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Multilateralism and Vaccine Diplomacy: An Analysis of Covid-19 Practises from August 2020 to July 2022

by

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Declaration:

I declare that the dissertation, which I hereby submit for the degree of MA International Relations at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

Abstract

This qualitative study questions what patterns of multilateral vaccine diplomacy were practised by states to adapt to the challenge of Covid-19 from August 2020 to July 2022. The vaccine diplomacy practises of China, Russia, India, the UK, and the USA within the multilateral domain are analysed through secondary data analysis. These states were selected since literature demonstrates that they are key players in the Covid-19 vaccine manufacturing and production process; they provided a significant amount of Covid-19 vaccine donations and played leading roles in the geopolitical system during Covid-19. The study is further guided by a conceptual framework that touches on the concepts of foreign policy, soft power, diplomacy, global health diplomacy, vaccine nationalism, vaccine diplomacy and multilateralism. The study shows that these nations have adopted a dual-method strategy in vaccine diplomacy—bilaterally and multilaterally—to realise their national interests. These interests are not solely confined to immediate health and immunisation goals but also extend to strategically secure future advantages, such as enhancing their influence or bolstering diplomatic ties within specific regions such as Africa and the East Asia Pacific. This study is significant for practitioners and scholars since it analyses the most significant "givers and receivers" of vaccine diplomacy that sheds light on our current geopolitical context, multilateral state alliances and the intentions behind vaccine diplomacy.

Keywords: Multilateral vaccine diplomacy, multilateral vaccine science diplomacy, Covid-19 vaccine development, geopolitical strategy, national interest, soft power, vaccine donation "givers" and "receivers".

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List of Abbreviations and Acronyms

ASEAN - Association of Southeast Asian Nations

AVATT - African Vaccine Acquisition Task Team

BARDA - The Biomedical Advanced Research and Development Authority

USA - United States of America

UK - United Kingdom

UAE - United Arab Emirates

EU - European Union

WTO - World Trade Organization

NIAID - The National Institute of Allergy and Infectious Diseases

CEPI - Coalition for Epidemic Preparedness Innovations

SA - South Africa

G7- Group of Seven

G20 - Group of Twenty

UNICEF - United Nations Children's Fund

WHO - World Health Organization

TRIPS - Trade-Related Aspects of Intellectual Property Rights

R&D - Research and Development

EAPR - East Asia and Pacific Region

ECAR - Europe and Central Asian Region

LACR - Latin America and Caribbean Region

MENA - Middle East and North African Region

NAR - North American Region

COVAX AMC - Covid-19 Vaccines Advance Market Commitment

ESAR - Eastern and Southern Africa Region

SAR - South Asian Region

FOCAC - Forum on China-Africa Cooperation

NATO - the North Atlantic Treaty Organization

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Chapter One: Introduction

1.1. Introduction

States within the international system have always had to adapt their diplomatic strategies to new global challenges. Examples of these challenges that traditional state relations faced; included physical and ideological wars, the rise of non-state actors and organisations, globalisation, and the progression of technology (Kelley 2010: 287). However, in 2019, humanity was challenged with a new global adversary in the form of the Coronavirus (Covid-19). This communicable disease, triggered by the "SARS-CoV-2 virus", quickly became a significant concern on the global stage (World Health Organization, 2022c: Internet). The Covid-19 pandemic impacted international, domestic, and multilateral politics among nations and has had disastrous effects on world health and the global economy, illustrating weakness in health systems and education, impacting livelihoods, creating food insecurity, poverty, and exacerbating inequalities between countries (G20 2021: Internet). States had to control the pandemic and protect citizens while maintaining international relations with other states and actors. This study questions whether states adjusted their diplomatic strategies by implementing vaccine diplomacy within the multilateral domain. The effects of Covid-19 have illustrated the need for global cooperation on vaccination and have influenced state foreign policy, the nature of diplomacy and various multilateral relations in different manners.

1.2. Outline of the Study

The study aims to analyse the vaccine diplomacy practises of China, Russia, India, The United Kingdom (UK), and the United States of America (USA) within the multilateral domain. These states were selected since literature demonstrates that they are key players in the Covid-19 vaccine manufacturing and production process (Evenett, Hoekman, Rocha, & Ruta 2021: 2); they provided a significant amount of Covid-19 vaccine donations and played leading roles in the geopolitical system during Covid-19 (Antwi-Boasiako 2022: 6; Gauttam, P., Singh, B. & Kaur, J. 2020: 319). The USA has shipped 622,611,170 doses of donated Covid-19 vaccines, followed by China, which has distributed 144,000,000 doses of vaccines and India, which has shipped 65,292,000 donated vaccine doses (Launch & Scale Speedometer 2022: Internet). Furthermore, the UK has dispatched 40,812,970 Covid-19 vaccine doses,

followed by Russia, which donated 1,637,500 vaccine doses (Launch & Scale Speedometer 2022: Internet).

The overarching topic of this study relates to the way in which states keep adapting their diplomatic practises when faced with new challenges. The study's main purpose is to analyse vaccine diplomacy practises between states during the Covid-19 pandemic from August 2020 to July 2022. The study follows this timeline given that in August 2020, the Sputnik V Russian vaccine was the first Covid-19 vaccine to be registered for global use (Kirgizov-Barskii & Morozov 2022: 173), and in July 2022, the global percentage of daily administered vaccine doses declined (Our World in Data 2022: Internet). Existing literature provided no evidence that the complete timeline of Covid-19 had been utilised to substantiate arguments; instead, existing literature used moments in time and pieces of specific occurrences during the pandemic to support their claims. This study aims to comprehend and explain the complete timeline of Covid-19 and vaccines. Further, the study aims to analyse the “givers and receivers” of vaccine diplomacy that can shed light on our current geopolitical context, multilateral state alliances and the intentions behind vaccine diplomacy. The study correspondingly intends to conceptually expand and build on the main concepts of foreign policy, soft power, diplomacy, global health diplomacy, vaccine diplomacy and multilateralism. The literature on these concepts illustrates the lack of definitional cohesion and understanding. Lastly, this research challenges the controversial opinion and concept of vaccine nationalism by reflecting on good governance from a citizen’s perspective and the responsibility of a government to warrant the health, safety, and best will of its citizens.

The multilateral domain will occupy the space of analysis considering three points: Firstly, the whole process of Covid-19 vaccines (such as the development, production, supply, and distribution) is multilateral. Various actors, governments, multinational corporations, stakeholders, international organisations, and civil society actors are involved in manufacturing vaccines. For example, the Comirnaty vaccine was developed by Pfizer, BioNTech and Fosun Pharma and was established multilaterally (RAPS 2022: Internet). Pfizer is a multinational pharmaceutical corporation founded in the USA (Pfizer 2022: Internet), while BioNTech is a multinational corporation established in Germany and frequently collaborates with other corporations,

universities and medical centres in Europe and the USA (BioNTech 2022: Internet). Fosun Pharma is a global pharmaceutical company founded in China and is also a shareholder of Sinopharm (FOSUN PHARMA 2022: Internet). The vaccine was funded by Fosun Pharma, BioNTech, the German government, the European commission, the European Investment bank and was licensed to be developed and sold in China (RAPS 2022: Internet). The multinational contextual nature of the vaccine process becomes increasingly complex when donation agreements are struck with initiatives such as COVAX. COVAX includes 89 self-financing governments, international organisations and charities that invested in multiple vaccine candidates, as well as 92 donor-supported governments that receive lower prices for vaccine doses (Halabi & Rutschman 2022: 26).

Secondly, the nature of diplomacy itself has changed to 'new diplomacy' that occurs within a multilateral setting. When the international system grew, traditional means of diplomacy such as ad hoc missions, ambassadors, and direct communications were no longer of use, and states started organising their relations with conferences and multilateral practises (Berridge 1995: 13). Thirdly, the rift between old and new practises of diplomacy further separated with the crisis of Covid-19 where states could no longer interact bilaterally or personally due to national lockdowns, travel restrictions and the threat of disease proliferation (International Monetary Fund 2021: Internet). Due to the complex nature of global interactions, states have to adapt their foreign policy and diplomatic practises to combat global crises such as Covid-19. Vaccine diplomacy has given states a means to achieve outcomes in their national interest within a multidimensional world while advancing global health and expanding diplomatic relations.

1.3. Concepts

Within the discipline of International Relations (IR), there is a differentiation between three levels of analysis which determine whether the analysis is focused on the individual level, the state level, or the international system (Paquin 2011: 1215). Within the study of foreign policy and diplomacy, the level of analysis shifts between the domestic and the international system. Consequently, we can assume that every action can have an impact on the system or other states. Foreign policy conveys how governments interpret and act towards their external environment; and is the action or

policy strategies towards external actors, with the objective of attaining national interest or changing the behaviour or policies of another state or actor (Holsti 1995: 19,84).

All states have unique national interests and objectives that can change at any time (Holsti 1991: 199-200) and can be driven by internal factors such as national identity, political groups, and public attitude, as well as external factors such as national and international security, geographical location, historical past, ideological beliefs, economic and cultural problems (Marek & Baun 2011: 144). Governments use foreign policy instruments to achieve outcomes in their national interests and refer to the methods of force and persuasion that states can utilise to achieve foreign policy intentions (Brighi & Hill 2016: 163). Foreign policy instruments are guided by the concept of power, which is divided into the categories of hard, soft, and smart power. This study focuses on soft power, which is characterised by legitimacy and has nonphysical properties such as culture, ideology, political value, attractive ideals, international institutions, and policies (Mol, Singh, Chattu, Kaur & Singh 2022: 1112).

A form of soft power occurs within diplomatic practises (Black 2011: 10). Diplomacy is the implementation of a government's foreign policy (Spies 2018: 36-37,39) and involves the joint actions of communication and negotiation between actors with the intent to reach an accord or uphold both actors' interests (Holsti 1995: 130). As the context, actors, and nature of the international system evolved, the practice of traditional bilateral diplomacy altered to adapt to these changes, often through multilateral diplomacy. Multilateral diplomacy refers to the actions between two or more states or groups with the purpose of accomplishing resolutions for multinational issues (Cooper, Heine & Thakur 2013: 248). This concept is tied to that of multilateralism, which relates to international collaboration regulated by universal standards, rules, and norms between numerous actors (including non-state actors) (Dal & Dipama 2022: 6).

This study focuses on the subcategory of health and global health diplomacy, vaccine diplomacy, which refers to the usage or delivery of vaccines between different global locations to advance foreign policy and diplomatic relations between nations or international collaborations (Varshney & Prasanna 2021: 112). Hotez (2022: 1) presents an example of vaccine diplomacy in a multilateral setting, detailing how Lithuania withdrew its offer of the Pfizer vaccine to Bangladesh. This step was taken

after Bangladesh chose not to vote in the UN General Assembly in March 2022 that criticized Russia's occupation of Ukraine (Hotez 2022: 1). Lithuania cancelled its Pfizer vaccine donation to Bangladesh (Lithuania Radio and Television (LRT) 2022: Internet). In February 2022, the Lithuanian government donated 225 600 psc of the Janssen vaccine to Ukraine via COVAX and further donated over 1.6 million Covid-19 vaccine doses to other states (Government of the Republic of Lithuania 2022: Internet).

Various Covid-19 and vaccine diplomacy studies discuss vaccine diplomacy in juxtaposition to vaccine nationalism, such as Halabi & Rutschman (2022: 10); Antwi-Boasiako (2022: 5); Sparke & Levy (2022: S90). Vaccine nationalism embodies the practice where governments negotiate agreements with pharmaceutical firms to guarantee the provision of vaccines for their populations (World Health Organization, 2021c: Internet) at the cost of other populations not having access to or receiving vaccine doses (Halabi & Rutschman 2022: 9). This study argues instead that the act of what is perceived as vaccine nationalism is a practice of good governance when observed from a citizen's perspective within the domestic realm. For example, India initiated the "Vaccine Maitri" program that supplied impoverished states with Covid-19 vaccines (Sharun & Dhama 2021: 761). However, as the pandemic reached its second peak, Basu & Mukherjee (2022: 138) prove how India's charitability led to the neglect of their public's vaccination strategy and the incapability of the government to ensure adequate vaccines for their citizens, causing a domestic health crisis. The practice of good governance within a health crisis relates to government accountability and transparency towards citizens on the situation, involvement of citizens in decision-making processes, maintaining the rule of law, and effectively and efficiently solving the health crisis while ensuring state survival and the interests of citizens (Van Doeveren 2011: 307-309). From the domestic perspective, the practice of good governance is further founded on human development and health, which includes access to healthcare, sanitation and water, control of communicable and non-communicable diseases, compliance with International Health Regulations and maintaining economic trade and growth (Ibrahim Index of African Governance (IIAG) 2021: Internet).

1.4. Literature Review

In December 2019, the first outbreak of the Coronavirus (Covid-19), which causes acute respiratory syndrome, occurred in Wuhan, China (World Health Organization & United Nations Children's Fund 2021: Internet). The transmission of the virus took the world by storm, and by March 2020, the World Health Organization (WHO) confirmed that the global community was amid a global health pandemic (World Health Organization & United Nations Children's Fund 2021: Internet). Most states responded by implementing domestic policies such as containment measures (travel restrictions, social distancing, quarantine, masks), lockdowns, financial assistance initiatives, and vaccination campaigns (International Monetary Fund 2021: Internet). The Covid-19 catastrophe provoked a scramble for global vaccines (Halabi & Rutschman 2022: 1).

Antwi-Boasiako (2022: 1-2) argues that during the Covid-19 pandemic, wealthier states that developed vaccines used these vaccines to attain soft power influences on the domestic realm or public opinion of less-developed states that received vaccine donations in the form of foreign aid. Vaccines were used as a soft power mechanism to change the perception of larger states in the public eye of smaller states (Antwi-Boasiako 2022: 1-2). When an external state has the power to increase perception and public opinion of another state's domestic realm, the external state yields soft power, which can lead to favourable outcomes in national interest or, alternatively, changes in another state's foreign policy (Antwi-Boasiako 2022: 2-3). It can be agreed that states utilised soft power strategies; however, this study failed to prove how vaccine donors changed public opinion. Halabi & Rutschman (2022: 3-4) state that, similarly to past pandemics, the Covid-19 playing field is characterised by a handful of prosperous states with research and manufacturing capabilities that stockpile and reserves candidate vaccines, juxtaposed to the majority of less-developed governments without vaccine production capacity or resources. During the pandemic, vaccine diplomacy was mostly utilised by China, India, and Russia with the aim of regional or international influence (Halabi & Rutschman 2022: 7).

Throughout Covid-19, India applied health diplomacy as a soft power instrument within its foreign policy framework by increasing health diplomacy practises such as vaccine donations and humanitarian programs in Africa (Mol *et al.* 2022: 1111). India is one of the world's pharmaceutical front-runners in manufacturing affordable generic

medications and immunisations (Mol *et al.* 2022: 1116). The role of India as a pharmaceutical hub enlarged during Covid-19 since India provided multiple countries with medical provisions and diplomacy, such as anti-diabetic and anti-asthmatic medications (Mol *et al.* 2022: 1118, 1121). Kirgizov-Barskii & Morozov (2022: 172) argue that India specifically targeted neighbouring states with vaccine diplomacy, such as Bangladesh and Myanmar, which reflects their foreign policy ideals of 'one world, one family' (Kirgizov-Barskii & Morozov 2022: 172). India further used vaccine diplomacy intending to illustrate international and regional leadership and to influence future political decisions, such as India's role within the United Nations Security Council (Kirgizov-Barskii & Morozov 2022: 173). India and Russia increased their bilateral relations in 2021 when both states agreed to transfer a substantial amount of Sputnik V vaccines to India (Kirgizov-Barskii & Morozov 2022: 173). Chattu, Singh, Kaur, & Jakovljevic (2021: 2) discuss India's health diplomacy role during 2021 with regard to "Trade-Related Aspects of Intellectual Property Rights" or TRIPS, that protects the copyright of vaccine producers. Impoverished states were unable to produce and purchase their own Covid-19 vaccines; Southern Africa and India counteracted this problem by soliciting that the "World Trade Organization" (WTO) implement a renunciation of product patents of Covid-19 vaccines during the pandemic (Chattu *et al.* 2021: 2). The sharp-witted plan was dismissed due to divided votes within the WTO, among the states that rejected this proposition 'included 35 advanced states such as Australia, Canada, and the EU (European Union)' (Chattu *et al.* 2021: 5).

According to Sharun & Dhama (2021: 761), while higher-income states such as the UK, USA, Australia, and the EU stockpiled their oversupply of vaccines, India initiated the "Vaccine Maitri" program that provided impoverished states with Covid-19 vaccines (Sharun & Dhama 2021: 761). Through this program, India provided vaccines to numerous states, such as Nigeria, Rwanda, Nicaragua, Belize, and Paraguay (Sharun & Dhama 2021: 762). The Vaccine Maitri program was launched in January 2021 and aimed at allocating Covid-19 vaccines to vulnerable South-Asian nation-states (Basu & Mukherjee 2022: 135). Basu & Mukherjee (2022: 135-136) argued that this gesture of friendship was a political manoeuvre of India to attain national interests of commercial and political expansion and development within the South-Asian region. Given the substantial manufacturing capacity of the Serum Institute of India, the country created an abundance of vaccines (Basu & Mukherjee 2022: 136). This excess

could subsequently serve as a means to achieve foreign policy objectives with neighbouring states (Basu & Mukherjee 2022: 136). India has provided multiple countries with Covaxin and Covishield vaccines, such as Bhutan, Maldives, states in Latin America and Africa (For example, Morocco, Seychelles, Egypt, Algeria, South Africa, Ghana, Congo, Angola, Kenya, Lesotho, Rwanda, and Senegal) (Mol *et al.* 2022: 1118,1121). India Further assisted states such as Afghanistan, Nepal, Sri Lanka, Bangladesh, Seychelles, Mauritius, and Myanmar with vaccines (Basu & Mukherjee 2022: 135). However, amidst the resurgence of Covid-19 infections, Basu & Mukherjee (2022: 138) illustrated how India's charitability led to the neglect of their public's vaccination strategy and the state's incapability to ensure vaccines for their citizens. The country's health sector still suffered under various lockdowns, the closure of borders and the public arena, and a shortage of physicians and active pharmaceutical ingredients, hospital facilities, and equipment after the first outbreak (Mol *et al.* 2022: 1116-1117).

Kirgizov-Barskii & Morozov (2022: 170-171) argue that China avoided vaccine nationalism and instead opted for vaccine diplomacy and distributed their national vaccines to over 63 counties. However, China also aimed for influence and financial gain since only 1,3% of their vaccine doses have been donated; the rest have been sold (Kirgizov-Barskii & Morozov 2022: 171). China also utilised vaccine diplomacy to influence Latin America and strengthen its geopolitical influence against the USA (Kirgizov-Barskii & Morozov 2022: 171). Lee (2021: 1,5) argues that China used vaccine diplomacy to enhance their international depiction and influence, to enhance and sustain diplomatic relations, and to expand their national wealth. Covid-19 vaccines have been utilised by 'India, China, and Russia to compete with Western states' by targeting underdeveloped states with vaccine aid and credits (Lee 2021: 1). China's vaccine diplomacy reflected preceding health diplomacy to areas such as Asia, and Africa (Lee 2021: 1). According to Lee (2021: 5) in 2021 China was the largest manufacturer of Covid-19 vaccines and exported 62% of its vaccines to other states. China successfully employed vaccine diplomacy within the Philippines, Iraq, Nepal, Pakistan, Zimbabwe, Mozambique, Namibia, and ten of the Association of Southeast Asian Nations (ASEAN) states (Lee 2021: 8-9). Although China consolidated with the COVAX initiative in October 2020, China's vaccine diplomacy, according to Lee (2021: 8,12) was mostly bilateral. Wang's (2021: 150,156) study found that China's prior

diplomacy and the Belt and Road Initiative resulted in positive vaccine diplomacy relations in Serbia and the United Arab Emirates (UAE) and illustrates that China's vaccine diplomacy approach was based on prior bilateral interactions. Gauttam *et al.* (2020: 323,333) likewise argues that by utilising health diplomacy, China has strengthened multilateral and state relations and increased participation in various Chinese diplomatic initiatives. For example China used the "Health Silk Road" program and the "Belt and Road" project to enhance relationships, acquire resources and restore their national brand (Sparke & Levy 2022: S89).

Tung (2022: 2,4-5) speculates that America and China employed vaccine diplomacy as a method of 'proxy-competition' to advance their national image as responsible global leaders (China after the Wuhan incident and the USA after Trump); to expand power objectives, advance economic and geopolitical partnerships, especially in Vietnam and Southeast Asia. In April 2022, the USA extended a donation of close to 40 million vaccines to Vietnam, while China contributed approximately 7.3 million doses (Tung 2022: 2). Both countries used vaccine diplomacy to achieve outcomes in national interest; the USA aimed at developing bilateral relations and economic partnerships with Vietnam while China aimed at receiving reassurance that Vietnam would avoid aligning with other forces against China (Tung 2022: 2). VietnamNet Global and Hanoitimes (2022: Internet) report that the 'USA took the lead in vaccine donations, contributing nearly 26 million Covid-19 vaccine doses, shadowed by Germany with 10 million, Australia with around 8 million, China with 7 million, Japan with 6 million and Italy with 3 million' among others. This data shows that vaccine donations or diplomacy was not isolated to China and the USA.

Sparke & Levy (2022: S86) argue that global access to Covid-19 vaccines is characterised by inequality and that the practises of vaccine diplomacy and vaccine charity (COVAX) have failed to solve this issue. Instead of opting for vaccine liberty, states such as Russia, China, and the USA employ vaccine diplomacy for national security, interest, and economic advantage (Sparke & Levy 2022: S87-S89). China used vaccine diplomacy strategies such as the "Health Silk Road and Belt and Road Initiative" to enhance relationships, acquire resources and restore their national brand after their reputation claimed a negative image since the Covid-19 outbreak originated in Wuhan, China (Sparke & Levy 2022: S89). Vaccine charity has been hindered by

vaccine nationalism and the complex nature of public-private and multilateral humanitarian interactions (Sparke & Levy 2022: S90). Bonora (2021: 170) argues that the EU's vaccine aid to the Western Balkans was overdue, resulting in Russian and Chinese assistance. As an illustration, in January 2021, Serbia was the recipient of 'one million doses of the Sinopharm vaccine from China' (Bonora 2021: 168). Consequently, 'Serbia entered into a letter of intent with China and the UAE to initiate the production of Sinopharm vaccines domestically by the close of 2021' (Bonora 2021: 168). China and Russia used vaccine diplomacy as a soft power to improve relationships with the Balkans region with prior associations with the EU (Bonora 2021: 160, 170).

Similarly, Giusti & Ambrosetti (2022: 1) found that Russia targeted vulnerable states with aid and vaccines that were overlooked by other states or western institutions (Giusti & Ambrosetti 2022: 1). The aim of this strategy was to improve Russia's geopolitical image, improve partnerships in 'Latin-America, Asia, and Africa' and deface the perception of Western states (Giusti & Ambrosetti 2022: 2,6). Russia further pursued states of the EU, such as 'Italy, Bosnia and Serbia' with their soft diplomacy tactics (Giusti & Ambrosetti 2022: 6). In August 2020, Russia's Sputnik V earned the distinction of being the first Covid vaccine to gain worldwide approval (Kirgizov-Barskii & Morozov 2022: 173). Russia used vaccine diplomacy to target neighbouring post-soviet states, Eastern Europe, Africa, Latin America, and economies incorporated into the Eurasian Economic Union (Kirgizov-Barskii & Morozov 2022: 173-174). Russia often targeted states that were unable to purchase vaccines or lacked capabilities to produce vaccines and often authorised technology transfers to allies such as Kazakhstan that later produced the Russian vaccine (Kirgizov-Barskii & Morozov 2022: 174). The Russians started off great with Russian vaccines accredited in more than ten countries, however; their success could be shaken by the hostilities they initiated in Ukraine in 2022, leading to multiple sanctions (Kirgizov-Barskii & Morozov 2022: 175).

Literature on USA vaccine diplomacy mostly frames the state in a vaccine nationalist position. According to Halabi & Rutschman (2022: 9) vaccine nationalism occurs when states give vaccination priority to their citizens, often reserving vaccine doses before market authorizations and drug approvals have been met. The USA relied on

Operation Warp Speed (OWS) to produce and secure millions of vaccine doses for the American market and supported six vaccine candidates through finance and purchase agreements (Halabi & Rutschman 2022: 13). The nationalism of vaccines can further be problematized by product shortage or inadequate global manufacturing capacity that is unable to balance world-wide supply and demand (Halabi & Rutschman 2022: 10).

On 3 August 2021, President Biden addressed the media and stated that the USA had shipped over 110 million Covid vaccine doses to 65 vulnerable nations and added that these vaccines are free donations from the USA without conditions, requirements, or persuasion (White House Press Release 2021: Internet). The objectives of these donations were to end the global pandemic and to save lives (White House Press Release 2021: Internet). However, Biden further stated: "In the race for the 21st century between democracies and autocracies, we need to prove that democracies can deliver. And the democracies of the world are looking to America to lead again- in two ways. First, to demonstrate we can control this virus at home. And second, to show we can help address it around the world." (White House Press Release 2021: Internet). This shows the objective of the USA to prove democratic geo-political power and influence again, which means vaccine donations have diplomatic and soft power objectives while simultaneously vaccinating their citizens. Gauttam *et al.* (2020: 319) assumes that Covid-19 obstructed the structure of international authority with powerful states such as the USA that struggled to maintain their global leadership roles and their public health dilemma (Gauttam *et al.* 2020: 319).

Consequently, other developed states have filled the global leadership role by participating in health diplomacy, thus improving their foreign relationships (Gauttam *et al.* 2020: 319). According to Gauttam *et al.* (2020: 321), both the EU and America were unsuccessful in maintaining their leadership functions on both the international and domestic fronts, which gave rise to China's leading position in assisting 'multiple nations with medicinal and monetary aid'. It is unclear if this is correct since literature has provided evidence that in 2021 the USA donated the largest amount of Covid-19 vaccine doses (80,8 million doses) to COVAX, which have been delivered and distributed globally (Our World in Data 2021b: Internet).

Similarly, the UK is also perceived by literature as a vaccine-nationalist state. The UK and the USA practised vaccine nationalism when governments pre-ordered Covid-19 vaccines before regulatory approval and entered purchase agreements with pharmaceutical companies, buying out large amounts of vaccines when they are released (Kirgizov-Barskii & Morozov 2022: 168). As of August 2020, the UK had secured contracts for '340 million vaccine doses from six distinct establishments', surpassing the country's actual requirements (Kirgizov-Barskii & Morozov 2022: 168). From a citizen's perspective, within the domestic realm, governments that ensured their populations were supplied with various Covid-19 vaccines and utilised vaccine diplomacy to increase trade and economic development were practising effective governance. Radovici & Robescu-Cercel (2022: 499) argue that in the crisis stage of the pandemic, Higher-Income Countries managed to pre-emptively secure Covid-19 vaccines by targeting supply chains and manufacturers with Advance Purchase Agreements. While the EU and USA acted as vaccine distribution hubs for High-Income-Countries that could afford larger orders, India distributed smaller orders to Middle-Income-Countries and rising economies (Radovici & Robescu-Cercel 2022: 499).

A vaccine hub refers to a large national production facility where the complete manufacturing process of the vaccine occurs in a single location (Byrne, Callahan, Kyoung, & Salomé Da Silva Duarte Lepez 2022: 2). However, Byrne *et al.* (2022: 2) illustrates that the process of vaccine manufacturing is multilateral, across numerous countries, facilities, organisations, and procedures. Byrne *et al.* (2022: 3) explain by demonstrating three phases of the vaccination process. The first phase is Research and Development (R&D), which entails 'exploratory research, pre-clinical studies, and clinic trials' (Phase I-III or phase IV, where national agencies approve the trials) (Byrne *et al.* 2022: 3). The second phase is Manufacturing, Packaging & Transport that requires manufacturing that adheres to global criteria, packaging, and transportation; that often requires cold chain capacity depending on the type of vaccine (Byrne *et al.* 2022: 3). The final phase is Distribution and Monitoring (D&M) which involves appropriate storage, the vaccination of citizens before the expiry of vaccines and monitoring vaccine effectiveness and side-effects (Byrne *et al.* 2022: 3). When these three phases are finalised in different regions or countries the timeline and practice of vaccine diplomacy, and immunisation becomes complex.

Evenett *et al. (*2021: 2) suggest that Covid-19 production centres around 13 countries called the “Vaccine Club”, the handful of producer nations and manufacturers remain in this club by interacting, exporting, trading, and sourcing ingredients from each other. The 13 states include Brazil, Canada, China, EU, India, Argentina, Japan, Korea, Switzerland, the USA, Russia, and the UK, from where 68% of vaccine manufacturers import their goods (Evenett *et al.* 2021: 2). The top exporters of key ingredients in vaccines include the USA, EU, UK, Japan, and China (Evenett *et al.* 2021: 2). For Evenett *et al.* (2021: 1) vaccine nationalism manifests through evident injunctions or restraints on outbound shipments, prioritising domestic access and availability of vaccines at the detriment of international distribution.

Evenett *et al.* (2021: 2,7) further suggest that the UK had exercised an ‘export control regime’ policy when the state signed agreements with manufacturers such as the Indian pharmaceutical company Wockhardt which resides in Wrexham, Wales. The company was hired to complete the “fill and finish stage” of vaccine manufacture; however, Wockhardt still advanced contracts with alternative buyers (Evenett *et al.* 2021: 7). To counter this, the UK also signed an exclusive supply contract with AstraZeneca for all the vaccines produced in the UK (Evenett *et al*. 2021: 7). In other words, all Covid-19 vaccines produced by AstraZeneca must go towards the UK’s citizens. India and China, on the other hand, tried to balance international exports while simultaneously vaccinating their citizens (Evenett *et al.* 2021: 6).

This helping hand approach was often met with failure, as seen in India during the second wave of Covid-19 as described on page 6 of this study. With the supply and production of vaccines various items, ingredients, and methods of distribution are needed to complete the process (such as ingredients of vaccines, syringes, gloves, and borosilicate vials) (Evenett *et al.* 2021: 8). The process is further complicated since different value chains, governments, actors, and companies are involved and information on the movement of supplies is often not published or accessible (Evenett *et al.* 2021: 8). Yet the study reflects that interdependence exists between members of the vaccine club and that key ingredients are condensed in the EU, USA, China, Singapore, and the UK (Evenett *et al.* 2021: 13).

The literature review on vaccine diplomacy reflects a rush in publications and a lack of a complete understanding of what transpired with China, Russia, India, the UK, and the USA from 2020 to 2022. Some of the data is used in timeline fragments and is no longer accurate since changes have occurred in state practises and strategies after 2020. It is thus essential to tell the whole story of vaccine diplomacy practises during Covid-19 to formulate and understand the phenomenon.

1.5. The Research Question

The study questions the following: What patterns of multilateral vaccine diplomacy were practised by states to adapt to the challenge of Covid-19 from August 2020 to July 2022?

The sub-questions are the following: Was multilateral vaccine diplomacy practised by states to achieve outcomes in national interest, and how did these practises evolve in the study's timeframe? The vaccine diplomacy practises of China, Russia, India, the UK, and the USA within the multilateral domain will be analysed.

1.6. The Methodological Approach

This study will utilise a qualitative approach complemented by a literature-based design and guided by a conceptual framework and research questions. The qualitative approach is suitable for this study as it is explanatory and descriptive in nature. Qualitative studies often apply interpretive social science, which utilises a 'non-linear research process' (Neuman 2000: 122). Qualitative approaches seek to uncover the significance of the data through analysis, categorisation, conceptualisation, critical questioning, and abstraction (Neuman 2000:123,163,420).

A conceptual framework relates and associates concepts to describe and comprehend a phenomenon or guide a research problem, the process of which often follows an inductive logic (Imenda 2014: 189). A conceptual framework, similar to a theoretical framework, is used as a perception tool to comprehend and explain reality (Ngulube, Mathipa, & Gumbo 2015: 6). This can often reflect the perspective and interpretation of the writer which relates to an interpretivist research philosophy. The conceptual framework acts as a binding agent that synthesises research, 'guides the research question, methodology and analysis' (Ngulube *et al.* 2015: 8).

A concept consists of various elements or “components” that were founded on additional or prior concepts (Jabareen 2009: 50). Each concept is uniquely characterised by their numerous elements, and within a framework, these concepts substantiate other concepts to provide knowledge and interpretation of the studied occurrence or reality (Jabareen 2009: 51). Jabareen (2009: 53-55) demonstrates the research process of conceptual framework analysis through several steps. The procedure starts with finding, organising, and evaluating texts and data sources, followed by the examining and categorisation of the data and texts (Jabareen 2009: 53-54). The next step involves the recognition and labelling of concepts, followed by grouping similar concepts (Jabareen 2009: 54). Thereafter, the concepts are integrated into a framework and validated or peer-reviewed by alternative academics and researchers (Jabareen 2009: 9). Lastly, the conceptual framework must be revised until an accord is reached, often across multiple disciplines (Jabareen 2009: 55).

Qualitative analysis and its progression throughout the research process builds the conceptual framework (Jabareen 2009: 51). This qualitative analysis will be a “desktop study” that utilises qualitative data analysis, secondary analysis and content analysis. ‘Content analysis’ refers to the evaluation of documented data (King, Aslam, Donald, Henderson, Anderson & Nortje 2017: 208), while secondary analysis refers to the exploration of existing data, documentation, and statistics (Neuman 2000: 305).

This longitudinal study will analyse data from August 2020 to July 2022 and has no ethical implications since the data and information that will be used resides in the public domain. No human subjects will be involved in this study, and the analysis will use secondary data sources and peer-reviewed academic papers. The study's main purpose is to analyse vaccine diplomacy practises between states during the Covid-19 pandemic from August 2020 to July 2022. The vaccine diplomacy practises of China, Russia, India, the UK, and the USA within the multilateral domain will be analysed.

1.7. The Structure of the Research

Within this study, chapter one, includes the introduction, the purpose of the study, the literature review, the research question, the methodology, and the research structure.

Chapter two discusses the contextual framework and includes the main concepts' association and definitions. Chapter three discusses the Covid-19 and vaccine context, and touches on vaccine developers, their country of origin, the multinational corporations involved, their country of origin and vaccine approval. Chapter three further examines the delivery of donations, the vaccine price and supply agreements by the "givers and receivers," where the vaccines were first approved, the timeline of approval, the Covid-19 timeline and global vaccine initiatives such as COVAX. The fourth chapter includes the data of China, Russia, India, the UK, and the USA, the diplomatic practises and initiatives used by these states, the relations between givers and receivers, and the multilateral partnerships of these states. Chapter four includes a discussion of findings and evaluations. Finally, chapter five discusses further conclusions and recommendations.

Chapter Two: Conceptual Framework

This conceptual framework has no part in the great theoretical debates and ideological biases. It recognises but excludes the unequal nature of the international system and North-South/ West-East divisions to the discipline, as the scope of the study is too small for all the issues related to international relations. This framework acts as a neutral space to explore and apply the concepts related to the study. Due to the complexity of our reality, interpretations, meanings, and associations of concepts vary. This chapter will explore different conceptual notions, elements, and discussions to grasp the essence of foreign policy, soft power, diplomacy, global health diplomacy, vaccine diplomacy and multilateralism and develop a framework worthy of analysis.

