# Economic Development, Industrial Robots and Sustainable Development in an Aging Society

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#### Introduction

In this study, theoretical and empirical models are used to analyse the effect of ageing and industrial robots on economic development. The task model and Solow model incorporate an ageing mechanism that takes into account the current link between industrial robots and economic development. We get macroeconomic statistics and information on robot utilisation for 77 nations and regions between 1993 and 2019 from the International Robot Federation, Penn World Table, and the World Bank. We discovered that while ageing has no effect on economic development, industrial robots may. It is important to note that economies that use industrial robots age more negatively than those that do not. Additionally, mechanism analysis indicates that the primary driver of economic growth is the industrial sector. Total factor productivity a gauge of technological development in an economy, was improved before labour replacement. The outcomes are nevertheless stable in the presence of endogenous issues.

### **Description**

It is no longer feasible to rely on labour-intensive sectors to propel economic development due to the ageing of the population. The economy of several nations has concurrently transitioned from fast growth to high-quality development, but they are now in the predicament of "getting old before getting rich." These nations started utilising industrial robots in the manufacturing process in order to suit their own national development needs. These nations can now sustain economic development without having to hire a lot of people. Costs have gone down, productivity has gone up, and the chance of human mistake has decreased as a result. Robots can operate continuously and can be utilised in harmful working environments that may be too risky for people. The usage of has had an influence on manufacturing [1,2].

Industrial robot use has an influence on manufacturing. Industrial robots have several benefits due to their low cost, unrestricted working hours, and superior production performance. The usage of industrial robots in production has had a mixed impact on the US economy, according to Acemoglu Robotics' mixed effects are especially noticeable in some domains. Industrial robots are now a crucial component of China's modernization of industry. Productivity growth and technical advancement, however, are not a magic bullet for resolving all societal issues. Industrial robots with high levels of specialisation have a substantial impact on job replacement, which causes technical unemployment. The labour substitution impact and the "employment" effect of robots are more complex and may be problematic, particularly in an ageing population maybe a two-edged sword. Examining the economic effects of robots in an ageing society is crucial given the ageing population and high-quality economic development [3,4].

Research already conducted focuses on how industrial robots affect productivity and replace human resources. Industrial robots and economic

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Received: 02 January, 2023, Manuscript No. economics-23-93362; Editor Assigned: 05 January, 2023, PreQC No. P-93362; Reviewed: 19 January, 2023, QC No. Q-93362; Revised: 24 January, 2023, Manuscript No. R-93362; Published: 31 January, DOI: 10.37421/2375-4389.2023.11.393 growth are closely related to one another Industrial robots can promote economic development by influencing productivity return on invested capital and enhancing total factor productivity They also contribute to quickening economic growth. Industrial robots speed up structural upgrades in China's service industry and encourage improvements and rationalisation of industrial structures. In addition, academics see industrial robots as a sign of technical advancement, saying that they boost productivity primarily through enhancing scale efficiency and technology efficiency Industrial robots contribute significantly to sustainable development by lowering energy use and encouraging the development of green technologies [5].

## Conclusion

Although numerous studies show that robots are increasing economic growth, there may be detrimental societal impacts. Industrial robot use causes more severe employment and distribution issues, according to Yongwei and Jiahui Wei ,which results in an imbalanced growth of the economy. Furthermore, according to Zhaokui Feng robots can help the Japanese economy by increasing labour productivity in the manufacturing, service, and agricultural sectors, accelerating national economic growth, and reducing ageing-related economic and social issues. However, there are still issues that are a staple of Marxism between humans and robots, labour and capital. Additionally, industrial robots differ regionally and have an influence on economic growth through several processes Industrial robots, for instance, have a favourable effect in the eastern and central.

## Acknowledgement

None.

# **Conflict of Interest**

None.

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**How to cite this article:** Mukoyi, Lenia. "Economic Development, Industrial Robots and Sustainable Development in an Aging Society." *J Glob Econ* 11 (2023): 393.