

Industrial and Commercial development assessment parameters in Kerala, focusing on Business and Production environment.

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Date of Submission: 15-05-2023

Date of Acceptance: 30-05-2023

ABSTRACT: Kerala, a state in India, possesses several advantages for businesses, including a skilled workforce, good infrastructure, and a favourable business environment. This paper proposes an assessment framework to attracting investment, improving regulations, enhancing skills through training and education, and developing infrastructure which can help eventually advance in its industrial and commercial sectors. The framework will facilitate the evaluation of progress and identification of areas requiring improvement, enabling the state government to enhance the business and production environment. This assessment parameters will serve as a valuable tool to promote industrial and commercial development, attract investment, and generate employment opportunities in Kerala.

KEYWORDS: Kerala, industrial and commercial development, assessment framework, business environment, production environment, investment, regulation, skills, infrastructure.

I. INTRODUCTION

Kerala is a state in India with a population of over 35 million people. The state has a long history of trade and commerce, and it is home to major industrial and commercial centres. In recent years, the state has made significant investments in infrastructure and development, and it is now considered to be one of the most attractive investment destinations in India. The state's industrial and commercial sector faces several challenges, including the lack of skilled labour, the high cost of doing business, inadequate infrastructure, and lack of access to credit. The development of an Industrial and Commercial development Assessment framework will help to address the key challenges and opportunities facing

in the sector. The framework will also help to guide the state government in its efforts to promote industrial and commercial development and to create a more conducive business environment.

The aim of this study is to develop an Industrial and Commercial development Assessment framework for Kerala focusing on the business and production environment.

The main objectives of the study are:

- i. To gain an in-depth understanding of Industrial and Commercial development planning.
- ii. To identify the parameters used to assess the Industrial and Commercial scenario of enterprises in a region.
- iii. To formulate a set of parameters based on Analytic Hierarchy Process to assess the industrial and commercial scenario of enterprises in a region.

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II. METHODOLOGY

The methodology outlined is a systematic approach to assess the industrial and commercial scenario of enterprises in a region. This approach will help us to identify the key factors that contribute to the success of businesses in a region, and the challenges that businesses face in a region. This information can be used to develop policies and programs that can support the growth and development of businesses in a region.

The steps are to gain an in-depth understanding of industrial and commercial development planning, conducting a literature review and interview with experts. To identify the parameters used to assess the industrial and commercial scenario of enterprises in a region, data is collected from government agencies, industry associations, and business surveys. To formulate a

set of parameters Analytic Hierarchy Process (AHP) is used to compare and rank the different parameters.

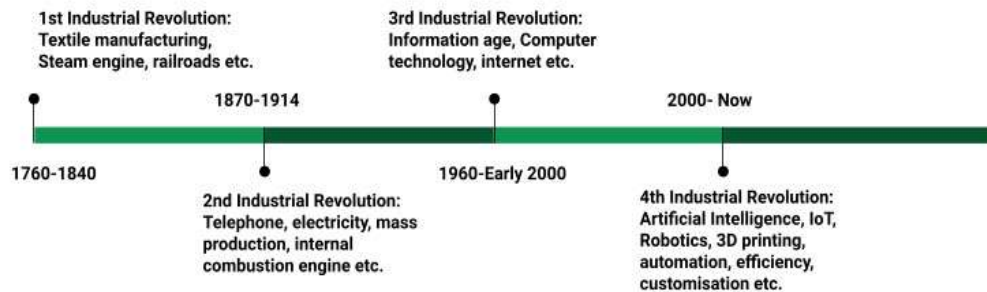
III. LITERATURE REVIEW

Industry and Commerce played a crucial role in the development of human societies since the beginning of civilization. The history of industry and commerce can be traced back to the ancient times when people first started trading goods and services with each other. From the barter system to the modern-day global economy, the evolution of industry and commerce has been shaped by various factors such as technological advancements, changes in political systems, and economic philosophies. The growth and development of industry and commerce have not only improved the standard of living but also led to the creation of jobs, wealth, and social progress. In this essay, we will explore the history of industry and commerce, from its early beginnings to the present day, and the impact it has had on society.

