

Public Authority Regulations and Invisible Hands of Adams Smith in A Free Market Economy During Emergency: The Paradoxical Relationship

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PUBLIC AUTHORITY REGULATIONS AND INVISIBLE HANDS OF ADAMS SMITH IN A FREE MARKET ECONOMY DURING EMERGENCY: THE PARADOXICAL RELATIONSHIP

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ABSTRACT

The study investigated public authority regulations and the invisible hands of Adam Smith in a free market economy during the emergency a paradoxical relationship but the focus is to determine the place of public authority regulation of prices of goods during pandemic. It generated primary data by administering sets of questionnaires to selected firms and the data was analyzed using the Chi-square analysis. The two hypotheses formulated for the study was tested at a 5% level of significance. Results revealed that there were no price variations in pharmaceutical products and bakery companies' products during the first wave of covid'19 pandemic in Nigeria. The findings show that because the restriction of movement did not affect essential commodities, and international borders were open for pharmaceutical goods and other essential products. Though discovery from the skeletal interviews conducted, showed an increase in demand for bakery products but no corresponding rise in prices. This movement restriction was affected by the firm order and directives of the government as carried out by COVID-19 task force. It is suggested that government should regulate the prices of commodities during emergencies to curtail artificial inflation.

Keywords: Adam Smith, COVID19 pandemic, Free Market, Invisible Hands, Paradoxical, Public Regulation.

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INTRODUCTION

In every economy around the world, there are go-betweens who interact by exchanging ideas, technologies, monies, goods and services. These economic agents include producers, suppliers, customers, workers, bankers, promoters, brokers, etc., as a result of the interplay among demand, supply and price mechanisms that connect these agents. In such transactional relationships, the equilibrium point between two or more parties is determined by demand and supply at the agreed price. Equilibrium's positions are determined at the fixated points where aggregate demand equates or crosses aggregate supply graphs (Farayibi & Asongo, 2020). This explains the triangular relationships connecting the three market forces. Under normal economic circumstances, markets are regulated by the invisible hands of demand and supply, maybe, in conjunction with trade unions and the government. In a capitalist regime, market forces have greater leverage in price regulation, while in a socialist' economy, the government largely dictates the fixation of price and even production. Since, there are



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rarely complete capitalist or complete socialist economies in the world, the fusion of invisible hands of Adams Smith, Trade unions and Policymakers regulate the activities of the market.

Alex et al., (2020) contend that demand is volatile in times of exigency. Obviously, the demand and supply of goods and services are not usually static. They are dynamic phenomena that create price fluctuations in non-monopolistic markets. Demand, supply, or price oscillates both during pandemic or regular market periods, however, with higher frequencies during crises. It is possible to predict changes in demand, supply, and price in non-crisis times, but, challenging to estimate with accuracy because of the uneven nature and changing predicaments. In economics, a monopolistic firm has the right (preference) to fix prices and deciding the number of goods to produce which may lead to abnormal profits during a pandemic if government categorizes its products as essential commodities.

In the context of covid19 pandemic, there were unprecedented pressures on both the public and private economies (Alex, et al. 2020). Demand, supply and price of goods and services are at the epicenter of these global economic dynamics. The popular construct of 'invisible hands' of trade that determine the price regime may have been displaced by the Covid-19 crisis. Market forces are temporarily on hold, allowing for panic purchase influenced by the unclear picture of the ravaging health and economic tragedies. Alex et al.,(2020) also posit that the coronavirus disease and global economic crises may have raised the continuum of demand, supply, and price reactions in the world. The imposition of lockdown by the Federal and State governments to mitigate the spread of the Coronavirus disease is assumed as one of the causes of disruptions in demand and supply in the markets. Considering the above background, it is crystal clear that studies have not been carried out on the power of government in regulating the prices of goods during global or local emergencies. It is this gap this empirical investigation intends to bridge. Based on the foregoing, the study's objectives are to determine the role of government in stabilizing or regulating prices of commodities during emergencies (with particular reference to covid'19 pandemic) in a free market economy and its impact on the citizen's disposable income and standard of living.

