most “effective management tool” for collecting and “measuring” the expenses in maintaining quality in a production process and also identifies the non-value-added expenses.

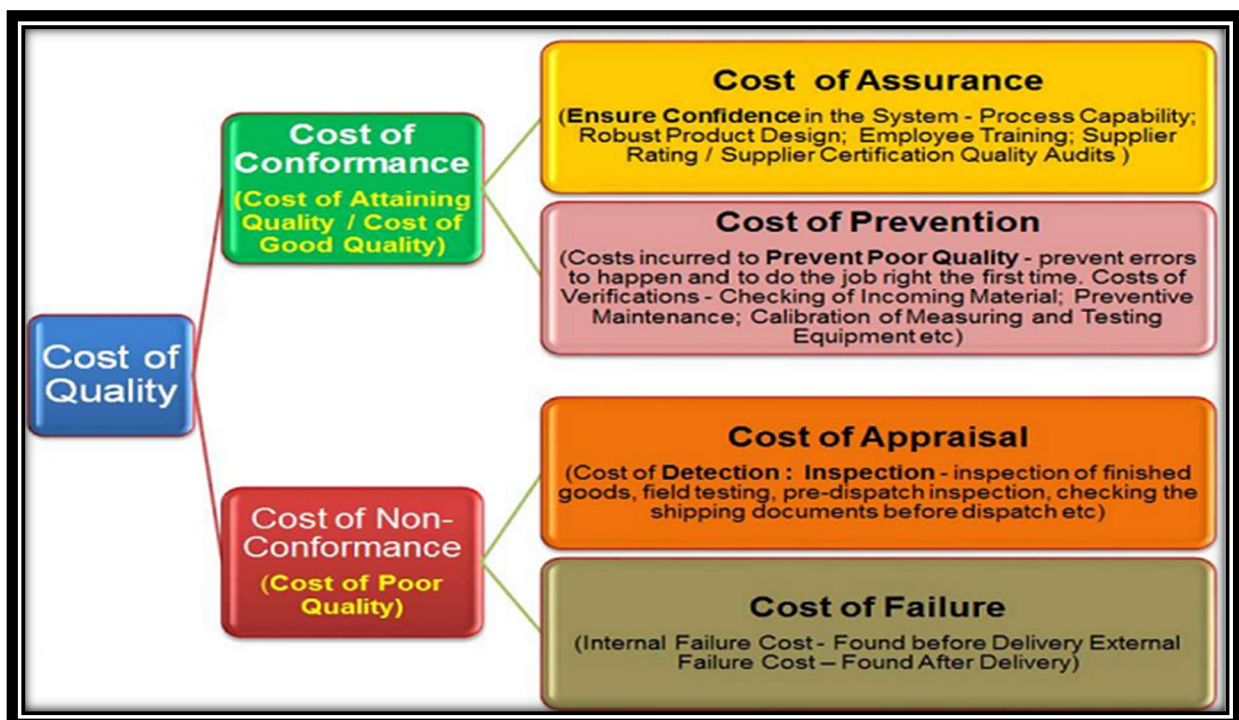
### Components of Cost of Quality

Cost of Quality (COQ) can be classified into two categories –

- Cost of Conformance (COC) or Cost of Good Quality (COGQ) and
- Cost of Non-Conformance (CONC) or Cost of Poor Quality (COPQ).

These classifications are explained with example in the following exhibit-

Exhibit 1 (Cost of Quality)



**Cost of Conformance (COC)** or Cost of Good Quality (COGQ) can be defined as Costs associated with doing quality job, conducting quality improvements, and achieving quality goals. These are the costs that aim at assurance of quality and prevention of bad quality. That means Cost of Conformance has two sub-divisions: Cost of Assurance and Cost of Prevention.

**(A) Cost of Assurance :** These costs are associated with the quality requirements, systems and procedures, control measures and audits to ensure appropriate quality standards are used and complied such as money spent on establishing methods and procedures; Process Capability Studies; robust Product Design; proper employee training in performing good quality job; supplier rating / supplier certification (assessment and approval of suppliers of products and services), Quality audits (confirmation that the quality system is functioning correctly) acquiring tools, and planning for quality. Quality assurance provides confidence in the system that ensures quality of deliverables.

**(B) Cost of Prevention:** The costs that arise from efforts to keep defects from occurring at all- prevent errors to happen and to do the job right the first time. Prevention costs may include Costs of Verifications – checking of incoming material, processes, products, and services to ensure that they conform to agreed specifications; Preventive Maintenance; Calibration of measuring and test equipment etc. These are planned and incurred before actual operation and money is all spent before the product is actually built. The focus on prevention tends to reduce preventable costs of bad quality.

**Cost of Non-Conformance (CONC)** or Cost of Poor Quality (COPQ) is the costs associated with all activities and processes that do not meet agreed performance and / or expected outcomes. These costs would disappear if every task were always performed without deficiency. These costs have two sub-divisions: Cost of Appraisal and Cost of Failure.

