

EXPEDITORS CUSTOMER PLANNING SUSTAINABLE SUPPLY CHAIN DURING PANDEMIC OF COVID-19

M.T.M. Yazid¹, Mohd Ramzi Mohd Nor², Zulaikha³ and A. Rozelin⁴

^{1,2}Industrial Logistics Section, Universiti Kuala Lumpur, Malaysian Institute of Technology, mohdyazid@unikl.edu.my

³Industrial Logistics Section (Post Graduate), Universiti Kuala Lumpur, Malaysian Institute of Technology,

⁴Quality Section, Universiti Kuala Lumpur, Malaysian Institute of Technology, rozelin@unikl.edu.my

mramzi@unikl.edu.my

ABSTRACT

The Global Covid-10 pandemic has infected millions of the world's population at a shocking speed even though every nation does prevent the spread by imposing Movement Control Order. Expeditors try to help navigate a global health crisis together, which has had a significant impact on their daily lives and supply chains. Expeditors recognize the main critical links in the supply chain and take great pride in the role of helping ensure customers run smoothly. Expeditors have a vested interest in ensuring the long-term success of supply chains, many of which are crucial in combatting Covid-19 and protecting medical professionals and citizens overall. This paper is to understand how can an organization optimize its global sourcing strategy to offer the best value in addition to resiliency to withstand disruption? In this paper, qualitative and quantitative approach has been employed. As a logistics researcher will look out on all the various methodologies available in the effectiveness of solution offered to improve service reliability and cost predictability for customers under Expeditors. The on-going situation in supply chain interrupting the logistical and required new procedures in the Global trading, Geopolitical challenges, Risk Mitigation, Digital Transformation, Environment and Recognition of Supply Chain.

Keywords: Expeditors, Supply Chain, Customer, Planning, Sustainable

1. INTRODUCTION

The Global COVID-19 pandemic has infected millions of the world's population at a shocking speed day by day even though the country does Control Movement Order. Its emergence has halted and brought down economic activities across the globe due to the imposition on mobility to curtail the disease's spread. Over some decades, the world has not witnessed such an experience. However, it has a significant toll on various economies due to shocks emanating from deteriorating human and health conditions [1]. This pandemic is exceedingly a health crisis but social and economic crises due to the effects it has had on lives and economies at large.

Moreover, the pandemic's impact would be heterogeneous from country to country, and it is likely to widen inequalities and poverty globally. This development would stall the progress made to achieve the Sustainable Development Goals, requiring much attention and urgent response [2].

Based on reading on [3], the nexus of environment-health-economic impact on human lives and countries at large have become necessary due to the emergence of the COVID-19 pandemic.

Expeditors try to help navigate a global health crisis together, which has had a significant impact on their daily lives and supply chains. Expeditors recognize the many critical links in the supply chain and take great pride in the role of helping ensure customers run smoothly. In many years in this business, Expeditors have never witnessed a time where global supply chains have been more important today.

That is why, now more than ever, Expeditors are focused on taking care of employees and their service providers. So that, Expeditors and customers can continue to go above and beyond for the business's needs. As a non-asset, knowledge-based company, Expeditors exercise extreme diligence in selecting, approving, and reviewing all service providers such as ocean carriers, airlines, and truckers of all sizes. Expeditors select all the providers based on many criteria, including compatibility with the provider's culture very carefully. Providers' abilities to integrate the systems with Expeditors and compliant the processes with the government's Standard of Procedure is the crucial part. These ongoing partnerships helping many customers' businesses and ensure the highest level of service with reasonable costs.

Expeditors are committed to building sustained, mutually beneficial relationships with their service providers by prioritizing their short- and long-term viability. Expeditors believe strong, vested relationships are vital for mutual, long-term success and the continuity that ultimately provides global supply chains. In the current situation, that many service providers were already struggling before the pandemic. In recently, the industry has gone from twenty major ocean carriers down to nine. Many trucking companies worldwide are in trouble, and airlines have been devastated by the lack of passenger travel. Many of these service providers' viability is at risk, which threatens the stability and resiliency of supply chains moving forward [4].

Expeditors are honoring and strengthening partnerships with their service providers in an essential way: providing timely payment to meet payroll and taking care of their employees and their employees' families. In this critical way, supporting each other will help ensure these key players can continue to play a vital role in the global supply chain after this crisis has subsided. Expeditors have a vested interest in ensuring the long-term success of supply chains, many of which are crucial in combatting Covid-19 and protecting medical professionals and citizens overall. The supply chain remains reliant on these providers continuing to operate.

