ISSN: 2456-4559 www.ijbmm.com

The Response and Adaptation of Smes in Vietnam to the Covid.19 Shock

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ABSTRACT: Small and medium-sized enterprises (SMEs) in Vietnam account for over 97 percent and the number of SMEs continue to increase. They play important roles in the economy but they also are sensible in cases of exogenous shocks. Based on the data from the White book on Vietnamese business from 2017 to 2021, the paper investigates the performances of the MSEs are impacted by Covid.19 and the smaller scale, the greater Covid.19 effect. However, their response with shocks quickly and recover faster than large enterprises.

KEYWORDS: SMEs, quantity, quality, performance.

I. INTRODUCE

Small and medium-sized enterprises (SMEs) are businesses with relatively small capital scale, laborers, and revenue. The number of SMEs accounts for a large proportion enterprises (usually over 90% enterprises of an economy). SMEs play a significant role in the economies, both developed and developing economies. SMEs are considered as backbone of private sector. They contribute in many important fields of economies and societies. SMEs help to create jobs and distribute the income more equally, especially jobs for the women and for poor households having few opportunities to find jobs and few alternative income sources. They also contribute to allocate the resources more efficient. Especially in developing countries which have plenty of labors and scarcity of capital. SMEs help absorb most cheap resource (labor) in the "informal" markets. SMEs also help to reduce the gap between rural and urban about the economic development and build a dynamic and resilient economic system in which the entrepreneurial spirit and skills are extended.

SMEs are very flexible, easy to transform, change in structure, production and service provision areas. However, SMEs have relatively small capital scale and labors. Because the scale of SMEs is quite small then they have more difficulties in accessing to large capital sources from investment banks, causing limitations in innovating equipment and promoting job development for businesses. Small businesses have fierce competition with large corporations in the same industry. Oppositely, small scale is also considered an advantage of SMEs in cases of facing with exogenous shocks. SMEs can respond and adapt quickly to shocks in the market such as exchange rate shocks, policy shocks... or natural shocks such as droughts, floods, epidemics, etc.

To evaluate the role of SMEs and their capacity in responding and adapting to the shocks, there are many Vietnamese and international studies the importance of SMEs with economies and society, as well as the adapting capacity of SMEs against the exogenous shocks. Hobohm (2008) summaries the roles of SMEs in an economy in three aspects: creating jobs, distributing the resources more efficiently and building a systematic productive capacity. Diep To Huyen et al. (2021) analyze the roles of SMEs in Phu Tho in creating jobs, contributing to the state budget, and collecting revenue. OECD Vietnam (2021) summaries the SMEs' characteristics in Vietnam which are higher labor productivity, quite innovative, underestimate the real contribution, contributing in national exports but belonging to foreigners mostly, strong managerial skills in the medium-sized enterprises, and the high rate of business activity. Vuong Khanh Tuan (2020) analyzes the effect of liberalization on SMEs in Vietnam and finds both the challenges and opportunities facing SMEs. Quoc Trung Nguyen Kim (2023) investigates the effect of Covid.19 on capital structure and finds that Covid.19 impacts negatively on the capital structure.

Pham Thi Tuy (2021) analyzes exogenous impacts on the economy and businesses such as gross domestic product, per capita income, trade activities, investment... all are seriously affected. Van and Nguyen (2021) analyze the impact of exogenous shock (Covid.19 pandemic) on the operations of tourism businesses. Analysis shows the huge impact of the pandemic, many tourism businesses are on the verge of bankruptcy. The total revenue of the tourism industry decreased by more than 40% in 2020 compared to 2021. Le Duy Binh and Tran Thi Phuong (2021) evaluate the positive exogenous shock that is the signing of the EVFTA between Vietnam and EU countries. Skorvagova and Pasztorova (2014) analyze the challenges and risks of SMEs when facing exogenous shocks. Many businesses had to close and cut spending when the financial crisis occurred. The authors also propose solutions so that SMEs can withstand exogenous shocks and continue to grow.

