



COVID-19 and the Performance of Exporting Companies in Benin

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Abstract

This paper assesses the effect of the COVID-19 pandemic on the performance of exporting companies in Benin. It also identifies factors that explain the perceived effect of COVID-19 on the companies' performance. To do this, we used a survey data covering 122 micro, small, and medium enterprises (MSMEs) and micro, small, and medium industry (MSMIs) in four communes in Benin. Firstly, we computed the annual rate change in quarterly turnover to capture the effect of the COVID-19. Secondly, a multiple regression was estimated to identify factors explaining the perceived effect of the COVID-19 on the exporting companies. We found that the exporting companies experience on average a 53.308% drop in quarterly turnover in 2020 probably due to the COVID-19 crisis. Based on the forecasts, the results also revealed a very slow recovery in activities but the rate of change will remain negative until 2021 if nothing is done to support the MSMEs/MSMIs. Finally, we found that the perceived effect of the COVID-19 depends on the level of education of head of the companies, on the experience in exportation, and on the organization of the work because of the pandemic. Our findings suggest the necessity for public policy support toward the MSMEs/MSMIs to contain the effect of the pandemic in Benin.

Keywords Benin · COVID-19 · Exports · Enterprises · Performance

JEL classification I18 · L25 · P42

Résumé

Cet article évalue l'effet de la pandémie de COVID-19 sur la performance des entreprises exportatrices au Bénin. Il identifie également les facteurs qui expliquent l'effet perçu de la COVID-19 sur les performances des entreprises. Pour ce faire, nous avons utilisé des données d'enquête couvrant 122 micro, petites et moyennes entreprises (MPME) et micro, petites et moyennes industries (MPMI) dans quatre communes

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du Bénin. Premièrement, nous avons calculé la variation annuelle des taux du chiffre d'affaires trimestriel pour capturer l'effet du COVID-19. Deuxièmement, une régression multiple a été estimée pour identifier les facteurs expliquant l'effet perçu du COVID-19 sur les entreprises exportatrices. Nous avons constaté que les entreprises exportatrices ont enregistré en moyenne une baisse de 53,308% du chiffre d'affaires trimestriel en 2020 probablement en raison de la crise de la COVID-19. Sur la base des prévisions, les résultats ont également révélé une reprise très lente des activités mais le taux de changement restera négatif jusqu'en 2021 si rien n'est fait pour soutenir les MPME / MSMI. Enfin, nous avons constaté que l'effet perçu du COVID-19 dépend du niveau d'éducation du chef d'entreprise, de l'expérience à l'exportation et de l'organisation du travail en raison de la pandémie. Nos résultats suggèrent la nécessité d'un soutien des politiques publiques envers les MPME / MSMI pour contenir l'effet de la pandémie et relancer les activités économiques.

Introduction

COVID-19 is an infectious disease caused by the most recently discovered coronavirus, SARS-CoV-2, which appeared in Wuhan (China) in December 2019. The disease quickly moved around the world, deeply disrupting essential economic activities as leading to lockdown. At the beginning, it was hoped that warm weather would shield many developing countries from the virus; this hope has not been realized and officials reported that confirmed cases of the infection are still growing. On 30th January, the coronavirus disease was admitted as a public health emergency of international concern, and on 11th March, it has been recognized as a global pandemic by the World Health Organization (WHO) (World Food Programme (WFP), 2020). Until today, health scientists are still learning about the infection, and think that one or more humans acquired the virus from an animal and that the virus spreads from person to person through infected air droplets that are projected during sneezing or coughing, or transmitted when humans have contact with hands or surfaces that contain the virus and touch their eyes, nose, or mouth with the contaminated hands (van Doremalen et al. 2020; Zhu et al. 2020).

The pandemic has affected 213 countries and territories around the world since emerging in China last December. As of July 24, 2020, there are more than 15.6 million cases infected with COVID-19 worldwide with 6% deaths (636,787 deaths). In term of number of reported cases, the USA is the most affected country in the world with more than 4.1 million confirmed cases following by Brazil, India, Russia, South Africa, Peru, Mexico, Chile, etc. However, when we focus on the number of cases per million inhabitants, we found that the most affected countries are Qatar, French Guiana, Bahrain, San Marino, Chile, Vatican City, Kuwait, Oman, Panama, USA, etc. (Fig. 1). Over the top 20 most affected countries, majority of the countries in the list are developing or emerging market economies.