2.1. The International and Domestic System

Chapter one of the study has confirmed the nature of the study's context and the relation between the levels of analysis. Berridge & James (2003: 145) defines the international structure as the organisation of nations and actors within the global realm (Berridge & James 2003: 145). Moreover, the international system might refer to the complex web of states, non-state actors, and international organisations (be they governmental or non-governmental), including their interrelations and reciprocal interactions (Berridge & James 2003: 148). The international realm entails multidimensional interactions between various state and non-state actors (Spies 2018: 27). The domestic realm refers to the public domain of the state, which domestic political life revolves around (includes the political, cultural, and social institutions of states) (Evans, Jacobson & Putnam 1993: 5). Both realms experience constant variation due to the actions of numerous actors. Since foreign policy involves interaction between the domestic and external domains, multiple factors sway the policymaking procedure, formulation, and implementation of foreign policy. Therefore, decision-makers and the strategy they produce must balance internal and external factors (Holsti 1995: 253-4).

2.2. Foreign Policy

It is challenging to conceptualise foreign policy since there is a divergence of opinion on the definition, indicators, and attributes (Holsti 1991: 192). Holsti (1991: 193) reflects on this paradox by arguing that states differ in their domestic realm, leaders,

culture, context, territory, norms, and ideals. Moreover, each state's foreign policy strategy is uniquely adapted to its contextual situations, making it difficult to find a standard definition and attributes (Holsti 1991: 193). Hermann (2011: 4) suggests that foreign policy emphasises the interests that governments seek to attain beyond their borders. Holsti (1995: 84) defines foreign policy as governmental action to change the behaviour of another state or entity. A foreign policy consists of policies (such as economic, social, and political) concerning the external world, which are approved by states or governments (Berridge & James 2003: 107). Similarly to Holsti (1995) and Berridge & James (2003), Jackson & Sørensen (2013: 252) argue that foreign policy is strategic state action and policy that enforces, sustains, and influences relations with other states or the external environment. Hermann (2011: 4) further enhances the concept by stating that policy is a strategic strategy aligned with specific interests that involve the consignment of resources if implemented. Moreover, foreign policy can be employed in the realm of multilateral engagements. Foreign policy can affect relations with multilateral institutions and other international entities within the state's peripheral (Hill 2016: 4).

Smith, Hadfield & Dunne (2016: 3,5) take a behavioural stance towards foreign policy when they define it as the act of policy formation related to state behaviour and relations with other actors, including 'global institutions, social movements and regional actors'. The authors further state that foreign policy is conceptually associated with public diplomacy aside from foreign policy focusing on external affairs (Smith *et al.* 2016: 5). Public diplomacy involves diplomatic interaction and communication between states and domestic or foreign citizens (Huijgh 2019: 9). According to Viswanathan (2019: 130) foreign policy is shaped by national history, public perspectives, state competences, national resources, and geographic location in the world. State interests alter as capabilities or new competencies, such as technology and knowledge, progress (Viswanathan 2019: 130-131).

Foreign policy illustrates the national interest that states seek to attain abroad. Foreign policy is the process of policy development (concerning domestic and foreign affairs) related to 'the political, constitutional, bureaucratic practises' and identifying national interests (Sofer 1988: 196). In foreign policy, decision-makers consider the state's capabilities, the process of policy development, and national needs. They then

formulate policies that reflect the government's goals and actions concerning the external context (Holsti 1995: 19). National interests thus guide foreign policy. The purpose of foreign policy is to advance national interests or change the activities and objectives of another state (Holsti 1995: 19). Holsti 1991 (195-196) further clarifies the concept by referring to four clusters of challenges that every state faces and could ultimately guide states' foreign policy. The clusters include sovereignty, welfare, security, and government order maintenance (Holsti 1991: 195-196). Foreign policy is structured to solve these problems. All these problems often influence each other and are influenced by the external environment (Holsti 1991: 195-200). Although states are unique in their context, history, identity, culture, and foreign policy, Holsti (1995: 84) proposes that states have the common objectives of security, sovereignty, welfare, status, and respect that can guide foreign policy. Van Nieuwkerk (2004: 95-96) clarifies Holsti's foreign policy objectives that can reflect 'short-range, middle-range or long-range objectives'. Short-term aims to sustain political, social, and economic structures (Van Nieuwkerk 2004: 95). Middle-range goals include self-expansion, regional agreements, foreign-private business agreements and market development (Van Nieuwkerk 2004: 95). Within this range, global credibility and legitimacy that plays into soft power relate to middle-range aims. Finally, long-range objectives relate to restructuring the political system or ideological expansion (such as democracy) (Van Nieuwkerk 2004: 96). The boundless ranking of foreign policy objectives will not be utilised in this study since the examination occurs during a crisis. Throughout the pandemic, states would have prioritised the interest of public health over, for example, ideological expansion.

Foreign policy, being an interplay between domestic and external dynamics, is influenced by a variety of factors that shape the decision-making process, policy formulation, and implementation. A balance needs to be sustained within the international and domestic systems since all realms are interconnected; any change in one sector leads to another change. Moreover, change within relations can impact the circumstances and decisions of other states (Holsti 1995: 120,254). Domestic factors involved in decision-making include national attributes, public opinion, socio-economic needs, national identity, ethical and cultural considerations, geography, bureaucracy, government structure and ideology (Holsti 1995: 253-4). In addition, international factors such as international law, global/external opinion, global crises, global market,

maintaining relations with other actors and actions/objectives of other states; also need political consideration (Holsti 1995: 253-4).

Similarly to most of the concepts in this framework, the definition and elements of foreign policy relate to the structure of the global order, the context or historical period and how it is constructed or perceived by various actors. Ayres (2011: 435-437) exemplifies this concept's diverse nature by examining American foreign policy and national interests within a multipolar system. Ayres argues that classical realism and balance of power concepts were employed to provide justifications for foreign policy decisions. Ayres (2011: 434) further differentiates between three types of systems or polarisation. A hegemonic state with a prevalence of power characterises unipolar systems (Ayres 2011: 434). Bipolar systems balance power distribution between two major powers or states (Ayres 2011: 434). In comparison, multipolar systems carry three or more major powers or states (Ayres 2011: 434). These systems are often used to study state practises over time.

The development of foreign policy occurs in phases. The foreign policy process involves 'formation, implementation and evaluation' (Odoh & Nwogbaga 2014: 11). The implementation phase is often the toughest to implement decisions, objectives, and strategy (Brighi & Hill 2016: 147-148). The practice of foreign policy requires various techniques of global cooperation in bilateral, transnational, and multilateral forms (Brighi & Hill 2016: 160-161). States often use diplomacy to implement and develop foreign policy. Diplomacy is practised in the "implementation" phase of foreign policy and determines which foreign policy instruments will further national interest (Spies 2018: 36-37, 39). However, foreign policy cannot be implemented or developed without diplomacy, negotiation, and regulations (Spies 2018: 44). In the sphere of foreign policy, the interplay of actions, reactions, perceptions, signals, and deliberate abstentions from action can have transformative effects on diplomatic relations and shape the decision-making environments of other states (Holsti 1995: 120, 254).

Similarly to the diplomatic process, the actors involved in the foreign policy process are debated within IR. While some argue that specific actors or professionals create foreign policy, others maintain that various actors are involved. Holsti (1995: 83) suggests that foreign policy is the product of decision-makers that includes actions or

strategies to change the policies, activities or perceptions of another state, non-state actor or the external environment; or to resolve an external dilemma (Holsti 1995: 83). Similarly, Spies (2018: 8) contends that foreign policy reproduces the perspectives and ideas of policy-makers and transforms it into foreign policy strategies executed in the external environment. External and internal environments impact policy-makers' choices and aims. Policy-makers include members of governments, political heads, cabinet ministers and department heads that jointly decide on policy (Cooper *et al.* 2013: 2). Sofer (1988:206) observes that politicians alone cannot handle the processes of foreign policy and diplomacy since their attention remains on narrow issue areas. Further, politicians often vary and are bound to party politics and election obstacles.

Although various scholars argue that the primary actor of foreign policy is the policy formulator, the perplexing reality of politics implies that a single perspective is no longer acceptable or wise. Sofer (1988: 206) argues that since foreign policy, decision-making and diplomacy involve infinite intricacies and variables; an individual or small group can't manage these processes. The knowledge, capabilities, and input of experts from various fields are needed (Sofer 1988: 206). Non-professionals, scholars, military specialists, politicians, community representatives and economic, business, and scientific experts are required for the diplomatic and foreign policy process (Sofer 1988: 206). Diplomats advise policy-makers, implement, and execute the foreign policy strategy that embodies the states' national interests (Cooper *et al.* 2013: 2). Every actor within the multilateral process of diplomacy and foreign policy has an important role. However, every state has individualistic teams, contexts and processes that make the conceptualisation and standardisation of processes difficult.

When analysing the information and definitions mentioned above, it can be determined that certain elements or components of foreign policy emerge. Firstly, foreign policy entails the action or behaviour of a state, government, or panel of actors towards external actors or affairs. Secondly, it involves a procedure that influences relations with others and circumstances. The policy is affected by political stability, government sustainability, welfare, sovereignty, security, and challenges often caused by others. In addition, the policy seeks to attain outcomes aligned with national interests, which are categorised based on their short- to long-term objectives. Nevertheless, during times of crisis, specific national interests are given priority. Lastly, foreign policy entails

an ongoing development, implementation, and continuous evaluation process, serving as the vital link between domestic and international interactions.

2.2.1. Foreign Policy Instruments

Foreign policy instruments refer to the methods of force and persuasion that states can utilise to achieve foreign policy objectives (Brighi & Hill 2016: 163). The critical foreign policy instruments are 'political, economic, military, and cultural' (Brighi & Hill 2016: 158). States' devices depend on the context, pledged resources, the risk involved and the effect on other actors and the system (Brighi & Hill 2016: 163). Brighi & Hill (2016: 164) created a scale of foreign policy instruments that starts at the first phase and escalates when a tool cannot reach objectives. The first phase involves diplomacy, followed by constructive sanctions, destructive sanctions, political intervention, and military occupation (Brighi & Hill 2016: 164). Spies (2018: 36, 38) similarly argues that there is a range of foreign policy instruments, from multilateral collaboration to diplomacy, economic strategies, and hostility to the outermost tool of war. Numerous foreign policy instruments mimic the characteristics of diplomacy, such as misadvised propaganda or the subset of public diplomacy (Spies 2018: 37). Foreign policy instruments include the use of hard, soft, and smart power.

The concept of power, its classification, spectrum, and distribution remain debated in IR. For example, Nye (2004: 2-3) argues that power is the means to change the behaviour of others to achieve one's objectives, which often depends on the context in which the interaction occurs and the possession of capabilities and resources. De Grazia (2021: 20) argues that power is the means to achieve a wanted outcome or strategic interests from others. Another perception relates power to knowing your desired results are assured (Nye 2004: 2-3). The type of power a state utilises can be constricted or supported by military or economic capability, technology, and leadership (Rivett 2018: 82-83). For Holsti (1995: 119) power influences other states, their decisions, and resources and depends on how the different countries respond to this act. Governments influence other states through persuasion, offering or granting rewards, threats or infliction of punishment and force (Holsti 1995: 125).

There are various approaches to conceptualising power. Some scholars employ a spectrum of power-related actions or behaviours, whereas others maintain that power is rooted in a nation's resources and capabilities. Alternatively, academics often define power on subjective judgements. Nye (2004: 3) examines approaches that directly associate power to state reserves and abilities. This approach to power is founded on the use of hard power mechanisms such as war and trade restrictions. The allocation of these 'power assets' varies on the context and critical state concerns (Nye 2004: 4). This definition fails to recognise that various actors perceive power and the value of power assets differently, restricting conceptual development. The environment of the actors' relationship and the sources perceived as power is ever-changing (Nye 2004: 2-3). The actors' context, the relationship between actors and how they perceive power influences the conceptualisation and meaning of power. In contrast, other approaches to power (such as soft power) argue that power is the attainment of state interests through altering others' behaviours, preferences, and actions through subtle persuasion or desirability (Rivett 2018: 81).

Hill (2003: 135) suggests a structured continuum of power in foreign policy; hard and soft power edges the structure with coercive diplomacy at the centre. Hard power includes physical force, blackmail, and deterrence, in contrast to so-called soft strategies of subversion, propaganda, sanctions, diplomacy, and culture (Hill 2003: 135). Foreign policy instruments include using hard, soft, and smart power. Fan (2007: 151) defines hard power as the capability to influence actions through coercion or physical threat. Hard power uses financial or combatant capabilities to pressure or forceful action on others (De Grazia 2021: 20). Examples of hard power include economic strength, military resources, technology, and state location (Mol *et al.* 2022: 1112). Hard power uses incentives or intimidation ("carrots" and "sticks") to ensure a wanted outcome (Nye 2004: 4). According to Fan (2007: 151), a foreign policy serves as the manifestation of hard power. Smart power intertwines the “muscle and brain” of power. Smart power intertwines hard and soft mechanisms (McInnes & Rushton 2014: 838). Smart power combines political, military, economic and cultural power assets (Viswanathan 2019: 130). Smart power utilises soft power practises while still keeping its options open for hard power (Spies 2018: 22).

Due to the complexity of these two concepts, the relationship between hard and soft power is often misunderstood. Mol *et al.* (2022: 1112) differentiate these concepts by examining their tangibility. Soft power has nonphysical properties such as culture, ideology, political value, attractive ideals, international institutions, and policies, while hard power has physical properties such as economic strength and military resources (Mol *et al.* 2022: 1112). The primary difference between the concepts is that soft power rests on legitimacy, credibility, and action out of free will and desire. Hard power is forceful, focused and has an immediate effect; while soft power is indirect, its outcomes appear in the long term through persuasion and appeal (Hill 2016: 143).

Fan (2007: 150) maintains that hard power can be measured, controlled by various actors, and often predicted, unlike soft power. Another differentiation between these concepts arises from their respective outcomes. Hard power is a direct strategy that shows results in the short-term, while soft power is subtle and indirect, delivering long-term results (Fan 2007: 151). In addition, a state can unknowingly attract the appreciation and following of others (Nye 2004: 7). Fan (2007: 150-151) also associates soft power with hard power; by arguing that states can only practice soft power when hard power assets (such as economic resources) sustains it. Since this study focuses on soft power, the section below will examine the concept in detail.

2.2.2. Soft Power

Similarly to the concepts of power and foreign policy, the notion of soft power is distorted and deliberated by researchers. Rivett (2018: 81) maintains that soft power seeks to achieve one's aims through the skill of influence and persuasion rather than coercion. Soft power is additionally used as a manner to 'sway negotiations or conflict resolutions' (Rivett 2018: 84). De Grazia (2021: 20) similarly argues that soft power 'charms or persuades action through the enticement of a state's political practises, culture, and values' (De Grazia 2021: 20). Desirable state characteristics such as culture, political norms, and legitimate policies produce soft power (Nye 2004: 6). Viswanathan (2019: 132) gives an example of how India's culture attracted soft power from 'western publics during the 1960s through desirable practises of yoga, meditation, and spirituality'. Other examples include music, fine arts, sports, and discourses (Viswanathan 2019: 132). For example, Asia's soft power attractions included

staggering economic growth and development, exports and multinational brands (Nye 2004: 83,84,87).

Fan (2007: 150,156) emphasises that soft power is built on communal advantages and used by various actors (such as individuals, groups, companies, institutions, and states). States' perception and use of soft power depend on contextual variables such as ‘historical relations, economic ties, cultural similarity and geographical proximity’ (Fan 2007: 150). The recipient of soft power chooses to practise collaboration, share objectives and reasoning with the user of soft power (De Grazia 2021: 20). Soft power relies on good communication between actors to ensure strategic interests (De Grazia 2021: 20). Similarly, diplomacy thrives on tactical and mutual communication between governments.

Viswanathan (2019: 130) views soft power as a process in contrast to a result or outcome. The foundation of soft power lies in the perception of the other actor and the strategic employment of policy instruments (Viswanathan 2019: 130). An example that illustrates this is the perception of hard military force, which tends to carry negative connotations until it is employed for peaceful objectives (Viswanathan 2019: 130). The power assets of soft power include attractive culture, political values (implemented domestically and internationally) and foreign policy when perceived as moral and legitimate (Nye 2004: 11). Fan (2007: 149) contrasts Nye’s assertions that soft power relates to ‘political values, alluring culture and foreign policy’. The researcher argues that values and institutions are rooted in national culture and that foreign policy is founded on and maintained by hard power assets (Fan 2007: 149). In other words, foreign policy choices are based on state resources of hard power, such as economic capabilities, instead of a form of soft power. The notion of 'power' is essentially prospective and requires the presence of capabilities to be operational (Fan 2007: 150). Examples of soft power such as aid, foreign immigration, sports, and international students are capabilities that can only be transformed into power when backed by economic resources, political and social institutions, values and societal relationships (Fan 2007: 150-151). While there is consensus that soft power stems from perception and the strategic utilisation of instruments, it is essential to recognize that not all states possess equal power capabilities or the capacity to shape perceptions. According to Nye (2004: 16) if states lack hard power, they can still advance national interests

through soft power assets such as legitimate foreign policies, diplomacy, and cooperation in global issues.

De Grazia (2021: 19) relates soft power and its development to realism and the concept of statecraft. Similarly to soft power, the classic realist concept of statecraft involved legitimacy, external perception, status, and power (De Grazia 2021: 19). These concepts relate to diplomatic practices and political relationships between governments or rulers. According to Spies (2018: 22) soft power descends from a government's act of favouring diplomatic methods. Soft power further relates to public diplomacy. Nye (2004: 108-111) defines public diplomacy as social initiatives and strategic public communication to advance foreign policy. The dimensions of public diplomacy include communication, transparency and sustaining good relations with the public, individuals, scholars, and the media (Nye 2004: 107-109). Public diplomacy is the interaction between governments, groups, and individuals to influence the citizens of other nations, thus changing other countries' foreign policy decisions or promoting national interest (Snow & Taylor 2009: 112).

The soft power practises of one state can impact the influence or power practises of other states and the international context (Fan 2007: 154). Soft power can also have a destructive impact on states. Using soft power can also weaken the soft power capabilities of others. For example, multilateral institutions often utilise soft power strategies by attracting followers and member states. Still, they can also undermine the state's legitimacy by altering what is known as legitimate institutions or practices (Nye 2004: 10-11, 90). The effectiveness of the soft power approach depends on the recipient and their perceptions (Fan 2007: 150). Viswanathan (2019: 132) proposes that the art of soft power relates to its understated nature, and this strategy's success relies on the receiver's perception and mutual interests, in contrast to culture and values. The concept is linked to foreign policy since soft power strategies can impact other states and the international context. A state's foreign policy and its method of implementation can change the perceptions of others. Foreign policy content, strategy, and implementation impact a state's appeal and soft power; It can either balance or tip the legitimacy scale (Nye 2004: 17,68). Soft power transcends borders, and the legitimacy of a state's power assets should always reflect in all its domestic and international practices.

A state, its foreign policy, and soft power diplomatic strategies reciprocally impact each other. Soft power and diplomacy can weaken or strengthen foreign policy. The formulation of national interests and the methods employed to pursue objectives play a crucial role in shaping foreign policy; as Nye (2004: 17) explains, 'foreign policy hinges on how states define their national interests, whether in broad or specific terms, and the strategies employed to achieve those objectives'. Viswanathan (2019: 132) changes the view of soft power as an aid to policy when he argues that soft power smooths the path for using other foreign policy instruments. This study agrees with aspects of Fan's work (2007:150) such as the features of soft power. Soft power is 'context-based, unpredictable, conditional, and intangible', complicating the measurement process (Fan 2007: 150). These soft power attributes relate to the study's interpretivist approach; thus, the perception or definition of soft power depends on the context and constructed notions of the actors involved.

From the discussions above, we can determine that the elements of soft power include legitimacy, credibility, mutual benefit, and self-determined behaviour. In addition, soft power assets include legitimate culture, political values, foreign policy, diplomacy, and public diplomacy. Lastly, soft power's context, its assets' significance and how it is perceived vary.

2.3. National Interest

States use foreign policy instruments, diplomacy, and soft power persuasion to attain national interest; all states have unique interests and objectives that can change anytime (Holsti 1991: 199-200). Burchill (2005: 23) suggests that the concept of national interest serves a practical purpose by influencing political actions through explanation, justification, or even the questioning of foreign policy decisions. Additionally, academically, it is employed to analyse the conduct of governments. The structure of the global realm shapes national interests, the type of political organisation the state possesses and the context or historical period of the state. Kaplan (2014: 61) provides an example as he describes the interests of national actors in the bipolar system during a period of power distribution and the national need for power and security. Burchill (2005: 9) similarly argues that the definition of national interest is context-based, and the meaning attached to this concept varies through social and

historical contexts. The context further depends on the level of analysis used by the researcher. Analytically the interests of individuals, states and international systems are equivalent to one another, and the interests of several systems can intersect or contrast (Kaplan 2014: 63). For example, in this study, the interests of citizens, pharmaceutical companies, governments and multilateral institutions (such as WHO and COVAX) overlapped in the domain of health and immunisation.

Kaplan (2014: 57-58) examines national interest through a systems approach and argues that the aspirations of a system are formed by the perception of its reality and what it needs or requires in this environment. The various requirements of a system do not change directly; however, the value or meaning attached to a need alters with the context, impacting the formulation or attainment of national interest (Kaplan 2014: 71-72). The value an actor attaches to a need also varies (Kaplan 2014: 72), complicating the universal conceptualisation of national interests.

The conventional definition of national interest reflects state or governmental goals and interests (Holsti 1991: 160). States have “common interests” such as survival and territorial sovereignty and “permanent interests” such as military, economic resources and political relationships that secure particular interests (Burchill 2005: 27). Van Nieuwkerk (2004: 90) describes national interest as pursuing state objectives that remain a long-term priority and reciting shared goals. The prioritisation of policies further determines national interest based on economic wealth, ideological ideals, or security threats (Van Nieuwkerk 2004: 90-91). As the context of the state fluctuates, national interest and priority levels vary correspondingly. National interests can thus be short or long-term. National interest can be motivated by internal factors such as national identity, political groups, and public attitude; or external factors such as national and international security, geographical location, historical past, ideological beliefs, and economic and cultural problems (Marek and Baun 2011: 144). In addition, global norms and domestic practices influence national interest as contemplated by the structure-agency debate (Van Nieuwkerk 2004: 90).

Within a state, national interest remains the primary objective and often involves a differentiation between insiders (nation) and outsiders (external environment) which is in contrast with universalist/cosmopolitan approaches (Burchill 2005: 27). Similarly,

Kaplan (2014: 58) maintains that the concept of national interest has been entangled in a subjective versus objective debate. The subjectivists argue that national interest embraces values and interests beyond that of power (Kaplan 2014: 58). Kaplan (2014: 58-59) agrees with objectivists who argue that national interests are static, constant, and concerned with power. He further states that the national interest of a state implies the assurance that public needs are met (Kaplan 2014: 59).

Burchill (2005: 1-22) explores the conceptual meaning of national interest by examining the theoretical and epistemological foundations of the concept. The author relates the idea of national interest to the liberal notions of 'communal will' and the classical realist doctrine of "raison d'état" (Burchill 2005: 13). The "general will" argues that legitimate governments rule according to the 'common interests of society' and implements policies that reflect these requirements (Burchill 2005: 13-14). Raison d'état relates to the purpose of a state or government's existence. Burchill (2005: 17) explores the work of Meinecke (1998) and argues that "raison d'état" emerged from a social contract between a ruler and his citizens. Within this notion, citizens agree to be governed by a ruler that 'acts in the communal interest of the public' and often preserves the state's survival by disregarding morality, religion, personal values, and gain (Burchill 2005: 17-18). Both theoretical notions relate to the social contract. The social contract is a social agreement between a government and its citizens within a state. The concept of the social contract involves individuals willingly surrendering or yielding specific rights to the government or legitimate authority in exchange for the political stability and security provided by the state (Smith *et al.* 2016: 503). The countries' state interest is thus linked to the will of citizens. Within this study, it could be argued that citizens and governments had a similar interest in health and immunisation during the pandemic and that it was the responsibility of governments to ensure these public needs were met, as the social contract argues.

Spies (2018: 17,18,20) relates the concepts of national interest and diplomacy by discussing the debated notions of 'moral and westphalian diplomacy'. "Value-seeking diplomacy" scholars argue that diplomacy aims for universal goods, philanthropy, good governance, and universal human rights (Spies 2018: 18). In comparison, "interest-maximising" diplomacy seeks power and state interests often linked to realists (Spies 2018: 18,20). The dynamics described above resemble the interplay between concepts

such as 'national interest and morality' or 'global governance and the sovereignty of states'.

State interest is essential in a state's relationships with other actors or states (Berridge & James 2003: 181). There is no universal standard of measurement for a state's national interest. However, the principal objective of foreign policy is to serve the national interest, which policy-makers can prioritise based on changing circumstances. The objective of foreign policy is to achieve outcomes in the state's national interest; execution of the approach lies with diplomacy through negotiation and communication with other states or actors. Diplomacy has developed in retaliation to mutual needs across various political actors (Spies 2018: 36).

2.4. Diplomacy

The concept of diplomacy is multifaceted. For some scholars, diplomacy is a foreign policy instrument or method to attain national interests. Sofer (1988: 196) maintains that diplomacy is a component of the foreign policy process and the effort to reach compromise without coercion. Brighi & Hill (2016: 164) place diplomacy within the first phase of a broad spectrum of foreign policy instruments. Diplomacy has the role of supervising and guiding foreign policy objectives (Kleiner 2008: 321). The function of diplomacy is to support the creation and implementation of foreign policy through negotiations, modifying policies and language, and ensuring the comprehension and positive reception of other actors (Sofer 1988: 196). Spies (2018: 36) argues that diplomacy surpasses foreign policy since it remains unrestrained by the practices or agency of political actors.

Moreover, scholars perceive diplomacy as the helping hand of other foreign policy instruments or a strategy of soft power. The effectiveness of foreign policy can be influenced by the use of soft power and diplomacy, which have the potential to either enhance or undermine it. Diplomacy acts as the conveyance of other foreign policy instruments that can entail enticement or threats (Spies 2018: 39). Furthermore, the concept can be observed as a metaphorical representation of assets associated with either hard or soft power. Diplomacy “symbolically” represents a state's soft or hard power (Spies 2018: 23). Alternatively, researchers define diplomacy as an institution that regulates relationships among states. Diplomatic relations refers to the

relationship between states (Berridge & James 2003: 80). Within diplomatic relations, states have a platform to discuss their interests, convey their point of view, and reach an agreement or disagreement on issues (Berridge & James 2003: 80). For Wiseman (2011: 1193) the standard definition of diplomacy is the 'practises, actions and institutions of sovereign states which indicate their intentions and interests to other states'.

In addition, scholars often view diplomacy as a formal representation of a government in an external environment or a tool of communication and negotiation. For Holsti (1995: 130), diplomacy entails 'negotiation or communication' between states to uphold both parties' interests and policies to reach an accord on mutual concern. Diplomacy is a bilateral or multilateral practice that requires mutual relations (Spies 2018: 40). Berridge & James (2003: 70) discuss diplomacy as the mechanism through which states communicate, facilitating the creation of normal or problematic relationships within the international system. Within diplomacy, a government must transmit to other states their ideals, acts, objectives, or the external conduct they want to 'alter, prevent or reinforce' to pursue governmental interests (Holsti 1995: 130).

Spies (2018: 8) conceptualises diplomacy as an infinite process of harmonious interaction and transmissions that concerns the relationships between states or groups in the international system. Formal representation, collective advantage, and negotiation form the basis of relations among actors, as explained by Spies (2018: 8). Diplomacy further evaluates and directs foreign policy objectives and serves as the mechanism for implementing other foreign policy instruments. Diplomacy is thus an intricate concept that occurs across multiple levels of analysis, different actors, and contexts (Spies 2018: 26). The explanation and definition of diplomacy have altered over time due to contextual changes and historical developments.

2.4.1. The History of Diplomacy

There are several debates intertwined in the history of diplomacy. The first relates to the history of diplomacy and when diplomacy and its practices began. Second, scholars often discuss when diplomacy became politically standardised, which relates to the previous debate. Third, alternative arguments focus on the separation between

old and new diplomacy, the threshold of which is unclear. Finally, scholars further debate the future of diplomacy related to traditional and modern diplomacy.

Griffiths (2005) provides an overview of the evolution of diplomacy. Griffiths 2005: 188) argues that the first comprehensible written records of international relations that offer evidence of diplomacy stem from the third millennium BC, the mid-14th century BC (called the Amarna letters), and the 500 BC when Greek city-states established a diplomatic structure. “Modern” diplomatic systems developed in the late 19th century through Italian city-states where diplomatic operations or resident missions were conducted (Griffiths 2005: 188). Berridge (1995: 2) argues that the French practised the technique of diplomacy through 'permanent diplomatic representation or embassies, confidentiality in negotiation and ceremonial procedures'. Sofer (1988: 195) recognises that elements of diplomacy, such as resident consulates and the creation of foreign bureaus, emerged in 14th and 15th-century Europe. However, the researcher further argues that diplomacy is a modern phenomenon which commenced from the ‘1815 Congress of Vienna’, where practises became universal (Sofer 1988: 195). Griffiths (2005: 188) maintains that modern diplomacy became customary with the ‘1961 Vienna Agreement on Diplomatic Relations’, which described the functions of a resident mission. Traditional bilateral diplomacy had the following functions: state representation in foreign countries through embassies and permanent diplomats, promotion of friendly state relations, negotiations, communication, and clarification of state interests, gathering and reporting information, and policy recommendations, to influence other states' domestic affairs of attitudes (propaganda), and consular services (Berridge 1995: 34-47). According to Ikenberry (2003: 535) after the Congress of Vienna in Europe, multilateralism followed through the diplomatic rules and agreements related to the distribution of power or balance of power theory. Berridge (1995) adds to the debate by arguing that modern diplomacy progressed in 1949 when the ‘UN’s International Law Commission (ILC)’ decided to prioritise the law of diplomacy issue, after which the Vienna Convention came into force in April 1964, three years later than the signing of the convention (Berridge 1995: 21, 28).

Diplomacy is a flexible pursuit. As time passed, what is perceived as traditional forms of diplomacy remained essential practices. Correspondingly newer or different types of diplomacy evolved and developed within the international system (Cooper *et al.*

2013: 25). The debates on old/new diplomacy are often based on certain milestones, such as the world wars and shifts in the nature of the international system. Berridge (1995: 1) states that before WW1, diplomacy was naturally bilateral since diplomatic negotiation and permanent diplomatic missions occurred in other states. Earlier forms of diplomacy were mostly bilateral and practised by governments, professional diplomats, and ambassadors. The traditional role of the diplomat included negotiation, representation, safeguarding nationals, frequently informing national governments about the events and circumstances in the mission state, and advancing cultural, economic and scientific relations while promoting international alliances that reflect national interest (Griffiths 2005: 188). Berridge & James (2003: 70) define a diplomat as a professional who practises diplomacy and works within a government's diplomatic bureau. According to Spies (2018: 30) three dimensions of diplomatic representation can be universally applied across different periods. Firstly, diplomats are symbolic representations of governments and their interests (Spies 2018: 31). Diplomatic interactions are formalistic and only occur when formal conditions or rules are agreed upon and practised (Spies 2018: 33). The final dimension is the substantive representation that relates to the practice or labour of diplomatic functions and responsibilities in the place of the state (Spies 2018: 35).

Diplomacy has traditionally been practised between sovereign states but has shifted to include relations with multiple actors (Kleiner 2008: 321). Berridge (1995: 13) suggests that after WW1, old diplomacy concluded, and new diplomacy reigned. Through the establishment of the League of Nations, new diplomatic practices and multilateral diplomacy evolved (Berridge 1995: 13). Griffiths (2005: 188-189) emphasises that the practice of diplomacy transformed considering junctures such as the World Wars, the League of Nations, the United Nations (UN), and the growth of diverse global actors and organisations. Diplomacy further evolved with the development of technology, communication, and travel, and the rise of different security threats such as terrorism (Griffiths 2005: 188-189). When the international system grew, ad hoc missions, ambassadors, and direct communications were no longer of use, leading to states organising their relations with conferences (Berridge 1995: 13). Advanced technology, improved travel methods, and enhanced communication methods further changed the nature of diplomacy (Berridge 1995: 32). New diplomacy included new actors and multilateral practices. Modernistic diplomacy

urges states to expand their relations and to forge unfamiliar alliances (Cooper *et al.* 2013: 93). As the nature of the system changed, non-professionals participated in diplomatic processes (Berridge 1995: 1).

On the contrary, Sofer (1988: 195) argues against the differentiation between old and new diplomacy and reasons that diplomacy is a contemporary occurrence (Sofer 1988: 195). The author explains that "modern diplomacy" principles slightly altered after two events (Sofer 1988: 197). In the 1918's, after the devastation of WW1, the characteristics of diplomacy changed from classified statecraft/ secret diplomacy to collaborative and open diplomacy (Sofer 1988: 197). This 'open diplomacy' also made way for public diplomacy and the outcomes of foreign policy and diplomatic practices to be collective knowledge (Sofer 1988: 202,203). Leira (2016:36) partially agrees when arguing that during the 1900's 'new diplomacy' related to transparent and collaborative ideals. The UN Conference on Diplomatic Relations in 1962 reiterated new diplomacy characteristics based on collaboration, democratic principles, disclosed knowledge, multilateral diplomacy, and summitry (Sofer 1988: 197, 203-204).

Within the debate of what the future holds for diplomacy, Morgenthau (1946: 1068-1069) discussed two schools of thought, the perfectionist liberal school and the legalistic school. The liberal school argues that foreign policy and diplomacy will disappear due to the spread of democratic and liberal principles; organisational conferences will replace head-to-head diplomacy, and a general world government such as the UN will promote the shared interest of all and peace within the system (Morgenthau 1946: 1067-1069). The legalist school argues that the state's political power will be replaced by international law (Morgenthau 1946: 1067). Within this school, old diplomacy and foreign policy are based on the state's pursuit of national interest; which will be replaced by a shared respect for universal law. Collective rules will be upheld by an international organisation (Morgenthau 1946: 1069). Morgenthau (1946: 1069) argues that new diplomacy reflects the constant change in intention and practice of relations between states to pursue national interests. He further responds to the two schools by arguing that there is, instead, a polarity between new and old diplomacy in modern times (Morgenthau 1946: 1076). For example, the UN is a platform for modern diplomacy; however, powerful states rule parts of the UN (Morgenthau 1946: 1076). It can be agreed with Morgenthau (1946: 1076-1079) that

new diplomacy is founded on old diplomacy and that the two often correlate. Sofer (1988: 204) argues that multilateral diplomacy and summitry might be fitting for crisis management; however, it is not a replacement nor a cause of decay for professional diplomacy. The diplomat's role in foreign affairs remains essential as they are the communicator, consolidator and mediator between various perspectives, actors and states while upholding national interests (Sofer 1988: 206). The diplomat further functions by 'assessing facts, comprehending contexts, evaluating the articulation and implementation of policies and calculating choices and actions their state can make' (Sofer 1988: 207). In the modern world, both forms of diplomacy are intertwined through multilateral initiatives and diplomatic negotiations. However, it is unclear how Covid-19 affected this dynamic. The debate of what the future holds for diplomacy plays into the studies dialectic of the unsatisfied global need for vaccines and the nationalist responsibilities of governments to provide health to their citizens, with both approaches confronted with a scarcity of resources. The next subsection discusses the nature of multilateral diplomacy.

