



The Impact of the Epidemic on Small and Medium-Sized Enterprises and Its Strategies

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Abstract. Since 2000, 99.9% of U.S. businesses have been small businesses, providing many jobs and opportunities in the United States. But the COVID-19 pandemic has adversely affected small businesses in the United States. Influenced by the epidemic, there is a global shortage of materials, and the cost of supply chains and raw materials is rising rapidly. At the same time, in recent years, almost all small and medium-sized enterprises in the United States have faced shutdowns, and the supply and demand ports have been greatly affected. Costs have increased significantly, which has prompted the development of small and medium-sized enterprises in the United States to encounter more crises. Starting from the bankruptcy and employee status caused by the economic difficulties American small and medium-sized enterprises faced during the epidemic, this paper analyzes the cash flow difficulties and cost control problems of American small and medium-sized enterprises due to COVID-19. They summed up how to find a suitable way for small and medium-sized enterprises to maintain their company stability and how to continue to develop over some time, which includes reducing costs and improving product sales to survive the epidemic.

Keywords: SMEs · US · Effect

1 Introduction

The United States is a highly monopolized developed country and a country with booming small and medium-sized enterprises. The successful development strategy of small and medium-sized enterprises has played an important role in the vigorous development of the American economy. In order to make small and medium-sized enterprises get better development, the United States established the small business administration in 1953. The main tasks of the administration include: making suggestions on the formulation of policies for small and medium-sized enterprises; Maintain contact with small and medium-sized committees at all levels of the country; Coordinate with other government

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agencies as a representative of small and medium-sized enterprises; Investigate the implementation of policies of small and medium-sized enterprises. In addition to establishing relevant institutions to help small and medium-sized enterprises, the U.S. government's support for small and medium-sized enterprises is multifaceted. In terms of finance, the federal government not only provides direct support to small and medium-sized enterprises through the credit plan, but also provides indirect support in the form of tax expenditure. At present, national competitiveness depends on scientific and technological strength and independent innovation ability, and the speed of innovation determines the long-term growth rate of national economy. Scientific and technological innovation is the key link of enterprise foundation and technology marketization. In the United States, small and medium-sized enterprises are the main body of national independent innovation. With the outbreak of COVID-19, small and medium-sized enterprises with poor risk resistance have encountered development difficulties. How to help them survive the crisis and continue to provide market vitality has become an important issue for national development.

Oshi and Sharma's research aims to introduce a conceptual model to assess sustainable practices and dynamic capabilities to ensure performance in disruptive environments [1]. Nasar's research explores factors supporting and hindering entrepreneurial activity during the COVID-19 pandemic. Eighteen in-depth interviews with entrepreneurs running small, medium, and micro-businesses using qualitative methods. Interviews were transcribed using NVivo 12, and content analysis was performed to generate themes. The research highlights the problems entrepreneurs have with adhering to lockdowns, social distancing, and business hours protocols. The findings of this study contribute to entrepreneurship research and empirical investigations to develop effective ecosystems to support entrepreneurs [2].

Min et al. Analyzed the direct and indirect support provided to SMEs through financial institutions [3]. Also, Lagerkvist and Esmat investigated the differences and determinants of their perceptions of COVID-19 business risks [4]. Kim et al. explored the factors affecting a restaurant company's financial turnaround to achieve sustainability following business closures during the COVID-19 pandemic [5]. Bauer et al. researched the ten effects of COVID 19 on the US economy [6].

Hamilton's research is a proposal that provides suggestions helping small businesses survive through COVID 19. The research analyzed the threats of small business posed by COVID is largely due to financial fragility. Hamilton mentioned it is necessary to expand the Employee Retention Credit to help cover small businesses' payroll costs and introduce a new Small Business Survival Credit to help cover small businesses' fixed costs [7]. Jialan et al. researched the impact of the 19th century economic crisis on business and consumer bankruptcies in the United States using real-time data on filings [8].