**(A) Cost of Appraisal:** Money spent to review completed products against requirements. Appraisal includes the cost of inspections, testing, and reviews. This money is spent after the product is built but before it is shipped to the user or moved into customers place. They could include: inspection of finished goods, field testing, pre- dispatch inspection, checking the shipping documents before dispatch etc

**(B) Cost of Failure:** All costs associated with defective products produced and or that have been delivered to the user. These costs are further sub-divided into Internal Failure Costs and External Failure Costs.

(a) **Internal Failure Costs**– These are the Costs generated before a product is shipped but after a product is made and inspected and found non-conformance to requirements, such as – Product/service design failure costs (internal – Design corrective action; Rework due to design changes; Scrap due to design changes); Purchasing failure costs (Purchased material reject disposition costs; Purchased material replacement costs; Supplier corrective action; Rework of supplier rejects; Uncontrolled material losses); Operations (product or service) failure costs (Material review and corrective action costs – Disposition costs – Troubleshooting or failure analysis costs (operations) – Investigation support costs – Operations corrective action; Operations rework and repair costs – Rework – Repair; Re-inspection / retest costs; Extra operations; costs of Scrap (operations); Downgraded end product or service; Internal failure – labour losses; Other internal failure costs

- (b) **External Failure Costs**—Costs generated after a product is shipped as a result of non-conformance to requirements, such as Complaint investigation/customer service; Returned goods; Retrofit costs; Recall costs; Warranty claims; Liability costs; Penalties; Customer/user goodwill; Lost sales; Other external failure costs

### Steps in Measurement of Cost of Quality:

The quality cost can be measured through the following steps-

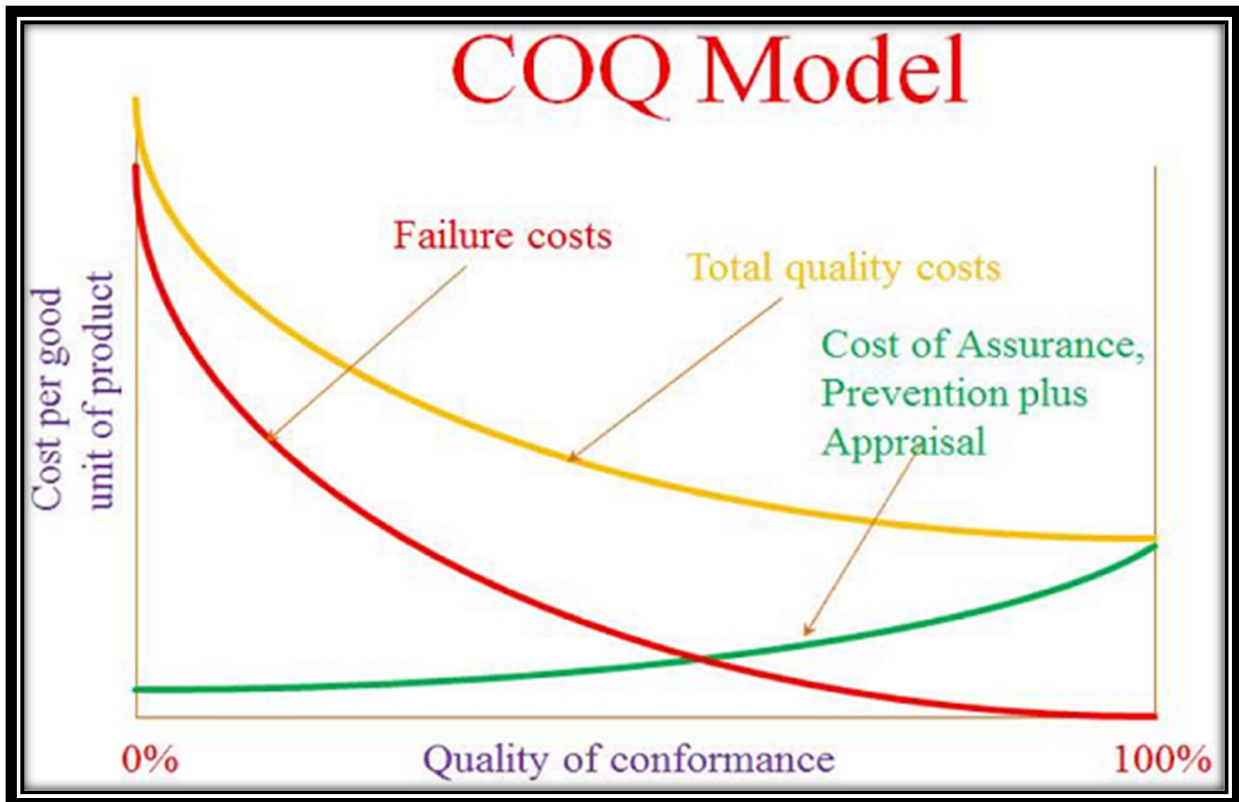


### COQ Model:

Quality is an investment and therefore quality efforts must be financially accountable. It is not the measurement, but the analysis and comparison for monitoring, control and strategic decisions that we can use the measured COQ. Applying the concepts of COQ measurement, analysis and corrections consistently can help reduce the cost of quality.