Expeditors are together, customers and their service providers, to managing the works pandemic to ensure the supply chain is getting along during struggling moments. Expeditors very much appreciate the opportunity to continue to serve customers' business. Customers can rest assured that the Expeditors team is working tirelessly through these challenging times with customers' business's best interests at heart.

2. PROBLEM STATEMENT

Global sourcing shifts is a complicated endeavor that involves more than just finding the lowest price for products and materials. When engaging in global sourcing, companies need to consider factors that span the entire range of the procurement process, such as maintaining a comprehensive sourcing strategy, identifying and evaluating suppliers, setting up logistical flows, evaluating delivery commitments, and managing suppliers. Organizations also require consider that the global situation can be fluid. Trade wars, changing economic landscapes, and other natural or human-made disruptions occur constantly. Supply chains need to be resilient enough to navigate through and around these disruptions with the least possible impact on their organization. Thus, companies need to regularly revisit their sourcing strategies, maintaining the best value with the least disruption over time. If an organization has not evaluated its comprehensive sourcing strategy lately, fast-changing economic and political climates should motivate them to ask if it is time to take another look.

3. REVIEW

While it is impossible to demonstrate precisely the economic outgrowth from the global pandemic of the latest COVID-19 coronavirus, there is an accord among economists that it would have a significant adverse outcome on the global economy. The primary projections estimated that should the virus has become a global pandemic, many manufacturing nations will lose approximately 2.4% of the worth of their gross domestic product (GDP) by 2020, uplifting experts to lower their global economic growth likelihood for 2020 from about 3.0% to 2.4%.

Worldwide GDP was projected at around 86.6 trillion U.S. dollars in 2019 to put this figure in point of view, indicating that only a 0.4% decline in economic development corresponds to about 3.5 trillion U.S. dollars in lost economic production. Nevertheless, these forecasts established before COVID-19 became a global pandemic before introducing mass public interaction interactivity to avoid the virus's transmission.

Since then, due to the occurrence, global stock markets have experienced a dramatic diminish. On March 16, 2020, the Dow Jones recorded its largest-ever single-day reject of nearly 3,000 points, breaking its existing 2,300-point track record, which achieves some days before [5]. The pandemic has intensified economic fallouts, causing a worldwide crisis whereby people are losing their lives. Others encounter unemployment due to the collapse of businesses because of the disruption in demand and supply. Hence, the pandemic is not only a health issue but a socio-economic issue suppressing the worldwide sustainable growth agenda [6].

The much foresee robust healthcare system in the advanced economies suffered tremendously due to the pandemic's emergence. Utmost medical officers were left in a dilemma to decide the patient who needs to survive. The inherence of a keen vaccine to stop the spread of the virus has caused high uncertainty globally because countries worldwide do not follow any reliable exit strategy [7].

The pandemic has sent the most unprotected and marginalized people into more deplorable states, for instance, persons with disabilities, older-aged persons, youths, ethnic minorities, and indigenous people. Tragically, individuals with no form of accommodation, such as migrants, refugees, or displaced persons, suffer significantly during the pandemic and will be continued to suffer the pandemic's aftermath. These evolutions are in existence as a result of loss of employment, mobility restrictions, and burgeoning rate of xenophobic events. Indeed, this pandemic is tremendously economic havoc and social problem that widens the inequality gap in the long term and medium if proper action is not put in place to curtail its exigency.

As discussed earlier, the stringency measures to curtail the virus's spread affect economies severely across the world. Astringency guidelines like the lockdown have affected productivity levels through workers' restriction to stay in their various homes to work rather than their workplaces. Besides, the restrictions on public gatherings, the imposition on travel bans, restriction on the attendance of public events, and tourist attraction site visits have contributed negatively to the hospitality and tourism sectors where most businesses have encountered a decline in their business activities by almost 90% [8]. Most significantly, businesses are dependent on social engagements, specifically in the tourism and entertainment sectors have experienced downturns, and most of their employees have lost their livelihood through job redundancy and layoffs. Furthermore, this shows the decline in consumption of their casualties and increased the uncertainty of people to spend, which caused many businesses to close down and fallout [9]. In place of this, most countries have projected to experience a sharp decline in economic growth, dipping their gross domestic product.

