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State Actor Behavior in the Gavi Alliance and its Effect on Decisional Output

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Chapter 1. Introduction

In an increasingly globalized world, Transnational Governance Initiatives have become all the more present in managing global issues. Models of private-public partnership have had to adapt to more complex institutionalized, multistakeholder, and international organizations that have a large sway over global topic area management. This is especially true as it pertains to global development, and pressingly since the Covid-19 crisis, global health development. “Private for-profit organizations have come to recognize the importance of public health goals for their immediate and long-term objectives, and to accept a broader view of social responsibility as part of the corporate mandate” (Reich, 2002). That in tandem with the emerging non-profit sector, civil service organization sector, and a global focus on governance challenges, has led to the rise of Transnational Governance Initiatives (TGIs). Of these health oriented TGI’s, few have been as broadly focused and successful as Gavi, the Global Alliance for Vaccines and Immunization.

1.1 Research Problem

Many scholars have attempted to look at Public Private Partnerships (PPPs) from the perspective of state actors (Hodge & Greve, 2013), (McKee et al., 2006). However this kind of perspective has not extended to TGI research, or when research is approached from a state perspective, then the theory is more based in international relations rather than in the fields of public administration or institutional theory. This creates a problem of how to develop a theoretical framework that can explain the role of state actors in these globally focused initiatives in which there are a variety of stakeholders. Westerwinter’s 2019 dataset of these types of organizations found certain patterns in the data that illuminate how and why state actors remain such a crucial part of these complex partnerships. Although the balance of power and

responsibility is different for every Initiative, state actors often have a large share of knowledge, resources (both monetary and personnel based), expertise, and political willpower as compared to other types of partners. It is the role of the state, the state actor's behavior, and the strategies of those state actors that are the focus of this research.

States are approaching these initiatives from the perspective of public administration and public values, making them act and participate in the initiative very differently from their non-state actor peers. These powers and abilities call into question the ability of a state actor or state actors to achieve the Initiative's governance function. However, as TGI research is still relatively new, few academic works exist which prioritize the perspective of state actors, and fewer still apply the perspective on a Transnational Governance Initiative or Public-Private Partnership that is based in Health Governance. This research will attempt to bridge some of that research gap.

1.2 Research Question

Now that an overview of the importance of state actors in these initiatives has been given, it should not be surprising that many initiatives try to tackle pressing global challenges. Many Transnational Governance Initiatives (TGIs) have been founded in the field of public health, but perhaps none so effective as Gavi. The Alliance was founded in 2000 after repeated governance failures caused a growing rift between the huge strides forward in immunization science and the actual ability of lower income countries to obtain even the most basic of vaccines (Center for Public Impact, 2016). Recognizing that the rise of globalization also led to increasing health interdependence, a collection of states, NGOs, non profits, scientists, and business leaders in the vaccine industry came together to form the Global Vaccine Alliance. The Alliance's issue area was to be specifically focused on providing vaccines to the countries that would not otherwise

have the financial means to do so. Overtime, the Alliance adapted to also include the necessary technological infrastructure, trained staff, and community education it takes to run a successful immunization program. The Alliance has transformed its goals, targets, and strategies greatly over its 20 plus year history. Its governance structure raises questions on institutional structure, state actor behavior, and how the partnerships within the Alliance affect its overall operations.

With that in mind the research question of this thesis will be how state actor behavior and patterns of interaction within the Gavi Alliance affect the Alliance's decisional output. To answer this question, theories concerning Transnational Governance Initiatives, Public Private Partnership, Institutional Analysis, and Institutional Trust will be utilized for the building of a new theoretical framework for which to study state actor behavior in service provision TGIs. Finally, this thesis will employ a two case qualitative analysis on the policy making process that resulted in a group of decisions concerning Yellow Fever vaccines, the first case from the perspective of the United Kingdom as a state actor, and the second case from the perspective of Uganda as a state actor.

1.3 Practical Relevance

Transnational Governance Initiatives across the board are playing a larger and larger role in governance. However, the global health focused TGIs have gone understudied, with climate governance dominating the literature landscape (Dubash, 2021; Guy et al., 2023; Okereke et al., 2009). If the Covid-19 pandemic were to have taught any lesson, it is that our global health system is in desperate need of reevaluation in terms of disaster preparedness, efficiency, and resilience (Malik, 2022). Without this, the global community will remain unprepared for the next epidemics and pandemics, and general health crises it will surely face. With Gavi being one of, if not the biggest immunizer worldwide, Gavi will have a massive role to play in the coming years.

Not due solely to the necessity of administering the delivery of Covid vaccines, but also to repair the lost progress on all other immunization fronts that occurred due to the pandemic. By analyzing the Gavi Alliance and its associated policy making organs from the perspective of state actors, it is the aim that global health focused TGIs in general can draw institutional and operational wisdom from Gavi's successes and failures. It is also the hope that by analyzing the role that states play in the Alliance, that states can learn how to behave and strategize in these types of TGI's in a way that maximizes positive health outcomes.

