جامعة عبد المالك السعدي
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Université Abdelmalek Essaadi

Centre des Etudes Doctorales Sciences et Techniques
&
Sciences Médicales

THESIS DEFENSE

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CANDIDATE FOR DOCTOR SCIENCES AND TECHNIQUES

SUSTAINABLE SUPPLY CHAIN PERFORMANCE EVALUATION IN THE DIGITAL TRANSFORMATION ERA

Date :	**Saturday, January 6th, 2024**
Time :	**10.00 am**
Location :	**Conference Room, Building F, FST - Tangier**

Committe Members		
Pr. Kamal REKLAOUI	ENSA - Tetouan	Chair
Pr. Abderrazak BOUMANE	ENSA - Tangier	Reviewer
Pr. Zoubir EL FELSOUFI	FST- Tangier	Reviewer
Pr. Driss SARSRI	ENSA - Tangier	Reviewer
Pr. Mustapha OUARDOUZ	FST- Tangier	Examiner
Pr. Mohamed FOURKA	FST- Tangier	Examiner
Pr. Naoufal SEFIANI	FST- Tangier	Supervisor

ABSTRACT

In today's business landscape, classical supply chain management (SCM) practices have proven their inadequacy in terms of maintaining competitiveness and fostering value creation. This has driven manufacturing companies to shift their supply chains from a classical level to a sustainable and digitally enabled one. This transformation involves adapting SC strategies to incorporate sustainability practices and leveraging digital transformation technologies to enhance efficiency, visibility, and responsiveness across SC networks. In response to this challenge, the proposed Ph.D. thesis aims to address the challenging issue of sustainable supply chain performance evaluation in the manufacturing context by developing an integrated multi-criteria decision-making (MCDM) framework based on the Best Worst Method (BWM) and Decision-Making Trial and Evaluation Laboratory (DEMATEL) approaches to rank the importance of decision criteria within each performance dimension, and analyze the causal relationships among decision criteria (short-term and long-term) and establish their interdependencies. This helps to identify the most influential criteria and their interdependencies, allowing decision-makers to better understand how various decision criteria interact with each other and impact sustainability performance dimensions, including financial, environmental, and social performance across supply chains. To the best of our knowledge, the conducted study is the first empirical study that integrates both BWM and DEMATEL to evaluate sustainable supply chain performance in the context of the manufacturing sector. Additionally, our thesis seeks to examine the impact of digital transformation adoption on sustainability performance across supply chains by developing a conceptual framework based on digital transformation, SC integration, and overall sustainable supply chain performance. The conceptual framework has been analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS 4.0 software. This research provides insights for practitioners into enhancing sustainable supply chain performance by adopting digital technologies and integrating SC functions. This study is the first to analyze the influence of digital transformation and supply chain integration on sustainable supply chain performance in the context of the manufacturing sector.

Keywords: Supply chain management, Sustainable supply chain performance, Sustainability performance evaluation, digital transformation, manufacturing sector, integrated MCDM framework, BWM, DEMATEL, PLS-SEM