Wilmoth et al. analyzed the effects of the COVID 19 pandemic on small business in the US. The research used line charts to visualize the changes in employment rates by regions and sectors [9]. Bartik et al. conducted a survey of more than 5,800 small businesses between March 28 and April 4, 2020 to explore the impact of coronavirus disease 2019 (COVID-19) on small businesses [10].

This article examines the operational issues (shutdowns, disruptions, and shortages of upstream and downstream industrial chains and suppliers) and funding issues (cash flow, cost increases due to rising raw material prices) faced by U.S. SMEs during the COVID-19 outbreak. Through the collection of data on American small and medium-sized enterprises under the influence of the epidemic from various aspects and the status of American small and medium-sized enterprises before and after the outbreak from multiple perspectives. They combined the current social situation to analyze the current problems faced by small and medium-sized enterprises in the United States and give short-term suggestions.

2 The Influence of COVID-19

The COVID-19 pandemic has had a negative impact on small businesses in the United States. 99.9% of businesses in the US are small businesses, and these have accounted for 65.1% of net new employment since 2000 [1]. Figure 1 illustrates the change in small business revenues from January to August 2020 for different industry sectors under the impact of COVID-19. The percentage change in small business revenues across all industries remains steadily fluctuating from January to March. They fall sharply between March (the start of the embargo) and April, and then begin to rise slightly until August. Overall, all industry sectors showed a downward trend of around 20% throughout the period, with the leisure and hospitality sector showing the most severe decline at around 48%. Revenues in retail and transport and education and health services fell by around 14% and 16% respectively.

Many small businesses became insolvent as a result of declining business revenues. According to Hamilton’s estimates, more than 420,000 small businesses closed permanently as a result of COVID-19 [2]. Despite this, and contrary to the expectations of many media and experts, the total number of bankruptcy filings fell by 27% year-on-year between January and August [3]. Figure 2 shows the change in Chapter 7, Chapter 11 and Chapter 13 bankruptcies from February to August 2020 compared to the same months in 2019. Compared to 2019, only Chapter 11, i.e. bankruptcies where reorganization is

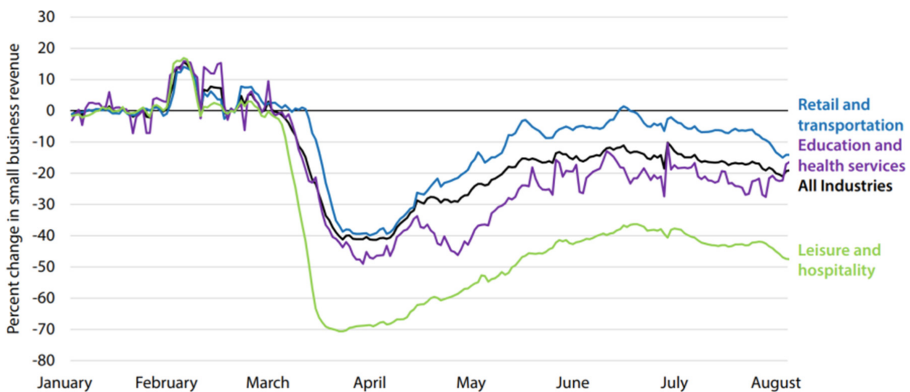


Fig. 1. Revenue changes of small businesses in different industries.

