

An Appraisal of the Impact of Covid-19 Pandemic on Entreprenuerial Development

Adewole Oluwasanmi, Oriola Muibat Oluwakemi, AdewaleTemilade

Department of Transport Management Department of Management and Accounting LadokeAkintola University of Technology Ogbomoso

Date of Submission: 10-12-2021Revised: 20-12-2021Date of Acceptance: 25-12-2021

ABSTRACT

The spread of the Coronavirus, COVID-19, is causing serious disorder to the society, enterprises in Nigeria and globally. The coronavirus eruption is destroying human health, disrupting the livelihood of thousands of people, and impact negatively on the global economy (Craven 2020; Amare 2020). The rapid spread of the COVID-19 virus led countries around the world into a health crisis with substantial economic, business, and commercial impacts being felt globally. The presence of the virus in Nigeria was first reported on February 27, 2020, when an Italian citizen visited Nigeria tested positive for the virus, caused by SARS-CoV-2. On 9 March 2020, a second case of the virus was reported at Ewekoro, Ogun State, as a result of a Nigerian citizen who had contact with the Italian index case. It is on this premise that this study, seeks to appraise the impact of Covid-19 on entrepreneurial development in Oyo state, Nigeria. The objectives of this study are to analyze the relationship between Covid-19 pandemic and entrepreneurial development and also to examine impact of Covid-19 pandemic the on entrepreneurial development. This research adopted survey research design where Covid-19 pandemic is considered as the independent variable and entrepreneurial development as the dependent variable. Primary data was used using structured questionnaire. Oyo state metropolis was chosen as the study area. 156 questionnaire were distributed across the 33 Local Government Areas in Oyo State. The respondents were chosen by using stratified sampling techniques to divide Oyo State into three senatorial districts. To analyze the data, both descriptive analysis and inferential statistics were used to analyze the data obtained. Volume of sales (VOS), cost of productivity (COP), and ease of goods distribution (EGD) were used to proxy development while entrepreneurial level of

lockdown (no lockdown, partial lockdown and total lockdown) were used to proxy Covid-19 pandemic. Findings in this study shows that there existed a moderate relationship between entrepreneurs' cost of productivity (NOLOCKCOP) and ease of goods distribution (NOLOCKEGD) when there is no lockdown.

Also, COP of entrepreneurs without Covid 19 pandemic in relation to EGD and VOS has moderate relationship. In contrary, the relationship between entrepreneurs' cost of productivity (NOLOCKCOP) when there is no lockdown and cost of productivity (LOCKDOWN) when there is lockdown had a weak relationship which shows that lockdown affects the cost of getting man power to get work done by entrepreneurs compared with when there is no lockdown. Multiple correlation coefficient R (0.806) reflects strong joint impact of cost of production, ease of goods distribution and volumes of sales of entrepreneurs in Ogbomoso when there is no lockdown on rate of return on Investment (ROI), the coefficient of determinant R^2 (0.649) explained the variation in Return on Investment (ROI) was 64.9% and critical p-value was 0.000. Therefore, it can be concluded that Covid-19 has significant impact on entrepreneurial development in Ovo State. Therefore. this study recommends that entrepreneurs should develop new competencies in terms of putting round peg in a round hole, such that cost of productivity is reduced at barest minimal in order to boost return on investment, implore good distribution channel that can accommodate uncertainties, improving experience management, and enhancing the experience of professionals (including academia, consultants, etc.) regarding the application of new technologies within distribution and business models during this period as an essential regional development need over the long-term. By focusing on these,



entrepreneurs and SMEs will not just survive this pandemic but will emerge capable of adopting new technologies, and become more competitive under these challenging circumstances.

