Through a Keynesian Theory to Analyze the Economic Impact under the Outbreak of COVID-19 in China

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Abstract. With the outbreak of COVID-19 pandemic, Chinese economy was hit severely and this disease brought a significant challenge for China. This was particularly the case for unemployment, the variation of GDP and the shrinking of small and medium-sized enterprises. The objective of this research is to investigate the impacts of COVID-19 in China, evaluating economic approaches being applied for different countries and point out the suitable method to boost the recovery of the Chinese economy from economic depression. The study used the fundamental concept of Keynesian theory to conclude the most effective approaches and showed that according to Keynesian theory, the Chinese government should implement expansionary policies to sustain economic growth by raising effective demand and solving unemployment problems. Therefore, the Chinese government can encourage the whole economy through fiscal and monetary policy.

Keywords: COVID-19; Keynesian theory; Chinese economy.

1. Introduction

On 11 March 2020, WHO Director-General Tedros Adhanom Ghebreyesus said the COVID-19 outbreak has taken on the characteristics of a pandemic. Speaking at a regular news conference in Geneva, Tedros Adhanom Ghebreyesus said the extent and severity of the outbreak were deeply concerning, "so we assess that the COVID-19 situation has taken on the characteristics of a pandemic" [1].

With the outbreak of COVID-19 pandemic, unemployment and the negative growth GDP have become the most dominant issues in China. Although the whole world experienced the financial crisis in 2008, Chinese year-on-year GDP still maintained positively, going through a slight decrease at approximately 3%. However, China's Y-o-Y GDP growth rate has fallen to -6.8% since the country was hit by the pandemic at 2019. It is fair to say that COVID-19 poses a threat to the Chinese economy heavily. With respect to quarterly GDP growth in the first quarter of 2020, it became the first negative economic growth, after which the quarterly GDP accounting system was set up in 1992 [2]. With the COVID-19 being controlled temporarily in mid-2020, positive growth (3%) was reached in the second quarter, recovering steadily in the rest of 2020.

It is also clear that COVID-19 exerted negative impacts on employment issues. In July 2022, the surveyed urban unemployment rate was 5.4%, down 0.1 percentage point from the previous month. The unemployment rate for adults aged 25-59 was 4.3%, and for young people aged 16-24 was 19.9%. Obviously, the unemployment rate of the younger generation was nearly 4 times larger than the surveyed urban unemployment rate.The service sector, which accounts for a large proportion of young adults aged between 16 and 24, has been hit heavily and has recovered slowly. The service sector is highly related to tourism, restaurants and entertainment, being closed down completely because of the outbreak of COVID-19, facing an extremely severe employment challenge. To sum up, the main feature of employment during an epidemic of coronavirus is the relatively high unemployment rate among young adults.

The 2020 Spring Festival holiday was estimated to have lost half of its sales in the categories of retail and catering services due to the pandemic, approximately about 500 billion yuan. In 2020, the cinema industry suffered a total economic loss of 12.3 billion yuan during the Spring Festival and in February. On February 11, the Beijing Film Association, the Guizhou Film Projection Industry Association and the Fujian Film Association, among others, called on property owners to offer rent remission for cinemas to help them overcome difficulties [5].

Fig. 1 Year-on-Year GDP of China from 1992 to 2020.
Source: China's National Bureau of Statistics [3].

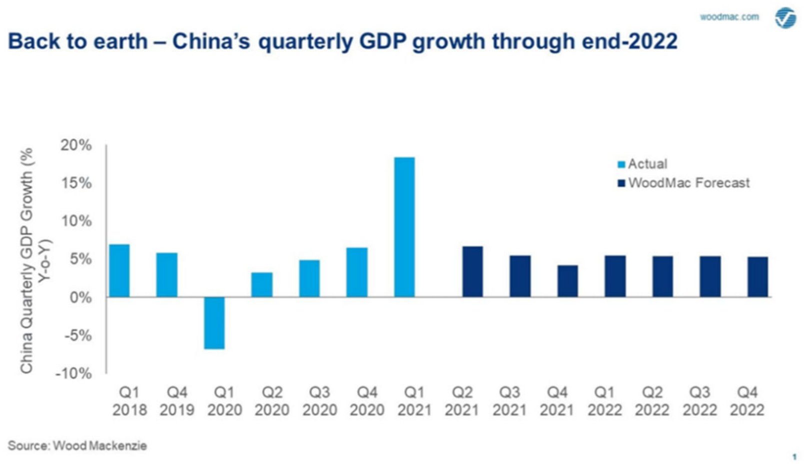

Fig. 2 China's quarterly GDP growth through end-2022.
Source: Wood Mackenzie [4].