The Industrial Revolution, on the other hand, began in the late 18th century and continued into the 19th century. This period marked a significant shift in manufacturing processes, as machines and new technologies replaced manual labour. The Industrial Revolution was fuelled by the growth of capitalism and the desire for increased efficiency and production. The development of steam engines, textile mills, and iron production allowed for the mass production of goods, leading to the rise of industrial capitalism.

The Commercial Revolution occurred in the late Middle Ages and early modern period, roughly from the 15th to the 18th century. During this time, European nations began to expand their trade networks, establish colonies, and engage in overseas exploration. This period saw the rise of mercantilism, a form of economic policy that aimed to accumulate wealth through trade, and the development of new financial systems, such as banks and stock exchanges. The Commercial Revolution created a more interconnected global economy and increased the flow of goods and ideas across borders [3].

Figure 2.1: Industrial revolution timeline



Source: [4]

The ISIC defines industry as a group of establishments primarily engaged in the same activity or producing similar products or services. The classification is based on the type of economic activity, such as agriculture, manufacturing, or services. The Indian government has provided various definitions for the term “industry” in different contexts. The most used definition, as stated in the Industrial Disputes Act of 1947, encompasses businesses, trades, undertakings, manufacturing activities, and occupations of employers, employees, and workers. Courts have further interpreted this definition to include any activity involving the production or provision of goods and services, regardless of profit motive or sector (public or private).

Additionally, the government has established specific definitions of industry for taxation, regulation, and other policies. For instance, the Factories Act of 1948 defines a factory as premises where a specific number of workers are engaged in manufacturing processes with or without the use of power.

The definition of industry carries significant implications. It determines the extent of government regulation for businesses and influences taxation practices. Moreover, it can impact the rights and benefits granted to workers.

Given its complexity, the definition of industry has sparked debates and legal disputes. The Indian government has made efforts to provide clarity on the matter, but ongoing interpretation remains a relevant aspect.

The WTO defines commerce as the exchange of goods and services between countries.” This means that when two countries trade with each other, they are exchanging goods and services for mutual benefit. The UNSD defines commerce as the exchange of goods and services between individuals, businesses, or countries with the objective of earning profits.

In conclusion, commerce is the exchange of goods and services between individuals, businesses, or countries. It is an important activity that benefits both individuals and countries. Commerce can be international or domestic, and it can be motivated by a variety of factors, including the desire to obtain goods and services, to generate wealth, or to improve social welfare. The WTO defines business services as services that facilitate the operation of other sectors of the economy, such as finance, transportation, communication, and distribution, as well as services that facilitate the operation of businesses themselves.”

This means that business services are a broad category of services that support the production and delivery of goods and services in other sectors of the economy. For example, financial services help businesses to raise capital and manage their finances, transportation services help businesses to move their goods and products, and communication services help businesses to communicate with their customers and suppliers. The UNSD defines business services as services provided to businesses and other organizations to support their operations and facilitate their commercial transactions.”

This definition is like the WTO’s definition, but it focuses on the services that are provided to businesses directly. For example, accounting and legal services help businesses to

comply with regulations, marketing and advertising services help businesses to reach their target customers, and human resources services help businesses to hire and train their employees. The ISIC defines business services as “services primarily intended to facilitate and support the activities of other businesses or individuals, including professional, technical and specialized services.” In conclusion, business services are a broad category of services that support the production and delivery of goods and services in other sectors of the economy. They are an important part of the global economy, and they play a vital role in the growth and development of businesses.

The International Standard Industrial Classification (ISIC) is a hierarchical classification system, which means that it is divided into a series of nested categories. The top level of the ISIC is divided into two main categories: industries and services. Industries are further divided into subindustries, which are then divided into divisions, groups, classes, and subclasses.

The ISIC is used by countries all over the world to collect and analyse economic data. It is also used by international organizations, such as the World Bank and the International Monetary Fund, to compare economic data between countries. The ISIC is a valuable tool for understanding the structure of the global economy. It is also a useful tool for businesses, governments, and other organizations to track the performance of the economy and to make informed decisions about economic policy. The most common classification system is based on the nature and scale of economic activities. The government of India uses the National Industrial Classification (NIC) and National Product Classification for Services (NPCS) system to classify industries and related services.[1]

Figure: Classification of Industry services



Source: [2]

The most recent categorization of industries in India, introduced in 2020, relies on the amount of investment in plant and machinery. This revised classification divides industries into three groups based on their investment levels.