Research Questions

1. Does public authority regulation affect the prices of goods during an emergency?
2. Does public authority regulation affect demand for goods and services during an emergency?
3. What is the role of the invisible hand of Adam Smith in price regulation during an emergency?
4. What is the position of the invisible hand of Adam Smith in regulating the demand and supply of goods during an emergency?

REVIEW OF RELATED LITERATURE

Concept of Public Authority Regulation of an Economy

Public authority regulation (PAR) represents the authority or power of a state or country to control the socioeconomic and political activities under its domain (Bryan, 2009). The state has extensive powers to regulate, and sway the economic and political pendulum or activities of a country according to laws (the Constitution, Edicts, Decrees, etc.), policies and program, to improve the lives of her citizenry. In respect of the economy, regulations may take the form of fiscal and monetary policies usually under the supervision, use, and control of the Central Bank to either contract or expand the economy (Jhinghan, 2008). Several agencies and parastatals are empowered, according to law, to carry out certain specific assignments. Some public bodies or organs, maybe ad hoc, are established to carry out a defined and, or definite task to be completed within a given period. The Covid-19 Task Force in Nigeria was an ad hoc Committee set up by the government to implement the Covid-19 protocols in line with WHO and NCDC models. In practice, governments, on a periodic basis, (generally on a yearly tranche), prepare budgets to streamline activities matched with the expected income for such duration. Therefore, PAR is an extensive term or be referred as an elastic concept that relates to the power of government to execute policies and programs that enhance good governance. It is the instrument that necessitates an ideal and acceptable system of governance in a polity. It is the approved, appointed, and accepted legal power to regulate, control as well as checkmate all activities, transactions, and relationships according to constitutional, and bilateral/multilateral mandates. Such authority is binding on the citizens, and it is incumbent on them to obey orders from all approved public agencies.



Concept of the Invisible Hands of Adam Smith

The concept or hypothesis of "invisible hands" was famously crafted by Adam Smith in his book titled "The Wealth of Nations" in 1776, which describes how free market economies incentivize or motivate individuals while acting and pursuing their interests to produce what is necessary and beneficial to the collective purpose of the society. In Kaushik (2011), Catherine, the book reviewer, alluded to the concept or phrase "invisible hand" as the principle of game theory. The basic tenet of Adam Smith's invisible hand has been criticized and referred to as self-interested behaviors pursued to maximize social welfare. The invisible force theory of demand and supply is often a misunderstood theory in the words of critiques. Gesheva and Vasilev (2016) argue that, in modern economies, competitive markets are free to allocate or apportion the usual scarce resources efficiently when a government does not intervene or play a prominent role. Thus, the invisible hands represent a metaphor that demonstrates the instincts in men that propel and direct their behaviors in a free market economy so that a greater variety of goods and services are offered and received. It is a typical scenario of economic or transactional relationships and interactions that are not intentional and not controlled by excessive regulations. Adam Smith portrays a system of liberty in such an economic process that would culminate at a point of optimization. This hypothetical fix is often regarded as where the demand and supply of goods and services are notionally equal.

According to scholars' agreement, theoretically there are three economic systems - the free market economy, the command economy, and the mixed market economy. The free market economy characterizes a limited intervention from the government, while the command economy demonstrates a system (political, social and economic) controlled by the government. The mixed market economy typifies an economy regulated by the combined factors or inherent nature of free and command market economies. It is the most widespread in the 21st century (Gesheva & Vasilev, 2016). The doctrine of invisible hand, according to Adam Smith's treatise, would thrive better in a free market economy, however such existence is somehow lean/hard due to the prevailing mixed economic structure across the globe. In Burstein and Burstein (n.d), the invisible hand hypothesis was paraphrased to mean "every individual... neither intends to promote the public interest nor knows how much he is promoting it... He intends only his gain, and he is... led by an invisible hand to promote an end which was not part of his intentions," coined from the perspective of moral sentiments. According to Grampp, (Minowitz, 2004), describes the invisible hands with the following quote "true, the invisible hand does have a consequence that is unintended, but the consequence is not a beneficial social order. It is a benefit that while important is of a lesser order..."