In conclusion, the hardest hit sectors are industries such as tourism, travel, financial markets, entertainment and manufacturing that have a devastating impact on GDP [6]. In Section 2, the study evaluates the cases of different countries around the world, and Section 3 suggest the most suitable policy of Chinese economy through the investigation of fiscal and monetary policies. Section 4 evaluate the availability of these policies and the application of Keynesian theory in China under the condition of COVID-19. Section 5 concluded the main findings and some limitations of this study.

2. The application of Keynesian policies in countries around the world

Keynesianism refers to the use of proactive policies set by government to control aggregate demand in response to or take precautions against economic downturns. Active fiscal and monetary policies are the main implements proposed by Keynesian economists to control the economy and combat unemployment [7]. Monetary policy typically affects aggregate demand through exchange rate, direct control of the money supply, and interest rate. Fiscal policy always affects aggregate demand through taxes and government spending.

2.1 Monetary Policy

Central banks have adopted different monetary policies in various periods, adopting expansionary monetary policies in downturn, or buying government bonds in the open market, reducing the discount ratio and the provision ratio in order to augment the supply of money, decreasing interest rates and encourage aggregate demand, Tightening monetary policy during good times, i.e. selling government bonds on the open market and raising discount and reserve ratios, reduces the money supply, raises interest rates and dampens aggregate demand. At different times, countries have different emphasis on monetary policy. Take the United States for example, after the 1960s, they tended to use expansionary monetary policy to accelerate the economy [8].

Monetary policy in the United States consists of the actions and communications of the Federal Reserve Board to facilitate firm prices, maximum employment, and a moderate rate of interest in the long-term - economic objectives that the Federal Reserve Board is directed by Congress to pursue [8].

2.2 Fiscal Policy

Fiscal policy main tools are government spending on unemployment benefits, infrastructure, and education. The U.S. government when the great depression in the 1930s used to implement Keynesian expansionary fiscal policy, increase government spending to build a bridge to build roads and other public facilities, also built a lot of national park facilities, offers a lot of jobs to the people of the United States, the purpose is to start the economic recovery. Keynes's advice had an immediate effect. During the financial crisis of 2008, President Bush began by increasing government spending to stimulate economic growth, sending tax rebate checks to people and bailing out failing banks. Since then, President Obama has kept GM, Chrysler and others out of bankruptcy, created jobs and helped innovative companies grow [9].

In March 1933, Congress voted for $3.3 billion in public works -- equivalent to all of the federal government's spending in 1930 -- money it believes that this money can be consumed within a few years. By 1934, unemployment ratio was stable at about 22 percent of the labour force, and Keynes and Harold Laski offered more examples of the same. "Can U.S. work its way to recovery? The answer to this question is "Of course!" . An economy's production is a response to spending - it was ridiculous to think that an economy can stimulate economic activity by spending less. When private consumption cannot sustain employment sufficient, government has to intervene. 'If they were left to do it themselves, they might do it better. However, this does not prove that this is unreasonable,' the article concluded. In its efforts to finish large-scale unemployment, the federal government hit upon the way. Under this policy, the federal government is forced to act as a compensation agent during economic downturns, filling the trough of the trade cycle with public money to promote recovery, and then cutting spending during booms [7].

Reply to the downturn and the financial crisis of 2007-2008, Congress and the Executive division took some steps that borrowed from Keynesianism. The federal government succour heavily indebted corporations in a variety of commercial enterprise, for example, automakers, insurance companies and banks [7].

In 2009, President Obama signed the American Recovery and Reinvestment Act, an $831-billion government incentive package designed to save existing jobs and create new tasks . It comprised tax cuts and unemployment subsidy. In addition, it assigned disbursement for health services, infrastructure, and cultivation [8].

Those incentive ways and federal disposals handed America's economy restore, forestalling the Great Recession from making another mature recession [8].

Pakistan fell into an economic recession during the COVID-19 pandemic, with a sharp decline in GDP, leading to imbalances in current and fiscal balances, disruptions in supply chains, and rising unemployment across the board. Pakistan implemented Keynesian policies, increasing government spending to stimulate economic recovery and steady recovery, including relief programs for public transport and so on.

Pakistan is in the midst of a feasible recession. Ready money transfers and other economic arrangement can appear a hugely rose-colored impact on the international economy. Given the circumstances, Pakistani regime in March announced an ambitious incentive program aimed at providing much-needed assistance to helpless customers and businesses in the region.The $8 billion assistance package was aimed at preventing Pakistan from continuing into a cycle of financial pressure and dependence as it takes steps forward to control the coronavirus outbreak. The cash transmission cost under the Ehsaas Emergency cash programme is $894 million, accounting for $894 million of the $8 billion economic stimulus plan. Although this is a laudable procedure, attached fiscal increasing is still occurring [6].