- i. Micro Enterprises: These are industries with investments up to Rs. 1 crore and turnovers up to Rs. 5 crores.

- ii. Small Enterprises: These include industries with investments up to Rs. 10 crore and turnovers up to Rs. 50 crores.
- iii. Medium Enterprises: These encompass industries with investments up to Rs. 50 crores and turnovers up to Rs. 250 crores.
- iv. Large Scale Enterprises: Industries that invest more than Rs. 250 crores fall into this category, which is not covered by the MSME (Micro, Small, and Medium Enterprises) definition. Nevertheless, large scale industries may still be eligible for government incentives and benefits.

This updated classification of industries in India is an enhancement over the previous system, which solely considered investment in plant and machinery. The new classification additionally takes into account the industry's turnover, providing a more accurate reflection of its size and scale. This classification is important for various purposes, such as determining eligibility for government incentives and schemes, providing financial support, and promoting the growth of small and medium enterprises. It also helps in policymaking, as it provides a clear understanding of the size and nature of different industries in India. Overall, the latest classification of industries in India is a step towards promoting the growth and development of the MSME sector, which is an important contributor to India's economy. Regenerate response

Industrial and commercial development in the global and Indian contexts involves a range of complex legal issues. These issues include intellectual property rights, competition law, labour law, environmental law, corporate law, contract law, and tax law.

To protect their intellectual property assets, businesses must be aware of relevant laws and regulations. For example, globally, there are conventions such as the Paris Convention for the Protection of Industrial Property, the Berne Convention for the Protection of Literary and Artistic Works, and the TRIPS Agreement. In India, laws such as the Patents Act, 1970, the Copyright Act, 1957, and the Designs Act, 2000 govern intellectual property rights.

Compliance with competition laws is crucial for businesses. The United States has the Sherman Antitrust Act, the Clayton Antitrust Act, and the Federal Trade Commission Act, while the European Union follows the Competition Act. In India, the Competition Act, 2002 regulates competition law. Labour laws protect the rights of employees globally and in India. The International Labour Organization's (ILO) Declaration on Fundamental

Principles and Rights at Work guides global labour standards. In India, the Factories Act, 1948, the Mines Act, 1952, and the Employees' Compensation Act, 1923 address labour-related matters.

Environmental regulations play a crucial role in the progress of industrial and commercial sectors. Internationally, agreements such as the United Nations Framework Convention on Climate Change, the Kyoto Protocol, and the Paris Agreement prioritize environmental protection. In India, specific laws such as the Water (Prevention and Control of Pollution) Act of 1974, the Air (Prevention and Control of Pollution) Act of 1981, and the Environment (Protection) Act of 1986 have been established to address environmental concerns.

Corporate laws govern the establishment, operation, and dissolution of businesses. The United States follows the Model Business Corporation Act, while the United Kingdom abides by the Companies Act. In India, the legal framework for corporate entities is provided by the Companies Act of 2013.

Contracts are a fundamental component of business transactions. The United Nations Convention on Contracts for the International Sale of Goods (CISG) serves as a global agreement. In the country of India, contract rules are governed by Indian Contract Act of the year 1872.

These examples illustrate the diverse range of laws and regulations that impact industrial and commercial development on both a global scale and within India. It is vital for businesses to familiarize themselves with these legal frameworks to ensure compliance and mitigate potential legal complexities.

Global organizations that play significant roles include:

The World Bank: A global financial institution that offers loans to developing countries for capital programs and provides technical assistance and policy advice.

The International Monetary Fund (IMF): An international organization that extends loans to countries facing balance of payments difficulties and provides technical assistance and policy advice.

The United Nations Industrial Development Organization (UNIDO) is a dedicated United Nations agency that aims to foster industrial development in developing nations by providing technical support, training, and services that promote investments.

The Asian Development Bank (ADB): A regional development bank that grants loans and aids to developing countries in Asia, while also providing technical assistance and policy advice.