There are all economics factors may influence the performance of supply chain. The sourcing factor to consider in the disruption to the supply chain especially due pandemic as per below:

Sourcing Factors to Consider:

- The complexity of the process and regulations
- Inland transportation costs and time
- Labor costs
- Required capital investment
- Legal and tax requirements for new entities
- Transportation costs
- Licensing requirements
- Duties, taxes, and fees associated with imported goods
- Classification and documentation requirements for goods leaving or entering a country
- Other government agencies requirements by country
- Customs processing time
- Post-entry customs issues and delays
- Special trade programs & free trade agreements
- Transparency Index
- Transportation carrier options, services, and transit times
- Geopolitical, economic, environmental, health & safety considerations:

Examples:

On March 22, 2018, the US President signed a memorandum under the Section 301 of the Trade Act of 1974, instructing the United States Trade Representative (USTR) to apply tariffs of \$50 billion on Chinese goods.

Other ongoing trade actions globally –Digital tax, trade embargos, free trade agreements, trusted trader programs, Brexit, anti-dumping, forced labor investigations, intellectual property enforcement, e-commerce growth, WCO tariff amendments, trade embargos & controls.

4. RESEARCH FRAMEWORK

Based on [10] it is the 'blueprint' or guides for research. It is a research framework based on an existing theory in a field of inquiry related to and reflects the study's hypothesis. It is often 'borrowed' by the researcher to build his/her own house or research inquiry. It serves as the foundation upon which research constructs the case study. [11] and ([12]) compare the theoretical framework's role to that of a map or travel plan. Thus, when traveling to a particular location, the map guides the traveler's path. Additionally, the theoretical framework guides the researcher so that it would not diverge from the limits of the accepted theories to make final contributions scholarly and academic. Consequently, [13] agreed that the theoretical framework is the precise theory or theories about the angle of human endeavor that can help study events. The theoretical framework consists of theoretical principles, constructs, concepts, and tenants of a theory (Grant, *et al.*, 2014)

There are several conditional or caution areas that can measure on this research such as customers with little focus on challenges, determine operational necessities, when tool & resources, E-commerce impact and budget outlook on how to handle the shipment within the cost capacity. On these cautions areas, this research providing solutions to improve service reliability and cost predictability. The research was performed based on framework in Figure 1.

For supply chain professionals worldwide, COVID-19 has been a test of resilience. The pandemic is the first disruption in the supply chain and of this scale and magnitude. Every single company entire world is facing unpredictable situations whether original equipment manufacturers (OEMs), suppliers, distributors, or service providers have been impacted somehow.

The novel coronavirus was the first reared its ugly head in the last few weeks of 2019 in China, which accounts for 20% of the world's manufacturing output. As the virus spread rapidly throughout China and the rest of the world, many supply chains became casualties.

Since then, 70% of supply chain decision-makers said that COVID-19 is creating the most significant impact on the supply chain. Furthermore, other disruptions like supply constraints, logistics lockdowns, and increased demand add to the complexities of doing business during the pandemic. Expeditors, as the service provider, will come out with the solution on how to helps customers due to pandemics and advice the best ways based on the mode of transportation.

