Comparative Analysis of Fast-Food Industry in China and the U.S under Covid-19 Pandemic -Taking KFC as an Example

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Abstract. Since the outbreak of the COVID-19 pandemic, there have been unprecedented impacts on both China's and the United States fast-food industries. Taking the example of KFC restaurants in China and the US, this article combines changes in the inflation index from the fourth quarter of 2019 to the fourth quarter of 2022, differences in the dining cultures and macro-level pandemic control policies between the two countries, as well as the variations in KFC's system sales in both markets. Through data and charts analysis, this study examines the effects of the pandemic on China's and the US fast-food industries, and the different influences of the aforementioned factors on their fast-food industries' recovery and development. The authors found that the US fast-food industry was less affected by the pandemic due to relatively loose monetary policy, stronger preference for fast food among the American people, and more passive and relaxed pandemic control measures. As a result, its post-impact recovery was better. The article also provides policy recommendations for promoting the further development of the fast-food industries in both two countries in the post-pandemic era.

Keywords: Fast-food industries; post-pandemic era; KFC.

1. Introduction

The catering industry is the most direct and typical window industry, and its development is related to the overall national economy and people's livelihood. Both in China and the United States, catering revenue has been an important component of total retail sales of social consumer goods [1]. According to data from the National Bureau of Statistics of China, in 2019, the proportion of catering revenue in the total retail sales of consumer goods in China reached 11.35%. Data from the U.S. Census Bureau and National Restaurant Association of the U.S. shows that in 2019, the proportion of catering revenue in the total retail sales of consumer goods in the United States reached an even higher value of 13.84%. In both two countries, fast food plays a significant role in their catering industry markets, making a vital contribution to catering revenue.

However, at the end of 2019, the sudden outbreak of the COVID-19 pandemic quickly swept across the world. As the two largest economies worldwide, China and the United States were deeply affected by this enormous pandemic, and their tertiary industries, represented by the catering industries, even faced a crisis. Now, as the impact of the COVID-19 pandemic gradually diminishes, the catering industries in both countries are gradually regaining their vitality, and the fast-food industries have successfully emerged from the shadows.

This article takes KFC in China and the US as examples, comparing and studying the impact of the pandemic on the fast-food industry in both countries, as well as their subsequent recovery and development. The analysis studies the reasons behind the differences observed from three aspects: macroeconomic monetary policy, dining culture, and pandemic control policy. Besides, this article also provides policy recommendations for the further development of the fast-food industries in both countries in the post-pandemic era.

2. Literature Review

2.1. The Impact of Epidemic on Chinese Catering Industry

There was an immeasurable impact on fast-food industries in both China and the United States because of the outbreak of the COVID-19 pandemic, as well as on their overall economies. Since the pandemic's onset, scholars have mainly focused their study on the overall impact of the pandemic on China's catering industry and its recovery and development.

From a macro perspective, Yang et al. found that the Chinese catering industry experienced a significant impact from the COVID-19 pandemic, primarily in the short term and in stages [2]. By July 2020, the industry had started to recover but remained fragile. Chai et al., analyzed economic data, observed negative year-on-year growth rates in catering industries' revenue for the period of January to September 2020 compared to the same period in 2019 [3]. However, starting from November 2020, restaurant revenue gradually increased, indicating a gradual recovery from the pandemic's impact.

Regarding macro policy recommendations, Chai et al. suggested implementing proactive fiscal policies and supporting small and medium-sized enterprises to further develop [3]. Xiao recommended government to implement support policies and increased assistance through financial technology, which can alleviate financial pressures on restaurant businesses and accelerate the catering industry's recovery [4]. Li proposed tax policies which can facilitate the recovery and development of the restaurant industry amid the COVID-19 pandemic, focusing on value-added tax, corporate income tax, tax incentives, and tax administration [5].

