

The 4th International Electronic Conference on Applied Sciences

Sept 2023 | ASEC 2023

**Integrating Sustainability Management and Lean
Practices for Enhanced Supply Chain Performance:
Exploring the Role of Process Optimization in SMEs**

SPEAKER: KUMEEL RASHEED

Authors: Kumeel Rasheed, Dr. Syed Saad, Syed Ammad, Muhammad Bilal



PRESENTATION CONTENTS

1 INTRODUCTION

2 LITERATURE REVIEW

3 MATERIALS & METHODS

4 RESULT & ANALYSIS

5 CONCLUSION



INTRODUCTION

- ✓ SMEs are recognized for their crucial contribution to economic development as they collectively impose a notable environmental burden due to their extensive resource and energy consumption, leading to the generation of significant by-products
- ✓ To maintain a competitive edge businesses across the supply chain are embracing various sustainability initiatives
- ✓ To enhance efficiency and reduce waste, enterprises are turning to Lean Practices (LP) in manufacturing and service sectors.
- ✓ The alignment of LP with environmental sustainability is gaining traction due to its emphasis on resource optimization and waste reduction
- ✓ The study evaluates the direct impacts of PO and LP on SP while also exploring how PO and LP facilitate the relationship between SMEs and SP



LITERATURE REVIEW (Lean Practices)

- ✓ The core focus of lean strategies is to reduce waste by streamlining activities that do not add value, such as excess space, equipment, and inventories throughout the supply chain
- ✓ A growing number of companies have adopted lean practices to drive ongoing improvements in supply chain operations
- ✓ The integration of lean principles into supply chains has focused on specific functional domains, such as lean logistics, just-in-time approaches in supply chain management, and the incorporation of lean and agility practices



LITERATURE REVIEW (Process Optimization)

- ✓ **Process Optimization involves introducing new and creative ideas, commercializing novel concepts, and implementing fresh services, products, or processes**
- ✓ **Optimization is achieved through organizational, process, and product innovation, interconnected elements that drive progress**
- ✓ **It introduces novel production or delivery methods and embraces changes in software, equipment, and techniques**



**INTERLINK
BETWEEN PO
AND LP**

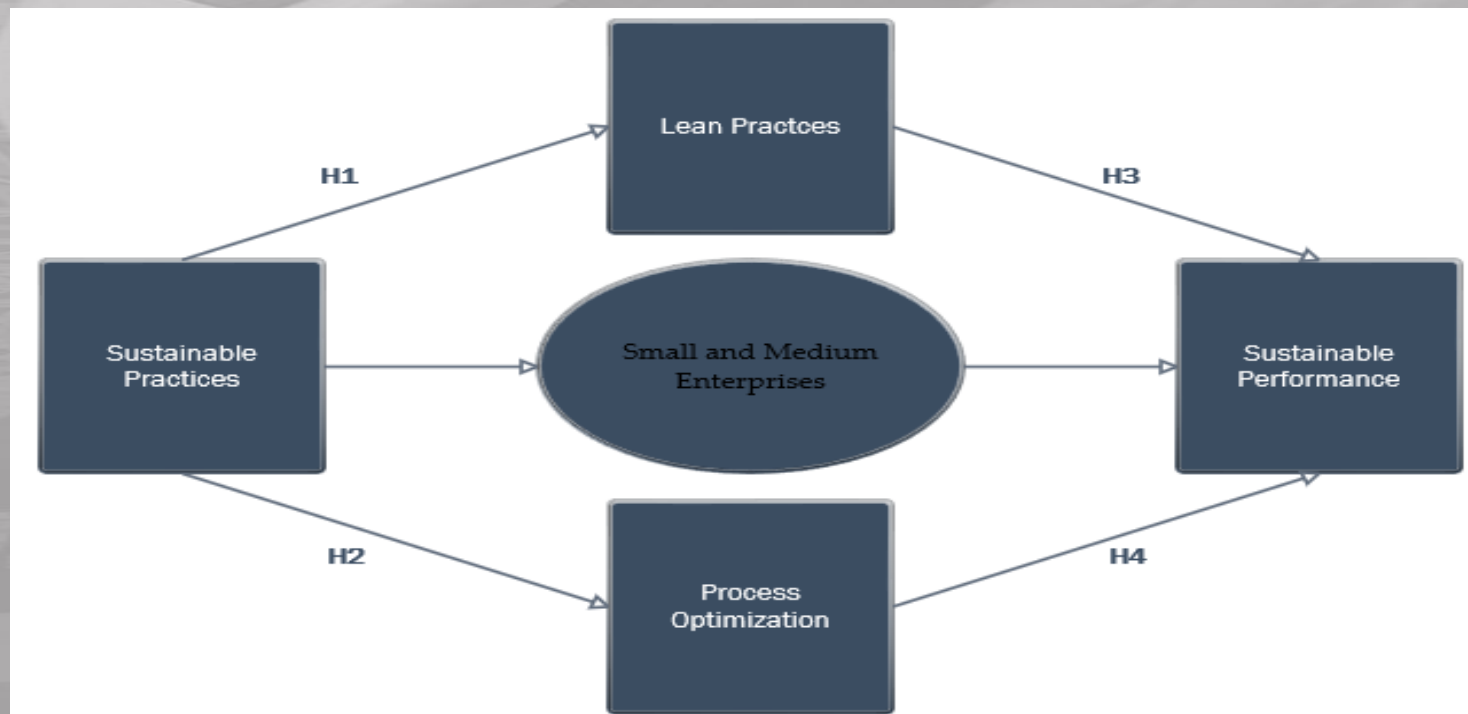
**INTERLINK
BETWEEN PO
AND SP**

**INTERLINK
BETWEEN LP
AND SP**



HYPOTHESIS DEVELOPMENT

- ✓ H1: There is a significant positive relationship between Sustainable Practices (SP) and Lean Practices (LP) of Small and Medium Enterprises (SMEs)
- ✓ H2: There is a substantial positive relationship between Sustainable Practices (SP) and Process Optimization (PO) of Small and Medium Enterprises (SMEs)
- ✓ H3: Lean Practices (LP) mediate a significant positive relationship between Sustainable Practices (SP) and Sustainable Performance (SPr) of Small and Medium Enterprises (SMEs)
- ✓ H4: Process Optimization (PO) mediates a substantial positive relationship between Sustainable Practices (SP) and Sustainable Performance (SPr) of Small and Medium Enterprises (SMEs)



RESULT AND ANALYSIS (Correlation Test)

- ✓ The association between the two parameters is displayed as a positive value in the mentioned correlation matrix, indicating that any shift or rise in the independent variable will likewise alter or increase the dependent variable

	SP	LP	PO	SPr
SP	1			
LP	0.702	1		
PO	0.521	0.685	1	
SPr	0.605	0.576	0.435	1



RESULT AND ANALYSIS (Regression Analysis)

- ✓ The results of a regression analysis examining the connection between Lean Practices (LP) and Sustainable Practices (SP). The table shows that there is a significant and strong positive relationship between these two variables

R	R-Square	Beta	Adjusted R-Square	F	T	Sig.
0.702	0.492	0.702	0.502	70.5	7.88	0.00



CONCLUSION

- ✓ The study extensively explored the complex connections between LP, PO, SP_r, and SP within the context of SMEs
- ✓ The intention behind this investigation is to equip businesses with strategies that can enhance their resilience in the present-day challenging environment
- ✓ The findings stress the significance of integrating sustainable practices and optimizing processes to drive enhanced performance





Thank You