In terms of continent, America with 54% of the world total confirmed cases is the most affected by the COVID-19 pandemic followed by Asia (23%) and Europe (18%) (See Fig. 2). Oceania and Africa are the least affected continent by the COVID-19 pandemic, with 0.1% and 5% of confirmed cases, respectively.



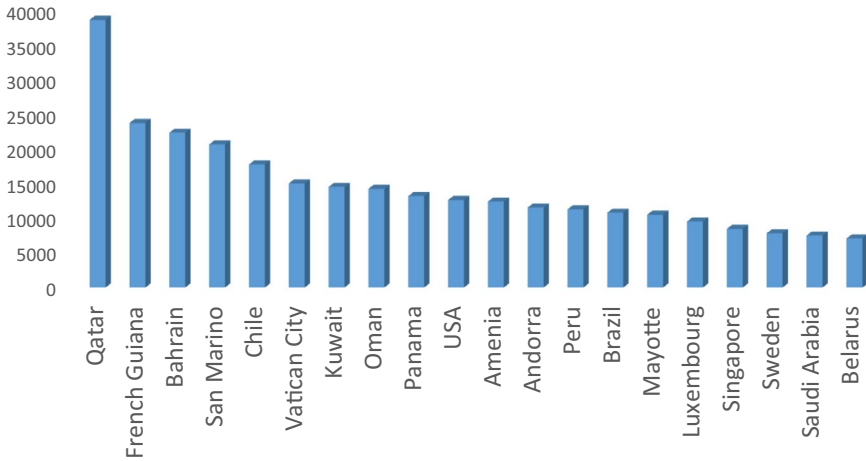


Fig. 1 Number of cases per million inhabitants (Top 20 countries). *Note:* Data retrieved from <https://www.worldometers.info/coronavirus/#countries%20retrieved>

However, the number of confirmed cases is still growing day after day in Africa. Indeed, Africa’s first case of COVID-19 was reported on 14 February in Egypt. Since then, the number of COVID-19 cases has risen to 789,151 cases with 16,715 deaths and 447,026 recoveries, as of 24 July 2020. The five African countries reporting most cases are South Africa (408,052), Egypt (90,413), Nigeria (38,948), Ghana (29,672), and Algeria (25,484).

In Benin, since the first case of COVID-19 reported on 16th March, the number of cases has risen in the country reaching 1690 cases in 24th July. The number of deaths reported in Benin is 34. Like most of the affected countries, the Beninese

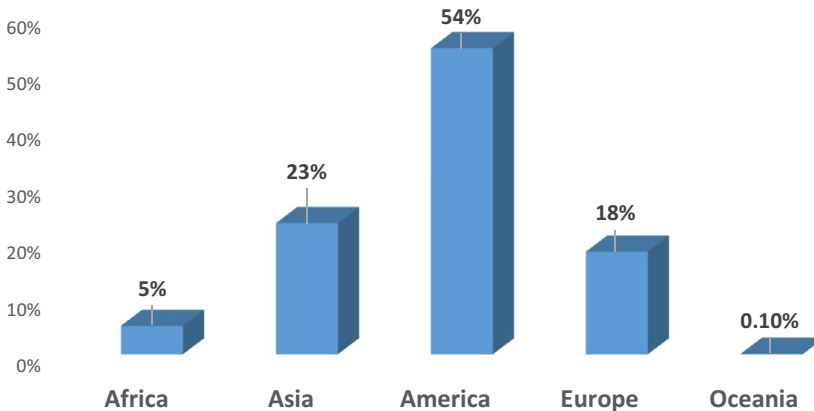


Fig. 2 Percentage distribution of confirmed cases by continent. *Source:* Retrieved from <https://www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases>