2.2. The Impact of Epidemic on the U.S. Catering Industry

Foreign scholars' research mainly focuses on the factors affecting the US fast food industry during the epidemic. Through the case analysis of KFC, Chen concluded that the loss of fast-food restaurants in the epidemic is related to the slowdown of globalization, the blockade, the weakening of consumers' confidence in economic prospects and consumers' negative emotions [6]. Firstly, in terms of supply and demand, Yang et al. observed that the decrease in restaurant demand was correlated with the increase in daily new COVID-19 cases according to the restaurant visitation model of passenger flow [7]. Lauren Chenarides found that a significant number of respondents reduced their fast-food consumption during the epidemic [8]. Keenan Marchesi et al. found that consumption at fast food restaurants decreased at first, but soon recovered or even exceeded pre-epidemic levels [9]. Despite the increase in total consumption, the volume of fast-food restaurants on 30 May 2021 is still lower than two years ago. Second, in terms of inflation, Savannah Bergquist et al. analyzed the period of the epidemic, i.e., from January to April 2020, food consumption prices rose and then slowed down in May and June [10]. Reinsdorf, Marshall discussed the changes in the CPI in the United States, and he used data and graphs to analyze the impact of the epidemic on inflation in the United States [11].

2.3. Summary

These studies discussed the impact of the epidemic on the fast-food industry in China and the United States from different perspectives, and some of the literature provided suggestions for the recovery of the catering industry. This also provides ideas for this paper to compare the impact of the fast-food industry in China and the United States and its recovery and development.

In summary, although these literatures have comprehensively described the impact of the US fast food industry since the epidemic, on the one hand, there is a lack of research focusing on the recovery and development of the fast-food industry in China and the United States after the epidemic, and on the other hand, there is a lack of comparative research on the fast-food industry in China and the United States. Due to the different eating habits of the Chinese and American people, the different pressures on the economy, and the different epidemic policies of the government, the impact and future development trends of the fast-food industry in China and the United States are different. The United States is a large fast-food country. Its fast-food industry system is mature and has become a relatively independent industry and system. Its fast-food chains are spread all over the world. Therefore, an in-depth comparison of the fast-food industry between China and the United States can provide valuable experience for the development of China's fast-food industry. Based on previous studies, this paper conducts further research in three aspects: one is monetary policy, the other is differences in food culture, and the third is epidemic prevention and control policy.

3. Fast-food Industry in China and the U.S.

As the second-largest global chain restaurant, KFC holds a significant position in the fast-food markets of both China and the US. Therefore, this article chooses to compare the changes in KFC's system sales in the two countries' markets to analyze the influence of the COVID-19 pandemic on the fast-food industries and the subsequent recovery and development in China and the US. Fast-food, being a part of the catering industry, is influenced by changes in the overall catering industry. In 2019, the market size of China's F&B industry reached US$650.8 billion. Due to the COVID-19 outbreak, the market size of China's restaurant industry declined for the first time in 2020, reaching $550.4 billion, a decrease of $100.4 billion, or 15.42%, compared to 2019. Similarly, the market size of the U.S. restaurant industry reached $279 billion in 2019. in 2020, the market size was $272 billion, a decrease of RMB 2 billion compared to 2019, representing a year-on-year decline of 0.73%.

As the influence of the pandemic on China's and the US fast-food industries became evident from 2020Q1, this article chooses to compare KFC's system sales data of each quarter from 2020Q1 to 2022Q4 with that of 2019Q4 to analyze KFC's recovery and development after being impacted by the pandemic. Figure 1 illustrates the percentage change in KFC's system sales respectively in the Chinese and American markets from 2019Q4 to 2022Q4 compared to the previous period. Figure 2 presents the quarterly percentage change in KFC's system sales respectively in the Chinese and American markets from 2020Q1 to 2022Q4 compared to that of 2019Q4 (before the pandemic's impact) after removing the influence of inflation. The data for the system sales' change rate in the Chinese (American) market (compared to the previous period) in Figure 1 is sourced from Yum Brands' financial reports, while the data for the percentage change in system sales in the Chinese (American) market (compared to 2019Q4) in Figure 2 is calculated based on the change rate in the Chinese (American) market (compared to the previous period) and the CPI data for China and the US. Both sets of data are rounded to the nearest integer. Considering that system sales are influenced by consumer spending, this article chooses CPI as an indicator to measure inflation. The CPI data for China is sourced from the National Bureau of Statistics of China, while the CPI data for the US is sourced from the Bureau of Labor Statistics.