2.4.2. Multilateral Diplomacy

Berridge & James (2003: 176) maintain that multilateral diplomacy occurs through conferences with the participation of three or more states. Due to the increase in sovereign countries and non-state actors in the global system, diplomacy is more accessible in a multilateral arena and often through multilateral conferences (Berridge 1992: 195). The motivation for multilateral practices includes the structure and nature of the international system, institutional influence, domestic factors (internal politics, political identity, national interest) and individuals (leadership and government-official beliefs) (Ikenberry 2003: 535). Berridge (1992: 195) differentiates between ad hoc and permanent multilateral discussions. Ad hoc multilateral conferences are occasional meetings with interested participants that disband once agreement or total disagreement is achieved (Berridge 1992: 195). In contrast, permanent multilateral conferences have continual committees, intentional participation, and parliamentary procedures (Berridge 1992: 195). Holsti (1995: 33) associates diplomacy and multilateralism by discussing the concept of multilateral conference diplomacy. Multilateral conference diplomacy occurs within international organisations such as the UN and ad hoc meetings between diplomatic actors and government officeholders

(Holsti 1995: 33). Similarly, Berridge (1995: 78-83) relates multilateralism and diplomacy by discussing summitry which refers to diplomacy practised by or between the heads of state. Summitry creates a space for state leaders or representatives to personally interact and negotiate for an extensive range of reasons and objectives; leaders can thus contribute to diplomacy (Dunn & Lock-Pullan 2016: 239,240). There are three types of summitries; firstly, a serial summit refers to a conference that routinely occurs, such as the meetings of the European Council (Berridge 1995: 83). Secondly, an ad hoc summit refers to a single session that can turn into a first of many (Berridge 1995: 88). Lastly, 'the high-level exchange of views' relates to government leaders meeting to discuss situations, explain intentions, obtain information, to negotiate or ensure that lower-level bargaining persists (Berridge 1995: 91). An example is when government heads take foreign tours to visit other leaders (Berridge 1995: 91).

Multilateral diplomacy and summits make it easier for states to target a larger audience to attain national interests (Sofer 1988: 203,204). However, the disadvantages of conferences include 'political misunderstandings, misinterpretation, language obstacles, improvisations due to time constraints, and loss of legitimacy if the summit fails' (Sofer 1988: 204). An example of summitry occurred on 17-18 February 2022, where the European Council and African Union had a joint summit meeting where the EU reiterated its pledge to provide a substantial volume of vaccine doses by mid-2022 through the African Vaccine Acquisition Task Team (AVATT) (European Council 2022: Internet).

Multilateral diplomacy is conceptually intertwined with multilateralism. Multilateralism includes the process of collaboration, discussion, and negotiation, often through ad hoc gatherings or within a global institution, to accomplish objectives or accord (Smith *et al.* 2016: 500). To comprehend the concept of multilateralism, a distinction must be explained between unilateralism, bilateralism, and multilateralism. Unilateralism refers to a single order or state that refrains from international partnerships that require certain obligations (Restad 2010: 66). Bilateralism occurs between two states and involves informal agreements with fewer risks for affected states (Kumar 2022: 428). The traditional definition of multilateralism involves international collaboration between three or more nations (Jørgensen 2011: 2). However, the conventional definition

overlooks the agency of alternative actors within the global system. According to De Wijk, Thompson, & Chavannes (2020: 17,23) multilateralism is a set of objective guidelines or principles that are followed and practised willingly by members and can consist of organisations, institutions, and regimes. Ikenberry (2003: 534) discusses three elements of multilateralism. First, multilateralism involves the organisation of interactions between three or more states, the relationship of which is established on consensual regulations that lessen national policy independence (Ikenberry 2003: 534). Dal & Dipama (2022: 6) describe Multilateralism as a foreign policy instrument to gain state objectives through mutual alliances and a form of international collaboration regulated by universal standards, rules, and norms between numerous actors (including non-state actors). Ikenberry (2003: 535) further builds on the concept of multilateralism by discussing three types of multilateral relationships. System Multilateralism occurs in the Westphalian state system, characterised by diplomacy, political autonomy, legality, and the relations between states (Ikenberry 2003: 534-535). Ordering multilateralism refers to the political or economic structure of the international system (Ikenberry 2003: 534-535). Lastly, contract multilateralism involves the regulations, codes of conduct and agreements regulating state relations (Ikenberry 2003: 534).

Similarly to diplomacy and foreign policy, multilateral diplomacy and multilateralism have many faces that alter with perspective and context. Within the context of this research, multilateral diplomacy is delineated as the collaborative interactions among two or more entities striving to establish diplomatic relations, achieve foreign policy objectives, or devise solutions to transnational challenges. The scope of multilateral diplomacy extends beyond the boundaries of state activity or high-level summit events. As illustrated in chapter three can be practised by various actors or groups, especially during a global health crisis.

2.4.3. Health Diplomacy

The health diplomacy process has changed from traditional bilateral diplomacy to a multilateral setting with a range of specialists and multiple actors (Hotez 2014: 1).
Health diplomacy shapes state policy and involves negotiating between states, intergovernmental organisations, non-governmental organisations, and non-state

actors regarding the response to health crises (Cooper *et al.* 2013: 693). Since global health can affect a state's society, economy, security, and power, it has emerged as a prominent issue within the foreign policy discipline (Feldbaum & Michaud 2010: 1). Mol *et al.* (2022: 1113) maintain that health diplomacy advances mutual benefits and allows actors to collaborate, often resulting in the use of soft power to promote multilateral interests. States have often utilised health diplomacy to obtain national interests or international recognition by assisting other states with health-related matters or aid (Feldbaum & Michaud 2010: 3). Health diplomacy is a coin of two sides. The obverse of the concept is often correlated with legitimate and moral practices, while the reverse relates to national interests. Cooper *et al.* (2013: 693, 704) stress that health diplomacy, cooperation, and aid (legitimate policies) can be used as a smokescreen to achieve other national political, economic, and social objectives. Governments often 'double dip' in foreign policy, where health is a soft or smart power tool to influence other states and pursue foreign policy objectives that exclude critical health priorities (Cooper *et al.* 2013: 703, 704).

Global health diplomacy is the expansion of health diplomacy to the global realm. Frenk & Moon (2013: 937) argue that the global health system is the multilateral collaboration between governments, organisations, health ministries, health agencies, academic institutions, actors, and groups with the combined interest of improving health. Multifaceted agents participate in global health diplomacy to formulate international health strategies (Hotez 2014: 1). Antwi-Boasiako (2022: 5) observes that global health diplomacy revolves around transnational or multinational health issues with governments using it to combine global health priorities, foreign affairs, and national interest. The objectives of global health diplomacy include enhanced public and global health, implementing protection mechanisms, improved international relations and commitment of multi-level actors to collaborate on world health equally (Mol *et al.* 2022: 1113).

Similarly to health diplomacy, the definition of global health is also contextually- and analytically-based. Many definitions of the concept are centred around topics, disease types, groups or populations, issue areas or geographic locations (Frenk & Moon 2013: 936). Frenk & Moon (2013: 936) try to conceptually build the concept of global health by describing the interdependent and multilateral relationships between various actors

in the international realm and the global transmission of health hazards. The authors further develop the concept by relating it to the dialectical “good and bad” discourse (Frenk & Moon 2013: 937,939). The concepts of “global health” and “global health diplomacy” are interconnected and often overlap in academic papers. According to Mol *et al.* (2022: 1113) international health diplomacy is characterised as a political instrument of transformation, seeking to improve world-wide health and mend diplomatic relationships, particularly in conflict zones or poor developing regions. Within the realm of global health diplomacy, vaccine diplomacy represents a distinct subset (Hotez 2014: 1)

2.4.4. Vaccine Diplomacy

Vaccine diplomacy connects the medical discipline with that of IR. According to Evenett *et al.* (2021: 3), vaccine diplomacy involves the deliberate application of vaccines, vaccine components, technology, and information as strategic tools to achieve political aims. Hotez (2014: 2) maintains that vaccine diplomacy encompasses the employment or consignment of vaccines with the aim of global health or humanitarian mediation. In contrast, Suzuki and Yang (2022: 2, 4) argue that vaccine diplomacy involves the allocation of vaccines with the objective of diplomatic practices or advances. Varshney & Prasanna (2021: 112) define vaccine diplomacy as the 'use or delivery of vaccines between different global locations, to advance diplomatic relations between nations or institutional collaborations’. Vaccine diplomacy entails using vaccines as an extension of foreign policy or diplomacy.

Hotez (2014: 2) explores a subdivision of vaccine diplomacy termed vaccine science diplomacy, which refers to the shared development or production of vaccines through the use of the interaction of scientists or researchers and technologies, often originating from different countries (Hotez 2014: 2). This definition neglects to add why these actors collaborate. Vaccine science diplomacy integrates science diplomacy and vaccines with the objective of national or personal interests.

To grasp vaccine science diplomacy, science diplomacy as a sub-concept is explored. Science diplomacy relates to the interaction between states, governments, scientists, diplomats, activists, researchers, universities, global companies, and stakeholders

(Varshney & Prasanna 2021: 111). Science diplomacy entails 'the maintenance of international partnership through scientific collaborations among states to address global challenges' (Copeland 2016: 629). Science diplomacy is direct cooperation between nations focusing on scientific partnerships to attain national interests (Copeland 2016: 630). Science diplomacy updates foreign policy objectives and encourages international collaboration, knowledge, and skill development (Copeland 2016: 629). Science diplomacy is associated with public diplomacy and soft power since knowledge production and learning occur in public or international settings (Copeland 2016: 629). The concept differs from international scientific cooperation (ISC), which excludes direct government involvement, and is commercially driven and practised by private and civil sector alliances (Copeland 2016: 630).

Vaccine science diplomacy is a subset of vaccine diplomacy. For this study, vaccine diplomacy relates to the donation of vaccines from one actor to another to advance diplomatic relations between nations, international collaborations, or attain outcomes in the national interest. These outcomes can be extended or short-term. In addition, vaccine science diplomacy relates to providing information, technology, or skills to produce vaccines. The antithesis of vaccine diplomacy is vaccine nationalism.

2.5. Vaccine Nationalism

Gostin, Moon & Meier (2020: 1617) describe vaccine nationalism as the act of wealthy nations securing vaccines and consigning to developing vaccine candidates to fulfil public demand. Qobo, Soko & Setlhalogile (2022: 10) maintain that vaccine nationalism relates to the nations of leading manufacturers, reserving vaccines and privileging public health. Zhou (2022: 453) differs in his definition of vaccine nationalism and argues that it is the act of withholding masses of new vaccine doses from the global community for national use during a global health catastrophe. Vaccine nationalism includes maintaining production rights and market monopoly for an unsustainable product, pre-production contracts and economic commitments between states and leading pharmaceutical corporations (Zhou 2022: 453).

Vaccine nationalism manifests as self-interested practises by states, characterised by purchasing, reserving, or stockpiling a surplus of vaccines, fully aware of the global scarcity of these products. Vaccine nationalism stems from the concept of nationalism.

Nationalism concerns government policies that uphold national sovereignty and eliminates external interference in the nation's domestic realm (Holsti 1991: 54). The vaccine nationalism discourse unlocked debates based on the notion that vaccine nationalism hampered global health collaboration leading to the proliferation of Covid-19. These debates regressed to traditional arguments of global governance initiatives undermined by nationalist states. The foundation of these debates rests upon the conceptual understanding of global governance, governance, and good governance.

2.6. Governance, Global Governance and Good Governance

2.6.1. Global Governance

As Halliday (2000: 19) explains, global governance pertains to the collection of institutions responsible for supervising the interactions between states concerning diverse global matters, including human rights and environmental affairs. Global Governance is the multilateral practices that structure how global problems are collectively addressed (Frenk & Moon 2013: 937). Global governance is influenced by the international system, states, non-state actors, organisations and their interactions and practises (Halliday 2000: 19). Frenk & Moon (2013: 937, 939) posit that effective global health governance involves ‘prioritising fairness, proficiency in achieving anticipated results, effectiveness, reliability, and the use of reasonable decision-making processes’. Gostin *et al.* (2020:1615,1616) view the WHO as a global health governance structure during the pandemic that used mechanisms such as International Health Regulations (IHR) to enforce state cooperation and responsibility. These authors additionally link nationalist states to hindering global health initiatives/ governance and implementing "medical protectionism," which leads to delays in the provision and distribution of medical supplies and equipment (Gostin *et al.* 2020: 1616). Yet again, the dialectic interplay between what is perceived as “good versus bad” and “national versus global” reveals itself.

Frenk & Moon (2013: 939) comparably argue that three challenges often hinder good global governance. Firstly, good global governance is challenged by national sovereignty, as during a global health crisis, a state’s government has the primary responsibility of national health and the interests of their populations (Frenk & Moon 2013: 939). Further, no global mechanism holds states accountable for international cooperation, and states don’t always have the capabilities to help those beyond their

borders (Frenk & Moon 2013: 939). Lastly, global health crises transcend multiple boundaries, governments, and policy-making arenas characterised by inter-reliant relationships (Frenk & Moon 2013: 939).

The global context thus changes to one of the contrasted conceptions of national health versus cosmopolitan ideals of global health and equal cooperation. Alternatively, states are caught in a conflict of interests between the universal moral obligation of the global distribution of vaccines and the national interest of immunising national populations. He & Chen (2021: 68) confirm this dynamic by arguing that Covid-19 exhibited a differentiation between the "Nationalist and Globalist" social groups.

This predicament is a familiar scenario in international relations, often reflected in tensions between cosmopolitanism and traditional approaches to the concept of the “nation-state”. Approaches to the notion of the “nation-state” and the social contract are often contested by perspectives of cosmopolitanism, humankind, and humanitarianism reflected in global aid initiatives and universal morality (Barnett 2016: 244). Cosmopolitanism pertains to the discussion of globalisation and centres around the ethical aspects within the international system, including the rights and obligations associated with the system through concepts such as ‘international law’ and the vision of worldwide governance (Stirk 2015: 7). Cosmopolitans are often critical of approaches of the nation-state. The westphalian system relates to the organisation of states; each territory has a governing authority, a bureaucratic system and recognised sovereignty that balances the distribution of power and impacts national interests (Stirk 2015: 9).

Similarly, Spies (2018: 14) discusses “Anti-diplomacy”, a paradigm of diplomatic theory advocated by idealism, cosmopolitanism, universalism, and utopian reasoning that contradicts state-centric notions of diplomacy. The exemplary companion of conceptualization is context.

The discourse on governance and good governance received a bad reputation after the Cold War. The consequences of the war left the global system with uneven distribution of power and wealth, a division between developed and developing states and ideological differences between the East and West (Weiss 2000: 798,799).

Developed states and institutions of the West often used their perceived notions of good governance ideals as a tool to enforce democratic rule, principles, and free-trade enterprises onto countries in desperate need of funding initiatives (Gallagher 2014: 333). For example, the World Bank and International Monetary Fund utilised structural adjustment programs to enforce democratic ideologies upon developing states (Weiss 2000: 799). Good governance was used as a norm of socialisation that divided the world into notions of ‘good & bad’ and ‘us & them’ (Gallagher 2014: 335,345). During this time, democracy was characterised as a legitimate system, often attracting the downside of soft power.

This dark discourse formed part of the failed state debate, which persists outside this project's scope. In the 1990s, the discourse of governance turned to humanitarian initiatives and universal human rights, confronting old-fashioned notions of "statehood" (Weiss 2000: 800). The traditional roles of a national government included 'defending the living standards of citizens, sustaining and developing the economy, assuring justice and fairness and upholding security interests' (Halliday 2000: 27).

2.6.2. Governance

Frenk & Moon (2013: 937) differentiate governance from global governance by contrasting the orderly nature of national governance with the anarchic nature of global governance. Various definitions and explanations of the term governance exist (Rotberg 2014: 511). Governance is often linked to the state's domestic sphere and the government's structure. Governance is the manner in which a social order structures and governs affairs (Frenk & Moon 2013: 937). Fukuyama (2013: 347) defines the state as the operation of executive organs of government and their ministries. In other words, governance resides within the realm of the state, where leaders, the rule of law, and the public co-exist, and anarchy is laid to rest. Governance relates to the operational capabilities of governments despite the type of political system (Fukuyama 2013: 350). For example, the governmental ability to structure and sustain laws and service delivery to the public realm (Fukuyama 2013: 350). Thus, governance relates to government or state responsibility within national bounds.

Rotberg (2014: 512) argues that governance entails the execution of government through the supply of certain political goods stipulated by public nationals. Political goods signify the interests of citizens, which governments represent and should provide. Fukuyama (2013: 364) further discusses two dimensions of governance "capacity and autonomy". Capacity relates to state resources and professional personnel; autonomy concerns the independence of government structures (Fukuyama 2013: 364). According to Rotberg (2009: 113), the survival of the state structure and government operation depends on providing political goods to citizens and taxpayers. This ideal is associated with the theory of governance that argues the state exists to serve the public interest as stipulated by the social contract between government and citizens within the domestic realm (Rotberg 2009: 114). In other words, a state's national interests should reflect the needs and interests of the public; this is the role or responsibility of the government. The state's foreign policy and diplomatic strategies should reflect national interests as citizens dictate.

The concept of governance is intricately intertwined in the political deliberations surrounding the assessment and measurement of governance. Fukuyama (2013: 364) maintains that the governance discourse aims to assess the quality of governance. There are various approaches to measuring governance or good governance. If the definition of governance or quality of governance has academic consensus, four methods can be used to measure the concept (Fukuyama 2013: 351). These approaches include the 'procedural measures, output measures, measures of bureaucratic autonomy and input measures' (Fukuyama 2013: 351). The performance of governments and the services delivered is based on the interests, necessities, and prospects of tax paying citizens (Rotberg 2014: 515). Rotberg (2014: 512) argues that since governance is an act, the performance of governments can be measured by analysing available objective data on the outcome of practices or the adequate supply of domestic services. Fukuyama (2013: 355) argues that there are numerous obstacles to using output measures. Firstly, outputs occur from the relations or interactions between the public sector and its external context (Fukuyama 2013: 355-356). Secondly, the services and public goods supplied by public sectors are difficult to measure and universalise (Fukuyama 2013: 355-356). Lastly, the results of measurements can be corrupted by external variables (Fukuyama 2013: 356). Kaufmann & Kraay (2008: 3) confirm that all indicators or measures of governance

contain an extent of subjective reasoning, and different data collection and aggregation levels are suitable for diverse types of analyses. This reasoning speaks to the study's interpretivist approach.

This research aims to challenge the controversial opinion and concept of vaccine nationalism by reflecting on good governance from a citizen's perspective and the government's responsibility to ensure its citizens' health, safety, and best will. A thorough examination of good governance is essential in pursuing this endeavour.

2.6.3. Good Governance

Farrington (2009: 249) illustrates that most scholarly definitions of governance link the concept to the public's participation in political affairs and the responsibility of governments to provide citizens with service delivery and collective goods. The definition of the concept of good governance, however, has been complicated by a list of additional requirements, indicators, responsibilities, institutes, practices and scholarly debates around cultural diversity, measurement, and objectivity (Farrington 2009: 250,253). Van Doeveren (2011: 307-309) relates good governance to principles of government accountability, transparency, efficiency, excellent public services, legitimate justice, and citizen engagement. Sundaram & Chowdhury (2012: 3-4) incorporate the notion of 'regulatory quality,' which denotes the state's capacity to establish and execute policies that foster the progress and expansion of the private sector and the overall economy. Respectable governments have foresight, competent leaders, efficient resources, and credibility (Pomeranz & Stedman 2020: 430). Rotberg (2009: 114) suggests that there is a hierarchy of political goods which is the government's responsibility that citizens anticipate. The scale commences with national defence and the supply of human security, followed by legal order and citizen participation in the political process (Rotberg 2009: 114). The fourth political good relates to the responsibility of the government to preserve and encourage economic development (Rotberg 2009: 115). The final public interest entails promoting human development, which includes medical services and "freedom from disease" (Rotberg 2009: 115). Although this hierarchy was developed to measure good governance in Africa, it can be applied to the global circumstances of the pandemic.

The challenge inherent in defining and conceptualizing good governance is that it often devolves into an extensive catalogue of subjective preferences that are difficult to quantify. However, suppose one utilises Kaufmann & Kraay's (2008: 3) argument that all indicators of governance contain an extent of subjective reasoning, and different levels of aggregation are suitable for different types of analyses. In that case, one can utilise indicators that complement the analysis and context of the research. The preliminary information aligns with interpretivist perspectives, which assert that knowledge is contingent upon the contextual factors at play. Rotberg (2009: 113) associates quality governance with the quality supply of public goods. The supply of public goods and quality governance relates to the earlier discussion of the general will and the social contract. The "social contract" concerns individuals voluntarily yielding selected rights to the regime or legitimate authority in trade for political stability and security provided by the state (Smith *et al.* 2016: 503). For example, citizens agree to pay taxes or follow national rules if the government ensures safety and a balanced society. This links to the traditional sovereign nation-state perspective that states primary responsibility and commitments are to their population (Barnett 2016: 243). In his work, Rotberg (2009: 115) illustrates the concept of human development as a public good, incorporating aspects such as "freedom from disease". This idea aligns closely with the subject of the present research.

In this study, 'good governance' is characterised by the degree to which national practices, including diplomacy and foreign policies, reflect citizens' concerns and uphold national interests. Within the context of the pandemic, where citizens and governments shared a vested interest in health and immunisation, the government was obligated to fulfil public needs. However, considering the contentious nature of the term 'good governance,' this study proposes the use of 'responsible governance' as a more fitting alternative.

As with all concepts, the meaning attached to responsible governance is determined by context, level of analysis and individual perspective. The concept of responsible governance is often overwhelmed by governmental reactivity versus governmental responsibility debates. Dahl (1971: 1) tiptoes around the deliberation within a realm of equality between the ruler and the ruled, where the government continuously acts in line with citizen interests. Bardi, Bartolini & Trechsel (2014: 237) distinguish between

'government responsiveness' and 'government responsibility'. They argue that responsiveness refers to governments reacting to citizens' immediate, short-range interests, while responsibility pertains to governments addressing broader, long-term societal needs that connect to the overall welfare of the state and its standing on the international stage (Bardi *et al*. 2014: 237). Linde & Peters (2020: 292-923) argue that responsive and responsible governance are interconnected and essential for building civilian confidence and support for leadership. They assert that a legitimate government must respond to the interests of the majority of its citizens (Linde & Peters 2020: 292). The above arguments are problematic in the context of this study since they are situated in democratic approaches.

This dissertation aligns the concept of responsible governance within Fukuyama's framework of political development, encompassing three key elements: "the state, the rule of law, and accountability" (Fukuyama 2014: 21). According to Fukuyama, the state represents a centralised structure that lawfully governs a territory, with guidance from the collective needs of its population. The judicial order is based on principles of public agreement and equality (Fukuyama 2014: 21).

In this context, the government's responsibility is to respond to the nation's immediate and long-term needs. This is particularly relevant to this study's contention that, during the pandemic, governments had an obligation to ensure public health needs were addressed. Fukuyama's understanding of responsible governance resonates with this study, as the elements above are adaptable across various political systems, institutions, or timeframes and can exist individually or in combination (Fukuyama 2014: 22).

2.7. Conclusion

This chapter articulated a conceptual framework of foreign policy, soft power, diplomacy, global health diplomacy, vaccine diplomacy and multilateralism. The following insights were derived from this section.

The scope of this study is situated within the sphere of multilateral interactions. Within this context, every action triggers a consequent reaction since the individual, domestic and international realms are interdependent. Foreign policy serves as the nexus linking

the domestic domain with the international arena. Foreign policy is a governmental strategy towards external actors to attain state interests. Diplomacy, an instrument of foreign policy, a soft power asset and the conveyor of other instruments, guides the development and implementation of foreign policy. Various foreign policy instruments are used to attain national interests related to hard, soft, and smart power. The elements of soft power include legitimacy, mutual benefit, and self-determined behaviour. In addition, soft power assets include legitimate culture, political values, foreign policy, diplomacy, and public diplomacy. The utilisation of soft power and diplomacy can have either a positive or negative impact on foreign policy effectiveness. States use foreign policy instruments, diplomacy, and soft power persuasion to attain national interest. Within this study, national interests reflect the needs and interests of the public. Multiple interests coexist and are given priority based on the evolving circumstances of the state. Diplomacy further pursues foreign policy objectives by acting as an institution that regulates state relations through representation, communication and negotiation. This section further observed that debates on the history of diplomacy and the separation between old and new diplomacy are aimless. New forms of diplomacy are rooted in traditional diplomacy, with bilateral and multilateral diplomacy often coexisting and being employed interchangeably. An example can be found in the bilateral and multilateral vaccine supply agreements in chapter three.

Multilateral diplomacy is the collaborative interactions among two or more entities striving to establish diplomatic relations, achieve foreign policy objectives, or devise solutions to transnational challenges. Multilateralism refers to relations between three or more actors, a set of consensual rules and regulations that regulate the interaction between these actors, and the multidimensional organisation of the international system. This section reiterates the multilateral reality of Covid-19 vaccines and global health catastrophes. Section 2.4.3, pages 40-41, demonstrated that health diplomacy shapes state policies in response to health crises, extending its influence to the global arena through international health diplomacy. A subcategory of global health diplomacy is vaccine diplomacy, which relates to the donation of vaccines from one actor to another to advance diplomatic relations between nations, improve international collaborations, or attain outcomes in the national interest.

In comparison, vaccine science diplomacy relates to providing information, technology, or skills to produce vaccines. The antithesis of vaccine diplomacy is vaccine nationalism which manifests as self-interested practises by states, characterised by purchasing, reserving, or stockpiling a surplus of vaccines, fully aware of the global scarcity of these products. The vaccine nationalism discourse unlocked debates based on the notion that vaccine nationalism hampered international health collaboration leading to the proliferation of Covid-19. These debates regressed to traditional arguments of global governance initiatives undermined by nationalist states. The foundation of these debates rests upon the conceptual understanding of good governance, global governance, and governance.

In this study's analysis, the concept of responsible governance emerged as more fitting than the traditional notion of good governance. Working within Fukuyama's framework of political development, which includes 'the state, law & order, and political liability' (Fukuyama 2014: 21), the focus shifted to how citizen interests are reflected in national practices. This entails examining elements such as diplomacy and foreign policies, which are instrumental in supporting national interests. In this context, the role of the government is to address the immediate and long-term needs of the public. This principle aligns closely with the main assertion of this study, which emphasises that during the pandemic, it was the government's responsibility to ensure that all public health needs were adequately met.

The findings of this chapter highlight how the characterisation and components of these concepts are influenced by the international system's structure, their utilisation within specific historical contexts, and their construction or interpretation by different actors. Moreover, this chapter emphasised the concepts' complex interconnectedness while interpreting their definitions and constitutive elements. With the support of these insights and the conceptual framework, the patterns of multilateral vaccine diplomacy practised by China, Russia, India, the UK, and the USA to adapt to the challenge of Covid-19 from August 2020 to July 2022, can be analysed. This framework is assessed when applied to the secondary data in the next chapter to inquire whether these states practise multilateral vaccine diplomacy to achieve outcomes in the national interest and how these practices evolved in the study’s timeframe. Within the broader context of how states keep adapting their diplomatic practices when faced with new

challenges, this knowledge structure enhances our understanding of the dynamics of multilateral relations, the practices of states and the moral predicaments faced by these states during Covid-19. The implication of this conceptual clarity means we can evaluate the practises of these states to find out whether they utilised multilateral vaccine diplomacy and practised responsible governance or vaccine nationalism. The next chapter applies this framework to the discussion of the multinational nature of Covid-19 vaccines, vaccine approval, reported vaccine prices, global Covid-19 vaccine production capacity and location, supply agreements, the initiative of COVAX, the Covid-19 and vaccine timeline and an overview of vaccine donations.

Chapter Three: The Covid-19 and Vaccine Context

3.1. Introduction

In December 2019, the first Coronavirus outbreak which causes acute respiratory syndrome occurred in Wuhan, China (World Health Organization & United Nations Children's Fund 2021: Internet). The transmission of the virus took the world by storm, and by March 2020, the WHO confirmed that the global community was amid a global health pandemic (World Health Organization & United Nations Children's Fund 2021: Internet). Most states responded by implementing domestic policies such as containment measures (travel restrictions, social distancing, quarantine, masks) lockdowns, financial assistance initiatives, and vaccination campaigns (International Monetary Fund 2021: Internet). However, the Covid-19 virus transcended national, regional, and international borders, paralysing individuals, states, and the international system. This pivotal point illustrated insecurity across all facets.

Several Covid-19 vaccines were the first to be produced within a year of infection; previously, the measles vaccine was the swiftest to be developed within ten years (1953-1963) (Vanderslott, Dadonaite, & Roser 2013: Internet). A vaccine's role is to expose the human body to an antigen, which does not instigate disease but imitates the virus. The antigen provokes the immune system's response, producing antibodies that can either block or eliminate the virus in the event of an infection (World Health Organization & United Nations Children's Fund 2021: Internet).

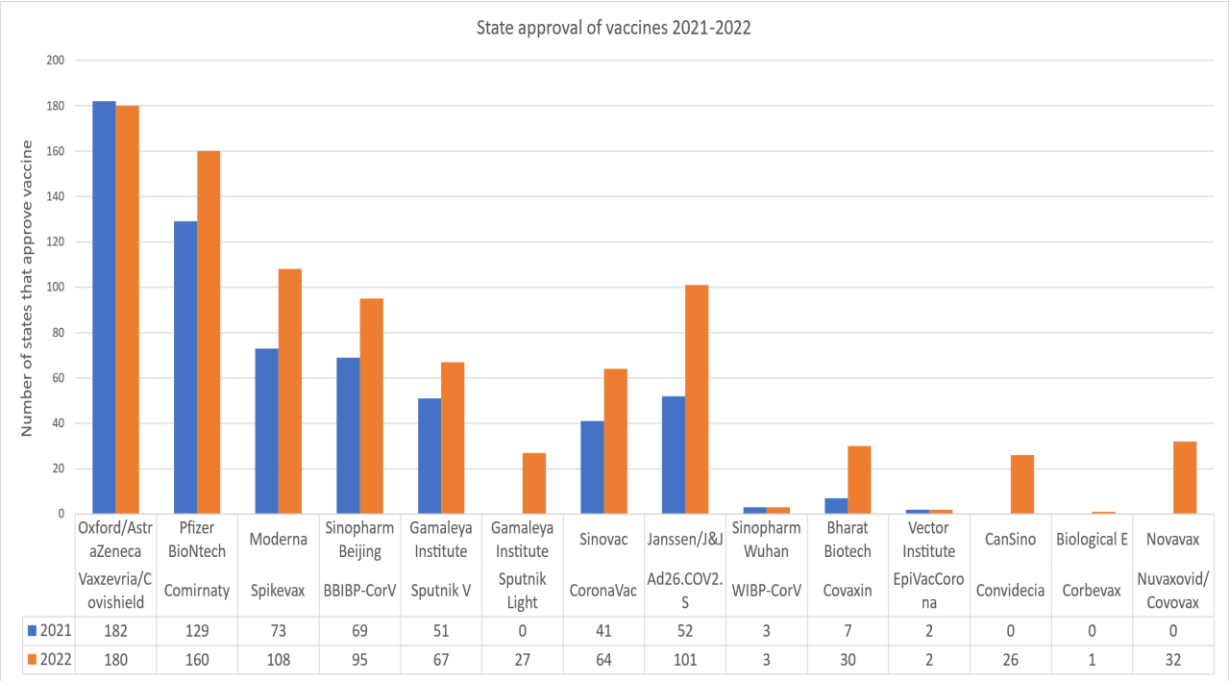
The processes of developing and manufacturing a vaccine represent distinct stages. Development occurs in the early life stages of a vaccine and includes research on the virus, selecting a technology platform/ type of vaccine design, the creation or procurement of ingredients and clinical trials (World Health Organization 2023c: Internet). The type of vaccine can be an inactivated vaccine, viral vector vaccine, live-attenuated vaccine, subunit vaccine, or nucleic acid vaccine (mRNA) (World Health Organization 2023c: Internet). Production and manufacturing of a vaccine occur after the development process; vaccines can be manufactured and produced locally or in different global locations depending on the type of production and the manufacturing company.

To understand states' multilateral actions, the vaccine developers, the types of production and manufacturing agreements often used to develop Covid-19 vaccines must be addressed. Agreements between developers, manufacturers and states depend on the types of production used to produce vaccines (UNICEF 2022b: Internet). ***"Fill & Finish"*** production refers to filling the product into vials, containers or syringes, followed by labelling and packaging for distribution (UNICEF 2022b: Internet). Another type of production involves the formation of ingredients used in the vaccine, the insertion of binding agents or the making of the adjuvants/ reactants (UNICEF 2022b: Internet).***"End-to-End"*** production includes all stages of the production cycle, excluding the Fill & Finish stage (UNICEF 2022b: Internet). Lastly, production can occur that has ***Fill & Finish and End-to-End*** capabilities (UNICEF 2022b: Internet).

There are further various types of manufacturers that can impact the locations and types of production. For instance, multiple phases and types of vaccine production are often outsourced to ***Contract Development and Manufacturing Organisations*** (UNICEF 2022b: Internet). In addition, ***Technology Transfer*** agreements frequently occur where the vaccine developer transfers the practical knowledge or technology to the manufacturer to complete the product's production cycle (UNICEF 2022b: Internet). The intricate nature of vaccine development and manufacturing captures the necessity for multilateral collaborations in vaccine creation. This chapter analyses several Covid-19 vaccines, their developers, manufacturers and multinational corporations, production types, vaccine prices, supply agreements, vaccine approval, vaccine donations and the global vaccine distribution initiative COVAX.

3.2. Vaccine Approval

***Figure 1**: State Approval of Covid-19 Vaccines 2021-2022*



	Oxford/AstraZeneca Vaxzevria/Covishield	Pfizer BioNtech Comirnaty	Moderna Spikevax	Sinopharm Beijing BBIBP-CorV	Gamaleya Institute Sputnik V	Gamaleya Institute Sputnik Light	Sinovac CoronaVac	Janssen/J&J Ad26.COV2.S	Sinopharm Wuhan WIBP-CorV	Bharat Biotech Covaxin	Vector Institute EpiVacCorona	CanSino Convidecia	Biological E Corbevax	Novavax Nuvaxovid/Covovax
2021	182	129	73	69	51	0	41	52	3	7	2	0	0	0
2022	180	160	108	95	67	27	64	101	3	30	2	26	1	32

***Source**: (Centres for Disease Control and Prevention (CDC) 2021: Internet).*

Figure 1 illustrates the patterns of state approval towards certain vaccines between 2021 and 2022. The figure shows that AstraZeneca, Moderna, Pfizer BioNTech and Sinopharm's vaccines remained the most approved and popular vaccines from 2021-2022. However, in 2022 these manufacturers lost a handful of support that turned to newer and alternative vaccine manufacturers such as Novavax. The approval of vaccines can depend on various factors such as the expansion of Covid-19, vaccine technology platforms, distribution procedures, available stock, and vaccine price. The actors involved in the production of the vaccines mentioned above are discussed in section 3,4 on page 59-77. The prices of vaccines and their fluctuation in different states can indicate state relations in the global sphere. Vaccine prices ought to exhibit some level of consistency or pricing benchmark depending on the technology employed. Fluctuations in vaccine prices based on the recipient might suggest the implementation of a soft power policy or be indicative of humanitarian efforts. However, the data further indicates that the entity responsible for setting vaccine prices is not clearly identified.

