“Measuring the Effectiveness of Quality Control Circles: A Goal Programming Approach”


Abstract (Summary)

Although most significant ideas and theories of human motivation and satisfaction have originated in the US, these ideas tend to be ignored by the majority of US organizations. Some ideas have been put to work in Japan with astonishing results. US management is now trying to learn from the Japanese success. Quality control circles (QCC) have been the most widely applied of Japanese techniques. A mathematical model is developed to help management in measuring the effectiveness of a QCC program. A goal programming model appears to be an appropriate technique for this purpose. Major objectives of a QCC program are generally to meet the organization's goals of raising productivity, quality, employee participation, and job satisfaction. The goal programming model used shows how a mathematical programming model can evaluate a QCC system's multiple goals and measure its effectiveness. Results of the different runs indicate that the model is very sensitive to changes in priorities and their ranking.

Subjects:

Quality circles
Quality control
Production management
Total quality management