Social Costs of the COVID-19 Management in Shanghai from Private Enterprises Perspective — A Case Study of Pang Pang Xiang (China) Co., Ltd.

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Abstract: Managing pandemic not only saves money by reducing transmission risk and minimizing economic impact, but it also incurs social costs and economic costs by disrupting the economy and increasing healthcare expenditures.This paper explores the social cost perspective of managing COVID-19 in Shanghai, with a focus on Pang Pang Xiang (China) Co., Ltd., which the only agricultural products and sideline distribution company seek IPO during the pandemic. The study employs qualitative case study methodology and content analysis to examine empirical data. It reveals that the company experienced a significant increase in revenue and gross profit margin due to business privileges during pandemic management, resulting in social costs.
Keywords: social cost, COVID-19 management, lockdown, private enterprise, Z-score

1. Introduction

The pneumonia outbreak has been declared a global pandemic by the World Health Organization in 2020[1]. Countries worldwide have proposed various management strategies to mitigate transmission risk, minimize economic impact, and sustain public health stability. Indeed, both quarantine and isolation have proven effective in controlling pandemics[2]. Implementation of social distancing, home quarantine, school closings, and case isolation would save approximately 40.76 trillion dollar worldwide, with social distancing accounting for 55 percent of the benefits.[3] However, pandemic management results in economic costs too, including medical expenses, reduced productivity, and impacts on GDP[4]. Implementing social distancing measures for managing COVID-19 incurs substantial social costs[5]. Many papers collectively demonstrate the consequential social and economic costs of managing the COVID-19 pandemic. One study estimated that the healthcare costs and losses in productivity associated with COVID-19 in China resulted in significant economic burden from a national economic perspective.[6] A systematic review conducted by another study revealed that the pandemic has caused patients to bear significant economic burden in their personal lives[4]. While economic activities are generally under pressure and personal financial burdens are increasing, a small number of companies have achieved high profits because they have obtained business privileges from pandemic management. Will such kind of enterprises incur other social costs?Because social costs are the negative effects of corporations' economic activities on society[7]. (1997)[8] investigated social costs and discovered that entrepreneurs frequently shift their internal costs onto society due to the innate selfishness of human nature and the tension between individual interests and the social welfare. Hence, social costs pertain to the harmful external impacts of corporate activities on society[9]. This paper try to research what social cost the private business enterprise of agricultural and sideline products distribution with leading position and with business privileges from pandemic management incurs? This study aims to examine the social cost during COVID-19 management in Shanghai by studying the Pang Pang Xiang (China) Co., Ltd.'s experiences. The study employs qualitative case study methodology and content analysis to analyze empirical data. This research makes a significant contribution to the comprehension of the social costs of COVID-19 management. The conclusions may help policymakers and businesses to develop strategies to mitigate the social cost of food distribution in crisis management in the future likewise pandemic.

2. Case review

Pang Pang Xiang (China) Co., Ltd. specializes in selling agricultural goods, prepackaged food items, bulk foods, and other commodities. The company caters to canteens in various enterprises and institutions, including government agencies, schools, hospitals, and businesses.[10] From 2014 to 2018, the company's gross profit margin ranged from 27.12% to 16.97%. However, as of 2020 and 2021, the gross profit margin increased significantly and recorded a high of 38.2% and 33.8%, respectively. The company achieved a new milestone by attaining a gross profit margin of 53.4% in the first five months of 2022.[10][11] This remarkable increase in profit margin took place during the pandemic management period, wherein the Shanghai Municipal Agriculture and Rural Committee acknowledged the company as a provider of secure epidemic-related products, resulting in noteworthy revenue. This instance presents an opportunity to examine the social costs that private businesses of agricultural goods may incur based on business privilege from pandemic management.

