

To What Extent Did the Telangana Industrial Policy Contribute to Industrialization in Karimnagar District

Rudra Dhanpal

BBA Family Business and Management
NMIMS University

Abstract: *This study examines the impact of the Telangana Industrial Policy 2014 on the industrialization of the Karimnagar district. The policy aimed to boost investments, foster industrial growth, and create employment opportunities. By providing incentives through the TS-IPASS system, the policy significantly increased the number of industries, improved infrastructure, and enhanced economic efficiency. The study highlights the positive effects on employment, income levels, and standards of living while also acknowledging the environmental challenges and social displacement caused by rapid industrialization. Overall, the policy has contributed to substantial economic development in Karimnagar, transforming it from an agriculturally reliant district to an emerging industrial hub.*

Keywords: Telangana Industrial Policy, Karimnagar, industrialization, economic development, TS-IPASS

1. Introduction

Economic development plays a crucial role in enhancing living standards, generating employment opportunities, and fostering overall economic growth of a nation.¹ An industrial policy is often adopted as a strategy to emphasize the role of government in industrial development, that includes a statement of goals for industrial growth and the means to attain them. It primarily focuses on the strategies and objectives that could be used to maximize **growth opportunities, create jobs, and promote backward areas.**² Industrial policy is used for development of economic and socio-economic factors of a country, state, or a district. By implementing the policy, government intervenes in the efficient allocation of resources and distribution of income. It controls or induces enterprise activity and determines the path for industrial development affecting socio-economic factors such as education, employment, and standards of living. In addition, Industrialization plays an imperative role in the economic development of underdeveloped countries and economies. Telangana industrial policy 2014 was adopted to **boost investments** in the state and promote the **activities of small-scale domestic firms.**³ It was able to operate and secure large-scale private sector participation and draw investments from domestic and international firms.⁴ The aid that was provided by the government to start-ups, micro, and large firms' setup their units in the state was classified as **TS-IPASS** (Telangana State- Industrial Project Approval and Self-Certification System).⁵

Telangana's vision for industrialization is "Research to Innovation; Innovation to Industry; Industry to Prosperity"⁶, which is reflected in the state's industrial policy framework, that was enacted in 2014 and went into effect in 2015 fiscal year.⁷ Prior to the adoption of industrial policy, Telangana's growth rate was marginal at 3% in 2012; however, with the implementation of the policy, the growth rate has climbed to 11.6% in 2015 and currently stands at 10.6% in 2021.⁸ The industrial policy was formulated for sustainable industrial development and create employment opportunities in the state. Adoption of the policy has created an ecosystem where the ease of doing business exceeds the best global standards. **TS-IPASS** is a part of industrial policy

¹Amanda Roche Director, Marketing and Communications, et al. "Top 6 Reasons That Economic Development Is Important to a Region's Economy." *News*, 21 Apr. 2022, <https://news.orlando.org/blog/top-6-reasons-that-economic-development-is-important-to-a-regions-economy-infographic/>. Accessed on: 12 August 2022.

²Putty, Sudheendra, and Balachandran Viswanathan. "THE TELANGANA INDUSTRIAL POLICY -A SINGLE WINDOW without GRILLS." *ResearchGate*, unknown, 4 Mar. 2020, www.researchgate.net/publication/339677307_THE_TELANGANA_INDUSTRIAL_POLICY_-_A_SINGLE_WINDOW_WITHOUT_GRILLS. Accessed on: 19 October. 2022.

³"Industrial Policy Framework for State of Telangana (2014): Information Technology, Electronics & Communications Department, Government of Telangana, India." *IT Electronics & Communications Department*, <https://it.telangana.gov.in/industrial-policy-framework-for-state-of-telangana-2014/>. Accessed on: 17 December 2022.

⁴*Telangana*. <https://www.telangana.gov.in/PDFDocuments/Telangana-Industries-Department-Annual-Report-2020-21.pdf>. Accessed on: 19 September 2022.

⁵Peter. "TS-IPASS: Application Procedure and Status-IndiaFilings." *IndiaFilings-Learning Centre*, Nov. 2019, www.indiafilings.com/learn/telangana-ts-ipass/. Accessed on: 17 November. 2022.

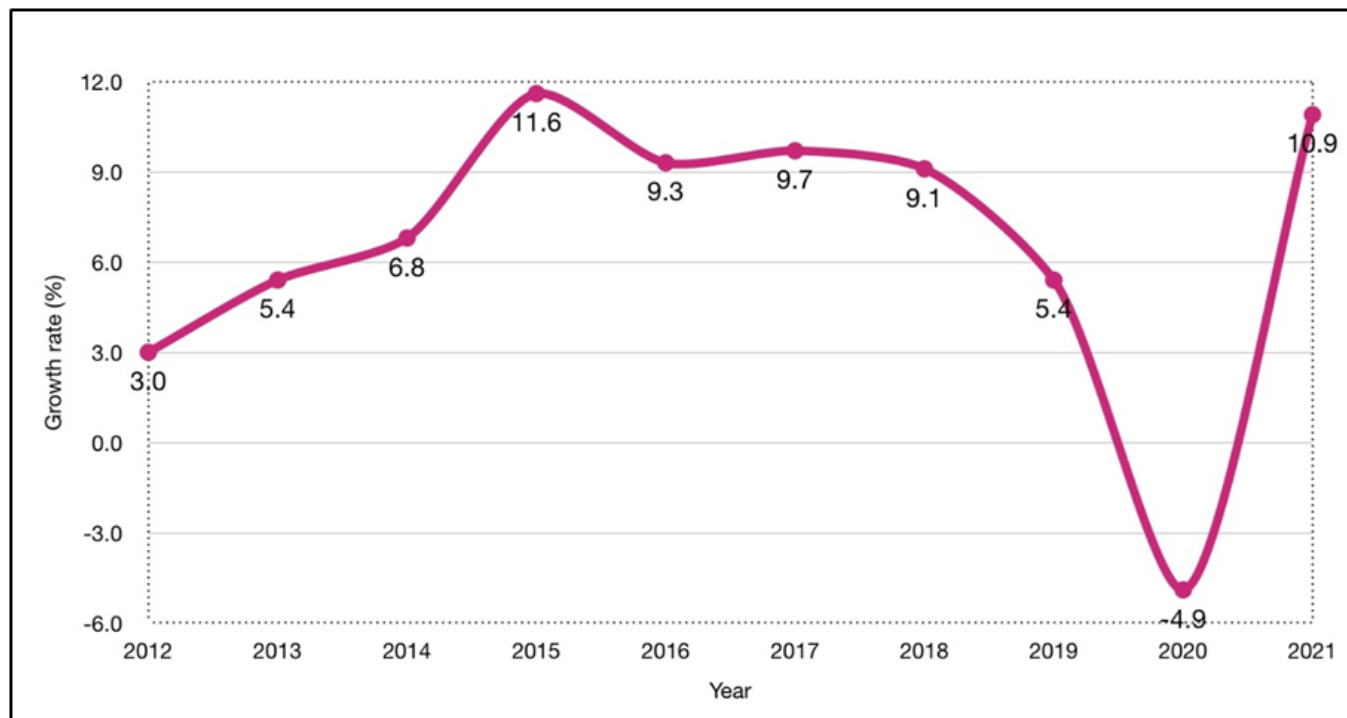
⁶"Telangana." *FTCCI*, <https://www.ftcci.in/pages/telangana>. Accessed on: 21 August. 2022

⁷"Industrial Policy Framework for State of Telangana (2014): Information Technology, Electronics & Communications Department, Government of Telangana, India." *IT Electronics & Communications Department*, <https://it.telangana.gov.in/industrial-policy-framework-for-state-of-telangana-2014/>.

⁸*Tsdps.telangana.gov.in*. <https://tsdps.telangana.gov.in/Atlas.pdf>. Accessed on: 21 January. 2023

that helped many start-ups and micro businesses in the state to enhance their production capacity and capital investments.⁹ Government has played a vital role in facilitating and drawing large scale participation in the private sector. In addition, the state has developed various prosperous districts that previously had no industries or investments and only relied on agriculture.