Key words; COVID-19, Entrepreneurial Development

I. INTRODUCTION

The spread of the Coronavirus, COVID-19, is causing serious disorder to the society, enterprises in Nigeria and globally. The coronavirus eruption is destroying human health, disrupting the livelihood of thousands of people, and impact negatively on the global economy (Craven 2020; Amare 2020). Confirmed cases of the coronavirus pandemic named Covid-19, which was first reported in December 2019 in the Chinese province of Hubei and declared a pandemic by the World Health Organization in March 2020 is now over 28 million worldwide, 1, 344, 403 in Africa, and 55,829 in Nigeria as at September 2020. The presence of the virus in Nigeria was first reported on February 27, 2020, when an Italian citizen visiting Nigeria tested positive for the virus, caused by SARS-CoV-2. On 9 March 2020, a second case of the virus was reported at Ewekoro, Ogun State, a Nigerian citizen who had contact with the Italian index case. The rapid spread of the COVID-19 virus led countries around the world into a health crisis. In addition to the human impact, there are substantial economic, business, also and commercial impacts being felt globally. As viruses know no borders, the impacts will continue to spread (KPMG, 2020). The study conducted by KPMG, (2020) has revealed that 94 percent of global and local businesses in Nigeria have been impacted and are already seeing COVID-19 disruptions.

However, Entrepreneurship is a process of designing a new business or running an already existing business that was previously initiated on a small scale (Ratten and Entrepreneurship, 2020). Entrepreneurs are important source of boost to the country's economy by introducing innovative technologies, services, products, and by providing new opportunities and jobs that contribute to the economy (Liu, 2020).

A global public health emergency was declared on 11 March 2020, which affected majority of lives throughout the world, posing a challenge for healthcare professionals (Keni, 2020). In addition to its impact on human lives, this pandemic has influenced entrepreneurial business greatly throughout the world (Liguori and Winkler, 2020). It is estimated that nearly 40% of the new businesses will fail and many businesses will be compelled to terminate contracts of full-time employees (Vaccaro, 2020). On the other hand in some businesses, there was an increase in entrepreneurial activity noticed (Bacq, 2020).

These businesses included automotive companies that experienced high demands for new product lines, such as ventilators. Throughout the world, steps are being employed on the company level as well as individual levels to tackle this crisis (Kuckertz, 2020). Due to preventive procedures taken by the governments of many countries, numerous small scale businesses, startups and entrepreneurs are the most vulnerable groups that are greatly impacted in this time of crisis (Ratten and Policy 2020). Many start-ups have re-directed their business strategies to produce products that are in greater demand. Producing these goods is a fundamental survival strategy and growth opportunity for these businesses (Sedlacek and Sterk, 2020). Covid-19 created problems such as meeting deadlines in both the short and long term (Maritz, 2020). It is on this premise that this study, analyze the impact of the COVID-19 pandemic on entrepreneurial development in Nigeria. The general objective of this study is an appraisal of the entrepreneurial impact of Covid-19 on development while the specific objectives are; to analyze the relationship between Covid-19 pandemic and entrepreneurial development. To examine the impact of Covid-19 pandemic on entrepreneurial development. The studv hypothesizes that: There is no significant impact of Covid-19 on entrepreneurial development? There is no relationship between the impact of Covid-19 and entrepreneurial development?

II. LITERATURE REVIEW

According to Zhu(2020), the first pneumonia case was discovered on December 8, 2019 in a wet market in Wuhan, the capital city of Hubei Province of China. Afterwards, several clusters of patients with such pneumonia were reported throughout late December 2019. Pandemics are not new and have occurred at different stages in human history (Ferguson . 2020) Given the rise in the frequency of pandemics, many researchers including Garrett (2007), Keogh-Brown (2008) and most recently Madhav (2017) and Fan (2018) argue that a large-scale global pandemic was inevitable. Ferguson et al. (2020) from the Imperial College London COVID-19 Response Team claim that COVID-19 is the most serious episode since the 1918 Spanish Influenza pandemic. Despite the comparisons, Barro (2020) concludes non-pharmaceutical interventions that the



implemented during 1918 Spanish Influenza pandemic were not successful in reducing overall deaths. This was because the interventions were not maintained for a sufficiently long period of enough time. He estimates that the mean duration of school closings and prohibitions of public gatherings was only 36 days, whereas the mean duration of quarantine/isolation was 18 days (0.05 years). These numbers were quite small compared to the number of days that the 1918 Spanish influenza pandemic was active.

Pandemics are expected to have a severe negative impact on economic activities, at least in the short run. According to Jonas (2013), the impact ranges from: i) avoidance reaction due to social distancing measures (e.g., individuals might forgo consumption and purchases of certain goods and services), ii) small direct costs (e.g., hospitalization and medical costs), iii) larger indirect costs (loss of labor, production), and iv) off-setting and cascading effects (disruption of services, travel and others). A number of studies tried to anticipate the economic loss from a pandemic for example, Jonung and Roeger (2006) forecasted that a hypothetical global pandemic would lead to 1.6 percent drop in GDP for the European Union.