2.1 Company establishment stage

Pang Pang Xiang (China) Co., Ltd., initially named as Shanghai Pang Pang Xiang Agricultural and Sideline Products Distribution Company, originated in September 2012. Its primary focus centers on vending edible agricultural commodities, pre-packaged provisions, and bulk food articles. It predominantly caters to canteens across different enterprises and institutions, such as government agencies, schools, hospitals, and businesses, by providing them with fresh, dependable, and secure agricultural and sideline goods. This business model generates profits through the markup between purchase and sale prices by combining purchasing, sales, and distribution.[10] Direct sales is the primary sales model utilized by the company. Between 2013 and 2015, the company's main sources of revenue is from kindergarten sector, accounted for approximately 5% to 15% of its total operating revenue. The company's customer base is widely distributed.[12]

For the company's profitability we use gross margin and return on equity, the company's gross margin was 22.85%, 27.12% and 19.53% from 2013 to 2015. ROE was 20.50%, 37.36% & 37.33% respectively.[12]

2.2 New third board listing stage

Shanghai Pang Pang Xiang Agricultural and Sideline Products Distribution (836365.OC) was listed on the New Third Board on February 19, 2016. The New Third Board is operated by the National Equities Exchange and Quotations of China (NEEQ), which is the third national equity trading venue following the Shanghai Stock Exchange and the Shenzhen Stock Exchange.[13]

During its time on the NEEQ, the Company issued three yearly reports spanning 2016 to 2018. The reports reveal that the Company's main business, earnings model, sales model, and types of large customers have not undergone significant alterations.

The company's profitability and return on investment in net assets can be observed from December 2016 to December 2018, that was17.93%, 19.58% and 16.97%; ROE is 6.12%, 8.96% & 9.88%.[10]

However, on August 27, 2019, the company disclosed its inability to timely deliver the 2019 semi-annual report. Consequently, on August 29, 2019, NEEQ delisted Shanghai Pang Pang Agricultural and Side Products Distribution[14]

2.3 The first application for listing on the Hong Kong Stock Exchange

On April, 2022, Shanghai Pang Pang Xiang Agricultural and Sideline Products Distribution Company submitted its initial application for listing on the Hong Kong Stock Exchange. On November 28, 2019, the Shanghai Pang Pang Xiang Agricultural and Sideline Products Distribution converted from a joint stock company to a limited liability company, resulting in a name change to Pang Pang Xiang (China) Co., Ltd., as detailed in the April 2022 prospectus.[11]

The main aspects of the business, including the earnings and sales models, as well as customer categories, have remained unchanged.[11]

Before seeking entry into the Hong Kong Stock Exchange, the company adopts the contractual control method to obtain Variable Interest Entities (VIEs) through a sequence of equity transactions.[11] This methodology facilitates the corporation's attainment of control and financial consolidation of the operating firm by executing multiple agreements, rather than exerting control through equity. Prior to the capitalization issue, HUANG, Jianyi invested in Qingteng International, an offshore company located in the British Virgin Islands. This company is used to exert control over PPang Pang Xiang (China) Co., Ltd., [11] The April 2022 prospectus highlights its significant transformation from a Chinese-owned enterprise to a fully foreign-owned enterprise.[11]

The company's gearing ratios were 64.07%, 80.64%, and 69.53% for 2019, 2020, and 2021, respectively.[11] Despite carrying significant levels of debt, the corporation issued a RMB12 million dividend during the fiscal year that ended in 2019.[11]

In 2021 the company is the leading supplier of food supply chain services to cafeterias in Shanghai, as stated by the April 2022 Prospectus. This position is based on revenue figures from 2020 onward.[11] prospectus on April 2022 showcases the company's profitability and return on equity (ROE) as demonstrated below: the company's profitability and return on investment in net assets can be observed from December 2019 to December 2021, that was28.9%, 38.2% and 33.8%; ROE is 60.5%, 62.7% & 45.7%.[11]

2.4 The second application for listing on the Hong Kong Stock Exchange

The company's initial attempt to list in Hong Kong was unsuccessful. In March 2022, a severe pandemic broke out in Shanghai, with more than 20,000 new cases per day at its peak. The Shanghai Lockdown was implemented as a measure to prevent the pandemic from further deteriorating. [15]