1.4 Academic Relevance

In order to answer the aforementioned research question, pre-existing theory on several topics need to be discussed, both in order to conduct the research itself and to establish relevance with the greater body of work that exists around TGIs, public administration, etc. So with that in mind, a literature review on Public Private Partnerships (PPPs), Transnational Governance Initiatives (TGIs), Elinor Ostrom's Institutional Analysis and Development Framework (IAD Framework), Hodge and Greve's Service Provision PPP Model, will be given, as well as a brief overview on value and institutional trust. This thesis will utilize Frieden's 1999 preference-strategy-outcome approach as it is a helpful tool for analyzing state strategy in international policymaking environments. However, in order to incorporate the specificities of TGI's, this thesis will borrow from the IAD framework in order to illuminate information about this unique policymaking environment. This thesis joins a long line of academic work that utilizes the IAD framework for an analysis of a complex institution like Gavi (Ran et al., 2020), (Abdu et al., 2022), as well as works that utilize the IAD framework in analyzing various types of health governance systems (Lazo, 2019).

This research is relevant to the current research on TGIs, but it also fills in some key gaps in the current literature, particularly when it comes to health focused TGIs and service provision TGIs. With states increasingly putting problem solving mandates in the hands of TGIs, it is necessary to study how that plays out with some of the world's largest health focused TGIs like Gavi. TGIs are often understudied given their large share of global issue area responsibility, but there are scholars such as Oliver Westerwinter who are beginning to take a closer look at TGIs, their governance functions, institutional structures, actor makeup patterns, and feasibility. It is the author's hope that this thesis will add to the growing numbers of literature that focuses on a singular health TGI, particularly those that focus on health service provision (Barnes & Browne, 2011; Cochi et al., 2016). This in combination with the aforementioned lack of research concerning the role of state actors in TGI's, and particularly how their behavior may differ from the domestic policy making or international organization environment, is the research gap this thesis will attempt to assist in closing. Having covered the overall topic, research question, actor perspective, practical relevance, and academic relevance, it is now possible to give a review of the relevant literature.

Chapter 2. Literature Review

In order to answer the research questions with the theoretical lens of public administration and governance, a literature review must be given that covers the theory of three main topics: Transnational Governance Initiatives, Public Private Partnerships, and Institutional Theory. It is most logical to begin with Transnational Governance Initiatives, because the embedded concepts within it form the basis of the core concepts involved with the research.

2.1.1 Transnational Governance Initiatives

Transnational Governance Initiatives (TGIs) are an emerging concept that is arguably understudied in the overall discipline of Public Administration. While “no undisputed definition of the universe of TGIs in world politics exists” (Westerwinter, 2019), Westerwinter’s general working definition and components is that Transnational Governance Initiatives are (i) composed of public private partnerships, (ii) operate across multiple countries, (iii) perform governance tasks that are related to some transnational problem, and (iv) are institutionalized in a way that all participants interact frequently. This working definition is perhaps the most comprehensive one, but there are others as well that help conceptualize TGIs and distinguish them from other types of networks and partnerships.

2.1.2 Governance and Governance Functions

This leads to a discussion of government vs. governance, and what governance functions exist. Rosenau’s 1992 work sets a clear distinction between government and governance that is important to keep in mind when discussing TGIs.

Governance is not synonymous with government. Both refer to purposive behavior, to goal-oriented activities, to systems of rule; but government suggests activities that are backed by formal authority, by police powers to insure the implementation of duly constituted policies, whereas governance refers to activities backed by shared goals that may or may not derive from legal and formally prescribed responsibilities. (Rosenau, 1992, p. 4)

To summarize, while both governance and government seek to use resources to drive behavior towards a common goal, the government has the backing of state power and the legal system while governance bodies do not.

Governance is growing in importance in the field of Public Administration, as State power, in Susan Strange's words has "leaked away, upwards, sideways, and downwards" (p. 56) part of this leakage has gone into less power-backed governance structures like the Gavi Alliance. Research trends over the last decades have alternatively tried to remove (Stone, 2008), (Josselin & Wallace, 2001) etc., and replace (Skocpol, 1982), (Voss et al., 2014), etc. 'the state' from the center of conversations pertaining to global problem solving and the social structure surrounding it. However, regardless of this state centering, it is difficult to overlook the importance of non-state actors in the landscape of international problem solving, including in TGI's.

Given the focus on governance it becomes possible to narrow down the type of governance that occurs in TGI's. Broadly speaking there are "eight (governance) functions; namely, agenda-setting, standard-setting and rule-making, standard and rule implementation, monitoring, funding, capacity-building, knowledge creation and information sharing, and service provision" (Westerwinter, 2019, p. 147). As one might expect, many TGIs fulfill multiple governance functions, or adapt from one to another as the institutional mandate shifts. The governance function relevant to this thesis is service provision, in this case the service being vaccines and the health infrastructure with which to deliver them.

