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How Does Economic Growth Affect the Economic Inequality in China?

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Abstract: This analysis focuses on the economic theory and the data presented for both economic growth and inequality from 1960 to 2020 in China by examining the influence of economic growth and development on Chinese economic inequality. The purpose of this research is to find the relationship between economic growth and inequality by determining the negative correlation and examining both negative and positive aspects of economic growth and its relationship to living standards.

Keywords: economic growth, inequality, unemployment, living standard

1. Introduction

Economic growth is defined as a rise in real domestic products, or the number of goods and services generated over a particular time period. Since China began its reform and revolution in 1978, the GDP has grown by nearly 10%per years, more than 800 million people have been pulled out of poverty, by receiving educations and wealth [1]. The economy has transformed from the cultural revolution period to a globalized and advanced phenomenon [2]. Chinese people have got more access to health, compulsory education, and entertainment according to the world bank. However, rapid economic growth in China causes economic inequality to grow at the same time, begging in the 1960s, the Gini coefficient was 0.326, the data rapidly climb to 0.482 in recent 10 years, which increased by 47.9% [3]. The negative relationship between economic inequality and economic growth has been censored where the shape shows that economic growth stimulates inequality [4]. The purpose of this paper is to discuss the correlation by introducing the methodology of the Gini Coefficient. The objective is to provide data and evidence for the positive side and negative sides of economic growth including its effects on economic growth etc.

2. Literature Review

2.1. Relationship

Kuznets asserted that there is a differentiated relationship between economic development and economic inequality [5], with the two indicators having a positive link in the initial stages by Kholeka and Sin-Yu, later in mature stage, they show a negative correlation [6]. This can be explained using the labor theories, for example when labors move from the manufacturing sectors to other sectors, as their skills are in demand in these sectors those labor who migrate will earn a higher income, and

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individuals who remain in the manufacturing sector will earn lower income, thus the inequality remains high in early stages. As the economy develops, most of the labors will migrate to other sectors to get higher salaries, therefore, the supply of labour will be lower than the demand, and individuals who stay in the manufacturing sectors will have higher incomes, which shorten the inequality.

2.2. Economic Growth Theory

According to Solow, economic growth can be categorized into short- and long-term economic growth. In short run, the total amount of all final products and services desired by consumers, governments, investors and foreign countries will affect the short- run aggregate demand, and when the short run aggregate supply changes will also affect growth in the short term [7]. In long term growth, an increase in long-run aggregate supply will affect the economy due to increase in quality and quantity of resources and technology which will influence the long-run aggregate supply.

2.3. Chinese Economic System

The Chinese government has minimized the importance of ideology in economic policy and taken a pragmatic approach to solve many political and socioeconomic issues. Education, stability, and consumer welfare are seen to be interdependent [9]. The government has placed a strong emphasis on increasing individual income and consumption as well as foreign trade to boost productivity and economic growth [9]. The reforms after 1978 boosted the inequality between urban and rural incomes as a result of technological changes noted by Benjamin [10].

3. Methodology

According to Friedman, the theory is made up of two parts: the "language" (logic and mathematics), which specifies the systematic and organizational techniques of reasoning and explanation; and meaningful hypotheses, which disclose abstract key properties of a complicated reality [11].

This section will be introducing the method of determining the degree of economic inequality and economic growth to reach the purpose and objective of this paper.

3.1. Measurement of Economic Inequality

Gini coefficient also can be referred to as the Gini Index. It is used to measure the inequalities within one nation or to compare different countries and cities. The scale expands from 0 to 1. When the measurement is one, it means that one person receives the entire national income. A value of 0 indicates that income is divided evenly among all members globally. To be more specific, total equality is represented by 0, and total inequality is represented by 1. To clarify, both circumstances would never exist in the real world.

