

## The Influence of Operational Changes on Efficiency and Sustainability of Manufacturing Firms

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**Abstract :** Nowadays, companies are more concerned with adopting their own strategies for increased efficiency and sustainability. Dynamic environments are fertile fields for developing operational changes. For this purpose, organizations need to implement an advanced management philosophy that boosts changes to companies' operation. Changes refer to new applications of knowledge, ideas, methods, and skills that can generate unique capabilities and leverage an organization's competitiveness. So, in order to survive and compete in the global and niche markets, companies should incorporate the adoption of operational changes into their strategy with regard to their products and their processes. Creating the appropriate culture for changes in terms of products and processes helps companies to gain a sustainable competitive advantage in the market. Thus, the purpose of this study is to investigate the role of both incremental and radical changes into operations of a company, taking into consideration not only product changes but also process changes, and continues by measuring the impact of these two types of changes on business efficiency and sustainability of Greek manufacturing companies. The above discussion leads to the following hypotheses: H1: Radical operational changes have a positive impact on firm efficiency. H2: Incremental operational changes have a positive impact on firm efficiency. H3: Radical operational changes have a positive impact on firm sustainability. H4: Incremental operational changes have a positive impact on firm sustainability. In order to achieve the objectives of the present study, a research study was carried out in Greek manufacturing firms. A total of 380 valid questionnaires were received while a seven-point Likert scale was used to measure all the questionnaire items of the constructs (radical changes, incremental changes, efficiency and sustainability). The constructs of radical and incremental operational changes, each one as one variable, has been subdivided into product and process changes. Non-response bias, common method variance, multicollinearity, multivariate normal distribution and outliers have been checked. Moreover, the unidimensionality, reliability and validity of the latent factors were assessed. Exploratory Factor Analysis and Confirmatory Factor Analysis were applied to check the factorial structure of the constructs and the factor loadings of the items. In order to test the research hypotheses, the SEM technique was applied (maximum likelihood method). The goodness of fit of the basic structural model indicates an acceptable fit of the proposed model. According to the present study findings, radical operational changes and incremental operational changes significantly influence both efficiency and sustainability of Greek manufacturing firms. However, it is in the dimension of radical operational changes, meaning those in process and product, that the most significant contributors to firm efficiency are to be found, while its influence on sustainability is low albeit statistically significant. On the contrary, incremental operational changes influence sustainability more than firms' efficiency. From the above, it is apparent that the embodiment of the concept of the changes into the products and processes operational practices of a firm has direct and positive consequences for what it achieves from efficiency and sustainability perspective.

**Keywords :** incremental operational changes, radical operational changes, efficiency, sustainability

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