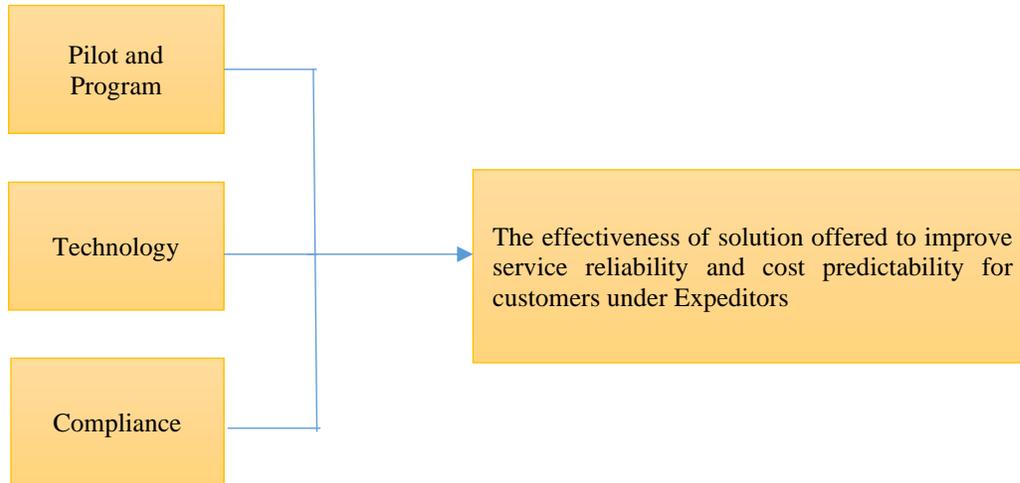


Figure 1: Research Framework

5. METHODOLOGY

Literature review has been used as the basic foundation for researcher to do research design. This study used many area of methods of data collection, the technique of data analysis, the time frame of the study and find out the result that related to the problem statement. In this study, qualitative and quantitative approach has been employed. As a logistics researcher will look out on all the various methodologies available in the effectiveness of solution offered to improve service reliability and cost predictability for customers under Expeditors. As mention earlier, this study conducts qualitative case where the study is focused on determine operational necessities before come out with tools and resources to overcome the disruptions supply chain due pandemic Covid-19. For the first level, Expeditors used qualitative method before collecting the data from customer in other stage.

Expeditors is provided in addition to or independent of transportation services, with value-added benefits derived from the global network. The customer planning is cover for all district for Expeditors help customers to improvise the process and business on disruption due pandemic Covid-19. Every country has a different issue and requirement on how to handle the issue. However, Expeditor provide the guidelines on the process and program that can apply for every single of customer. Figure 2 below shows the coverage of Expeditor services' entire world.

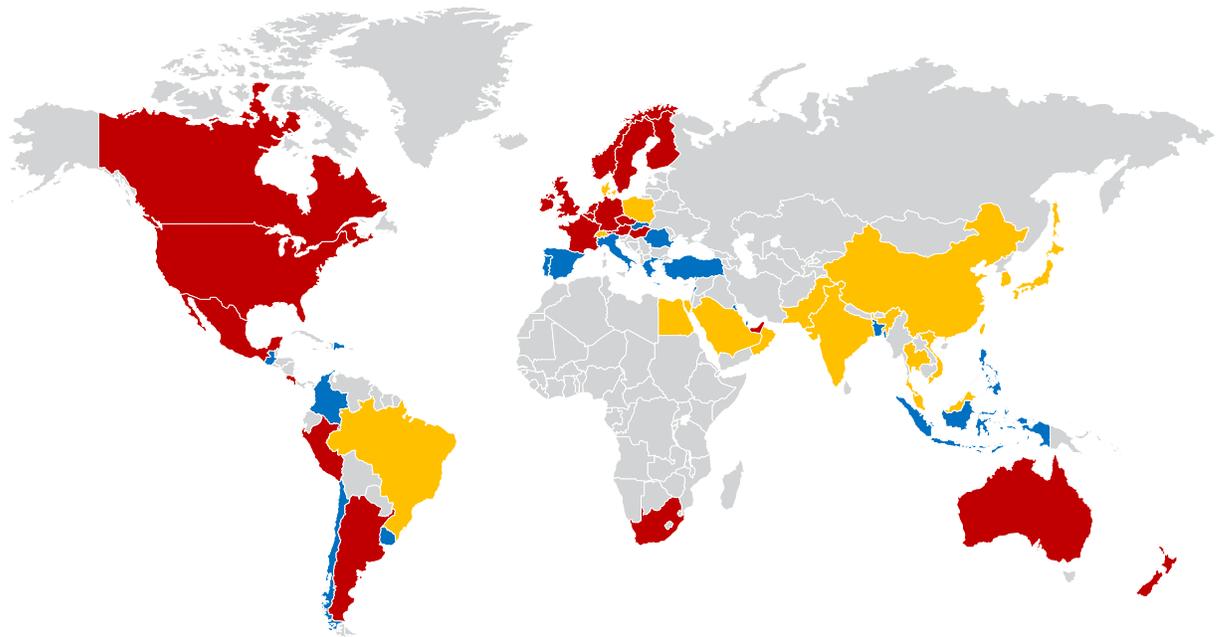


Figure 2: Expeditors Services in World Map

In Figure 3, showed the Expeditors services in Countries by names, Third Party countries and acting as both in red, blue color and yellow.