Indian organizations include:

The Department of Industrial Policy and Promotion (DIPP): The DIPP is a government agency that is responsible for promoting industrial development in India. The DIPP provides several services to businesses, including investment promotion, market research, and trade facilitation. The Small Industries Development Bank of India (SIDBI) is a government-owned financial institution that extends loans and various financial services to small and medium enterprises (SMEs). SIDBI also offers support in the form of training and other assistance to SMEs. On the other hand, the National Manufacturing Competitiveness Council (NMCC) is a governmental body appointed to enhance the competitiveness of the manufacturing industry in India. The NMCC serves the manufacturing sector by providing policy recommendations, training programs, and benchmarking services. The Confederation of Indian Industry (CII): The CII is a non-profit organization that represents the interests of the Indian business community. The CII provides several services to businesses, including advocacy, training, and networking.

State organisations. Kerala Industrial Infrastructure Development Corporation (KINFRA): It is a state-owned company that is responsible for developing industrial infrastructure in Kerala. It provides several services to businesses, including land development, factory sheds, and common facilities. Kerala State Industrial Development Corporation (KSIDC): KSIDC is a state-owned company that is responsible for promoting industrial development in Kerala. KSIDC provides several services to businesses, including investment promotion, market research, and trade facilitation. Kerala Small Industries Development Corporation (KSSIDC): KSSIDC is a state-owned company that is responsible for providing financial and technical assistance to small and medium enterprises (SMEs) in Kerala. KSSIDC provides several services to SMEs, including loans, grants, training, and market linkages. Kerala Startup Mission (KSUM): KSUM is a state-owned company that is responsible for promoting entrepreneurship and innovation in Kerala. KSUM provides several services to startups, including incubation, mentorship, and funding. Kerala State Information Technology Infrastructure Limited (KSITIL): KSITIL is a state-owned company that is responsible for developing and managing IT infrastructure in Kerala. KSITIL provides several services to businesses, including data centres, cloud computing, and networking.

India has experienced notable growth in its industrial and commercial sectors in recent years. This growth can be attributed to several factors, including economic reforms, infrastructure improvements, foreign investments, skill enhancement, and facilitation of business operations.

The implementation of economic reforms since 1991 has played a significant role in stimulating industrial and commercial development by fostering a more open and competitive economy. These reforms have simplified business operations and promoted growth opportunities. Substantial investments by the government in infrastructure development have also contributed to the progress.

Enhanced transportation networks, improved power supply, and better availability of essential services have facilitated business operations and expansion.

Foreign investments have been instrumental in driving industrial and commercial development in India. These investments have brought advanced technology and expertise, bolstering the competitiveness of Indian businesses.

The government's focus on skill development has played a vital role as well. By investing in developing a skilled workforce, India has ensured that it has the necessary talent pool to support industrial and commercial growth.

The government has also taken measures to improve the ease of doing business in India. This has streamlined processes, making it more convenient for businesses to establish and operate. Consequently, it has attracted greater investments and fostered growth.

As a result of these factors, India has witnessed significant advancements in industrial and commercial sectors. The manufacturing industry has experienced rapid growth, and the country has become a major exporter of goods and services. Additionally, the services sector, particularly IT and ITES services, has flourished.

This progress in industrial and commercial development has had a positive impact on the Indian economy. It has created employment opportunities, boosted exports, and reduced poverty levels. Furthermore, it has positioned India as an appealing investment destination.

The Indian government remains committed to promoting further industrial and commercial development, with a target of achieving a \$5 trillion economy by 2024. To attain this goal, the government is focused on implementing additional reforms, fostering infrastructure development, enhancing skills, and facilitating ease of doing business.

The outlook for industrial and commercial development in India is highly promising. With a large and expanding population, a young workforce, and a rapidly growing economy, India presents itself as an attractive investment destination and a potential economic powerhouse.

Kerala, a state in India, has a long-standing history of commercial and industrial development. It offers a range of advantages that make it an attractive destination for businesses, including a skilled workforce, well-developed infrastructure, and a favourable business environment.

Various industries contribute to Kerala's thriving economy. The state encompasses manufacturing sectors such as textiles, food processing, and electronics. Additionally, its popularity as a tourist destination has established tourism as a major contributor to the state's economy. Furthermore, Kerala has emerged as a significant hub for information technology (IT) and information technology-enabled services (ITES), providing substantial employment opportunities and bolstering economic growth.