3.3. Reported Vaccine Prices (per dose)

A lack of governmental and corporate transparency resulted in only a few countries, developers and groups disclosing their vaccine charges per dose to the public domain. Variations in prices can occur due to bilateral or political agreements, supply shortages, the change in demand, the rise in competition, delivery costs and the distribution of the virus. The variation in vaccine prices between countries indicates a lack of a global pricing standard or conduct authority to ensure fair and equitable purchases and agreements. Data on the precise vaccine production and component costs are currently unattainable.

Nuvaxovid and Covovax have minimal pricing data and only a single entry. For example, Nuvaxovid was sold to Denmark in 2021 for $20.90 per dose, and from 2020-2022 Covovax sold doses to Covid-19 Vaccines Advance Market Commitment (COVAX AMC) at the low price of $3.00 per dose (UNICEF 2022e: Internet). *The AstraZeneca/ Vaxzervria* vaccine's price per dose averaged $3.85 (UNICEF 2022e: Internet). Variations in the Vaxzervria vaccine's costs occurred between different countries. For example, in 2020, the European Commission paid $2.19 per dose compared to Colombia, which paid $6.00 (UNICEF 2022e: Internet). Colombia's high dose price is surprising since neighbouring Brazil paid $3.15 per dose, and Argentina paid $4.00 per dose (UNICEF 2022e: Internet).

The BBIBP-CorV (Sinopharm vaccine) averaged a costly $17.87 per dose (UNICEF 2022e: Internet). The Sinopharm vaccine shows substantial price variations per vaccine dose between countries. For example, Hungary paid $36.00 per dose compared to Zimbabwe, whose price per dose averaged $8.50 (UNICEF 2022e: Internet). The vaccine shows changes in certain countries' prices in the same period. For example, in 2021, Zimbabwe's price per dose varied between $6.9 - $10.00, while Argentina's prices ranged between $20.00 - $4.50 (UNICEF 2022e: Internet; Ministerio de Salud Argentina 2022: Internet). Zimbabwe's low price can indicate that there is a diplomatic relationship between Zimbabwe and China. Senegal, another African state, paid $18.60 per dose, substantially higher than Zimbabwe's (UNICEF 2022e: Internet). In 2020, China spent an excessive $29.75 per dose, which is abnormal since the BBIBP-CorV is a national vaccine developed by China (UNICEF 2022e: Internet). The

high price of the national vaccine could indicate China's national interest in supporting and upholding its national economy during the pandemic.

The *Covaxin* vaccine's price per dose averaged $14.63. However, the vaccine showed variation in costs between different countries. For example, in 2021, India's purchase price varied from $3.02 - $5.45 compared to Botswana's high price of $16.00 and Nepal's private market price of $35.00 (UNICEF 2022e: Internet). Covaxin further engaged in supply agreements with private markets. For example, Nepal's private market's price for Covaxin was $35.00 per dose, while India's private market paid $2.91 per dose (UNICEF 2022e: Internet). Curiously, in 2022 the price per dose for the Indian private market was less than India's 2021 price per dose. For example, India paid an average of $4.24 per dose, while India's private market paid $2.91 per dose of Covaxin (UNICEF 2022e: Internet). India's motivation for this tactic could be similar to that of China in an attempt to uphold the domestic economy. The *Corbevax vaccine* averaged $4.35 per dose and only showed data on the prices for India and India's private market (UNICEF 2022e: Internet). The data shows the repetitive variation of India's private market pricing from $3.22- $10.31, in contrast to India's low price per dose at $1.92 (UNICEF 2022e: Internet). Therefore, Corbevax was primarily administered to immunise the Indian populace, exemplifying the national priority of safeguarding the health of Indian citizens.

The *Comirnaty* vaccine's price per dose averaged $14.40 (UNICEF 2022e: Internet). The vaccine shows substantial price variations per vaccine dose between countries or groups. For example, in 2021, the African Union's price was $6.75, while South Africa's price was $10.00, Tunisia paid $7.00, and Lebanon's price remained high at $18.00 (UNICEF 2022e: Internet). The vaccine further illustrates changes in particular groups' prices in the same period. For example, in 2020, the European Commission paid $14.70- $18.90 per dose (UNICEF 2022e: Internet). Although the USA developed and funded the vaccine, the country's price remained high at $19.50 per dose (UNICEF 2022e: Internet). The sustained high vaccine price could indicate that the USA might have employed this strategy to stimulate their domestic economy. *The Convidecia* vaccine's price per dose averaged $23.77 (UNICEF 2022e: Internet). The available data illustrate that the vaccine's price remained high and that Pakistan's private markets paid $27.15 per dose (UNICEF 2022e: Internet).

The *Ad26.COV 2.S. (Janssen)* vaccine averaged $9.20 per dose (UNICEF 2022e: Internet). The vaccine had relative stability in price variation as most buyers paid $10.00, except for COVAX, which paid $7.50 per dose, and the European Commission, which paid $8.50 (UNICEF 2022e: Internet). The *Spikevax* vaccine's price averaged $22.26 per dose (UNICEF 2022e: Internet). Data on this vaccine shows substantial price variations per vaccine between different countries. For example, the USA paid $15.00 per dose compared to Kuwait's higher price of $40.00 per dose (UNICEF 2022e: Internet). Moreover, Spikevax's pricing structure for High-Income-Countries ranges from $32.00 to $37.00. However, pricing for Lower-Income-Countries or Middle-Income-Countries remains unspecified (UNICEF 2022e: Internet). The reduced price that the USA pays for the Spikevax vaccine can be attributed to its role in its development and funding.

The *CoronaVac* vaccine's price averaged $16.76 per dose (UNICEF 2022e: Internet). However, the vaccine shows substantial price variations per vaccine between different countries. For example, Zimbabwe paid an average of $6.95 per dose compared to China which paid a high $29.75 per dose (UNICEF 2022e: Internet).
Similarly to the Sinopharm vaccine, Zimbabwe received the lowest price for the Sinovac vaccine, indicating a diplomatic relationship between China and Zimbabwe. Data on CoronaVac further demonstrates sales to Thailand's private market at the high cost of $32.52 (UNICEF 2022e: Internet). Sales at such a high price to private markets could indicate national interest in upholding China's domestic economic power.

The *Sputnik V* vaccine averaged $14.15 per dose (UNICEF 2022e: Internet). The vaccine shows substantial price variations per vaccine between different countries. For example, Latin America paid $3.00 per dose compared to Hungary, which paid $19.90 per vaccine dose (UNICEF 2022e: Internet). Latin America's low vaccine prices relate to the vaccine manufacturing location at Uniao Quimica Farmaceutica Nacional, suggesting a technology transfer or supply agreement occurred between involved actors (UNICEF 2022e: Internet). The Russian vaccine further illustrates sales to private markets with price variations between these markets. For example, Moldova's private market paid $9.75 per dose, Lebanon's private market paid $19.00, and Pakistan's private market paid $27.15 per dose (UNICEF 2022e: Internet).

Given that Russia strategically opted to supply private markets with high-priced doses rather than the governments of the respective countries, it suggests that Russia's national interest might have been oriented towards advancing domestic economic growth. The data on Sputnik V's prices show discrepancies during 2020 since the global price of Sputnik V was set at $10.00 (UNICEF 2022e: Internet). However, Kazakhstan and India paid higher costs of $13.00 and $13.58 (UNICEF 2022e: Internet).

The *price of the Covishield Vaccine (AstraZeneca and Serum Institute of India's vaccine) averaged* a low $5.05 per dose (UNICEF 2022e: Internet). The vaccine illustrates minor price variation, except for Bangladesh's private market at $13.27 per dose, compared to India's private market at $2.91 per dose (UNICEF 2022e: Internet). India's private market's vaccine price per dose changed from $7.95 in 2021 to $2.91 in 2022 (UNICEF 2022e: Internet). In 2021 India purchased the vaccine at the average price of $3.47 per dose (UNICEF 2022e: Internet). Covishield was sold to India and India's private market as India has a mixed healthcare system that relies on public and private health institutions (Patel, Mazumdar-Shaw, Kang, Das, and Khanna 2021: 1428). India sold doses to COVAX and the African Union at the low price of $3.00 per dose (UNICEF 2022e: Internet), which could indicate a soft power strategy. It is unclear whether the vaccine developer companies or countries involved determine vaccine prices due to a lack of data and numerous factors that could alter vaccine costs. Covid-19 vaccine prices can further be affected by global vaccine production capacity and locations used by developers.

3.4. The Multilateral Nature of Covid-19 Vaccines

The study examines several vaccines due to their multilateral nature and processes and their affiliation with China, Russia, India, the UK, and the USA. The Comirnaty, Spikevax, Vaxzevria/Covishield, Sputnik V and Sputnik Light, Janssen (Ad26.COV2.S), CoronaVac, BBIBP-CorV (Sinopharm vaccine), EpiVacCorona, Convidecia, ZF2001, Covaxin, CoviVac, Nuvaxovid, Corbevax and the VLA2001 vaccine are discussed and analysed. The tables in this section discuss the type of vaccine developers, their initial location, their collaborations, the vaccine development location, vaccine funding and the vaccines link to China, Russia, India, the UK, and the

USA. The Comirnaty vaccine was used as an example of multilateralism in chapter one.

3.4.1. The Comirnaty Vaccine

Pfizer, BioNTech, and Fosun Pharma multilaterally developed the Comirnaty vaccine (RAPS 2022: Internet). Table 1 illustrates the multilateral collaboration between vaccine developers, funders, companies, and states.

Table 1: *The Comirnaty Vaccine*

Vaccine Developers	Developer Initial Location	Company Type	Vaccine Development Location	Collaborations	Vaccine Funding	Link to Country/Scope
Pfizer	USA	Multinational Pharmaceutical Corporation	Multilateral	BARDA, Sanofi (Multilateral Company)	BARDA, BioNTech, FOSUN Pharma, German Government, European Commission, European Investment Bank	The USA and China developed and funded the vaccine.
BioNtech	Germany	Multinational Corporation				
Fosun Pharma	China	Global Pharmaceutical Corporation				

Sources: *(RAPS 2022: Internet; Pfizer 2022: Internet; BioNtech 2022: Internet; FOSUN PHARMA 2022: Internet; World Health Organization 2023a: Internet).*

Pfizer is a multinational pharmaceutical corporation founded in the USA, while BioNTech is a multinational corporation established in Germany (Pfizer 2022: Internet; BioNTech 2022: Internet). Fosun Pharma, however, is a global pharmaceutical company that is also a shareholder of Chinese state-owned Sinopharm (FOSUN PHARMA 2022: Internet). To put it another way, the Chinese government confederates with Fosun Pharma. These vaccine developers collaborated with the “Biomedical Advanced Research and Development Authority” called BARDA and the multilateral company Sanofi. BARDA aims to develop medical countermeasures (vaccines, medications, treatments, and diagnostic instruments) that address a range of USA public health medical emergencies (Medical Countermeasures.gov 2022a: Internet). BARDA maintains a direct affiliation with the US government as it operates under the Department of Health and Human Services (Medical Countermeasures.gov 2022a: Internet). Fosun Pharma, BioNTech, BARDA, the German government, the European Commission, and the European Investment Bank funded the vaccine, which was also

licensed to be developed and sold in China (RAPS 2022: Internet). Therefore, one can directly link the development and funding of the Comirnaty vaccine to the practices of the USA and China. Vaccine diplomacy entails using vaccines as an extension of foreign policy or diplomacy. Thus, one could argue that the USA, China, the European Commission, and the German government had the critical national objective of developing, manufacturing, and obtaining Covid-19 vaccines and used multilateral vaccine diplomacy by collaborating with various actors around the Comirnaty vaccine. The Covid-19 era significantly strained citizens and governments, as national and global health deterioration triggered a chain reaction that adversely affected human development, political stability, and economic growth. Amid the crisis, these states prioritised immunisation as a national interest, recognising it as the sole solution to Covid-19. This decision accentuated the citizens' critical need for a life unburdened by disease, which relates to responsible governance. The absence of vaccine nationalism is demonstrated by the actions of China and the USA, who opted to invest in the funding and development of the Comirnaty vaccine rather than merely purchasing or hoarding vaccine doses.

3.4.2. The Spikevax (mRNA) Vaccine

Moderna, BARDA, and the USA National Institute of Allergy and Infectious Diseases (or NIAID) developed the Spikevax vaccine (RAPS 2022: Internet). Table 2 illustrates the associations between Spikevax vaccine developers, funders, companies, and the USA.

Table 2: *The Spikevax Vaccine*

Vaccine Developers	Developer Initial Location	Company Type	Vaccine Development Location	Collaborations	Vaccine Funding	Link to Country/Scope
Moderna	USA	Biotechnology and Pharmaceutical Company	USA	Moderna Tx, Moderna USA, JPEO-CBRND, USA Army Contacting Command	Vanderbilt University Medical Center, CEPI, BARDA, NIAID, Emory University, USA Operation Warp Speed, Dolly Parton COVID-19 Research Fund	The USA developed and funded the vaccine.
BARDA	USA	The Biomedical Advanced Research and Development Authority	USA			
NIAID	USA	US National Institute of Allergy and Infectious Diseases	USA			

Sources: *(RAPS 2022: Internet; Moderna 2022: Internet; Medical Countermeasures.gov 2022a: Internet; Medical Countermeasures.gov 2022b: Internet; Medical Countermeasures.gov 2022c: Internet; The National Institute of Allergy and Infectious Diseases 2022: Internet; World Health Organization 2023a: Internet).*

The Spikevax vaccine can be characterised as the ‘American Vaccine’ given that no external collaborations or funding were involved during its development phase, with the notable exception of sponsorship from the Coalition for Epidemic Preparedness Innovations (CEPI). The previously mentioned is a global alliance encompassing private, community, charitable, and social movements joining forces to promote the enhancement and equitable distribution of vaccines for transferable viruses and pandemics (CEPI 2022: Internet).

Spikevax was developed by US companies and supported by USA collaborations in America. The table above illustrates that the USA relied on US initiatives, institutes, and political departments to develop and fund Spikevax. One such initiative is the “National Institute of Allergy and Infectious Diseases”, called NIAID. This American health institute supports research on vaccines, treatments, and diagnostic assessments to prevent and treat diseases (The National Institute of Allergy and Infectious Diseases 2022: Internet). The developers collaborated with the USA Army Contracting Command and USA “Department of Defence’s Joint Program Executive Office for Chemical, Biological, Radiological and Nuclear Defence” to purchase Pfizer and Moderna vaccines (Medical Countermeasures.gov 2022c: Internet).

The creation of Operations Warp Speed by the USA involved a collaborative effort among various governmental departments, including the Department of Health and Human Services and its sub-agencies, as well as the public domain (RAPS 2022:

Internet). BARDA utilised these partnerships to build a Covid-19 medical countermeasure portfolio that invests in various Covid-19 vaccines (Medical Countermeasures.gov 2022b: Internet). Within this portfolio, BARDA has partnered with Moderna USA, Inc., Pfizer Inc., Sanofi Pasteur, GlaxoSmithKline, ModernaTX, Inc., Janssen Pharmaceutical, Inc. AstraZeneca and Novavax Inc. (Medical Countermeasures.gov 2022b: Internet). Operation Warp Speed was the USA's power-tool initiative to ensure national immunisation interests, rapid vaccine development, and fund and support vaccine candidates.

BARDA and Operation Warp Speed were used as foreign policy strategies to ensure the development and funding of multiple vaccines for the USA. These initiatives further allowed the USA to establish enduring relationships within the global pharmaceutical industry, expanding their national objectives beyond Covid-19 immunisation to technological and medical development. The involvement of the USA's "National Institute of Allergy and Infectious Diseases" and BARDA in developing Spikevax underscores the practice of multilateral vaccine science diplomacy. The USA's direct contribution to numerous vaccine development processes, coupled with vaccine diplomacy, has the potential to cultivate soft power over time.

3.4.3. The Covid-19 Vaccine AstraZeneca Vaccine (Vaxzevria)

AstraZeneca, the Oxford Vaccine Group, and the Serum Institute of India developed the Covid-19 Vaccine AstraZeneca (also called Vaxzevria and Covishied) in the UK and India (RAPS 2022: Internet). Table 3 illustrates the multilateral relations between the AstraZeneca vaccine developers, funders, companies, and states. The AstraZeneca vaccine embodies multilateralism. Not in terms of ad hoc gatherings but rather in terms of collaboration among diverse countries, actors, stakeholders, and corporations, all sharing a common goal.

***Table 3**: Covid-19 Vaccine AstraZeneca/ Vaxzevria/Covishield/ ChAd0x1-S*

Vaccine Developers	Developer Initial Location	Company Type	Vaccine Development Location	Collaborations	Vaccine Funding	Link to Country/Scope
AstraZeneca	UK	Multinational Biopharmaceuticals Corporation	UK	BARDA AstraZeneca	UK Government - National Institute for Health Research, USA Operation Warp Speed, BARDA, CEPI	The vaccine was co-developed by the UK and India. The UK and USA funded the vaccine.
Oxford Vaccine Group/University of Oxford	UK	Research Group	UK			
The Serum Institute of India	India	Global Pharmaceutical and Biotechnology Company	India			

***Sources:** (RAPS 2022: Internet; AstraZeneca 2022: Internet; Oxford Vaccine Group 2022: Internet; Serum Institute of India Pvt. Ltd. 2022a: Internet; World Health Organization 2023a: Internet; GOV.UK 2022a: Internet).*

This multifarious vaccine has different designations across various locations. For example, in Europe, the vaccine is known as Vaxzevria, formerly AZD1222 and ChAdOx1 (RAPS 2022: Internet). AstraZeneca and the Oxford Vaccine Group in the UK first developed this vaccine. AstraZeneca and the Serum Institute of India further co-developed the vaccine for use in India under the name Covishield (RAPS 2022: Internet). The UK Government funded the AstraZeneca vaccine under the National Institute for Health Research, while the USA employed Operation Warp Speed and BARDA. The vaccine was co-developed by the UK and India and funded by the UK and the USA. The AstraZeneca vaccine was further funded by CEPI. The co-development of Vaxzevria between corporations, states, initiatives, and a research group exhibits multilateral vaccine science diplomacy. The mutual collaboration between these states suggests diplomatic ties or the foreign policy strategy of multilateral relations. Additionally, the multilateral partnerships formed around this vaccine could render states susceptible to the influence of soft power persuasion. The mutual collaboration further indicates that all three states had interests in national immunisation and multilateral vaccine collaboration, principles that oppose vaccine nationalism.

3.4.4. The Sputnik V Vaccine

The Sputnik V is the “Russian Vaccine” developed by the Acellena Contract Drug Research and Development company, the Health Ministry of the Russian Federation, and the Gamaleya Research Institution within Russia (RAPS 2022: Internet). The table

below shows that Russia originally developed and funded Sputnik V; however, various collaborators in multiple locations produced the vaccine.

***Table 4**: The Sputnik V Vaccine*

Vaccine Developers	Developer Initial Location	Company Type	Vaccine Development Location	Collaborations	Vaccine Funding	Link to Country/ Scope
Gamaleya Research Institute	Russia	Research Institute	Multilateral	Binnopharm (Global Pharmaceutical Company), R-Pharm (Russian Biopharmaceutical Company), Belarus, India, Venezuela, UAE, Stelis Biopharma (Contract Development and Manufacturing Organization), Belarus, Italy, China (Shenzhen Yuanxing Gene-tech, TopRidge Pharma, Hualan Bio), Korea (GL Rapha, ISU ABXIS), Serbia (Torlak Institute), India (Panacea BioTec), Bahrain (The Mumtalakat Holding Company Binnopharm Group), Vietnam (Vabiotech)	The Russian Direct Investment Fund	Russia developed and funded the vaccine
Acellena Contract Drug Research and Development	Russia	Global Pharmaceutical/ Pharmacology Company				
Health Ministry of the Russian Federation	Russia	Health Ministry of the Russian Federation				

***Sources:** (RAPS 2022: Internet; Accellena 2022: Internet; The Gamaleya National Center of Epidemiology and Microbiology 2022: Internet; Binnopharm Group 2022: Internet; R-Pharm 2022: Internet; Sputnik V 2022: Internet; Stelis Biopharma 2022: Internet; Hong Kong Business Directory 2022: Internet; Yuanxing Gene 2022: Internet; China.Cn 2022: Internet; GL Rapha 2022: Internet; ISU ABXIS 2022: Internet; Torlak 2022: Internet; Panacea Biotec 2022a: Internet; Panacea Biotec 2022b: Internet; Mumtalakat 2022: Internet; Vabiotech 2022:Internet).*

The Russian Direct Investment Fund funded this multilateral vaccine, while the pharmaceutical companies Binnopharm and R-Pharm co-produced it (Binnopharm Group 2022: Internet; R-Pharm 2022: Internet). Russia used multilateral vaccine diplomacy and soft power by partnering with 14 countries to produce the vaccine globally, such as India, China, Turkey, Vietnam, Brazil, Italy, Iran, Mexico, Kazakhstan, Serbia, the Republic of Belarus, Egypt, Argentina, and South Korea (Sputnik V 2022: Internet). Strategically, Russia approached large vaccine-producer countries such as China and India while excluding the UK and the USA.

Russia mobilised their resources, expertise, technology, and research institutions to

develop the first Covid-19 vaccine. Following this achievement, Russia extended their 'vaccine recipe' to other nations, exemplifying the practice of multilateral vaccine science diplomacy. These Russian practices can be perceived as a soft power instrument or a smokescreen of legitimacy. The intent behind Russia's vaccine diplomacy remains ambiguous — whether it was aimed at strengthening alliances or flooding a desperate global market with their vaccine. Additionally, it remains uncertain whether Russia prioritised national immunisation as a key interest, aimed to broaden its diplomatic relations, or focused on large-scale vaccine production. This predicament reveals a two-fold outcome. The ambiguity surrounding Russian interests provides no clear signs of responsible governance being practised. Conversely, this ambiguity might be interpreted as a legitimate act of governance, as it potentially enables various other nations, some possibly lacking the resources to develop a vaccine, to achieve their immunisation goals.

3.4.5. The Sputnik Light Vaccine

Gamaleya Research Institute, Acellena Contract Drug Research and Development developed the Sputnik Light vaccine in Russia (RAPS 2022: Internet). Table 5 demonstrates that, unlike the development of Sputnik V, the creation of Sputnik Light was a unilateral endeavour, with the specifics of any collaborations surrounding it remaining unknown.

Table 5: *The Sputnik Light Vaccine*

Vaccine Developers	Developer Initial Location	Company Type	Vaccine Development Location	Collaborations	Vaccine Funding	Link to Country/Scope
Gamaleya Research Institute	Russia	Research Institute	Russia	Unknown	The Health Ministry of the Russian Federation, The Russian Direct Investment Fund	Russia funded and developed the vaccine.
Acellena Contract Drug Research and Development	Russia	Global Pharmaceutical Pharmacology Company				
Health Ministry of the Russian Federation	Russia	Health Ministry of the Russian Federation				

Source: *(RAPS 2022: Internet).*

Sputnik V and Light utilise the component Ad26 vector; however, the difference lies in the Sputnik V, which uses a component called rAd5 (RAPS 2022: Internet). The reason behind the development of this vaccine is unknown. It is possible that the government pursued the development of this secondary vaccine to fulfil the national goal of

immunising the Russian population, which could be interpreted as an act of responsible governance. Considering the ambiguous character of Russian national interests and international partnerships, it is only possible to hypothesise the outcomes within the context of the conceptual structure. The relationship between vaccine nationalism and the development of vaccines solely for domestic use remains ambiguous, given that different supply agreements could influence this interpretation.

3.4.6. The Covid-19 Vaccine Ad26.COV2. S (Janssen)

The Ad26.COV2.S vaccine was developed by Janssen Vaccines and its parent company Johnson & Johnson, in the Netherlands and the USA (RAPS 2022: Internet). The table below illustrates the multilateral cooperation that created this vaccine.

Table 6: *Covid-19 Vaccine Janssen (Ad26.COV2.S)*

Vaccine Developers	Developer Initial Location	Company Type	Vaccine Development Location	Collaborations	Vaccine Funding	Link to Country/Scope
Janssen Vaccines	USA	Global Pharmaceutical Company	Multilateral	India (Biological E) Sanofi (Multilateral Company) USA (Merck & Co Inc) IDT Biologika (Multilateral Company)	Janssen, USA Department of Defense, USA Operation Warp Speed, BARDA, NIAID	A USA company developed the vaccine, and the US government funded the vaccine.
Johnson & Johnson	The Netherlands	Global Healthcare Company				

Sources: *(RAPS 2022: Internet; Janssen 2022a: Internet; Janssen 2022b: Internet; Biological E. Limited 2022a: Internet; Biological E. Limited 2022b: Internet; Merck 2022: Internet; Sanofi 2022: Internet; IDT BIOLOGIKA 2022: Internet; World Health Organization 2023a: Internet).*

The Janssen vaccine was developed in multiple locations. In August 2020, the Indian company Biological E agreed to produce the Janssen vaccine and their candidate (RAPS 2022: Internet; Biological E. Limited 2022: Internet). In 2021 Sanofi decided to support the manufacturing of the Janssen vaccine to supply Europe with vaccines, although Sanofi has similar agreements with Pfizer and BioNTech (RAPS 2022: Internet). Under the funding of BARDA and the USA Department of Health and Human Services, Merck agreed to support the manufacturing and supply of the Janssen vaccine within the USA (Merck 2022: Internet; RAPS 2022: Internet). IDT Biologika agreed to assist J&J vaccine production in 2021 (RAPS 2022: Internet). Janssen, the USA Department of Defence, Department of Health and Human Services, BARDA, National Institute of Allergy and Infectious Diseases (NIAID) and USA Operations Warp Speed funded the Covid-19 Janssen vaccine (RAPS 2022: Internet). The information

above confirms that the USA developed a foreign policy that encouraged multilateral collaboration, vaccine development and funded various vaccine candidates. The practice of collaboration between various actors for a mutual interest echoes multilateral vaccine science diplomacy. The information further illustrates that the USA leveraged different manufacturing companies and collaborations, such as Merck, to ensure national immunisation objectives and multilateral diplomatic relations. The collective efforts of cooperation, development, and financing related to Ad26.COV2.S bear no connection to the concept of vaccine nationalism.

3.4.7. The CoronaVac Vaccine

The CoronaVac vaccine was developed by Sinovac in China (RAPS 2022: Internet). The table below shows that the development of this vaccine remained in the Chinese domestic sphere, with the exceptions of collaborations with Indonesia and São Paulo.

Table 7: *The CoronaVac Vaccine*

Vaccine Developers	Developer Initial Location	Company Type	Vaccine Development Location	Collaborations	Vaccine Funding	Link to Country/Scope
Sinovac Biotech Ltd	China	Biopharmaceutical Company	China	Indonesia (BioFarma), São Paulo (Butantan Institute and Manufacturing Plant)	Advantech Capital (Chinese Private Equity Fund), Sino Biopharmaceutical (Conglomerate Chinese Pharmaceutical Company), Vivo Capital (Healthcare Investment Firm)	The vaccine was developed and funded in China by a Chinese Company.

Sources: *(RAPS 2022: Internet; Sinovac 2022a: Internet; BioFarma 2022: Internet; Advantech Capital 2022: Internet; Vivo Capital 2022: Internet; Sino Biopharmaceutical Limited 2022: Internet).*

Sino Biopharmaceutical is one of China's leading conglomerate pharmaceutical companies that specialises in the research and development of pharmaceuticals and owns several smaller healthcare companies across China (Sino Biopharmaceutical Limited 2022: Internet). It is unclear if this vaccine had a direct relation with the Chinese government; however, multilateral diplomacy occurred with the collaborations with the governments of Indonesia and São Paulo. Within Indonesia, the state-owned BioFarma partnered with Sinovac to produce vaccine doses in 2021 (RAPS 2022: Internet). São Paulo partnered with Sinovac to produce the CoronaVac vaccine at the Butantan Institute and manufacturing plant (RAPS 2022: Internet; São Paulo

Government 2022: Internet). A Chinese company based in China developed and funded the vaccine. While it bolstered multilateral ties and advanced domestic immunisation interests, its direct link to the Chinese government remains ambiguous. CoronaVac indirectly associates with the Chinese government since Sinovac partners with "the Chinese Academy of Sciences" and practises in China (Sinovac 2022b: Internet). Unlike CoronaVac, the Sinopharm vaccine directly correlates with the Chinese government.

3.4.8. The BBIBP-CorV (Sinopharm) Vaccine

the BBIBP-CorV vaccine was developed by China's National Pharmaceutical Group called Sinopharm and the Beijing Institute of Biological Products within China (RAPS 2022: Internet). Although there were four developers, the nature of this vaccine is unilateral and within the Chinese domestic sphere.

Table 8: *The BBIBP-CorV/NVSI-06-07 Vaccine (Sinopharm Vaccine)*

Vaccine Developers	Developer Initial Location	Company Type	Vaccine Development Location	Collaborations	Vaccine Funding	Link to Country/Scope
Beijing Institute of Biological Products	China	Subsidiary of Sinopharm	China	Unknown	The Chinese Ministry of Science and Technology	The vaccine was developed and funded by China.
Sinopharm	China	State-owned Pharmaceutical Company				
The China National Pharmaceutical Group Co., Ltd.	China	State-owned Pharmaceutical Company				
Wuhan Institute of Biological Products	China	State-owned Pharmaceutical Company				

Sources: *(RAPS 2022: Internet; China.org.cn 2022: Internet; Sinopharm 2022: Internet; UNICEF 2022d: Internet; World Health Organization 2023a: Internet; Wuhan Institute of Biological Products Co., Ltd. 2022:Internet).*

The Beijing Biological Products Institute is a subsidiary of Sinopharm, a state-run pharma firm under the "China National Pharmaceutical Group" called Sinopharm (Sinopharm 2022: Internet). Similarly, the Wuhan Institute of Biological Products is also a state-owned pharmaceutical company (Sinopharm 2022: Internet). The vaccine was financed by the Chinese Ministry of Science and Technology (RAPS 2022: Internet). There is a direct affiliation between the vaccine and China. However, during the development of this vaccine, no multilateral collaborations (that we know of) occurred. It is worth noting that Sinopharm (Wuhan) and CNBG Wuhan manufactured another Sinopharm Wuhan vaccine (UNICEF 2022d: Internet). The Sinopharm (NVSI) vaccine

was developed by Sinopharm and manufactured by UAE's Hayat Biotech through a technology transfer (UNICEF 2022d: Internet). The Wuhan vaccine has been used for the national immunisation of Chinese citizens and was financed by the Chinese Ministry of Science and Technology (RAPS 2022: Internet).

Given that the Government of the People's Republic of China was accountable for developing and funding multiple vaccines, it underscores the state's emphasis on domestic immunisation, indicating responsible governance. The undisclosed collaborations suggest a preference within China to rely on national and domestic pharmaceutical institutions rather than engaging in multilateral production. China's 'internal approach' to vaccine development and manufacturing subtly promotes the advancement of skills and technology within the domestic realm.

3.4.9 The EpiVacCorona Vaccine

The Vector Institute developed the EpiVacCorona vaccine in Russia (RAPS 2022: Internet). Table 9 illustrates that the vaccine was developed and funded by Russia and that multilateral vaccine diplomacy occurred with the collaboration with Venezuela.

Table 9: *The EpiVacCorona Vaccine*

Vaccine Developers	Developer Initial Location	Company Type	Vaccine Development Location	Collaborations	Vaccine Funding	Link to Country/Scope
The "Russian Federal Budgetary Research Institution State Research Center of Virology and Biotechnology" (The Vector Institute)	Russia	State Institution, under the jurisdiction of the "Russian Federal Service for Supervision of Consumer Rights Protection and Human Welfare" or Rospotrebnadzor	Russia	Venezuela	The Vector Institute	The vaccine was developed and funded by Russia.

Sources: *(RAPS 2022: Internet; Gavi 2022d: Internet; BEKTOP 2022: Internet; Venezuelananalysis.com 2021: Internet; World Health Organization 2023a: Internet).*

The Vector Institute operates under the authority of the Federal Service for Supervision of Consumer Rights Protection and Human Welfare (Rospotrebnadzor) and is dedicated to addressing global disease risks (BEKTOP 2022: Internet). Although EpiVacCorona was mainly utilised for Russian immunisation, in March 2021, Venezuela agreed to produce and participate in the vaccine trials (Venezuelananalysis.com 2021: Internet). The Vector Institute partly funded the vaccine; other funding sources are unknown (RAPS 2022: Internet). Therefore, the EpiVacCorona vaccine has a direct affiliation with Russia. Russia employed this domestically produced vaccine to achieve its prioritised national interest of internal health, a move that contradicts the principles of vaccine nationalism. The solitary collaboration between Venezuela and Russia hints at a potential exercise of soft power and cultivating a diplomatic relationship.

3.4.10. The Convidecia/ Convidicea Vaccine

The Beijing Institute of Biotechnology, CanSinoBIO, and the Chinese Academy of Military Medical Sciences developed Convidecia in China (CanSinoBIO 2022b: Internet). Table 10 reflects the Chinese national interest in strengthening and utilising their domestic biopharmaceutical companies and military medical academy instead of using external services. In the long term, this strategy benefits the public, domestic sphere and economy through skilled labourers, technology and funding that remains in China. Similarly, the Chinese Academy of Medical Sciences and Institute of Medical

Biology created an approved unnamed vaccine in China, although minimal information is available on this vaccine (RAPS 2022: Internet).

Table 10: *The Convidecia Vaccine*

Vaccine Developers	Developer Initial Location	Company Type	Vaccine Development Location	Collaborations	Vaccine Funding	Link to Country/Scope
CanSino Biologics Inc.	China	Global Biopharmaceutical Company	China	Unknown	CanSino Biologics Inc.	The vaccine was co-developed by China and a Chinese company.
The Beijing Institute of Biotechnology	China	Subsidiary of Sinopharm				
Chinese Academy of Military Medical Sciences	China	Medical Research Institute				

Sources: *(RAPS 2022: Internet; CanSinoBIO 2022a: Internet; CanSinoBIO 2022b: Internet; World Health Organization 2023a: Internet).*

CanSino Biologics Inc funded the Convidecia vaccine, while external collaborations are unknown. However, the Chinese Academy of Military Medical Sciences is directly associated with China's People's Liberation Army. At the same time, the Beijing Institute of Biotechnology is a subsidiary of Sinopharm (a state-owned pharmaceutical company). Hence, the Convidecia vaccine was jointly developed by a Chinese government entity in collaboration with a Chinese company. The determination of whether China's in-house strategy demonstrates vaccine nationalism hinges on the nature of the supply agreements, which will be explored in a subsequent section.

3.4.11. The ZF2001 Vaccine

The "Chinese Academy of Sciences Institute of Microbiology" and a company called "Anhui Zhifei Longcom Biopharmaceutical", industrialised the ZF2001/ ZIFIVAX Covid vaccine within 'China and Uzbekistan' (RAPS 2022: Internet). Similarly to the Convidecia vaccine, ZIFIVAX utilises domestic capabilities, excluding the collaboration with Uzbekistan. However, this vaccine could have altered from domestic production to external collaboration since the vaccine clinical trials must be tested on various populations to be accepted by the WHO. The Academy of Military Medical Services, Zhongyianke Biotech and Liaoning Maokangyuan Biotech further developed the vaccine (World Health Organization 2023a: Internet).