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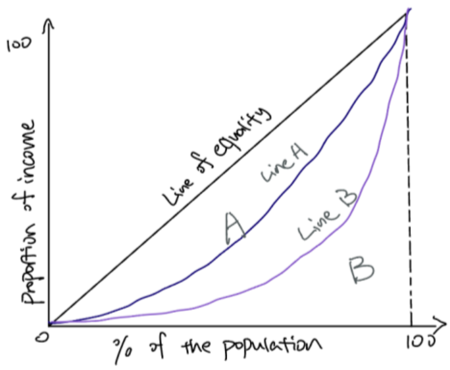

Figure 1: Graph of Lorenz curve.

The Lorenz Curve is used to compute the Gini coefficient. This is seen in figure 1. To clarify, each percentile is drawn on the graph using a 45-degree line. This line denotes complete equality, as a result, the lowest 10% of the population obtains 10% of the income, while the highest 10% likewise receive 10% of the total income. The percentiles below this line are populated along this line, resulting in the Lorenz Curve.

The Gini coefficient should be calculated using the formula below:

Gini coefficient= area between the diagonal and Lorenz curve/total area under diagonal=Area A/Area A+B

Imagine that line A and line B represent two different countries. In fig.1, line A is closer to the line of equality than line B, therefore, country A is more equal than country B.

3.2. Measurement of Economic Growth

Table 1: Different measurements for long term and short term economic growth.

<table>
<tr><td></td><td>Neoclassical and Keynesian model</td><td>Production Possibility model</td></tr>
<tr><td>Short-term growth</td><td>risein aggregate demand
risein short-run aggregate supply</td><td>numbers of unemployed workers rediced
improvement in efficiency</td></tr>
<tr><td rowspan="2">Long-term growth</td><td colspan="2">increased resource quantity
upgradedresource quality
more innovations and advanced technologies</td></tr>
<tr><td>improvements in efficiency
institutional changes</td><td>-</td></tr>
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4. Results and Data

From the precious sectors, the researchers indicate that there will be a positive relationship between economic growth and inequality; a negative relationship in long run.

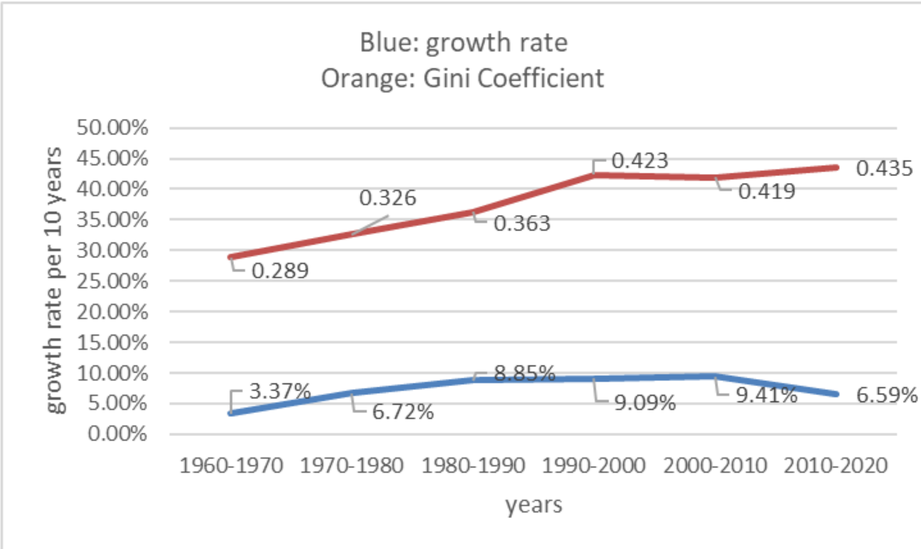

Figure 2: Trend line for the average growth rate and Gini index per 10 years [1].

