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THE VALUE OF TRADE ON COVID-19 VACCINATION MOBILIZATION IN THE ASEAN

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Abstract:

Trade is a fundamental economic activity that involves the exchange of commodities and services between countries with mutual economic interests through imports and exports. The study examined the value of trade in vaccine acquisition in the ASEAN region. The COVID-19 pandemic has caused major challenges in the world due to the health threat it caused to the community and the suspension of the majority of the world's activities. The study utilized a descriptive quantitative method utilizing secondary data from different reliable sources such as the ASEAN Statistical reports and WHO, focusing on the identified indicators namely, Covid- 19 cases, ASEAN trade by goods, vaccination rate, and vaccination sources. This study provides insights into how the trade partnership may have affected the acquisition of the COVID-19 vaccines. The study concluded that the inability of most of the countries in the ASEAN to produce COVID-19 vaccines can be attributed to the priorities in research and development which is important in today's societal development and survival. Further research may be required to provide direct measures using other indicators to extrapolate the role of trade in vaccine facilitation.

Keywords: Value of Trade, COVID-19 Vaccination, ASEAN

1) INTRODUCTION

Trade is a fundamental economic activity that involves the exchange of goods and services through imports and exports between countries of mutual economic understanding. The COVID-19 pandemic has caused major challenges in the world due to the health threat it caused to the community and the suspension of the majority of the world's activities. For most countries including the state member of ASEAN, the safety of each nation is considered to be a way of restoring the economy thus ensuring that each state member's territory substantial amount of vaccine to neutralize or stop the spread of the deadly virus. More than thirty vaccines have been approved for general or emergency use in countries all around the world. As of early 2022, over eleven billion doses had been administered worldwide. In dozens of countries, at least three-quarters of the population has been fully vaccinated; the highest immunization rates are in Portugal, Singapore, and the United Arab Emirates. Many African countries have only immunized a small percentage of their population. Immunization of a critical mass of the world's population, which is important for bringing the pandemic under control, continues to encounter challenges, including hazardous new virus strains like omicron,

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worldwide rivalry for a limited supply of doses, and public skepticism about vaccines. (Council on Foreign Relations 2022).

All countries need the vaccine to mitigate the spread of the virus however developing a vaccine is not an easy task and not all countries can develop it. Vaccines are frequently the result of cross-sector collaboration, with private pharmaceutical companies collaborating with public health authorities or university labs. Thus, some countries from different regions rely on the supply coming from different economic trade partners, the world health organization, or even from various private organizations with bilateral or multilateral trade agreements. Vaccine production is a complex process that necessitates access to specialized equipment and supplies, as well as storage and highly skilled workers. Trade data can be used to get insight into the supply and demand situations for vaccinations before COVID-19, allowing for the identification of manufacturing capacity and existing trade infrastructure that can be used to distribute new vaccines. Vaccines (for human use) have a single HS code (300220). This makes analyzing general supply and demand conditions easier, but it comes at the expense of more specific information on which vaccines are traded by which countries. Vaccines are delivered to underdeveloped economies by high-income countries. The European Union (EU) is the principal supplier of vaccine imports for all areas. More than two-thirds of vaccines in South Asia and Sub-Saharan Africa are imported from the European Union. East Asia and South Asia, on the other hand, are gradually becoming vaccine suppliers for other rising markets. Finally, the supply networks that support vaccine manufacturing and distribution must be efficient for vaccines to be delivered safely and on time. (OECD 2021). With COVID-19's worldwide development. With the advancement of vaccinations, the problem of easing the global health crisis has evolved into a continual process. Countries are also exhorting efforts to ensure that each country has equal access to vaccines and subsidies. The study is focused on the value of a trade that each member of the state in the ASEAN region used as means to mobilize vaccine and distribute it among the member of the state in a specific period. In addition, the existing, literature of studies on trade and how is trades significant across social activities in the community. The study focuses on the value of trade as a mobilizer of vaccines to facilitate distribution among the ASEAN countries.