Expeditors			Third Party		
Argentina	Germany	Peru	Bangladesh	Kuwait	Turkey
Australia	Hong Kong	South Africa	Chile	Lebanon	Uruguay
Austria	Hungary	Scotland	Colombia	Panama	
Belgium	Ireland	Singapore	Dominican Republic	Philippines	
Canada	Luxembourg	Sweden	Greece	Portugal	
Costa Rica	Mexico	UAE (Dubai)	Guatemala	Qatar	
Czech Republic	Netherlands	United Kingdom	Indonesia	Romania	
France	New Zealand	United States	Italy	Slovak Republic	
Finland	Norway		Jordan	Spain	

Both as Expeditors and Third party	
Bahrain	Oman
Brazil	Pakistan
China	Poland
Denmark	Saudi Arabia
Egypt	Switzerland
India	Taiwan
Japan	Thailand
Korea	Vietnam
Malaysia	UAE (Abu Dhabi)

Figure 3: Expeditors, Third-Party and Both

In this study, researcher has obtained the solution from expertise committee under Expeditors. The Expertise committee is expertizing and always conducting the case study to regarding current issue on supply chain requirement entire world. The experts are representatives from department Global Product Compliance and Trade flow. The interview session for solution that Expeditors can offered has two types of collection data; 1) interview by conferences call and 2) via email. The interview session conducted with 4 elements:

Table 1: Sources of Data as 4 Elements for Interview

Determine Operational Necessities	What the operational that will evaluate on this project? What kind of review of operational will be do? How expeditors may support the customer's operation
Digital Transformation	What the technology use? On how to implement the technology?
Tool & Resources	What the tool and resources that going to be use? What the impact towards supply chain?
Budget outlook	What kind of mode transportation involve in this budget? If there have any solution provided?

6. RESULTS AND DISCUSSION

Based on the 4 elements during the extensive interview, the results are discussed accordingly.

A. Determine Operational Necessities - researcher define there are a lot of disruption on supply chain for every geographical. On the first stage, to find the best solution, Expeditors require to determine operational necessities that relevant for every district and customers. The operational necessities that expertise defined as:

1. Ongoing classification and FTA support
2. A review of service provider capabilities
3. Trusted trader programs
4. Duty mitigation services
5. Audit support

B. Tools & Resources

The global trade environment is in one of the most fluid states in memory with everything from trade wars to pandemics. Companies have to take a hard look at their supply chain resiliency, and ensure their company can adapt in an ever-changing world. Expeditors to help their customer to sustain in the business. Here the technologies that may help customer to facing the disruption:

Table 2: The Tool & Resources Used by Customer

Customer Sourcing Profiles	Supply Chain Solutions – Network Design	Living Model
Tradeflow	Tradewin	Order Management Program & Associated Data OM Scope and Rates -Walmart example
Systems costs for key procurement processes	FTA Navigator	Authorized Economic Operator -Supply Chain Security

C. E-commerce Impact

Significant acceleration of e-commerce penetration has occurred, in addition to increase in activity (more grocery adoption, more curbside pick-up). Many retailers with an e-commerce presence saw their volumes increase dramatically if the products sold are used at home.

Several opportunities have been discovered during the interview process and tabled as below:

Table 3: Issues & Tools/Resources

Issue	Tools/Resources
Growing E-Commerce Volumes	Expeditors order fulfillment services in their shared multi-client facilities
Last Mile Delivery Cost Reduction (transit time improvement)	Additional fulfillment sites closer to customers to reduce delivery zones or offer Expeditors negotiated courier discounts to customers
Supporting Increased Inventory Levels	Flexible space utilization model and overflow storage available in Expeditors warehouses
Scenario planning	Living Model
Network Analysis and Redesign	Supply Chain Solutions
Decreased dependence on competing e-commerce marketplaces	Reduce reliance on dominant providers to reclaim control using 3PL order fulfillment services

Table 4: Supply Chain Impact & Opportunities

Supply Chain Impacts	3PL Opportunity
Growing e-commerce volumes	Deliver expertise and increased inventory placement opportunities
Risk diversification	Reduce reliance on own asset base and employees/service provider base
Increased inventory levels	Flexible space utilization
New sourcing locations	Quickly develop new network infrastructure
Decreased dependence on competing e-commerce marketplaces	Reduce reliance on dominant providers to reclaim control
Competition for space and labor from new product categories	Enable access to shared space and labor models
Expectations for increased warehouse automation and Capex	Leverage partner investments with ROI spread across multiple industries and customers to preserve working capital
Increased oversight of health and safety of workers	Reduce complexities and costs of EH&S obligations
Re-evaluation of sourcing priorities	Quickly develop new network infrastructure

7. CONCLUSION AND RECOMMENDATION

As conclusion, expeditors come out will many ways to help customer on supply chain process within the budget by customer can absorb. This project focusing on planning “How can Expeditors help” in the way of management. This project will do more on research after the checklist given to customer and Expeditors received the data. This project will continue on how customer implement the planning given by expeditors in their business. Here the checklist that will distribute to customer after the program have been implemented.