Table 11: *The ZF2001/ ZIFIVAX Vaccine*

Vaccine Developers	Developer Initial Location	Company Type	Vaccine Development Location	Collaborations	Vaccine Funding	Link to Country/Scope
Anhui Zhifei Longcom Biopharmaceutical	China	A subsidiary of Chongqing Zhifei Biological Products Co., Ltd	China	Uzbekistan	Anhui Zhifei Longcom Biopharmaceutical	The vaccine was co-developed by China.
the Institute of Microbiology of the Chinese Academy of Sciences	China	State-owned Company				
Academy of Military Medical Services	China	Chinese State-owned Company				
Zhongyianke Biotech	China	Biopharmaceutical Company				
Liaoning Maokangyuan Biotech	China	A subsidiary of Zhongyianke Biotech Co,.Ltd.				

Sources: *(RAPS 2022: Internet; World Health Organization 2023a: Internet; CAS HOLDINGS 2023: Internet; ZFSW 2022: Internet; Zhongyianke Biotech 2023: Internet).*

ZIFIVAX has a dash of multilateralism and vaccine diplomacy with the mutually beneficial arrangement with Uzbekistan. Uzbekistan participated in the three vaccine-stage clinical trials (RAPS 2022: Internet). The vaccine was funded by Anhui Zhifei Longcom Biopharmaceutical and co-developed by China. Thus, the vaccine has a direct affiliation with China. Again, China leveraged its domestic biopharmaceutical companies to achieve the national immunisation interest while capitalizing on local development.

3.4.12. The Covaxin (BBV152) Vaccine

The Indian Council of Medical Research, Bharat Biotech, the National Institute of Virology, ViroVax and Ocugen produced the Covaxin vaccine in India and the USA (RAPS 2022: Internet). Table 12 illustrates the multilateral nature of Covaxin with dealings between vaccine developers, funders, companies, and states.

Table 12: *The Covaxin Vaccine (BBV152)*

Vaccine Developers	Developer Initial Location	Company Type	Vaccine Development Location	Collaborations	Vaccine Funding	Link to Country/Scope
Bharat Biotech International Limited	India	Global Biopharmaceutical Company	India	Unknown	Bharat Biotech, The Indian Council of Medical Research, The Adjuvant Development Program-NIAID (USA)	The vaccine was developed and funded by India and the USA
Indian Council of Medical Research	India	Indian Council of Medical Research				
National Institute of Virology	India	Indian National Institute				
Ocugen	USA	Biopharmaceutical Company	USA, Canada			
Virovax LLC	USA	Biotechnology Company	USA			

Sources: *(RAPS 2022: Internet; Bharat Biotech 2022a: Internet; Bharat Biotech 2022b: Internet; Ocugen 2022a: Internet; Ocugen 2022b: Internet; ViroVax 2022: Internet).*

ViroVax developed Covaxin's adjuvant with funding from the Adjuvant Development Program under the USA National Institute of Allergy and Infectious Diseases or NIAID (RAPS 2022: Internet). Ocugen has partnered with Bharat Biotech as a co-developer of the vaccine to target the markets of the USA and Canada (RAPS 2022: Internet). Bharat Biotech, The Indian Council of Medical Research and The Adjuvant Development Program of the USA National Institute of Allergy and Infectious Diseases (NIAID) funded Covaxin. Thus, the vaccine was developed and financed by India and the USA. Initial data suggest that both India and the USA employed multilateralism as a tool of foreign policy, with an emphasis on global health diplomacy and national interest, particularly in the context of Covid-19 vaccine development. Both nations were receptive to numerous collaborations. Their approach to funding and developing multiple vaccines through multilateral partnerships don't align with vaccine nationalism. Instead, it has the potential to generate soft power and mutual benefits.

3.4.13. The CoviVac Vaccine

The Chumakov Federal Scientific Center for Research and Development of Immune and Biological Products produced CoviVac in Russia (RAPS 2022: Internet). The table below illustrates the unilateral nature of this vaccine coupled with undetermined data.

Table 13: *The CoviVac Vaccine*

Vaccine Developers	Developer Initial Location	Company Type	Vaccine Development Location	Collaborations	Vaccine Funding	Link to Country/Scope
The Chumakov Federal Scientific Center for Research and Development of Immune-and-Biological Products	Russia	Russian Academy of Sciences/ Ministry of Science and Higher Education of the Russian Federation	Russia	Unknown	Unknown	Russia developed the vaccine.

Sources: *(RAPS 2022: Internet; Chumakovs 2022: Internet).*

The Chumakov Federal Scientific Center for Research and Development of Immunobiological Drugs, commonly known as the Polio Institute, is a part of the Federal State Autonomous Scientific Institution under the Ministry of Science and Higher Education of the Russian Federation, located in Moscow (Chumakovs 2022: Internet). In 2021 Russia approved the use of CoviVac, although trials still had to be finalised (RAPS 2022: Internet; Reuters 2021: Internet). Russia developed the vaccine; however, the funding and collaboration sources of the vaccine are unknown. The decision to approve vaccine use before the completion of trials suggests inefficient governance, as it fails to guarantee the safety and well-being of citizens. This decision further obscures the motives behind their actions.

3.4.14. The Nuvaxovid (Covovax) Vaccine

CEPI, Novavax, and the Serum Institute of India developed the Nuvaxovid injection (Covovax in India; previously NVX-CoV2373) in the USA and India (RAPS 2022: Internet). Table 14 illustrates the multilateral collaboration between vaccine developers, companies, and states.

***Table 14**: Vaccine Nuvaxovid/ Covovax/ NVX-CoV2373)*

Vaccine Developers	Developer Initial Location	Company Type	Vaccine Development Location	Collaborations	Vaccine Funding	Link to Country/Scope
Novavax	USA	Global Biotech Company	USA	Japan (named TAK-019), UK (GlaxoSmithKline), USA Operation Warp Speed, Australia (named Nuxaviod Boosters)	USA Operation Warp Speed, CEPI, USA Department of Defence	The vaccine was funded by the USA and developed by India.
CEPI	Switzerland	Global Coalition	India			
Serum Institute of India	India	Global Pharmaceutical and Biotechnology Company	India			

***Sources:** (RAPS 2022: Internet; Novavax 2022: Internet; CEPI 2022: Internet; Serum Institute of India 2022a: Internet; Serum Institute of India 2022b: Internet).*

India's Serum Institute of India had agreed to co-develop and manufacture the vaccine in India as Covovax (RAPS 2022: Internet). GlaxoSmithKline collaborated with developers to manufacture the vaccine in the UK (RAPS 2022: Internet). CEPI, Operation Warp Speed and the USA Department of Defence funded the vaccine (RAPS 2022: Internet). As stated in section 3.4.2, CEPI is an international alliance comprising private, public, humanitarian, and civil society organisations working together to promote the development and equitable distribution of vaccines for infectious diseases and pandemics (CEPI 2022: Internet). CEPI is an excellent example of multilateralism and global health diplomacy. Nuvaxovid is used and developed by several countries under different labels. Australia produced the vaccine for Nuxaviod boosters; in India and the EU, the vaccine is produced and labelled as Covovax (RAPS 2022: Internet). The vaccine is developed and sold in Japan as the TAK-019 vaccine (RAPS 2022: Internet). The vaccine was funded by the USA and developed by India. Once again, India and the USA reveal their national interests in fostering multilateral collaboration, engaging in diplomatic practices, and developing multiple vaccines, all of which contribute to effective governance.

3.4.15. The Corbevax Vaccine

Developed within India and the USA, Corbevax is a product of collaborative efforts between 'Dynavax, CEPI, Biological E, and the Baylor College of Medicine (Texas)' (RAPS 2022: Internet). Table 15 demonstrates the multilateral relations between Corbevax's vaccine developers, funders, companies, and states.

***Table 15**: The Corbevax Vaccine*

Vaccine Developers	Developer Initial Location	Company Type	Vaccine Development Location	Collaborations	Vaccine Funding	Link to Country/Scope
Biological E. Limited	India	Pharmaceutical and Biologics Company	India	Unknown	USA, CEPI, Private Investors	India and USA developed the vaccine. The USA funded the vaccine.
Baylor College of Medicine (Texas)	USA	US College of Medicine	USA			
Dynavax	USA	Biopharmaceutical Company	USA			
CEPI	Switzerland	Global Coalition	India			

***Sources**: (RAPS 2022: Internet; CEPI 2022: Internet; Dynavax Technologies 2022: Internet).*

India and the USA developed the vaccine. The USA, CEPI and private investors funded the vaccine. As can be noted in sections 3.4.2, 3.4.3 and 3.4.14, during the pandemic, CEPI invested in multiple vaccine Research & Development portfolios, including Novavax, SK Bioscience, the University of Queensland, Biological E, Clover Biopharmaceuticals, the University of Hong Kong, AstraZeneca/Oxford University and Moderna (CEPI 2023: Internet). The joint development of additional vaccines by India and the USA signifies a diplomatic relationship and their engagement in multilateral vaccine science diplomacy.

3.4.16. The VLA2001 Vaccine

The VLA2001 vaccine was collaboratively developed in France and the USA by Valneva, the UK National Institute for Health Research, and Dynavax (RAPS 2022: Internet). Table 16 illustrates the multilateral collaboration between vaccine developers, companies, and states.

***Table 16**: The VLA2001 Vaccine*

Vaccine Developers	Developer Initial Location	Company Type	Vaccine Development Location	Collaborations	Vaccine Funding	Link to Country/Scope
Valneva	France	Global Pharmaceutical Company	France	Unknown	UK Government	The UK developed and funded the vaccine.
Dynavax	USA	Biopharmaceutical Company	USA			
UK National Institute for Health Research	UK	UK National Institute for Health Research	UK			

***Sources**: (RAPS 2022: Internet; Dynavax Technologies 2022: Internet; Valneva 2022: Internet; Valneva 2021: Internet; World Health Organization 2023a: Internet).*

Valneva developed the vaccine while supported by the UK "National Institute of Health Research (NIHR)" and partnered with Dynavax (RAPS 2022: Internet). The UK government funded the VLA2001; however, the UK government terminated the agreement in September 2021 and claimed the company was in breach of its obligations under the Supply Agreement (RAPS 2022: Internet; Valneva 2021: Internet). In April 2022, the UK re-affirmed Conditional Marketing Authorisation for Valneva by the UK Medicines and Healthcare Products Regulatory Agency (MHRA) (GOV.UK 2022b: Internet). The only multilateral vaccines that the UK facilitated and developed were that of AstraZeneca and Valneva. The information gives the impression that the UK's Covid-19 strategy often relied on securing early access to finished Covid-19 vaccines rather than funding and developing multiple vaccines multilaterally. By August 2020, the UK had secured early access to the AstraZeneca, Janssen, Valneva, BioNtech, GlaxoSmithKline and Novavax vaccines (GOV.UK 2020: Internet). These actions could be interpreted as vaccine nationalism.

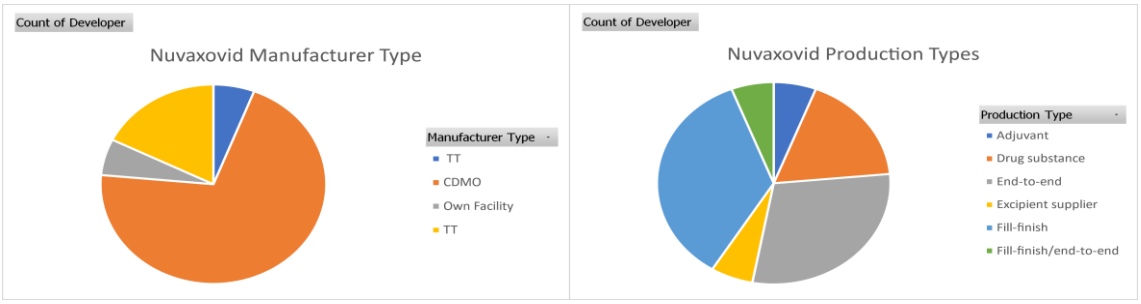
The section above illustrates that the vaccine's developers, their collaborations, vaccine funding and distribution of Covid-19 vaccines are a multilateral process often funded or affiliated with governmental practices. The tables in this section discussed the vaccines association with China, Russia, India, the UK, and the USA. Global vaccine approvals and market trends had additional effects on the patterns of multilateral vaccine diplomacy. These dynamics could shift a state's national interest towards alternative vaccines offering more advanced technology or superior clinical outcomes.

3.5. Global Covid-19 Vaccine Production Capacity and Location

As mentioned in section 3.1, agreements between developers, manufacturers and states depend on the types of production or manufacturing used to produce vaccines. The figures below illustrate a trend towards **Contract Development and Manufacturing Organization's** manufacturing and **Fill-Finish** production types since most vaccine companies use this process. Additionally, no correlation was found between a particular process, location, or government. For example, the CoronaVac and Convidecia vaccines were both developed by China. However, CoronaVac used **Technology Transfers** and **Fill-Finish** while Convidecia used **Technology Transfers** and **Fill-Finish/End-to-End** production (UNICEF 2022f: Internet).

Similarly, Russian CoviVac and Sputnik V differed in their vaccine manufacturing and production processes. Unlike Sputnik V, which typically relies on **Technology Transfers** and **Fill-Finish/End-to-End** production, CoviVac mainly employs **Technology Transfers** and **End-to-End** production (UNICEF 2022f: Internet). The UNICEF database has no information on the manufacturing and production types of EpiVacCorona and the ZF2001 vaccine (UNICEF 2022f: Internet). The manufacturing and production type affects the global and regional agreements and distribution of the Covid-19 vaccine.

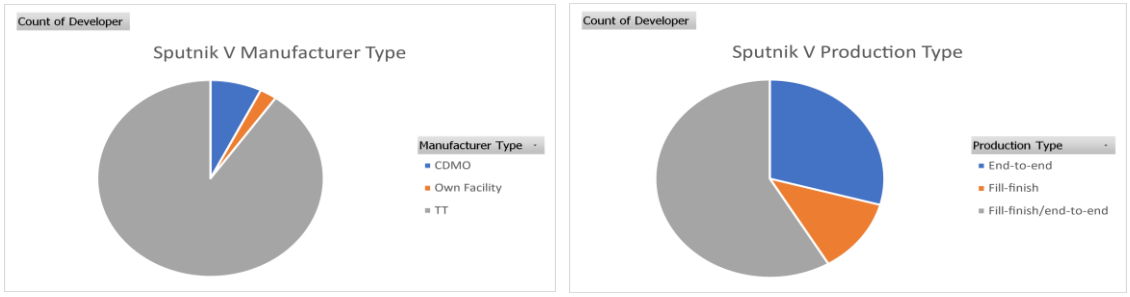
***Figure 2**: Nuvaxovid Manufacturer and Production Type*



***Source**: (UNICEF 2022f: Internet).*

This figure illustrates that Contract Development and Manufacturing Organizations were primarily used to manufacture Nuvaxovid and Fill-Finish production.

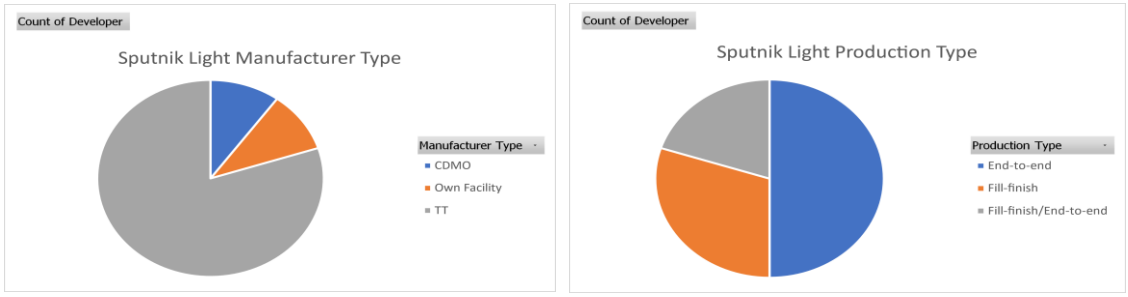
***Figure 3**: Sputnik V Manufacturer and Production Type*



***Source**: (UNICEF 2022f: Internet).*

The figure illustrates that Sputnik V was primarily manufactured through Technology Transfers and Fill-Finish/End-to-End production types.

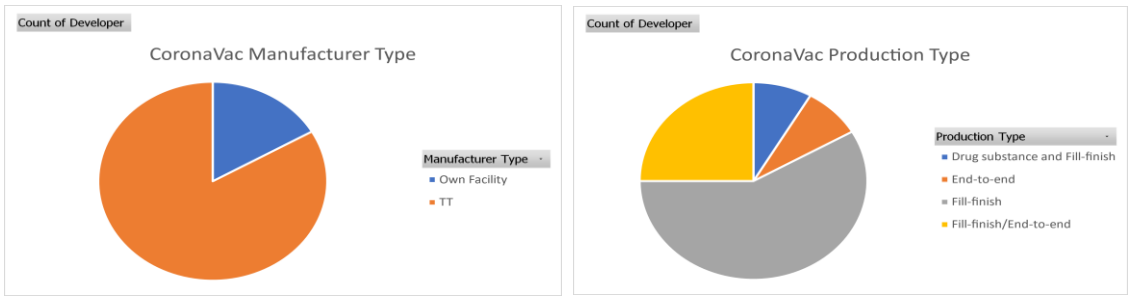
***Figure 4**: Sputnik Light Manufacturer and Production Type*



***Source:** (UNICEF 2022f: Internet).*

Similarly to Sputnik V, Sputnik Light was primarily manufactured through Technology Transfers and End-to-End production.

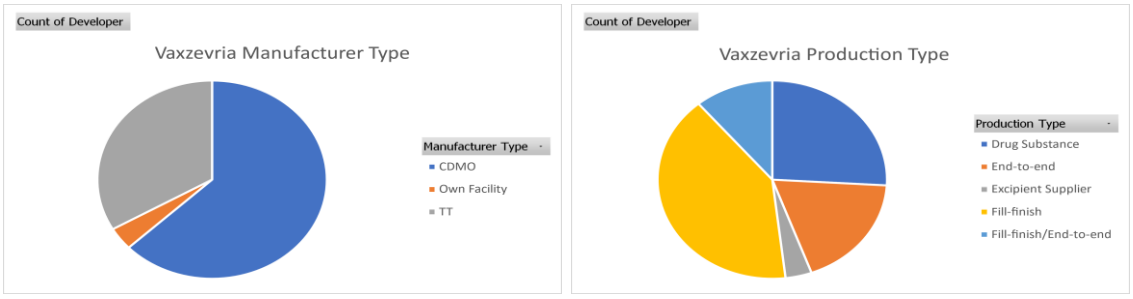
***Figure 5**: CoronaVac Manufacturer and Production Type*



***Source**: (UNICEF 2022f: Internet).*

This figure illustrates Technology Transfers were predominantly used to manufacture CoronaVac and Fill-Finish production types.

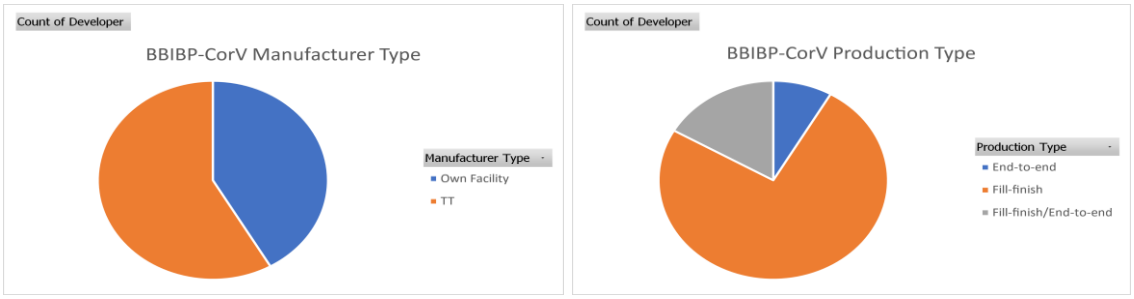
***Figure 6**: Vaxzevria Manufacturer and Production Type*



***Source**:(UNICEF 2022f: Internet).*

Vaxzevria primarily utilised Contract Development and Manufacturing Organizations and Fill-Finish production.

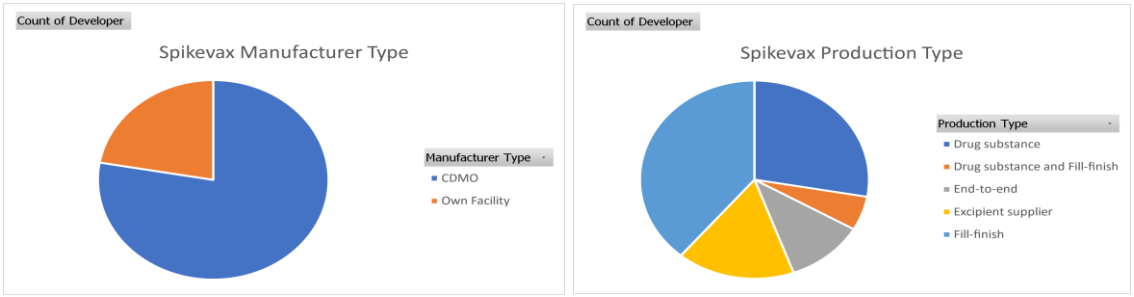
***Figure 7**: BBIBP-CorV Manufacturer and Production Type*



***Source:** (UNICEF 2022f: Internet).*

The BBIBP-CorV vaccine was primarily manufactured through Technology Transfers and produced through the Fill-Finish production type.

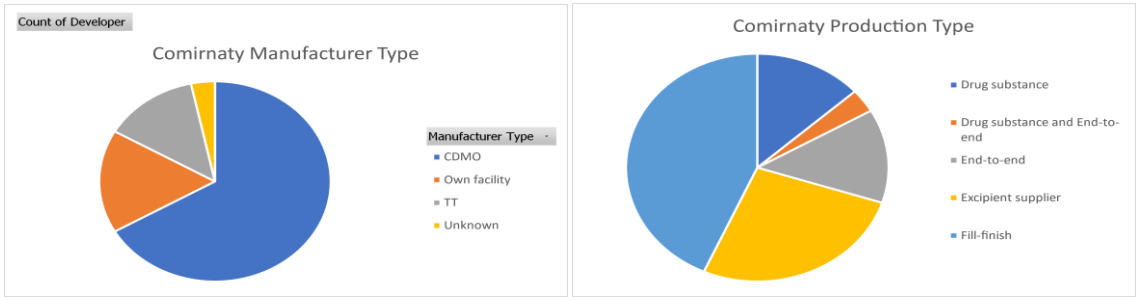
***Figure 8**: Spikevax Manufacturer and Production Type*



***Source:** (UNICEF 2022f: Internet).*

Figure 8 illustrates Spikevax primarily used Contract Development and Manufacturing Organizations, Fill-Finish, and drug substance production types.

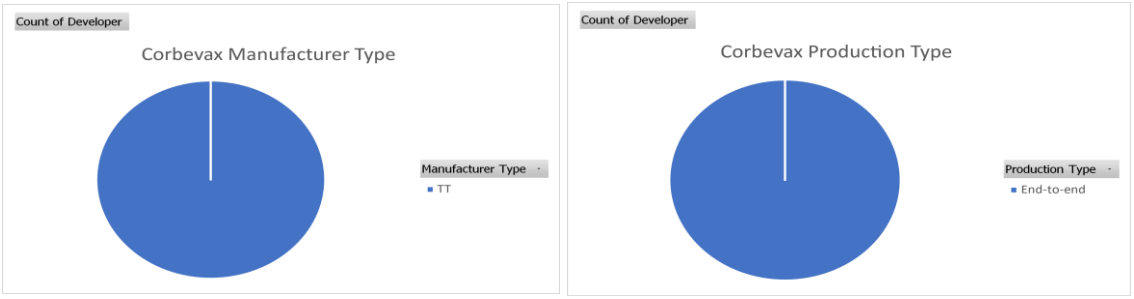
***Figure 9:** Comirnaty Manufacturer and Production Type*



***Source:** (UNICEF 2022f: Internet).*

Similarly to Spikevax, Comirnaty predominantly utilised Contract Development and Manufacturing Organizations and Fill-Finish production.

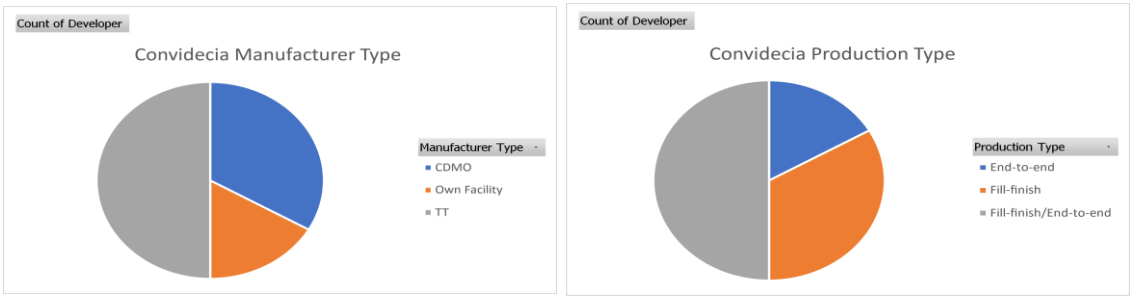
***Figure 10**: Corbevax Manufacturer and Production Type*



***Source:** (UNICEF 2022f: Internet).*

Notably, Corbevax exclusively used Technology Transfer manufacturing and End-to-End production.

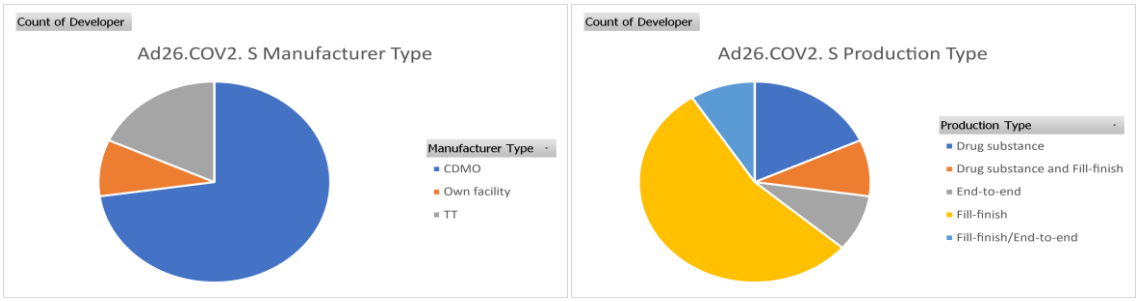
***Figure 11**: Convidecia Manufacturer and Production Type*



***Source:** (UNICEF 2022f: Internet).*

Convidecia primarily used Technology Transfers and Fill-Finish/End-to-End production.

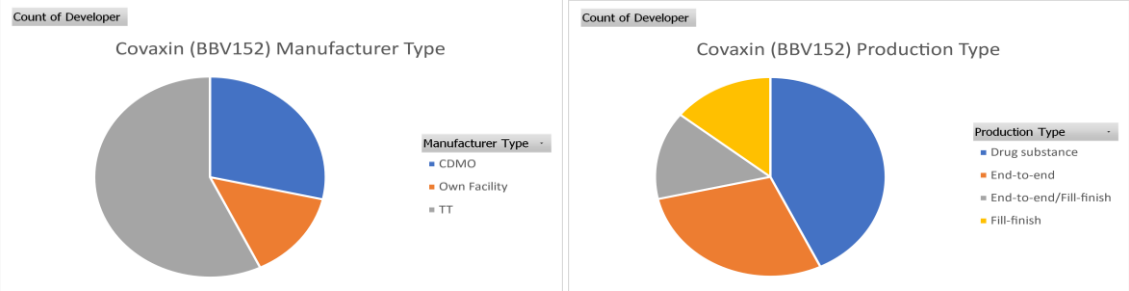
***Figure 12**: Ad26.COV2.S Manufacturer and Production Type*



***Source:** (UNICEF 2022f: Internet).*

This figure illustrates that Contract Development and Manufacturing Organizations were primarily used to manufacture Ad26.COV2. S, as well as Fill-Finish production.

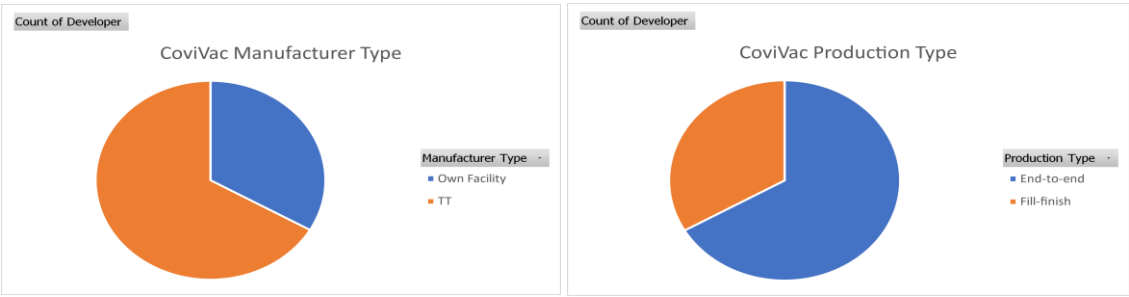
***Figure 13**: Covaxin Manufacturer and Production Type*



***Source:** (UNICEF 2022f: Internet).*

Covaxin essentially used Technology Transfers and drug substance production.

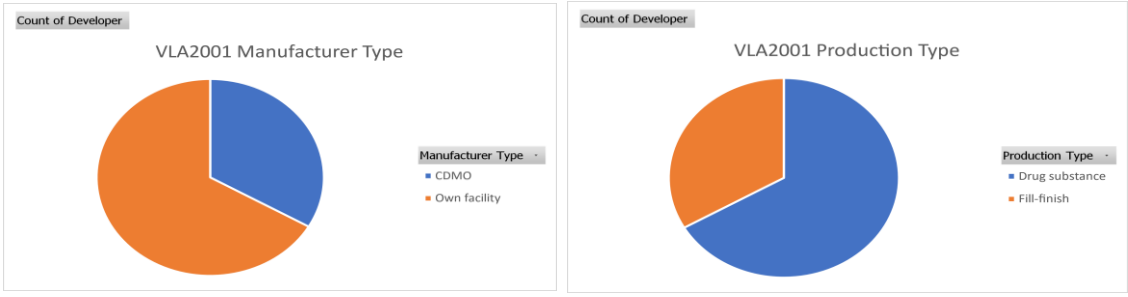
***Figure 14**: CoviVac Manufacturer and Production Type*



***Source**: (UNICEF 2022f: Internet).*

CoviVac exclusively used Technology Transfers, their facility, and End-to-End and Fill-Finish production.

***Figure 15**: VLA2001 Manufacturer and Production Type*



***Source**: (UNICEF 2022f: Internet).*

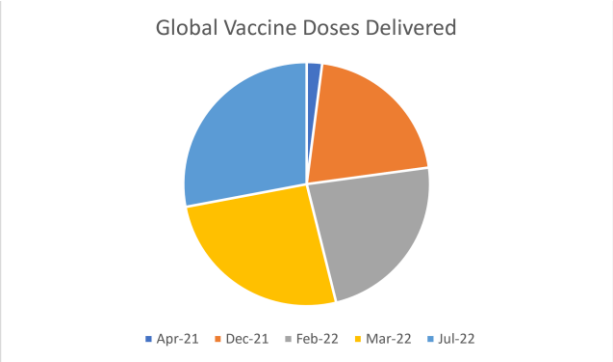
VLA2001 predominantly used their facility for manufacturing and drug substance production. The approaches taken by vaccine-developing states are largely contingent upon the terms of bilateral and multilateral supply agreements.

3.6. Supply Agreements

During the Covid-19 pandemic, numerous bilateral and multilateral vaccine supply agreements occurred across the globe. Since countless contracts happened during the pandemic, this section identifies a few significant milestones that impacted vaccine

supply agreements from 2021-2022. Additional Covid-19 milestones will be illustrated in section 3.8 of chapter three. The figure below demonstrates that vaccine deliveries intensified between April 2021 and July 2022.

***Figure 16**: Global Vaccine Doses Delivered from April 2021-July 2022*



***Source**: (UNICEF 2021a; 2021b; 2022b; 2022c; 2022d).*

Since deliveries intensified from April 2021, the first milestone will initiate from this point in time. Since April 2021, 'an estimated 1,04 billion vaccine doses have been delivered globally' (UNICEF 2021a: Internet). At this time, a handful of producers monopolised a significant portion of the vaccine market. The five largest Covid-19 vaccine producers were *Sinovac, Sinopharm, Pfizer/BioNTech, Serum Institute of India and AstraZeneca* (UNICEF 2022a: Internet). These developers produced 80% of the Covid-19 vaccine market (UNICEF 2022a: Internet). *AstraZeneca* had the highest number of reported manufacturing or supply agreements, followed by the *Gamaleya Research Institute* (UNICEF 2021a: Internet). As observed in chapter two, in 2021, vaccine producers attracted numerous manufacturing agreements. For example, Russia secured supply and production agreements with GL Pharma (500 million doses), China's TopRidge Pharma (100 million doses per year), Panacea Biotec (100 million doses per year) and R Pharm (8-10 million doses monthly) (UNICEF 2021a: Internet). *Sinovac* secured bilateral deals with Guinea, Moldova, and Egypt (UNICEF 2021a: Internet). *Bharat Biotech* agreed to double the production of Covaxin vaccines, while *Novavax* pushed their production target back due to supply shortages such as bioreactor bags and filters (UNICEF 2021a: Internet).

The second milestone ensued at the end of 2021. During this time, the Omicron (B.1.1.529) variant was designated a Covid-19 variant of concern that impacted supply

agreements, production, and donations of Covid-19 vaccines (UNICEF 2021b: Internet). The Omicron variant escalated fear and urgency for vaccines, leading to an upsurge of significant purchase agreements between states and developers, forcing producers to expand their supply. For example, the European Commission signed a purchase agreement to deliver over 200 million doses from Pfizer/BioNTech in 2022 (UNICEF 2021b: Internet). Similarly, the UK accelerated purchase agreements with *Moderna* (60 million doses) and with *Pfizer/BioNTech* (54 million doses) for 2022/2023 (UNICEF 2021b: Internet). *Moderna* further enhanced their supply to COVAX for an additional 20 million doses in the second quarter of 2022 and 130 million doses for the third quarter of 2022 (UNICEF 2021b: Internet). The swift execution of purchase agreements, while mindful of the global vaccine shortage, indicates vaccine nationalism.

The new variant advanced the third turning point that occurred in January 2022. Covid-19 vaccine developers extended their production facilities by increasing manufacturing arrangements to different global locations (UNICEF 2022b: Internet). This milestone is significant since various vaccine developers changed their manufacturing locations to African states. Due to production deficits, global supply chain problems and scarcity, manufacturers struck agreements to develop vaccine production facilities and technology transfers in Africa (UNICEF 2022b: Internet). For example, *Sinopharm* secured a Fill & Finish agreement for vaccine production with Morocco's Sothema (a pharmaceutical subsidiary under West Africa Pharma) (UNICEF 2022b: Internet; Sothema 2022: Internet). *Sinovac* and *the Gamaleya Institute* secured Fill & Finish production agreements with Groupe Saidal, Alegria's largest pharmaceutical company (UNICEF 2022b: Internet; Pharma Boardroom 2018: Internet). Egypt had Fill & Finish and End-to-End agreements with *Sinovac and Gamaleya Institute* (UNICEF 2022b: Internet). *Janssen, Aspen Pharma, ImmunityBio, and Pfizer/BioNTech* reached Fill & Finish agreements with South Africa (UNICEF 2022b: Internet). Further, *BioNTech* and Rwanda had agreed upon End-to-End vaccine production with an unknown manufacturer (UNICEF 2022b: Internet).