The main purpose of this monetary injection is to produce an unexpected rise in domestic expenditure, which instantly increases the market demand for goods and reduces the expected national savings at any level of the real rate of interest. Other aid packages announced by the government included P267 billion for solid dissipation regulation and stormwater wastewater systems; 572 billion Pakistani rupees for public transport, urban rail and road transport systems; Pakistani rupees 141 billion for sewage treatment plants; 41 billion Pakistani rupees for disaster relief; 92 billion Pakistani rupees for water projects [6].

Like increased government procurement, these fiscal stimulus measures end up increasing market demand and allowing industrialists to invest. In July and August, it also reduced export gas charges related to zero-rating activities to help them present structure events following coronavirus-related lockdown.Thus, this change in fiscal policy regulates prices because firms confront the demand of development at the static price level, shifting the demand curve of the market upward. This expansionary change increases rate of employment and national output [6].

3. Policy responses

Keynes believes that encouraging consumption, lowering interest rates and expanding government spending are three key measures to boost economy. These three methods correspond well to the three components of GDP of closed economies - consumption, investment and government expenditure. Therefore, during the Great Depression of the United States in the 1920s and 1930s, Keynes proposed to Roosevelt to "prioritise large-scale expenditures by the government" and pointed out that these expenditures should be optimised for quick-impact projects, such as the construction of railways, dams and other public installations, with the aim of starting recovery [10].

Generally, fiscal policy tools include both government expenditures such as government purchases and transfers, and government revenues such as public debt issuance; monetary policy tools include both open market operations, legal reserve ratio and rediscount rate, and other auxiliary monetary tools such as moral suasion and window guidance. The intermediate variables are selected according to certain principles, for example, disposable income is selected as an intermediate variable for fiscal policy, and interest rate, credit size and money supply are used as intermediate variables for monetary policy.

3.1 Monetary policy

The supply of money is controlled by the central bank, when government increase the amount of money they released, in the beginning, the price would not be influenced immidiately. However, increasing supply of money could encourage production. This is due to the reason that there is more capital put in the production, firms are more likely to expand the scale of production, purchase more raw material for manufacture and hire more labour, which is benefitial for lower the unemployment rate in the short run.

Specifically, China's fiscal policy should appropriately continue to reduce taxes and fees or stop reducing taxes and fees to stop enterprises from temporarily engaging in speculative development or production, so that the whole industry can steadily return to its pre-epidemic basis; stop expanding government spending, reduce stimulation of the consumption-based tertiary industry, and correctly guide private enterprise investment; appropriately increase the issuance of government bonds and local bonds for the government to guide the correct and stable development of the industry, or reduce or stop the issuance of government debt to reduce social capital liquidity[11]. At the same time, the central bank can adopt open market operations to repurchase securities to reduce capital market liquidity; adopt appropriate increases in the legal reserve ratio and the benchmark one-year time deposit rate to limit bank credit expansion and borrowing, thus appropriately reducing the amount of social financing.

3.2 Fiscal policy

Due to the failure to resume work and production on time, many SMEs face serious difficulties in operating. Some firms are shedding a large number of jobs in order to keep their profit and decrease their operating costs after COVID-19 break out [12]. In order to save many small and medium-sized enterprises in distress and encourage employment, on the one hand, the government can help small and medium-sized enterprises tide over the difficulties by reducing taxes, such as exempting taxes and fees such as income tax for small and medium-sized enterprises in the first quarter of this year, delaying the collection added-value tax for small and medium-sized enterprises, and appropriately reducing social security rates. On the other hand, the government can also support small and medium-sized enterprises to resume work and provide subsidies for production and manufacture regarding to the epidemic [11]. At the same time, the government can also provide rent subsidy policies for small and medium-sized enterprises by advocating rent relief and subsidised and special incentives that take the initiative to increase job opportunities. When their cost reduced by these policy and welfare, the redundant would be lower accordingly.

In addition, the government can offer a certain welfare for individuals to improve their consumption capacity, such as issuing vouchers to middle-class citizens and below; on the other hand, it can appropriately adjust daily consumer prices to adapt to the decline of consumer capacity after the epidemic. Meanwhile, after the COVID-19 is constrained, the government can also appropriately increase workers' holidays, stimulate people's consumption needs and promote the recovery of leisure, entertainment, tourism and other industries by giving people more leisure time [9].

2020 fiscal policy in China is significantly stronger than 2019. Measures such as issuing additional local debt, increasing the fiscal deficit rate and issuing special treasury bonds are still on the way and will continue to support various regulatory measures, mainly infrastructure construction.

