28th May 2022

Macroeconomics Report: Class Assignment
Innovation Capacity & Economic Growth

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28th May 2022

Abstract

Our world is undergoing a complete technological revolution which is a huge driving force for national innovation development and capacity. This paper will be discussing the correlation of innovation capacity to its economic growth. The main area of focus is going to be the analysis of China, on a macro level. In this report, we will clearly highlight the trends of how innovation parameters, for instance, gross domestic expenditures or research and development, affect China's economic growth. The exhibits that will be used to provide visual representation of relevant data will contribute to the extent and clarity of the relationship between capacity and growth.

Economic Growth

Our economy eccompasses all activities related to production, consumption and trade of goods and services in an area, more specifically a country. Economic growth is measured by aggregated demands. This is called the Gross Domestic Product more commonly known as the GDP. The GDP is the combined value of all goods and services produced in a country within a year. A higher GDP means a better economic activity in a country which leads to a better overall quality of life. In order to increase the GDP a country must have the innovation capacity to keep the high rates going.

Innovation Capacity

What is the innovation capacity of a country? "National innovative capacity is the ability of a country, as both a political and economic entity, to produce and commercialize a flow of innovative technology over the long term." According to The World Development Indicators of the World Bank there are six variables that measure the extent of Innovation; the gross domestic product as mentioned earlier can be used in this instance as well, patents filed by residents and non-residents, research and development expenditure, the number of researchers in research and development activities, high-technology exports, and scientific and technical journal articles. The indicators aid in deciphering the innovation capacity and finding the flaws, which then help to strengthen a country's national innovation system.

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China

We will now take a look at China, a country whose economic growth has benefited significantly from innovation capacity. This can be traced back to the 1990s when they started investing heavily into the inputs of the innovation system (Research & Development). Aspects that they changed about their national innovation system are linking the science sector with the business sector, providing incentives for innovation activities, and balancing the import of technology and indigenous R&D. On the micro level this means that innovation capacity has become essential for domestic firms' market success. With its high rate of innovation capacity, China plans to shift into an innovation based technology. This means that they will focus more on innovation of new products and services rather than the product itself. While some are hesitant about it others believe that "with solid fundamental and industrial support, China has the potential to cultivate world-class innovations beyond developing markets". Furthermore, economic growth has also boosted due to the amount of successful startups that have helped the country move the economy upwards alongside its innovation capacity.

Deductions

Although there was no visible relationship between China's R&D expenditure and its percentage of GDP until 1993, these two factors have largely gone hand in hand since 1994. Despite a small decline in 1989, one can notice a steady increase in both sectors.
In recent years (2003,2004) the R&D expenditure has been significantly higher than the country's percentage of GDP. This clearly shows us the fact that both these variables are interrelated and help China's economy to flourish.

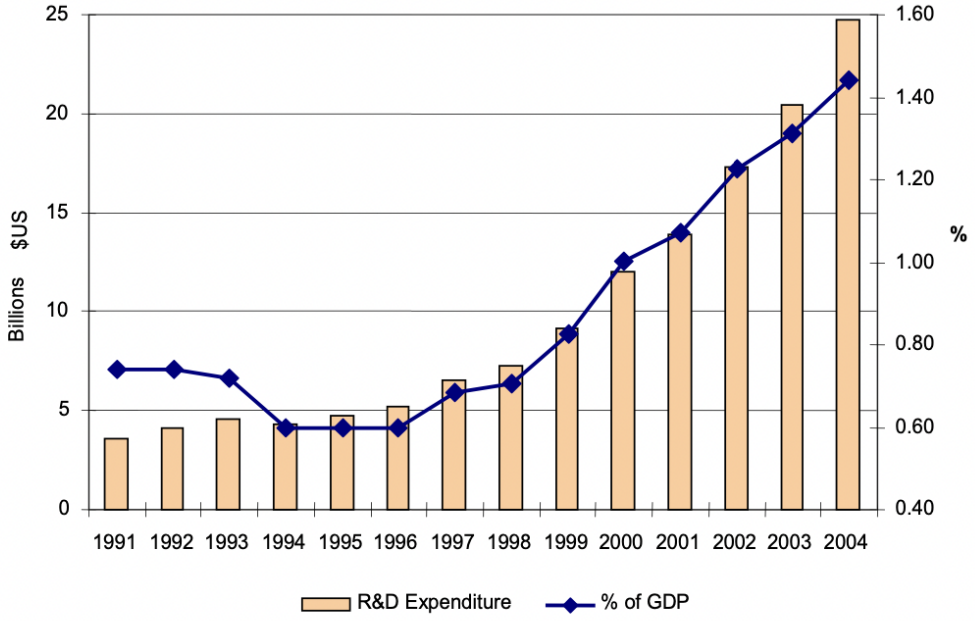

Exhibit: China's R&D Expenditure and a percentage of Gross Domestic Product from 1991 till 2004

Conclusion

With the given examples above, it is proven that there is a direct and positive correlation between innovation capacity and economic growth. To sum it up, as productivity rises, more goods and services are produced. In the right economy, where more goods and services are offered and consumed, more people will use these services and increase economic flow. With higher economic growth comes a higher GDP. Hence, a greater level of capacity for innovation should be seen as a positive because it plays an imperative role in stimulating economic growth, especially for developing countries.

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Citations

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