Karimnagar is a developing district in the Indian state of Telangana where the economy was heavily reliant on agriculture¹⁰ amid scarce resources, inadequate enterprise activity, and abundant labour force; but implementation of industrial policy in Telangana has resulted in the efficient allocation of resources, distribution of income, and has directed a path for growth and development in the district in terms of industries and investments.¹¹ It has established various industries in the district that has benefited in generating higher rate of employment and improving other socio-economic factors such as income, education, and standards of living.



Graph 1: Growth rate of Telangana at current prices from the year 2012 to 2021

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Source: <https://www.tsdp.telangana.gov.in/Atlas.pdf>

2. Review of Literature

Many studies have analysed the effect of the Telangana Industrial policy on development of the state, but they do not explicitly focus on Karimnagar's growth and development.

According to D. Thirumala Rao's study, the Telangana Industrial Policy has played a crucial role in drawing substantial foreign investments, particularly in the IT sector. The study also emphasized that the state's TS-IPASS initiative has contributed to enhancing the ease of doing business, while the policy's focus on skill development has equipped local individuals with the requisite skills to secure employment in industries, consequently promoting economic growth in the state.¹³

Researchers from Osmania University did a comparable evaluation of the impact of the Telangana Industrial Strategy on industry development. The analysis determined that the policy had considerably helped to the expansion of the state's industrial

⁹ Improving Ease of Doing Business for Telangana MSME's ...-IJSR. https://www.ijssr.com/citations/ETRI2018/IJSR_ETRI_201806.pdf. Accessed on: 29 December. 2022

¹⁰ "DistrictsOfIndia- Socio-Economic Statistical Data of Karimnagar District, Telangana." *Indiastatdistricts.com*, 2014, www.indiastatdistricts.com/telangana/karimnagar-district. Accessed on: 18 August. 2022.

¹¹ "Industrial Policy a Shot in the Arm for Karimnagar." *Thehindu.com*, 13 June 2015, www.thehindu.com/news/national/telangana/industrial-policy-a-shot-in-the-arm-for-karimnagar/article7314799.ece. Accessed on 16 September. 2022.

¹² tsdps.telangana.gov.in. <https://tsdps.telangana.gov.in/Atlas.pdf>. Accessed on: 21 September. 2023

¹³ Thirumala Rao, D. "Policy of Telangana Government for Business Development." *Asian Journal of Managerial Science*, vol. 7, no. 1, 2018, pp. 42–45., <https://doi.org/10.51983/ajms-2018.7.1.1290>. Accessed on: 2 September. 2022

and service sectors, attracting private investments, and resulting in the establishment of new firms. The research did not evaluate the policy's influence on industry in the Karimnagar area.¹⁴

The literature sources analysed collectively have shown that the Telangana Industrial Policy has been a key factor in driving industrialization in the state. The policy has attracted private investment, led to the growth of various sectors, and created employment opportunities, despite some implementation challenges.

3. Objectives of this Study

1. This study will investigate the role of industrial policy on economic development and its impact on the urbanization of Karimnagar region.
2. It will evaluate the industrial policy and its contribution for the development of industries and its impact on the investment level in the district.
3. It shall also examine the impact of industrial policy on socio-economic factors such as employment, income, and standards of living.

Hypothesis

HO: The **Null hypothesis** for this essay would be “there is no impact of adopting the Industrial policy on economic development in Karimnagar, Telangana”

H1: The **Alternative hypothesis** for this essay would be “there is a significant impact of adopting the Industrial policy on economic development in Karimnagar, Telangana”.

Research Area



Figure 1: Map of Karimnagar district

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Source: <https://www.fast2sms.com/help/bulk-sms-service-provider-in-karimnagar-telangana/>

Karimnagar was chosen as geographical constraint for this research due to its underdeveloped and backward status before the implementation of the industrial policy. Nevertheless, the district has made significant progress in attracting industries and investments over time. As a result, the district has undergone remarkable progress in its economic growth and development¹⁶, making it an ideal location to investigate the significant impact of the Telangana Industrial policy on industrialization.

¹⁴ Mekha, Vigneshwar, and Adma Kamalakar Reddy. “Industrialization and Decentralisation of Industries in Telangana State – Post TS-IPASS Policy.” *International Journal of Management and Social Sciences Research (IJMSSR)* ISSN: 2319-4421, vol. 7, 4 Apr. 2018, pp. 22–34. Accessed on 19 September. 2022

¹⁵ “Bulk SMS Service Provider in Karimnagar, Telangana.” *Fast2SMS*, <https://www.fast2sms.com/help/bulk-sms-service-provider-in-karimnagar-telangana/>. Accessed on: 15 December 2022

¹⁶ *FTCCI*. <https://www.ftcci.in/source/TS-IPASS%20Report.pdf>. Accessed on: 6 October. 2022.

4. Methodology

This essay focuses on the regional development of Karimnagar district due to adoption of industrial policy in Telangana state. It will thoroughly investigate developments and socio-economic factors of the district, such as employment, number of industries, quality of life, and education.

Primary data:

This investigation relies heavily on primary data, collected from a survey conducted in Karimnagar and the sub-divided mandals nearby. The direct sampling method was used to collect data from **100 samples** in **Karimnagar**. The period of study for this research is from the year **2017 to 2022**. Semi-structured telephone interviews were conducted with people working in the industrial sector who were benefited from the policy and also individuals working in the district collectorate, which helped me gain a better understanding about the benefits and flaws of implementing industrial policy in the state. The data could be **biased** as respondents might have only provided favourable feedback.

Secondary data:

Many industrial policy documents were accessed from the state portal website, which contained a brief about the industrial policy. The policy framework was referred to understand the government's objective and how it would bring new investments into the state.

Statistical information about the policy was accessed through the government website under the RTI Act, 2005 that makes access to all Government data a fundamental right of each Indian citizen.¹⁷ IB economics textbook by Paul Hoang, research papers, articles and Government reports accessed through the internet were also referred.

Why is industrial policy important for economic growth and development?

Industrial policy plays a crucial role for economic growth and development because it helps to create job opportunities, increase productivity, and encourage innovation.¹⁸ The government aids in creation of new job opportunities for individuals by fostering the growth of particular sectors or businesses. This is significantly imperative in developing economies where unemployment rate is often high. By creating jobs, industrial policy can assist to eliminate poverty and enhance the standards of living for people. Yet, the industrial policy of a country or state is impacted by the ideologies and principles of the concerned government. In addition to promoting the growth of certain sectors or industries, the government may aid in improving the production and efficiency of particular industries. This can lead to higher production and better competitiveness on the global market¹⁹, given that productivity is important in an economy because it has an enormous impact on the standards of living and income of individuals in the short term. This occurs when total economic output increases. Also, by investing in R&D and supporting innovation, industrial policy may contribute to the acceleration of technical breakthroughs and the enhancement of productivity.²⁰

The policy plays a significant role in promoting sustainable economic development by stimulating more effective use of natural resources, minimising waste, and energy consumption, and allocating resources to their optimal use.²¹ Thus, governments promote the development of green and sustainable sectors to minimize the negative effects of industrialisation on the environment while assuring long-term responsible economic growth.²² This is due to the fact that sustainable industrial growth ensures an economy's resources are used effectively and conservatively. Industrial policy is also adopted to augment investment inflows and facilitate transformational change in the industrial base that creates pathways to sustainable industrial development. In addition, the policy can promote economic growth by enhancing the balance of trade through increasing exports and reducing dependence on imports.²³

¹⁷ RTI Act, <https://rti.gov.in/rtiact.asp>. Accessed on: 29 November. 2022.

¹⁸ GKToday. "Industrial Policy: Meaning, Need and Importance." *Gktoday.in*, GKToday, 14 Oct. 2015, www.gktoday.in/topic/industrial-policy-meaning-need-and-importance/#:~:text=The%20main%20objective%20of%20any,by%20providing%20concessions%20for%20industrial. Accessed on: 29 October. 2022.

¹⁹ Anu Madgavkar, et al. "How Governments in Emerging Economies Can Help Boost and Sustain Growth." *McKinsey & Company*, McKinsey & Company, 11 Mar. 2019, www.mckinsey.com/industries/public-and-social-sector/our-insights/how-governments-in-emerging-economies-can-help-boost-and-sustain-growth. Accessed on: 12 December. 2022.

