



## Industrialization Strategy in the Macro Economy Existing in Regencies and Cities

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### ARTICLE INFO

*Keywords:* Industrialization, Regional Economic Growth, GRDP Added Value, Multiplier Effect, Human Resources

*Received* : 5 April 2026

*Revised* : 20 May 2026

*Accepted* : 20 June 2026

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### ABSTRACT

Industrialization is an important strategy for boosting regional economic growth by transforming the economic structure from the primary sector to the industry sector, which has a higher added value. This study aims to analyze industrialization strategies for increasing economic growth and community welfare at the regency and city levels. The research uses a qualitative descriptive method with a literature study approach. Secondary data is obtained from books, scientific journals, publications from the Central Bureau of Statistics (BPS), government documents, and reports from relevant institutions. Data analysis is conducted qualitatively in a descriptive manner through the process of breaking down, comparing, and interpreting various literature sources. Research results show that developing industries based on local potential, building infrastructure, improving human resource quality, creating a conducive investment climate, strengthening industrial zones, and utilizing innovation and technology are key strategies to boost regional economic growth. Industrialization increases GRDP added value through downstreaming, creates a multiplier effect on trade, services, transportation, and SMEs, and expands job opportunities. However, its implementation still faces obstacles such as limited infrastructure, low-quality human resources, limited investment, inefficient bureaucracy, and social and environmental challenges. Integrated, inclusive, and sustainable industrialization policies are needed to improve competitiveness and community welfare

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## **INTRODUCTION**

Industrialization is a process of socio-economic change that transforms the means of livelihood of agrarian societies into industrial societies. Industrialization can also be understood as a condition where people focus on the economy, which includes increasingly diverse jobs (specialization), salaries, and higher earnings. Industrialization is part of the modernization process where social changes and economic development are closely linked to technological innovation. According to Jean Fourastié's classification, an economy consists of three parts. The first part consists of commodity production (agriculture, livestock, exploitation of mineral resources). The second part involves the production of goods for sale, and the third part is the service industry. The process of industrialization is based on the expansion of the second part, whose economic activities are dominated by those of the first part.

Industrialization in Indonesia has been declining since the 1998 economic crisis. This setback doesn't mean that Indonesia lacks the capital to invest in domestic industry, but it's more about the absorption of goods produced by local industries. Opening up the domestic market is a key factor for Indonesian industries to bounce back because right now, the Indonesian market is dominated by foreign products.

In the context of a region's macroeconomy, industrialization at the district and city level acts as a key driver in changing the structure of Regional Gross Domestic Product (RGDP). This process not only shifts the location of production but also creates a fundamental shift from reliance on the unstable primary sector to the manufacturing sector, which offers higher added value. Overall, the success of local-level industrialization is seen in increasing labor productivity through specialization and the adoption of technological innovations, which can eventually boost per capita income and the community's purchasing power in the area. The rise in industrial activities at the district and city level also generates a significant multiplier effect, where growth in manufacturing sparks the development of supporting service sectors like logistics, transportation, and local trade.

Furthermore, regional industrialization functions as a strategic tool to achieve fiscal independence by strengthening Local Own-Source Revenue (PAD). With industrial growth centers in place, city and regency governments have more stable sources of taxes and levies to fund public infrastructure development. However, the earlier-mentioned challenge of deindustrialization forces local governments to not only focus on the physical development of industrial areas but also on adjusting spatial planning policies and regulations that support the domestic market. In a macroeconomic context, integrating local resource potential with stronger interregional supply chains is key so that industries at the city and regency level are not just passive observers but can reclaim the domestic market from foreign products while also strengthening national economic resilience from the ground up.

## **LITERATURE REVIEW**

### **Industrialization Theory**

Industrialization is the process of changing the economic structure from primary sectors, like agriculture and mining, to more modern industrial sectors. This process isn't just about building factories or increasing the production of goods, but also involves changes in technology usage, work patterns, and boosting overall economic productivity in society. Industrialization is often seen as one of the measures of development success because it can create new jobs, increase people's income, and add more value to a product.

According to Todaro and Smith (2015), industrialization is an important part of economic development, marked by the increasing contribution of the industrial sector to the economy. Through industrialization, regions can process their resources into products that have a higher selling value compared to just selling raw materials. For this reason, industrialization has become a strategy widely used to speed up economic growth and improve people's welfare.

### **Structural Transformation Theory**

Structural transformation theory explains the change in the composition of economic activities from the traditional sector to a more modern and productive sector. This change is usually marked by a declining role of the agricultural sector and an increasing contribution of the industrial and service sectors to the economy of a region.

Arthur Lewis (1954) explained that economic development happens when labor moves from the traditional sector, which has low productivity, to the modern sector, which has higher productivity. This shift in labor improves resource use efficiency and leads to faster economic growth. Meanwhile, Chenery (1979) argued that structural transformation is a process that occurs along with rising incomes, technological progress, and the growth of industry and service activities.

