

**THE IMPACT OF INNOVATION ON ECONOMIC GROWTH: EVIDENCE  
FROM DEVELOPED AND DEVELOPING COUNTRIES**

**Thesis**

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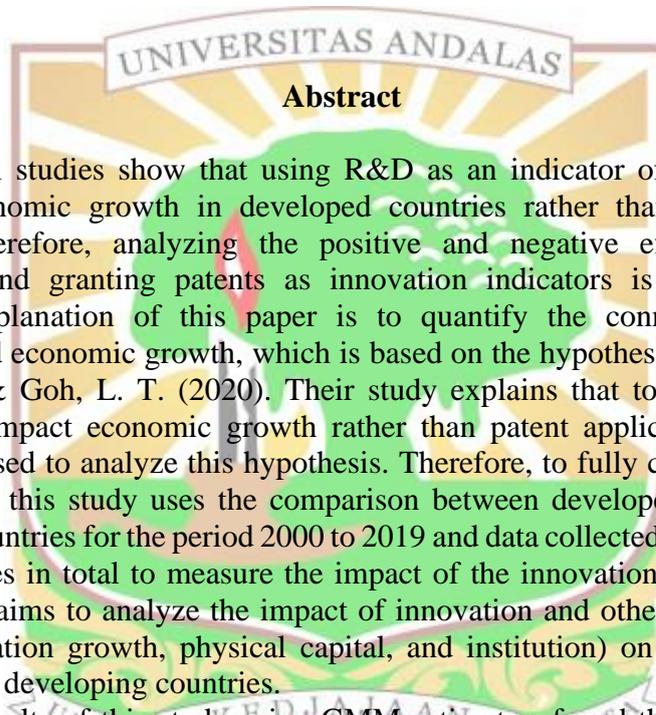
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# **The Impact of Innovation on Economic Growth: Evidence from Developed and Developing Countries**

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Several studies show that using R&D as an indicator of innovation can influence economic growth in developed countries rather than in developing countries. Therefore, analyzing the positive and negative effects of patent applications and granting patents as innovation indicators is necessary. The theoretical explanation of this paper is to quantify the connection between innovation and economic growth, which is based on the hypothesis by Law, S. H., Sarmidi, T., & Goh, L. T. (2020). Their study explains that total patent grants significantly impact economic growth rather than patent application. Only one country was used to analyze this hypothesis. Therefore, to fully capture the effect of this policy, this study uses the comparison between developed countries and developing countries for the period 2000 to 2019 and data collected with the number of 30 Countries in total to measure the impact of the innovation of an economy. This research aims to analyze the impact of innovation and other factors (human capital, population growth, physical capital, and institution) on the economy in developed and developing countries.

The results of this study using GMM estimator, found that the impact of Innovation only affects developed countries, and it is estimated to have a positive effect with granted patents, but a negative effect with patent applications on economic growth. Meanwhile, in emerging countries, granted patents have a negative but insignificant effect, and patent applications have a positive but also insignificant effect on economic growth. So, it is recommended choosing different proxies for some variables, such as the life expectancy at birth, that can be changed to other indicators that can help to improve the nexus between innovation and economic growth, adding other indicators of innovation that can help to boost the performance of innovation on economic growth, and especially economic growth measurement that supports both types of countries.

**Keywords:** Innovation, Patent, Human Capital, Economic Growth, Dynamic panel model, GMM

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