The main business, earnings model, sales model, and categories of large customers remained the same.[11]

The shareholding structure has not changed in five months. In October 2022, the company released a second prospectus, promising a dividend of 23.4 million yuan to its shareholders before the listing.[11] The heavily indebted company has prioritized paying dividends over debt repayment. As of the same period, Pang Pang Xiang (China) Co., Ltd.'s cash reserves and cash equivalents totaled 4.709 million yuan, with a further 24.575 million yuan in pledged bank deposits, as noted in the prospectus.[11] Long-term and short-term bank borrowings amounted to $87.15 million yuan, out of which short-term borrowings accounted for $56.465 million yuan.[11] The company's cash and cash equivalents do not adequately cover its short-term borrowings. Nevertheless, the company has proposed to declare a dividend of $23.4 million as of October 2022.[11]

During the first five months of 2022, the company experienced a decrease of 66% in revenue from kindergartens and educational institutions due to offline shutdowns caused by the epidemic. However, revenue from new temporary and emergency service customers reached 34.27 million yuan, making it the most significant source of revenue.[11] Additionally, the gross profit margin for temporary and emergency services customers from January to May was remarkably high at 69.6%, exceeding the company's previous gross profit margin of approximately 15% to 30% of the overall gross margin much more. The latest prospectus from Pang Pang Xiang indicates a 15% decline in revenue to 74.458 million yuan from January to May 2022 compared to the same period last year, attributed to the impact of the epidemic and other factors.[11] However, during the same duration, the company's net profit surged 40% , and the gross profit margin shot up to 53.4% in total from 33.8% in 2021.[11] It appears that the company capitalized on the pandemic lockdown management through increasing gross profit margin to generate significant profits.

3. Z-score measurement for gross margin and ROE

Below is a table summarizing the company's gross margin and return on equity (ROE) from 2012 to 2021. The data for 2022 has not been included as it only spans five months and is therefore incomplete.

Table 1. 2016-2021Gross profit margin and ROE of Pang Pang Xiang (China) Co., Ltd.

	December 31, 2021	December 31, 2020	December 31, 2019
Gross profit margin	33.8%	38.2%	28.9%
Return on equity	45.7%	62.7%	60.5%
	December 31, 2018	December 31, 2017	December 31, 2016
Gross profit margin	16.97%	19.58%	17.93%
Return on equity	9.88%	8.96%	6.12%

Source: (Prospectus of 2022 and Annual report 2018)[10][11]

The Z-score calculates the degree to which each figure in a data set deviates from the mean of the entire set, denoting the distance of a particular figure in relation to the standard deviation. To evaluate the deviation from the mean of the company's gross margin and ROE, the Z-score is utilized.[24]