²⁰ *Www.imf.org*. <https://www.imf.org/-/media/Files/Publications/DP/2022/English/IPGDCFEA.ashx>. Accessed on: 3 January. 2022.

²¹ *Oecd.org*, 2023, www.oecd.org/greengrowth/whatisgreengrowthandhowcanithelpdeliversustainabledevelopment.htm. Accessed on: 17 February. 2023.

²² "Smart Industrial Policies for Development-OECD." *Oecd.org*, 2013, www.oecd.org/dev/pgd/smartindustrialpoliciesfordevelopment.htm. Accessed on: 21 August. 2022.

²³ Weiss, John, and John Weiss Is Director. *Export Growth and Industrial Policy: Lessons from the East Asian Miracle Experience*. 2005, www.adb.org/sites/default/files/publication/156779/adb-dp26.pdf. Accessed on: 16 January. 2023

Through generating employment opportunities, boosting productivity, supporting innovation, promoting sustainable growth, and enhancing the trade balance, industrial policy will assist in advancing economic development and enhancing people's living standards.²⁴

Telangana Industrial policy 2014

The Telangana industrial policy was designed to foster industrial growth and development, as well as to attract investments from both domestic and foreign businesses.²⁵ Apart from providing a business-friendly environment, Government of Telangana started various incentives to encourage establishments of new industrial enterprises catering to the needs of different sections of society. It also implemented a variety of programmes to assist the growth of entrepreneurship and innovation, including incubation centres and start-up funding. The 2014 Telangana Industrial Policy also sought to encourage the expansion of key industries, including manufacturing, information technology, and tourism.²⁶

Economic growth and development in Karimnagar

The district experienced structural changes marked by sectorial shifts, sustained productive growth, and technological spill overs, accompanied by an increase in demand, occupations, and income levels, as well as institutional and social economic upheavals. It has boosted the potential output of the economy and encouraged competition to accelerate economic activity.²⁷ The policy has shifted economic participation from low to high productive sectors, that lead to diversification into new industries and sector specific industrial deepening and upgrading using efficiency and productivity as the key to resource allocation.

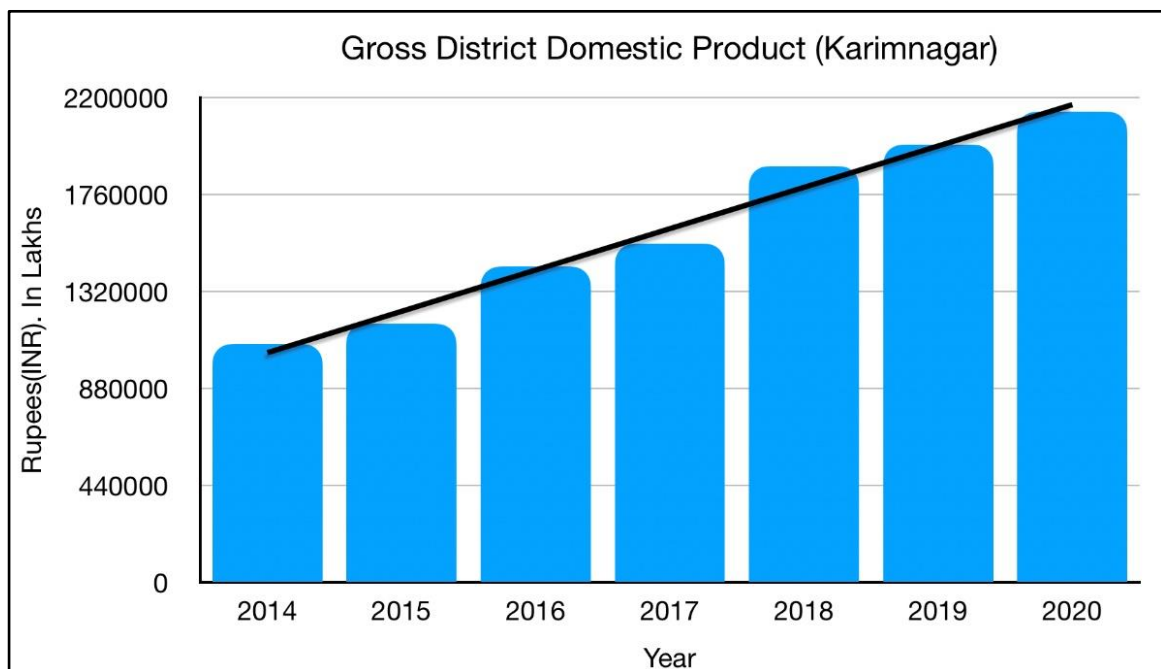


Figure 2: Gross District Domestic product of Karimnagar from the year 2014 to 2020

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Source:

<https://www.telangana.gov.in/PDFDocuments/Telangana-Socio-Economic-Outlook-2023.pdf>

<https://www.telangana.gov.in/PDFDocuments/Socio%20Economic%20Outlook%202019.pdf>

²⁴ Johnson, Josiah. "Looking at the Pros and Cons of Industrial Policy." *American Enterprise Institute-AEI*, 9 Dec. 2021, www.aei.org/economics/looking-at-the-pros-and-cons-of-industrial-policy/#:~:text=%E2%80%9CIndustrial%20policy%20can%20save%20or,a%20specific%20industry%20or%20location. Accessed on: 3 September. 2022.

²⁵ Shankar, Sinduja. "Telangana State Industrial Policy-IndiaFilings." *IndiaFilings-Learning Centre*, 9 Jan. 2020, www.indiafilings.com/learn/telangana-state-industrial-policy/. Accessed on: 19 December. 2022.

²⁶ "Industrial Policy Framework for State of Telangana (2014): Information Technology, Electronics & Communications Department, Government of Telangana, India." *IT Electronics & Communications Department*, <https://it.telangana.gov.in/industrial-policy-framework-for-state-of-telangana-2014/>. Accessed on: 31 August. 2022.

²⁷ "Industrial Policy a Shot in the Arm for Karimnagar." *Thehindu.com*, 13 June 2015, www.thehindu.com/news/national/telangana/industrial-policy-a-shot-in-the-arm-for-karimnagar/article7314799.ece. Accessed on: 23 October. 2022.

²⁸ *Telangana.gov.in*. <https://telangana.gov.in/PDFDocuments/Telangana-Socio-Economic-Outlook-2023.pdf>. Accessed on: 19 February. 2023

Since the implementation of industrial policy in state, the GDDP of Karimnagar has experienced a steady increase, which can be attributed to various factors such as the rise in the number of industries and investments, an increase in the efficiency of resource allocation, expansion in production capacity, and continuous technological advancements in the district.²⁹

Production capacity

Karimnagar has witnessed an increase in quality and quantity of economic goods and services that were produced and consumed by the society. This has enhanced economic efficiency and productivity as a result of optimal resource allocation.³⁰

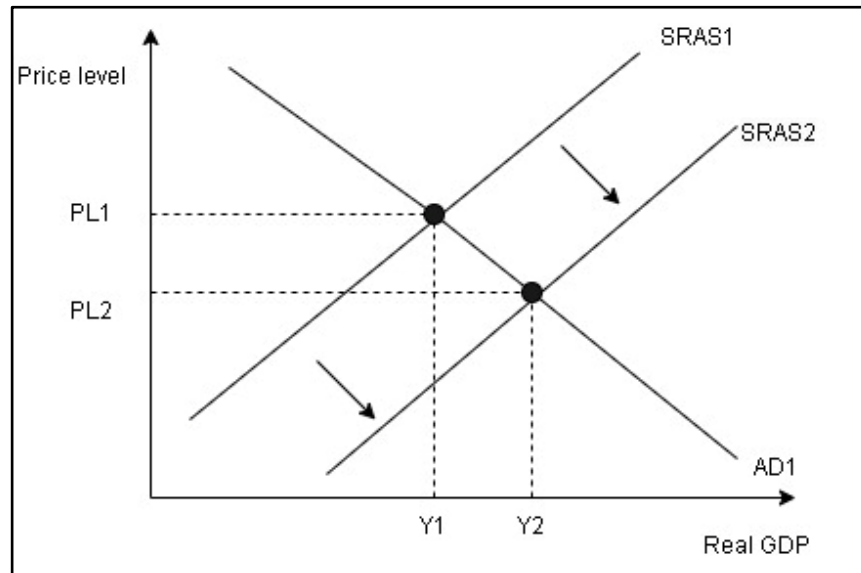


Figure 3: Industrial policy- increase in aggregate supply in short run.