III. METHODOLOGY

This research adopted survey research design to give room for comprehensive overview of the variables under examination. In this case, Covid-19 pandemic is considered as the entrepreneurial independent variable and development as the dependent variable. In order to achieve the objectives of the study, primary data was sourced by the use of structured questionnaire. Oyo state metropolis was chosen because it's one of the states that has the highest number of people infected with Covid-19 pandemic (NCDC, 2020). Hence, 156 questionnaire were distributed across the 33 Local Government Areas in Oyo State. Meanwhile, respondents were chosen by using stratified sampling techniques to divide Oyo State into three senatorial districts. Simple random sampling was adopted so as to give each item in the population an equal probability of being selected. Sampling size for this study is 156 respondents. Primary data was collected by direct contact with entrepreneurs (owners) of Micro Small and Medium businesses, with the use of (156) structured questionnaire distributed to the respondents (MSMEs) to examine the impact of Covid-19 on their performance through their day to day activities.

To analyze the data, descriptiveanalysis was used in analyzing the socio demographic factors of the entrepreneurs. Correlation analysis was carried out to measure the degree of correlation of Covid 19 pandemic and entrepreneurial development in terms of volume of sales (VOS), cost of productivity (COP), and ease of goods distribution (EGD) when there is lockdown, partial lockdown and when there is no lockdown. Multiple Regression analysis was used to interpret and to test the hypothesis of independent variables involved on dependent variable. Tables. percentages and frequencies were presented to calculate and interpret respondent's opinion from the questionnaires. Hence, the questionnaire was administered to respondents from both registered and unregistered MSMEs which gives room for sound opinion about questions contained in the research instrument.

Relationship between Covid 19 pandemic and entrepreneurial development

In order to determine the relationship between Covid 19 pandemic and entrepreneurial development, correlation analysis was implored which was presented in table 1. Covid 19 pandemic was proxy by Level of lockdown(LOCKDOWN) while volume of sales, cost of productivity and ease of goods distribution were used to proxy entrepreneurial development. It shows that the relationship between the cost of productivity (NOLOCKCOP) when there is no lockdown and ease of goods distribution when there is no lockdown is moderate at correlation value of 0.577. Similarly, the relationship between the cost of productivity (NOLOCKCOP) when there is no lockdown and volume of sales when there is no lockdown is moderate at correlation value of 0.631. Furthermore, the relationship between the cost of productivity (NOLOCKCOP) when there is no lockdown and cost of productivity when there is lockdown has a weak correlation at correlation value of 0.331. Also, the relationship between ease of goods distribution (NOLOCKEGD) when there is no lockdown and volume of sales when there is no lockdown is moderate at correlation value of 0.611. The relationship between ease of goods distribution (NOLOCKEGD) when there is no lockdown and ease of goods distribution when there is lockdown is moderate at correlation value of 0.787. In the same vein, the relationship between volume of sales (NOLOCKVOS) when there is no lockdown and volume of sales when there is lockdown is moderate at correlation value of 0.489. In each case, critical p-value was 0.000 which was lower than 0.05 significant level. There existed



statistically significant relationship between Covid

19 pandemic and entrepreneurial development.

	-	NOLOCKC OP	NOLOCKEGD	NOLOCKVO S	LOCKDO WN
NOLOCKCOP	Pearson Correlation	1	.577**	.631**	.331**
	Sig. (2-tailed)		.000	.000	.000
	Ν	156	156	156	156
NOLOCKEGD	Pearson Correlation	.577**	1	.611**	.787**
	Sig. (2-tailed)	.000		.000	.000
	Ν	156	156	156	156
NOLOCKVOS	Pearson Correlation	.631**	.611**	1	.489**
	Sig. (2-tailed)	.000	.000		.000
	Ν	156	156	156	156
LOCKDOWN	Pearson Correlation	.331**	.787**	.489**	1
	Sig. (2-tailed)	.000	.000	.000	
	Ν	156	156	156	156

Table 1: Correlations of the relationship between Covid 19 pandemic and entrepreneurial development

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Researcher's field survey (2021)

Impact of Covid-19 pandemic on entrepreneurial development.