$$z = (x - \mu) / \sigma$$

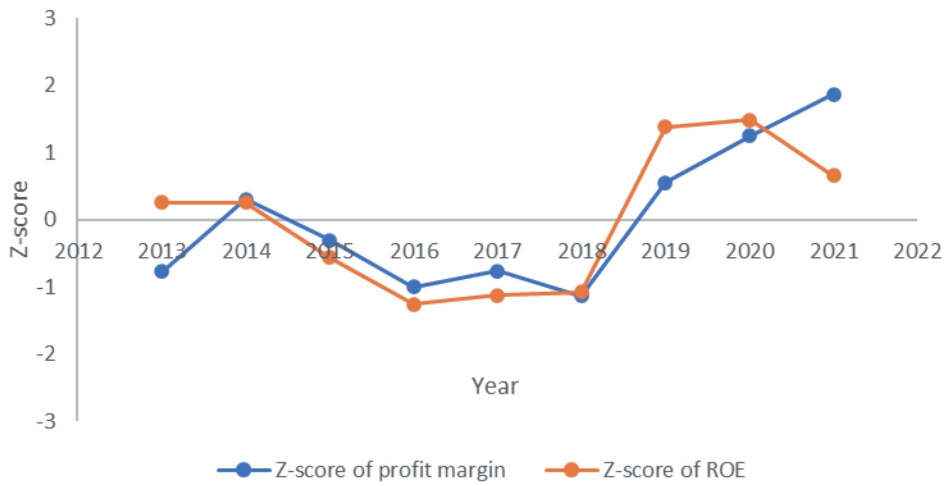

Figure 1. Z-score of profit margin and ROE

Since the outbreak of the pandemic in 2019, the company's Z-scores for both gross profit margin and return on equity (ROE) have consistently exceeded the average. In 2021, the Z-score for gross profit margin reached a record high of 1.87 (Figure 1). It is worth noting that, over the course of three years, the COVID-19 pandemic has led to a dire situation for the lodging and catering industry in Shanghai. In 2020, the industry suffered a substantial loss of 3.743 billion yuan. The following year, revenue remained stagnant. Disappointingly, in 2022, the industry experienced a massive loss of 8.733 billion yuan.[16] The average loss per enterprise in 2020 was 1.1291 million yuan. Although there was a profit in 2021, the average profit per enterprise was only 6,900. The intensification of the pandemic and the lockdown of Shanghai in 2022 have resulted in a significant financial impact, with the average enterprise losing 2.32 million dollars.[16]

The increasing trend in the company's gross margin Z-score and Z-score of ROE over the past three years suggests that the implemented epidemic management measures of government did not result in any losses for the company. Rather, these measures have strengthened its bargaining power and return on investment in the market. Are there any social costs to society as a result of this increased bargaining power and ROE of the company due to these epidemic management measures?

4. Case analysis from social cost perspective

4.1 Diminishing purchasing power

During the period of management of the Shanghai lockdown, only companies categorized as supply guarantee organizations were allowed to provide and deliver agricultural products, leading to a shortage of supplies. As stated in the prospectus, the Shanghai Municipal Agriculture and Rural Committee included PANG PANG XIANG in the supply guarantee list in March 2022 and assigned it the responsibility to deliver agricultural products and other food items to different customers.[11]

Entrepreneurs frequently shift internal costs onto society.[17] The company has increased its product prices in response to rising procurement costs. The market for canteen food supply chains in China is highly fragmented, with over 500 companies operating solely in Shanghai.[11] The Lockdown management of pandemic transformed the previously competitive market for canteen food supply into government-concessioned markets. The company raised prices to obtain higher margins, leveraging privileged supply from Shanghai's pandemic management. During lockdown time, Pang Pang Xiang (China) Co., Ltd., recorded net profit rose to 18.081 million yuan, indicating an increase of 42.5% year-on-year. The gross margins have increased to 69.6%. This exacerbates the issue of decreased purchasing power for Shanghai residents while in lockdown[18].

4.2 Inappropriate occupation of bank loan

Any costs, sacrifices, and losses that enterprises impose on society, whether economic or non-economic in nature, can certainly be considered as social costs[19]. The prospectus for October 2022 indicates that one of the objectives for using the funds raised from the listing is to enhance the efficiency of capital utilization and reduce reliance on external sources of financing, particularly bank loans. The company's bank loans have risen by over sixfold in the last three years, from RMB10 million in 2019 to RMB71.46 million in 2021. But on August 28, 2019 Pang Pang Xiang (China) Co., Ltd., declared a cash dividend of approximately RMB12.0 million which was paid in March 2021 to its then shareholders.[11] Furthermore, a dividend of around RMB23.4 million was announced to its shareholder, Pang Pang Xiang Hong Kong, in respect of the distributable profit of Pang Pang Agricultural Products for the six months, ended June 30, 2022.[11]

It is noteworthy that under the Variable Interest Entities (VIE) equity framework, Huang Jianyi and his wife have complete ownership of Pang Pang Xiang Agriculture Products.[11] The distribution of the dividend can be seen as a direct transfer of the company's cash to the personal accounts of the owners.The company used its significant net profits from business privilege from pandemic management to pay out dividends. Unfortunately, instead of using the profits to repay the loans, they were distributed as dividends to the firm's actual controllers. This resulted in the inappropriate occupation of bank loan, hindering its proper allocation and generating costs associated with its misuse.