In the context of regional development, structural transformation can be seen from the increasing contribution of the industrial sector to the GRDP and the decreasing economic dependence on the primary sector. The more successful a region is in carrying out structural transformation, the greater its chances of achieving sustainable economic growth.

### **Economic Growth Theory**

Economic growth is the process of increasing a region's production capacity, shown by a rise in output or income in the long term. Economic growth becomes one of the main goals of development because it is directly related to improving people's welfare.

According to Solow (1956), economic growth is influenced by several main factors, namely capital accumulation, the labor force, and technological development. Among these three factors, technological progress is considered to play a very important role because it can increase productivity and the efficiency of using available resources.

Industrialization has become one of the main drivers of economic growth because it can increase investment, expand job opportunities, and encourage

technological innovation. With the development of the industrial sector, an area will have a larger production capacity, which can boost regional income and improve people's welfare.

### **Multiplier Effect Theory**

The concept of the multiplier effect was introduced by John Maynard Keynes in macroeconomic theory. This theory explains that an investment made in the economy will generate an increase in income that is greater than the initial investment value.

In developing industrial areas, incoming investments not only benefit the companies operating there, but also create impacts for other economic sectors. The presence of industries will open up job opportunities, increase people's income, and boost consumption activities. Furthermore, this increased consumption will create demand for various goods and services, which in turn stimulates growth in trade, transportation, housing, and small businesses.

So, the multiplier effect shows that the benefits of industrialization aren't just felt by those in the industry, but also spread to various interconnected economic sectors, which can boost regional economic growth more broadly.

### **Human Capital Theory**

The Human Capital theory was developed by Theodore Schultz and Gary Becker. This theory explains that education, training, work experience, and health are forms of investment that can improve the quality of human resources. The higher the quality of human resources a region has, the higher the productivity it can achieve.

According to Becker (1993), investing in human resources will provide long-term benefits because it can enhance individuals' abilities to work, innovate, and adapt to technological changes. In the era of modern industrialization, the quality of human resources is a crucial factor for the success of industrial development. Therefore, developing education, vocational training, and improving digital skills are important steps to prepare a workforce that can meet the needs of the ever-evolving industrial world.

### **Regional Economic Development Theory**

Regional economic development is an effort carried out by local governments together with the community to boost the economic capacity of the area by utilizing available resources. The main goal of regional economic development is to create jobs, increase community income, and promote sustainable economic growth.

According to Arsyad (2015), regional economic development can be carried out through the development of key sectors that have great potential to boost the competitiveness of a region. One strategy that is often used is developing industries based on local potential because it can create higher added value compared to selling natural resources in their raw form.

By developing industries integrated with local potential, the government can strengthen the local economic structure, increase investment, and create

more evenly distributed community welfare. For this reason, industrialization becomes one of the important tools in regional economic development.

## **METHODOLOGY**

This research uses a qualitative descriptive research method with a literature study approach (library research). This method was chosen because the study focuses on reviewing theories, concepts, and various information related to industrialization strategies in boosting economic growth at the regency and city levels.

The data used in this study is secondary data obtained from various sources, such as books, scientific journals, research articles, publications from the Central Statistics Agency (BPS), government documents, as well as reports from national and international institutions relevant to the topic of industrialization and regional economic development.

Data collection was carried out through a literature study, which involved reading, understanding, and reviewing various references related to industrialization, economic structure transformation, increasing the added value of GRDP, the multiplier effect, and changes in the employment structure in the region.

Then, the collected data was analyzed using qualitative descriptive analysis techniques, by elaborating, comparing, and interpreting various information obtained from literature sources. The results of the analysis were then used to provide an overview of industrialization strategies that can support economic growth and improve community welfare at the district and city levels.

## **RESULT AND DISCUSSION**

Based on the results of literature review and descriptive analysis on the concept of industrialization in the context of regional macroeconomics, it was found that industrialization strategies play a significant role in boosting the economic growth of regencies and cities. Industrialization has been proven to not only increase production capacity but also accelerate the transformation of the economic structure from the primary sector to the secondary sector, which has higher added value.

The analysis results show that there are five main findings.

1. Industrialization based on local potential is the most relevant strategy for regions. Districts or cities that develop industries according to their comparative advantages, like agro-industry in farming areas or processing fishery products in coastal areas, can increase the added value of local products and create more job opportunities for the community.
2. Transforming the economic structure through downstreaming can increase the contribution of the manufacturing sector to the Regional Gross Domestic Product (RGDP). Areas that not only sell raw materials but also process them into semi-finished or finished products gain a bigger boost in economic output.
3. The development of industrial areas creates a multiplier effect on the local economy. The presence of industrial areas encourages growth in the trade,

transportation, services, food, housing, and various micro, small, and medium enterprises (MSMEs) that are part of the industry's supply chain.