Ratko and Ulgen (2009) analyze the impact of the 2008/2009 financial crisis on SMEs. The special point of the article is not only to analyze the negative effects but also the positive effects of the crisis on the development of SMEs. Juergensen et al. (2020) analyze the impact of the Covid.19 pandemic on SMEs in the EU region. The authors proceed to divide the impact of this shock into short-term and long-term impacts. Miklian and Hoelscher (2021) analyze the impact of various types of exogenous shocks such as financial crisis, natural disasters, and armed conflicts... on SMEs. The analysis shows that different exogenous shocks will have different impacts on SMEs, thereby requiring effective solutions for each case. Cheratian et al. (2022) analyze the impact of the exogenous shock of sanctions by countries to Iran on SMEs. Businesses have to make comprehensive cost cuts and face a hiring freeze. And the authors conclude that in cases of having shocks, micro enterprises have better elasticity than small and medium enterprises. Stock et al. (2022) believes that to escape shocks in today's era, SMEs need to apply digital technology techniques (digital process innovation, digital product innovation and model innovation in digital business) during operations.

SMEs in Vietnam also have an important role in the economy and society. The number of SMEs also accounts for over 90 percent. They contribute about 40 percent of GDP, pay 30 percent to the state budget, about 33 percent of industrial output value, 30 percent of export value. The Vietnamese studies related to the SMEs facing of shocks, especially based on the performances of SMEs are still limited. This paper investigates the SMEs' capacity in responding and adapting to the Covid.19 shock in Vietnam. This shock is evaluated as a one of the greatest depression in history. Most countries and territories had to close all activities as well as borders. People had to stay at home, only some major fields allowed to operate. That period not only economies were heavily affected, but human lives were also seriously threatened.

To evaluate how the SMEs of Vietnam respond and adapt with the Covid.19 shock, this paper uses the data from the White book on Vietnamese Business. Previously, agencies only announced the number of enterprises in general for the whole country, not detailing each locality, each field and different data. The White book on Business provides three important indicators: quantity, growth rate and quality of businesses detailing to field and location. The book was first published in 2019. The book provides a true, panoramic, complete and official picture of the business development situation for policymakers, managers, and researchers at home and abroad to refer to.

Based on comparative method, this paper finds that the low efficiency of SMEs is not only by the impact of Covid.19 but also of on their own. And the smaller scale of enterprises, the lower of efficiency. The micro and small-sized enterprises had negative outcome all years in this periods. The SMEs seems response with shocks quickly than large enterprises because the breaking point (the lowest efficiency) felt into 2019 while the large felt into 2020 (2019 was the year at which Covid.10 appeared). And SMEs also recover faster than larger enterprises because they performed better in 2020 and 2021.

The rest of the paper is constructed as: Part II is the data and methods; Part III is results and the last is the conclusions.

II. DATA AND METHODS

2.1. Data

This paper uses data from The White Book on Vietnamese business published by the General Statistics Office of Vietnam (GSO). The White Book was firstly published in 2019. This book includes the indicators evaluating Vietnamese business on three features: quantity, growth rate and quality. Before the White Book on Vietnamese business was published, the business data were reported in in many different publications, not systematic and incomplete. This book provides complete data for users such as officers, researchers, business men, etc. The data are provided only more details, more systematics but wider range including national and provincial ranges.

The quantity and growth rate data relate to the number of enterprises with establishing, operating, getting profits, losses, newly established and dissolved, the number of labors, rate of female workers, etc.

The quality data relate to the equity, assets, equity per labor, fixed assets, fixed assets per labors, net revenue, earning before tax (EBT), the ratio of EBT and net revenue, the ratio of EBT and total assets, the ratio of EBT and owner's equity, etc.

To evaluate the sensitivity of SMEs, this paper uses both quantity and quality data measuring SMEs' performance from 2017 to 2021 (The White books on Vietnamese business were published from 2019 to 2023).