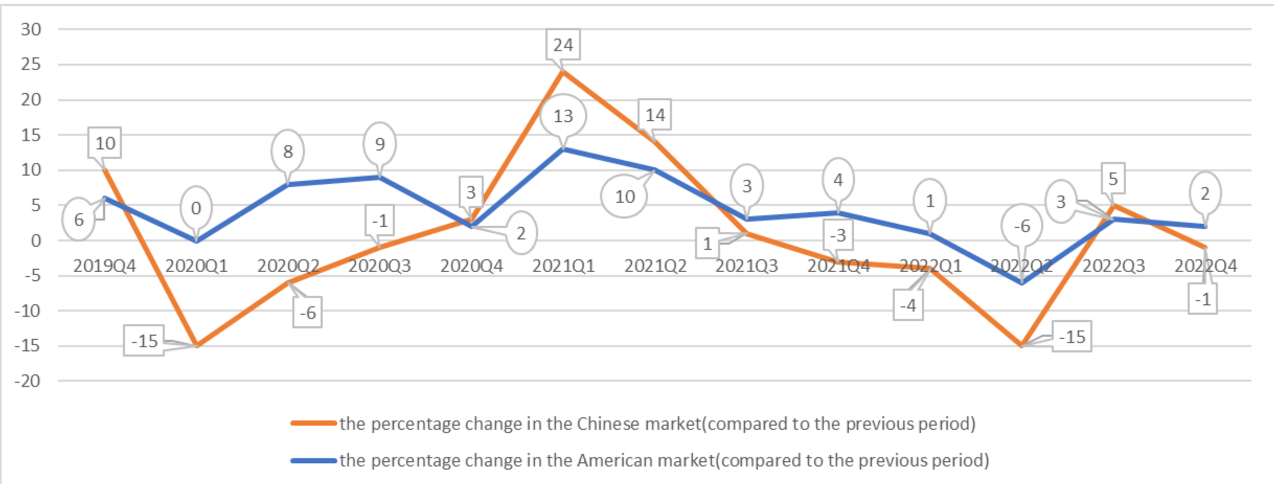

Fig. 1 The percentage change in KFC's system sales in the Chinese and American markets from 2019Q4 to 2022Q4 (compared to the previous period) (Photo credit: Original)

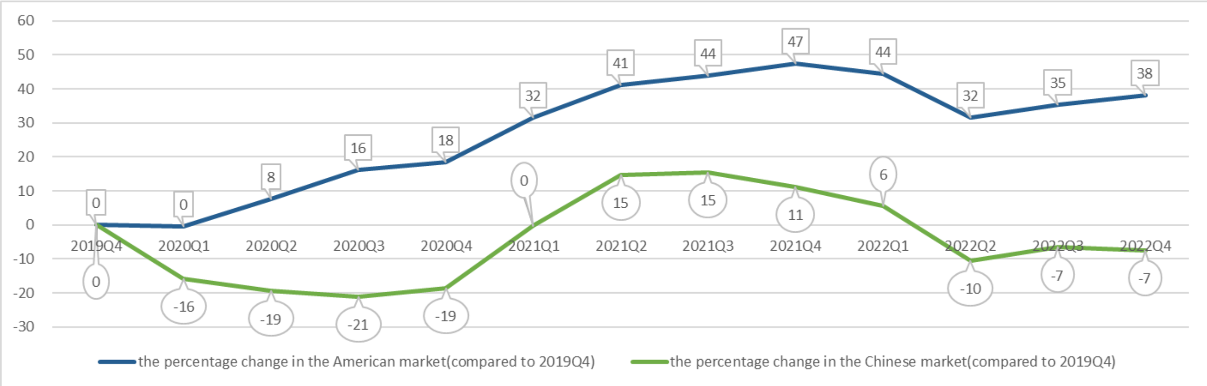

Fig. 2 The percentage change in KFC's system sales in the Chinese and the U.S markets from 2019Q4 to 2022Q4 (compared to 2019Q4) (Photo credit: Original)

Compared to 2019Q4, KFC's system sales in the US market remained flat in 2020Q1. However, it showed a steady upward trend from 2020Q2 to 2021Q4, reaching nearly a 50% increase compared to 2019Q4 in 2021Q4. Although there was a slight decline in system sales in 2022Q1 and 2022Q2, it resumed a slow increase in 2022Q3 and 2022Q4.In contrast, KFC's system sales in the Chinese market experienced greater fluctuations. It maintained low-level in 2020, with all four quarters below the level of 2019Q4. Subsequently, there was a rapid recovery from 2021Q1 to 2021Q3, with a 15% increase in system sales compared to 2019Q4 in 2021Q2 and 2021Q3. However, sales began to decline again in the following quarters, and there was a negative growth compared to 2019Q4 again in 2022Q2. Although there was a little growth in 2022Q3 and 2022Q4, the system sales level has not fully recovered to the level of 2019Q4 in 2022Q4.