2.1.3 Components and Embedded Concepts

Having discussed the definitions and purposes of a TGI, it is possible to discuss some of the components and embedded concepts involved with them. Focusing first on some of the embedded concepts, it is important to quickly discuss globalization. "The term incorporates a host of profound changes in world politics: growing political linkages at the global level, erosion of local space and time as structures of economic life, and homogenization of social life through

global standards, products, and culture” (Kahler & Lake, 2003, p. 3). This globalist expansion is what has allowed the rise of TGIs and shifted the focus from solving local or regional challenges to global ones on an international scale.

Another key component of the TGI is in the name: initiative. In other words, in order to actually be a TGI there has to be an initiative to solve or improve a certain issue. This is what sets TGIs apart from other transnational organizations because they originate and are structured from a problem solving perspective. This also means TGIs are particularly connected with the concept of public values. While many governmental issues may be conducted as a matter of course, for example infrastructure maintenance, governance based initiatives approach an issue with preconceived values that help explain why the Initiative’s participants or actors feel that problem needs to be addressed, and what values are used in the finding of solutions (Bozeman, 2007). In the case of public health TGIs like Gavi these values can include things like public health, equity, risk aversion, etc.

Alkire and Chen (2004) discuss four schools of thought when it comes to global health values: equity, humanitarianism, human rights, and utilitarianism. Although each has a slightly different basis, philosophical, moral, etc., each school of thought appears across many global health initiatives. Equity is attached to the idea of fairness, or allocating resources taking into consideration disadvantaged populations. Humanitarianism focuses more on virtue ethics and oftentimes are aligned with religion based acts of morality and altruism. A rights based approach is more rooted in legal doctrine, as in, what does an individual have a right to under any given legal framework? Finally utilitarianism is based on the philosophical concept of maximizing utility. All in all, public values and the school of thought behind those values are an important lens from which to view TGIs, because TGIs are uniquely assembled around problem solving

and the execution of public values, even while existing outside of a traditional public administration landscape.

To summarize, Transnational Governance Initiatives are multi actor partnerships that perform a specific governance function or combination of governance functions, formed out of a desire to solve a global issue that stems from a public value or set of public values, and are more and more frequently being created and utilized as an alternative to exclusively government or state administered problem solving initiatives.

2.1.4 Public-Private Partnerships

To broaden the perspective of the research landscape, it is necessary to discuss the literature concerning Public Private Partnerships. TGIs are essentially a specific type of Transnational Public Private Partnership. Westerwinter distinguishes between the two by highlighting the importance of more than just a public private partnership, but also the participation of institutions that do not fall neatly into either category like Civil Society Organizations or private not for profit organizations. It may be helpful to conceptualize a transnational PPP as a cornerstone of a larger TGI.

There is an abundance of research when it comes to the concept of public private partnerships that merits a specific section dedicated to the various theories associated with the concept. There are many different types of intersector relationships. What sets a PPP apart is that “In all cases, the scope of PPP business, and so its potential for success, are constrained *contractually* rather than by market forces or the intervention of a statutory regulator” (Gerrard, 2001). In other words, although they are bound by market and legal forces as other actors are, it is contracts and partnership structure that actually drives the constraints of the partnership itself. These contractually restrained partnerships are diverse in terms of structure. PPPs can take many

different forms such as a Private Finance Initiative, Joint Venture, etc. The Public sector's role in these partnerships is to define the scope of the operation, and to specify priorities and goals.

Meanwhile, the private sector's domain is "to deliver the business objectives of the PPP on terms offering value for money to the public sector" (ibid). Another useful definition is Van Ham and Koppenjan (2001). These authors view PPPs as a "cooperation between public-private actors in which they jointly develop products and services and share risks, costs and resources which are connected with these products and services." This definition is relevant as well because it focuses on PPPs with a service provision function, in line with the Gavi partnership.

In terms of how to classify PPPs there are a multitude of ways to accomplish this. One way is to use the four factors of scope (in regards to size/jurisdiction), partners, level of commitment, and type of objective (Mitchell, 2008, p.10). Scope can exist on the spectrum of local, national, and global. Local relationships tend to be defined more by individual relationships rather than institutional relationships. National partnerships may be more complex, and also more formalized, as a national structure will likewise need more clear guidelines for parties to act in a way that is beneficial to a partnership that is broader in scope. Global partnerships, which will be discussed in greater depth throughout this thesis, are obviously far more complex, and often must be institutionalized to a far greater degree than its small scope counterparts.

The partners factor dives into the different types of actors that can be present in a PPP, obviously state actors, but also a combination of both private for profit organizations and private not for profit organizations, NGOs and CSOs. However, some PPPs are more limited and only contain purely public and purely private partners. In terms of level of commitment, this can exist on a spectrum from a small portion of resources (both financial and personnel based) that each

actor has, being dedicated to the furthering of the partnership on one side, to the various actors pooling together all or most of their resources for the furthering of that partnership on the other side. Finally there is the variable of type of objective. Some types of objectives can be financial, for example, a partnership may try to achieve the maximum amount of financial efficiency, or to lower transaction costs for all actors across a given issue area. Other objective types, like those in health governance, can be concerning the types of health that the partnership seeks to increase, perhaps the cure/control of a certain disease or types of diseases, or more broadly, an objective type can be service provision.

