



LOCALIZATION OF LIGHTING MANUFACTURING AND ITS IMPACT ON INDUSTRIAL COMPETITIVENESS IN SAUDI ARABIA

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1.7 Research Model

The research model illustrates the relationship between localization of lighting manufacturing (independent variable) and industrial competitiveness (dependent variable).



Chapter 2: Literature Review

2.1 Introduction

Industrial localization has emerged as a critical strategic priority for many emerging economies seeking to enhance competitiveness, reduce dependency on imports, and strengthen domestic industrial capabilities. In Saudi Arabia, localization is strongly aligned with Vision 2030, which emphasizes economic diversification, industrial development, and the creation of sustainable value chains.

The lighting industry represents a significant opportunity within this transformation due to its strong linkages with infrastructure, construction, and energy efficiency initiatives. Despite the Kingdom's industrial potential, the lighting sector remains highly dependent on imported products and components, limiting the development of local manufacturing capabilities.

This chapter reviews existing literature related to industrial localization and its impact on competitiveness. It focuses on the independent variable (localization), the dependent variable (industrial competitiveness), and the relationship between them.

2.2 The Independent Variable: Industrial Localization

Industrial localization refers to the process of developing domestic manufacturing capabilities to replace imported goods and strengthen local industries. It involves increasing local content, developing supply chains, and investing in production technologies and human capital.

According to Porter (1990), national competitiveness depends on the ability of industries to build local capabilities, innovate, and improve productivity. Localization supports this by enabling countries to retain value within their economies and reduce reliance on external suppliers.

In emerging economies, localization is particularly important as it contributes to industrial diversification and economic resilience. The World Bank (2020) highlights that developing local manufacturing capabilities strengthens supply chains and enhances long-term economic stability.

Localization is not limited to final assembly but requires the development of upstream and downstream industries. This includes component manufacturing, material processing, tooling, and advanced production technologies. Without these elements, localization remains incomplete and industries continue to depend on imports.

In the context of the lighting industry, localization involves transitioning from assembly-based operations to full-scale manufacturing, including the production of key components such as fixtures, housings, and electronic modules. Achieving this requires significant investment in industrial infrastructure, technology, and ecosystem development.

2.3 The Dependent Variable: Industrial Competitiveness

Industrial competitiveness refers to the ability of firms or industries to produce goods efficiently while maintaining quality and cost advantages in both domestic and international markets.

Competitiveness is influenced by several factors, including cost efficiency, productivity, innovation, supply chain integration, and access to raw materials. According to Porter's theory of competitive advantage, industries achieve competitiveness through continuous improvement, technological advancement, and the development of supporting industries.

In manufacturing sectors, competitiveness is closely linked to supply chain efficiency. Industries with strong local supply chains are able to reduce production costs, improve responsiveness, and enhance product quality.

Innovation also plays a critical role in competitiveness. Firms that invest in research and development are better positioned to develop new products, improve processes, and respond to market changes.

In the Saudi context, industrial competitiveness is essential for reducing reliance on imports and positioning local industries to compete globally. Strengthening competitiveness requires not only cost advantages but also the development of advanced manufacturing capabilities and integrated supply chains.

2.4 The Relationship Between Localization and Industrial Competitiveness

The relationship between industrial localization and competitiveness is widely recognized in academic literature. Localization contributes to competitiveness by improving cost efficiency, strengthening supply chains, and enabling innovation.

One of the primary benefits of localization is cost reduction. By producing goods locally, industries can reduce transportation costs, import duties, and lead times. This enhances price competitiveness in the market.

Localization also improves supply chain resilience. Dependence on imported components exposes industries to global disruptions, price fluctuations, and logistical challenges.

Developing local supply chains reduces these risks and ensures continuity of production. Furthermore, localization supports innovation by encouraging investment in research and development and facilitating knowledge transfer. Industries that localize production are better able to adapt technologies to local conditions and develop customized solutions.

However, the relationship between localization and competitiveness is not always straightforward. Successful localization requires the development of a complete industrial ecosystem, including suppliers, infrastructure, skilled labor, and technological capabilities. Without these elements, localization efforts may result in increased costs and reduced efficiency.

In the Saudi lighting industry, the lack of upstream capabilities such as aluminum die casting and advanced component manufacturing represents a significant barrier to achieving full competitiveness. Therefore, building a comprehensive manufacturing ecosystem is essential to realizing the benefits of localization.

2.5 Conclusion

The literature indicates that industrial localization is a key driver of competitiveness, particularly in emerging economies seeking to reduce import dependency and strengthen domestic industries. Localization enhances cost efficiency, improves supply chain resilience, and supports innovation.

However, achieving these benefits requires more than local assembly. It depends on the development of a fully integrated manufacturing ecosystem, including upstream industries and advanced production capabilities.

This study builds on existing literature by examining how localization can transform the Saudi lighting industry into a competitive and sustainable manufacturing sector.

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