The short-term growth of an economy is caused due to enhancements in productivity and efficient allocation of resources,³¹ leading to a parallel shift in the short-term supply curve (SRAS). This influences the aggregate supply of the economy, which refers to the total quantity of goods and services supplied in an economy at all possible price levels at a given time.³² Figure 1 illustrates, a rightward shift in the supply curve of an economy (SRAS1 to SRAS2) due to increased productivity. Hence, the price level has decreased from PL1 to PL2, but the quantity supplied has increased from Y1 to Y2. Therefore, companies in Karimnagar can produce more goods and services with the same quantity of inputs, resulting in a greater level of output (Y2) and a lower level of price (PL2) at any given level of aggregate demand. This positive change in SRAS can potentially result in long-term economic growth, as firms will be able to produce without raising their costs, resulting in a greater quantity of units produced over time.³³

²⁹ "What Is Economic Growth and How Is It Measured?" *Investopedia*, 2023, www.investopedia.com/terms/e/economicgrowth.asp. Accessed on: 17 October. 2022

³⁰ Rastogi, Harina. "Resource Allocation: Benefits and Challenges | Analytics Steps." *AnalyticsSteps*, 2022, www.analyticssteps.com/blogs/resource-allocation-benefits-and-challenges. Accessed on: 16 November. 2022

³¹ Dabla-Norris, Era, et al. "Anchoring Growth: The Importance of Productivity-Enhancing Reforms in Emerging Market and Developing Economies." *Staff Discussion Notes*, vol. 13, no. 8, 2013, p. 1, <https://doi.org/10.5089/9781616357290.006>. Accessed on: 17 November. 2022

³² "Aggregate Supply-Econlib." *Econlib*, 17 Aug. 2022, www.econlib.org/library/Topics/College/aggregatesupply.html. Accessed on: 21 December. 2022.

³³ "Aggregate Supply Explained: What It Is, How It Works." *Investopedia*, 2023, www.investopedia.com/terms/a/aggregatesupply.asp. Accessed on 23 November. 2022.

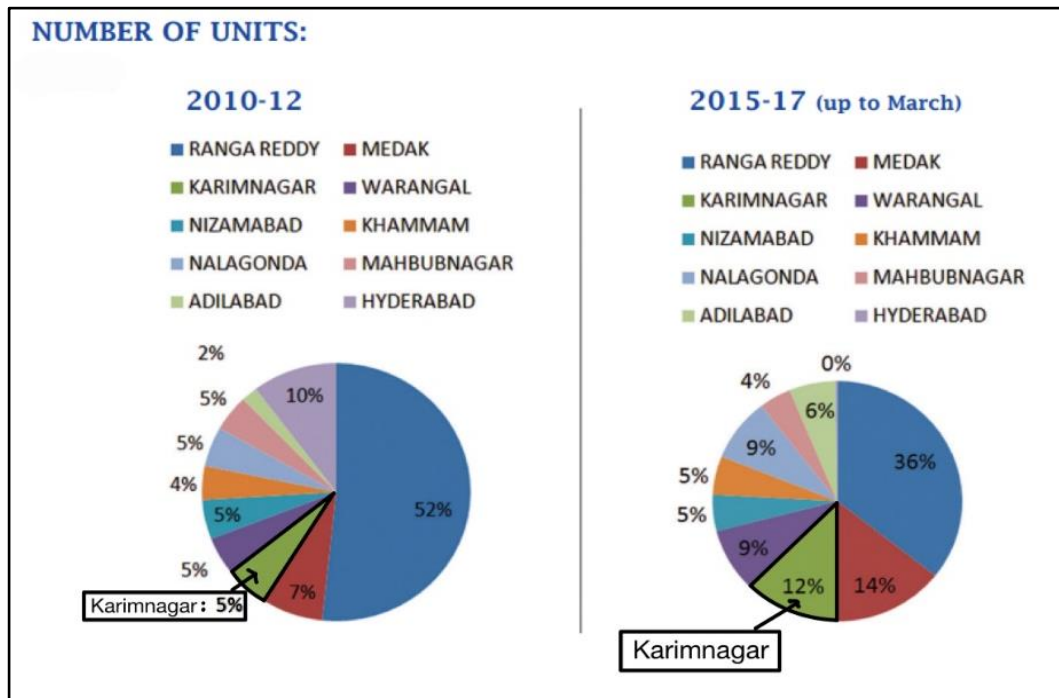


Figure 4: Karimnagar's contribution to the total number of units produced in Telangana in 2012 and 2017

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Source: <https://www.ftcci.in/source/TS-iPASS%20Report.pdf>

Figure 2 illustrates the change in Karimnagar's percentage contribution to the total number of units produced in Telangana between 2012 and 2017. In 2012, Karimnagar's contribution was merely 5%, however it has since climbed to 12% over time. The growth is due to the provision of incentives to domestic companies to boost their production capacity, as well as the efficient allocation of market resources. This demonstrates that the strategy has been effective in encouraging enterprises to boost their output and extend their operations, resulting in a substantial increase in Karimnagar's share of the state's total output. Hence, it may shift the production possibilities curve (PPC) to the right, representing a rise in the economy's long-term output potential.

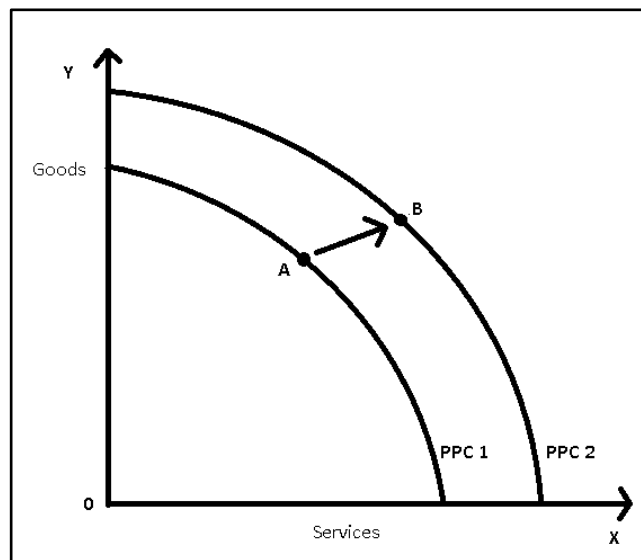


Figure 5: Impact of Industrial policy- Increase in Real GDP/production possibilities.

Industrial policy has substantially contributed to short-term growth and boosted potential output due to an increase in productive capacity of Karimnagar. As a result, the production possibility curve of the economy shifts right, and a new macroeconomic equilibrium is formed. Production possibility curve is defined as the possible combinations of goods and services that could be produced within limitation of scarce resources of the economy.³⁵In Figure 1. Potential economic growth of Karimnagar is depicted by a rightward in the production possibility curve (PPC 1 to PPC 2), and a sustained economic growth was achieved

³⁴ FTCCI. <https://www.ftcci.in/source/TS-iPASS%20Report.pdf>. Accessed on: 16 November 2022

³⁵ <https://www.facebook.com/thebalancemoney>. "What Is the Production Possibilities Curve in Economics?" *The Balance*, 2018, www.thebalancemoney.com/production-possibilities-curve-definition-explanation-examples-4169680. Accessed on: 12 December. 2022.

in the district as a result of an increase in the potential output of the economy. This has extended the macroeconomic equilibrium of Karimnagar from point 'A' to point 'B'. Adoption of industrial policy in Telangana has accelerated the productive capacity of the district due to eased efficiency in the allocation of resources and increased quantity and quality of factors of production as a result of technological advancements, higher educated labour and improved physical capital.³⁶

Industries and investments

Industrial policy has a significant impact on industries and investments in a district due to increased producer advantage in the economy. The TS-iPASS is a component of the industrial policy of Telangana that provided incentives and subsidies for firms and startups to setup their businesses and create a favorable investment climate for potential investors.³⁷ This has prompted investors to invest in the district. As a result, there has been a boost in the number of investors investing in different sectors of the region.