To summarize, Public Private Partnerships are contractually constrained partnerships in which multiple types of actors work toward a common goal. They can be analyzed and categorized using the dimensions of scope, partners, level of commitment, and objective type. PPPs exist in different layers of context that dictate partnership choices and outcome. Although PPPs and TGIs are distinct concepts, many of the basic theoretical and research concepts and dynamics in PPPs are relevant to the study of TGIs as well, and can be viewed as a central partnership to a larger TGI.

2.1.5 Institutional Theory

Pivoting back to Westerwinter's earlier TGI definition, another key concept involved is the concept of institutionalization. Institutionalization is crucial in understanding how temporary agreements or conferences are distinct from TGIs. Many organizations have existed which appear to meet the various components of a TGI, however there are a large number which fall short of the institutionalization threshold. This is because many initiatives are theorized as a spontaneous, one time, or with a limited enough time scope to as not develop an institutional framework that would allow regular, consistent interaction between parties. These might include

for example, one time meetings between public, private, and CSO organizations such as at a conference. It is that continued interaction and the institutionalization of those partnerships which are truly highlighted in TGI research. Since TGIs are a complex type of institution with multiple types of actors and action situations, it is necessary to review the state of the art of institutional theory in order to discover what institutional theories may be utilized to construct a theoretical framework for the research question.

The New Institutionalists

Institutional theory can be viewed from multiple different perspectives. Among so-called 'new institutionalists' there exists three basic schools of thought: Sociological Institutionalism, Rational Choice Institutionalism, and Historical Institutionalism (Hall & Taylor, 1996). Each perspective constitutes different theoretical concepts as to why institutions are created and why they develop in the way they do. Sociological institutionalism obviously approaches from a more sociological or behavioral perspective. The benefits of this type of institutionalism is that it is more inclusive of institutions whose actors have wide heterogeneities. It is also more concerned with behavioral norms and culture building, which is useful when dealing with institutions whose goals are heavily based in norms and values, rather than more definable outcomes like monetary profit or emissions reduced from a climate regulation policy (Meyer & Rowan, 1977).

On the other hand you have the Rational Choice Institutionalists, which approaches institutionalism from an economic perspective. It is also borne out of an analysis of political realist landscapes such as American congressional behavior (Riker, 1980). However, the frameworks that exist in rational choice theory are difficult to apply to situations in which different actors have different motivation sources, uncertain futures/outcomes with decision

making, and whose outcomes usually involve a general public good rather than a specific gain or loss that an actor receives.

Historical Institutionalism approaches institutionalism by answering the question of how historical and current institutional structure decisions govern outcomes. Historical institutionalists “saw the institutional organization of the polity or political economy as the principal factor structuring collective behavior and generating distinctive outcomes” (Hall & Taylor, 1996, p. 937). It can also be used to understand why a similar policy decision in a similar environment can lead to very different outcomes due to the preexisting structural design. In building a theoretical framework, Sociological Institutionalism emerges as the dominant perspective because it allows for the inclusion of less concrete variables such as institutional norms, trust, and culture. However, Historic Institutionalism is also necessary for understanding the context in which such structural and policy based decisions are made. Finally, although clear models developed from rational choice institutionalism are difficult to pin down in less concrete scenarios, its basic tenets that actors will seek out outcomes that are most beneficial to them and their goals, can and does coexist with the other two forms of institutionalism.