In February 2022, another milestone occurred that impacted global dynamics and vaccine practises. On 24 February 2022, Russia invaded and attacked Ukraine (CNN 2022: Internet). The conflict in Ukraine has affected the production, agreements,

distribution, and trade of Sputnik V, Sputnik Light, EpiVacCorona, and CoviVac (RAPS 2022: Internet). The conduct of Russia raises suspicion of whether the multiple collaborations, Licensing Deals, Private Purchases, Technology Transfers and agreements that occurred with the Sputnik V vaccine intended to fund Russia's invasion or secure diplomatic support from other states. In 2022 a German manufacturing facility suspended production for the Russian vaccine due to the Ukraine-Russian conflict and sanctions against Russia (UNICEF 2022c: Internet).

However, the other vaccine producers continued manufacturing and purchase agreements. For example, Japan agreed to purchase 75 Million *Pfizer* doses and 70 Million *Moderna* vaccine doses (UNICEF 2022c: Internet). *Moderna* and the UK decided to develop an mRNA Innovation and Technology Center in the UK (UNICEF 2022d: Internet). *Sinovac* and Cambodia's health Ministry agreed to co-develop a new filling factory in Phnom Penh (UNICEF 2022d: Internet). By July 2022, 14.4 billion doses of Covid-19 vaccines had been distributed worldwide, reaching 228 countries (UNICEF 2022d: Internet). During this period, 39 vaccines were given the green light for global use. Nonetheless, *Pfizer/BioNTech, Sinovac, Serum Institute of India, Sinopharm,* and *AstraZeneca* maintained their hold over the worldwide market, commanding a 73% share (UNICEF 2022d: Internet). The table below illustrates the known type of vaccine supply agreements, the year in which most agreements occurred, the regions where most of the vaccine's agreements transpired, vaccine licensing deals and private purchases.

***Table 17**: Vaccine Supply Agreements*

Vaccine	Year	Primary Agreement Types	Dominant Agreement Regions	Licencing Deals	Private Purchases
Comirnaty	2020-2022	Bilateral and Multilateral	EAPR[1], ECAR[2], LACR[3], MENA[4]	China	Taiwan
Spikevax	2020-2022	Bilateral and Multilateral	EAPR, ECAR, LACR, NAR[5]		Lesotho, The Philippines
Vaxzevria/ AstraZeneca	2020-2022	Bilateral and Multilateral	LACR, EAPR, MENA		Lesotho
Covishield (Vaxzevria- India)	2020-2022	Bilateral and Multilateral	LACR, EAPR, MENA	Bangladesh	Iran
Sputnik V	2020-2022	Bilateral	ECAR, LACR, MENA	Mexico, Uzbekistan, Egypt	Mongolia, Moldova, Israel, Lebanon, Nepal, Pakistan
CoronaVac	2020-2022	Bilateral and Multilateral	EAPR, ECAR, LACR, ESAR[6]	Ukraine	Singapore, Colombia
BBIBP-CorV (Sinopharm)	2020-2022	Bilateral	LACR, ECAR, EAPR, ESAR	Malaysia	
Convidecia	2020-2021	Bilateral	LACR,SAR[7], EAPR		Pakistan
ZF2001/Zifivax	2021	Bilateral	ECAR	Malaysia	
Covaxin	2021	Bilateral	SAR, ESAR, LACR		Brazil
Nuvaxovid	2020-2022	Bilateral and Multilateral	EAPR, ECAR, NAR, MENA		
VLA2001	2022	Bilateral and Multilateral	ECAR, MENA		
Sputnik Light	2021	Bilateral	ECAR, EAPR, MENA		
Ad26.COV2.S (Janssen)	2020-2021	Bilateral and Multilateral	EAPR, ECAR, LACR		
EpiVacCorona	2020-2021	Primarily utilised for Russian immunisation			
CoviVac	2021	Single Bilateral Deal with Belarus			
Corbevax	2022	Single Bilateral Deal with India			

***Source**: (UNICEF 2022g: Internet)*

The table shows the Comirnaty, Spikevax, Vaxzevria, Covishield, CoronaVac, Nuvaxovid, VLA2001, and Ad26.COV2.S vaccines primarily had Multilateral and Bilateral agreement types. The Sputnik V, BBIBP-CorV, Convidecia, ZF2001, Covaxin, and Sputnik Light vaccines mainly participated in Bilateral purchase agreements. Further, the CoviVac and Corbevax vaccines had single bilateral agreements, while

[1] East Asia and Pacific Region (UNICEF 2023: Internet)
[2] Europe and Central Asian Region (UNICEF 2023: Internet)
[3] Latin America and Caribbean Region (UNICEF 2023: Internet)
[4] Middle East and North African Region (UNICEF 2023: Internet)
[5] North American Region (UNICEF 2023: Internet)
[6] Eastern and Southern Africa Region (UNICEF 2023: Internet)
[7] South Asian Region (UNICEF 2023: Internet)

EpiVacCorona had no known purchase agreements. The few agreements that occurred in West and Central Africa were all Bilateral purchase agreements (UNICEF 2022g: Internet). Licencing Deals and Private Purchases between states and developers could indicate diplomatic relations. Vaccine donation practises among states, developers, and global initiatives serve as a tangible measure of diplomatic ties. The global undertaking, COVAX, showcases the efficacy of multilateral vaccine diplomacy and global health strategies.

3.7. The Global Initiative: COVAX

COVAX is the most significant multilateral initiative utilising vaccine diplomacy and acted as a soft power platform for states during the pandemic. In the wake of the Covid-19 crisis, global leaders called for a multilateral and collaborative solution to this global health catastrophe which led to the formation of the “Access to Covid-19 Tools (ACT) Accelerator” by April 2020 (World Health Organization 2020: 5). ACT Accelerator is a global partnership by governments, scientists, international institutions, private and multilateral members that seek to progress the expansion, manufacture, and equal access to Covid-19 treatments, tests, and vaccines (World Health Organization 2021a: Internet). COVAX, the immunisation segment of the ACT Accelerator is a collaborative effort managed by entities such as CEPI, WHO, Gavi the Vaccine Alliance, various governments and universities, and pharmaceutical companies including Inovio, AstraZeneca, Novavax, CureVac, Institut Pasteur, the University of Oxford, Merck, Themis, Moderna, the University of Queensland, Clover Biopharmaceuticals, and the University of Hong Kong (RAPS 2022: Internet).

COVAX is a multilateral collaboration of organisational leads (WHO, Gavi, UNICEF, World Bank, Pan American Health Organization PAHO), industry experts, civil society representatives, independent consultants, foundation leaders, academic experts, individual doctors, medicine agencies (such as the European Medicine Agency, governmental health representatives (such as the national institutes of health USA) and country representatives (World Health Organization 2020:6-20). Five principles of responsible governance guide COVAX (World Health Organization 2020: 27). The principles include transparency and honesty regarding venture capital, actions and progression, timely and effective decision making, good leadership and suitable adherents of advisory groups, equitable decision making with reflection on conflicts of

interests and the successful management of conflicts of interests (World Health Organization 2020: 27). Ghana was the first recipient of 600,000 AstraZeneca vaccines that immunised over 60% of their targeted inhabitants (World Health Organization 2021b: Internet).

COVAX is supported by the Multilateral Leaders Task Force on Covid-19. The Multilateral Leaders Task Force is the collaboration of the International Monetary Fund, WHO, WTO, members of ACT Accelerator and COVAX, AVATT, pharmaceutical companies, governments, regional development banks and private companies (Multilateral Leaders Task Force 2021: Internet). The Multilateral Leaders Task Force aims to advance the equitable distribution of 'Covid vaccines, therapeutics, and diagnostics' through securing multilateral subsidies and economic agreements, specifically supporting low-income states (Multilateral Leaders Task Force 2021: Internet). The Multilateral Leaders Task Force and COVAX have also partnered with the G20 and called upon these states to vaccinate at least 40% of their populations by the end of 2021 and 60% by the first half of 2022 (Multilateral Leaders Task Force on COVID-19 2022: Internet). During the critical phase of the pandemic, COVAX, organisations, multinational corporations, experts, and country leaders utilised multilateral assemblies, summits, and conferences to share information, expertise and funding to hinder the global pandemic. For example, On 18-19 May 2020, the 73rd World Health Assembly was held virtually, followed by the Global Vaccine Summit (World Health Organization 2022h: Internet). The Global Health Summit took place on 21 May 2021 in Rome, bringing together the leaders of the G20, regional and international organisations (European Union 2022: Internet). At this summit, the participants and leaders of the G20 agreed to the Rome Declaration and reaffirmed their support of ACT-A, COVAX, COVAX AMC and equitable access to Covid-19 vaccines (European Union 2022: Internet).

At the 2020 Global Vaccine Summit hosted by the UK, the initiative known as COVAX was introduced. Its objective was to ensure equitable access to reliable vaccines worldwide and accelerate the development and production of Covid-19 vaccines (Gavi 2022b: Internet). In 2020, COVAX's objective was to secure at least 2 billion doses of Covid-19 vaccines, aiming to distribute them to the most vulnerable countries by the end of 2021, thereby seeking to end the first critical phase of the pandemic (World

Health Organization 2020: 5). Gavi launched the COVAX AMC 2020 which is the financing instrument of COVAX and assists 92 low- and middle-income economies in the participation of COVAX, enabling equal opportunities for vulnerable states to access safe Covid-19 vaccines funded by donors (Gavi 2022a: Internet). For COVAX, 2020 was a year of financial pressure. COVAX AMC's funding began with the 2020 Global Vaccine Summit, where participants pledged $8,8 billion; However, by the last month of the year, COVAX had only collected $400 million (Gavi 2022b: 16, 25).

The beginning of 2021 marked a significant financial milestone for COVAX, as the initiative secured funding from multiple sources. This included contributions from the G7 Summit in February, an investment event hosted by the USA in April, the Global Health Summit in May organised by the European Commission and Italy, and the Gavi COVAX AMC Summit hosted by Japan in June (Gavi 2022b: 16). In July 2021, COVAX and partners launched the COVAX Marketplace. On this multilateral technological platform, suppliers, governments, citizens and involved parties can track vaccines, stock, prices and suppliers of vaccines to increase global vaccine supply (World Health Organization 2021c: 12). November 2021, the COVAX Humanitarian Buffer was launched that ensures doses are delivered to people living in countries with a humanitarian concern or displaced people in conflict areas such as Iran and Afghanistan (Gavi 2022b: 28,32). As the pandemic evolved, COVAX formed additional regional and multilateral collaborations, such as the 'African Vaccine Acquisition Task Team' and PAHO (Gavi 2022b: 35). In addition, the Gavi COVAX dose-sharing initiative was set up, with France being the first to donate doses to the program (Gavi 2022b: 37). States that had acquired vaccines by agreements or had a surplus supply used dose-sharing to contribute to COVAX. Manufacturers such as AstraZeneca, Johnson & Johnson, Moderna and Pfizer-BioNTech, and states from the G7 and G20 agreed to dose-sharing principles (Gavi 2022b: 37).

COVAX initially targeted 950 million doses to supply to AMC countries by the end of 2021 (Gavi 2022b: 15). Despite encountering a series of hurdles such as export bans, production issues, deferred regulatory approvals, supply deficits, competitive pressure for vaccines, funding shortfalls, and logistical impediments, COVAX accomplished its initial milestone by the close of 2021. This milestone was reached when COVAX AMC gathered $10 billion and secured over 1.2 billion Covid-19 doses (Gavi 2022b: 90). In

addition, COVAX AMC received donations and funding from governments, foundations, corporations, and organisations (Gavi 2022b: 90-95). For example, in 2021, China contributed $100 million to COVAX AMC, while the UK contributed $731 million and the USA $4,000 million (Gavi 2022b: 90-92).

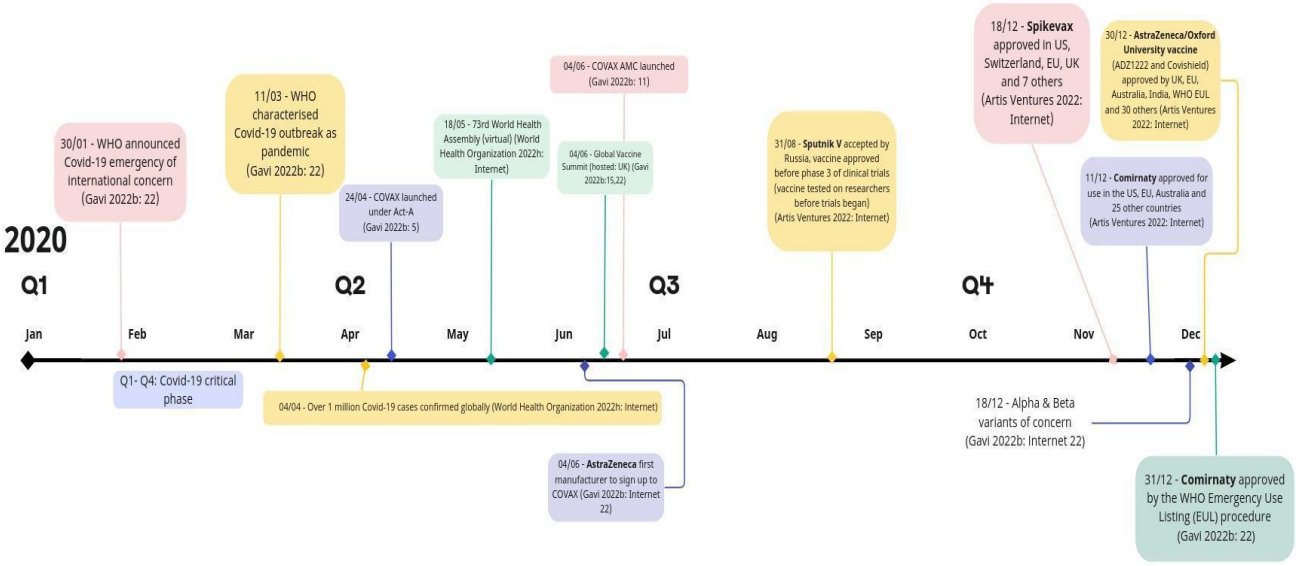
Since January 2022, Gavi (2022b: 5-6) indicates that COVAX has supplied a significant portion of the Covid-19 vaccine doses in various income groups: 82% in Lower-Income-Countries, 40% in Lower-Income-Countries when India is left out, and 12% in Upper-Middle-Income-Countries excluding China. At the start of 2022, the initiative had delivered about 1 billion doses of Covid-19 vaccines to 144 countries (Gavi 2022b: 5-6). In the given period, COVAX delivered a significant number of vaccine doses to various regions: 289 million to Sub-Saharan Africa, 252 million to SAR[8], 223 million to the EAPR[9], 112 million to MENA[10], 88 million to LACR[11], 33 million to ECAR[12], and 1 million to NAR[13] (Gavi 2022b: 85). COVAX's current 2022 objectives are to ensure the complete vaccination of adolescents, to support AMC-92 countries to safeguard their high-risk populations and to focus vaccine delivery on 34 high-risk countries (World Health Organization 2022f: 1). COVAX managed to be the diplomatic link between "donating and receiving" governments, vaccine developers, multilateral and regional initiatives. The COVAX initiative utilised soft power strategies by associating vaccine donations with vulnerable groups with the essence of legitimacy. Furthermore, COVAX exemplifies what could be achieved given the existence of a comprehensive global health system.

3.8. Covid-19 and Vaccine Timeline

The timeline of events is vital to comprehend and operationalize the context of the pandemic and the evolution of vaccines. For example, the progression of the virus and its variants impacted the advancement, manufacturing, production, and supply of Covid vaccines.

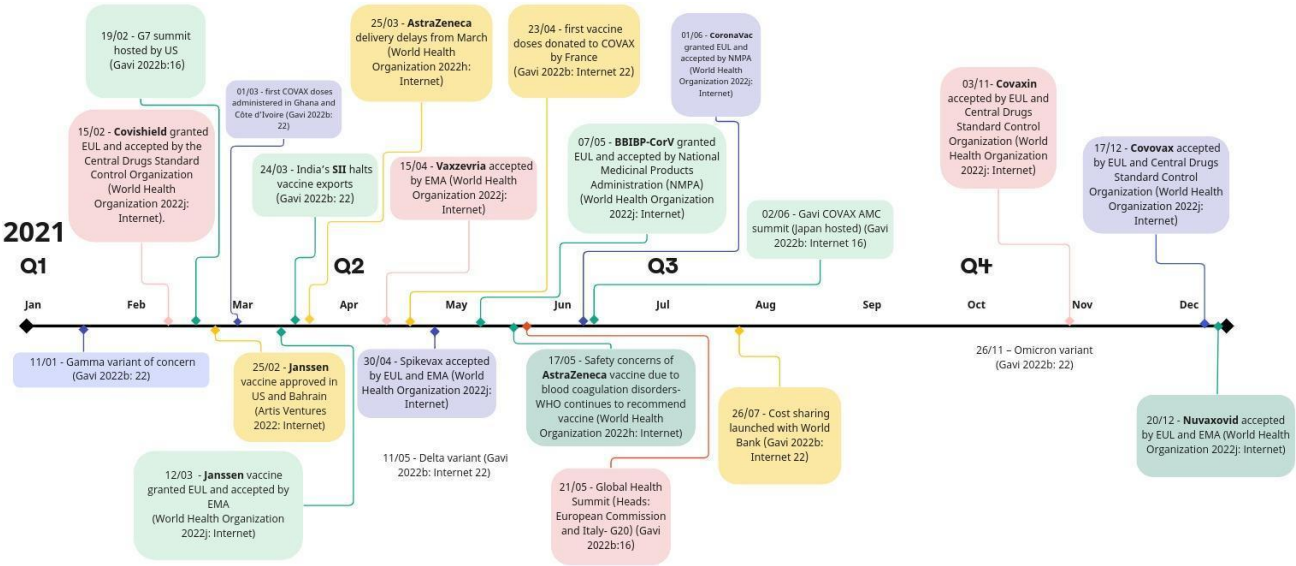
[8] Southern Asian Region (UNICEF 2023: Internet)
[9] East Asia and Pacific Region (UNICEF 2023: Internet)
[10] Middle East and North Africa (UNICEF 2023: Internet)
[11] Latin America and the Caribbean Region (UNICEF 2023: Internet)
[12] Europe and Central Asia Region (UNICEF 2023: Internet)
[13] North American Region (UNICEF 2023: Internet)

***Timeline 1**: 2020 Covid-19 Timeline*



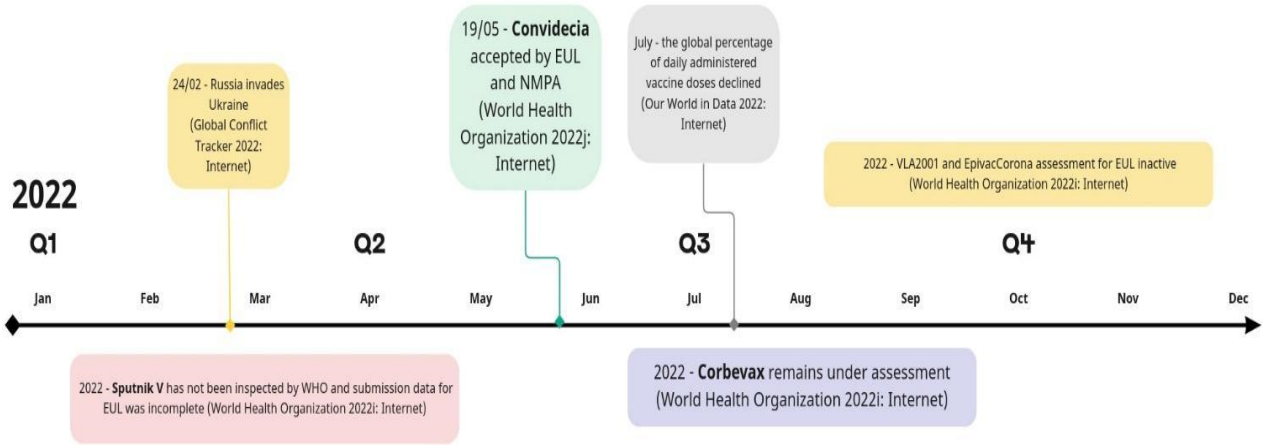
***Source**: Authors Compilation*

***Timeline 2**: 2021 Covid-19 Timeline*



***Source**: Authors Compilation*

***Timeline 3**: 2022 Covid-19 Timeline*



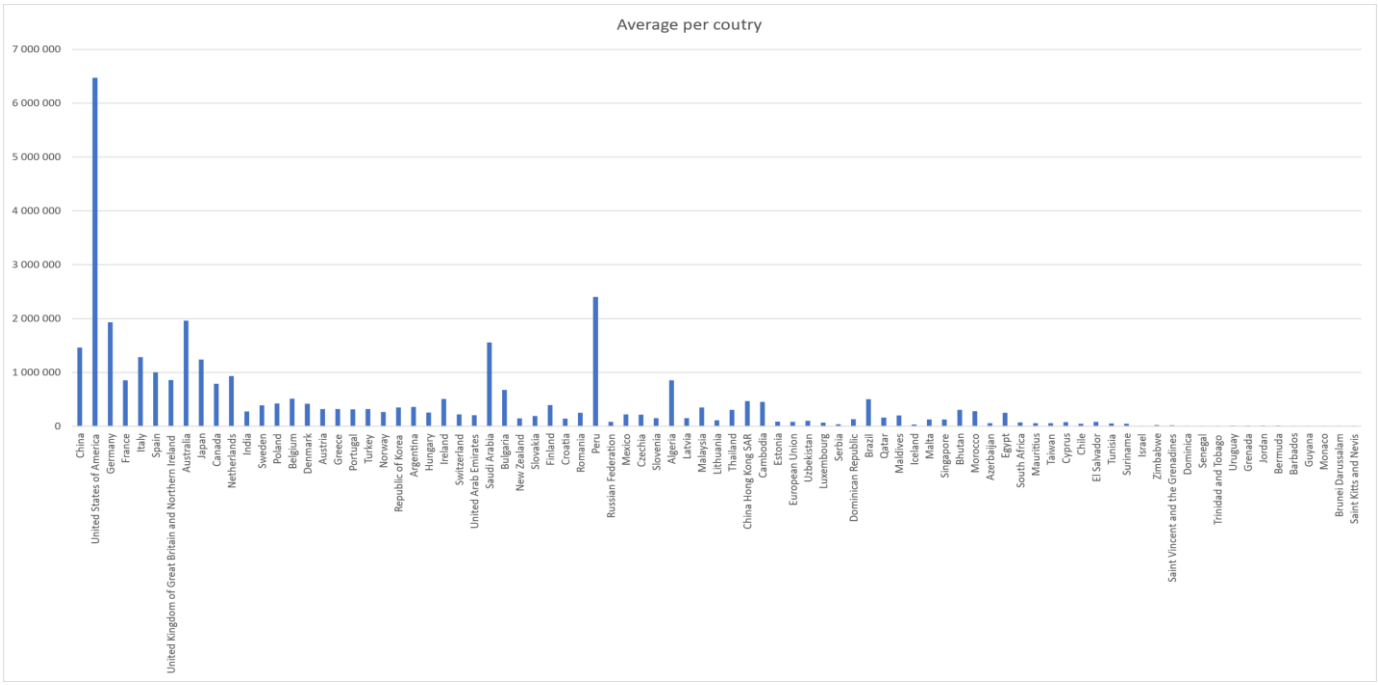
***Source:** Authors Compilation*

The year 2020 marked a pivotal phase in the Covid-19 crisis, witnessing the establishment of COVAX and the approval of vaccines such as Spikevax, Comirnaty, and AstraZeneca by the WHO and national health authorities. In 2021, vaccine developers faced mounting pressure, leading to delivery and export delays for some. However, by 2022, the intensity and urgency of the situation began to fade. The following section will present an overview of vaccine donations, highlighting their potential role as indicators of multilateral vaccine diplomacy practices.

3.9. Vaccine Donations: An Overview

From April 2021, across all donors, the majority of vaccine donations were gifted to Lower-Middle-Income Countries (64,42%), followed by Upper-Middle-Income countries (15,92%), Low-Income-Countries (11,88%) and lastly High-Income-Countries (7,78%) (UNICEF 2021a: Internet).

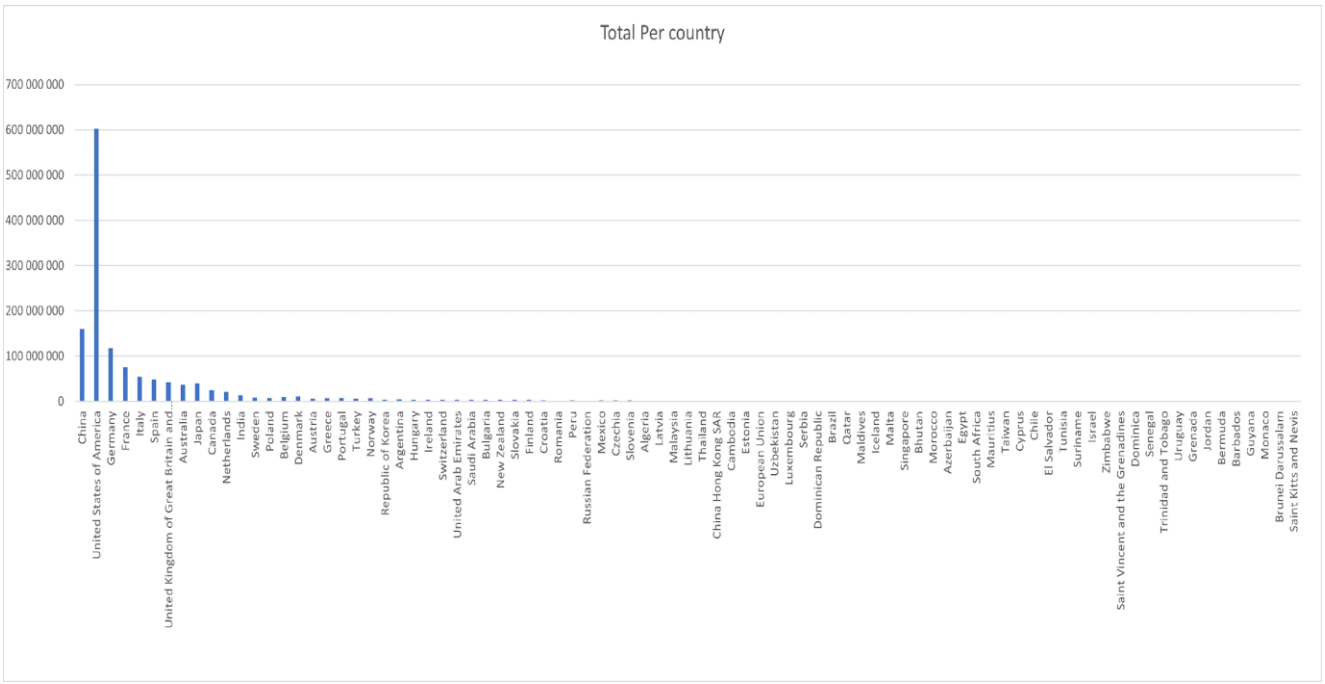
***Figure 17**: Average delivered vaccine donations per country.*



***Source**: (UNICEF 2022h: Internet).*

Figure 17 visually demonstrates the average delivered vaccine donations per country. This figure illustrates that although this study focuses on China, Russia, India, the UK, and the USA, multiple countries donated vaccines, perhaps representing a form of global health solidarity.

***Figure 18**: Total vaccine doses delivered per country.*



***Source**: (UNICEF 2022h: Internet).*

The highest average of delivered vaccine donations came from a group of countries which includes China, the USA, Germany, France, Italy, Spain, the UK, Australia, Japan, Canada, the Netherlands, India, Sweden, Poland, and Belgium. The practice of multilateral vaccine donations could be perceived as a soft power strategy. A detailed analysis of the multilateral vaccine diplomacy practises of China, Russia, India, the UK, and the USA will be discussed in chapter four.

3.10. Conclusion

This chapter confirmed the multilateral nature and processes of Covid-19 vaccines and related certain vaccines to the governments of China, Russia, India, the UK, and the USA. As identified in Chapter one, these states were not just pivotal contributors to vaccine manufacturing; they additionally played a significant role in the development phase of Covid-19 vaccine production. The advancement and significant contribution to vaccines exemplify the prioritisation of national interests in immunisation. This section verified that Covid-19 vaccines are often co-developed by governments and companies in various locations through different manufacturing and production processes. Vaccine prices remain fluid, and it's uncertain whether they are under regulatory control. Section 3.2. observed vaccine approval and popularity trends demonstrating AstraZeneca, Moderna, Pfizer BioNTech, and Sinopharm's vaccines remained the most popular from 2021-2022. However, in 2022 newer and alternative vaccine manufacturers such as Novavax increased in popularity. The chapter further reported available vaccine prices and irregularities. The information suggests that vaccine price variations between countries indicate a lack of a global pricing standard to ensure fair and equitable purchases and agreements. The variation in prices and sale trends could indicate state national interests and diplomatic relationships; however, multiple variables can impact vaccine prices. Although this section touches on these indicators, the study further focuses on the verifiable indicator of vaccine donations that can be associated with diplomatic practices. Under vaccine production capacity and location, section 3.5 demonstrated a trend towards Contract Development and Manufacturing Organization's manufacturing and Fill-Finish production types since most vaccine companies used these processes.

Additionally, no correlation was found between a particular process, location, or government, as state-developed vaccines used different manufacturing and production

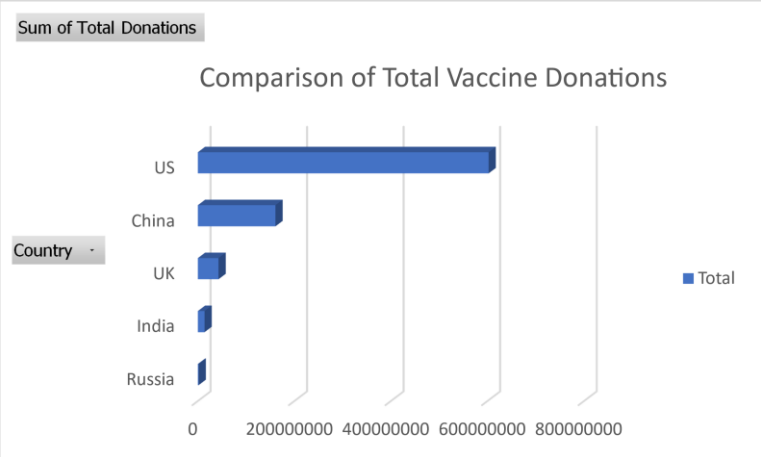
types. The chapter moreover discussed vaccine supply agreements that reiterated the multilateral nature of the production, development, manufacturing, and supply of Covid-19 vaccines and touched on significant milestones that impacted global supply. The following section gave an overview of global vaccine donations, the Covid-19 timeline, and the global health initiative COVAX. To foster a better grasp of this information, the next chapter details the conceptual framework that guides our secondary data analysis on China, Russia, India, the UK, and the USA.

Chapter Four: China, Russia, India, the UK and the USA: Donations, Evaluations and Findings

4.1. Introduction

Section 3.9, figure 17[14] concluded that China, US, and UK donated some of the highest average delivered vaccine donations. This chapter aims to apply the conceptual framework to secondary data of vaccine donations from China, Russia, India, the UK, and the USA; to determine what patterns of multilateral vaccine diplomacy were practised by these states to adapt to the challenge of Covid-19 from August 2020- July 2022. This chapter further intends to determine whether these states practised multilateral vaccine diplomacy to achieve outcomes in national interest and how these practices evolved. The figure below compares total vaccine donations between the USA, the UK, Russia, India and China.

Figure 19: *Comparison of Total Vaccine Donations between the US, UK, Russia, India, and China*



Source: *(UNICEF 2022h: Internet).*

The data from UNICEF (2022h: Internet) reveals each country's total contributions of vaccines: The US leads with 602,329,550 donations, followed by China with 160,726,345. The UK has donated 42,735,796 vaccines, while India's contributions amount to 13,824,000 (UNICEF 2022h: Internet). Russia, with the fewest contributions, has donated a total of 1,637,500 vaccines (UNICEF 2022h: Internet). These figures for vaccine donations might well provide insights into the nature of diplomatic relationships, the exercise of soft power, and the dynamics of multilateral

[14] Pages 93-94

engagements. It's worth noting that the states mentioned above may have engaged in various Covid-19 foreign aid practices that align with their vaccine donation intentions. For instance, in March 2020, Russia provided Italy with medical supplies, personnel, and soldiers (BBC News 2020: Internet). These actions, occurring before vaccinations were available, might signal Russia's intent to foster a positive relationship with Italy or to undermine the North Atlantic Treaty Organization (NATO), particularly in the context of subsequent events in Ukraine. While such foreign aid practices could be interpreted as indicators of diplomatic relations, exploring this idea falls outside the scope of the current study. The next section examines the USA, the UK, Russia, India and China's diplomatic strategies and initiatives, delves into the interactions between donors and recipients, and explores their cooperative efforts within the multilateral context.

4.2. China Vaccine Donation Practises

As discussed in chapter three, China has direct associations with the Comirnaty, CoronaVac, BBIBP-CorV, ZF2001 and Convidecia vaccines. China's role in developing and funding multiple Covid-19 vaccines is well-established, with a notable emphasis on an internal approach to their development. Except for Comirnaty, these vaccines predominantly relied on national and domestic pharmaceutical institutions rather than pursuing multilateral production. China's national interest strongly prioritised domestic immunisation while fostering advancements in skills and technology within its borders. In the context of this research, we might presume that national interests are indicative of public health needs and well-being, implying responsible governance strategies. China used a balanced strategy as they adapted their initial 'internal approach' during the manufacturing phase of multiple vaccines. It should be noted that Fosun Pharma was the exception which participated in multilateral relations and vaccine science diplomacy right from the development phase of the Comirnaty vaccine.

China's unilateral practices evolved into multilateral practices after the development of vaccines through supply, manufacturing, purchase agreements and donations. For instance, the Russian Direct Investment Fund collaborated with three companies, namely Shenzhen Yuanxing Gene-tech, TopRidge Pharma (Hong Kong) Limited, and Hualan Biological Engineering Inc., for the production of the Sputnik V vaccine in China (RAPS 2022: Internet). Shenzhen Yuanxing Gene-tech Co., Ltd. and TopRidge

Pharma are private companies based in China (Yuanxing Gene 2022: Internet; Hong Kong Business Directory 2022: Internet). However, Hualan Bio, also a private company, is utilised nationally by Chinese authorities and has an alliance with the China Academy of Sciences (China.Cn 2022: Internet). Moreover, Sinovac and São Paulo partnered to manufacture the CoronaVac vaccine at the Butantan Institute and its manufacturing facility (RAPS 2022: Internet; São Paulo Government 2022: Internet).