4. Industrialization has changed the regional workforce structure. There has been a shift of labor from the agricultural sector to manufacturing and modern services. However, this change has not been fully matched by human resource readiness because there is still a gap between workers' competencies and industry needs.
5. The implementation of industrialization at the district and city level still faces various challenges, including limited infrastructure, low quality of human resources, limited investment, inefficient licensing bureaucracy, low technology utilization, and weak synergy among stakeholders.

Overall, the research results show that the success of regional industrialization is largely determined by the integration of economic development policies, the quality of human resources, infrastructure readiness, and the local government's ability to create a conducive investment climate.

## **DISCUSSION**

### **Industrialization Strategy as a Driver of Regional Economic Growth**

Research shows that industrialization is an important tool in regional economic development. This finding aligns with Todaro and Smith (2015), who state that structural transformation towards the industrial sector is a crucial stage in the economic development process.

Developing industries based on local potential is the most effective approach because it allows regions to utilize available resources to create added value. For example, a district with agricultural potential will gain greater economic benefits if its harvest is processed into industrial products rather than sold as raw materials. So, industrialization not only boosts economic output, but also strengthens regional competitiveness by creating products that have higher economic value.

### **Economic Structure Transformation and Increasing GRDP Added Value**

The economic shift from the primary sector to the industrial sector is an indicator of regional development success. Research shows that downstreaming is the main strategy to boost the industrial sector's contribution to GRDP.

These findings support Arsyad's (2015) view that increasing added value is key to sustainable economic growth. When raw materials are processed locally, the economic benefits don't leave the area; instead, they circulate within the region through higher income, investment, and community consumption.

Besides that, the economic diversification created by industrialization can strengthen the region's economic resilience against external shocks, like commodity price fluctuations or changes in climate conditions that often affect the agriculture sector.

### **The Multiplier Effect of Industrial Areas on the Local Economy**

This study found that industrial areas have a fairly large multiplier effect on the local economy. Industrial investment not only directly creates jobs but also spurs various new economic activities.

This phenomenon aligns with Keynes' multiplier theory, which explains that increased investment will raise people's income and consumption in a chain reaction. Workers' income from the industry is spent again to meet daily needs, which in turn drives growth in the trade and service sectors.

Industrial areas also strengthen connections between sectors through backward and forward linkages. SMEs get opportunities to become suppliers of industrial support materials, while the trade and logistics sectors grow as distribution channels for industrial products.

So, the success of industrial areas should not only be measured by the amount of investment coming in but also by the extent of economic benefits received by the local community.

### **Shift in Workforce Structure and HR Challenges**

Industrialization has led to significant changes in the workforce structure. Workers are gradually moving from the agricultural sector to the manufacturing and modern service sectors.

Even so, research results show that human resource readiness is still a major challenge. The industry's need for workers who are skilled in digital technology, automation, and data analysis can't yet be fully met by the existing education and training systems.

This situation shows that there's a skill mismatch between education and the job market. That's why local governments need to strengthen vocational education, competency-based training, and build collaboration between universities, businesses, and industries. Improving the quality of human resources is essential so that local people can be the main players in the industrialization process and not just spectators in their own region.

### **Challenges of Industrialization and Policy Implications**

The research results identified that infrastructure limitations are still the biggest obstacle in developing local industries. Poor roads, unstable electricity supply, and limited logistics facilities increase production costs and reduce investment appeal.

On top of that, complex bureaucracy also slows down the arrival of investors. Simplifying permits and improving legal certainty are key factors in creating a competitive business environment.

From an environmental perspective, industrialization also has the potential to cause pollution and social conflicts if not managed properly. Therefore, applying the principles of sustainable development through the green industry concept becomes really important.

The policy implications of this research point to the need for an integrated industrialization approach, which includes:

1. Developing industries based on regional potential.
2. Accelerating the development of industry-supporting infrastructure.
3. Strengthening vocational education and workforce training.
4. Simplifying regulations and making investment easier.
5. Strengthening partnerships between large industries and SMEs.
6. Implementing digital technology and industrial innovation.

7. Environmental oversight to ensure sustainable development.

## **CONCLUSION AND RECOMMENDATION**

Based on the discussion about industrialization approaches at the regency and city level, it can be concluded that industrialization is one of the key strategies for local economic development, capable of driving economic growth while also improving people's welfare. Industrialization doesn't just focus on developing the industrial sector alone, but also involves transforming the economic structure from a primary sector based on agriculture and natural resource exploitation to more productive and efficient secondary and tertiary sectors with higher added value. Through this process, regions can boost economic performance, expand job opportunities, and strengthen regional economic competitiveness in facing economic dynamics both nationally and globally.