In order to examine the impact of Covid 19 pandemic on entrepreneurial development, multiple regression analysis was implored which was presented in table 2. Multiple correlation coefficient (R) reflects joint impact of cost of production, ease of goods distribution and volumes of sales of entrepreneurs in Ogbomoso when there is no lockdown on rate of return on Investment (ROI) when there is lockdown at 80.6%. The coefficient of determinant (R^2) reflects the extent thatindependent variables (cost of productivity, ease of goods distribution and volumes of sales of entrepreneurs in Ogbomoso when there is no lockdown) explained the variation in Return on Investment (ROI) was 64.9%. Furthermore, the fvalue was 93.617 while the critical p-value was 0.000 which is lower than the level of statistical significance. The golden rule states that when the critical P-value is lesser than 0.05 level of statistical significance, the null hypothesis which states that there is no significant impact of Covid 19 on entrepreneurial development should be rejected and the alternative hypothesis which states that there is significant impact of Covid 19 on entrepreneurial development should be accepted. Thus it was inferred thatCovid 19 had significant impact on entrepreneurial development.

Table 2 Impact of Covid-19 pandemic on entrepreneurial development.

Model Summary							
Model	R		R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson	
1	.806		.649	.642	.49017	1.177	
			ANOVA				
Model		Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	67.479	3	22.493	93.617	.000	
	Residual	36.521	152	.240			
	Total	104.000	155				



International Journal of Advances in Engineering and Management (IJAEM) Volume 3, Issue 12 Dec 2021, pp: 1215-1221 www.ijaem.net ISSN: 2395-5252

			Coefficients			
Unstandardize		ed Coefficients	Standardized Coefficients	Т	Sig.	
Model		В	Std. Error	Beta		
1	(Constant)	.890	.112		7.942	.000
	NOLOCKCO P	182	.051	233	-3.576	.000
	NOLOCKEG D	.511	.038	.850	13.300	.000
	NOLOCKVO S	.080	.046	.117	1.745	.083

a. Predictors: (Constant), NOLOCKVOS, NOLOCKEGD, NOLOCKCOP

b. Dependent Variable: LOCKDOWN

Source: Researcher's field survey (2021)

IV. SUMMARY, CONCLUSION AND RECOMMENDATIONS

Findings from the correlation analysis above, shows that there is moderate relationship between entrepreneurs' cost of productivity (NOLOCKCOP) and ease of goods distribution (NOLOCKEGD) when there is no lockdown at 0.577. Likewise entrepreneurs' cost of productivity (NOLOCKCOP) and volume of sales (NOLOCKVOS) when there is no lockdown has a moderate correlationat 0.631 which implies that COP of entrepreneurs without Covid 19 pandemic in relation to EGD and VOS has a moderate relationship. In contrary, the relationship between entrepreneurs' cost of productivity (NOLOCKCOP)when there is no lockdown and cost of productivity (LOCKDOWN) when there is lockdown has a weak correlation at .331 but is statistically significant at 0.000 which inferred that lockdown affects the cost of getting man power to get work done by entrepreneurs compared with when there is no lockdownand therefore a weak relationship existed between the two variables (NOLOCKCOP and LOCKDOWN). Conversely, multiple correlation coefficient R (0.806) reflects strong joint impact of cost of production, ease of goods distribution and volumes of sales of entrepreneurs in Ogbomoso when there is no lockdown on rate of return on Investment (ROI) which implies thatCovid 19 pandemic hinders free movement of goods, cost of productivity and volume of sales, thus, affect return on investment of entrepreneurs at that period of the time. The coefficient of determinant R^2 (0.649) reflects the extent that independent variables (cost of productivity, ease of goods distribution and volumes of sales of entrepreneurs in Ogbomoso

when there is no lockdown) explained the variation in Return on Investment (ROI) was 64.9%. Furthermore, the f- value was 93.617 while the critical p-value was 0.000 which is lower than the level of statistical significance. The golden rule states that when the critical P-value is lesser than 0.05 level of statistical significance, the null hypothesis which states that there is no significant impact of Covid 19 on entrepreneurial development should be rejected and the alternative hypothesis which states that there is significant impact of Covid 19 on entrepreneurial development should be accepted. Hence, the influence of COVID-19 motivates entrepreneurs to rethink their real competencies, seek new opportunities, and redefine sustainable business models in a more intense and timely manner. Strategy of superior adaptability in shorter cycles, balancing between measures and concentrating on building innovation not limited to only entrepreneurs but other aspect of business at large during and after this period. Therefore, it can be concluded that Covid-19 has significant impact on entrepreneurial development in Oyo State.

