The Impact of COVID-19 Pandemic on Offline and Online Shopping in China

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Abstract: While the effects of COVID-19 have faded, little is known about its impact on shoppers are. This may be due to the scarcity of detailed data. Because of this, in this paper, this paper uses a systematic review to detail the changes in shopper behaviour in China as a result of the epidemic. To this end, I analysed the 2020 data literature on shopping to investigate How shoppers' Habits Changed During the COVID-19 Pandemic. It was finally shown that there was a substitution effect between online and offline shopping during the COVID-19 pandemic. As a result, we find that online shopping has gradually reduced people's willingness to shop offline since COVID-19. And with the introduction of government policies, such impacts are diminishing, but while the decision to shop remains almost unchanged. And a lot of this is down to the fear of infection and the effects of sealing control. The findings of this paper provide some reference for consumer recovery in the post-epidemic era, as well as for the response strategies of enterprises when they may face another epidemic in the future.

Keywords: COVID-19, online shopping, offline shopping, China

1. Introduction

Information and Communication Technology (ICT) is changing the traditional retail industry. This change is reflected in consumption patterns: According to the Office for National Statistics, Online retail sales accounted for 14% of total sales in the UK in 2014. Up from 2.1% in 2002, while in the United States, the share of online retailing in total sales rose to 7% from 2.8% in 2006[1]. The ubiquity of online shopping has created a disruptive change in the retail industry, further development with the COVID-19 pandemic. Of course, with the start of the blockade, the closure of some brick-and-mortar shops that were unable to cope with the prolonged blockade has also had an impact. Some studies report spontaneous behavioural changes during a pandemic, such as reduced shopping mobility or a shift to electronic purchases due to fear of contracting coronavirus (independent of any blockade) [2]. In some areas, there are also many consumers who choose to shop online because they can't stand wearing masks for long periods of time. Most all research on shopping to date has focused on shop and purchase channel choices in the real economy. Unfortunately, information on the impact of offline and online shopping was missing during the COVID-19 explosion, so the purpose of this post is to explore that question.

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Based on the integration and editing of existing literature, this thesis will answer the following research questions: (1) Did the outbreak have an impact on shopping? (2) Did it have an impact on online and offline shopping during the epidemic? (3) How do impacts differ for rural and urban areas? The so-called "post-epidemic era", Epidemics come and go, and small outbreaks can occur at any time, has had a huge impact on this era, like a person who has recovered from a serious illness and is unable to go back to the past, either psychologically or physically, and who is unable to go back to the past. By the same token, we can no longer go back to the world before the epidemic, and this is especially true for the economy. So, this research is about identifying the impact of the epidemic on online and offline shopping, to identify the specific impact of the epidemic on this era, and to help the economy recover in the "post epidemic era".

2. Literature review

The impact of the epidemic has been discussed in the existing literature mainly in economic terms, and a more important part of it concerns the impact of the epidemic on shopping. For example, author Thomas Wieland used a micro-econometric shop choice model to analyse the spatial shopping behaviour of German consumer electronics and furniture retailers during the New Crown outbreak, and the study concludes that, for furniture shopping, only in the first study area. Consumers' aversion to germs had a significant impact on channel choice. In addition, the study found that age and gender had a significant impact on the frequency of online shopping [3]. After reviewing a large amount of literature, this paper finds that the Technology Acceptance Model (TAM) is used more in the literature on shopping intentions. Gefen et al. used TAM to study Internet users' intention to use e-commerce websites [4] and pointed out that perceived usefulness influences intention to use. Aron O' Cass et al. concluded that perceived usefulness has a significant positive correlation with consumer attitudes [5]. Dai et al. pointed out that channel usefulness positively affects online channels in pre-sale, in-sale and after-sale segments [6]. In 991, The theoretical model was formalised by the Theory of Planned Behaviour [7] published by Ajzen. The Theory of Planned Behaviour can explain $40\% \sim 50\%$ of the variance in purchase intention [8], 67% of the variance in purchase intentions can be explained by behavioural attitudes, subjective norms and perceived behavioural controls [9] The Theory of Planned Behaviour has a high degree of accuracy in predicting human behaviour and intentions [10]. Attitude and perceived behavioural control are explanatory variables of intention variables [11]. The mediating effect of government information disclosure on public willingness to comply with epidemic prevention through policy understanding is higher than policy satisfaction in public health contexts [12]. Consumers' perceptions of the scientific attributes of epidemics and hazard assessment improved after experiencing a major health and safety event [13]. The pressure to prevent and control the epidemic brought about by the imported New Coronavirus has affected residents' consumption of imported goods. The intensity attributes of the new crown epidemic event and risk perceptions play a fully mediating role between spatial distance perceptions and societal willingness to participate [14] Theory of Planned Behaviour has also been used as an assessment tool for investigating intentions to receive influenza vaccine [15]. China's e-commerce platforms have developed to a very mature stage, and during non-epidemic periods, there are also most people who choose to shop online rather than offline. Existing literature suggests that, this paper will analyse the impact of epidemic pandemic on online and offline shopping, which is a further enrichment and expansion of the theoretical research in this area.