government has taken the measure of the crisis by implementing emergency measures to contain the spread of the virus, namely: the isolation of passengers from flights coming from abroad and from certain land borders. Under the supervision and support by the State, the establishment of a sanitary cordon limiting movements around the twelve (12) most affected communes for 2 months, as well as a multi-channel communication campaign on the barrier actions to be adopted. Although containment was not decreed in Benin, the economy is necessarily affected by the pandemic, in particular due to the establishment of the sanitary cordon breaking the logistics chains for small traders and the flow of goods and people through the country, the closing of the borders of all the neighboring countries of Benin, and the fall in international trade and that of cotton prices. It can therefore be said without much risk of being mistaken that economic operators and Beninese companies, whatever their sizes and sectors of activity, are somehow affected by the pandemic in various ways.

The Beninese economy depends on agriculture and processing industries for agricultural products, sectors largely focused on cotton and cashew nuts, and trade. Statistics indicate that the primary sector represents 28.1% of GDP, the secondary sector 14.6% including 6% for agro-food industries and 4.4% for construction, the tertiary sector 48.8% of GDP including 13% for trade and 9% for transport. The export sector (498 billion FCFA in 2019) plays an important role with a contribution to the GDP which rose from 6.12% in 1960 to 27.30% in 2018; i.e., an increase of 346% and an average annual contribution of 18.03% of GDP between 1960 and 2018 (World Bank 2020). According to data from the National Institute of Statistics and Economic Analysis (INSAE 2020), the ten most representative partners in Benin's exports are Bangladesh (26.9%), India (14.2%), Vietnam (10.6%), China (7.5%), Nigeria (5.8%), Denmark (3.6%), Egypt (3.5%), Niger (3.2%), Malaysia (3.0%), and Burkina Faso (2.4%). In terms of major exporting items, Cotton fiber is by far the main product exported from Benin with 53% of the country's exports, followed by cashew nuts (9%), and seeds and oleaginous fruits (6.6%).

From a theoretical perspective, COVID-19 will substantially impact exportation in various ways. Naturally, a higher COVID-19 burden in an exporting country decreases the scale of production, which leads to a decrease in export supply. Exports will decrease particularly in industries and countries where remote work is less feasible. The exports of one country may also be affected by the COVID-19 burden in its neighboring countries. For example, decreased exports from an affected country create an export opportunity for its neighbors. On the other hand, negative production shocks due to COVID-19 in a country may reduce production in neighboring countries through supply-chain networks.

As noted in several studies (AfDB 2020; Ayittey et al. 2020; Evans 2020; Laborde et al. 2020; Nonvide 2020a, b; Valensisi 2020; World Bank 2020), the consequences of this COVID-19 pandemic would be dramatic worldwide, both from a health and economic point of view. The most affected economies are those with poor healthcare systems, those that rely heavily on tourism, international trade, and commodity exports, and those with high debt burdens and high dependence on volatile international financial flows (AfDB 2020; Tröster and Küblböck 2020). Africa Economic Outlook (AEO) 2020 report indicated that outward-looking West African Countries expected to record



negative trade balances through decreases in exports due to coronavirus hitting export markets (AfDB 2020). A study by Fugazza (2020) has indicated that total commodity exports to China are currently moving downward because of COVID-19. As compared to a situation without the COVID-19 crisis, total commodity exports to China may fall by 15.5 to 33.1 billion US Dollars during 2020. In Ethiopia, Beyene and Gebrewolde (2020) found that agriculture exports will likely be the hardest hit, impacting poor rural livelihoods most. In the West African Economic and Monetary Union (WAEMU) countries, the COVID-19 report of the WAEMU Consular Chamber (Bloomfield Investment, 2020) reveals that it is the services sector that is most affected by the pandemic (87%), followed by trade (71%), industry (62%), crafts (56%) and finally agriculture, breeding, fishing (48%). In trade sector, the sub-sectors most affected by the COVID-19 pandemic concern the informal sector, in particular that of the sale of fresh products, retail trade, semi-wholesale trade, exports, and imports in the respective proportions. These sub-sectors are subject to the effects of a drop in supply and demand due to the stopping or slowing down of activities because of the observation of barrier and social distancing measures, containment measures, restrictions on movements of people and goods which, on the whole, would contribute to a disruption of trade, to the decline in household income and purchasing power.

