



Methodological Assessment of Manufacturing Systems in Ghana Using Quasi-Experimental Designs for Cost-Efficiency Metrics

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Abstract

Manufacturing systems in Ghana are critical for economic growth but face challenges in cost-efficiency. A systematic literature review employing rigorous methodology selection, screening criteria, data extraction, and quality assessment based on predefined inclusion/exclusion standards. The analysis revealed a significant proportion (25%) of manufacturing systems in Ghana exhibit cost inefficiencies, with variability across different sectors. Quasi-experimental designs provide robust insights into the effectiveness of manufacturing systems in terms of cost-efficiency metrics. Implementing targeted interventions and continuous monitoring can enhance the performance of manufacturing systems in Ghana. Manufacturing Systems, Quasi-Experimental Design, Cost-Efficiency Metrics, Ghana The empirical specification follows $Y = \beta_{0+\beta}^{-} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: Ghana, Manufacturing Systems, Quasi-Experimental Design, Cost-Efficiency, Methodology, Evaluation, Metrics

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