Besides developing local potential, building economic infrastructure is also a very crucial element to support the success of industries. Facilities like transportation routes, ports, electricity, clean water, telecommunication systems, and logistics centers play an important role in supporting the production and distribution of goods. Good infrastructure can reduce logistics costs, improve efficiency in the production process, and facilitate trade between regions. On the other hand, a lack of infrastructure often becomes a major obstacle to industrial progress in many locations. Therefore, local governments need to make sustainable investments in infrastructure development to create an economic environment that benefits industrial growth.

Another aspect that has a big impact on the success of industrialization is the quality of human resources. The modern industrialization process requires workers who not only have technical skills but can also adapt to ever-evolving technology. Therefore, improving education standards, developing vocational training programs, and initiatives to upgrade workers' skills are vital steps in preparing human resources that can compete. Collaboration between local governments, educational institutions, and the industrial sector is also very important to ensure that educational and training curricula are always aligned with industry needs. This way, the skills gap between workers and industry demands can be reduced.

In addition, increasing investment is also one of the main elements in speeding up industrialization in certain areas. Investment, whether from local or foreign sources, can boost production capacity, introduce technological innovations, and create jobs for the community. To attract investment, local governments need to create a business-friendly environment by simplifying licensing processes, giving incentives to investors, and improving legal protections for business activities.

Economic transformation through industrialization also has a broad impact on regional economic development through the multiplier effect. The presence of industries in a region not only provides direct benefits to the companies operating there but also boosts the growth of other economic sectors such as trade, transportation, services, and micro, small, and medium enterprises (MSMEs). Partnerships between large industries and MSMEs can strengthen industrial

supply chains and expand the distribution of economic benefits to the community. With these inter-sector connections, economic activities in the region become more dynamic and sustainable.

Besides providing economic impact, industrialization also plays an important role in creating jobs and boosting people's income. The manufacturing industry and its supporting sectors usually require a large workforce, both skilled and semi-skilled. With more job opportunities, unemployment can decrease and people's welfare can improve. Higher income also strengthens purchasing power and increases household consumption, which is one of the main components of regional economic growth.

However, the implementation of industrialization strategies also faces various challenges that need to be addressed seriously. Limited infrastructure, uneven quality of human resources, lack of investment, and bureaucracy that is not yet fully efficient are some of the main obstacles in industrial development at the district and city levels. Additionally, poorly planned industrial development can lead to various negative impacts such as environmental damage, regional development disparities, and social pressure due to rapid urbanization. Therefore, local governments need to apply the principles of sustainable development in the industrialization process by paying balanced attention to economic, social, and environmental aspects.

The development of digital technology also opens up new opportunities to support the industrialization process in the regions. Utilizing information technology, production automation, and digitalization of industrial management systems can increase operational efficiency and expand market access for local industrial products. By making use of digital technology, industry players can reach wider markets, including international ones. Therefore, developing technological capacity and improving digital literacy for the workforce and business players is an important step in facing the digital economy era.

Overall, industrialization plays a strategic role as a driving force for regional economic development. By developing industries based on local potential, improving human resource quality, building adequate infrastructure, creating a conducive investment climate, and utilizing innovation and technology, regions can achieve more productive and sustainable economic growth. Industrialization can also strengthen the regional economic structure, increase GDP value-added, and promote more equitable community welfare.

With careful planning, strong coordination between the government, private sector, educational institutions, and the community, as well as the implementation of policies focused on sustainable development, the industrialization process at the district and city level can run optimally. In the end, industrialization not only becomes a means to boost regional economic growth, but also serves as an important foundation for creating inclusive, competitive development that can improve the overall quality of life for the community.

## **SUGGESTION**

This study employed a qualitative descriptive approach based on a literature review; therefore, its findings are limited to theoretical and conceptual

analyses of industrialization strategies at the regency and city levels. Future studies are recommended to use quantitative methods with panel data or econometric models to empirically measure the impact of industrialization on regional economic growth, employment absorption, poverty reduction, and Gross Regional Domestic Product (GRDP) growth. Furthermore, comparative studies across different regions are needed to identify variations in industrialization outcomes based on local economic characteristics, infrastructure availability, and institutional capacity.

Future research may also investigate the role of digital transformation, Industry 4.0 technologies, and innovation ecosystems in enhancing industrial competitiveness and regional development. In addition, examining the effectiveness of government policies, investment incentives, and public-private partnerships in supporting industrial growth would provide valuable policy insights. Considering the increasing importance of sustainability, further studies should explore the environmental and social impacts of industrialization, including green industry practices, carbon emission reduction, and inclusive economic development. Finally, mixed-methods research integrating quantitative and qualitative approaches is recommended to provide a more comprehensive understanding of the opportunities, challenges, and long-term implications of industrialization for sustainable regional economic development

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