This paper aims to provide answer to the following research questions: What are the effect of the COVID-19 pandemic on the performance of exporting enterprises? And what explains the perceived effect of COVID-19 on the performance of exporting enterprises in Benin? By doing this, the paper provides evidence based on how policy intervention could help in boosting the economic activities in Benin during this COVID-19 pandemic crisis. In fact, exporting companies are caught between a rock and a hard place, pressed on all sides. The closure of borders in most countries has led to a decline in export activity, forcing some local businesses to look to the domestic market. In addition, exporting companies that cannot sell their products have therefore found themselves with an overstock of excess inventory.

The rest of the paper is structured as follows. “[Transmission Channels of the COVID-19 Crisis on the Performance of MSMEs/MSMIs](#)” section discusses the pathways for short-term impacts of COVID-19 on enterprises performance, and “[Data and Methods of Analysis](#)” section presents the methods of analysis followed by results and discussion in “[Results and Discussion](#)” section. Finally, “[Conclusion](#)” section concludes and proposes some policy actions needed to reduce the impact of the COVID-19 pandemic on the exporting enterprises in Benin.

Transmission Channels of the COVID-19 Crisis on the Performance of MSMEs/MSMIs

The pandemic nature of COVID-19 and its high capacity for propagation have consequences for all sectors of activity. While COVID-19 causes enormous losses of life, it is also disrupting economic activities around the world. The disruptions affect the activities of Micro, Small and Medium Enterprises (MSMEs) and Micro, Small and Medium Industry (MSMIs) in different ways. It appears that measures decided



by states to limit the spread of COVID-19 have helped reduce economic activity which may negatively affect the turnover of the enterprises.

A first channel through which the COVID-19 pandemic affects the performance of micro, small, and medium-sized companies is that of demand. Indeed, to slow the spread of the pandemic, governments are forced to adopt several measures including limiting airline flights, closing land borders, limiting gatherings, forcing the closure of some enterprises, shutting down of restaurants, bars, nightclubs, and cinemas, resulting in significant job losses. These measures have contributed directly and indirectly to a tightening of the demand addressed to MSMEs/MSMIs. Directly, exporting companies and those engaged in activities that have an international connection, such as tourism, have suffered a decline in demand for their goods and services. Also, the decline in economic activity in the rest of the world also affects MSMEs/MSMIs in Benin, especially exporting ones. This pandemic which began as a health crisis has turned into a major economic crisis with slowing global growth, which will not only curb export demand, but will also delay investment decisions that non-residents might make, as well as financing decisions. However, the effects of the drop in demand generated by the closing of borders must be qualified. As highlighted in the Bloomfield Investment report (2020), the drop in demand resulting from the border closures has more affected specialist firms causing a drop in demand from these companies. As a consequence, cash flow troubles and layoffs are recorded. For non-exporting MSMEs/MSMIs that carry out specialized activities, the drop in demand has mainly resulted from the diversion of demand. This is particularly the case of companies specializing in the production of construction equipment, which are also weakened by the drop in demand from the population, which devotes more of its resources mainly to food needs rather than to capital goods. Thus, less specialized companies are less affected.

A second channel through which businesses are affected by COVID-19 is the restriction of labor supply due to containment and quarantine measures. Even if this channel is partially offset by teleworking or rotations, the restriction of the labor supply has affected the activities of companies. Unlike most advanced countries or many emerging countries, teleworking cannot be an option for MSMEs/MSMIs, but rather an option for a tiny fraction of the workforce in Benin, those working in large companies and certain sectors. In most developing countries, the vast majority of people work in the informal sector or in factories, micro, small, and medium-sized enterprises, none of the companies will have the resources to support and keep employees beyond a few days since its MSMEs/MSMIs have a low financing capacity to bear these costs (OECD 2020). Furthermore, OCDE (2020) added other factors such as the already existing intrinsic difficulties of MSMEs/MSMIs (persistence of financing problems, limited access to public markets, productivity, weak integration into national and international value chains). The disruption of supply chains has resulted in increased direct and indirect costs for MSMEs/MSMIs. The difficulty of moving and the closing of borders have changed the supply process for companies, which has led to an increase in the prices of the inputs they use (Passet and Balboni 2020). On the other hand, which is the case for companies exporting perishable products, companies experience a drop in the price of their product due to the drop in international demand (UNDP 2020).