The commercial and industrial development in Kerala can be attributed to several factors. The state boasts a highly educated and skilled workforce, with a literacy rate of 94%, the highest in India. Technical and vocational training institutes further contribute to creating a competent workforce. Kerala also benefits from a robust infrastructure, including well-connected roads, reliable power supply, and ample water resources. The presence of ports and airports facilitates efficient transportation of goods and people. Moreover, the state maintains a favourable business environment characterized by a low tax rate, simplified regulatory framework, and incentives such as tax breaks and subsidies for businesses.

These factors have collectively contributed to significant commercial and industrial growth in Kerala in recent years. The state has successfully attracted major businesses, resulting in rapid economic expansion, job creation, increased exports, and poverty reduction.

The Kerala government is dedicated to promoting further commercial and industrial development. It actively encourages investment through various schemes and outreach efforts. Additionally, the government emphasizes skill development by establishing technical and vocational training institutes and providing financial assistance to businesses for employee training. Infrastructure development is also a priority, with upgrades to roads, power supply, water management systems, and the construction of new ports and airports.

These plans and initiatives are geared towards driving commercial and industrial growth, with the goal of transforming Kerala into a \$1 trillion economy by 2030. The Kerala government's new Industrial and Commercial Policy for 2023-2028 with 25 objectives and 7 policy focus pillars. The policy aims to create a sustainable industrial ecosystem that attracts investment and innovation. The objectives of the policy include building a robust entrepreneurial ecosystem, making Kerala a thriving startup destination, and upgrading traditional industries with new technologies. The policy also aims to enhance industry-ready skill sets, attract industry players from emerging sectors, and foster a seamless environment for doing business in the state. Additionally, the policy aims to promote sustainable industries and enhance RD capabilities and linkages in new and emerging sectors of industry and economy (CPCB, 2019).

To achieve the objectives of the policy, seven policy focus pillars have been identified, including fostering entrepreneurship, enabling infrastructure, being hi-tech, building futuristic skill sets for employment, creating a supportive business environment, enhancing the "Kerala" brand equity, and building sectoral ecosystems. The policy aims to maximise private investments in industrial infrastructure development, strengthen logistics infrastructure to achieve multi-fold growth in exports, and create an Industry 4.0 compliant industry ecosystem. Additionally, the policy aims to build global linkages to foster foreign investments and exports, enable access to foreign markets for increased trade volumes, and encourage businesses to adopt best ESG practices.

Industrial Park Rating System is a rating system developed by the Ministry of Commerce and Industry of the Government of India to evaluate and assess the quality and infrastructure of industrial parks in the country. The IPRS provides a framework for rating industrial parks based on various parameters such as location, connectivity, infrastructure, environmental sustainability, social infrastructure, and business support services. The rating system aims to encourage the development of world-class industrial parks in India and attract more investments from both domestic and foreign companies.

PESTEL is a framework used in strategic management and business analysis to identify and evaluate the external factors that can impact an organization's operations and decision-making processes. In business analysis and strategic planning, organizations often consider external macroenvironmental factors that could impact their operations, performance, and overall success. These

factors comprise economic, sociocultural, technological, environmental, legal, and political aspects. Political factors encompass government policies, regulations, and stability that could influence organizational operations. Economic factors include economic conditions, inflation, exchange rates, and other indicators that could affect organizational performance. Sociocultural factors refer to social and cultural norms, attitudes, and beliefs that could impact consumer behaviour and market trends. Technological factors involve advancements in technology, innovations, and the impact of automation and digitalization on business operations. Environmental factors encompass the impact of climate change, natural disasters, and sustainability on an organization's operations and reputation. Lastly, legal factors include laws, regulations, and the legal environment that could affect the organization's operations, industry, and market. Considering these factors can help organizations make informed decisions and develop effective strategies to navigate potential challenges and opportunities in the external environment.

The World Bank's Ease of Doing Business index is an annual report that assesses the ease of doing business in 190 economies around the world. The report covers various indicators, such as starting a business, getting credit, paying taxes, enforcing contracts, and more. The purpose of the report is to provide policymakers with data and insights that can help them identify areas of improvement and implement reforms that can make it easier for businesses to operate and thrive. It also serves as a tool for investors and entrepreneurs looking to make informed decisions about where to invest their time and money.

Figure 2.3: Ease of doing business parameters.