2) LITERATURE REVIEW

COVID 19 and the ASEAN

Since the World Health Organization (WHO) declared the new coronavirus (COVID-19) a global pandemic on March 11, 2020, the virus has infected 23.3 million individuals worldwide and killed 741,000 people. In Southeast Asia, at least 869,515 cases and 21,076 deaths have been confirmed in 17 ASEAN member countries as of October; however, this number is undoubtedly much higher due to the significant number of cases that go unreported or undiagnosed, particularly in developing nations with flimsy healthcare systems (Djalante et al., 2020).

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Responses to COVID-19 taken by different ASEAN members have been incredibly varied, ranging from stringent lockdown conditions in the highly regulated city-state of Singapore to "business as usual," notably in rural parts of developing nations with sizable informal economies like Laos and Myanmar. However, through trade regionalization and economic integration, ASEAN member nations have also had a long history of cross-border collaboration. ASEAN collaboration has been included in regional frameworks, such as the ASEAN Political-Security Community (APC), ASEAN Economic Community (AEC), and ASEAN Socio-Cultural Community, in the area of health (ASCC) (ASEANSTATS | Asean Statistics Web Portal 2017).

Role of Trade

Trade is crucial in an unprecedented global health crisis to preserve lives and livelihoods, and international cooperation is necessary to keep trade moving. Four things can be done in the face of significant uncertainty: increase confidence in trade and global markets by increasing transparency about trade-related policy actions and intentions; maintain supply chains, particularly for necessities like food and medical supplies; avoid making matters worse by avoiding needless export restrictions and other trade barriers; and even amid the crisis, look beyond the immediate. Government assistance must be provided in a way that makes sure it serves the public interest, not vested interests, and prevents it from causing market distortions in the future OECD (2020).

The quick COVID-19 vaccine development has been welcomed because vaccinations are anticipated to be crucial in confining the pandemic and, as a result, save lives, save healthcare systems, and aid in the recovery of the economy. As a result, there are high expectations for the efficient delivery of vaccinations and immunization campaigns. Vaccine production and distribution are being carried out under extreme time constraints. There are high hopes that the vaccination will be administered quickly, ending the limitations and enabling a return to normal life. Unmet expectations may therefore have a variety of detrimental socioeconomic effects. Additionally, there is a chance that low vaccination rates could result in fresh outbreaks of diseases that can be prevented by vaccination OECD. (2020).

Numerous COVID-19 vaccines are in line for regulatory approval on a global scale. A significant scientific accomplishment will be developing reliable, safe vaccinations. Manufacturing and shipping COVID-19 vaccinations around the world will be no less of an accomplishment; it will be a challenge of unmatched scope, breadth, and complexity. The COVID-19 vaccine trade value chain crosses paths with WTO regulations and trade-related laws several times. With the use of this non-exhaustive checklist, which aims to promote open communication and transparency, governments will be better able to ensure that trade policy supports the creation and quick release of COVID-19 vaccines (Summary - world trade organization, 2022).

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COVID-19 Vaccination

The public use of COVID-19 vaccinations was authorized in late 2020 and early 2021 around the globe. The public's hesitation to get vaccinated against COVID-19 has now been highlighted in several studies. However, little is known regarding the type and scope of COVID-19 vaccine reluctance among medical professionals globally. (Biswas, et al. (2021). There is a growing push for some type of COVID-19 health status certificate that would support these goals as nations strive to revive their economy and people want freedom and normalcy in their lives. Initiatives for COVID-19 passports for both domestic and foreign travel have already exploded. (Dye & Mills, 2021). A sustainable post-pandemic recovery for ASEAN must be based on "strategic patience and shared responsibility" both within and across national boundaries. Strategic patience should not just be seen as a "wait and see" approach to affluent countries donating COVID-19 vaccines. Similar to the coordinated EU-US approach in Africa, Latin America, and the Caribbean5 for strategic partnerships, leveraging ASEAN strategic investment to mobilize joint concrete and cohesive COVID-19 vaccine manufacturing production will foster global vaccine equity on a larger scale with low- and middle-income economies. To address the gaps in worldwide COVID-19 vaccination equality, there needs to be a practical and creative ASEAN approach to innovation. (Cardenas, 2021)

3) METHODOLOGY

Design. The descriptive quantitative method was utilized in this study focusing on the review of records and data on the identified indicators as presented in the data set. The collected data were accounts both in the ASEAN context and the world data on COVID-19 cases. The authors utilized the review of record checklists which indicates the data that needed to be collected from the existing and validated report from the ASEAN Statistical Reports as well as the World Health Organization.