2.2. Method

To evaluate the capacity of response and adapting to changes in the economy of SMEs, this paper uses the comparative method. The comparison will do by two ways: (1) Compare the performances of SMEs before and after Covid.19, and (2) compare the performances between SMEs and large enterprises from 2017 to 2021.

Some indicators used to measure the SME's quality include: capital turnover, debt to equity ratio (D/E), net revenue, earnings before tax (EBT), Return on Sales (ROS), Return on total assets (ROA), and Return on equity (ROE).

Where:

Debt to equity ratio (D/E) = Average total debt/ Average total equity
Capital turnover = Net Revenue/ Average liabilities and owners' equity
Return on Sales (ROS) = EBT/Net Revenue
Return on total assets (ROA) = EBT/ Average total assets
Return on equity (ROE) = EBT/ Average total equity

III. RESULTS

Covid.19 perhaps is considered as the biggest exogenous shock. Financial crisis in 2008 and great depression of the 1930s in history were the crises with the effect on economy. However, when they occurred, people still went to work, borders weren't locked. Many economic activities still remained. And people did not die. But Covid.19 crisis was different from other crises. It not only impacted economic activities but social activities. People had to stop all activities including economic, travelling, sport....They had to stay at home. All activities stopped impacted on most of the sectors. For that situation, many firms were bankrupted or closed. SMEs or big firms overcome easier with those shocks, the exogenous shocks?

3.1. The definition of SMEs in Vietnam

As many countries over the world, enterprises in Vietnam also include SMEs and big enterprises. Where, an enterprise falls into the SMEs category if it satisfies one of two criteria as in Table I. The first criterion is based on the number of labors and capital investment value. And the second criterion is based on the number of labors and total revenue. The threshold of criteria of trade and service are different from other sectors. Both these two criteria require that the total employment of SMEs does not exceed 200 people.

Indicator	Micro enterprises		Small-sized e	nterprises	Medium-sized enterprises	
I. Laborers and capital	Number of (person)	Total capital (VND billion)	Number of laborers (person)	Total capital (VND billion)	Number of laborers (person)	Total capital (VND billion)
Agriculture, forestry and fishery; Industry and construction	≤10	≤3	≤100	≤20	≤200	≤100
Trade and service	≤10	≤3	≤50	≤50	≤100	≤100
II. Laborers and revenue	Number of laborers (person)	Revenue (VND billion)	Number of laborers (person)	Revenue (VND billion)	Number of laborers (person)	Revenue (VND billion)
Agriculture, forestry and fishery; Industry and construction	≤10	≤3	≤100	≤50	≤200	≤200
Trade and service	≤10	≤10	≤50	≤100	≤100	≤300

Table I. The definition of SMEs in Vietnam

Source: Decree No. 80/2021/NĐ-CP

${\bf 3.2.}$ The performance of SMEs measured by quantity criteria

As mentioned above, to provide a more complete picture of Vietnamese business the White Books record the outcomes of Vietnamese business based on quantity, growth rate, and quality indicators. Therefore, this paper evaluates the efficiency of SMEs through the Covid.19 shock based on the quantity indicators first.

Like most economies all over the world, the SMEs in Vietnam account for a large proportion of the total number of firms. From 2017 to 2021, the number of the SMEs increased from 544.210 to 699.852, but the rate of SMEs increased a little bit, from 97.11% to 97.38% as shown in Table II.

Table II. T	he proportion	of SMEs in	Vietnam	during	2017-2021
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Year	SMEs	Whole country	%	
2017	544212	560413	97.11	
2018	593629	610637	97.21	
2019	651138	668505	97.40	
2020	666256	684260	97.37	
2021	699852	718697	97.38	

Source: GSO

During 2017-2021, SMEs increased about 1.3 times. However, the increase mostly falls into the micro enterprises as shown in Figure.1. The micro enterprises account for a large percentage in SMEs, from 65.43% to 71.19%. While the small-sized enterprises dropped down both in the number of firms and the proportion, from 30.88% to 25.18%. And the medium-sized seem unchanged (over 3%) during 2017-2021.

