

Economic Response to the Epidemic: An Analysis of Macroeconomic Policy in China and the US

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Abstract: The global outbreak of COVID-19 epidemic has instigated turmoil in international financial markets and a severe economic recession. China and the United States have adopted context-specific strategies in response to the pandemic. This research diligently gathers and compares the interventions implemented by each country, with the objective of elucidating the similarities and differences in their methodologies, along with the economic implications of these measures. As the United States is highly market-oriented, the Federal Reserve implements direct monetary policies, along with other fiscal tools by the government. From a formal perspective, the novel monetary policy instruments deployed in both China and the United States operate through the establishment of specialized purpose vehicles. However, the two are still fundamentally different. In policy terms, the Federal Reserve's tool is quantitative easing, while China's tool is the traditional category of credit. It can be anticipated that the paths of economic recovery of the two countries will demonstrate a more pronounced divergence trend.

Keywords: COVID-19, policy stimulus, economic recovery.

1. Introduction

The COVID-19 pandemic, which originated in December 2019 in China, swiftly spread across the country and escalated into a global health disaster. This unprecedented health crisis had profound effects on the world economy, marking one of the most severe downturns since the end of World War II. Throughout the pandemic, there was a notable fluctuation in international trade activities and domestic industries within countries worldwide, which might have exacerbated anti-globalization sentiments. Amidst this complex scenario, the dynamics of globalization faced significant challenges.

Macroeconomic policies are crucial for maintaining economic stability and managing inflation rates. The implementation of these strategies varies significantly across different nations, largely influenced by the diversity in political systems and levels of development. This leads to notable discrepancies, especially when contrasting countries like China and the United States, which frequently attract substantial academic scrutiny. In spite of the plethora of scholarly work on this subject, a conspicuous gap persists in the form of a comprehensive comparative evaluation of the monetary strategies adopted by these nations following the pandemic. The conduct of such a comparative analysis serves as a pivotal benchmark and catalyst for the formulation and enhancement of China's current monetary policies. This approach fosters a more profound comprehension,

empowering China to adeptly utilize monetary policy tools. Consequently, it safeguards the robustness of the economy against impending recurring crises and diverse external shocks.

During the COVID-19 pandemic, countries such as the United States, Japan, and numerous European nations resorted to Quantitative Easing (QE) as a monetary policy tool. Notwithstanding the implementation of QE, all these economies encountered inflationary pressures, which inevitably necessitated substantial adjustments in their monetary policy frameworks [1]. Both China and the United States have refined their monetary policy instruments to enhance their responsiveness to the effects of the pandemic. There has been a notable improvement in the harmonization between monetary policy actions and fiscal measures, facilitating more effective collaborative responses to the crisis. The distinction lies in the fact that China maintained a predominantly expansionary monetary policy from 2020 to 2022, with a consistent stance. Conversely, the United States' monetary policy during the same period traversed three distinct phases, encapsulated by the sequence of "exceptionally loose - gradual deceleration - tightening." As a result, the trajectories of monetary policy for both nations began to diverge from a point of relative alignment at the onset of the pandemic, progressively moving in opposite directions [2].

The current scholarly endeavor critically evaluates the foundational principles and effectiveness linked to the implementation of macroeconomic strategies within the Chinese and American economies, with a pronounced focus on monetary policy during the pandemic era. This analysis delves into a comprehensive array of economic indicators, encompassing gauges of economic growth and inflation rates, and proposes remedial measures and suggestions for future policy architectures.

2. Macroeconomic Policy in China

During the epidemic period, China has encountered a series of challenges, such as downward economic pressure, inadequate effective demand, and the transition from old to new growth drivers. Given these challenges, China's monetary policy has adopted an overarching strategy focused on preserving economic stability and fostering growth. Highlighted in the Monetary Policy Implementation Report published by the People's Bank of China, the focus is on "enhancing countercyclical adjustments." This initiative seeks to streamline the mechanism through which monetary policy impacts the economy, mitigates and addresses financial risks, and facilitates the ongoing recovery of the economy [3]. Specific measures encompass the reasonable growth and structural optimization of total credit, along with promoting the liberalization of deposit and loan interest rates and reducing the financing cost of enterprises. China's monetary policy adjustments also take into consideration the variations in the global economic situation. With the easing of global inflationary pressures and the shift of monetary policies in major economies, the People's Bank of China has more leeway for maneuvering in cutting interest rates and reserve requirements to support the upturn of the domestic economy [4].