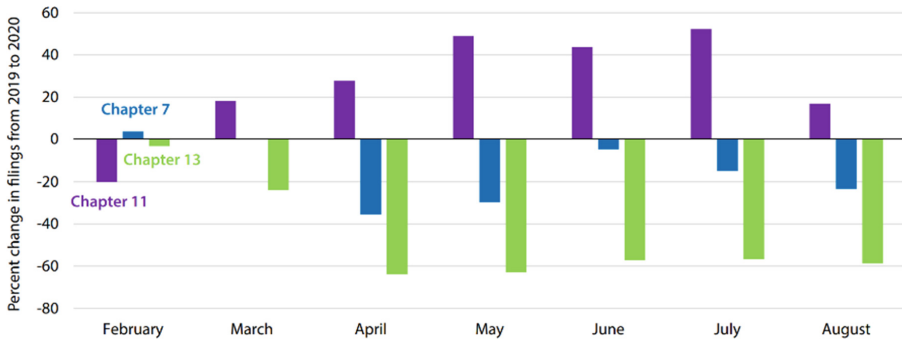


Fig. 2. Changes in Chapter 7, 11 and 13 bankruptcies

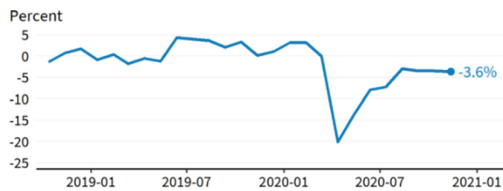


Fig. 3. Change in number of working and self-employed

permitted under the US Bankruptcy Code, increased. Chapter 7 bankruptcies, where the debtor’s assets are liquidated and used to pay creditors, initially increased in February relative to 2019, then remained the same but stayed below 2019 levels from April through August. Chapter 13 bankruptcy, which allows individuals or sole proprietors to agree to pay a percentage of their income until creditors are paid, was lower than 2019 levels throughout the period and down approximately 60% from the same period in 2019.

The effect of COVID-19 can also be presented by the change of the number of people who were self-employed and working relative to 12 months prior [4]. The X axis represents the dates, and the Y axis represents that the numbers on shown dates as the percentage of the numbers 12 months before. As Fig. 3 shows, the number was about 20% lower in April 2020 than in April 2019.

More specifically, the change in employment varies across industry sectors [4]. Figure 4 shows the change in employment in financial activities, miscellaneous services, and leisure and hospitality in April 2020. The vertical axis shows the percentage change in employment between April 2019 and April 2020. The horizontal axis shows the share of employment in small businesses before the pandemic. The size of each disk corresponds to the sectoral share of total pre-pandemic employment. Miscellaneous services had the largest share of small businesses at 85%, with a 22% decrease in employment. In contrast, leisure and hospitality had the largest decrease in employment at around 48% and its small business share was third at 61%.

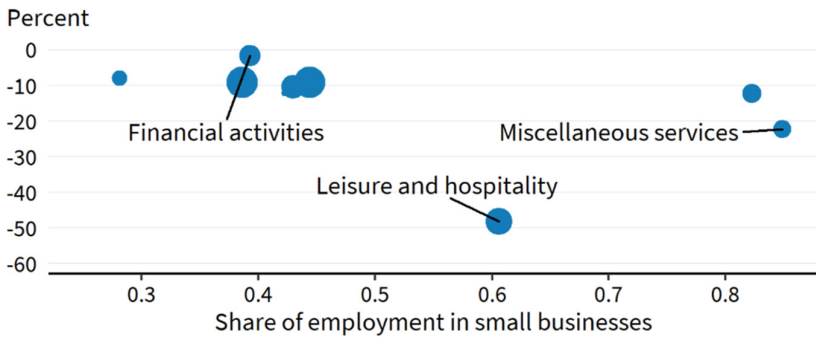


Fig. 4. Change from April 2019 to April 2020 in employment by sector

3 The Problems of SME

3.1 Financial Fragibility

The impact of COVID-19 is attributed to the financial vulnerability of small businesses. The results from Alexander et al. show that the time of the survey, the median business with more than \$10,000 in monthly expenses only had about 2 weeks of cash on hand. [5]. In the results, finances were measured by asking respondents how much cash they could probably access (e.g. in savings, cheques) without seeking further loans or obtaining funds from family or friends to pay for your business. This amount was then divided by their monthly expenses on 31 January 2020 to see how long they could sustain their operations without seeking additional credit.