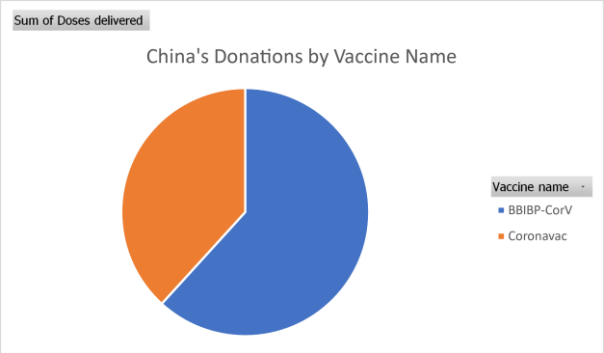
Additionally, within Morocco, Sinopharm established a fill & finish agreement for vaccine production with Sothema, a pharmaceutical subsidiary under West Africa Pharma (UNICEF 2022b: Internet; Sothema 2022: Internet). China further collaborated with the multilateral COVAX initiative by donating vaccines. Our World in Data (2022: Internet) maintains that Hong Kong donated a substantial amount[15] of vaccines to the multilateral initiative COVAX. The practices employed by China have proven valuable for their domestic realm by enhancing citizens' health, national skill procurement, technological development and fostering alternative multilateral and bilateral diplomatic connections. Contributions to global initiatives may be viewed as legitimate practises and displays of soft power, subject to individual interpretation. It's evident that China's practices were driven by a domestic interest in immunisation and involved multilateral relationships. The following section evaluates China's primary choices of vaccines for donations and investigates whether the recipient countries were selected based on existing diplomatic ties.

4.2.1. Data and Evaluation of China's Vaccine Donations

Figure 20 depicts the vaccines that China predominantly selected for donation purposes.

[15] At the time of the study, Hong Kong donated about 6.60 million vaccine doses (Our World in Data 2022: Internet).

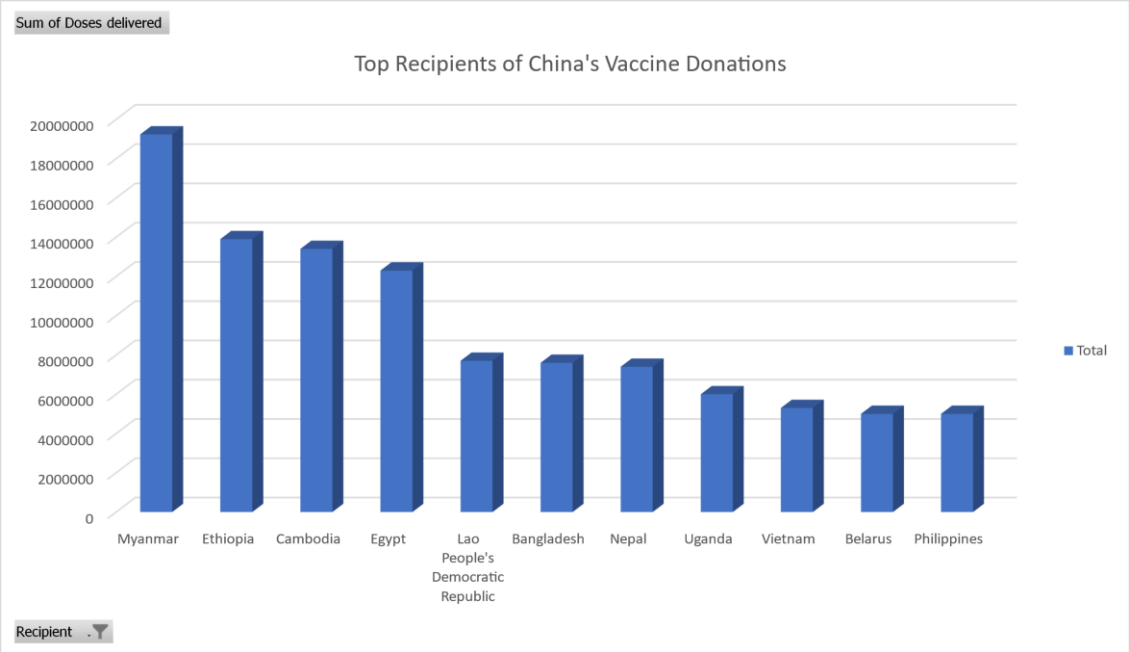
Figure 20: *China's Donations by Vaccine Name*



Source: *(UNICEF 2022h: Internet).*

China primarily donated its national BBIBP-CorV vaccine, implying that other[16] vaccines might have been assigned for national immunisation or sale agreements. The information in Figure 20 might further suggest that the BBIBP-CorV (Sinopharm) and Coronavac vaccines demonstrated greater trial results or were available in surplus, thus donated to assist other states. The next figure depicts the leading recipients of China's vaccine donations.

Figure 21: *Top Recipients of China's Vaccine Donations and Recipients*



Source: *(UNICEF 2022h: Internet).*

[16] The Comirnaty, ZF2001 and Convidecia vaccines.

Due to the restricted nature of this dissertation, the diplomatic relationship of the four states that received the most donations, Myanmar, Ethiopia, Cambodia and Egypt, will be examined.

The China-Myanmar Diplomatic Relationship

The diplomatic relationship between Myanmar and China remains ambiguous. The continual political insecurity and ethnic tensions within Myanmar complicate the relationship between China and Myanmar. Myanmar has been plagued by deep-rooted tensions between Muslim and Buddhist nationalist groups (Global Conflict Tracker 2023a: Internet). In 2016 the National League for Democracy party secured victory in the national elections, which was quickly overshadowed by ensuing ethnic tensions, escalating to further violence in 2017 (Global Conflict Tracker 2023a: Internet). In 2021 a military coup removed the government from power, triggering extensive insecurity and economic downfall (United Nations Human Rights Office of the High Commissioner 2023: Internet). It can be inferred that China and Myanmar maintained some form of diplomatic relations, as evidenced by the presence of the People's Republic of China's active embassy in Myanmar (Embassy of the People's Republic of China in Myanmar 2023: Internet). China's Embassy in Myanmar published the Speech of Union Minister U Kyaw Tint Swe at the Second China-Myanmar Pauk Phaw Friendship Day in 2017. During this speech, Union Minister U Kyaw Tint Swe reiterated the mutual diplomatic, cultural, economic and geographical relationship between China and Myanmar (Embassy of the People's Republic of China in Myanmar 2023: Internet). Peng (2021: 189-190) maintains that Myanmar's approach towards China entails enhancing bilateral relations with China while taking actions to evade dependency, such as expanding relations with other states. Recent diplomatic ties can be illustrated by the opening of a new maritime trade route in 2022, the Chinese "Beibu Gulf Port-RCEP", which anchors in Myanmar's Yangon Port (Global New Light of Myanmar 2023a: Internet).

The Global New Light of Myanmar illustrates further evidence; the country's daily newspaper published a piece on Myanmar's greatest medicinal exporter, China, in 2022 (Global New Light of Myanmar 2023b: Internet). Currently, two years post-coup, Myanmar remains entangled in conflicts, civil war, and persistent violations of human rights (United Nations Human Rights Office of the High Commissioner 2023: Internet).

Given the ambiguity surrounding China-Myanmar relations, this study is limited to speculation about China's actions. Perhaps China used vaccine diplomacy as an instrument with Myanmar to enhance diplomatic relations and soft power practices or attain outcomes in future national interests. The vaccine diplomacy practises between China and Myanmar took a bilateral form, in contrast to the multilateral vaccine diplomacy employed with COVAX.

The China-Ethiopia Diplomatic Relationship

As illustrated by the Chinese Embassy of Ethiopia's webpage, the two states have had a bilateral relationship since 2008, characterised by diplomatic engagements, military cooperation, infrastructure and technological advancements, and economic partnerships (Embassy of the People's Republic of China to the Federal Democratic Republic of Ethiopia 2023a: Internet). For example, in 2017, China and Ethiopia pledged to enhance the "Belt and Road initiative" (Embassy of the People's Republic of China to the Federal Democratic Republic of Ethiopia 2023b: Internet). This 2013 proposal aimed to establish greater connectivity between Asia and Africa beyond the traditional silk trade routes (Embassy of the People's Republic of China to the Federal Democratic Republic of Ethiopia 2023b: Internet). Ethiopia's Ministry of Foreign Affairs provides a comprehensive summary of the China-Ethiopia relationship, which dates back to 1970 (The Federal Democratic Republic of Ethiopia, Ministry of Foreign Affairs 2023: Internet). It underscores that the bilateral alliance has notably intensified since 2017. The two countries have concurred on numerous mutual agreements and protocols, such as the Trade Protocol of 1988 and the Memorandum of Understanding on air services signed in 2013 (The Federal Democratic Republic of Ethiopia, Ministry of Foreign Affairs 2023: Internet). Furthermore, China and Ethiopia collaborate in the multilateral "Forum on China-Africa Cooperation (FOCAC)" (The Federal Democratic Republic of Ethiopia, Ministry of Foreign Affairs 2023: Internet). The strong Ethio-China diplomatic ties suggest that China may have leveraged bilateral vaccine diplomacy with Ethiopia to advance diplomatic relations, and soft power practices, improve mutual multilateral alliances, or attain outcomes in future strategic interests such as establishing trade routes within Africa.

The China-Cambodia Diplomatic Relationship

Murg (2022: 128) proposes that China and Vietnam compete to establish diplomatic dominance within Cambodia. Sino-Cambodian affairs are rooted in financial aid, infrastructure development, bilateral commerce, and military collaboration, often resulting in Cambodia's reliance on China (Murg 2022: 128-129). Po & Sims (2022: 37) assert that China's interest in the Cambodian Kingdom can be attributed to its strategic geographical position, influence within multilateral alliances, economic proliferation, and support for initiatives such as the One China Policy and Belt and Road Initiative. Po & Sims (2022: 50) also assert that China routinely intervenes in Cambodia's internal affairs to protect against transformations in political and democratic landscapes. In February 2023, the Kingdom of Cambodia and China reaffirmed their robust ties, asserting that their bilateral relations will continue to thrive, even amidst significant global shifts (Kingdom of Cambodia, Ministry of Foreign Affairs and International Cooperation 2023: Internet). Therefore, China utilised bilateral vaccine diplomacy as an instrument with Cambodia to enhance diplomatic relations, and soft power practises, improve mutual multilateral alliances, or attain outcomes in future national interest.

The China-Egypt Diplomatic Relationship

In 2021, China and Egypt commended their bilateral diplomacy over the past 65 years marked by economic, educational, medical collaboration and development programs such as the ‘Belt and Road Initiative’ (DNE News 2023a: Internet). According to Pannell (2008: 717) China has sustained favourable bilateral relations with Egypt for economic expansion, natural reserves, and access to the Suez Canal. China and Egypt have strong ties built on trade and investment collaborations such as the “China-Egypt Suez Economic and Trade Cooperation Zone” (Economic and Commercial Section of the Embassy of the People’s Republic of China in the Arab Republic of Egypt 2023: Internet). In the context of vaccine science diplomacy, Egypt, Sinovac Biotech Ltd and VACSERA had a manufacturing and Technology Transfer agreement in 2021 (UNICEF 2021a: Internet, DNE 2023b: Internet). Evidence reveals that China used vaccine diplomacy and vaccine science diplomacy as an instrument with Egypt to progress diplomatic relations, and soft power practices, improve mutual multilateral

alliances, or attain outcomes in the national interest. The vaccine diplomacy strategies implemented between China and Egypt manifested in bilateral and multilateral forms.

To conclude, from August 2020 to July 2022, China used bilateral and multilateral vaccine diplomacy to adapt to the challenge of Covid-19. These bilateral and multilateral vaccine diplomacy strategies might yield benefits for future prioritised national interests or generate soft power. China is particularly focused on achieving results in its national interests within Southeast Asia and Africa, possibly to gain influence in both regions. Nevertheless, by primarily focusing on the unilateral development of national vaccines (with the exception of Comirnaty), China has ensured its national interests in public immunisation and local development, thus acquiring the means to aid its diplomatic allies.

4.3. Russia's Vaccine Donation Practises

As discussed in chapter three, the Russian Federation was directly involved with the Sputnik V, Sputnik Light, EpiVacCorona and CoviVac vaccines. The intent behind Russia's vaccine diplomacy remains ambiguous. Russia's explicit contribution to multiple vaccines might signify their national focus on public vaccination. For example, EpiVacCorona had mostly been utilised for Russian immunisation, although in March 2021, Venezuela agreed to produce the vaccine and partake in the vaccine trials (Venezuelananalysis.com 2021: Internet). Promoting the health of citizens by keeping them disease-free typically signifies effective governance practices. However, in 2021, Russia approved the use of CoviVac while trials still had to be finalised (RAPS 2022: Internet; Reuters 2021: Internet). This move arguably exhibits less effective governance and a potential disregard for the welfare of its citizens.

Russia further manifested its multilateral vaccine diplomacy by engaging in multiple production agreements. Russia strategically employed multilateral vaccine diplomacy and soft power by partnering with 14 countries[17] to produce the vaccine globally (Sputnik V 2022: Internet). In addition, Russia enacted multilateral vaccine science diplomacy by undertaking technology transfers, supply and production agreements. For example, Russia secured supply and production agreements with GL Pharma (500

[17] India, China, Turkey, Vietnam, Brazil, Italy, Iran, Mexico, Kazakhstan, Serbia, the Republic of Belarus, Egypt, Argentina and South Korea (Sputnik V 2022: Internet).

million doses), China's TopRidge Pharma (100 million doses per year), Panacea Biotec (100 million doses per year) and R Pharm (8-10 million doses monthly) (UNICEF 2021a: Internet). The intent behind Russia's vaccine diplomacy remains ambiguous. Moreover, it remains unclear whether Russia's primary pursuit was domestic immunisation, the expansion of its diplomatic ties, or an emphasis on mass vaccine production.

Similarly to China, Russia's practices evolved from unilateral vaccine development, fostering advancements in skills research and technology within national frontiers. As mentioned in section 1.2, Sputnik V was the first Covid-19 vaccine registered for global use in August 2020. As detailed in Section 3.6, Russia began to extend its multilateral manufacturing agreements across diverse locations from 2021 onwards. For example, Russia had Fill & Finish production agreements with Alegria's Groupe Saidal and Fill & Finish and End-to-End agreements with Egypt (UNICEF 2022b: Internet; Pharma Boardroom 2018: Internet). Sputnik V held licencing deals with Mexico, Uzbekistan and Egypt; and Private Purchases from Mongolia, Moldova, Israel, Lebanon, Nepal and Pakistan, as indicated in Table 17[18]. Russia's multilateral vaccine diplomacy and vaccine science diplomacy practices halted in February 2022 after Russia invaded and attacked Ukraine (CNN 2022: Internet). The conflict in Ukraine affected the production, deals, allocation, and trade of Sputnik V, Sputnik Light, EpiVacCorona, and CoviVac (RAPS 2022: Internet). The undertakings of Russia provoked distrust about whether their multiple collaborations, Licensing Deals, Private Purchases, Technology Transfers and agreements related to the Sputnik V vaccine were intended to fund Russia's invasion or secure diplomatic support from other states.

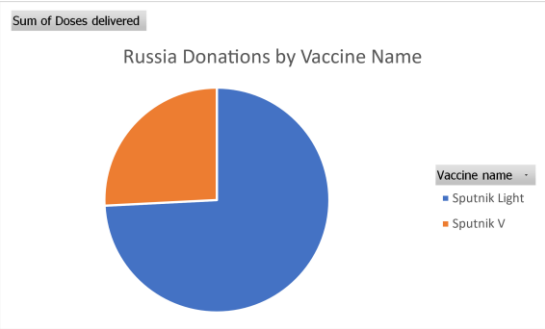
There is no indication that Russia donated doses to the global initiative COVAX (Our World in Data 2022: Internet, Multilateral Leaders Task Force on Covid-19 2023: Internet). The disengagement between COVAX and Russia seems reasonable, given that Russia's vaccines had not received deployment approval from the WHO (World Health Organization 2022i: Internet). The following section evaluates the primary selections of vaccines for donations by Russia and examines whether the recipient countries were selected based on existing diplomatic ties.

[18] Page 86-88

4.3.1. Data and Evaluation of Russia's Vaccine Donations

Figure 22 reveals the vaccines that Russia predominantly selected for donation purposes.

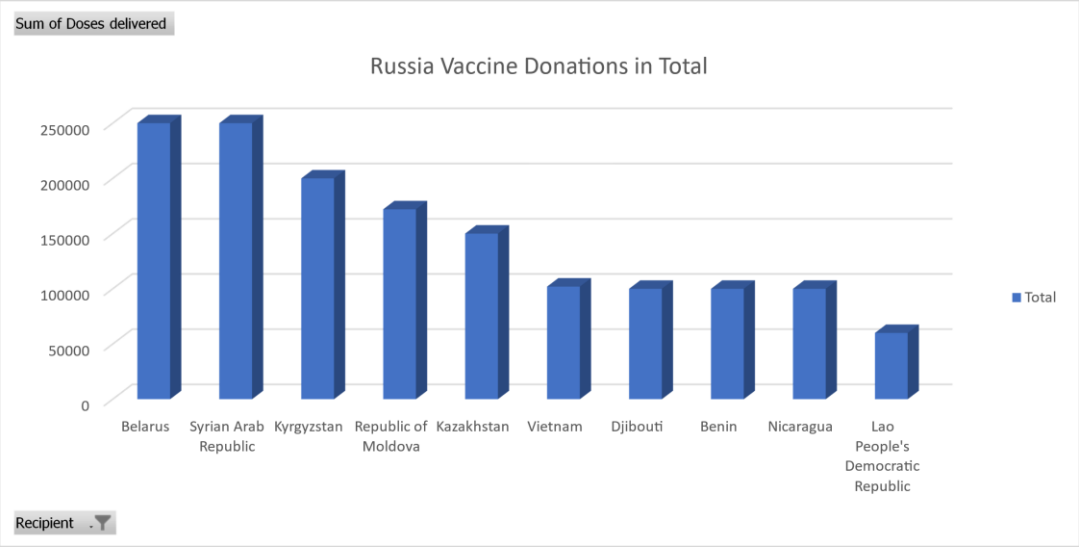
Figure 22: *Russia Donations by Vaccine Name*



Source: *(UNICEF 2022h: Internet).*

Figure 22 illustrates that Russia primarily donated Sputnik Light and Sputnik V vaccines. As illustrated in Figure 19[19], Russia had the fewest donations among the countries compared, amounting to 1,637,500 donated vaccines (UNICEF 2022h: Internet). The figure below demonstrates the Russian Federation's vaccine donations and recipients in total. The total recipients of Russia's donations are presented, given that Russia contributed to only a select number of recipients.

Figure 23: *Russia Vaccine Donations and Recipients in Total*



[19] Page 96-98

Source: *(UNICEF 2022h: Internet).*

Due to the restricted nature of this dissertation, the diplomatic relationship of the four states that received the most donations, Belarus, the Syrian Arab Republic, Kyrgyzstan and the Republic of Moldova, will be examined.

The Russia-Belarus Diplomatic Relationship

Their recurrent ' Forum of Regions ' illustrates Belarus and Russia's diplomatic ties, where cooperation agreements are discussed (BelTA 2023: Internet). The two countries' economic, military and diplomatic relations have left Belarus reliant on Russia and quarantined from external influence (Ambrosio 2006: 408,426). The two countries have long-standing relations with partnerships and regional agreements such as "the Union State Treaty of 1999" and the "Commonwealth of Independent States" (Press Service of the President of the Republic of Belarus 2023: Internet, Ministry of Foreign Affairs of the Republic of Belarus 2023: Internet). Russia consequently implemented bilateral vaccine diplomacy with Belarus to prolong diplomatic affairs or cultivate a setting conducive to the employment of soft power strategies.

The Russia-Syrian Arab Republic Diplomatic Relationship

Given the presence of a Russian embassy in Syria, one can infer the existence of a diplomatic relationship between the two nations (Embassy of the Russian Federation to the Syrian Arab Republic 2023: Internet). According to Crosston (2014: 95, 101) for an extended period, Syria has been a focus of Russia's national interest and foreign policy strategy, a relationship frequently marked by inconsistency and ambition for power. In November 2022, the Joint Syrian-Russian Governmental Committee held a session which agreed to develop bilateral relations further, representing a diplomatic affiliation (Syrian Arab News Agency 2023: Internet). Therefore, Russia employed bilateral vaccine diplomacy to strengthen relations with Syria. It could also be argued that a form of multilateral vaccine diplomacy transpired, given the involvement of Russian companies in the development process, indicating relations between three or more parties.

The Russia-Kyrgyzstan Diplomatic Relationship

According to Musa Kyzy (2022: 103), Kyrgyzstan has been on Russia's soft power radar since historic times. The bilateral relationship between Russia and Kyrgyzstan has been maintained by historical & cultural ties, commercial collaboration, armed alliances and diplomatic interactions (Musa Kyzy 2022: 114). In 2022 Russia's Mikhail Mishustin[20] met with Akylbek Japarov,[21] who reiterated their intentions to strengthen their diplomatic alliance (The Russian Government 2022: Internet). Therefore, Russia employed bilateral vaccine diplomacy to strengthen relations with Kyrgyzstan or gain soft power to attain outcomes in future national interests.

The Russia-Republic of Moldova Diplomatic Relationship

JOVIĆ-LAZIĆ & KUVEKALOVIĆ-STAMATOVIĆ (2020: 22) maintains that Moldova holds a position of impartiality between relations with Russia and the EU & NATO. Moldova exhibits caution in its close engagements with Russia, a sentiment rooted in Russia's failure to withdraw its 'mediation' armed forces from Moldova following the Transnistrian conflict (JOVIĆ-LAZIĆ & KUVEKALOVIĆ-STAMATOVIĆ 2020: 33,35). Therefore, Russia could pose a security threat to Moldova if diplomatic relations are not carefully maintained (JOVIĆ-LAZIĆ & KUVEKALOVIĆ-STAMATOVIĆ 2020: 46). Meanwhile, Russia seeks to prevent the expansion of the EU and NATO, as these movements are perceived to undermine Russia's regional power and disrupt the traditional East/West divide (JOVIĆ-LAZIĆ & KUVEKALOVIĆ-STAMATOVIĆ 2020: 22). The Republic of Moldova supports this argument; through the Ministry of Foreign Affairs and European Integration's historic partnerships with NATO (Republic of Moldova 2023: Internet). One might propose that Moldova has abandoned their neutrality, as the state recently intensified its defence relationships with NATO due to the threat of the Russian-Ukraine war (Government of Republic of Moldova 2023: Internet). The preliminary information suggests that Russia utilised vaccine diplomacy before the invasion of Ukraine to gain Moldova's diplomatic support or to prohibit further relations with Moldova, the EU and NATO.

[20] Russian Prime Minister Mikhail Mishustin (The Russian Government 2022: Internet).
[21] Chief of Staff of the Presidential Executive Office of Kyrgyzstan Akylbek Japarov (The Russian Government 2022: Internet).

To conclude, from August 2020 to July 2022, Russia used bilateral and multilateral vaccine diplomacy to adapt to the challenge of Covid-19. Russia actively pursued multiple supply agreements, engaged in private market sales, facilitated technological transfers, and entered licensing deals, despite none of its vaccines being approved by the WHO. When this information is considered alongside Russia's invasion of Ukraine, it becomes evident that Russian national interest did not prioritise domestic immunisation but rather focused on diplomatic support, cultivating soft power, and securing long-term objectives such as maintaining regional control. Initiating a war during a global health crisis contradicts the national interests of citizens and implies a strained relationship between the government and its people, as well as a compromised sense of collective morality.

4.4. India's Vaccine Donation Practises

As discussed in chapter three, the Indian government had a direct association with Covaxin and a secondary contribution with Covishield, Covovax, and the Ad26.COV2.S vaccines, since the companies involved in these vaccines fall under India's jurisdiction and market values. India's active participation in developing and financially supporting diverse multilateral vaccines highlights its national commitment to immunisation and the enhancement of multilateral relations, thereby demonstrating responsible governance. The co-development of numerous vaccines between India, Indian corporations, global companies, other states, initiatives and research groups exhibits multilateral vaccine science diplomacy. Section 3.4[22] also demonstrates the diplomatic ties between India and the USA, as evidenced by their collaborative efforts to develop multiple vaccines.

India's practices sustained the multilateral development and manufacturing of Covid-19 vaccines. India is renowned for its robust pharmaceutical industry and impressive biotechnology capabilities, exemplified by industry leaders such as the Serum Institute of India and Biological E. India strategically leveraged this valuable asset to foster multilateral relationships and potentially create circumstances conducive to implementing soft power strategies. In 2021 India's practices further evolved from multilateral interactions and diplomatic aid (such as the Vaccine Maitri program) to a stagnation in international production after a surge in national Covid-19 cases. India

[22] Page 59-76

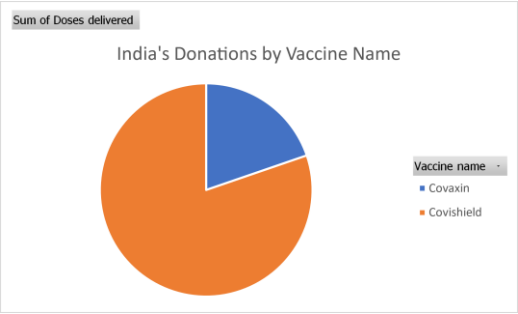
has provided multiple countries with Covaxin and Covishield vaccines, such as Bhutan, Maldives, states in Latin America and Africa (Mol *et al.* 2022: 1118,1121). Basu & Mukherjee (2022: 138) demonstrated how India's charitability led to the neglect of their public's vaccination strategy and the government's incapability to ensure Covid-19 vaccines for their citizens. Section 3.8[23] shows that the Serum Institute of India briefly halted production in March 2021 (Gavi 2022b: 22).

The databases of Our World in Data (2022: Internet) and the Multilateral Leaders Task Force on Covid-19 (2023: Internet) give the impression that India neglected to donate doses to COVAX. However, India sold Covishield doses to COVAX and the African Union at the low price of $3.00 per dose, compared to the Janssen vaccine sold to COVAX at $7.50 per dose (UNICEF 2022e: Internet). The relatively low price offered to COVAX may suggest either a demonstration of soft power or the cost-effectiveness of utilising Covishield technology. The following section evaluates the primary selections of vaccines for donations by India and examines whether the recipient countries were selected based on existing diplomatic ties.

4.4.1. Data and Evaluation of India's Vaccine Donations

Figure 24 reveals the vaccines that India predominantly selected for donation purposes.

Figure 24: *India Donations by Name*

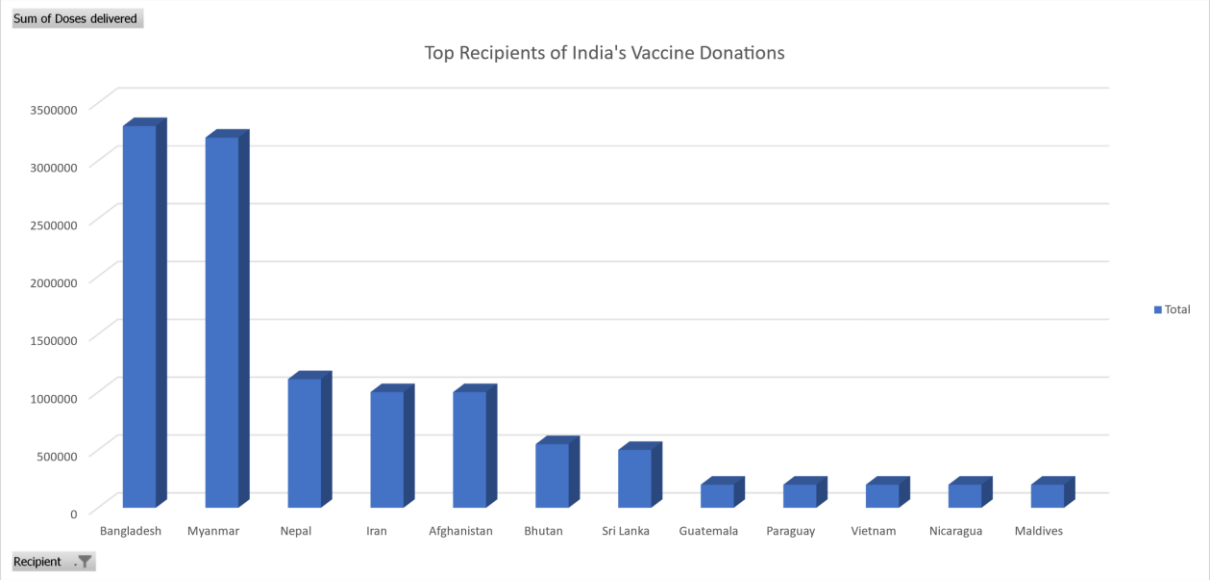


Source: *(UNICEF 2022h: Internet).*

Figure 24 illustrates that India primarily donated Covaxin and Covishield vaccines. The following diagram illustrates the leading recipients of India's vaccine donations.

[23] Page 91-93

***Figure 25**: Top Recipients of India's Vaccine Donations*



***Source:** (UNICEF 2022h: Internet)*

The section below will analyse India's prior diplomatic ties with Bangladesh, Myanmar, Nepal and Iran, the four states that received the most donations.

The India-Bangladesh Diplomatic Relationship

Hossain & Islam (2021: 1) argue that Bangladesh's strategic location (a juxtaposition to Southeast Asia and the Indian Ocean) makes it a diplomatic interest of both China and India. Bangladesh takes advantage of good bilateral relations with both countries, fully aware of the current power struggle between China and India (Hossain & Islam 2021: 1,14). On the one hand, the relationship between India and Bangladesh is founded upon shared history, close geographical proximity, and cooperative ties (Shamsher M. Chowdhury 2020: 192, 197). On the other hand, their relationship has been marked by broken promises, land and border disputes, and periodic instability and violence among various groups (Shamsher M. Chowdhury 2020: 193-195). A recent example is India's inactivity in the 'Rohingya crisis' (Shamsher M. Chowdhury 2020: 197-198). India has extensively documented its bilateral relations with Bangladesh, highlighting evidence of defence partnerships, economic and developmental collaboration, and cultural bonds (Ministry of External Relations, Government of India 2023a: Internet). In September 2022, Prime Minister Shri Narendra Modi of India and Prime Minister H.E. Sheikh Hasina of Bangladesh met in India to reaffirm the bilateral partnership between the two countries (Ministry of External Relations, Government of India 2023b: Internet). India's pursuit of bilateral

vaccine diplomacy may be interpreted as an attempt to reconcile and strengthen diplomatic ties with Bangladesh, simultaneously aiming to regain regional influence in the area.

The India-Myanmar Diplomatic Relationship

Similarly to India-Bangladesh relations, India's ties with Myanmar are characterised by numerous agreements that have seen limited implementation, coupled with challenges such as insurgency in India's Northeast region, unlawful migration, Myanmar's political instability, and inadequate trade volumes (Gottschlich 2015: 144,147,151). Further, Myanmar has become a venue for the competitive influence of India and China, where China has significantly entrenched itself in Myanmar's energy market (Gottschlich 2015: 151, 154). This rivalry is based on Myanmar's strategic geopolitical location (Paribatra 2022: 269). According to (Paribatra 2022: 269-270) Myanmar is plagued by regional uncertainty due to rivalries between large states and domestic instability due to insurgency, ethnic tensions, political insecurity and a weak economy. Additionally, in 2021, a coup led to the overthrow of the National League for Democracy, resulting in political unrest (Paribatra 2022: 275). Despite these developments, India persisted in bolstering relations with Myanmar through military alliances and weapons procurement (Paribatra 2022: 278,281). Two years post-coup, Myanmar grapples with unrest, conflict, and human rights abuses (United Nations Human Rights Office of the High Commissioner 2023: Internet). Due to Myanmar's current insecurity and violence, diplomatic ties between India and Myanmar remain ambiguous. India's approach to bilateral vaccine diplomacy could be interpreted as a strategic manoeuvre intended to restore diplomatic relations with Myanmar, provide humanitarian aid, protect Indian boundaries, reassert domestic influence within Myanmar, and secure prospective national interests.

The India-Nepal Diplomatic Relationship

Similarly to Bangladesh, Nepal is immersed in the geopolitical rivalry between India and China. Both China and India, as stated by Ranjan & Gurung (2021: 93-94), strive to exert diplomatic influence in the strategically positioned state of Nepal. Notably, both countries have established ‘friendship treaties’ with Nepal (Ranjan & Gurung 2021: 93). Nepal and India have an inconsistent relationship. For example, in 2019-2020, India and Nepal had a territorial claim disagreement regarding the ‘Kalapani’ district

(Ranjan & Gurung 2021: 96). However, during 2021, India assisted Nepal with infrastructure and enhancement projects while the two states maintained a strong economic partnership (Ministry of External Affairs, Government of India 2023: Internet). Similarly, the Government of Nepal, Ministry of Affairs (2023: Internet) further reiterates the amicable relationship between the two states, reinforced by an unrestricted borderline. Perhaps India utilised bilateral vaccine diplomacy to re-balance the diplomatic relationship with Nepal.

The India-Iran Diplomatic Relationship

The historical bond between India and Iran has been anchored in trade and socio-cultural connections (Soltaninejad 2017: 25). This relationship, however, has experienced varying degrees of strength and strain. For instance 2003, the 'Strategic Cooperation Roadmap and Delhi Declaration' revitalised Indo-Iranian ties, promising strategic cooperation in diplomacy, military, technology, and trade (Soltaninejad 2017: 26,27). These plans did not fully materialise, and Indo-Iranian relations started to stagger in the 2000's, primarily due to Iran's position on nuclear weapons, which led to India fostering closer ties with the USA (Soltaninejad 2017: 27). India has increased diplomatic endeavours with Iran to establish a nexus to the Eurasian Region, enhance regional security, foster trade, counter-terrorism, secure energy resources, and capitalise on Iran's strategic location (Singh & Singh 2019: 169,171-172). Iran holds a strategic advantage due to its proximity to Pakistan and possession of the Chabahar Port, offering India a gateway to the Eurasian Region (Singh & Singh 2019: 171-172). India's further interest in Iran can be attributed to the China-Pakistan alliance and India's longstanding disputes with both Pakistan and China (Singh & Singh 2019: 170). Even though agreements like the 'Chabahar Port and International North-South Transport Corridor' have been signed, progress on these initiatives has been prolonged (Singh & Singh 2019: 171,173). The Embassy of India Tehran, Iran (2023: Internet) maintains that India-Iran relations reflect economic collaboration, diplomatic practices, multilateral forums, cultural bonds and 'civilizational connection'. Hence, India's application of bilateral vaccine diplomacy could have been used to reinforce diplomatic relations with Iran, advancing agreed-upon initiatives like the Chabahar port while concurrently striving to re-establish its regional sway in the area.

In conclusion, from August 2020 through July 2022, India strategically employed multilateral and bilateral vaccine diplomacy in response to the Covid-19 challenge. On the multilateral front, India collaborated in the co-development and financing of numerous vaccines, strategically employing multilateral vaccine science diplomacy to expand industrial ties, promote vaccine production, and strengthen diplomatic and multilateral relationships. On a bilateral level, India wielded vaccine diplomacy to foster diplomatic ties with hesitant neighbours, produce soft power influence, and perhaps secure future interests in the Indo-Pacific Region. The “Asia-Pacific” or “Indo-Pacific Region” is a spatial construct, best described by Shinzo Abe as a nexus between Pacific and Indian Oceans (Ministry of Foreign Affairs of Japan 2007: Internet). It can further be suggested that, at a later stage of the pandemic, when the Serum Institute of India paused international production, India pivoted from a philanthropic stance to prioritise Covid-19 vaccination for its population.

4.5. The UK’s Vaccine Donation Practises

As discussed in chapter three, the UK government directly correlated with the AstraZeneca/ Vaxzevria and VLA2001 vaccine. The UK’s role in developing and funding the multilateral AstraZeneca/Vaxzevria vaccine is well-established. However, the UK did not directly contribute to the development or funding of the Ad26.COV2.S or Comirnaty vaccine. Instead, from August 2020, the UK secured early access to the AstraZeneca, Janssen, Valneva, BioNtech, GlaxoSmithKline and Novavax vaccines (GOV.UK 2020: Internet). The UK government funded the multilateral VLA2001 vaccine; however, the agreement was terminated in September 2021 (RAPS 2022: Internet; Valneva 2021: Internet). Thus, the UK only funded and developed a single vaccine compared to the other states discussed in this study.