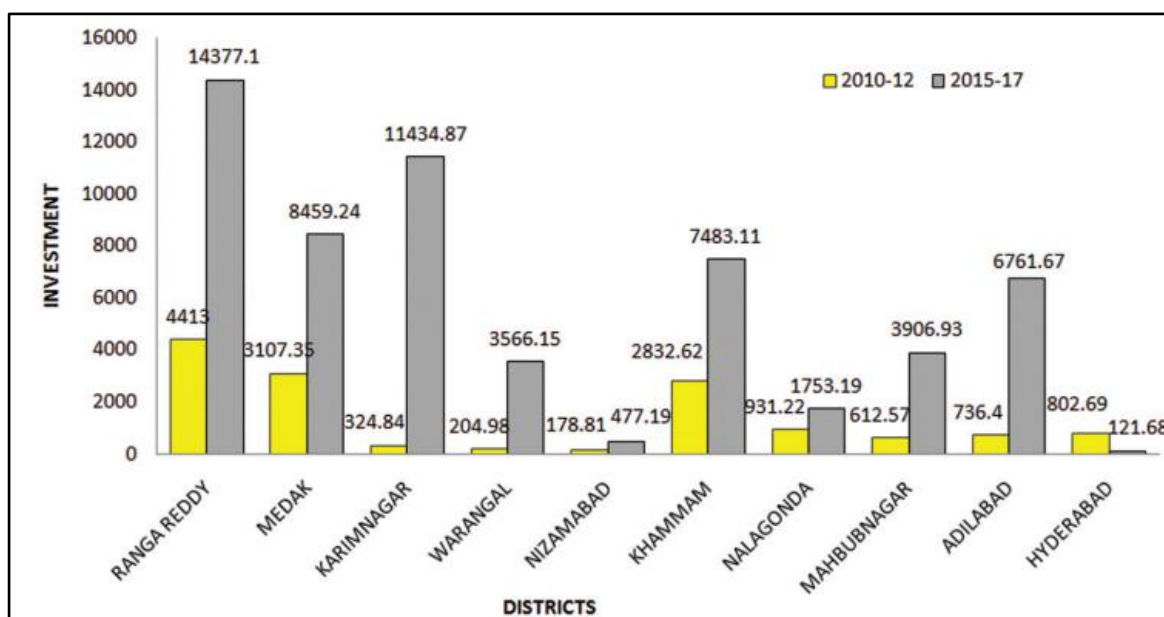


Figure 6: Number of investments in districts of Telangana in the year 2012 and 2017

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Source: <https://www.ftcci.in/source/TS-iPASS%20Report.pdf>

Figure 5. illustrates an increase in the levels of investments in the district of Karimnagar during the year 2012 and 2017. In 2012 the number of investments was relatively marginal at 324.84, however by 2017 the investments have significantly increased to 11434.87, representing a remarkable rise of 3420% in the span of 5 years. Therefore, a surge in investments has also played a vital role in fostering the expansion of existing industries and enabling the establishment of new ones in the region, as they provide entrepreneurs with essential financial resources. With increased financial assistance businesses can invest in human resource, technology, and their operations, that results in higher production and output³⁹.

Karimnagar was initially limited to primary sector solely, however adopting an industrial policy has increased number of industries that has enhanced interconnectedness between the sectors benefiting capital and human resource efficiency.⁴⁰ It has incentivized domestic firms to function effectively and improve their production capacity.

³⁶ Team, AnalystPrep. "Effects of Investment in Physical Capital, Human Capital, and Technological Development on Economic Growth." *CFA, FRM, and Actuarial Exams Study Notes*, AnalystPrep, 6 Feb. 2023, analystprep.com/study-notes/cfa-level-2/effects-of-investment-in-physical-capital-human-capital-and-technological-development-on-economic-growth/. Accessed on: 19. February 2023.

³⁷ "TS-IPASS." *Telangana.gov.in*, 2020, <https://ipass.telangana.gov.in/>. Accessed on: 23 October. 2022.

³⁸ FTCCI. <https://www.ftcci.in/source/TS-iPASS%20Report.pdf>. Accessed on: 25 August. 2022

³⁹ "What Is the Relationship between Human Capital and Economic Growth?" *Investopedia*, 2023, www.investopedia.com/ask/answers/032415/what-relationship-between-human-capital-and-economic-growth.asp. Accessed on: 19 November. 2022.

⁴⁰ Refer to appendix 3.

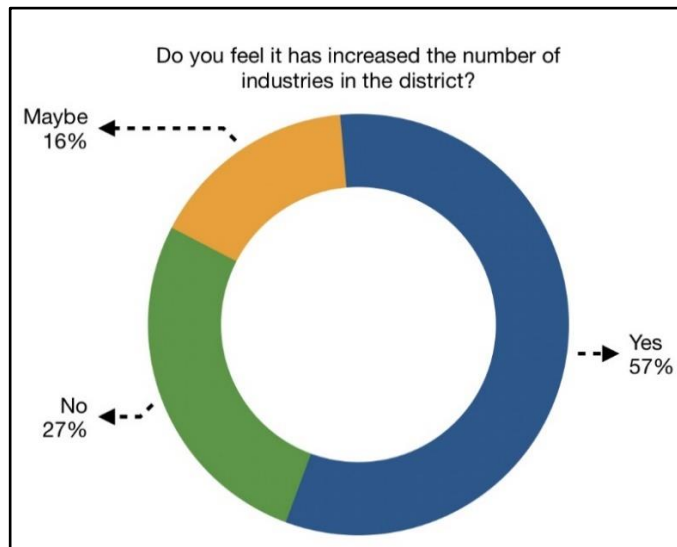


Figure 7: Survey response on number of industries

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57% of the respondents surveyed believe that adoption of industrial policy has resulted in an increase in the number of industries in Karimnagar. This is due to the enhanced financial investment in the district, which provides entrepreneurs with an incentive to establish or expand their businesses.⁴² However, 27% of the respondents disregard the view that industrial policy has benefited the society and the economy as a whole, and this is due to the negative externalities created like resource depletion or environmental pollution by the industries during the process of production.⁴³ But on the contrary, increase in number of industries has also contributed positively to the economy by generating job opportunities, enhancing income levels, facilitating technological advancements, and promoting regional development.⁴⁴ This increases the productive capacity and potential output of the economy and results in a rightward shift of the Keynesian AS curve in the long term.