Overall, the system sales in the US market have consistently been higher than the level of 2019Q4 in almost every quarter, showing a rapid recovery after the impact of the pandemic. Except for a brief decline in 2022Q1 and 2022Q2, the overall development has been relatively positive. On the other hand, the system sales in the Chinese market were significantly affected, with sales in each quarter of 2020 being lower than those of 2019Q4. Subsequently, there were fluctuations in the period from 2021 to 2022, and by the end of 2022Q4, the sales level had not yet returned to the pre-pandemic level of 2019Q4. The recovery has been less favorable, indicating that there is still substantial room for further development.

4. Reasons for Differentiated Recovery and Development

Regarding the research on the differences in the recovery and development of China's and the US fast-food industries in after being impacted by the pandemic, this article will analyze the reasons for these differences from three aspects: macroeconomic monetary policy, dining culture, and macro-level pandemic control policy.

4.1. The Impact of Monetary Policy

Considering that there have been no frequent changes in the macroeconomic monetary policies of China and the United States since the outbreak of the pandemic, the impact of any changes would be directly reflected in the inflation index. Therefore, taking the case of KFC, this article first selects inflation index as a data indicator to analyze the effects of different macroeconomic monetary policies in China and the US on the recovery and development of their respective fast-food industries after being impacted by the COVID-19 pandemic.

Figure 3 and Figure 4 respectively illustrate the trends of the GDP deflator index and Consumer Price Index (CPI) for each quarter from 2019Q4 to 2022Q4 in both China and the United States. The GDP deflator index in Figure 3 and the CPI data in Figure 4 are presented as percentage changes compared to the same period of the previous year.

Please note that the quarterly GDP deflator index for China is calculated based on nominal GDP and indices of GDP provided by the National Bureau of Statistics of China. The quarterly GDP deflator index for the United States is calculated based on monthly GDP deflator indices provided by the U.S. Bureau of Economic Analysis. The quarterly CPI for China is calculated based on monthly CPI data provided by the National Bureau of Statistics of China, while the quarterly CPI for the United States is calculated based on monthly CPI data provided by the U.S. Bureau of Labor Statistics.

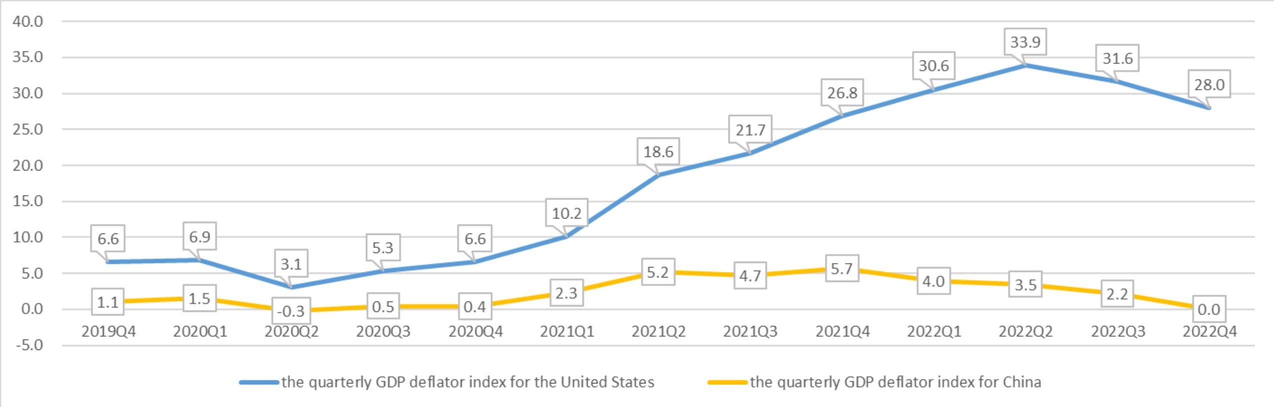

Fig. 3 The quarterly GDP deflator index trends for both China and the U.S from 2019Q4 to 2022Q4 (compared to the same period of the previous year) (Photo credit: Original)