Concept of Emergency/Pandemic in an Economy

The relationship between emergencies or pandemics and the general economy (global and local) can be confidently regarded as strange bedfellows that are more or less incompatible, *stricto sensu*. Pandemics have been explained to mean sudden and unexpected occurrences that frustrate economic and productive activities (Atagba, 2020; Baldwin, 2020; Cremades, 2019). The Covid-19 pandemic was adjudged the worst crash to the global economy, and more so, stringent containment measures were deployed to curtail the whirlwind nature of its cancerous spread. Measures ranging from social distancing, washing hands, and wearing face masks to the quarantine of victims of Covid-19 disease were enforced by everyone, including the Covid-19 Task Force. In Nigeria, the heinous activities of the Boko Haram terrorist sect have caused untold mayhem to the Nigerian economy. Soludo (2020) writes about the twins' maladies of sporadic health diseases (Covid-19) and the resultant collapse of the global economy, UN report (2020) and Vilela (2020) hammer on the closure of educational institutions consequent upon Covid-19 invasion of the global space and Edih et al., (2022) reiterates the alarming rate of mortality of Covid-19 patients and warns that such spiral effects will not abate except tactical and multifarious measures were drafted. Also, Almut et al., (2020) and Tabish (2020) surmise that the sudden occurrence of the novel coronavirus has occasioned dislocations in global economic activities.

The resultant effects of Fulani herders led to the killings of thousands of farmers, massive displacement of people from their ancestral lands, destruction of farms, and produce, and a leeway to pervasive insecurity across the length and breadth of the country. The incessant kidnapping of school children, among whom are the Chibok girls and the uncountable kidnapped of people for ransom, has become a lucrative business in the hands of Fulani herdsmen. As such, the problem of insecurity and harsh economic conditions are another dimension of Soludo's twin maladies facing the Nigerian people. During pandemics, whether happening globally or locally, the consequences on economic indices/indicators are usually negative, resulting in a rise in prices (indication of an inflationary trend in



times of emergency is shocking and swift) of goods and services, a hike in the cost of living, reduction in the standard of living, abnormal profiteering for monopolists selling essential commodities in a free market economy (Cole, 2015; Jhinghan, 2008). The presumed consequences of artificial hoarding of products and the possible hike in such products may lead to panic buying, thereby forcing the price to rise even astronomically.

Empirical studies

Lee and Mckibbin's (2003) study on the effects of the SARS epidemic found that there was significant reduction in consumption of goods and services, an increase in operating costs, and risks of investments. The degree of shocks to an economy depended on the country's vulnerability to the disease. However, the shocks were not limited to the affected countries. Boom, et al. (2005) study also demonstrated the economic impact of the mutated avian influenza strain using the Oxford Economic Forecasting Model. It revealed demand contraction in two-quarters of Asia, resulting to 2.6 percent Asian GDP or US \$3.2 billion, more profound shock to consumption, and loss of revenues from exports amounted to 6.5 percent of GDP (US \$282.7 billion). The study also showed decreased global GDP of about 0.6 percent while global trade of goods and services contracted by 14 percent (US \$2.5 trillion). Farayibi and Asongu (2020) had a study on the economic consequences of the Covid-19 pandemic in Nigeria. The aggregate supply and aggregate demand AS-AD model was the theoretical anchor for the study. The authors assert that global economic fluctuations were generated by the Covid-19 pandemic. However, the pandemic had insignificant adverse effects on macroeconomic variables, inflation, employment, exchange, and GDP growth in Nigeria. To empirically assert causality between these correlations, time was of the essence.

Comparatively, Covid-19 has a disproportionate impact on the elderly health status. The lockdown measures have disrupted supply chains, aggregate demand and consumption patterns globally than its predecessors. Economic shocks, and financial market turbulences have been amplified, resulting in borrowings and higher debt levels for households, firms, and countries (Abel, 2020; Boissay and Rungcharoenkitkul, 2020). Carlsson Szlezak et al., (2020a, 2020b) listed three channels of transmitting the negative economic impact of Covid-19, namely, direct, indirect, and supply-side disruptions. The authors emphasized that, direct impact relates to a reduction in consumption of goods and services, and indirect impact affects the financial market and the real economy. The lockdown of production processes has negatively affected supply chains, labor demand, and employment.

