

ECONOMICS

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Premium Edit

For a manufacturing organization, ~~to compete effectively in the global marketplace,~~ cutting costs and improving overall efficiency is essential ~~for competing in the globalized marketplace.~~ In this paper, we present a single-stage production system with two independent quality characteristics, ~~and each having a different associated costs associated with each quality characteristic.~~ ~~that~~ This associated cost falls below a lower specification limit (scrap) or above an upper specification limit (rework) ~~is presented in this paper.~~ We assume ~~the amount~~ number of reworks and the number of scraps ~~are assumed to be~~ depending on ~~the~~ process parameters such as ~~the~~ process mean and SD. ~~†~~ Thus, the expected total profit is significantly dependent on the process parameters. In ~~†~~ this paper, we develop a ~~an~~ Markovian decision-making model for determining the process means. We perform a ~~S~~ sensitivity analysis ~~is performed~~ to validate ~~the proposed model,~~ and present a numerical example ~~is given as an~~ for illustration. ~~†~~ ~~The~~ the results showed that the optimal process means has a major effects on the parameters of the quality characteristics.

Comment [A1]: From what I understand, you first develop a model for the determination of process mean, and then use the derived process mean in the production system. Consider the following revision for a more logical flow:

"In this paper, we develop a Markovian decision-making model for determining the process mean, and then propose a single-stage production system with two independent quality characteristics..."

If you accept this change, you will need to delete the sentence "In this paper, we develop a Markovian decision-making model for determining the process means," which appears later.

Comment [A2]: Is my insertion apt?

Comment [A3]: For improved flow, I have combined these two sentences using a semicolon, as they are closely linked.