3. Analysis of the impact on online and offline shopping during the pandemic

The New Crown pandemic affected people in various ways, but the impact was more noticeable at the beginning of the pandemic in the early 2020's, as shown in the figure 1, the emergence of the New

Crown pandemic greatly affected the manufacturing industry. In this paper therefore look at the year 2020 as a typical year to determine if the New Crown epidemic has had an impact on online and offline shopping.

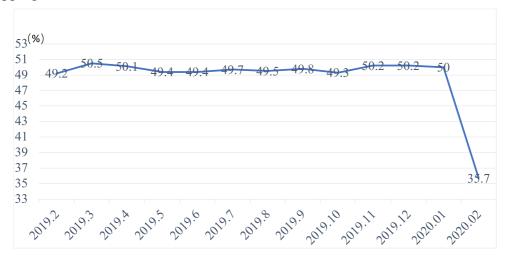


Figure 1: PMI in China from 2019-2020.

3.1. Did the outbreak have an impact on shopping?

According to the National Bureau of Statistics, total retail sales of consumer goods will reach RMB 391,981 million in 2020, down 3.9 per cent from the previous year. Among them, total retail sales of consumer goods excluding automobiles amounted to 352.566 billion yuan, a year-on-year decline of 4.1 per cent.

The data showed that total retail sales of consumer goods in December amounted to 405.666 billion yuan, an increase of 4.6% year-on-year, with the growth rate falling by 4 percentage points from the previous month. Of this, total retail sales of consumer goods, excluding automobiles, amounted to RMB 35,695 billion, an increase of 4.4%.

In December, retail sales of consumer goods in urban areas amounted to RMB 3,470.6 billion, with a breakdown by the location of the business unit, up 4.4% year-on-year; sales of consumer goods in rural areas amounted \$586 billion, up 5.9%. 2020, retail sales of consumer goods in urban areas amounted RMB 33,911.9 billion, down 4.0 per cent year-on-year; retail sales of consumer goods in rural areas amounted \$528.62 billion, down 3.2 per cent.

By consumption category, total retail sales of consumer goods in December totalled 356.16 billion yuan, up 5.2%; catering revenue was 495 billion yuan, up 0.4%, compared with a decline of 0.6% in Nov. In 2020, retail merchandise sales of \$352.453 billion, down 2.3 per cent from the previous year; revenue from catering was RMB 3,952.7 billion, down 16.6 per cent year-on-year.

By retail format, in 2020, retail sales of supermarkets in retail establishments after the embargo increased by 3.1 per cent over the previous year., this compares with declines of 9.8%, 5.4% and 1.4% in department stores, specialty shops and boutiques, respectively.

Consumption expenditure per capita of national residents in 2020 will be RMB 21,210, decrease of 1.6 per cent from the previous year; after deducting the price factor, the actual decrease was 4.0%. Nominal decline in per capita consumption expenditure narrowed by 1.9 percentage points during the year compared with the first three quarters, this represents an increase of 4.3 per cent compared to the first half of the year and 6.6 percentage point increase compared to the first quarter.

This suggests that overall consumer spending is on a downward trend.

3.2. Did it have an impact on online and offline shopping during the epidemic?

In 2020, national online retail sales will grow by 10.9 per cent year-on-year, growth accelerated by 1.2 percentage points in the first three quarters. Among them, online retail sales of physical goods increased by 14.8 per cent, significantly high compared with total retail sales of consumer goods over the same period; online retail sales of physical goods accounted for 24.9% of total retail sales of consumer goods. In online retailing of physical goods, the retail sales of foodstuffs and commodities for use grew faster, by 30.6 per cent and 16.2 per cent respectively. More than 83 billion deliveries a year fueled by the rapid growth of online consumption, an increase of more than 30 per cent over the previous year.

The impact of the epidemic of consumer problem-solving on consumption is even more pronounced. In the first quarter, customer traffic in physical shops dropped sharply, and merchandise sales fell sharply. Maintains information on the lives of the inhabitants, as well as the Settlement Operations Branch, the customer flow of physical shops rebounded significantly, and offline consumption recovered significantly. These supermarkets will be down 3.1 per cent from 2020 onwards., growth accelerated by 0.2 percentage points, a few percentage points higher than in the previous three quarters; and the rate of decline in the retail sales of commodities in department stores, compared to the previous three quarters, specialty and boutique shops decreased by 6.8, 3.8 and 5.4 percentage points, respectively. Compared to the first quarter, they fell by 25.1, 19.3 and 27.3 percentage points.

3.3. How do impacts differ for rural and urban areas?

The urban consumer market continued to improve. in 2020, urban retail trade in consumer goods declined by 4.0 per cent year-on-year, decreased by 3.3 percentage points compared to the previous three quarters. Retail sales of consumer goods in cities and towns saw positive year-on-year growth for two consecutive quarters, with retail sales of consumer goods in cities and towns increasing by 4.5% year-on-year in the fourth quarter, an accelerated growth rate of 3.6 percentage points compared with the third quarter.