4.3 Damage to the credibility of the Shanghai Municipal Agriculture and Rural Committee

The Shanghai Municipal Agriculture and Rural Committee has designated the company as a crucial organization for ensuring food supply during the lockdown period.[11] As per the prospectus released on October 24th, 2022, the company has recorded gross profit margins ranging from 36.3% to 83.8%, responding to the epidemic lockdown situation and the urgent requirements of its customers.[11] However, the guidance released by the General Administration of Market Supervision of the People's Government of the People's Republic of China on February 1, 2020, regarding the investigation and handling of illegal acts of price gouging during the prevention and control of the COVID-19 epidemic, specifies that it is unlawful for a seller to offer goods of the same type at a price higher than the price difference between the purchase and sale rates of the most recent actual transaction prior to (and including) January 19, 2020 (identical day).[20] In 2020, the company only achieved a gross margin of 38.2%.[11] The committee's assigned company undoubtedly violated the guidance for market price stability of basic livelihood commodities and necessary materials.

4.4 Potential reduced efficiency of capital allocation

Total gross margins go from 17.93% in 2016 to 33.8% in 21 years and, to a staggering 53.4% in 2022. Return on equity goes from 6.12% in 2016 to 45.7% in 2021.[10][11] If an investor analyzes the company's gross margins and return on equity for the past six years, they would discern that the company possesses strong bargaining power in the industry and provides an outstanding ROE. The increasing gross margins and ROE make it tempting to direct investors towards a company with unsustainable earnings, ultimately harming the efficiency of capital allocation. Although the company's application for a Hong Kong listing ended in failure, such potential social costs should also attract the attention of those developing crisis management measures.

5. Conclusion

Pang Pang Xiang (China) Company Limited distributes agricultural and sideline products and is considered a leading industry player by the Shanghai Municipal Agriculture and Rural Committee. The committee has designated the company as a critical food supply assurance organization for pandemic management, specifically in regards to lockdown management.[11] During the pandemic crisis, Shanghai's food Consumer Price Index (CPI) experienced a year-on-year decline, going from 114.2 in January 2020 to 99.9 in January 2021 and further to 98.3 in January 2022.[21] The total gross profit margin of PANG PANG XIANG saw a notable increase, with the Z-score of the gross profit margin deviating significantly from the mean. The company achieved an all-time high gross profit margin of 53.4% during the five-month lockdown period ending on May 31, 2022. By mid-2022, the disposable income of Shanghai residents had dropped by 3.4% compared to the previous year[22]. The record high gross profit margin not only reduced the purchasing power[18] of Shanghai residents but also contravened the Guidance for Ensuring Market Price Stability of Basic Living Commodities and Necessities.[23] The company's utilization of the food distribution privilege granted by the Committee is plainly linked to an increase in its profit margin during the crisis time. This is tantamount to levying heavy taxes on Shanghai residents who were in lockdown during this crisis period.

Despite bearing a bank loan of RMB71.46 million, the company prioritized paying out dividends over loan repayment, counter to its original intention of going public to lessen its dependence on bank loans.[11] Improperly occupying bank loan could potentially harm the effectiveness of a bank's loan allocation.

When devising crisis management strategies, it is crucial to consider the potential long-term social ramifications. Despite the importance of a company's financial performance, as measured by gross margins and return on equity (ROE), there is growing concern regarding the social costs of profit generation and distribution. As a result, stakeholders and policymakers make seriously concern thoroughly and evaluate these issues to prepare for potential crisis management.

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