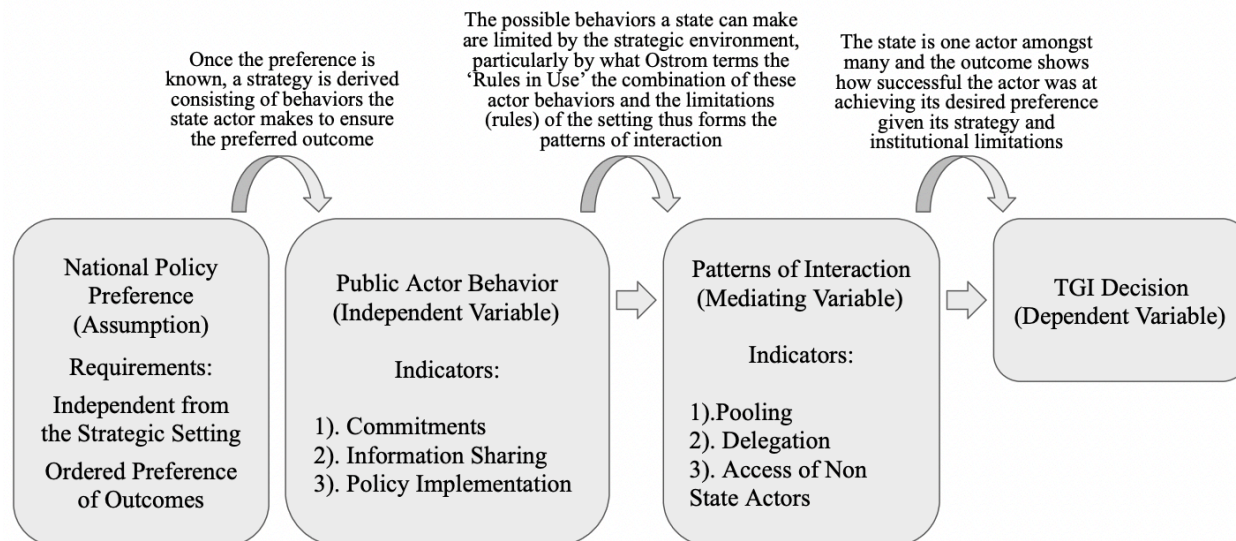
2.1.6 Bases for Institutional Trust

These aforementioned institutionalist perspectives are a good starting point to conducting an analysis that answers questions about institutional behavior, but it does not answer questions of how and why actors continue to participate in an institution. This is where the concept of institutional trust comes in. There is a large body of academic theory on institutional trust Sønderskov & Dinesen (2016), Metlay (2013), Fuglsang & Jagd (2015), but the most relevant to this research is two different bases for institutional trust, institutional-based trust and process-based trust.

The work of Reinhard Bachmann and Andrew Inkpen, refers to the former as "a form of individual or collective action that is constitutively embedded in the institutional environment in which a relationship is placed, building on favorable assumptions about the trustee's future behavior vis-a-vis such conditions" (Bachmann & Inkpen, 2011). In other words, the strength of the institution itself is the basis for trust in the institution itself. Another definition of institutional based trust is by Guido Möllering (2005). Institutional trust, which is "shared expectations derived from formal social structures represented, for example, by signals of professions or associations" (Möllering, 2005).

Process-based trust might also be described as past based trust. It is "tied to past or expected exchanges between specific actors which can be first-hand or by reputation."(ibid) These types of trust bases, institutional and process based, help to view the case from an actor driven perspective, and since this research is more focused on state actors and the inherent tensions between them and other types of actors, these trust bases are critical to understanding actor behavior. Now that a full overview of the literature has occurred, it is possible to discuss the theoretical framework.

2.2 Theoretical Framework



2.2.1 Overview of the Theoretical Framework

The overview of the theoretical framework and specifically the links between the variables is based on what Frieden 1999 termed the “preference-strategy-outcome” approach to understanding how state actors behave in international policy making environments. Broadly speaking this approach has several key characteristics and assumptions. First, “An actor's preferences are the way it orders the possible outcomes of an interaction in an environment of strategic interaction” (pg. 42). However, a key caveat to how to define and identify national preferences is that “For analytical purposes, preferences must be kept separate from other things – most importantly, from characteristics of the strategic setting. Otherwise, we are unable to distinguish between the causal role of actors' interests and that of their environment.” (pg. 39) In other words, national preference must be defined by actions independent of the strategic setting or policy environment. This means that in order to observe each state actor’s preferred preference, it is necessary to look at evidence unrelated to the TGI but still related to the topic of the decisions. This can take the form of national reports on the topic area, budgetary and strategy documents, etc.

The approach continues with the relationship between preference, strategy, and outcome. “In any given setting, an actor prefers some outcomes to others and pursues a strategy to achieve its most preferred possible outcome.... The actor’s strategy is its attempt to come as close as possible to the outcome it most prefers” (pg. 41). For the purposes of this framework, the variable ‘state actor behavior’ can be understood as the individual pieces that make up the state actor’s overall strategy, with the behaviors selected being the most identifiable and observable behaviors within an overall strategy exhibited by state actors in this particular TGI. To incorporate the rules in use and resulting patterns of interaction, “States require ways to obtain their goals, paths to their preferences. These paths must take into account the environment – other actors and their expected behavior, available information, power disparities, differential capabilities, and other features of the strategic setting... In any given setting preferences are fixed, and strategies derive from them... given its preferences, an actor forms strategies based on the possibilities presented by the environment” (pg. 46)

To summarize, preferences are derived independent of the strategic setting. National preferences can be understood as the ranking of possible outcomes of the setting. Strategies are derived to ensure the actual outcome is as close to the preferred outcome as possible, and that those strategies are derived given the restrictions and characteristics of the strategic environment (what Ostrom terms the ‘action arena’). Having now discussed the overall Frieden based approach and its modifications to fit the research structure and to incorporate some of Ostrom’s institution-focused analysis, it is possible to move on to the theoretic definitions and explanations of the individual variables.