Data and Methods of Analysis

Survey Design and Data Collection

Data used in this study come from a survey of 122 exporting enterprises conducted in July 2020 in Benin by the “Ministère de l’Industrie et du Commerce.” In Benin, the first-level subdivisions are the departments. The country is divided into twelve (12) departments. A department consists of at least one commune which in turn is divided into districts. The survey covers four communes including Cotonou, Sèmè Kpodji, Abomey-Calavi, and Allada. Majority of the exporting companies in Benin are located in these communes because of their proximity to the port of Cotonou and also due to the availability of the raw material. The exporting companies were purposively selected based on the lists provided from the “Ministère de l’Industrie et du Commerce” and the association of the SMEs/SMIs in Benin.

Questionnaires were pre-tested and modified accordingly before being administered. Majority of the interviews were conducted face to face with the head of the companies, however, due to the unavailability of the head of the companies and also because of COVID-19 crisis, some interviews were conducted via telephone or email. In the latter case, the enumerators have sent the questionnaire to the head of the companies who provide feedback in a reasonable time. The information collected concern the general information about the company, exports quantity, employment and salaries, turnover and financial commitments, perceptions of the impacts of the pandemic, and the proposed support policies for MSMEs/MSMIs. The survey was conducted during the first half of July 2020. It should be noted that data on turnover, exports, and employment collected are monthly data on the period 2017–2020. In addition, monthly forecasts made by the enterprises in terms of turnover for the second semester of 2020 and for 2021 are collected.

Methods of Analysis

The objectives of this study are to (1) estimate the effect of the COVID-19 pandemic on the performance of the exporting companies in Benin, and (2) to assess the factors that explain the perceived effect of the COVID-19 pandemic on the performance of the exporting companies in Benin. The performance of the exporting companies is measured by the quarterly turnover.

For the first objective, we estimated the variation of the turnover and calculate the quarterly rate of the change in companies’ turnover. We calculate the quarterly rate of change in turnover by comparing even quarters. Therefore, the effect of the COVID-19 pandemic on the performance of the exporting companies is captured through the percentage drop in the turnover. The variation analysis was done on the basis of a differential analysis in order to determine the direction and the percentage variation in the turnover (turnover) of the companies. So the percentage change is determined for each quarter using the formula below:



$$\text{Rate of change in turnover} = \frac{\text{Turnover}_t - \text{Turnover}_{t-1}}{\text{Turnover}_{t-1}} * 100 \quad (1)$$

For the second objective, a multiple regression analysis was done to assess the determinants of the exporting companies' turnover. The enterprises were asked about the effect of the pandemic on the turnover in percentage. The model estimated with an ordinary least square (OLS) technique is specified as follows:

$$Y_i = \beta_0 + \sum_{j=1}^k \beta_j X_{ij} + \varepsilon_j \quad (2)$$

Y_i is the dependent variable, X_{ij} is a vector explanatory variables, and $\beta_0, \beta_1, \dots, \beta_k$ are the parameters to be estimated. The dependent variable is the perceived effect of the pandemic on the turnover in percentage. The explanatory variables include gender of the head of the companies, age and level of education of the head of the companies, experience in exportation, number of products exported, legal status, sectors of activities of the company, the organization of the work because of the pandemic, changes in input costs, and additional costs to cope with the pandemic. The gender of the head of the companies, age and level of education of the head of the companies, experience in exportation, number of products exported, legal status, and sectors of activities of the company are identified in the literature as determinants of the exporting companies' performance, especially in the long run (Haddoud et al. 2019; Maurel 2009; Baldauf et al. 2000). Actually, the predictors of export performance may include environment-related factor such as socio-cultural and political factors, firm characteristics such as demographics and management motives, and business strategies such as differentiation and low cost (Baldauf et al. 2000). This paper adds three additional variables (the organization of the work because of the pandemic, changes in input costs, additional costs to cope with the pandemic) to capture the specific factors related to the pandemic.