Baldwin (2020) contended that Covid-19 has adversely affected the flow of income in the economy. Households have reduced consumption and savings levels due to no payment by employers. The reduction in demand for imports is causing a continuous reduction of income for the rest of the world. Demand and supply shocks have caused displacements in domestic and international supply chains. Gourinchas (2020) described the relationships among economic agents worldwide (employees, firms, suppliers, consumers, and financial intermediaries). He posited that everyone is an employee, consumer, lender, etc., to another. Any disconnection of the supply chain (circular flow) will result in a 'cascading effect' that will rob other agents.

RESEARCH METHODOLOGY

Research Design

This study employed questionnaires to gather primary data from respondents chosen from selected companies. Companies used were selected based on a simple random sampling technique. The primary data were analyzed using non-parametric statistical analysis known as the Chi-square method. Hypotheses were tested at a 5% level of significance.

Research Respondents

The study's population comprises a staff of 30 selected pharmacy stores and bakeries in Delta State, Nigeria. By the application of a simple random sampling technique, 90 staff was the representative sample.

Research Instrument



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Primary data were generated by the administration of a structured questionnaire to chosen respondents. The questionnaire was subjected to validation test using the content/sampling a validation method.

Data Analysis

The two hypotheses were tested at a 5% level of significance using the chi-square statistical analysis.

Model specification

The Chi-square model is as follows;

$$X^2 = \frac{(O_1 - E_1)^2}{E_1}$$

Where; X^2 is Chi-square

O_1 is observed

E_1 is expected

Hypothesis H01; Covid'19 pandemic did not have a positive and significant relationship with, the demand, supply, and price of pharmaceutical products during the first wave.

H02 ; Covid'19 pandemic did not have a positive and significant relationship with demand, supply, and price of bakery products during the first wave.

RESEARCH FINDINGS AND DISCUSSION

The following tables contain details of responses and analyses based on the field report.

Table 2a: Combined response pattern for questions 3 and 4

QUESTIONS	SA	A	DA	SD	TOTAL
3	10	25	25	30	90
4	20	30	30	20	90
TOTAL	30	45	55	50	180

Table 2b:

Combined options	Resp. 3	Resp. 4	Total
Agree [SA/A]	35	40	75
Disagree [D/SD]	55	50	105
Total	90	90	180

$$\text{Expected frequency for [SA-A]} = \frac{75 \times 90}{180} = 37.5$$

$$\text{Expected frequency for [SD/D]} = \frac{105 \times 90}{180} = 52.5$$

$$X^2 = \frac{[35 - 37.5]^2}{37.5} + \frac{[40 - 37.5]^2}{37.5} + \frac{[52 - 52.5]^2}{52.5} + \frac{[50 - 52.5]^2}{52.5}$$

$$\text{Calculated Chi-square } [X^2C] = 0.57$$

$$\text{Tabulated value } [X^2T] = 3.84$$

$$\text{Level of significance} = 5\%$$

$$\text{Degree of freedom} = 1$$



Table 3a: combined responses pattern on questions 7 and 8

Question	SA	A	D	SD	Total
7	10	25	25	30	90
8	20	20	30	20	90
Total	30	45	55	50	180

Table 3b:

Combined options	Resp. 7	Resp. 8	Total
Agree [SA/A]	40	46	86
Disagree [SD/D]	50	44	94
Total	90	90	180

$$\text{Expected frequency for [SA-A]} = \frac{86 \times 90}{180} = 43.0$$

$$\text{Expected frequency for [SD/D]} = \frac{91 \times 90}{180} = 47.0$$

$$X^2 = \frac{[40-43]^2}{43.0} + \frac{[46-43]^2}{43.0} + \frac{[50-47]^2}{47.0} + \frac{[44-47]^2}{47.0}$$

$$X^2 = 0.80$$

$$\text{Calculate chi-square } [X^2C] = 0.80$$

$$\text{Tabulated value } [X^2T] = 3.84$$

$$\text{Level to significance} = 5\%$$

$$\text{Degree of freedom} = 1$$

The decision rule: the null hypothesis will be accepted when the Calculated value (X^2C) is less than the Tabulated value (X^2T), but the null hypothesis will be rejected if the Calculated value is greater than the Tabulated value.