Sample and Data. The researchers utilized secondary sources from websites of reliable agencies (e.g. WHO, ASEAN, etc.). The study presents world and ASEAN accounts and compares these data. The study was quantifying the relationship of the identified variables namely, COVID-19 cases, mortality rate, and trade which focuses on the sources of COVID-19 vaccines. Lastly, connect this with the current vaccination rate to explain how vaccine distribution was facilitated using trade.

Data analysis. The analysis of data was focused on the comparison of the ASEAN region's COVID-19 case accounts against the other region in the world. The data were analyzed and presented descriptively to discuss the storyline linking trade to the mobilization of vaccination in the ASEAN region. The findings from the analysis present the situation of vaccination facilitation and provide a sight of how international trade partnership is relevant in the mobilization of vaccines.

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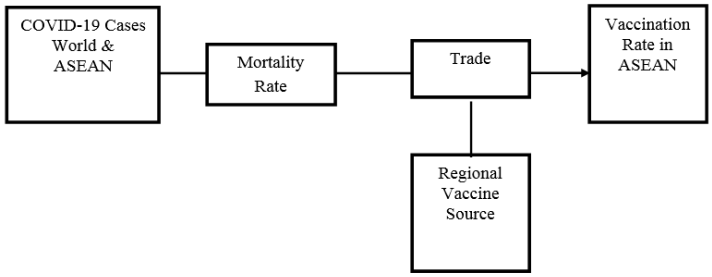
4) RESULTS

The COVID-19 virus has infiltrated all the countries in the world most especially the ASEAN countries. The ASEAN community has imposed measures to prevent the spread of the virus, however, the absence of clear medical intervention and vaccine at the onset of the pandemic resulted in a high mortality rate. Trade is an essential tool in the mobilization of vaccines through supply chain management. The supply chains that underpin vaccine manufacture and distribution must be efficient for vaccines to be delivered safely and on time. Three, and in some cases four, key processes make up the vaccine supply chain (depending on the vaccine). The first is the medication development phase, followed by mass production, distribution and administration, and finally logistics (if products such as cool boxes need to be returned). The supply chain will be handled in several nations at various phases. While mass production may be geographically concentrated, many of the ingredients for production or primary and secondary packaging will come from a variety of places. As a result, commerce will be essential for vaccine mass production, distribution, and administration. (OECD, 2021).

Figure 1: Framework of the Study



In the facilitation of the analysis of the aim of this study, the researchers identified key indicators to present the situation on the mobilization of vaccines in the ASEAN countries. The identified indicator presents what the researchers aim to describe in this study. The indicators were chosen based on the assumption that the higher number of COVID-19 cases and death necessitates the facilitation of vaccines through trade agreements.

Table 1: Confirmed COVID Cases & Death as of April 25, 2022 Situation by WHO

Region	Confirmed Cases	%	Death	%
Europe	214,635,881	42.06	2,722,343	43.67
Americas	152,929,420	29.97	1,986,943	31.88
South- East Asia	57,825,369	11.33	785,858	12.61
Western Pacific	54,368,755	10.65	342,189	5.49
Eastern Mediterranean	21,696,595	4.25	224,542	3.60
Africa	8,813,883	1.73	171,638	2.75
Total Cases	510,269,903	100	6,233,513	100