2.1. Economic Response

Considering the influence of the pandemic, China's Gross Domestic Product (GDP) growth rate from 2018 to 2023 showed differing levels of volatility. However, the overarching trend demonstrated a resumption of growth. As depicted in Figure 1, the Chinese economy displayed remarkable resilience spanning from 2018 to 2023, particularly in the face of the pandemic's effects. Specifically, in 2019, the GDP growth rate in China stood at 6.1%. Notwithstanding the profound economic downturn in 2020 due to the pandemic, China managed to achieve a commendable growth rate of 2.3%, demonstrating its robustness and adaptability. In 2021, the first year of the 14th Five-Year Plan, China's economy expanded by a strong 8.1%, with a two-year average growth of 5.1%. By 2023, China's economic growth rate recovered to 5.2%.

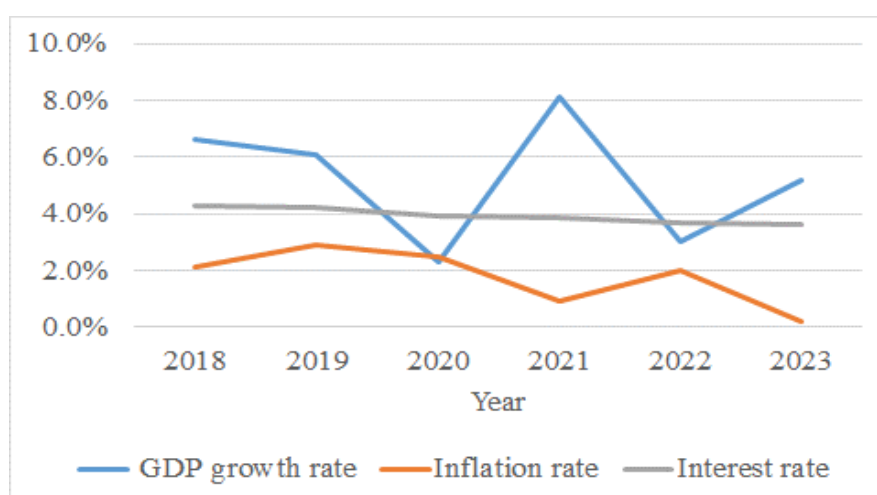


Figure 1: GDP growth, inflation and interest rate of China (Data Source: World Bank).

On the whole, China's economy maintained stable growth during the epidemic. The government effectively responded to the impact of the epidemic by implementing flexible and appropriate monetary policies and proactive fiscal policies, and promoted high-quality economic development. In 2023, China's economic expansion was primarily propelled by enhancements in domestic demand, strategic structural adjustments, the acceleration of scientific and technological advancements, and the advancement of reform and opening-up policies. Simultaneously, the Chinese administration intensified its macroeconomic management endeavors to mitigate risks and safeguard the stability of living standards and the broader societal milieu.

It is apparent that, amidst the challenges posed to China's economic growth by the pandemic, the implementation of stringent epidemic prevention and control strategies, coupled with strategic economic policy adjustments, have facilitated the maintenance of an upward economic trajectory and led to a notable recovery in 2023. During the entire duration of the pandemic, a steady decline in interest rates has been observed in China. The decline in economic activity within the nation, a result of the epidemic's repercussions, led to a diminution in market borrowing requirements. In response to this scenario, with the intent to enhance loan utilization and investment, the People's Bank of China modified interest rates. This adjustment was made with the objective of invigorating economic activity by reducing rates, thereby stimulating economic growth. From 2018 to 2023, amidst the impact of the novel coronavirus epidemic and a complex international environment, China's overall inflation rate remained stable. The examination of Figure 1 demonstrates that, in 2023, China's inflation rate, quantified through the Consumer Price Index (CPI), showed a yearly increase of just 0.2%, indicative of largely steady price levels across the year. Specifically, food prices witnessed a year-on-year decrease of 0.3%, with a remarkable 13.6% reduction in pork prices acting as the principal catalyst for the decline in the CPI. Concurrently, the core CPI, which strips out fluctuations in food and energy costs, witnessed a mere 0.7% increase over the preceding twelve months, underscoring the resilience of pricing dynamics for industrial consumer goods and services. Even under external factors such as the epidemic outbreak, it is clear that China's inflation rate has remained at low levels, reflecting effective government macro-control measures alongside market supply guarantees.