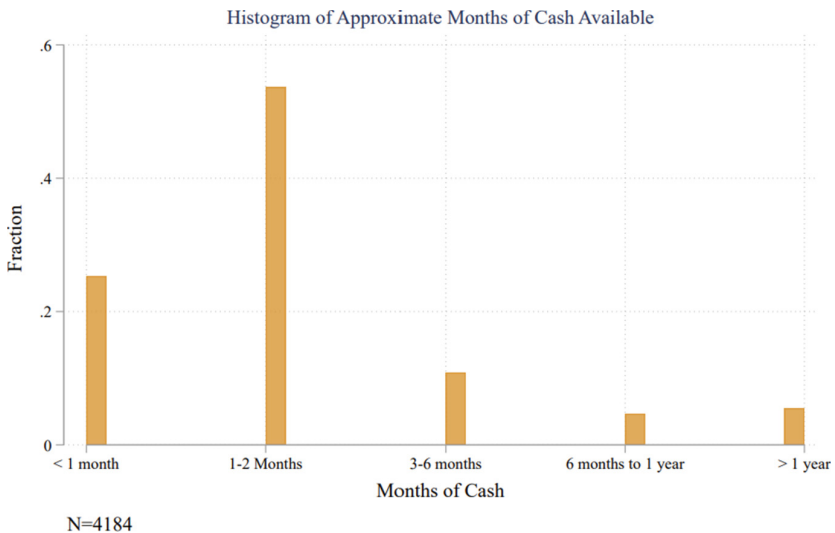


Fig. 5. Months of Available Cash

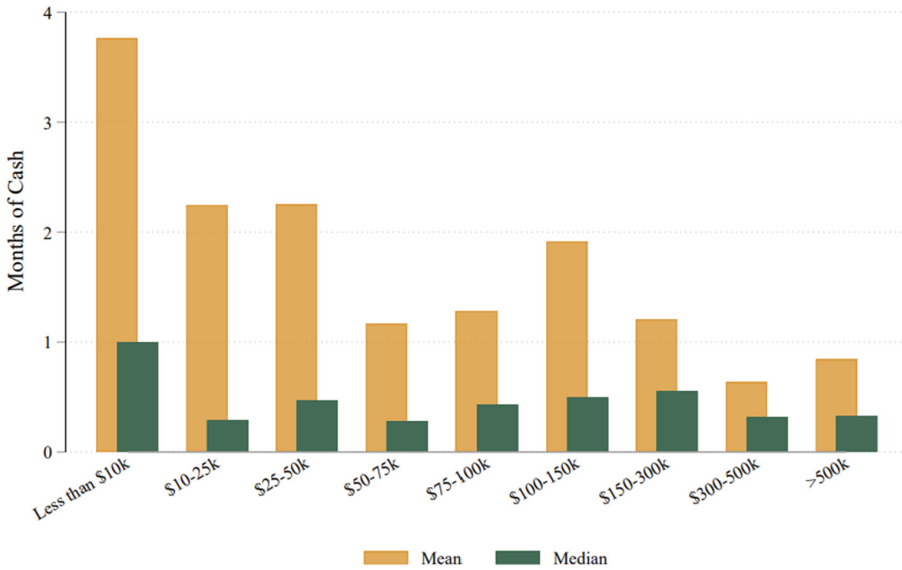


Fig. 6. Mean and Median Months of Cash Split by Monthly Expenses \$000s

Figure 5 presents a bar chart of available cash as a multiple of monthly expenditure in January 2020 [5]. Around a quarter of companies have less than one month’s expenditure in total cash on hand. About one-half of companies have enough cash on hand to cover one or two months of expenditure. Clearly, only about 5% of companies can operate for six months to one year without seeking loans or funding. Similarly, only about 6% of the total number of companies are able to operate with this cash on hand for more than a year.

Figure 6 categorizes firms by monthly expenditure in January 2020 and then demonstrates the average and median cash on hand relative to pre-crisis expenditure [5]. The median firm with monthly expenditure below \$10,000 has available cash for one month. For all higher expenditure levels, the median company normally has less than fifteen days cash on hand based on expenditure levels before COVID 19. These companies simply hardly have the available cash to cover their normal expenditure. As the data shows, the level of cash on hand for small business owners is limited, which may explain the prevalence of layoffs and closures. Without these actions, these small companies may struggle to meet payroll and continue operating.