4. The Evaluation of Fiscal and Monetary Policy and the Availability of Keynesian Theory in China during the Outbreak of COVID-19

This paragraph aims at assessing the usage of fiscal and monetary policy, discussing the existence of crowding out effect due to the expansion of government expenditure. Besides, through the example of proposing expansionary fiscal policy in the end of 20th century, this paragraph concluded the impracticability of Keynesian theory in China.

4.1 Evaluating fiscal policy and monetary policy

Keynes regarded that the government propose expansionary fiscal policy can tackle with the economic recession. However, this type of police might lead to the crowding out effect to some extent. The crowding-out effect is an economic theory that the increase in public sector expenditures leads to a decrease in private sector expenditures. If increasing the government expenditure, which can be spent in the construction of infrastructure, the interest rate will rise and then lead to the private investment reduce so that the government cannot be able to achieve the particular outcome. In addition, the target of government subsidies is also worth discussing. If Subsiding or investing big enterprise but the government ignore the survival issues of SMEs might lead to the out of business of some SMEs companies, resulting in the appearance of squeezed workforce. Even though it can stimulate the speed of recovery, the loss exceeds its benefits.

To sum up, the policymakers ought to take expansionary fiscal policy, increasing their expenditure and stimulate consumption among individuals. Simultaneously, they should also adopt moderate monetary policy, meaning that they put a great deal of money into the market. In this case, the interest rate will be maintained at the same level. With the corporation between fiscal policy and monetary policy, the government can achieve a stable interest rate and the economic growth in the meantime.

4.2 Assessing the availability of Keynesian theory in China

In 1997, the price level in China began to experience a negative growth since the financial crisis in Asia, and the degree of economic recession was worsened. In order to reverse this situation, the Chinese financial department decided to expose expansionary fiscal policy in the second half of 1998. To alleviate the economic depression, they borrowed heavily. At the beginning of 1998, 280.85 billion yuan of Treasury bonds were planned to be issued, and an additional 100.25 billion yuan was issued in the second half of the year. At the beginning of 1999, 341.5 billion yuan of government bonds were planned to be issued, but this was later increased by 600 billion yuan. Second, while the government is expanding investment, it is also trying to boost household income to stimulate consumption. In 1999, the government spent a total of 54 billion yuan to increase individual income, benefiting 84 million people nationwide. However, in 2002 summer, there was tiny effects of the decreasing of interest rate on boosting consumption. The radical purposes of Keynesian theory during the economic recession are the expansion in investment and the stimulation of consumption. Therefore, the unsatisfactory results in 2002 since the government investment didn't improve the personal investment, leading to the investment was still sluggish. Then it turned into a repeating cycle: the lack of investment result in the drop of demand. Besides, although China poured a large amount of money into the market so as to rise the individuals' income, the expansion of consumption demand is not sufficient enough. In China, high incomers purchase the things they need, and then they do not have their consumption demand any more while most of impoverished groups have their own needed, but they are not affordable to purchase. This is a problem that Keynesian theory cannot solve [13].

In concluded, due to the discrepancy of market system between western countries and China, the usage of Keynesian theory might lead to different outcomes. For instance, the United States is a typical developed market economy country, with developed and perfect market system. However, Chinese market economy is still under construction so the same policy idea, on the basis of different institutions will generate different results.

5. Conclusion

Fiscal policy and monetary policy are the government's instruments for macroeconomic regulation, and it is objectively necessary for them to work together in coordination[14]. Arising from the findings, China's government should take into account the current state of our economic recovery based on the reality that the vast majority of enterprises have basically resumed work and production and the money market is relatively abundant in liquidity, and focus on the employment of residents and the medium- and long-term financing of enterprises. Specifically, China's fiscal policy will continue to reduce fees and taxes, help the development of enterprises and protect them in order to stabilise employment; increase government spending to stimulate social consumption and guide private investment; accelerate the issuance of local bonds and focus on issuing special government bonds to enhance the efficiency of the use of funds raised and attract more social capital. At the same time, monetary policy should pay more attention to the use of structural tools, achieve precise drip-feeding, implement credit expansion for small and micro enterprises and the real economy, maintain reasonable liquidity through the banking system, so that social financing is in a reasonable position year-on-year, while strengthening financial supervision to prevent arbitrage. And with the gradual development of the domestic economic situation, fiscal policy and monetary policy gradually reduce the regulation of the economy, fiscal policy should gradually restore the basic balance of fiscal revenue and expenditure, monetary policy should focus on maintaining the stability of the financial market, under the coordination of the two, let the market play a role in promoting the effective allocation of resources.

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