Recommendation

As the country strives to cope with the uncertainties of this crisis and businesses continue implement their pandemic to response strategies, this study recommends that entrepreneurs shoulddevelop new competencies in terms of putting round peg in a round hole, such that cost of productivity is reduced at barest minimal in other to boost return on investment, implore good distribution channel that can accommodate uncertainties, improving experience management, and enhancing the experience of professionals (including academia, consultants, etc.) regarding



the application of new technologies within distribution and business models during this period is an essential regional development need over the long-term. By focusing on these, entrepreneurs and SMEs will not just survive this pandemic but will emerge capable of adopting new technologies, and become more competitive under these challenging conditions.

REFERENCES

- Abioye O, Ogunniyi A, and Olagunju K [1]. (2020);Estimating the Impact of COVID-19 on Small and Medium Scale Enterprise: Evidence from Nigeria:1International Institute of Tropical Agriculture (IITA), Nigeria 2International Food Policy Research Institute (IFPRI), NIgeria 3Economics Research Branch, Agri-Food and Biosciences Institute (AFBI), 18a Newforge Lane, Belfast BT9 5PX, UK.
- [2]. Bacq, S., Geoghegan, W., Josefy, M., Stevenson, R., & Williams, T. A. (2020). The COVID- 19 virtual idea blitz: Marshaling social entrepreneurship to rapidly respond to urgent grand challenges. Business Horizons, 63, 705–723.
- [3]. Barro, R. J. (2020). Non-Pharmaceutical Interventions and Mortality in U.S. Cities during the Great Influenza Pandemic, 1918-1919 (Working Paper No. 27049; Working Paper Series). National Bureau of Economic Research. <u>https://doi.org/10.3386/w27049</u>
- [4]. Barro, R. J., Ursúa, J. F., &Weng, J. (2020). The Coronavirus and the Great Influenza Pandemic: Lessons from the "Spanish Flu" for the Coronavirus's Potential Effects on Mortality and Economic Activity (Working Paper No. 26866; Working Paper Series). National Bureau of Economic Research. <u>https://doi.org/10.3386/w26866</u>
- [5]. Craven M., Liu L., Mysore M., and Wilson M. (2020). Risk Practice COVID-19: Implications for business. McKinsey & Company.
- [6]. Fan, Y., Orhun, A. Y., &Turjeman, D. (2020). Heterogeneous Actions, Beliefs, Constraints and Risk Tolerance During the COVID-19 Pandemic (Working Paper No. 27211; Working Paper Series). National Bureau of Economic Research. <u>https://doi.org/10.3386/w27211</u>
- [7]. Ferguson, N., Laydon, D., Nedjati Gilani, G., Imai, N., Ainslie, K., Baguelin, M., Bhatia, S., Boonyasiri, A., Cucunuba Perez, Z., Cuomo-Dannenburg, G., Dighe, A., Dorigatti, I., Fu, H., Gaythorpe, K., Green,

W., Hamlet, A., Hinsley, W., Okell, L., Van Elsland, S., ... Ghani, A. (2020). Impact of non-pharmaceutical interventions (NPIs) to reduce COVID19 mortality and healthcare demand. Imperial College London. https://doi.org/10.25561/77482

