

Evaluation of the Enablers of Industry 4.0 in the Ready-Made Garments Sector of Bangladesh: A Fuzzy Analytical Hierarchy Process Approach

Authors : Shihab-Uz-Zaman Shah, Sanjeeb Roy, Habiba Akter

Abstract : Keeping the high impact of the Ready-Made Garments (RMG) on the country's economic growth in mind, this research paves a way for the implementation of Industry 4.0 in the garments industry of Bangladesh. At present, Industry 4.0 is a common buzzword representing the adoption of digital technologies in the production process to transform the existing industries into smart factories and create a great change in the global value chain. The RMG industry is the largest industrial sector of Bangladesh which provides 12.26% to its National GDP (Gross Domestic Product). The work starts with identifying possible enablers of Industry 4.0. To evaluate the enablers, a Multiple-Criteria Decision-Making (MCDM) procedure named Fuzzy Analytical Hierarchy Process (FAHP) was used. A questionnaire was developed as a part of a survey for collecting and analyzing expert opinions from relevant academicians and industrialists. The responses were eventually used as the input for the FAHP which helped to assign weight matrices to the enablers. This weight matrix indicated the level of importance of these enablers. The full paper will discuss the way of a successful evaluation of the enablers and implementation of Industry 4.0 by using these enablers.

Keywords : enablers, fuzzy AHP, industry 4.0, RMG sector

Conference Title : ICCTI 2022 : International Conference on Clothing and Textile Industry

Conference Location : London, United Kingdom

Conference Dates : May 26-27, 2022