According to figure 2, the economic growth trend lines show that China’s economy increases from 1960 to 2010, same for the Gini index, the number increased from an average of 0.289 to 0.419. Malcom estimated that the coefficient for the 1960s is less than 0.3 [12]. Surprisingly, the rural and income disparity reaches the climax which was twice the index than the starting year. During the 1980s, the value is around 0.356 and 0.383. In the journal American Economic Association Dennis states that rural investments contributed for" less than 10% of the budget in the 1980s and 1990s [13]. despite the fact that the rural population represented roughly 73-76 percent of the national population, resulting in significant rural-urban inequities [14].In the later period, the rate of economic growth us relatively high however, the rate falls down after 2016. Chinese government implemented the demand-side policy to adjust the aggregate demand to reduce short term fluctuations [15]. It contains both monetary policy and fiscal policy, where monetary policy means that government will either increase and decrease the interest rate to impact the money supply; the government also impose the fiscal polict to change the spending on public goods, merit goods and tax rates. On the other hand, more government spending means more transfer payments(unemployment benefits, education welfare, and pensions) which creates job opportunities to reduce unemployment. China is carrying a progressive tax system- income increases, the amount of tax needs to pay for income increases. As a result. The trend between 2000-2010 follows the previous discussion about the correlation, that it became negative.

5. Discussion

The findings clearly show that there is a long-term inverse relationship between economic growth and inequality. This section will be focused on discussing whether economic goods are always ‘good’ and the purpose is to get a thorough understanding of the influence in short term and long term economic growth in the economy. Economic development contains both short-term growth and long-term growth. Short-term economic growth is caused by increases in aggregate demand or short-run aggregate supply; long-term growth is caused by increases in long-run aggregate supply. In figure 3 (short run economic growth) It demonstrates that the aggregate demand curve moves to the right as a result of the four aggregate demand drivers (government spending, investment, cosumer spending on goods and services, and export minus import), resulting in gains in real GDP from Y1 to Y2 (indicates increase in the real GDP) and a rise in the price level. In figure 4, the first

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short run aggregate supply curve shifts to the second curve, causing the real GDP to rise, which is caused by falls in prices of the factors of production or changes of the non-resources prices and so on. Differently, during long term economic growth, the straight line curve- LRAS curve moves to the rightward position. Long-run aggregate supply stands vertically as the supply is independent of the general price level and its intersection with the x-axis is the potential GDP meaning that The country is generating at its highest actual production level. As a result, a movement to the right in the long-run aggregate supply curve suggests a growth in the quantity or quality of the factors of production, or certain technological advancements.

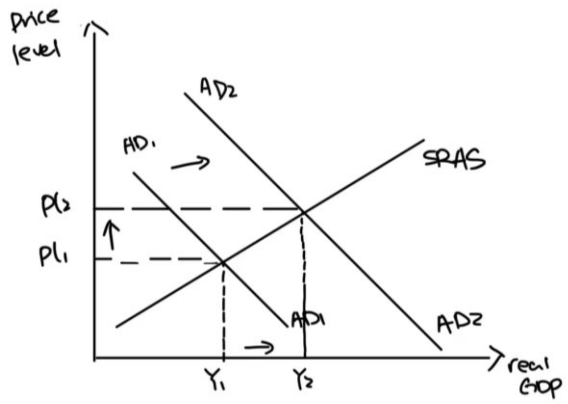

Figure 3: Graph for rise in aggregate demand.

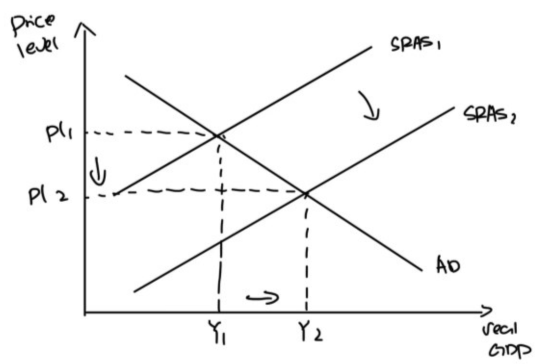

Figure 4: Graph for rise in short term aggregate supply curve graph.