2.2. Other Impacts

The pandemic has exerted a significant influence on both the global economic landscape and societal dynamics. In an effort to address the multifaceted challenges posed by the outbreak, China has

embarked upon a comprehensive strategy, encompassing a multitude of sectors. Specifically, in the real estate sector, the Chinese government has introduced city-specific measures to control the real estate market, reduce mortgage costs, and actively promote housing guarantee. These measures aim to balance the property market and prevent overheating or cooling while safeguarding residents' housing needs. In terms of employment, the Chinese government places great importance on stabilizing job opportunities. It has implemented policies to support enterprises in maintaining and expanding employment opportunities, and strengthened employment promotion services for college graduates and other key groups. Additionally, support has been enhanced for retired military personnel, migrant workers, and people with disabilities who face difficulties in finding jobs. To ensure people's well-being during this special period, the government increased fiscal subsidies for compulsory education, basic old-age care, and basic medical care. Furthermore, it raised the special additional deduction standard for individual income tax for supporting elderly individuals and children while strengthening efforts in renovating old urban communities and supplying government-subsidized housing. These policies reflect China's commitment to economic stability, as well as its concern for livelihood issues during this challenging time.

3. Macroeconomic Policy in the US

Throughout their responses to the COVID-19 pandemic, China and the United States have adopted markedly different strategies, differing significantly in terms of intensity, scope, and employed methodologies. These disparities can be largely attributed to the unique national contexts and the varying impacts of the epidemic within each country. The Federal Reserve's policy tools enable comprehensive financial assistance to a wide range of entities, embracing enterprises of varying sizes and serving diverse customer segments. This extensive outreach expands the landscape of funding options, utilizing a multifaceted array of financing strategies, such as, yet not confined to, issuing bonds, engaging in bill finance, implementing wage stabilization measures, and establishing consumer credit facilities [5]. Moreover, beyond their role in enabling transactions among economic actors, the Federal Reserve's policy tools play a crucial part in preserving stability across diverse financial sectors, encompassing the equity market, bond market, commodity market, and other related domains.

In the United States, the deployment of special purpose vehicles (SPVs) operates as an intermediary mechanism. Through this setup, SPVs procure commercial papers, bonds, and various other assets from authentic enterprises, utilizing these assets as collateral. Consequently, this arrangement enables SPVs to secure loans from the Federal Reserve, which in turn facilitates indirect access for the underlying enterprises to loan resources. The policy instruments can be categorized into four primary domains: the Secondary Market Corporate Credit Facility (SMCCF), the Primary Market Corporate Credit Facility (PMCCF), the Commercial Paper Financing Facility (CPFF), and the Term Asset-backed Securities Loan Facility (TALF). The Federal Reserve's direct intervention strategies are structured to facilitate a wide array of collateral types, including securities, loans, and commercial paper, within a comprehensive liquidity mechanism that supports the valuation of these collateral assets. During the current pandemic crisis, the Federal Reserve successfully broadened the collateral scope by easing the criteria for eligible issuers under the SMCCF, PMCCF and TALF, and the rating thresholds [6].

In response to the commencement of the global pandemic in February 2020, the United States implemented expeditious and forceful monetary policy interventions. As the Federal Reserve continues to assess the magnitude and direction of monetary policy, it has shifted from QE to a period of normalization. This transformation has resulted in the establishment of a policy framework that seamlessly integrates fiscal policy with debt monetization [7]. In the immediate aftermath, these measures exert a clear influence in re-establishing stability within the financial sector. However, their

efficacy in the intermediate and extended periods wanes, encountering constraints particularly related to currency devaluation and the Triffin dilemma.