Results and Discussion

Profile of the Surveyed Enterprises

Around 75% of the head of the companies are men compared to 25% who are women and the heads have on average 45 years old (Table 1). The majority (62%) of the head of the companies have higher education; only 2.5% have no educational attainment. The majority (69%) of companies have an export experience of less than 5 years; 17% have export experience between 5 and 10 years; 7% have been exporting for between 10 and 15 years and 7% have more than 15 years of experience in exports. It should also be noted that most companies (87%) are specialized in the export of a single product against 8% which export 2 products and 5% which export 3 products (Table 1). Among the exported products are pineapple and its derivatives such as pineapple juice, cashew nuts, and its derivatives such as cashew nuts,



cashew fines, dried mango, mineral water, soybeans, soap, clothes, shea and its derivatives, sesame, and appetizers. There is a strong representativeness of limited liability companies with a proportion of around 64% followed by sole proprietorship with 27% and limited companies which represent about 7%. Cooperatives and economic interest groups (GIEs) each represent 1%. The classification of enterprises shows that 66% are commercial enterprises, and 25% manufacturing and only 9% are service enterprises. The breakdown by branch of activity shows a strong representativeness of companies in the trade branch (52%), followed by other companies in the agriculture (21%) and industry (14%) branch. It appears that 46.3% of the firms were obliged to stop the activities owing to the COVID-19 pandemic, 30.6% continued to work as usual, 5.8% resorted to telework, and 17.3% adopted mixed work organization. On average, the companies experience an increase of about 14% in input costs owing to the pandemic. In addition, the average additional costs to cope with the pandemic amounts to 1,098,877 F CFA.

Estimation of the Variation in the Turnover of Exporting Companies in Benin

Table 2 shows the quarterly turnover in millions of CFA for the companies surveyed. The annual change is shown in Fig. 3. Sales vary from quarter to quarter, however, some quarters are peak sales periods. These are for example the first and fourth trimesters.

Annually, we notice an increase in turnover from 101.1 million in 2017 to 124.8 million in 2018 then to 181.4 million in 2019 (Fig. 3). Then followed a drop in 2020 when turnover fell to 65.3 million, due to the global health crisis of COVID-19. This effect will continue until 2021 if nothing is done to support its businesses. The forecast for turnover in 2021 is CFA 54.5 million.

The increase in annual turnover from 2017 to 2019 is also accompanied by an increase in the rate of change in quarterly turnover over the same period, except for the fourth quarter in 2018 and the first quarter in 2019 (see Fig. 4). In 2020, there is a drop in the first observed quarterly turnover of about 37.677%, though a slight increase of 2.273% is observed for the second observed quarterly turnover. This indicates that the turnover of companies has decreased by 37.677% in the first quarter compared to the year 2019. Even, in the second quarter of 2020, the firms do not perform as they will without the pandemic. This drop in turnover would be probably due, all things being equal, to the effects of the pandemic of COVID-19 which affects all sectors of activities especially exports. Based on the forecasts made by the companies surveyed, we also notice a drop of 86.930% and 90.898% in the third and the fourth quarters of 2020 and a very slow overall recovery in activities but the rate of change will always remain negative until 2021 if nothing is done to support MSMEs/MSMIs. On average, a drop in quarterly turnover of about 53.308% is found.

Our findings are similar to those found in by Albonico et al. (2020) and Buffington et al. (2020). Indeed, Albonico et al. (2020) have shown that 80% of SMEs in the UK are experiencing decline in their revenues with difference across sector. The most negatively affected sectors in UK are logistics, construction, and agriculture. In