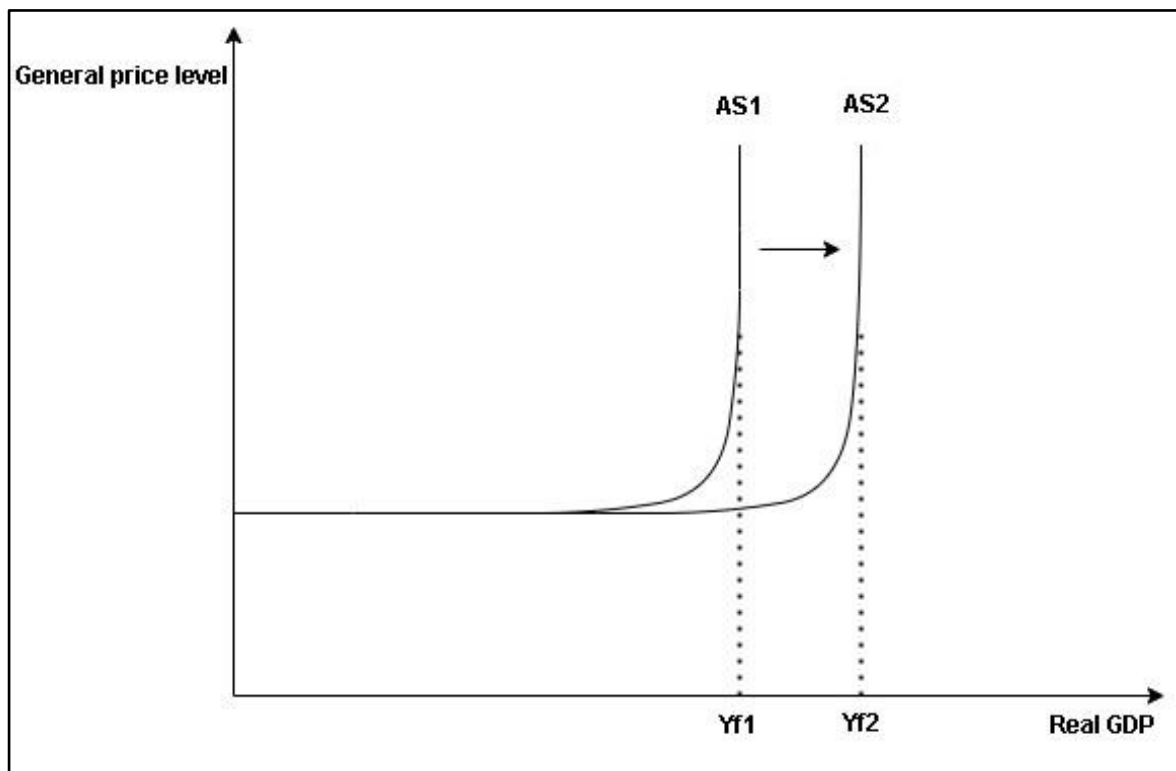


Figure 8: Shift in Aggregate supply in the long run

⁴¹ Refer to appendix 2.

⁴² "Capital Investment Is a Key Driver of Economic Growth." *Investopedia*, 2023, www.investopedia.com/ask/answers/032615/how-does-total-capital-investment-influence-economic-growth.asp. Accessed on: 16 October, 2022.

⁴³ "Manair River – SANDRP." *SANDRP*, SANDRP, 21 Jan. 2023, sandrp.in/tag/manair-river/ Accessed on: 31 January, 2023.

⁴⁴ *Telangana.gov.in*. <https://telangana.gov.in/PDFDocuments/Telangana-Socio-Economic-Outlook-2023.pdf>. Accessed on: 30 August, 2022

In the Keynesian model, the aggregate supply represents the total output produced by firms in an economy,⁴⁵ and when the number of industries increases, the supply curve shifts to the right due to the economies of scale attained by firms because of increased resource efficiency or lower production costs. The number of industries in Karimnagar has increased over time, and as a result, the economy's overall supply shifts from AS1 to AS2 by raising the supply quantity from Yf1 to Yf2. This leads to increase in demand for employees in the short term. Thus, Karimnagar has experienced structural transformation and economic development with increased employment opportunities for youth in the district.

Employment opportunities and Income levels

Industrial policy fosters the development of new enterprises in the economy, which results in the creation of employment opportunities owing to an increase in demand for employees in various industries.⁴⁶ Post-implementation of industrial policy, job opportunities in Karimnagar's Mining, Power, and cement sectors have risen, due to the incentives provided to the firms. Hence, corporations boost their human resources and research and development as a result of reduced manufacturing costs.

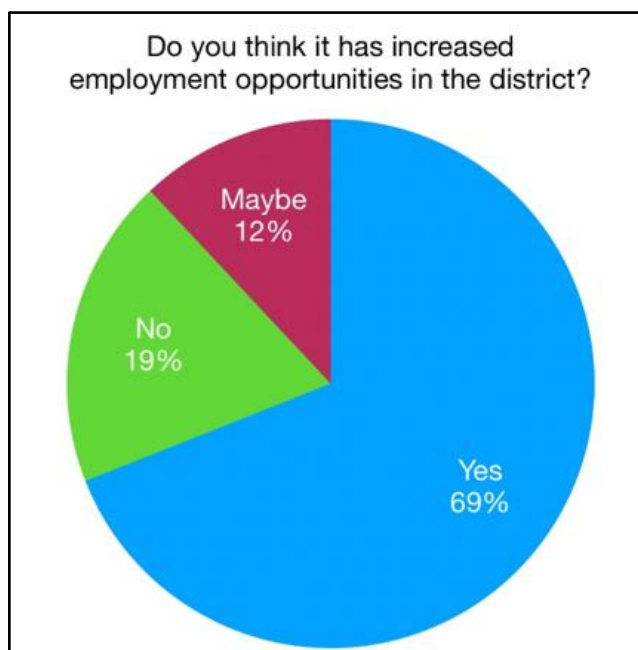


Figure 9: Survey response on employment opportunities in Karimnagar

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57% of the respondents believe that adoption of industrial policy has created employment opportunities in the district due to increased demand for labour in the market as a result of enhanced industrial activity in the economy. Nevertheless, 19% of respondents stated “no” because the policy has primarily generated higher employment opportunities only in sectors such as Agro based, engineering based, Handloom and textiles⁴⁸ owing to the region's greater availability of natural resources for certain industries. But, On the contrary it has increased income levels of individuals in the economy.⁴⁹

⁴⁵ The. “The Keynesian Model and the Classical Model of the Economy-Video & Lesson Transcript | Study.com.” *Study.com*, 2021, study.com/academy/lesson/the-keynesian-model-and-the-classical-model-of-the-economy.html. Accessed 24 October. 2022.

⁴⁶ *An Industrial Policy for Good Jobs the HAMILTON PROJECT MISSION STATEMENT*. drodrik.scholar.harvard.edu/files/dani-rodrik/files/rodrik_-_an_industrial_policy_for_good_jobs.pdf. Accessed 12 September. 2022

⁴⁷ Refer to appendix 2.

⁴⁸ *Telangana Industries Department*. <http://industries.telangana.gov.in/Library/DistrictNew/KARIMNAGAR.pdf>. Accessed on: 21 September. 2022

⁴⁹ *Telangana.gov.in*. <https://telangana.gov.in/PDFDocuments/Telangana-Socio-Economic-Outlook-2023.pdf>. 17 August. 22

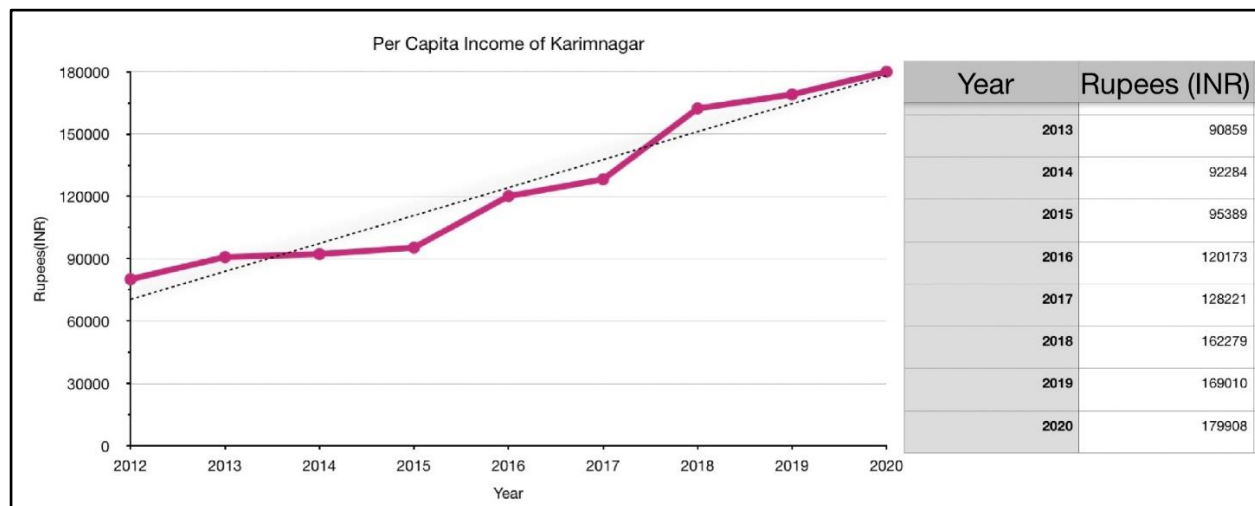


Figure 10: Per Capita income of Karimnagar

Source:

<https://www.telangana.gov.in/PDFDocuments/Telangana-Socio-Economic-Outlook-2023.pdf>

<https://www.telangana.gov.in/PDFDocuments/Socio%20Economic%20Outlook%202019.pdf>

Figure 10 demonstrates that from 2012 to 2020, the per capita income of individuals in Karimnagar has grown by 90% due to the increasing job opportunities in the economy. Furthermore, due to technological advancements the efficiency of production and allocation of resources, has resulted in increased productivity levels leading to greater profits for firms, which in turn benefits the employees as their income increases. In addition, as a result of increased production levels, the prices of goods and services decrease, thereby enhancing the purchasing power of consumers. Because individuals in the economy have more money, they tend to spend more, leading to economic growth and increased economic activity, which, in turn, raises the income levels of all stakeholders involved in the economy's circular flow of income and also enhances standards of living.