Consumer prices in rural areas market was higher than that of cities and towns. In 2020, farmers' share of consumption down compared to last year, with the rate of decline narrowing by 3.5 standard point combination with that of the previous three quarters. In the fourth quarter, rural retail consumer sales by 5.6 per cent year after year, economic growth was 4.3 percentage points faster than in the third quarter and 1.1 percentage points higher than the city's total retail sales of goods.

4. Conclusion

This paper examines the impact of an epidemic pandemic on online and offline shopping and concludes that, firstly, there is a correlation between the length of online and offline shopping during an epidemic. Secondly, the epidemic had an impact on shopping, which gradually diminished as the government gradually took measures against the development of the epidemic. Third, at the beginning of the epidemic, rural and urban purchases of consumer goods declined at the same time, and after the epidemic subsided, total urban and rural purchases gradually increased, but more rapidly in rural areas than in urban areas.

In this post-pandemic era, the epidemic may have a profound impact on every aspect of people's lives, and every choice they make will be relevant to them. What the economy will look like in the future is a topic that countless economists continue to discuss, and for businesses, making different decisions based on the different needs of consumers is the way to ensure that they can continue to operate. Therefore, this paper examines the changes in consumers' choice of shopping channels during the epidemic to help companies better understand consumer behaviour. And synthesising this paper,

what should be suggested here is that companies can appropriately add more online shopping channels to increase online sales. Enterprises whose main consumer market is in rural areas can appropriately increase the number of offline shops.

There are some shortcomings in this paper, for example, this paper has been combing the previous literature, while the lack of some data support, the future may be able to use the econometric regression model to test this relationship, which remains to be studied in the future.

References

- [1] Bucchioni, P., Liu., X., Weidenhamer, D.: Retail E-commerce Sales. US Census Bureau of the Department of Commerce. (2015).
- [2] A Timeline of the Coronavirus Pandemic. Retrieved from https://www.nytimes.com/article/coronavirus-timeline htm/. Accessed 10 Sept 2022/09/10. The New York Times. (2021).
- [3] Spatial shopping behavior during the Corona pandemic:insights from a micro-econometric store choice model for consumer electronics and furniture retailing in Germany. (Thomas Wieland)
- [4] Gefen, Detmar W. Straub. The Relative Importance of Perceived Ease of Use in IS Adoption: A Study of E-Commerce Adoption[J]. Journal of the Association for Information Systems, 2000, 8(1): 1-20.
- [5] Aron O'Cass, Fenech T. Web Retailing Adoption: Exploring the Nature of Internet Users Web Retailing Behaviour [J]. Journal of Retailing and Consumer Services, 2003, 10(2): 81-94.
- [6] Dai Ting, Wen Decheng, Chen Xiao. Research on customers' shopping channel selection behaviour under O2O mode[J]. Shandong Social Science, 2016(10):119-125
- [7] Ajzen I. The Theory of Planned Behavior[J]. Organizational Behavior and human decision processes, 1991 (50):179-211.
- [8] Sutton S. Predicting and Explaining Intentions and Behavior: How Well Are We Doing? [J]. Journal of Applied Social Psychology, 2010, 28(15):1317-1338.
- [9] Wu Ruijuan, Li Dongjin, Wu Bo. Analysis of Chinese farmers' consumers' purchase intention of down-home plus point products[J]. China Soft Science.2010(1):40-52.
- [10] Wang Dahai, Yao Fei, Zheng Yuxiang. Research on the analysis of credit card usage intention and its marketing strategy based on the theory of planned behaviour[J]. Journal of Management. 2011, 8(11): 1682-1689.
- [11] Xin Xueling, Guo Chenglong. Consumers' shopping intention on cross-border e-commerce platforms under epidemic situation.2022.9
- [12] Wu Jinjin, Ma Weihong, Fu Yang. Does Information Disclosure Affect Public Willingness to Comply with Policies? [J]. Public Administration Review.2020(3):65-83.
- [13] Wu Yidong, Chen Zhuo, Chen Jie. Historical Memory and Residents' Risk Awareness-Based on the Long-Term Impact of the SARS Epidemic on the Prevention and Control of the New Crown Epidemic[J]. Industrial Economics Review.2021(3):19-33.
- [14] Zheng Jiuhua. "Participation or spectatorship: the mediating effect between perceived spatial distance and willingness to participate in a new coronavirus outbreak[J]. Journal of East China University of Science and Technology (Social Science Edition).2020(1):100-112.
- [15] Chu A, Gupta V, Unni E J. Utilizing the Theory of Planned Behavior to Determine the Intentions to Receive the Influenza Vaccine during COVID-19: A cross-sectional Survey of US Adults[J]. Preventive Medicine Reports, 2021, 23(4): 1-5.