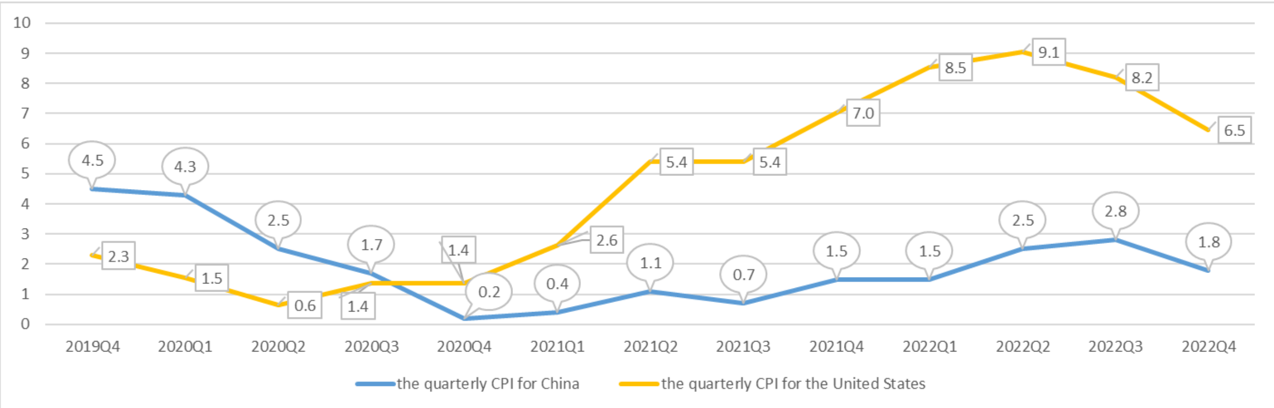

Fig. 4 The quarterly CPI trends for both China and the U.S from 2019Q4 to 2022Q4 (compared to the same period of the previous year) (Photo credit: Original)

The quarterly GDP deflator index and quarterly CPI for the United States showed an overall upward trend from 2019Q4 to 2022Q2, with slight decreases in 2022Q3 and 2022Q4. Comparatively, the quarterly GDP deflator index and quarterly CPI for the United States were higher than those for China overall. And there were especially significant differences during the period from 2021Q1 to 2022Q4. During the period from 2019 to 2021, the United States implemented an unrestricted quantitative easing policy, combined with the pressure from the pandemic, leading to a gradual increase in its inflation rate after the pandemic [12]. In Figure 2, KFC in the US market quickly recovered and continued to develop steadily after being impacted by the pandemic, maintaining a steady upward trend from 2020Q2 to 2021Q4.

However, by 2022Q1, the long-term high inflation rate started to have an increasing impact on the expectations of the American people. From 2022Q1 to 2022Q2, the rapid rise in prices led to a decrease in consumers' willingness to spend, which in turn resulted in KFC's system sales in the US market experiencing its first decline since the post-pandemic era. In 2022, the US shifted to a tightening monetary policy, which has stabilized and gradually reduced the inflation rate of the US dollar [12]. By 2022Q3, inflation was gradually brought under control, which also contributed to the steady increase in KFC's system sales in the US market from 2022Q3 to 2022Q4.

Compared to the United States, China has implemented a relatively stable monetary policy since the outbreak of the pandemic, maintaining stable prices and a relatively low inflation rate [12]. Both the GDP deflator index and CPI have remained at relatively low levels. In Figure 2, the authors observe that the effect of monetary policy on promoting the recovery and development of KFC in the Chinese market has been limited. As of 2022Q4, KFC's system sales in the Chinese market have still not recovered to pre-pandemic levels.

