

## Economic Design of a Quality Control Chart for the Proportion of Defective Items

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**Abstract :** Many companies use the statistical tool named as statistical quality control, and which can have a high cost for the companies interested on these statistical tools. The evaluation of the quality of products and services is an important topic, but the reduction of the cost of the implantation of the statistical quality control also has important benefits for the companies. For this reason, it is important to implement a economic design for the various steps included into the statistical quality control. In this paper, we describe some relevant aspects related to the economic design of a quality control chart for the proportion of defective items. They are very important because the suggested issues can reduce the cost of implementing a quality control chart for the proportion of defective items. Note that the main purpose of this chart is to evaluate and control the proportion of defective items of a production process.

**Keywords :** proportion, type I error, economic plan, distribution function

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