To hedge against the uncertainty of the epidemic, the United States quickly introduced new policies. By the end of March 2021, the aggregated fiscal stimulus had approached approximately \$6 trillion, reflecting an unprecedented scale. According to the Congressional Budget Office (CBO), the budget deficit for the fiscal year 2020 in the United States stood at \$3.1 trillion, which equated to 15.2% of GDP. This percentage marks the highest level since 1945. In response to the impact of the pandemic, the Federal Reserve reactivated its zero-interest-rate policy in March 2020. Within a fortnight, the federal funds target rate was rapidly lowered to a band of 0% to 0.25%. Concurrently, the Federal Reserve announced plans for open-ended QE and the launch of extensive asset purchase initiatives. From March to May 2020, the Federal Reserve's asset base witnessed an unprecedented expansion of nearly \$3 trillion. By the end of 2020, there was a significant year-over-year increase in US assets, marking a rise of 77%. The United States prioritizes policies aimed at stabilizing markets, safeguarding domestic demand, stimulating consumption, and enhancing income levels. The overarching policy objective is to elevate household incomes and foster consumption activities.

3.1. Economic Response

As can be seen in Figure 2, The United States experienced fluctuations in GDP growth rates over the 2018-2023 period, partly affected by the pandemic.

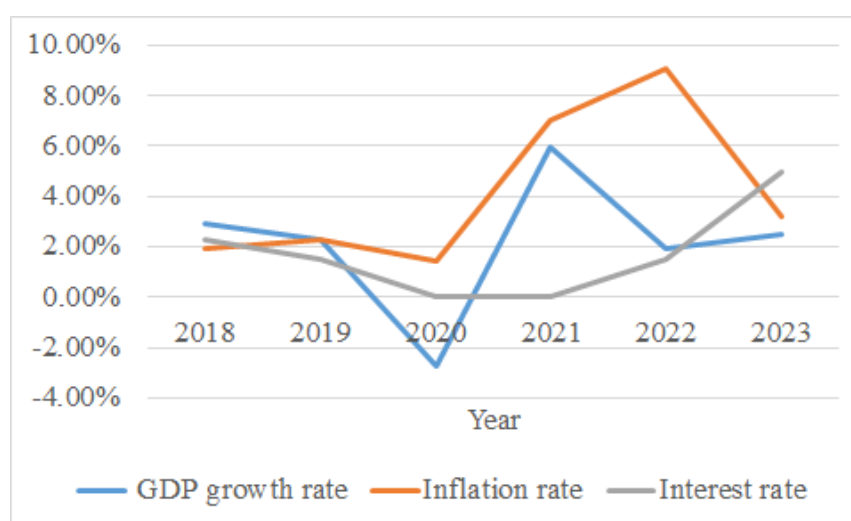


Figure 2: GDP growth, inflation and interest rate of the US (Data Source: World Bank).

From Figure 2, GDP growth in 2019 and 2018 was 2.29% and 2.95%, respectively, reflecting the steady growth of the US economy before the pandemic. In 2020, due to the impact of the novel coronavirus epidemic, the US's GDP showed negative growth of -2.77%, which is a low point in recent years. In 2021, the United States experienced significant economic growth, with GDP growth reaching 5.95%, a strong rebound after a 2.77% decline in 2020 due to the pandemic. In 2023, the US real GDP growth rate is 2.5%, up from 1.94% in 2022, showing continued economic recovery. The data suggest that while the US economy took a hit during the pandemic, it recovered in subsequent years through policy support and market adjustments. The data for 2023 show that the US economy has not only returned to growth, but has increased its growth rate, reflecting the economy's resilience and ability to adapt. From March to December 2022, the United States raised interest rates for a total of 7 times, with a cumulative increase of 425 basis points. Ultimately, the target range for the federal

funds rate was raised to 4.25% to 4.50%, greatly alleviating inflation and causing a rapid decline in the inflation rate.

3.2. Other Response

During the pandemic, the job market and people's livelihood in the United States have undergone significant changes. Research conducted by the Federal Reserve Bank of Richmond indicates that the pandemic in early 2020 resulted in a sharp decline in the labor force participation rate, which had not yet returned to 2019 levels despite a rapid recovery in the employment rate. As of 2021, both the labor force participation rate and the unemployment rate were approaching their estimated trends, suggesting a high degree of labor market tightness, particularly when compared to long-term demographic trends. According to data from the Bureau of Labor Statistics, the unemployment rate in October 2020 was 6.9%, with 11.1 million individuals out of work. However, this figure is likely an underestimate as it did not account for individuals who had ceased looking for employment due to poor economic prospects. Unemployment remained 3.5% higher than its pre-pandemic level in February 2020, resulting in an additional 5.3 million people being unemployed. The US economy experienced a substantial contraction at an annualized rate of 4.8% during the first quarter of 2020 and a staggering decline of 3.29% during the second quarter – marking its most significant downturn since 1945. Consumer behavior within the United States has also shifted during the pandemic. It has indicated that COVID-19 has had a considerable negative impact on consumption, resulting in significant reductions globally. Additionally, the consumption structure within cities has changed significantly during the pandemic; there has been a notable increase in the market share of daily necessities and medicine consumption while other areas such as education, catering and leisure have decreased. However, it is important to note that even throughout lockdowns, these shifts in consumption structure did not fundamentally alter, suggesting that consumption possesses some resilience, and the trend of consumption upgrading has not been reversed due to COVID-19.