In summary, after the outbreak of the pandemic, the relatively loose monetary policy in the United States facilitated a rapid recovery of the fast-food industry, and subsequently its development momentum was more robust. Although there was a slight decline in the fast-food industry during 2022Q1 and 2022Q2 due to the impact of the continuous increase in the inflation rate, the fast-food industry in the US quickly resumed a stable upward trend after inflation was brought under control. On the other hand, the relatively stable monetary policy implemented in China did not provide a significant boost to the recovery and development of the fast-food industry. The fast-food industry's recovery was much slower, and its sales fluctuated. As of 2022Q4, the sales had not yet recovered to pre-pandemic levels.

4.2. The Influence of Catering Cultural Difference

As the service object of the fast-food industry, consumers' fast-food consumption behavior will have a direct impact on the recovery and development of the fast-food industry. Taking 2019 (before the normalization of the epidemic) as an example, this paper makes a statistical comparison of a series of data between China and the United States. The data comes from the National Bureau of Statistics of China and the American Catering Association (see Figure 5).

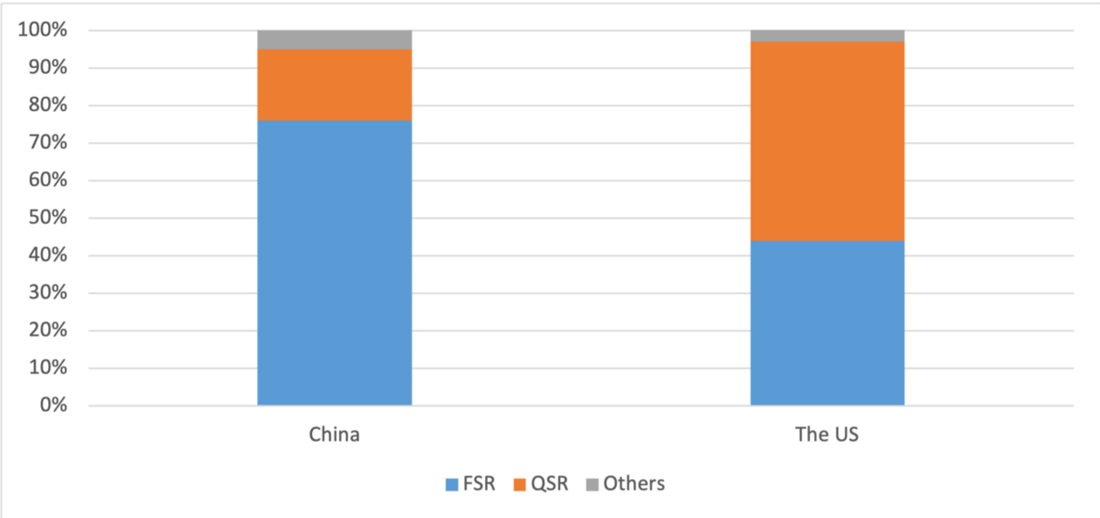

Fig. 5 The restaurant service types in China and the U.S (Photo credit: Original)

Restaurants can be broadly categorized into Full-Service Restaurants((FSR) and Quick Service Restaurants (QSR). The United States has a strong fast-food culture; FSR accounted for 44%; the proportion of QSR is 53%, and the proportion of two types of service restaurants in the United States is not much different. In China, people have more demand for dinner. FSR account for 76% and QSR for 19%. It shows that the proportion of FSR is much higher than that of QSR in China. Secondly, when comparing the data from China and the US, the proportion of QSR in China is much lower than in the US.

In Table 1, it was found that in 2019, the per capita catering consumption in China was CNY3,286, and the per capita catering consumption in the United States was CNY16,667. Catering accounted for 11% and 13% of total social consumption goods, respectively. The United States is slightly higher than China, but from the perspective of the proportion of fast food in catering turnover, the proportion of fast food in China is 22%, while that in the United States is 48%. It can be seen that the Chinese people do not like fast food as much as the Americans.

Table 1. Comparison of Chinese and the U.S catering industry

	China	The US
Total retail sales of consumer goods	41 trillion yuan	43 trillion yuan
Restaurant turnover	4.7 trillion yuan	5.5 trillion yuan
Per capita catering consumption	3,286 yuan	16,667 yuan
Restaurant turnover Account for the retail sales of social consumer goods Proportion	11%	13%
Fast food turnover accounted for the proportion of catering turnover	22%	48%

Because the duration of the epidemic is short, although the epidemic has inhibited people's social consumption in the short term, in the medium and long term, people's social needs will not be weakened, but there will be retaliatory growth after the epidemic. As the effects of the outbreak on the restaurant structure of the catering industry and on people's eating habits are not irreversible, the catering structure and sales of Sino-US KFC will gradually return to the pre-epidemic level. And because Chinese consumers have a greater demand for dinner and do not prefer fast food like the American people, the Chinese fast-food industry may recover more slowly than the American fast-food industry.