Economic growth can bring some benefits to the nation. Economic growth occurs when the increase in real domestic product is faster than the total population and it is strongly associated with improvements in standards of living. For example, China influenced the rapid economic growth since last century. Historically, the Chinese economy was defined as outdated and underdeveloped. Since many people remained absolute poverty- they were unable to afford the basic necessity in daily lives. Improvements since then saw the real GDP of this developing country increased more than 10% a year. In early 1950s to 1960s, the life expectancy was at 52 years, the Chinese economy was experiencing a cultural revolution and it causes individuals to lose their freedom on property and freedom, and in the 1980s, the number rose to 67 years; and the poverty decreased to 138 million. It was a huge advancement for China that there were more government expenditures on public goods and merit goods, food supply and sanity, as well as building conditions, moved through numerous stages. The income in China rose quickly during the late 1990s, where they were able to spend more on housing, since the 1990s more buildings were being constructed including apartments, shopping malls and tourist spots [16]. With the economic growth, the real GDP rose drastically as well as the living standard for individuals. Additionally, economic growth is usually linked with the sustainability that is provided by the governments to pursue appropriate measures to ensure sustainable resources. Economic growth is strongly related to the living standard, shown by different sets of measurements. The Chinese economy was distinguished by huge economic inequality and extreme employment insecurity before. To pull the economy out of the under-developed status, the Chinese government spends more on merit goods to raise living standards for instance a large proportion of the public budget has been devoted to areas such as compulsory education, pharmacy, and policy re-generation including child policies and laws; as the Chinese government spends the vast majority of its budget on these things, it helps to boost the employment and productive efficiency, while increasing the disparity between the rich and poor, that richer people can always gain scarce resources but the poorer people do not have the ability to gain enough resources. Furthermore, companies invest in new technologies and innovations which improve the quantity and quality of products and services causing more individuals to spend their disposable incomes on goods and services such as food, education, healthcare, and entertainment, which improves their living standards.

However, economic expansion has a number of detrimental economic and environmental consequences. To be more specific, it frequently has negative externalities in that some damages are irreversible. For example, China has encountered huge economic problems like high levels of pollution, soil erosion, land degradation due to over-farming for agriculture, and overuse of land to construct new roads, routes and housing. The pollution in China is extremely high with an average rate of pm2.5 over 200 in the winter period which causes further health issues. On the other hand, rapid economic growth impact economic equality meaning that the income and wealth distribution is worsened. According to studies of China's inequality, the difference between affluent and poor household incomes in China is vast and has contributed significantly to the overall economic inequality. The income in metropolitan China is more than three times that in Europe [17]. China’s Gini coefficient increased rapidly. The reason for huge income inequality due to the economic growth behind are inappropriate government regulations. For instance, the use of technologies in industries and industries and agricultural sectors demands more capital inputs instead of labor, due to faster efficiency creates unemployment and failure in income distribution; less government investment in human capital and resources creates drawbacks to individual’s income and creates bigger income gaps with wealthy people. Furthermore, there is a potential conflict between inflation and economic growth. For example, demand-pull inflation is induced by rise in aggregate demand as a result of increases in consumer spending, investment, government spending, and net export (export minus import) as shown in figure 3 while real GDP increases, the price level rises from pl1 to pl2, therefore the short run economic growth put pressure on inflation suggesting a conflict between the macroeconomic objectives.

6. Conclusion

In an economy where credit is scarce and the poor cannot borrow, investment cannot expand, resources cannot be adequately allocated and inequality acts as a brake on growth. In this case, redistribution by the government will help create new investment opportunities, raise the level of social output, and eventually improve both equity and efficiency. As Mirrlees states, the moral hazard determines the system of the economy, and redistribution policies pursued by governments to promote equity are sometimes limited to economic growth [18]. That's because once people know their earnings will be taxed, and their payments are equal there's less incentive to work hard.When credits are insufficient and the poor are unable to borrow, investment cannot increase, resources cannot be distributed appropriately, and inequality serves as a brake on economic growth and development. In

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this situation, government redistribution will create new innovations and technologies to raise the investment possibilities, and social production, which enhance both equality and efficiency. According to Mirrlees, moral hazard controls the economic system, and redistribution programs implemented by governments to reduce inequality can sometimes restrict economic growth [18].

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