- [8]. Garrett, T. A. (2007). Economic Effects of the 1918 Influenza Pandemic. Federal Reserve Bank of St. Louis, 26.
- [9]. Jonas, O. B. (2013). Pandemic Risk (p. 40)
 [World Development Report 2014 on Risk and Opportunity: Managing Risks for Development].
 <u>https://openknowledge.worldbank.org/bitstre</u> <u>am/handle/10986/16343/WDR14 bp Pande</u> <u>mic Risk Jonas.pdf?sequence=1&isAllowe</u> <u>d=y</u>
- [10]. Jonung, L., &Roeger, W. (2006). The macroeconomic effects of a pandemic in Europe: A model-based assessment. DG ECFIN, European Commission, Brussels. <u>https://ec.europa.eu/economy_finance/public ations/pages/publication708_en.pdf</u>
- [11]. KPMG, (2020). Covid-19: A Business Impact Series. Financial, Tax and Regulatory Considerations to Manage COVID-19 Disruptions. Issue 2.
- [12]. Kuckertz, A., Br`andle, L., Gaudig, A., Hinderer, S., Morales Reyes, C. A., Prochotta, A., ... Berger, E. S. C. (2020). Startups in times of crisis – A rapid response to the COVID-19 pandemic. Journal of Business Venturing Insights, 13, Article e00169.
- [13]. Lewis, D., Mertens, K., & Stock, J. H. (2020). U.S. Economic Activity During the Early Weeks of the SARS-Cov-2 Outbreak (Working Paper No. 26954; Working Paper Series). National Bureau of Economic Research. <u>https://doi.org/10.3386/w26954</u>
- [14]. Liguori, Eric, and Christoph Winkler. (2020).
 From Offline to Online: Challenges and Opportunities for Entrepreneurship Education Following the COVID-19 Pandemic. SAGE Publications Sage CA: Los Angeles, CA.
- [15]. Liu, L., Moon, H. R., &Schorfheide, F. (2020). Panel Forecasts of Country-Level Covid-19 Infections (Working Paper No. 27248; Working Paper Series). National Bureau of Economic Research. <u>https://doi.org/10.3386/w27248</u>
- [16]. Liu, Yipeng, Jong Min Lee, Celia J Asian Business Lee, and Management. (2020).
 "The challenges and opportunities of a global health crisis: the management and



business implications of COVID-19 from an Asian perspective."

- [17]. Madhav, N., Oppenheim, B., Gallivan, M., Mulembakani, P., Rubin, E., & Wolfe, N. (2017). Pandemics: Risks, Impacts, and Mitigation. In D. T. Jamison, H. Gelband, S. Horton, P. Jha, R. Laxminarayan, C. N. Mock, & R. Nugent (Eds.), Disease Control Priorities: Improving Health and Reducing Poverty (3rd ed.). The International Bank for Reconstruction and Development/ The World Bank. <u>http://www.ncbi.nlm.nih.gov</u> /books/ NBK 525302/
- [18]. Maritz, Alex, Aron Perenyi, Gerrit de Waal, and Christoph J Sustainability Buck. 2020. "Entrepreneurship as the Unsung Hero during the Current COVID-19 Economic Crisis: Australian Perspectives." 12 (11):4612.
- [19]. Meahjohn I., and Persad P., (2020); The Impact of COVID-19 on Entrepreneurship Globally. In: Journal of Economics and Business, Vol.3, No.3, 1165-1173.Asian Institute of Research Journal of Economics and Business Vol.3, No.3, 2020 1166
- [20]. NCDC (2020) First Case of Corona Virus Disease Confirmed In Nigeria https://ncdc.gov.ng/news/227/first-case-ofcorona-virus-disease-confirmed-in-nigeria retrieved on May 11, 2020
- [21]. Ratten, Vanessa J International Journal of Entrepreneurial Behavior, and Research. 2020. "Coronavirus disease (COVID-19) and sports entrepreneurship."
- [22]. Ratten, Vanessa J International Journal of Sociology, and Social Policy. 2020. "Coronavirus (covid-19) and social value cocreation."
- [23]. Ratten, Vanessa J Journal of Small Business, and Entrepreneurship. 2020. "Coronavirus (covid-19) and entrepreneurship: changing life and work landscape."1-14.
- [24]. Sedlacek, Petr, and Vincent Sterk. 2020."Startups and Employment Following the COVID-19 Pandemic: A Calculator."
- [25]. Vaccaro, Alexander R, Charles L Getz, Bruce E Cohen, Brian J Cole, and Chester J J (2020). The Journal of the American Academy of Orthopaedic Surgeons Donnally III.. "Practice management during the COVID-19 pandemic."
- [26]. Zhu, N., Zhang, D., Wang, W., Li, X., Yang, B., Song, J., Zhao, X., Huang, B., Shi, W., Lu, R., Niu, P., Zhan, F., Ma, X., Wang, D., Xu, W., Wu, G., Gao, G. F., Tan, W., & China Novel Coronavirus Investigating and

Research Team. (2020). A Novel Coronavirus from Patients with Pneumonia in China, 2019. The New England Journal of Medicine, 382(8), 727–733. https://doi.org/10.1056/NEJMoa2001017