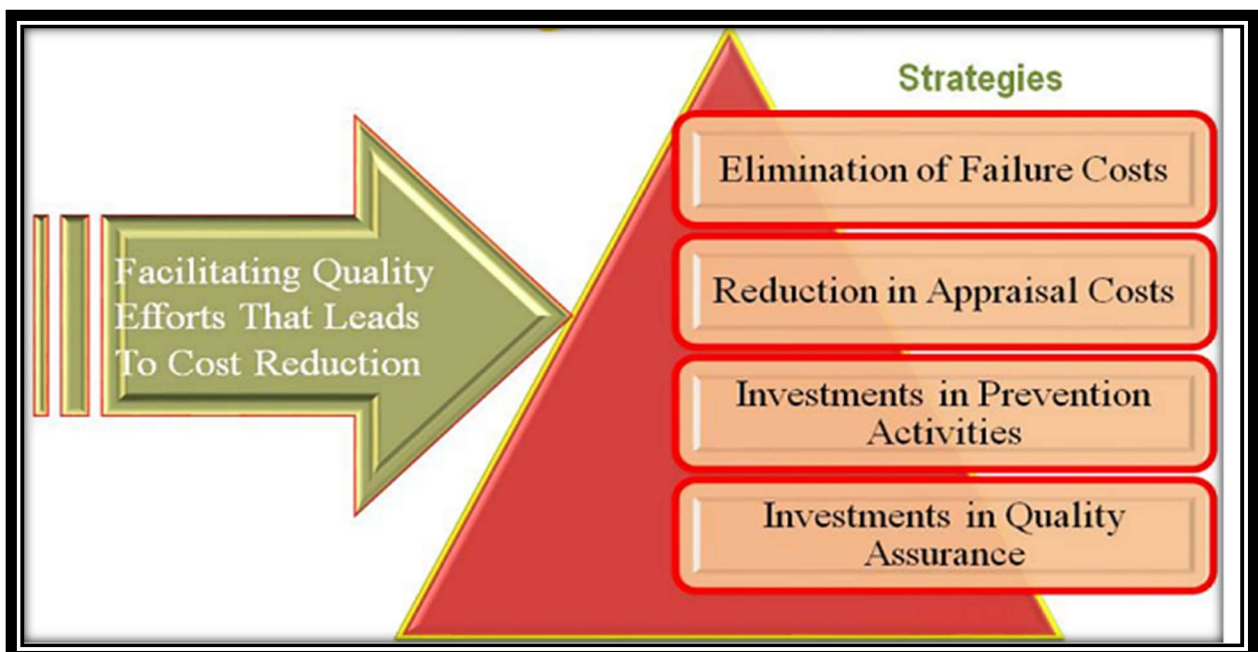
The Cost of Quality (COQ) model constructs a chart displaying prevention, appraisal, and failure costs over time in order to demonstrate the cost of poor quality. The model is based on the theme that prevention is better than cure. As we make more investments in quality assurance and prevention activities, then the incidents of failures will come down resulting in drastic reduction in total cost of failure. Cost of failure will not incur if the quality is free from faults. At this point the total cost of quality becomes equal to cost of quality assurance plus cost of prevention. Therefore, it is worth to make investments in quality assurance and prevention efforts which yield more benefits by reducing quality faults. This model provides better clarity on the CoQ-metric and its constituents – the understanding of which is essential for establishing a quality management strategy for the organization to improve quality of products, services and ultimately the brand image.

The COQ model can be easily understood by the following diagram-



As seen from the above chart with increasing investment on Cost Assurance and Prevention activities the Cost of Failure is drastically falling down and resulting in overall reduction in Total Quality Cost. Therefore, the objective of Cost of Quality is to increase in the Investments on Quality Assurance and Prevention activities. The important goals of cost of quality costing system are as follows-

### Goals of CoQ system



## Quality's Effect on Income and Expenses

Quality related out comes (benefits or Loss) and costs can be treated in financial terms as Income and Expenditure as shown below.



### Conclusion:

An important conclusion drawn from this chapter is that understanding of the cost of quality is extremely important for any business in establishing an organizational quality management strategy and making calculated decisions of investing on quality related improvements and grab ample opportunities to show case the quality image. Quality costs can comprise a major portion of the total expenses of a business, though they are hidden within its normal cost recording system, which is oriented more towards recording by responsibility centre than by quality issue. The mitigation of quality issues can greatly increase the profitability of a business, as well as enhance the level of customer retention.