2.2.2 State Actor Characteristics and Behavior

As stated before, all state actors in the Alliance are expected to have a pre-existing policy preference. The independent variable is the various behaviors that a state actor employs in an overall strategic attempt to have their preferences carried out by the TGI. As mentioned in the introduction, this research concerns two cases: the UK and Uganda. This is due to the fact that each state represents the two kinds of states represented on the Gavi board: donor countries and implementing countries respectively. So as the selected behaviors are delineated, it is important to note how these behaviors may appear differently for each actor given the difference in resources and expertise between the two states, and by extension the two types of states.

A continuing theme in TGI literature is what each type of stakeholder provides in a given PPP (Wang et al, 2018). States in these alliances provide several assets that help an overall TGI: legitimacy (Jooste et al, 2009), information and expertise (Dawes et al 2012), and various personnel and financial resources (Erdem Türkelli, 2021). These assets are therefore key in selecting the state actor behaviors for the framework, because the behaviors are related to those functions and roles. To that end, the behaviors selected are: declaration and maintaining of commitments, information sharing, and policy implementation. While this list certainly does not reflect every behavior a state may exhibit in these partnerships, each selected behavior comes from existing PPP and TGI literature most relevant to the research at hand, are related to the functions and assets expected of a state actor in a PPP or TGI, and can be observable in the collection of data publicly available for the case.

The first behavior to discuss is the declaration and maintaining of commitments. It is important to discuss this indicator first because it often is the catalyst for the creation of TGI's. As TGI's are formed in recognition of a certain governance problem (Reinsberg & Westerwinter, 2021), states often declare a commitment to enter into such an initiative. The ability of states to

make commitments is central to the process of international institutionalization (Keohane, 1984). This is also related to some of the functions of the state actor in a TGI mentioned earlier, because commitments can be financial (and therefore enacts the public actor function of providing funds to a TGI) or more broad statements of support and confidence (which helps provide legitimacy).

There is a large body of scholarship on the subject of international commitments, but one useful working definition, particularly for *credible* commitments is that “A state makes a commitment to a course of action when it creates a subjective belief on the part of others that it will carry through with a certain course of action” (Gaubatz, 1996, p. 111). This definition therefore focuses on commitments that are widely believed, those that build legitimacy. This belief is crucial as states also make commitments to further their interests and to build credibility of predictable behavior (Simmons, 2000). So how are these commitments observable in this case? When it comes to state commitment in the Gavi Alliance, or state commitment in Gavi’s mission more generally, this can take the form of formal speeches, agency policy announcements/publications, or public statements made by government officials. This behavior contributes to the overall strategy from the preference-strategy-outcome approach by allowing the actor to build (or reduce) different types of resources for the TGI whether that be legitimacy, financial, etc. It increases the number of outcomes of TGI decision making that are more favored by that state actor by strategically increasing or decreasing certain types of support.

Another behavior a state actor engages in within these partnerships is the gathering and distribution of information, which obviously relates directly to the state actor function of providing information and expertise. “Information is a vital resource: governments depend on detailed information and knowledge concerning the physical movements, economic transactions, and business operations of firms and citizens in order to provide basic services and enforce the

law” (Efrat & Newman, 2018, p. 396). Putting this in a TGI context, this means that without robust information, the same governance failures that would occur on a state level lead to governance failures at the TGI level. Hence, states turn to information sharing agreements in which “government authorities formally commit to providing necessary data and information to peers in other jurisdictions” (ibid).

In the context of Gavi, this can include information on a wide array of topics, including public health, supply chain management, vaccine hesitancy, etc. In other words for the purposes of this research, information sharing is indicated by a state actor providing information that the state itself gathered (either via a government agency or through a third party) to either the Alliance in general or to specific relevant actors within the Alliance. Since most of the policy research in Gavi is conducted by the Gavi secretariat, one of the key indicators for information sharing will be whether or not certain states or their affiliated agencies are mentioned as a consultant or as a data source in the various policy research documents or more general Gavi publications relevant to the case decision topic. This behavior contributes to the overall strategy in a similar way as commitments, but in this case the TGI’s resource level being manipulated by the state actor is information and knowledge itself.

Finally, the last state behavior is policy implementation. This behavior is rather self explanatory, it is the action of implementing a given policy. However, within the Gavi partnership, only certain kinds of state actors implement policies over their own state, and that is the state actors representing implementing countries. The reason this behavior is included in this list is to demonstrate both the unique case of this TGI, in that the TGI comes to a decision that a state actor or multiple state actors is expected to carry out in order to continue receiving services, and the unique position that implementing states occupy within the alliance. This behavior can

be demonstrated via country reports from Gavi that specifically assess the performance of a specific state in carrying out Gavi's immunization plans. This is part of overall strategy only in the case of an implementing state actor, who must maintain its credibility as an implementing state in order to receive the benefits of the TGI. To summarize, the state actor behavior observed in this framework falls broadly into three categories: declaring and maintaining commitments, information sharing, and in the case of implementing countries, policy implementation. These variables make up an overall strategy based on the state actor's preference, and allows the researcher to examine the effects of state behavior on decision outcome.