Technological advancements and Infrastructure

In Karimnagar, industrial policy has promoted the development of industries in several sectors, including IT, mining, and agriculture.⁵⁰ This has facilitated technical and industrial advancements for production of goods and services. Technological change is the most important factor that determines the rate of economic growth.⁵¹ It has a much more significant influence than capital formation because technical development can lead to a sustained increase in output per capita. Not only has new technology enhanced production or efficiency, but it has educated workforce on how to operate advanced technologies.

Industrial policy has also helped for the development of various industrial parks and special economic zones (SEZs)⁵², resulting in a rise in infrastructure due to increased economic investment and government participation. In order to encourage investments and enterprises from various economic sectors, the Telangana government has developed major infrastructural amenities in Karimnagar.⁵³ Public infrastructure investments boost the productivity of private capital and labour, leading to higher output, however, this positive effect can be offset if the investments are financed with additional government borrowing.

Nevertheless, these factors have facilitated the expansion of existing enterprises and the establishment of start-ups, therefore contributing to the industrialisation of the district. On the other hand, industrialisation has detrimental long-term effects on third parties and the environment owing to resource depletion and overuse of common access resources.⁵⁴

Environmental Devastation

As a result of the policy's adoption, negative externalities on the environment have resulted from resource depletion and overuse of common access resources in Karimnagar.⁵⁵ This is primarily due to the policy's facilitation for development of various firms

⁵⁰ *Telangana Industries Department*. <http://industries.telangana.gov.in/Library/DistrictNew/KARIMNAGAR.pdf>. Accessed on: 21 September.2022

⁵¹ "Technological Progress and Economic Growth | Economics." *Economics Discussion*, 2 Mar. 2018, www.economicsdiscussion.net/economic-growth/technological-progress-and-economic-growth-economics/30156. Accessed 16 November. 2022

⁵² "TSIIC." *Telangana.gov.in*, 2014, tsiic.telangana.gov.in/showView?div_id=21. Accessed 25 November. 2022.

⁵³ Special Correspondent. "₹231-Cr. Smart City Funding for MCK." *Thehindu.com*, 3 July 2018, www.thehindu.com/news/national/telangana/231-cr-smart-city-funding-for-mck/article24324383.ece. Accessed 16 December. 2022.

⁵⁴ Chu, E. W., and J. R. Karr. "Environmental Impact: Concept, Consequences, Measurement ☆." *Reference Module in Life Sciences*, 2017, <https://doi.org/10.1016/b978-0-12-809633-8.02380-3>. Accessed on: 12 January. 2023

⁵⁵ Refer to Appendix 3.

in the economy, which has led to an increase in pollution and the depletion of natural resources. The release of toxic pollutants into the atmosphere has a negative effect on all economic stakeholders.⁵⁶ It has been observed that unrestrained industrialization is primarily responsible due to the lack of government restrictions on industries. To avoid the production of additional negative externalities, the government should intervene to ensure that industries comply to environmental standards.⁵⁷

Evaluation

The Telangana Industrial Policy 2014 aimed to promote industrialization and economic growth in the state, particularly by encouraging the establishment of small and medium enterprises (SMEs) in different regions, including Karimnagar.⁵⁸ In this evaluation, I will examine the extent to which the Telangana Industrial Policy has contributed to industrialization in Karimnagar.

Positive impacts:

The Telangana Industrial Policy has led to the establishment of several new industries in Karimnagar, including manufacturing, services, and agriculture-related sectors. This has created job opportunities for the local population and helped to increase the per capita income of the people in the region. Furthermore, the policy has encouraged investment in the development of infrastructure, such as roads, railways, and ports, which has facilitated the transportation of goods and services, thereby enhanced the region's connectivity and made it more accessible to local individuals.⁵⁹

Negative impacts:

Despite its positive impacts, the Telangana Industrial Policy has also brought negative consequences, particularly in terms of environmental degradation and social displacement. The establishment of new industries and the expansion of existing ones have led to the degradation of the natural environment and increased pollution levels, which has a detrimental impact on the health and well-being of local residents.⁶⁰ Additionally, the displacement of local communities due to land acquisition for industrial projects has caused social unrest and displacement.

Effect on different stakeholders:

The Telangana Industrial Policy has had various consequences on different stakeholders. Domestic businesses, for instance, have benefited from the policy because it has enabled them to establish new industries or grow existing ones. The quantity and quality of products and services produced by industry had an indirect effect on consumers. In addition, consumers could be affected by the environmental and social impacts of industrialisation, that might influence their purchasing decisions. Moreover, NGOs play an important role in the economy to mitigate the harmful effects of industrialisation on local communities and the environment. On the other side, local farmers and workers have been negatively impacted by the policy, mainly owing to the displacement induced by land acquisition and the negative environmental effect.

Limitations of the research:

The study may be restricted in the sense that the primary data collected could be biased because respondents might have only provided positive feedback, and if the statistical data collected through secondary research results in misleading or wrong findings, then it could lead to incorrect conclusions.

6. Conclusion

The Telangana Industrial policy has had a substantial effect on industrialisation in Karimnagar. The focus of the policy on incentivizing the establishment of small and medium firms, fostering sustainability and environmental protection, and promoting innovation and technology has helped in the expansion of the region's industrial sector. Yet, there are additional challenges, such as the need to address environmental issues and give assistance to local farmers and communities. It is necessary to conduct additional research on the policy's effects on various stakeholders, such as multinational corporations, government agencies, and local communities, in order to completely evaluate its effectiveness. In brief, the Telangana Industrial policy offers a framework for the continued growth and development of the industrial sector in Karimnagar and other districts in the state.

7. Further Scope

⁵⁶ Dooley, Robert S., and Linda D. Lerner. "Pollution, Profits, and Stakeholders: The Constraining Effect of Economic Performance on CEO Concern with Stakeholder Expectations." *Journal of Business Ethics*, vol. 13, no. 9, 1994, pp. 701–11. *JSTOR*, <http://www.jstor.org/stable/25072578>. Accessed on: 29 December. 2022.

⁵⁷ Refer to appendix 3.

⁵⁸ "Industrial Policy Framework for State of Telangana (2014): Information Technology, Electronics & Communications Department, Government of Telangana, India." *IT Electronics & Communications Department*, <https://it.telangana.gov.in/industrial-policy-framework-for-state-of-telangana-2014/>. Accessed on: 8 December. 2022.

⁵⁹ *FTCCI*. <https://www.ftcci.in/source/TS-iPASS%20Report.pdf>. Accessed on: 17 November. 2022.

⁶⁰ "Manair River – SANDRP." *SANDRP*, SANDRP, 21 Jan. 2023, sandrp.in/tag/manair-river/. Accessed on: 31 January. 2023.

This topic could be further explored on “**To what extent different strategies could be used to mitigate the negative impacts of industrialization**”, particularly in relation to the environment and social displacement.

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- **Karimnagar** – A district in the state of Telangana, popularly known for agriculture and the fertile land it holds.
- **Industrialization** – Industrialization is the process of transforming an economy from primarily agricultural to one based on the manufacturing of goods and services using mechanized and automated processes.
- **Economic development** - Economic development is the process of improving the economic well-being and quality of life for a community or country through efforts such as job creation, innovation, and sustainable growth.
- **TS-IPASS** – Telangana State Industrial Project Approval and Self Certification System, is a certification provided to the firms establishing their industries in Telangana state as a proof for subsidy grants and tax benefits.
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Appendix 1 (Survey Questionnaire)

Survey on Telangana Industrial policy

 rudra2700@gmail.com (not shared) [Switch accounts](#)



Infrastructure is a necessary component for economic growth and development; do you feel it has improved over time in the district?