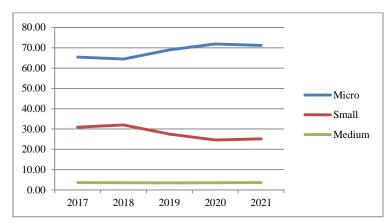


Figure 1. The proportion of number of enterprises in SMEs groups during 2017-2021

One of important roles of SMEs in economies is to provide jobs, reduce the unemployment rate. The rate of jobs that SMEs create accounted for over 30% (from 38.15% to 36.09%) during 2017-2021. The number of jobs not only reduced the relative value but the absolute value. And the job rate in the SMEs was the lowest during Covid 19 (2020-2021). Oppositely, the number of jobs in big firms accounts for from 61.85% to 63.91%. During the Covid.19 crisis, the job number in big firms still increased both absolute and relative values (for more details, seeing in Figure.2).

The contribution of three types of enterprises about providing jobs in SMEs group is quite different. While the number of micro enterprises is the greatest, more 2.8 times and 19.8 times than the small and medium-size, respectively in 2021, they create jobs less 1.6 times than the small-sized and nearly the medium-sized. Both the micro and small-sized created jobs decreasingly during Covid.19, but the medium-sized increased. Based on the relative number, the micro still created more jobs than two other groups during this period (more details seeing in Table III)

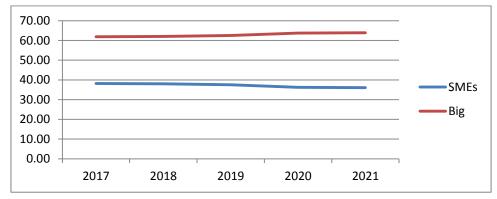


Figure. 2. The job rate in SMEs and big firms during 2017-2021

Table III. Jobs created by three types of enterprises in SMEs group during 2017-2021

Year	Micro	Small	Medium
2017	1270513	2877815	1389806
2018	1450611	2840937	1336404
2019	1655462	2693684	1332372
2020	1408645	2503989	1419449
2021	1423623	2516448	1401403

Source: GSO

The economic potential and competitiveness of SMEs in this period are evaluated based on some indicators as the liability and owner's equity, total fixed assets, rate of owner's equity, equity per employee, and fixed assets per employee.

Firstly, we see equity, rate of owner's equity and fixed asset in SMEs. The total equity of SMEs increased during 2017-2021, from VND 9,012,689 billion to 16,845,553 billion. Although Covid.19 impacted seriously in Vietnam in 2020 and 2021, the equity of SMEs still rose. However, this trend only kept for small and medium-sized firms, micro enterprises were impacted by Covid.19, the micro's total equity reduced in 2021 comparing with in 2020. Although the absolute value of equity of SMEs increased after Covid.19, the proportion reduced, from 33.42% in 2019 to 30.93% in 2021.

To sponsor for assets, SMEs use the more owner's equity than big firms. SMEs' owner's equity fluctuated from 39.1% to 43.9% during 2017-2021, while this rate in big firms did not fluctuate much this period (around 26%-27%). In SMEs group, micro enterprises have the largest proportion of the owner's equity, greater than 55% of their capital. This means that the scale of firms affect a business's ability to mobilize capital from outside, especially if the economy experiences an exogenous shock.

The future profitability of a business depends on the amount of fixed assets the business invests and fixed assets per worker. Two these indicators of SMEs also increased during 2017-2021. The total fixed assets increased from VND 3067317 billion to 5796840 billion and the fixed assets per worker increased from VND 216 million to 347 million during this period. The total fixed assets and fixed assets per worker of three types of enterprises in SMEs group rose in this period (except total fixed assets of the micro enterprises in 2021).

Now we consider the change of these indicators if comparing with these values of large enterprises. The results are provided in Table IV. All indicators in Table 4 are calculated by dividing the SMEs' value to larger enterprises' value. From Table IV, we find that providing the total fixed assets, owner equity, fixed assets per worker of SMEs increased more quickly than large enterprises (except the equity).