2.2.3 Patterns of Interaction

Before being able to discuss the decision outcome, it becomes necessary to theoretically discuss the venue in which these TGI decisions are being made. Although Frieden's preference-strategy-outcome approach is very useful, in order to reveal more about the specifics of a TGI setting, it becomes necessary to clearly delineate theoretically between the behaviors themselves that make up the strategy, and the features of the setting (TGI) that influences that strategy. Therefore Patterns of interaction, when viewed generally, is a mediating variable, because it is the step in between the state actor's behavior and the decision itself. It can be understood as the patterns concerning how the actor navigates the complexities of the TGI, whether that be the rules of the TGI itself, the differences in power/ability/function between the state actor and other actors in the Alliance, and its own position and function assignments within the TGI. This is not to say that each factor of those rules and interaction patterns being discussed is a mediating variable, because each factor present in the decision making process may affect the relationship between state actor behavior and the ultimate Gavi decision differently, in other words, some factors may act as moderating, confounding, or any other type of variable instead.

When it comes to the general mediating variable, the researcher borrows the “Patterns of Interaction” from Elinor Ostrom’s Institutional Analysis and Development Framework. McGinnis’s guide to using the framework states that “Institutions constitute and generate regularized patterns of interaction by changing the costs and benefits associated with alternative actions and by making available options that would not be feasible to any one individual acting alone” (p. 5). Therefore it is important to discuss certain elements of the formal institutional design that determine the patterns of interaction that occur within the Alliance at large, and specifically the two cases selected. Sommerer et al. posits that three factors in particular affect an organization's ability to come to a decision; (i) pooling, (ii) delegation, and (iii) the access of transnational (non-state) actors. These three factors are also useful in giving the research a more well-rounded look at all aspects of the institution, by incorporating voting rules, authority-based rules, and rules about the type of actor allowed to participate, reflecting more of the TGI sources of complexity mentioned previously.

Before going into those factors however, it is important to specify the level of decision making taking place in the two cases. Ostrom’s framework specifies three types of choices an institution can make, of which Collective Choice: the processes through which institutions are constructed and policy decisions are made, is the primary type relevant to this framework. To a lesser extent, Operational Choice: the implementation of practical decisions, is also at play (McGinnis, p. 11). This is because, in the case of Gavi, those authorized to make operational choice decisions are represented at the collective choice level. This means the operational decision makers, which have more information on the area where any collective choice will be implemented, can anticipate and report potential limitations to the implementation of proposed decisions. It also provides an opportunity for those decisions to be altered in order to incorporate

that feedback before being finalized and implemented. Having described the level of decision making present in the two cases, Sommerer's factors can be discussed in greater depth.

Pooling describes institutional rules that do not allow for any one state to have veto power. In other words, institutional rules that are the most democratic, with the simple majority determining the decision, are rules with the largest amount of pooling. On the inverse, institutional rules that require unanimous consent have the least amount of pooling. There are also intermediate levels, for example, international organizations like the UN, in which some members have veto power, while others do not. Pooling determines the amount of power an individual state actor has in a given situation.

For instance, if Gavi does indeed have the least amount of pooling, small implementing state actors such as Honduras for example can have more power granted to them than the typical international relations forums would allow, because they could prevent a decision from being enacted without the need for coalition building. This modifies the dynamics of typical state actor behavior (or indeed the behavior of all actors in an institution) when it comes to cooperation and compromise. Whereas in an institution designed with maximum amounts of pooling, an actor would have to influence other actors to join their position if indeed their position was not the majority opinion. This indicator of pooling is therefore a moderating variable, because the degree of pooling determines the degree to which an individual state actor is able to unilaterally stop a policy outcome that they do not prefer, thus having a moderating effect on the relationship between state actor behavior and TGI decision. This factor will be observable through the TGI's charter documents, and will be a constant for both state actors, because each state actor will be subject to those institutional rules, and those institutional rules did not change during the time scope of the case.

Delegation refers to institutional rules that allow for the granting of authority to independent supranational bodies to take actions and contribute to decision-making on their behalf. Supranational bodies can be tasked with a variety of functions, such as setting an agenda for decision-making, implementing policy through day-to-day managerial decisions, or monitoring compliance through rule interpretation and dispute settlement. In order to carry out these tasks, these bodies have some autonomy or independence from states in the areas of agenda-setting, policy implementation and dispute settlement. (Sommerer et al., 2021, p. 820)

This factor demonstrates if the institution allows for outside decision input and authority beyond the state actors in the organization. In other words, this factor helps capture the share of power and influence the state actors have vis a vis the rest of the Gavi actors and the independent bodies also involved with Gavi. Like pooling, this is a moderating variable because the degree to which authority is delegated affects the share of power and control the two state actors have in the case. This factor will be observable through various Gavi documents stating the responsibilities of various organizations, and the progress reports they submit.