- Yes
- No
- Maybe

To what scale do you think Telangana industrial policy 2014 was favourable for growth and development in Karimnagar?

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Do you think it has increased employment opportunities in the district?

- Yes
- No
- May be

Do you feel it has increased the number of investments in the district?

- Yes
- No
- Maybe

On a scale of 1 to 10, how industrial policy was effective for growth and development in Karimnagar?

- | | | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Has it personally or professionally benefited you?

Yes

No

Maybe

Do you feel it has improved standard of living and literacy rate in the district?

Yes

No

Maybe

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Google Forms

Appendix 2 (Survey responses)

Infrastructure is a necessary component for economic growth and development; do you feel it has improved over time in the district?	To what scale do you think Telangana industrial policy 2014 was favourable for growth and development in Karimnagar?	Do you think it has increased employment opportunities in the district?	Do you feel it has increased the number of investments in the district?	On a scale of 1 to 10, how industrial policy was effective for growth and development in Karimnagar?	Do you think it has affected the environment in the district	Do you feel it has improved standard of living and literacy rate in the district?
Yes	4	Yes	No	9	Yes	No
Yes	1	Yes	No	5	No	Maybe
Yes	5	Yes	Yes	9	Yes	Yes
No	3	No	Yes	8	No	Yes
Yes	4	May be	No	8	Yes	No
Yes	5	Yes	Maybe	9	No	Yes
Yes	3	Yes	Yes	7	Yes	Yes
Yes	5	No	No	8	Yes	Maybe
Yes	4	Yes	Yes	8	Yes	Yes
Yes	5	No	Yes	8	No	Yes
No	3	No	No	6	No	No
Yes	4	Yes	Maybe	5	No	No
Maybe	5	No	Yes	10	Yes	No
Maybe	4	May be	Maybe	7	Maybe	Maybe
Maybe	5	May be	Maybe	9	Maybe	Yes
Yes	4	Yes	Yes	9	Yes	Yes
Yes	3	May be	Maybe	7	Maybe	Maybe
Yes	4	No	No	7	Yes	Yes
Yes	4	Yes	No	6	Yes	No
No	4	Yes	Yes	8	No	Maybe
Yes	4	Yes	Yes	8	Maybe	Maybe
No	4	No	No	5	No	No
Yes	5	Yes	Yes	10	Yes	Yes

Maybe	2	May be	Maybe	4	Maybe	Maybe
Yes	4	Yes	Yes	9	Yes	Yes
No	2	No	No	4	No	No
Yes	5	Yes	Yes	10	Maybe	Maybe
No	5	Yes	No	7	Yes	Yes
Yes	4	Yes	Yes	7	Yes	Yes
Yes	3	No	Yes	5	No	Yes
Yes	4	No	No	10	Yes	Maybe
No	2	No	No	4	No	No
Yes	5	No	Yes	7	No	Yes
Yes	5	May be	Maybe	8	No	Yes
Yes	4	Yes	Yes	9	Yes	Yes
Yes	4	Yes	Yes	8	Yes	Yes
No	4	Yes	Maybe	9	Yes	No
Yes	4	Yes	Yes	9	Yes	Yes
No	3	No	No	5	No	No
No	2	No	No	4	No	No
No	2	No	No	4	No	No
Yes	4	Yes	Yes	10	Yes	Yes
Yes	4	Yes	Yes	8	Yes	Yes
Yes	4	Yes	Yes	8	Yes	Yes
Maybe	5	Yes	Maybe	9	Yes	Yes
Yes	5	Yes	Yes	10	Yes	Yes
Yes	5	Yes	Yes	10	Yes	Yes
Yes	5	Yes	Yes	10	Yes	Yes
No	1	No	No	1	No	No
No	1	No	No	1	No	No
No	1	No	No	1	No	No
No	1	No	No	1	No	No
Yes	4	Yes	Yes	7	Yes	Yes
Yes	5	Yes	Yes	8	Yes	Yes
Yes	2	Yes	Yes	5	Yes	Yes
Yes	5	Yes	Yes	9	Yes	Yes
Yes	1	Yes	Yes	3	Yes	Yes
Yes	2	Yes	Yes	7	Yes	Yes
Yes	1	Yes	Yes	9	Yes	Yes
Yes	5	Yes	Yes	7	Yes	Yes
Yes	3	Yes	Yes	10	Yes	Yes
Yes	5	Yes	Yes	10	Yes	Yes
Yes	5	Yes	Yes	10	Yes	Yes
Yes	5	Yes	Yes	10	Yes	Yes
Yes	5	Yes	Yes	10	Yes	Yes
Yes	5	Yes	Yes	10	Yes	Yes
Yes	2	No	No	4	No	Maybe
Yes	4	No	Maybe	6	Yes	Yes
Maybe	4	Yes	Maybe	9	No	Maybe
Yes	5	Yes	Maybe	9	Yes	Maybe
Maybe	5	Yes	No	8	Maybe	Yes
Maybe	5	Yes	No	5	No	No
Yes	5	No	Yes	6	Yes	Maybe
Yes	5	Yes	No	9	Yes	Maybe

Yes	3	No	No	2	Maybe	Yes
Yes	4	Yes	No	2	Yes	Yes
No	2	May be	Yes	10	Yes	Yes
No	3	No	Yes	4	Yes	No
No	2	Yes	Maybe	5	No	Maybe
Maybe	4	May be	Maybe	2	Maybe	Maybe
Yes	5	Yes	Yes	10	No	Yes
Yes	5	Yes	Yes	10	Yes	Yes
Yes	3	May be	Maybe	5	Maybe	Maybe
Yes	1	No	No	1	No	No
Yes	4	Yes	Yes	9	Yes	Yes
Yes	4	Yes	Yes	9	Yes	Yes
Yes	5	Yes	Yes	10	Yes	Yes
Maybe	3	May be	Maybe	4	Maybe	Maybe
No	1	No	No	1	No	No
Yes	4	Yes	Yes	4	Yes	Yes
Yes	4	Yes	Yes	9	Yes	Yes
Maybe	4	Yes	Yes	9	Yes	Yes
Yes	4	Yes	Yes	9	Yes	Yes
Yes	4	Yes	Yes	9	Yes	Yes
Yes	4	Yes	Yes	9	Yes	Yes
Maybe	4	Yes	Yes	9	Yes	Yes
Yes	5	Yes	Yes	10	Yes	Yes
Yes	5	Yes	Yes	10	Yes	Yes
Yes	5	Yes	Yes	10	Yes	Yes
Yes	5	Yes	Yes	10	Yes	Yes

Appendix 3 (Interview)

1. What steps has the district administration taken to attract new industries to the region and encourage existing industries to expand?
The government is constantly enhancing the district's infrastructure and is also providing various kinds of incentives and subsidies for businesses to establish its industries in the region.
2. How is the district administration supporting the development of infrastructure such as roads, power, and water supply, to facilitate industrial growth in the district?
We believe that infrastructure is a vital tool for enhancing economic activity, and the district has undergone structural changes and established infrastructures such as transit and public use facilities that might be beneficial to both businesses and the people.
3. Can you provide examples of successful industrial projects that have been implemented in the district, and how they have contributed to the local economy?
Karimnagar was able to develop a number of Agro-based and textile enterprises. Moreover, it has established a number of industrial parks and special economic zones (SEZ) in the region.
4. Have there been any negative externalities created by industries in the district?
Industrialization has certain negative externalities on third parties, and industrialization in Karimnagar to some extent has depleted natural resources and raised pollution levels owing to the production of goods and services.
5. How is the district administration addressing environmental concerns related to industrialization?
The government intends to formulate regulations to prevent the pollution and depletion of natural resources from reaching a critical level.
6. How is the district administration working to ensure the availability of skilled labour for the industrial sector in the district?
Karimnagar has a massive population of young individuals between the ages of 25 and 32, which will improve the potential of the district's industries in the coming years. It is also easier to educate them on using advanced technologies technology.