4 Solution

Affected by the epidemic, almost all industries have been hit on a large scale, especially the physical sector. Due to the epidemic’s impact, the conventional supply and demand relationship has been seriously damaged. There are unsolvable problems in the supply chain of many products. For example, fewer people are involved in supply chain transportation. The price of containers has increased rapidly. At the same time, due to the

impact of the epidemic, there is a global shortage of supplies. All countries and individuals will hoard supplies and daily necessities in large quantities. Such behavior has intensified the inflation, which also stimulated the demand side of the market and made the shortage of materials more serious. At the same time, the demand side has risen sharply.

In contrast, the supply side has suffered a sharp drop in production capacity due to the epidemic's impact, which is an unavoidable challenge for small and medium-sized enterprises. Small and medium-sized enterprises should strengthen the control of costs and investment expenditures in special periods to reduce cash outflows. The negative impact of the epidemic on the operating income of all enterprises is inevitable. The small and medium-sized enterprises need to consider their own business and order situation thoroughly. In addition, the management of enterprises should change and formulate additional company policies under the epidemic through meetings. Implement more prudent cost control measures, reduce fixed costs and reduce variable costs under the premise of complying with national policies and laws, and carefully evaluate and control capital expenditures to ensure the competitiveness of enterprises so that enterprises can survive the epidemic. Save cashflow. For small and medium-sized enterprises engaged in the physical industry, reducing company overhead and management costs is the most effective solution. First of all, management costs should be diminished, and all the company's managers' expenses should be reduced by reducing salaries and layoffs. Secondly, suppliers and supply chains should be re-selected to reduce the overall cost of products. The prices of many suppliers are still the lowest in the market, but they are likely to be affected by the supply chain. After increasing the logistics price, the cost may be much lower than local suppliers. Enterprises should pay more attention to the management of receivables and payables and fully communicate and negotiate with upstream and downstream cooperative enterprises as soon as possible. The scale of receivables prevents downstream companies from encountering sales problems due to the epidemic without funds, resulting in bad debts.

On the other hand, strive for a more extended payment period with upstream companies and suppliers to ease the company's liquidity and reduce the pressure on the company's cash flow. At the same time, due to the inability of factories to start, small and medium-sized enterprises can choose to hoard raw materials or reduce prices to clear inventory according to different products to ensure the regular cash flow of the enterprise. For example, most of the raw materials for producing products by high-tech companies are rare metals, etc. As strategic materials, prices will inevitably rise according to the conditions of various countries. Therefore, you can choose to hoard more raw materials in advance to cope with the rising cost of raw materials when the remaining funds can maintain the company's operation. The best way for small and medium-sized enterprises engaged in catering is to reduce the number of stores and sell stores. It reduces the rent and other expenses and stabilizes the company's cash flow to make plans after the epidemic.

5 Conclusion

This study aims to provide recommendations for short-term survival strategies after analysis by understanding the survival environment and current situation of US SMEs

affected by COVID-19. To sum up, during the period of COVID-19, the operational problems (shutdowns, upstream and downstream industrial chains, and supplier disruptions and shortages) and funding problems (cash flow, cost increase due to rising raw material prices) faced by SMEs in the United States, Leading to forced layoffs and bankruptcy of small and medium-sized enterprises. Through the collection of data on American small and medium-sized enterprises under the influence of the epidemic from various aspects and the status of American small and medium-sized enterprises before and after the outbreak from multiple perspectives. Combined with the current social situation, it analyzes the current problems faced by small and medium-sized enterprises in the United States and gives short-term suggestions. Crises are both dangers and opportunities. The negative impact of the novel coronavirus epidemic on specific industries and enterprises is unavoidable. However, suppose the response method is appropriate. In that case, enterprises will certainly be able to improve their immunity after experiencing this crisis's baptism, remove structural risks, and form a healthy environment. It should improve the financial and business management system, enhance competitiveness, and reach a new level.

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