

Optimizing Current Strategies and Applications in Industrial Engineering

Prasanta Sahoo
Jadavpur University, India

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Chapter 3

Role of Human Resources, Production Process, and Flexibility on Commercial Benefits From AMT Investments


Jorge Luis García-Alcaráz

 <https://orcid.org/0000-0002-7092-6963>
Autonomous University of Ciudad Juarez, Mexico

Arturo Realyvásquez-Vargas

 <https://orcid.org/0000-0003-2825-2595>
Instituto Tecnológico de Tijuana, Mexico

Emilio Jiménez-Macías

 <https://orcid.org/0000-0001-6749-4592>
University of La Rioja, Spain

Liliana Avelar Sosa

Autonomous University of Ciudad Juarez, Mexico

Aide Aracely Maldonado-Macías

Autonomous University of Ciudad Juarez, Mexico

ABSTRACT

Advanced manufacturing technologies (AMT) acquisition by maquiladoras (foreign-owned manufacturing companies) is a tendency that allows these companies to maximize their commercial benefits. However, it remains unclear how the AMT implementation impacts on their performance. In addition, this research studies 383 responses to a questionnaire about the AMT implementation in the Mexican maquiladora industry and reports an analysis with four latent variables associating obtained benefits after the AMT implementation—human resources, flexibility, production process, and commercial benefits—where their relationships are evaluated through six hypotheses using a structural equation model (SEM). Finally, the outcomes demonstrated that AMT benefits for human resources have a direct effect on flexibility, production process, and commercial benefits. However, the direct effect from human resources benefits, knowledge, and experience on commercial benefits are acquired through indirect effects, using flexibility and production process as mediator variables.

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