It seems the UK’s Covid-19 strategy often relied on securing early access to finished Covid-19 vaccines rather than funding and developing multiple vaccines multilaterally, which relates to vaccine nationalism. While the UK demonstrated a vested interest in immunisation, its contribution to the broader multilateral landscape, specifically regarding vaccine or technological development, was arguably less significant than other countries. Instead of actively participating in research and development efforts, the UK predominantly focused on procuring a substantial surplus of vaccines. Notably, the 2020 Global Vaccine Summit, where COVAX was introduced, took place in the UK,

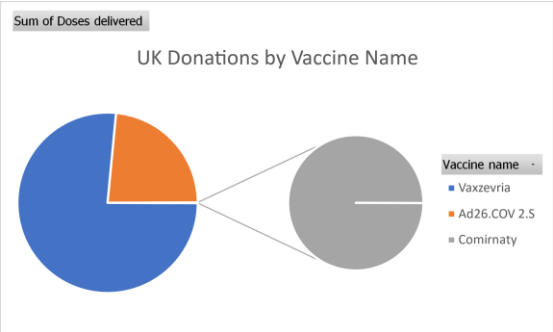
suggesting their contribution to the global initiative's multilateral unveiling (Gavi 2022b: Internet).

The UK adapted its vaccine strategy following initial lessons learned, transitioning from early procurement agreements to investing in a forthcoming national vaccine development facility. By 2022, Moderna and the UK had agreed to establish an mRNA Innovation and Technology Center based in the UK (UNICEF 2022d: Internet). This centre is set to commence vaccine production in 2025, positioning the UK with enhanced preparedness for future health crises (GOV.UK 2022c: Internet). The UK government further collaborated with the multilateral COVAX initiative by donating vaccine doses.

The UK also donated a substantial amount[24] of vaccines to the multilateral initiative COVAX (Our World in Data 2022: Internet). Donating to global initiatives can be perceived as a legitimate practice and soft power, depending on the interpreter. According to UNICEF (2022h: Internet), the UK largely used COVAX as a donation mechanism, followed by bilateral mechanisms. The following section evaluates the primary choices of vaccines for donations by the UK and investigates whether the recipient countries were selected based on existing diplomatic ties.

4.5.1. Data and Evaluation of the UK's Vaccine Donations

***Figure 26**: The UK Donations by Vaccine Name*

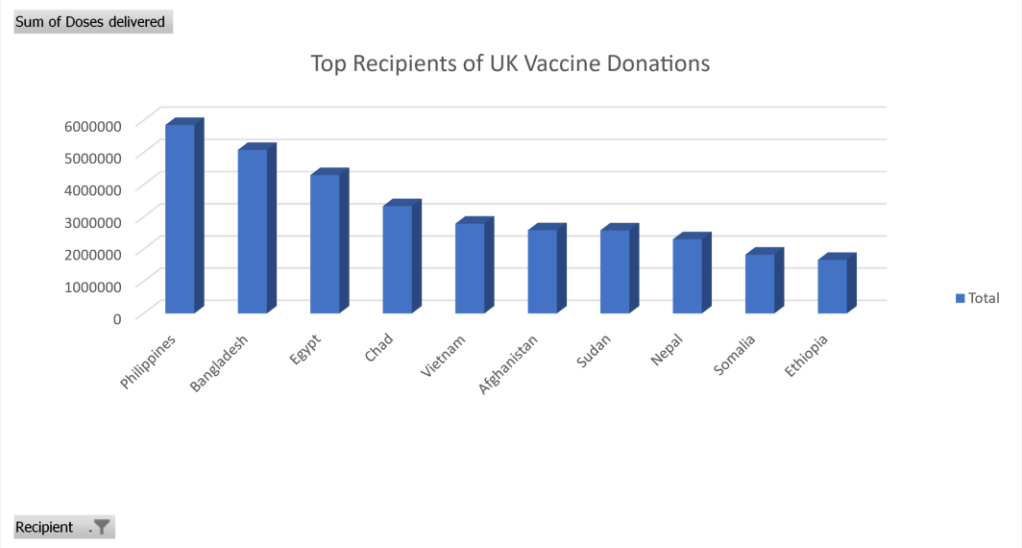


Source: (UNICEF 2022h: Internet)

[24] The UK donated about 29.30 million doses (Our World in Data 2022: Internet).

Figure 26 depicts that the UK predominantly selected Vaxzevria, Ad26.COV2.S and Comirnaty for donation purposes. The following figure illustrates the leading recipients of UK vaccine donations.

Figure 27: *Top Recipients of UK Vaccine Donations*



Sources: (UNICEF 2022h: Internet)

The UK's relationship with the Philippines, Bangladesh, Egypt, and Chad will be examined.

The UK-Philippines Diplomatic Relationship

According to the Republic of The Philippines, Department of Foreign Affairs (2023a: Internet), The UK-Philippine diplomatic relations initiated in 1946. The British Embassy in the Philippines identifies trade, foreign investment, and several issues like terrorism and human rights as the basis for the bilateral relationship between the two nations (GOV.UK 2023a: Internet). The UK's prioritised interest in the Philippines relates to foreign investment and trade. In agreement, the Philippine News Agency (2023: Internet) underscores the strength of the UK-Philippine connection, manifested in aspects like employment, commerce, investment, and tourism. On 10 September 2019, the Philippines Secretary of National Defense, Delfin N. Lorenza, attended the Defense and Security Equipment International Exhibition in the UK, which could indicate future security collaboration (the Republic of The Philippines, Department of Foreign Affairs 2023b: Internet). In 2021, Australia, the UK and the USA announced their trilateral security alliance, AUKUS, to maintain a politically secure and peaceful

Indo-Pacific Region (The White House 2023: Internet). The three nations developed 'conventionally-armed, nuclear-powered submarines' to be delivered to Australia within 2023 (The White House 2023: Internet). The above information shows a shift in foreign policy to a focus on the security of the Indo- Pacific Region. Therefore, it's clear that the UK used bilateral and multilateral vaccine diplomacy as an instrument with the Philippines to enhance diplomatic relations, trade relations, and soft power practices or to enhance future security interests in the Indo-Pacific Region.

The UK-Bangladesh Diplomatic Relationship

Given the presence of a British High Commissioner in Dhaka, Bangladesh, one can infer the existence of a diplomatic relationship between the two nations (GOV.UK 2023e: Internet). As stated by the British High Commissioner to Bangladesh, Ms Sarah Cooke, the relationship between the UK and Bangladesh is built on pillars such as economic partnerships, human development, cultural exchanges, trade and security (GOV.UK 2023f: Internet). During the third Strategic Dialogue held on 24 April 2019, both countries reinforced their strategic partnership, addressing topics including trade, education, socio-economic progress, migration, defence cooperation, effective governance, human rights, and solutions to the Rohingya predicament (Ministry of Foreign Affairs Dhaka, Bangladesh 2023: Internet). Evidence of their ongoing diplomatic ties can be seen in their collaborative efforts during the multilateral COP26 World Leaders Summit (Bangladesh Foreign Office Briefing Notes 2021: Internet). Therefore, one could deduce that the UK has leveraged both bilateral and multilateral vaccine diplomacy, particularly through COVAX, as a strategy to deepen its diplomatic ties with Bangladesh, bolster trade relationships, or extend its reach through the exercise of soft power.

The UK-Egypt Diplomatic Relationship

It can be inferred that the UK and Egypt maintain some form of diplomatic relations, as evidenced by the presence of the UK's active embassy in Egypt (GOV.UK 2023b: Internet). In 2022 the UK-Egypt Association discussed future trade collaboration in numerous sectors and past successes such as the Cairo Monorail project, the Globeleq solar farm, and the investment in the Lekela wind farm (GOV.UK 2022d: Internet). The past examples of UK-Egypt collaboration suggest that the UK's interest in Egypt primarily reflects a mutually beneficial economic relationship and renewable

energy projects. The diplomatic ties between the two states can further be evidenced by the multiple diplomatic interactions between President El-Sisi and British prime ministers; for example, in 2019, multiple phone calls occurred between President El-Sisi and ex-prime minister Boris Johnson (The Arab Republic of Egypt Presidency 2023a: Internet; The Arab Republic of Egypt Presidency 2023b: Internet). Therefore, it's clear that the UK used multilateral vaccine diplomacy through COVAX as an instrument with Egypt to enhance diplomatic relations, trade relations or soft power practices.

The UK-Chad Diplomatic Relationship

It appears that the foundation of the UK's diplomatic relations with Chad is centred on development and humanitarian assistance. As stated by the British Embassy in N'Djamena, the diplomatic interplay between the two countries hinges on initiatives for development and aid, assisting with climate change, addressing security issues, and fostering political stability in the Lake Chad Basin (GOV.UK 2023c: Internet). In 2021, the UK initiated the Lake Chad Basin Program to ensure political stability, promote conflict resolution, foster defence partnerships, and manage terrorist organisations in the region (GOV.UK 2023d: Internet). Both domestic and regional instability marks Chad. Internally, the country faces political insecurity, an underdeveloped economy, climate change impacts, extensive poverty, and ongoing refugee crises (World Bank 2023: Internet). Externally, Chad is neighboured by countries frequently entangled in insurgency, terrorist activities, and violence, including Nigeria, Sudan, and the Central African Republic (World Bank 2023: Internet). The UK's vested interest in maintaining Chad's political and socio-economic stability coincides with its objectives to ensure security and encourage development in nearby Nigeria (GOV.UK 2023d: Internet). The UK, employing vaccine diplomacy through the international COVAX mechanism, potentially aimed to provide humanitarian assistance to Chad, bolster its influence in the region, or solidify its diplomatic ties with Nigeria.

In conclusion, from August 2020 through July 2022, the British employed bilateral and multilateral vaccine diplomacy to respond strategically to the Covid-19 challenge. Multilaterally, the UK used COVAX as a mechanism for vaccine donations. In bilateral contexts, vaccine diplomacy was leveraged to foster diplomatic bonds, secure future interests of economic cooperation, and potentially exert soft power influence.

Additionally, the UK's Covid-19 strategy largely hinged on securing early access to completed vaccines instead of funding and co-developing multiple vaccines on a multilateral basis, a phenomenon related to vaccine nationalism. Despite the UK showing a clear commitment towards immunisation, its contributions to the wider multilateral framework, particularly regarding vaccine or technological development, can be seen as arguably less substantial than other nations.

4.6. The USA's Vaccine Donation Practises

The USA had a hands-on approach to vaccine development, production and manufacturing. As discussed in chapter three, the USA is directly associated with the Comirnaty, Spikevax, Ad26.COV2.S, Covaxin, Corbevax and Nuvaxovid vaccines through BARDA, the National Institute of Allergy and Infectious Diseases (NIAID) and Operation Warp Speed. The US government was indirectly involved in the VLA2001 vaccine since it was founded in the USA and marketed in the American domestic sphere. Since the USA funded and multilaterally co-developed numerous Covid-19 vaccines and initiatives, the national interest in immunisation and multilateral relations are transparent. These actions reflect responsible governance practices. The USA used BARDA, Operation Warp Speed and the National Institute of Allergy and Infectious Diseases (NIAID) to establish enduring relationships within the global pharmaceutical industry, expanding their national objectives beyond Covid-19 immunisation to technological and medical development. For example, BARDA utilised these partnerships to build a Covid-19 medical countermeasure portfolio that invests in various Covid-19 vaccines (Medical Countermeasures.gov 2022b: Internet). The USA's vaccine practices remained a balance between multilateral partnerships and internal resources or initiatives. These strategies remained even though USA Presidency changed from the Trump Administration to the Biden Government [25](U.S. Department of Defense 2020: Internet; CNN 2020: Internet).

According to Our World in Data (2022: Internet), the USA donated a sizable amount[26] of vaccines to the multilateral initiative COVAX. Contributions to a global initiative could be interpreted as legitimate actions or exercises of soft power, depending on the observer's perspective. UNICEF's database illustrates that the USA largely used

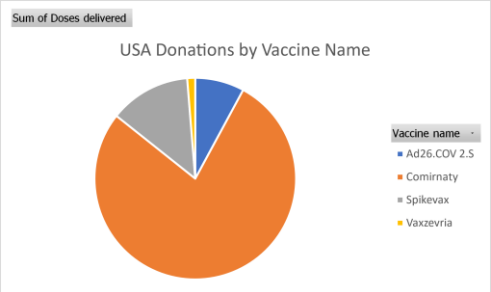
[25] Joe Biden was elected as the US President on 7 November 2020 (CNN 2020: Internet).

[26] The USA donated about 276 100 000 doses to COVAX (Our World in Data 2022: Internet).

COVAX as a donation mechanism, followed by bilateral mechanisms (UNICEF 2022h: Internet). The following section evaluates the primary choices of vaccines for donations by the USA and investigates whether the recipient countries were selected based on existing diplomatic ties.

4.6.1. Data and Evaluation of the USA's Vaccine Donations

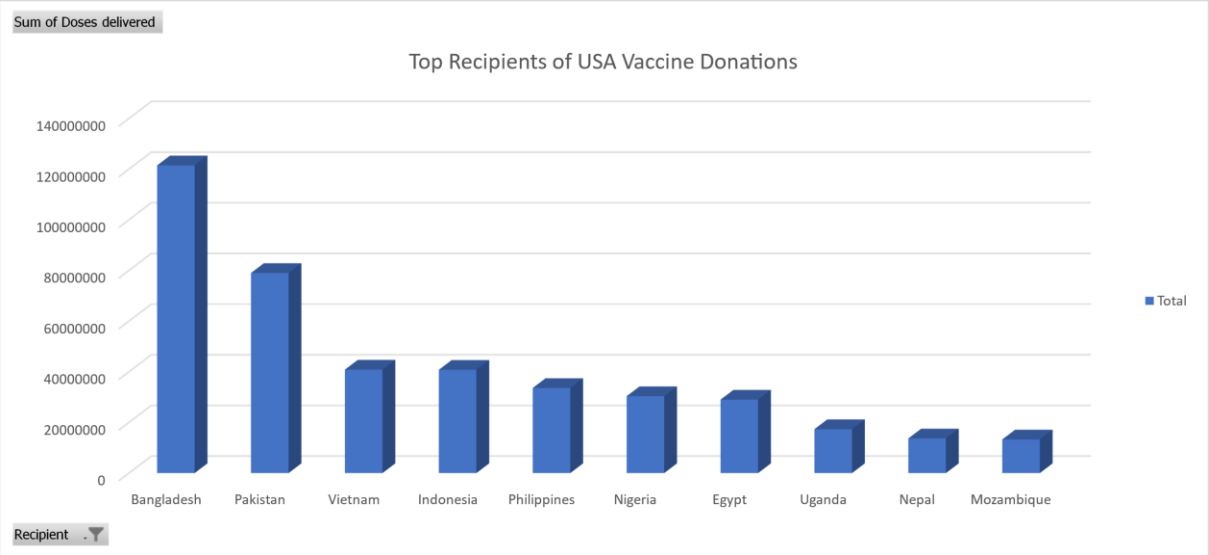
Figure 28: *The USA Donations by Vaccine Name*



Source*: (UNICEF 2022h: Internet)*

Figure 28 illustrates that the USA predominantly selected Ad26.COV2.S, Comirnaty, Spikevax and Vaxzevria vaccines for donation purposes. The following figure depicts the leading recipients of USA vaccine donations.

Figure 29: *Top Recipients of USA Vaccine Donations*



Source: *(UNICEF 2022h: Internet)*

The diplomatic relationship between the USA, Bangladesh, Pakistan, Vietnam and Indonesia will be examined.

The US-Bangladesh Diplomatic Relationship

As per the US Department of State (2022a: Internet), the foundations of US-Bangladesh bilateral ties rest on economic engagements, collaborative security efforts, humanitarian assistance, and matters on climate change. The year 2022 signified the 50th anniversary of diplomatic ties between the US and Bangladesh, reinforcing their shared commitment to ensuring tranquillity in the Indo-Pacific Region (U.S. Department of State 2022a: Internet). Their collaborative efforts extend into the multilateral arena through shared participation in global institutions like the UN, the World Bank, and the ASEAN Regional Forum (U.S. Department of State 2022a: Internet). The US-Bangladesh relationship, as outlined by the United States Institute of Peace, has seen periods of instability due to US concerns over human rights breaches, credible elections, and perceived 'democratic backsliding' in Bangladesh (Anwar, MacDonald, Markey & Siddiqui 2022: Internet). Highlighting these tensions, in 2021, the USA introduced sanctions against both former and current members of Bangladesh's Rapid Action Battalion due to alleged infringement on human rights leading to a period of strained bilateral relations (Anwar *et al.* 2022: Internet). Nonetheless, as reported by The Daily Star, a Bangladeshi newspaper, collaboration persisted into 2022 with the convening of the 8th US-Bangladesh

Security Dialogue, aimed at fostering security commerce, military cooperation, and protecting the exchange of military information (The Daily Star 2023: Internet). Hence, one could argue that the USA deployed both bilateral and multilateral vaccine diplomacy strategies (via COVAX) with Bangladesh, not only to bolster diplomatic relations, trade, and security collaboration but also to advance their sway in the Indo-Pacific Region and to employ soft power tactics for prospective interests.

The US-Pakistan Diplomatic Relationship

According to the US Department of State (2022b: Internet), the foundation of US-Pakistan relations rests on economic collaboration, foreign investment, educational collaborations, US aid initiatives, and shared concerns such as counterterrorism, security, renewable energy, and climate change. With Pakistan bordering Afghanistan, both nations share vested interests in region stabilisation and combating terrorism (U.S. Department of State 2022b: Internet). A testament to recent diplomatic engagements occurred in December 2022, when Pakistan's Foreign Minister, Bilawal Bhutto Zardari, visited the USA. During this visit, both nations reaffirmed their commitment to further strengthening bilateral ties in trade, investment, development, and climate change (Ministry of Foreign Affairs, Government of Pakistan 2022: Internet). The cooperative bond between the USA and Pakistan also finds expression in the multilateral domain, demonstrated by their shared involvement in global bodies such as the UN and G77 (Ministry of Foreign Affairs, Government of Pakistan 2022: Internet). The enduring nature of US-Pakistan diplomatic relations suggests that the USA may have leveraged multilateral vaccine diplomacy with Pakistan to advance diplomatic and economic ties, and soft power practices, to improve mutual multilateral alliances or attain outcomes in future strategic interests such as establishing a channel of influence to Afghanistan. The vaccine diplomacy practises between America and Pakistan took a multilateral form via COVAX.

The US-Vietnam Diplomatic Relationship

In 2020 Vietnam and the USA celebrated their 25th anniversary of diplomatic ties by reiterating their collaborations on global health security, addressing climate variability and reconciliation after the war (The White House 2021: Internet). The US-Vietnam relationship centres around maritime security in the South China Sea, social and economic development, advancing sustainable energy sources, human rights, health

security and addressing the ‘legacy of war issues’ (The White House 2021: Internet). While US-Vietnam relations have faced challenges in the past, including the Vietnam War and a sanction on the sale of lethal weapons (lifted in 2016), both states have made strides in advancing their relationship. The “US-Vietnam Comprehensive Partnership” has guided this progress, established in 2013 (U.S. Department of State 2021: Internet). The two states' collaborative efforts extend into the multilateral arena through shared participation in international establishments such as the UN, the US Global Peace Operations Initiative, the ASEAN Regional Forum, World Bank and Asia-Pacific Economic Cooperation (U.S. Department of State 2021: Internet). It seems that the USA’s interest in a peaceful and lawful Indo-Pacific aligns with Vietnam’s interest, as Vietnam recently disputed that China contradicted the Declaration of Conduct of Parties in the South China Sea when China’s coast guard and research vessel breached the ‘Vietnamese Exclusive Economic Zone’ (Vietnam Ministry of Foreign Affairs 2023a: Internet). The Vice Spokesman of the Vietnamese Ministry of Foreign Affairs responded positively to the recent security alliance between the USA, Australia and the UK in the Indo-Pacific Region. The Spokesman maintained that political stability, amity and cooperation are a mutual interest of every state (Vietnam Ministry of Foreign Affairs 2023b: Internet). Hence, one could argue that the USA deployed multilateral vaccine diplomacy strategies (via COVAX) with Vietnam to bolster diplomatic relations, trade, and security collaboration, expand their influence in the Indo-Pacific Region, and employ soft power tactics for prospective interests.

The US-Indonesia Diplomatic Relationship

Indonesia holds a significant interest for the USA, given its stature as a major democratic nation, its pivotal role in the Indo-Pacific Region, its substantial influence within the Association of Southeast Asian Nations, and its proximity to the resource-rich South China Sea (U.S. Department of State 2022c: Internet). The relationship between the USA and Indonesia is guided by the 'US-Indonesia Strategic Partnership', a platform that promotes cooperation in areas such as commerce, development aid, energy, democratic processes, civilian engagement, maritime security, and collaboration on a range of global issues (U.S. Department of State 2022c: Internet). Indonesia and the USA jointly participate in multilateral initiatives, including the East Asia Summit, ASEAN Regional Forum, G20, Asia-Pacific Economic Cooperation Forum, and the UN (U.S. Department of State 2022c: Internet). The Center for

Strategic & International Studies (2022: Internet) emphasizes that the dynamics of the US-Indonesia relationship have significantly influenced successive USA presidential administrations. While the Trump administration experienced a deterioration in diplomatic ties with Indonesia, the Biden administration, since 2021, has been actively reviving cooperation on maritime security, renewable energy, and other agreed areas under the 2015 USA-Indonesia Strategic Partnership (Center for Strategic & International Studies 2022: Internet). As affirmed by the Embassy of the Republic of Indonesia in Washington DC (2023: Internet), the collaborative efforts between the two countries encompass a range of areas, including politics, defence, trade, investment, environmental issues, and peace and development cooperation. Therefore, it's clear that the USA used multilateral vaccine diplomacy through COVAX as an instrument with Indonesia to enhance diplomatic relations, trade, and security collaboration, increase their influence in the Indo-Pacific Region, and employ soft power tactics for prospective interests.

In conclusion, from August 2020 through July 2022, the USA employed bilateral and multilateral vaccine diplomacy to respond strategically to the Covid-19 challenge. Multilaterally, the USA used COVAX as a mechanism for vaccine donations. In bilateral contexts, vaccine diplomacy was leveraged to foster diplomatic bonds, secure future interests of economic and security collaborations, expand their influence in the Indo-Pacific Region, and employ soft power tactics for prospective interests. This can be illustrated by the USA's 'free and open Indo-pacific strategy', a 2019 foreign policy strategy towards the Indo-Pacific Region (Department of Defense, United States of America 2019: Internet). The Indo-pacific strategy shows a shift in foreign policy to a focus on the security of the Indo-Pacific Region.

From a different perspective, the data within this study indicates which countries benefited the most from vaccine donations from China, Russia, India, the UK, and the USA. Figures 21,23,25,27 & 29[27] illustrate that *Vietnam* received Covid-19 vaccine donations from all five donors. Further, *Bangladesh and Nepal* received vaccines from China, India, the UK, and the USA; while *Egypt and the Philippines* benefited from China, the UK, and the USA. In this study, the underlying motivations for why these

[27] Page 98,104,108,113,118.

specific states benefited from vaccine diplomacy can only be lightly explored and hypothesised. Each of the states mentioned above might have used vaccine diplomacy to their benefit, potentially driven by foreign interests related to economic, diplomatic, or security partnerships.

It could be inferred that donors targeted Vietnam, Bangladesh, Nepal and the Philippines due to their strategic locations within the Asia-Pacific or Indo-Pacific Region (United Nations Economic and Social Commission for Asia and the Pacific 2021: Internet). Numerous targeted states likely benefited from the power struggle between the USA and China (the East and West), as both powers employed vaccine diplomacy to influence specific relationships and counter their adversary. A similar dynamic can be observed between China and India, especially in their diplomatic dealings with Nepal, Bangladesh, and Myanmar (Hossain & Islam 2021: 1,14; Gottschlich 2015: 151,154; Ranjan & Gurung 2021: 93). The strategic appeal of the Philippines and Vietnam can be tied to the South China Sea, a disputed region valued for its abundance of natural wealth such as oil, gas, and marine life (Global Conflict Tracker 2023b: Internet).

Egypt’s strategic location, connecting Africa and Asia and bordering the Mediterranean Sea, Sudan, Libya, and the Red Sea, makes it a critical trade threshold, particularly through the Suez Canal (WorldAtlas 2023a: Internet). The country's impressive list of national development initiatives and expanding industries and services has created an enticing environment for foreign investments (The Arab Republic of Egypt Presidency 2023c: Internet). Likewise, Bangladesh enjoys a strategic position surrounded by powerful economies such as China and India and crucial maritime trade routes like the Bay of Bengal (WorldAtlas 2023b: Internet). Bangladesh’s appeal could be linked to the developmental growth of multiple industries, including manufacturing, ready-made garments, information technology, electronics and electrical equipment and construction supplies (Bangladesh Investment Development Authority 2020: Internet). Economic development can be linked to the country's open-armed approach to foreign investment, cheaper labour, and multiple economic zones (Bangladesh Investment Development Authority 2020: Internet).

Bangladesh's role in the Asia Pacific's large electrical equipment and components industry has expanded. The country now produces and exports key items like ‘transformers, diodes, and semiconductors’ to major economies such as China and India (Bangladesh Investment Development Authority 2020: Internet). This fits a broader regional trend; from 2016-2020, ‘26 Asia-Pacific states were responsible for 83.7% of global exports in integrated circuits, electrical and optical equipment’ (Asian Development Bank 2022: Internet). Dominant contributors to these imports include China, the Philippines, Malaysia, and the Republic of Korea (Asian Development Bank 2022: Internet).

The global reliance on the Asian-Pacific Region for integrated circuits, electrical and optical equipment, and trade may play a part in the popularity of donations to this region, particularly in the contemporary era. Larger economies like China, potentially overwhelmed by their production capabilities and global supply responsibilities, may seek to delegate some of these duties to smaller states or allies. This shifting focus to small and medium economic powers could also relate to the strategic use of trade routes and the increasing complexity of maritime governance. For example, China's recent territorial disputes over the South China Sea (Global Conflict Tracker 2023b: Internet) might drive the nation to explore alternative maritime trade routes with fewer restrictions, such as the Bay of Bengal and the Suez Canal.

China's actions abroad, in turn, prompt deterrence efforts from the West, shaping a complex ‘Chessboard’ global dynamic (Slaughter 2017: 5-7). It should be noted that the observations in this study are, by nature, speculative and constrained. A two-year study is insufficient to determine whether countries such as China, India, the UK, and the USA have achieved their national objectives through vaccine diplomacy. These connections require further, more extensive exploration to be fully substantiated.

4.7. Conclusion

This chapter applied the conceptual framework to secondary data of vaccine donations from China, Russia, India, the UK, and the USA; to determine what patterns of multilateral vaccine diplomacy were practised by these states to adapt to the challenge of Covid-19 from August 2020-July 2022. The chapter further discussed the practice of multilateral vaccine diplomacy to achieve outcomes in national interest and how

these practices evolved. The research conducted from August 2020 to July 2022 indicates that China employed bilateral and multilateral vaccine diplomacy to respond to the Covid-19 crisis. These strategies could potentially reap the rewards for future prioritised national interests and help to amplify soft power. China seems especially interested in fostering its national interests in Southeast Asia, the Asia-Pacific and Africa, which may aim at consolidating its influence in these regions. However, by predominantly investing in the domestic development of its vaccines (excluding Comirnaty), China has safeguarded its national interests in public health and local development, acquiring resources to assist its bilateral allies.

Russia mainly utilised bilateral vaccine diplomacy to adapt to the challenge of Covid-19. However, it could also be argued that a form of multilateral vaccine diplomacy transpired, given the involvement of Russian companies in the development process, indicating relations between three or more parties. Russia's strategy involved numerous supply agreements, participated in private market transactions, facilitated technology transfers, and signed licensing deals, despite none of its vaccines receiving WHO's approval. Considering Russia's Ukraine invasion, it is apparent that Russia's national interest did not prioritise domestic immunisation but leaned towards gaining diplomatic support, fostering soft power, and securing strategic objectives like retaining regional dominance and historical losses.

India strategically deployed bilateral and multilateral forms of vaccine diplomacy to confront the Covid-19 crisis. In the multilateral sphere, India's collaboration in the co-development and funding of various vaccines was a strategic exercise of multilateral vaccine science diplomacy aimed at broadening industrial relationships, advancing vaccine production, and fortifying diplomatic and multilateral ties. Meanwhile, on a bilateral level, India used vaccine diplomacy to nurture diplomatic relations with uncertain neighbours, generate soft power sway, and potentially safeguard its prospective interests in the Indo-Pacific Region. During the later stages of the pandemic, India's vaccine development strategy shifted from prioritising external aid to concentrating on domestic immunisation.

Between August 2020 and July 2022, the UK responded strategically to the Covid-19 crisis using bilateral and multilateral vaccine diplomacy. The UK relied on the COVAX

platform to distribute vaccine donations on the multilateral front. In bilateral settings, the UK utilised vaccine diplomacy to fortify diplomatic ties, safeguard future economic collaboration interests, and potentially enhance its soft power influence. It is also worth noting that the UK's Covid-19 strategy primarily focused on securing early access to fully developed vaccines rather than funding and co-developing multiple vaccines on a multilateral scale, a practice comparable to vaccine nationalism.

In strategising its response to the Covid-19 crisis, the USA effectively utilised bilateral and multilateral vaccine diplomacy. By channelling vaccine donations through COVAX, the USA made significant multilateral contributions. In bilateral settings, they employed vaccine diplomacy to nurture diplomatic ties, underpin future economic and security collaborations, and fortify their position within the Indo-Pacific Region. This tactic could also serve as a soft power mechanism for advancing future interests. Notably, the USA has shown a keen interest in consolidating its position in Southeast Asia and the Indo-Pacific Region, potentially as a strategy to establish dominance or counterbalance China's influence in these regions.

Hence, it is apparent that these nations have adopted a dual-method strategy in vaccine diplomacy—bilaterally and multilaterally—to realise their national interests. These interests are not solely confined to immediate health and immunisation goals but also extend to strategically secure future advantages, such as enhancing their influence or bolstering diplomatic ties within specific regions. The next chapter will discuss the specific outcomes and recommendations of the study.

Chapter Five: Specific Outcomes and Recommendations

5.1. Introduction

This study utilised a qualitative approach complemented by a literature-based design and guided by a conceptual framework and research questions. This analysis thoroughly examined the vaccine diplomacy practises of China, Russia, India, the UK, and the USA within the multilateral domain, revealing that these states strategically utilised multilateral and bilateral vaccine diplomacy to achieve outcomes in national interests. These insights significantly enhance our understanding of diplomatic mechanisms to advance national interests, our current geopolitical context, multilateral state alliances, and vaccine diplomacy's intentions.

5.2. The Structure of the Research

The first chapter of the study provided the context and intention of the analysis by discussing the purpose of the study, a literature review, the research questions, the study's methodology, and the research structure. The second chapter developed a framework worthy of analysis and explored different conceptual notions, elements, and discussions to grasp the essence of foreign policy, soft power, diplomacy, global health diplomacy, vaccine diplomacy, multilateralism and responsible governance. The third chapter examined the Covid-19 and vaccine context, which touched on the multinational nature of Covid-19 vaccines, vaccine production capacity and locations, supply agreements, the Covid-19 timeline, global vaccine initiative COVAX and an overview of the delivery of donations. Chapter four delved into the analysis of secondary data, focusing on the diplomatic practices and initiatives undertaken by China, Russia, India, the UK, and the USA. Chapter four also examined the relationships between the donor and recipient countries and the multilateral partnerships formed by these states. Additionally, it included a discussion of the study's findings and evaluations. Chapter four further discussed the findings and evaluations of the study. Finally, the current chapter five discusses the specific outcomes and recommendations.

5.3. Overview of Findings

The study employed the concepts of foreign policy, soft power, diplomacy, global health diplomacy, vaccine diplomacy and multilateralism to frame and understand the diplomatic practices of China, Russia, India, the UK, and the USA. This research

underscored the multilateral nature of Covid-19 vaccine processes, such as the development, production, supply, and distribution, which involves various actors, governments, multinational corporations, stakeholders, international organisations, and civil society actors. Through the analysis of the practises, diplomatic partnerships and secondary sources of the states mentioned above, we were able to discern that these states were key players in the Covid-19 vaccine manufacturing and production process, that they provided a significant amount of Covid-19 vaccine donations and played leading roles in the geopolitical system during Covid-19. The study, in essence, revealed the deep entrenchment of national interests within diplomacy. It uncovered that national priorities often outweigh cosmopolitan moral principles, a phenomenon evident in Russia's case. In alignment with the conceptual framework, it was found that state interpretations, meanings, associations, and actions demonstrate substantial variation. Furthermore, a government's pursuits do not always align with the citizens' needs or responsible governance practices.

Placed within the broader context of how states keep adapting their diplomatic practises when faced with new challenges, these findings illustrate that states use diplomacy in various manners, such as multilateral and bilateral diplomacy (vaccine diplomacy or vaccine science diplomacy), to attain outcomes in prioritised national interests and to lay the foundations for future advantages. Particularly concerning their diplomatic ties and influence within certain regions. The advantage of this study lies in its use of a timeline that can show practises, the evolution of practises and the future outcomes of these practises. This analysis identified a trend in foreign policy pursuits and interests linked to Africa, the Indo-Pacific Region and strategic geopolitical locations such as the South China Sea. The research emphasizes how vaccine diplomacy offers nations a tool to achieve outcomes in national interests within a multifaceted and bilateral context. Concurrently, it facilitates advancing global health and expanding diplomatic relations, a crucial topic worth further exploring.

This study had the following limitations: Firstly, the scope of the study was limited to the multilateral vaccine diplomacy practices of China, Russia, India, the UK, and the USA from August 2020 to July 2022. Secondly, the present study faced limitations inherent in a "desktop study," including geographic restrictions on certain websites and networks. Furthermore, the intricate nature of the subject matter warrants more in-

depth resources and extensive time for exploration. This complexity is especially pronounced in the concept of responsible governance, a central theme in this study, which underscores the need for further examination and thoughtful consideration in future research. While the initial focus of this dissertation centred on the concept of good governance, the analysis ultimately revealed that responsible governance might be a more fitting framework within this context. However, a comprehensive exploration of responsible governance was constrained by time and resources. Future research endeavours might benefit from a dedicated examination of this concept, utilising the insights and methodologies developed in this study. Future studies on the current topic are recommended to utilise the implemented conceptual framework on a case study or comparative analysis to provide further insight into the practice of multilateral vaccine diplomacy of alternative states that developed Covid-19 vaccines. For future studies, researchers may consider using a virtual private network (VPN) or conducting localised research within their home countries.

5.4. Conclusion

This study aimed to analyse the vaccine diplomacy practises of China, Russia, India, the UK, and the USA within the multilateral domain. The findings of this analysis demonstrated that states employ a diverse range of diplomatic strategies, including multilateral and bilateral vaccine diplomacy, to achieve outcomes aligned with their national interests. Moreover, such strategies help to establish the foundation for potential future benefits, especially in strengthening their diplomatic ties and amplifying their influence within particular regions.

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