4.3. The Impact of Covid-19 Prevention and Control Policies

4.3.1 The impact on China

There is a large difference between China's and the United States' policies for preventing and controlling outbreaks. This difference has resulted in different levels of losses in the restaurant industry and even the fast-food industry in China and the United States. The basic principle of China's epidemic prevention policy is to protect the health and safety of the people. The government has called for minimizing travel in order to reduce the physical damage of the epidemic. This effectively ensured the low spread of the epidemic and the health of the people, but at the same time, the reduction of going out caused different degrees of impact on the consumption of the catering industry [13]. As a result of the national policy, Chinese people reduced the frequency of going out and contact. The people are unable to eat out or make other consumption, which makes the overall consumption scale of the whole catering industry decrease. Fast food as a part of catering will also be affected with the change of catering. From the KFC data above, it can be concluded that the fast-food industry in China during the epidemic was slow to recover and fluctuated negatively during the epidemic. The impact of the policy made people's normal traveling less, and thus fast-food sales were low. Although the recovery of fast food was slow, China's policies protected the lives and health of more people.

4.3.2 The impact on the U.S.

In contrast, the United States' policy on the epidemic is aimed at protecting and stabilizing the normal development of the economy. In an effort to maintain social and economic stability in the United States, the Centers for Disease Control and Prevention (CDC) urged people at the beginning of the outbreak not to wear masks and not to manage the range of COVID-19 positive patients. This poses a huge threat to the safety and health of American citizens. The epidemic has spread widely in the United States due to these loose and ineffective policies. The drawback of policies is to sacrifice more people's lives and safety. According to the data of CDC, as of June 3, 2023, the death toll of COVID-19 in the United States has reached an astonishing 1,131,439. The result is that many American citizens have lost their lives, but the overall size data of the catering industry is good. From the results of the epidemic on the American people and combined with the KFC data, the study analyzes that the purpose of the United States policy towards the epidemic is to achieve rapid economic recovery, but this behavior ignores the safety of the people's lives. Even though the fast-food industry in the United States has recovered rapidly and steadily, the cost is that the United States has sacrificed millions of lives and tens of millions of people's health. From an economic perspective, this policy is a good response to the epidemic, but from a moral perspective, its use should not be justified.

5. Conclusion

The wide scope and impact of the COVID-19 epidemic have posed new challenges to the recovery and development of the fast-food industry and even the overall economy in China and the United States. Through the above data and analysis, the study concludes that there is a large gap between the recovery degree of fast food in China and the U.S. The fact is that the U.S. food and beverage recovery is faster. A large part of the reason is due to the relatively loose monetary policy in the United States, which made the fast-food industry recover faster, but at the same time, caused the inflation rate to be too high. China's stable monetary policy has not significantly contributed to the recovery of the fast-food industry, resulting in a more pronounced and fluctuating recovery from the impact of the epidemic. Secondly, the Chinese diet does not rely on fast food as much as Americans do, plus add to this the fact that China's epidemic management policies are more proactive and stricter. As a result, both China and the U.S. have achieved their desired policy objectives, with China successfully protecting the safety and health of more people and the U.S. also successfully maintaining its economic stability and rapid recovery. From the above factors, the US fast food recovery was faster while the Chinese fast-food recovery fluctuated more, resulting in a wider gap between the Chinese and US fast food recoveries. In the future, it is suggested that China can implement a relatively loose monetary policy to stimulate people's consumption desire from the demand side, and the United States can continue to implement a relatively tight monetary policy for a period to strictly control the inflation rate which has been at a high level for a long time since 2021. As the impact of the COVID-19 epidemic on society gradually disappears, it is believed that the fast-food industry in both countries will have a long-term development in the future.

Authors Contribution

All the authors contributed equally, and their names were listed in alphabetical order.

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