Source: World Health Organization https://covid19.who.int/

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The covid-19 pandemic has infiltrated the entire world which brought health care risk and suspended the majority of the world's daily activity. The above table shows the regional covid-19 cases as of April 25, 2022, the total confirmed cases have reached approximately 510,269,903. The data shows Europe is leading which has 42.06 % of confirmed cases, on the other hand, Africa has the lowest number of confirmed cases which is 1.73 %. This means that the widespread of the virus is still evident across the region. The table also shows the regional death of COVID-19 around the world as of April 25, 2022, has reached approximately 6,233,513. The data present that Europe has the highest mortality rating 43.67% while Africa has the lowest mortality rate 2.75%. With the increase in covid-19 cases, it comes as no surprise that there is also an increase in the death rate as shown in the above table. This suggests that there is a need to increase vaccination across the region in the world. In a recent study, there have been over 514 million cases of coronavirus (COVID-19) worldwide as of May 1, 2022. The virus has spread to nearly every country and territory entire world, with the United States accounting for nearly a fifth of all cases worldwide. The number of coronavirus cases has overloaded health systems all around the world, including in the richest and best-prepared countries. Millions of people in the world's most disadvantaged countries lack access to life-saving items including test kits, face masks, and respirators (Elflein, J., 2022).

Table 2: **ASEAN Trade in Goods by Trading Partners, 2016-2020**

Trading Partners	2016-2017	2017-2018	2018-2019	2019-2020	Trade Rate	%	Total Trade Amount
ASEAN	21.91	21.96	21.46	20.22	85.55	22.52	2,934,151.00
Australia	1.30	1.34	1.24	1.03	4.91	2.25	293,434.90
Canada	-0.46	-0.45	-0.39	-0.39	-1.69	0.58	74,999.10
China	16.15	16.04	18.42	18.42	69.03	17.65	2,299,341.20
EU-28	9.14	9.22	7.53	7.53	33.42	9.85	1,282,949.80
India	1.87	1.86	1.46	1.46	6.65	2.71	353,589.80
Japan	7.51	7.19	6.52	6.52	27.74	8.23	1,072,255.90
Korea, Republic of	5.02	4.72	4.89	4.89	19.52	5.75	749,051.70
New Zealand	-0.63	-0.64	-0.63	-0.67	-2.57	0.36	46,645.30
Russian Federation	-0.35	-0.29	-0.35	-0.48	-1.47	0.62	80,408.10
United Kingdom					0.00	0.24	31,012.90
USA	8.09	8.33	9.47	10.62	36.51	10.01	1,303,661.10
Rest of the World	18.45	18.70	17.88	17.64	72.67	19.23	2,505,465.30
Total Trade Amount						100.00	13,026,966.10

Source: ASEAN Secretariat- ASEAN Statistical Year Book 2021 https://asean.org/wp-content/uploads/2021/12/ASYB_2021_All_Final.pdf

Trade of goods is one of the driving forces of its economic activities which involved the exchange of commodities or services between diverse economic actors voluntarily. a transaction will only take place if both parties believe it will benefit their respective interests because neither party is obligated to trade. ASEAN has trade partners with

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different trading partners in several countries and the rest around the world. For five years between 2016 to 2020 ASEAN has been the highest trading partner in Goods with a trade rate growth of 85.55 and a trade amount of 2,934,151 which is 22.52% of the total trade amount across the regions in the world. This suggests that members of the ASEAN community engaged in the trade of goods in most of the countries around the world through export within the five years mentioned. Meanwhile, the United Kingdom is the lowest having only trade goods in the year 2020 amounting to 31,012.90 which is 0.24% of the trade amount across the regions in the world this suggests that the United Kingdom was not an active goods trader which involving export not until the year 2020.

Table 3: **Vaccination Rate in ASEAN as of April 30, 2022**

Country	The population as of 2022	Total Vaccine doses administered per 100 population	Persons fully vaccinated with the last dose of primary series	Persons Boosted per 100 population
Brunie	445,431	241.91	92.67	61.048
Cambodia	17,168,639	222.44	84.4	48.425
Indonesia	279,134,505	145.85	60.04	13.031
Laos	7,481,023	144.7	63.43	17.719
Malaysia	33,181,072	214.7	80.76	49.329
Philippines	112,508,994	133.1	62.11	11.808
Singapore	5,943,546	238.69	85.13	67.894
Thailand	70,078,203	189.58	72.93	36.422
Myanmar	55,227,143	98.79	42.02	2.349