Table 1 Characteristics of the surveyed enterprises

Variables	%/Means
Gender of the head of the companies	–
Male	75.0
Female	25.0
Level of education of head of the companies	–
No education	2.5
Primary education	6.0
Junior and Senior high education	29.0
University	62.0
Age of the head of the head of the companies (years)	45.2
Experience in exportation	–
Less than 5 years	69.0
Between 5 and 10 years	17.0
Between 10 and 15 years	7.0
More than 15 years	7.0
Number of products exported	–
One product	87.0
Two products	8.0
Three products	5.0
Legal status	–
Cooperatives	1.0
Economic interest groups	1.0
Limited companies	7.0
Limited liability companies	64.0
Sole proprietorship	27.0
Sectors of activities	–
Commercial	66.0
Manufacturing	25.0
Service	9.0
Branch of activities	–
Agriculture	21.0
Industry	14.0
Trade	52.0
ICTs	1.0
Arts and crafts	10.0
Construction	2.0
Organization of work	–
Cessation of activities	46.3
Work as usual	30.6
Telework	5.8
Others	17.3
Changes in input costs (%)	14.0
Additional costs (thousands F CFA)	1,098,877



Table 2 Quarterly turnover, 2017–2021 (in millions of CFA)

Quarter	2017	2018	2019	2020	2021*
January–March	27.3	54.2	35.3	22.0	30.7
April–June	22.9	23.5	30.8	31.5	7.9
July–September	22.3	24.2	32.9	4.3*	8.1
October–December	28.6	22.9	82.4	7.5*	7.8
Annual average	101.1	124.8	181.4	65.3*	54.5

*Forecasts made by the surveyed companies

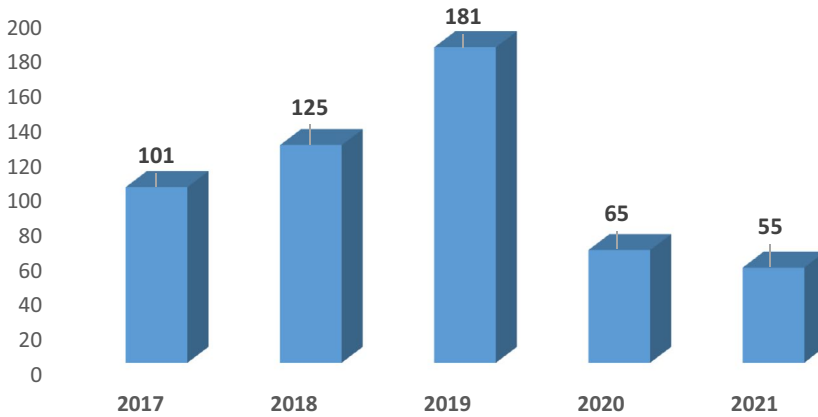


Fig. 3 Evolution of annual turnover (in millions), 2017–2021

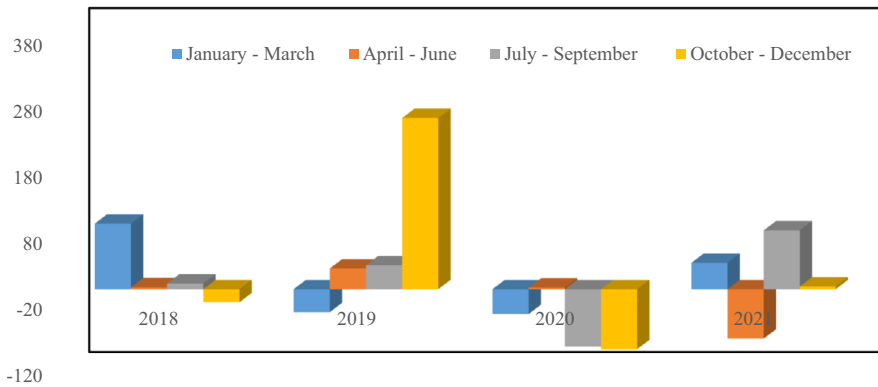


Fig. 4 Annual rate of change in quarterly turnover, 2017–2021. (Color figure online)

fact more than 90% of surveyed SMEs in these sectors reported reductions in their revenue, while the least affected SMEs are those in scientific, finance and insurance, and education sectors. Also, Albonico et al. (2020) have shown that about 75% of



the SMEs in UK would be out of business by January 2021 if their revenue were to decrease by 10 to 30%. In the United States, Buffington et al. (2020) indicated that almost 90% of small businesses experienced a strong (51%) or moderate (38%) negative impact from the pandemic; 45% of businesses experienced disruptions in supply chains.

