

## Enriching Resilience in Smart Manufacturing: The Role Industry 4.0 on Sustainable Production Process

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### Abstract

The world began to develop gradually since actual birth of technology happened in late 1760's which was named as Industrial Revolution. The study paper aims at evaluating, how well the Industry 4.0 can be applied in smart manufacturing in order to maximize productivity parallel to resilience and sustainability. The paper employs thorough review of existing literatures to gain insights on how Industry 4.0 can increase the productivity of a firm where smart manufacturing concepts are undertaken. In order to derive an innovative solution, the theme itself drives to establish couple of questions as, How the seamless integration of Industry 4.0 enrich the productivity in the context of smart manufacturing and will the integration of Industry 4.0 in the production process can enhance resilience in smart manufacturing. A broad literature review has been carried out to identify key theories and concepts to find information about the existing practical and theoretical implications of Industry 4.0. And using a simple questionnaire data has been gathered and analysed using an extensive as well as a comparative method. Collectively, Industry 4.0 not only creates efficient and effective production processes but also enables the activities such as maintenance and upgrades which will results in lower capital expenditure.

**Keywords:** *Smart manufacturing, Industry 4.0, Sustainability, Artificial Intelligence, Internet of Things*