Table IV. The economic potential and competitiveness of SMEs comparing with large enterprises during 2017-2021

Indicators	2017	2018	2019	2020	2021
Equity	0.4	0.4	0.5	0.5	0.4
Rate of owner's equity	1.6	1.6	1.5	1.6	1.7
Equity per labor	0.6	0.7	0.8	0.8	0.8
Fixed assets	0.3	0.4	0.5	0.5	0.6
Fixed assets per labor	0.5	0.5	0.5	0.6	0.7

Note: These ratios calculated by taking the value of SMEs over value of big firms

3.2. The performance of SMEs measured by quality criteria

To evaluate the performance of SMEs measured by quality criteria this paper uses seven indicators: Net revenue, EBT, the capital turnover, ROS, ROA, ROE, and D/E.

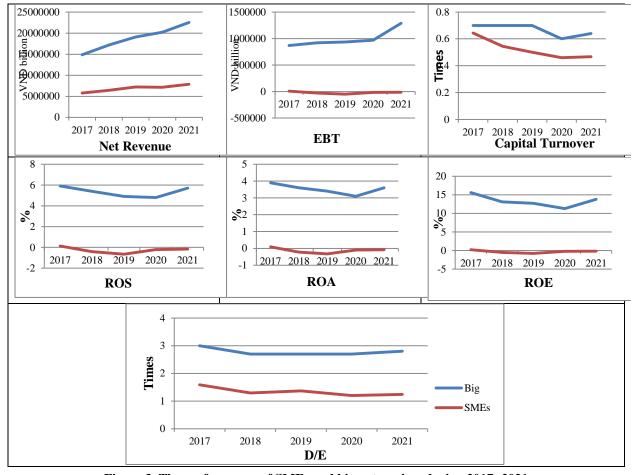


Figure 3. The performance of SMEs and big enterprises during 2017 -2021

The performances of SMEs and big enterprises during 2017 -2021 are provided in Figure 3. Figure 3 shows that all indicators perform the outcomes of SMEs are less than big enterprises. Although the number of SMEs accounts for the large proportion of the number of firms, the SMEs' revenue only equals one third of big firms' revenue. The SMEs' revenue increased during 2017-2021, but their revenue compared to large enterprises is gradually decreasing, from 39% to 34%.

The SMEs' EBT during 2017- 2021 was only positive in 2017, the rest was negative. However, the effect of Covid.19 on SMEs' EBT was less than the previous period. In 2020 and 2021, the SMEs' EBT were still negative but the level was less than 2 years before. The big firms are less affected by Covid.19. The big firms' revenue did not reduce in this period. Contrarily, their EBT increased during 2017-2021. Especially, in 2021 their EBT was higher 1.3 times than one in 2020.

Because the EBT was negative in most of the years, the ROS, ROA, ROE were also negative. However, the level gradually reduced. The year that SMEs' had the largest negative EBT was 2019. That year was the starting of Covid.19 (the fourth quarter of that year). Figure 3 shows that the SME's response to the Covid.19 shock was faster than the big firms. The lowest performances of big firms in ROS, ROA ROE, and capital turnover felt in 2020, but the lowest performance of the SMEs felt in 2019.

Now we find more about the scale of SMEs impacted by Covid.19 shock. Using the same indicators as above, we compare the performance of micro, small, and medium-sized enterprises.

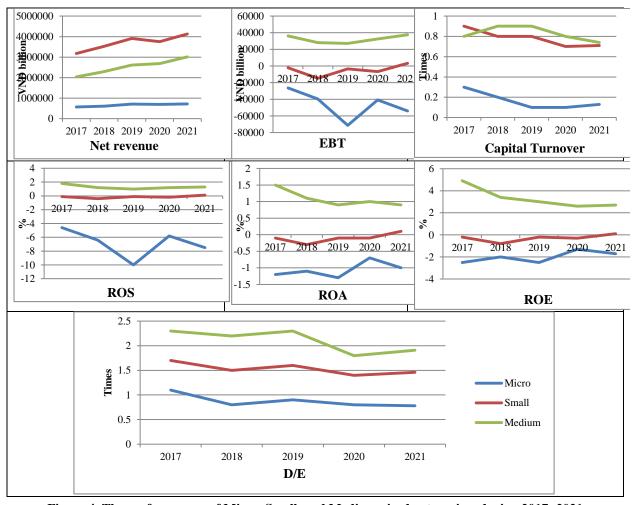


Figure 4. The performances of Micro, Small, and Medium-sized enterprises during 2017 -2021