Factors Explaining the Perceived Impact of COVID-19 on the MSMEs/MSMIs in Benin

The average perceived effect of the COVID-19 pandemic amounts to 75.23%, with a standard deviation of 20.845%. Thus, according to the enterprises, there are a drop of 75.23% in turnover attributable to the pandemic during the first two quarters of 2020. Note that, above, we find that there is a decrease of 37.677% in turnover during the first quarter of 2020 compared with 2019 and a slight increase in the second quarter; on average a drop of about 53.308% in quarterly turnover. This suggests that the perceived effect goes beyond comparing quarters of 2020 with the corresponding of 2019, it may even accounts for 2018 or before. Table 3 presents the estimation results of the factors explaining the perceived effect of COVID-19 pandemic on the turnover of the SMEs/SMIs in Benin. It appears that the experience in exportation affects positively and significantly the effect of the COVID-19 pandemic on the turnover of the companies. This means that the companies that rely heavily on exports are suffering from the pandemic as they are unable to get new contracts abroad. Moreover, companies whose heads have university formal education level perceive more the effect of the COVID-19 pandemic on the turnover than those that do not have university formal education. Companies that stop activities, or continue working as usual or that resorted to telework perceive more the effect of the pandemic on turnover compared with those that relied on mixed approaches. Those that resorted to telework perceive the highest effect, followed by those that stop activities and those that continued business as usual.

Conclusion

The COVID-19 pandemic continues to affect the African continent especially Benin. The number of confirmed cases is rising and the economic impacts of COVID-19 pandemic will depend on the duration of the pandemic. In this paper, we estimate the effect of the COVID-19 pandemic on the performance of the exporting companies in Benin. We used a survey data covering 122 exporting companies in four municipality in Benin. The annual rate change in quarterly turnover was calculated to capture the effect of the COVID-19, while a multiple regression was estimated to identify factors explaining the perceived effect of the COVID-19 on the exporting companies. The results indicate that the COVID-19 pandemic has a negative effect on the performance of the exporting companies in Benin. These companies experience on average a 53.308% drop in turnover quarterly in 2020 due to the COVID-19 crisis. Based on the forecasts, the results also reveal a very slow recovery in



Table 3 Estimation results of the factors associated with the perceived effect of COVID-19 on exporting enterprises turnover

Dependent variable: perceived effect of the pandemic on the turnover in percentage	Coefficients	Standard Errors
Experience of the enterprise in exportation	1.164**	0.5219
Number of exported products	3.134	3.793
Legal status (Reference: Sole proprietorship)		
Limited companies	10.908	7.588
Limited liability companies	- 1.938	4.336
Age of the head of the company	0.285	0.268
Sectors of activities (Commercial)		
Manufacturing	1.052	7.438
Service	0.481	5.949
Level of education (Reference: At most primary)		
Secondary	16.344	11.678
University	21.414*	10.883
Gender of the head of the company is male	- 1.538	5.127
Organization of work (Reference: Others)		
Cessation of activities	26.967***	5.176
Work as usual	13.848**	6.260
Telework	33.815***	8.390
Log(Additional costs)	1.499	1.291
Changes in inputs costs	- 0.046	0.092
Adj $R^2 = 0.916$		
Prob > $F = 0.000$		

***Significant at 1%, **Significant at 5%

activities but the rate of change will remain negative until 2021 if nothing is done to support the SMEs/SMIs in Benin.

Our findings highlight that while measures to stop the spread of the virus are necessary, it is also important that government supports the SMEs/SMIs for a revival of activities. The following policies to support the SMEs/SMIs in Benin are proposed:

- Financial support in terms of reimbursement of Value Added Tax (VAT) credits and subsidies up to 60% of turnover;
- Cancellation of taxation and para-fiscal systems for companies throughout the pandemic period;
- Guarantee loans at subsidized rates to companies up to their working capital needs;
- Advocacy for the extension of payment deadlines for financial commitments made by exporting companies;
- Create a solidarity fund to cover disasters (epidemics, pandemics, prolonged droughts, major floods, etc.) not covered by insurance.



Declarations

Conflict of interest The authors declare that they have no conflict of interest.

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