Hypothesis one: covid'19 pandemic did not have a positive and significant relationship with the demand, supply, and price of pharmaceutical products during the first wave.

Results from Chi-square analysis revealed that the Calculated value (X^2C) is less than the Tabulated value (X^2T); $0.57 < 3.85$. It means there was no positive and significant relationship between covid'19 pandemic, and the demand, supply and price of pharmaceutical products during the first wave of the pandemic. This is because pharmaceutical products were classified by the government as essential commodities, and were not bound by the imposed restrictions during the first wave. There was no increase in the price of pharmaceutical products because the task force was very effective in implementing price control policy and monitoring during the pandemic. This result is in line with Almut(2020), that pharmaceutical companies and food industry benefited during covid'19 pandemic. Ordinarily, without government intervention, demand arises due to economic uncertainties, less substitutable goods and goods associated with health during epidemics (Baqae & Fathi, 2020 ; Guerriero et al., 2020).

Hypothesis two: Covid'19 pandemic had no influence on demand supply and price of bakery products during the first wave.

It was observed from the Chi-square analysis that the Calculated value (X^2C) is less than (X^2T); $0.80 < 3.58$. There was no positive and significant relationship between covid'19 pandemic and price of bakery products during the first wave. However, interview report showed that there were increase in the demand and supply without a proportionate rise in prices. This infers that the Tasks Force assigned to monitor anomalies; price inflation did a great job. Lee and McKibbin (2003) showed that during SARs epidemic there was large reduction in consumption of goods, and services. There was demand contraction in two quarters in Asia during Mutated Avian Influenza Strain (Bloom et al.,2005).



CONCLUSION

The paper concludes that the pandemic did not generate any rise in the prices of products sold by pharmaceutical and Bakery Companies. However, there was a mild increase in demand for bakeries without a proportionate rise in price. Reasons adduced are; one, they were classified as essential products; two, these products were not under any restriction, and three, these companies were not barred from production during the period and especially, the monitoring groups (i.e. effective public authority regulations) set up by government were enforced and implemented. It is therefore suggested that, governments should expand the numbers/categories of essential commodities and set up monitoring groups or taskforce to control, checkmate artificial hoarding, arrest hoarders and curtail deliberate inflation of prices for goods by producers/or marketers during periods of emergency. Such measures would help to maintain the approved prices for products and ameliorate the undeserved hardship imposed on the populace in times of pandemics.