A. Customer Preparation Checklist

- 1-Sourcing Factor Considerations:
- 2-Labor costs
- 3-Appropriate supplier base - expertise, quality, and number
- 4-Required capital investment
- 5-Regulatory and financial due diligence
- 6-Licensing requirements
- 7-Duties, taxes, and fees associated with imported goods
- 8-Classification and documentation requirements for goods leaving or entering from the potential new origin country
- 9-Other government agencies requirements by country
- 10-Customs processing time

- 11-Post-entry customs issues and delays
- 12-Special Trade Programs and Free Trade Agreements
- 13-Transparency Index
- 14-Transportation carrier and brokerage provider options, routings, cost, and transit times
- 15-Origin receiving and consolidation requirements and appropriate providers
- 16-Origin trucking requirements and appropriate providers
- 17-Geopolitical, economic, environmental, health and safety considerations
- 18-Landed cost calculations
- 20-Origin country current sourcing demand and ability to support growth both short-term and long-term (i.e. country infrastructure).

REFERENCES

- [1] I. Kickbusch, G. M. Leung, Z. A. Bhutta, M. P. Matsoso, C. Ihekweazu, and K. Abbasi, “Covid-19: How a virus is turning the world upside down,” *BMJ*, vol. 369, no. April, pp. 10–12, 2020, doi: 10.1136/bmj.m1336.
- [2] B. Reviews and H. D. Index, “United Nations Development Programme , Human Development Report 2020 . The Next Frontier Human Development and the Anthropocene , director and lead author Pedro Conceição , New York : United Nations , 412 pp .,” pp. 231–235, 2020.
- [3] S. A. Sarkodie and P. A. Owusu, “Impact of meteorological factors on COVID-19 pandemic: Evidence from top 20 countries with confirmed cases,” *Environ. Res.*, vol. 191, p. 110101, 2020, doi: 10.1016/j.envres.2020.110101.
- [4] B. B. B. E. D. I. C. Solution, “Solution for Innovation in Order Management Service & Freight Forwarding,” no. May, 2020.
- [5] P. Asare Vitenu-Sackey and R. Barfi, “The Impact of Covid-19 Pandemic on the Global Economy: Emphasis on Poverty Alleviation and Economic Growth,” *Econ. Financ. Lett.*, vol. 8, no. 1, pp. 32–43, 2021, doi: 10.18488/journal.29.2021.81.32.43.
- [6] M. Ciotti, M. Ciccozzi, A. Terrinoni, W. C. Jiang, C. Bin Wang, and S. Bernardini, “The COVID-19 pandemic,” *Crit. Rev. Clin. Lab. Sci.*, vol. 57, no. 6, pp. 365–388, 2020, doi: 10.1080/10408363.2020.1783198.
- [7] D. Altig *et al.*, “No Title,” 2020.
- [8] N. Fernandes, “Economic effects of coronavirus outbreak (COVID-19) on the world economy Nuno Fernandes Full Professor of Finance IESE Business School Spain,” *SSRN Electron. Journal*, ISSN 1556-5068, Elsevier BV, pp. 0–29, 2020.
- [9] N. Fraser, “Feminism, Capitalism, and the Cunning of History - An Introduction,” *Sci. l’Homme la Société*, vol. 17, p. 15, 2012, [Online]. Available: <https://halshs.archives-ouvertes.fr/halshs-00725055>.

- [10] C. Grant and A. Osanloo, "Understanding, Selecting, and Integrating a Theoretical Framework in Dissertation Research: Creating the Blueprint for Your 'House,'" *Adm. Issues J. Educ. Pract. Res.*, vol. 4, no. 2, pp. 12–26, 2014, doi: 10.5929/2014.4.2.9.
- [11] M. D. Adler, *Regulatory Theory*. 2010.
- [12] H. E. Green, "Use of theoretical and conceptual frameworks in qualitative research," *Nurse Res.*, vol. 21, no. 6, pp. 34–38, 2014, doi: 10.7748/nr.21.6.34.e1252.
- [13] J. Mensah, R.O., Agyemang, F., Acquah, A., Babah, P.A & Dontoh, "Discourses on conceptual and theoretical frameworks in Research : Meaning journal of African interdisciplinary studies," *J. African Interdiscip. Stud.*, vol. 4, no. 5, pp. 53–64, 2020, doi: 10.46769/jais.011972146583600143.