The performances of the Micro, Small, and Medium-sized enterprises during 2017-2021 are provided in Figure.4. From Figure.4 we can see that the net revenue of the Micro, Small, and Medium-sized enterprises still increased during Covid.19 crisis. However, the rates of net revenue growth among these types of enterprises were different. Small and medium-sized enterprises had higher rate of growth, equal 4 or 5 times than micro enterprises' one. Especially, the small-size group had the greatest net revenue during 2017-2021.

Although the small-size group had the greatest net revenue during 2017-2021, its EBT was negative in this period (except 2021). Micro group's EBT also was negative all years from 2017 to 2021, and the level of lost increased in Covid.19 crisis. The EBT of medium-sized enterprises was positive in this period, and its EBT during Covid.19 shock was higher than some years before. Figure 4 shows the SMEs' EBT was negative all years and the reason of this was that the performance of micro and small-sized enterprises was not good, which dragged the EBT of the SMEs. Because the negative size of micro and small-sized was higher than medium-sized, the EBT of SMEs was negative all years during this period. Therefore, the other indicator including ROS, ROA, and ROE were also negative. The smaller scale of enterprises was the greater loss of enterprises was. However, ROA and ROE of medium-sized enterprises tended to reduce from 2017 to 2021, while small-sized enterprises increased and micro enterprises fluctuated. The reason the ROA and ROE of the medium-sized reduced is not from inefficient because its EBT still increased in this period. Its reduction came from the expansion of the equity.

Ability to recover capital and pay debts of the SMEs decreased during Covid.19 crisis, and micro enterprises still had the lowest value of two indicators and the value is quite small compared with two other groups. The low value of capital turnover of micro enterprises shows that this group's activity is not efficient.

IV. CONCLUSIONS

The SMEs are the backbone of an economy. Their roles to the economies are proofed in many studies. Based on the conditions about the labor and capital investment is quite easy to establish, the SMEs account for a large proportion of enterprises in an economies. The rate of SMEs in Vietnam also is high, over 97 percent in

this period. Because the easy conditions in establishment, then they can spread throughout a country and easier conditions to hire workers, they help to create jobs, reduce the rate of unemployment, especially for workers who do not need to have high qualifications. The rate of jobs created during this period by SMEs accounts for less than 40 percent, and the unemployment increased during Covid.19. Although both groups (SMEs and large enterprises) had lower number of workers during Covid.19, the SMEs fire workers at a faster rate than ones, especially in micro enterprises.

Providing equity, fixed assets in total and per worker increased during 2017-2021, which helped SMEs operate more efficient. The growth rate of these indicators in SMEs group was higher than large enterprises. However, the rate owner equity of SMEs was greater than large enterprises, which means SMEs had difficulty in accessing the capital from other sources, especially for micro enterprises which had over 50 percent owner equity.

Number of enterprises increased and equity, fixed assets conditions were better but the efficient operation of SMEs still need to improve. Most quality indicators measuring the SMEs efficiency had negative value. The reasons do not come from Covid.19 because negative value existed before Covid.19. And the response with Covid.19 of the SMEs seems quickly than large enterprises because the break point in the indicators mostly felt in 2019, while large enterprises felt in 2020. The recovering of SMEs again seems faster because the higher value of these indicators felt in 2020 and 2021.

The negative outcomes of SMEs mostly cause by the micro and small-sized enterprises, especially from the micro enterprises. Therefore, the operation of the micro and small-sized needs to improve in the future to increase the efficiency and roles of SMEs in Vietnamese economy.

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