Source: World Health Organization https://covid19.who.int/
World Population Review https://worldpopulationreview.com/

Since the start of the covid-19 outbreak, many countries in the different regions have exerted efforts to neutralize or stop the spread of the virus. The vaccination rate in ASEAN as of April 30, 2022. In terms of total vaccine doses administered per 100 population, it can be seen that Brunei has the highest in terms of doses administered per 100 population which is 241.91 while Myanmar has the lowest with 98.79. In terms of being fully vaccinated with the first series of vaccines still, Brunie has the highest rate of 92.67 while again Myanmar has the lowest rate with only 42.02. Lastly, in terms of person boosted per 100 population, it shows that among the countries within the ASEAN region Singapore has the highest boost rate having 67.894 while Myanmar still has the lowest rate having 2.349 in the entire region. Although these identified countries showed the highest rates in the vaccination series. However, it can be observed that each country varies in population which means that these countries still have a fair amount of progress in the vaccination series administration. The vaccination rate of the ASEAN region as of April 30, 2022, suggests that the member of the ASEAN has considered vaccination an important matter in their respective country as a means of boosting health. In August and September 2021, a study was conducted in four ASEAN nations to assess the desire to get vaccinated against COVID-19 based on the severity of the pandemic. The findings show that the number of respondents who accept vaccines far outnumbers those who do not. Furthermore, the number of people who get

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the vaccination if the pandemic gets worse outnumbers those who get it if it gets better. The results of the logistic regressions suggest that the impact of the drivers on COVID-19 vaccine adoption varies in magnitude and direction depending on the severity of the pandemic. (Duong, A. H., & Antriyandarti, E. 2022).

Table 4: COVID-19 Vaccines doses that the ASEAN Member States Received

Country	COVAX	Bilateral	Multilateral /Bilateral	Unknown	Total
Brunie	252,800		50,400	112,338	415,538
Indonesia	41,460,310	3,317,000	168,085,540		212,862,850
Lao PDR	1,857,440	2,602,000			4,459,440
Malaysia	1,387,200	2,500,000		25,700,871	42,747,271
Singapore	244,800		301,000	8,631,063	9,176,863
Thailand	2,918,450		9,417,000	34,102,566	46,438,016
Cambodia	2,391,600	4,318,000	18,500,000		25,209,600
Philippines	16,912,480	3,221,640	41,843,100		62,977,220
Viet Nam	17,845,850	4,470,200	9,557,411	8,047,519	46,206,850
Myanmar	4,048,200	9,248,200	2,736,000	3,065,616	15,049,816
Total	**89,319,130**	**29,677,040**	**250,490,451**	**79,659,973**	**465,543,464**[1]

Sources: The ASEAN- the official Publication - August-September 2021- COVID-19

The ASEAN state members received the vaccine from various sources including; the COVAX facility, bilateral donors, bilateral/multilateral agreements, and unknown donors. Primarily all members of ASEAN received vaccines from the COVAX facility. It is one of the pillars of the Access to COVID-19 Tools (ACT). The ACT Accelerator is ground-breaking international cooperation aimed at accelerating the discovery, manufacture, and fair distribution of COVID-19 testing, treatments, and vaccinations. (COVAX facility. Gavi, the Vaccine Alliance 2022, April 28). In bilateral donors' the majority of the ASEAN member received the COVID-19 vaccine except for Brunie, Singapore, and Thailand. Bilateral COVID-19 vaccine donors are from a government organization that provides direct vaccine aid to a recipient country. In the Bilateral/Multilateral agreement again the majority of the State member of ASEAN received the COVID-19 vaccine except for Lao PDR and Singapore. Countries within the ASEAN community also received vaccines not limited to Bilateral but also in multilateral agreements which can be three or more nations. There are also unknown sources of vaccine received by some of the state members which nearly ties with the COVAX source in terms of volume donated. Trade policy was one of the tools that several governments used to combat the COVID-19 outbreak. Import barriers for medical products and supplies, as well as agricultural and food products, were removed, and export limitations were placed.