Ease of starting a business.	Dealing with construction permits.
Getting electricity for the same.	Registering your property.
Getting credit for your business.	Protecting minority investors.
Paying taxes.	Trading across borders.
Enforcing contracts.	Resolving insolvency.

Source: [5]

The Ease of Doing Business report uses a scoring system to rank countries based on their overall business environment. The higher the score, the easier it is to do business in that country. The report also provides detailed information on each indicator, including the procedures, time, and cost involved in each process. The "Starting a Business" parameter evaluates the ease of starting a business in

a particular country by considering the number of formalities and procedures involved, the time and cost required, and complying with all necessary permits, licenses, and tax requirements. This parameter also considers the minimum capital requirement for starting a business in that country. The "Dealing with Construction Permits" parameter assesses the ease of obtaining construction permits in a country by looking at the number of procedures, time, and cost involved in getting the necessary permits and complying with building regulations for constructing a commercial building. The "Getting Electricity" parameter evaluates the ease of getting new electricity connections for businesses in a country, including the procedures, time, and cost required for obtaining necessary permits, inspections, and fees. The "Registering Property" parameter assesses the ease of registering property ownership in a country by considering the procedures, time, and cost involved in transferring property ownership, obtaining necessary documents, paying fees, and registering the transfer. The "Getting Credit" parameter measures the ease of getting credit for a business in a country by evaluating the legal framework and credit reporting system, as well as the availability of credit information. The "Protecting Minority Investors" parameter measures the degree to which the legal framework in a country protects the rights of minority shareholders and provides remedies for violations. The "Paying Taxes" parameter evaluates the ease of complying with tax regulations in a country by considering the number of tax payments, time and cost required for tax preparation and filing, and the overall tax burden on businesses. The "Trading Across Borders" parameter measures the ease of trading goods across borders in a country, including the time and cost required to comply with customs and border regulations and the quality of trade infrastructure and logistics. The "Enforcing Contracts" parameter assesses the ease of resolving commercial disputes through the legal system in a country by evaluating the time and cost required and the quality of the judicial process. The "Resolving Insolvency" parameter measures the ease of resolving insolvency cases in a country, including the time, cost, and recovery rate, and the legal framework for insolvency proceedings.

IV. RESULTS

From expert reviews and discussions, the AHP results of parameters to assess the enterprises are listed out below.

Table: Results of AHP

	Internal Infrastructure	External Infrastructure & Connectivity.	Technological Factors	Social Factors	Political Factors	Economic Factors	Environmental Factors	Weightage
Internal Infrastructure	1.00	3.00	2.00	5.00	3.00	0.50	0.50	19.56%
External Infrastructure & Connectivity.	0.33	1.00	2.00	2.00	3.00	0.50	2.00	15.28%
Technological Factors	0.50	0.50	1.00	6.00	4.00	1.00	6.00	20.91%
Social Factors	0.20	0.50	0.17	1.00	2.00	0.33	3.00	7.71%
Political Factors	0.33	0.33	0.25	0.50	1.00	0.50	6.00	7.96%
Economic Factors	2.00	2.00	1.00	3.00	2.00	1.00	3.00	23.09%
Environmental Factors	2.00	0.50	0.17	0.33	0.17	0.33	1.00	5.49%

V. CONCLUSION

The weightage results highlight the significance of each parameter in the decision-making process. The internal infrastructure emerged as the most crucial factor, accounting for 19.56% of the overall weightage. It was followed by economic factors (23.09%) and technological factors (20.91%), which also held substantial importance. External infrastructure and connectivity (15.28%) and social factors (7.71%) obtained relatively lower weightages but were still recognized as influential factors. On the other hand, political factors (7.96%) and environmental factors (5.49%) were found to have the least impact on the project's success.

These findings emphasize the need for project managers and stakeholders to prioritize and allocate resources effectively based on the relative importance of each parameter. By focusing on strengthening internal infrastructure, addressing economic considerations, and leveraging technological advancements, project success can be enhanced. It is crucial to recognize the interconnectedness of these factors and consider them holistically during project planning and execution.

In conclusion, the AHP results presented in this study offer valuable guidance for project managers and stakeholders in understanding the relative importance of different parameters affecting project success. By considering these findings and incorporating them into the decision-making process, project outcomes can be improved, leading to greater efficiency, effectiveness, and overall success.

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