Abstract:

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1. Introduction

Sustainable production process improvement is very important for all enterprises as its implementation can help them to achieve development plans, scheduling, and reduce costs and pollution. An increasing number of papers have discussed optimization and performance measurement for improvement and benchmarking. However, few studies have examined optimization and performance analysis in terms of sustainable process improvement. For these reasons, I had invited high quality papers on optimization and performance analysis for sustainable production process improvement for consideration for publication in the *Processes* journal.

The aim of this Special Issue was to publish state-of-art articles spanning all areas of analytical, theoretical and empirical articles related to sustainable production process improvement. The Special Issue had accepted 24 papers addressing a wide spectrum of topics following but not restricted to:

1. Benchmarking analysis for sustainable product process improvement
2. Optimization model for sustainable product process improvement
3. Productivity or efficiency estimation for sustainable product process improvement
4. Scheduling optimization for sustainable product process improvement
5. Strategies for sustainable product process improvement
6. Innovation for sustainable product process improvement

2. Performance Evaluation Issues

Alatifi et al. [1] measured the performance using multivariate non-normal process capability. They used two different models (Box-Cox and Johnson transformations) and compared them via generated data and case study from the previous literature. Kwak [2] analyzed inventory turnover as a performance evaluation of 421 companies in the manufacturing industry. In this paper, the author used Altman’s Z score approach to compare top and bottom companies’ performance.

Shin et al. [3] tried to find the right innovation type in chemical industry using data envelopment analysis. They used 64 Korean chemical firms from a 2016 Korean innovation survey. Aamir et al. [4] used water treatment waste as a soil stabilizer to measure performance of sustainable soil stabilization process. And Sevinç and Eren [5] used 82 firms in Konya Chamber of industry as automotive supplier industry. They used a data envelopment analysis, analytic hierarchy process and technique for order preference by similarity to ideal solution method to analyze the dataset. Aslam et al. [6] evaluated the industrial process performance using control chart for monitoring the process capability index.

3. Sustainable Issues

Qurashi et al. [7] focused on sustainable design to find the sustainable engineering solution. Moreover, Yin et al. [8] argued the quality and speed improvement of green new product development.
Wang et al. [9] used a fuzzy multicriteria decision-making model to evaluate sustainable supplier’s performance of garment industry in Vietnam. They also analyzed, with a triple bottom line model, the analytic hierarchy process and technique for order preference by similarity to ideal solution method in their paper.

4. Optimization Issues


5. Operational Issues

Kim and Narasimhan [16] focused on the supply network design process of original equipment manufacturers in auto and consumer electronics industries. Wang et al. [17] proposed a multi-criterial decision-making model for supplier selection in the oil and gas industry. In addition, Frigura-Oliasa et al. [18] investigate the operational improvements and technical parameters of the metal oxide varistors manufacturing process.


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References

2. Kwak, J.K. Analysis of Inventory Turnover as a Performance Measure in Manufacturing Industry. Processes 2019, 7, 760. [CrossRef]