4. Comparisons

During the COVID-19 pandemic, both China and the United States implemented a variety of monetary and fiscal measures aimed at mitigating economic disruptions and endeavoring to spur economic recuperation [8]. The Federal Reserve System swiftly took action by lowering the target range for the Federal funds rate to an almost zero level, and initiated a sequence of emergency lending and asset purchase initiatives to stabilize financial markets and ensure liquidity availability. Meanwhile, the People's Bank of China responded by reducing reserve requirements, decreasing interest rates, and providing re-loans and rediscounting facilities to enhance market liquidity and reduce corporate financing costs [9].

As a federal country, the speed and effectiveness of policy response in the United States are influenced by the coordination between the state and the federal government. The United States government has successfully mitigated the economic fallout by implementing substantial fiscal stimulus measures aimed at providing direct aid to both households and enterprises, as exemplified by the enactment of the Coronavirus Aid, Relief, and Economic Security (CARES) Act. Conversely, China's political framework enables the government to swiftly aggregate resources and formulate policies for swift response and cohesive action, demonstrating notable benefits in both epidemic containment and economic rejuvenation. US policies have been successful in averting a meltdown in financial markets and stabilizing the economy to some extent in the short term, but the long-term effects remain uncertain, especially given rising fiscal deficits and debt levels. China's policies are more focused on boosting long-term growth by investing in infrastructure and supporting key industries, but it also faces problems such as rising debt and overcapacity.

In the event of a new wave of outbreak, China and the United States may need to further adjust their policies to meet new challenges. The United States will likely need to continue Quantitative Easing and may consider more fiscal stimulus to support the economy, while taking care to avoid excessive inflation and debt risks. China is likely to continue to take advantage of its political system to support the most affected areas through targeted policies and promote economic restructuring [10].

5. Conclusion

China and the United States have implemented a range of strategies to cope with economic and social issues amidst the pandemic, showcasing the distinctive attributes of their unique political systems and economic frameworks. China's policies during the epidemic reflect its institutional advantage of focusing on macro-level economic performance. China swiftly implemented stringent containment strategies, including lockdowns, extensive medical care, and an all-encompassing community prevention and control framework, to curb the virus's dissemination effectively. Simultaneously, the government enacted an assertive fiscal policy and a judicious monetary policy, enhancing their predictive accuracy, adaptability, and efficacy to facilitate stable and sustainable economic growth. In addition, China attaches great importance to ensuring people's livelihood and economic development, and strives to promote the ongoing infrastructure projects by cutting taxes and fees and accelerating the issuance and use of local government special bonds.

US policies during the pandemic reflect a different political system and economic structure. As the United States is highly market-oriented, the Federal Reserve implements direct monetary policies, along with other fiscal tools by the government. US fiscal policy is subject to the constraints of bipartisan politics, executive and legislative, and the continuity and stability of policy may be affected. The United States has implemented large-scale fiscal stimulus programs, such as the CARES Act, to stimulate the economy and protect household consumption by means of tax relief and direct subsidies. The fiscal spending in the United States prioritizes the sustenance of public welfare, encompassing areas like social security, education, healthcare, and so forth. This emphasis underscores an economy characterized by a dominant service sector alongside a high degree of consumer spending at the household level.

Going forward, both countries will need to find a balance between maintaining economic stability and addressing long-term challenges. China needs to continue to deepen supply-side structural reform and remove institutional obstacles while maintaining policy continuity and stability to promote high-quality economic development. The United States needs to strike a balance between bipartisan politics, ensure policy coherence, and pay attention to the sustainability of fiscal deficits, while strengthening international cooperation to address global challenges. Both countries should remain flexible and forward-looking in their policies to respond to possible new shocks from the pandemic and other external uncertainties.

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