The goal of maximizing the availability of key supplies in the domestic market drove the mix of import facilitation and export controls (Evennett S.et al.2022). With the distribution of COVID-19 vaccines to many regions of the developing world expected to increase dramatically, the focus has moved to ensure that these vaccines reach patients safely. Closing gaps in transportation and distribution systems will be critical in

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breaking the pandemic's grip. According to statistics from the World Bank's logistics performance index (LPI) database - a reasonable proxy for transportation and distribution logistics — Asian nations with better logistics performance have higher vaccination rates. South Korea, Singapore, New Zealand, Japan, and Malaysia, which are more developed and geographically smaller economies in Asia, have better than average logistics performance and a higher immunization rate. The average LPI score across these developed economies is 3.6, and the average vaccination rate is around 75% of the population. Singapore leads the group with an 87 percent vaccination rate, thanks to its dense population density inside a 728.3-square-kilometer area and robust logistics infrastructure, which has allowed it to vaccinate a record number of people. In China and Hong Kong, COVID zero policies have also contributed to higher vaccine uptake (Munemo & Nyantakyi, 2022).

By simplifying and digitizing international trade requirements, trade facilitation has emerged as an effective method for mitigating the catastrophic effect of COVID-19 on trade. The epidemic brought attention to the importance of trade facilitation in guaranteeing the timely delivery of medicinal and other necessary items. Most countries in the region have quickly undertaken several short-term crisis measures in reaction to the epidemic and related trade disruptions, according to the survey's Trade Facilitation in the times of crisis section. On average, only 55.7 percent of crisis-related trade facilitation measures are implemented, because many nations still lack long-term trade facilitation plans to improve preparedness for future crises (Asia Pacific Trade Report, 2021)

5) DISCUSSIONS

The COVID-19 virus has spread to every nation in the world. Particularly the ASEAN nations. The ASEAN community has enacted regulations for transmission of the virus, but the lack of a definite medical treatment and vaccination at the beginning of the significant mortality rate was brought on by the pandemic. Trade is a crucial strategy for distributing immunizations to control the supply chain. ASEAN in terms of COVID cases & mortality as of April 25, 2022, is shown to be one of the tops (Table 1.). ASEAN has a good trading partner in different countries performing high in Trade of Goods for the past five years between 2016-2020 (Table 2.) among countries including Australia, Canada, China, EU-28, India, Japan, Republic of Korea, New Zealand, Russian Federation, UK, and USA. In the ASEAN region vaccination has been done through different government initiatives The ASEAN region's immunization rate implies that the ASEAN member has viewed immunization as a priority as of April 30, 2022, a critical issue in their respective nations as a way to improve health. It shows that each member of the ASEAN community is doing their best not only to solve the health crisis but eventually the entire country's operation, especially the economy. (Table 3). The following ASEAN member shows that the vaccination was given to the ASEAN state members from a variety of sources, including Bilateral donors, bilateral and multinational agreements, and the COVAX facility are some examples of these. It can be seen that most of these vaccines acquired by each member of the ASEAN states are

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members of their trade partners which contribute not only to economic benefit but another form to Social and political terms.

6) CONCLUSIONS AND IMPLICATIONS

The impact of the COVID-19 pandemic is apparent as evidenced in the number of cases and deaths all over the world. It has also affected the economy as the widespread led to massive lockdowns that prevented the mobility of people. The high number of cases and mortality rate means challenged the existing knowledge on health crisis management. Vaccine production was the only hope for the world to rise from the pandemic crisis. Many countries with the capacity to manufacture vaccines have exerted effort to accelerate the facilitation of the production of the vaccine. In this study, the procurement of vaccines was facilitated in different ways. The relationship between the ASEAN countries and vaccine-producing countries have paved the way for the acquisition and provision of vaccines to the community, therefore trade relationship among the regions in the world is essential for the aim of providing health protection to the community. The study also concluded that the inability of most of the countries in the ASEAN to produce COVID-19 vaccines can be attributed to economic development and priorities in research and development which is important in today's societal development and survival.

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