REFERENCES

- Abel, B. (2020). A Literature Review of the Economics of COvid-19. IZA DP NO.13411. Adam Smith – Invisible Hand Economics Learning Community. <http://economicslearningcommunity.org/economics/economics-quotes/adam-smith-invisible-hand/>
- Alex, A. Todd, B., & Stephen, M. (2020). Pricing in a pandemic: navigating the Covid-19. <https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/pricing-through-the-pandemic-getting-ready-for-recovery>
- Ataguba, J. E. (2020). Covid-pandemic, a war to be won : understanding its economic implications for Africa. AppliedHealth Economies, Health Policy, 28, 325-328. <https://pubmed.ncbi.nlm.nih.gov/32249362/>
- Baldwin, R. (2020). The supply side matters: guns versus butter covid-style. <https://voxeu.org/article/supply-side-matter-guns-versus-butter-covid-style>.
- Boissay,F and Rungcharoenkitkul,P. (2020). Macroeconomic effects of Covid-19: An Early Review. In BIS Bulletin). Bank for International Settlements. <https://ideas.respec.org/p/bis/bisblt/7.html>
- Bryan, A. G. (2009). Black's law dictionary (9th ed.). West Publishing Co. United States. [https://www.scirp.org/\(S\(351jmbntvnsjt1aadkposzje\)\)/reference/ReferencesPapers.aspx?ReferencelD=1122846](https://www.scirp.org/(S(351jmbntvnsjt1aadkposzje))/reference/ReferencesPapers.aspx?ReferencelD=1122846)
- Burstein, N. R., & Burstein, P. L. (n.d). The invisible hand : economics of supply and demand, 1-45. <https://www.wm.edu/offices/auxiliary/osher/course-info/classnotes/burstein.pdf>
- Carlsson-Szlezak, Reeves,M. & Swartz, P. (2020a). Understanding the Economic Shock of Coronavirus. Harvard Business Review. <https://hbr.org/2020/03/understanding-the-economic-shock-of-coronavirus>.
- Cremades, R., Mitter, H., Tudose, N. C., Sanchez-plaza, A., Graves, A., Graves, A., & Brockmam, A., (2019). Ten principles to integrate the water-energy-land nexus with climate services for co-producing local and regional integrated assessment. Science TotalEnvironment, 693, 133662. <https://agris.fao.org/agris-search/search.do?recordID=US201900339472>
- Gesheva, N., & Vasilev, A. (2016). Revisiting the invisible hand hypothesis : a comparative study between Bulgaria and Germany. Econstor, 1-20. <https://hdl.handle.net/10419/144162>



- Gourinchas, P.O (2020). Flattening the Pandemic and Recession Curves. Mitigating the Covid Economic Crisis; Act Fast and Do Whatever. <http://viet-studies.net/kinhte/CovidEconomicCrisis.pdfpage38>
- Guerrieri, V., Lorenzoni, G., Straub, L., & Werning, i. (2020). Macroeconomic Implications of Covid-19: Can Negative Supply Shocks Cause Demand Shortages? (Working Paper No.26918; Working Paper Series). National Bureau of Economic Research. <https://doi.org/10.3386/w26918>.
- Jhinghan, M. L. (2008). Advanced economic theory: micro and macro economics (12th). VrindaPublication Ltd. Delhi, India. https://www.treca.org/furn./margin/advanced_economic_theory_by_m_l_jhinghan_eoiham_pdf
- Kaushik, B. (2011). Beyond the invisible hand: groundwork for a new economics. Princeton NJ, Princeton University Press, 273pp. <https://press.princeton.edu/books/paperback/9780691173696/beyond-the-invisible-hand>
- Lee, J. W. & Mckibbin, W. (2004). Globalization and Disease: the case of SARs. Asian Economic Papers, 3 (1), 113-131. <https://www.brookings.edu/wp-content/uploads/2016/06/20040203-1.pdf>
- Minowitz, P. (2004). Adam Smith's invisible hands. Econ Journal Watch, 1(3), 381-412. <https://econjwatch.org/articles/adam-smith-s-invisible-hands>
- Montgomery, J. J. (2022). Assessing the Digital Technology Competencies of Certified Public Accountants: A Gaze into Ilokano Workplace Context. Universal Journal of Educational Research. 1(2), 26-36. <https://doi.org/10.5281/zenodo.6937848>
- Puna, T. (2023). Environmental Conservation Practices in Baybay City Leyte. International Journal of Multidisciplinary Educational Research and Innovation. 1(1), 47-58. <https://doi.org/10.5281/zenodo.7379570>.
- Tabish, S. A. (2020). Covid'19 pandemic : emerging perspectives and future trends. Journal of Public Health, 9, 1286-1799. [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7282311/The Economic Consequence of the COVID-19 Pandemic in Nigeria-SSRN](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7282311/The_Economic_Consequence_of_the_COVID-19_Pandemic_in_Nigeria-SSRN) http://papers.ssrn.com/sol3/papers.cfm?abstract_id=3637668
- Vilela, P. (2020). Research and higher education in the time of Covid19. Lancet, 396(10251), 583,. [https://doi.org/10.1016/SO14-6736\(20\)31818-3](https://doi.org/10.1016/SO14-6736(20)31818-3)