If delegation is the share of authority and responsibility given to bodies independent of Gavi, then the access of Transnational non-state actors is the share of authority and responsibility given to non-state actors within the Gavi Alliance. The access of Transnational non state actors is the institutional design that allows for formal participation of TNSA's into the organization, this includes the ability to agenda set, vote in interstate governance decisions, etc (ibid, pg. 823). In the case of TGI's, this access is a prerequisite, because PPP's require the formal participation of non-state actors. The degree of this access however yields many different results, especially in combination with the previous two factors. Therefore this indicator will include the proportion of non-state actors to state actors, and the various relationships that each state actor has with the

non-state actors involved in the collective choice level. This can be observable through the documents concerning board members and the constituency they represent. In summary, an analysis of the features of the TGI will illuminate some of the limitations on state actor behavior and describe more thoroughly the process of decision making of the TGI than focusing solely on state actor behavior would allow for.

2.2.4 Decision Outcome of the TGI

Having discussed the state actor behaviors and patterns of interaction, it is possible to conclude with the decision outcome. Different institutions will have different metrics as to observe what the outcome of their respective decision making process was, but it is usually demonstrated by specific policy announcements or internal documents of the partnership such as meeting minute documents or reports. On a TGI wide level, The dependent variable for this is the policy output of the Gavi TGI, specifically the case decisions outlined in the Gavi Board Meeting Minutes documents. But given that the research question is the effects of state actor behavior on outcome utilizing a preference-strategy-outcome approach, the actual dependent variable for each case is whether or not the state actor achieved its preferred outcome. The decision outcome will reveal how successful the state actor is in implementing the behaviors in its overall strategy in order to achieve preferred outcomes in a setting with a large diversity of actors and stakeholders, yet a preexisting broad level of institutional consensus.

Chapter 3. Methodology

In order to answer the research question “How does state actor behavior influence the decisional output of the Gavi Alliance”, a multiple case qualitative study was performed. “Yin (2003) describes how multiple case studies can be used to either, “(a) predict similar results (a literal replication) or (b) predict contrasting results but for predictable reasons (a theoretical

replication)” (p. 47). As the goal of this research is to discover findings that have implications for Transnational Governance Initiatives in general, this makes a multiple case design an ideal choice because it allows the researcher to draw conclusions based on replicated events, but also allows the previously mentioned difference between states to be highlighted and explained as a predictable reason for possible contrasting result.

3.1 Two State Rationale and Most Different Systems Design

In researching state actor behavior, it was necessary to highlight how states within TGI’s in general and within Gavi itself are not a monolith. It stands to reason that the cleavages in motivations, resources, power, etc. all have an effect on their behavior and which behaviors a state may choose to (or have the ability to) exhibit in these Alliances. Since all Gavi Board decisions funnel through an environment in which many states are operating, and then result in a singular outcome, a Most Different Systems Design was the most appealing. This is because these designs seek to explain how two different cases, in this instance, the two state actors and their behavior, can arrive at the same outcome, the outcome being the Gavi Board Decision (Anckar, 2008). In the case of the Gavi Alliance, there are two types of states for which the cleavage between them necessitates a most different design system setup. They are known as “donor” countries and “implementing” countries, also sometimes referred to as “industrialized” vs. “industrializing”.

Donor countries are largely made up of western powers such as the United States, United Kingdom, Germany etc. as well as wealthy countries in East Asia such as Japan and South Korea. They are the states which bring in the majority of the funding for Gavi’s operation. It should be noted that on the donor side, states are clustered into small groups of 3-5, and one state in each group nominates one individual from that state to represent the full group of countries

(Gavi Operating Model, 2023), however as the approved board member is usually a member of the nominating state's government, they primarily represent the nominating state.

Implementing countries are those states which receive Gavi support and are in charge of implementing Gavi policy within their own states. Implementing countries must maintain their public health infrastructure enough so that Gavi's policies will actually be successful in their country. This also means that the stakes for participation in the Alliance and in the implementation process is higher for implementing countries, because failures can result in catastrophic conditions for the country's citizens, including sudden outbreaks of contagious diseases, increasing disease burdens, and whether or not a state's government can maintain the voters' favor based on those successes and failures.

The distinction between donor and implementing countries is therefore quite useful in separating the type of state actors because for one, Gavi separates its two kind of state representatives in this way, so the institutional rules are reflected in this cleavage selection, and for another, separating the group of states along these lines in reality helps to account for many sources of cleavages such as income, region, level of influence and dependence, etc.

3.2 Case Selection

Before discussing the case decisions specifically, it is necessary to discuss why the Gavi TGI was selected in the first place. As discussed earlier the first reason was that it was a service provision TGI, in charge of delivering concrete goods and services. The second was because Gavi is a health oriented TGI. Maintaining health infrastructure and meeting health goals is an undertaking that requires constant investment. Vaccinating today's birth cohort does not guarantee the safety of the next year's birth cohort. Health TGI's also must contend with shifting landscapes in terms of production scale, market share, vaccine demand, and list of approved

vaccines. Selecting a health provision TGI helps capture an area with large amounts of fluidity, time pressure, importance, etc. and thus captures a larger organization dealing with more complex problem solving that is under researched.

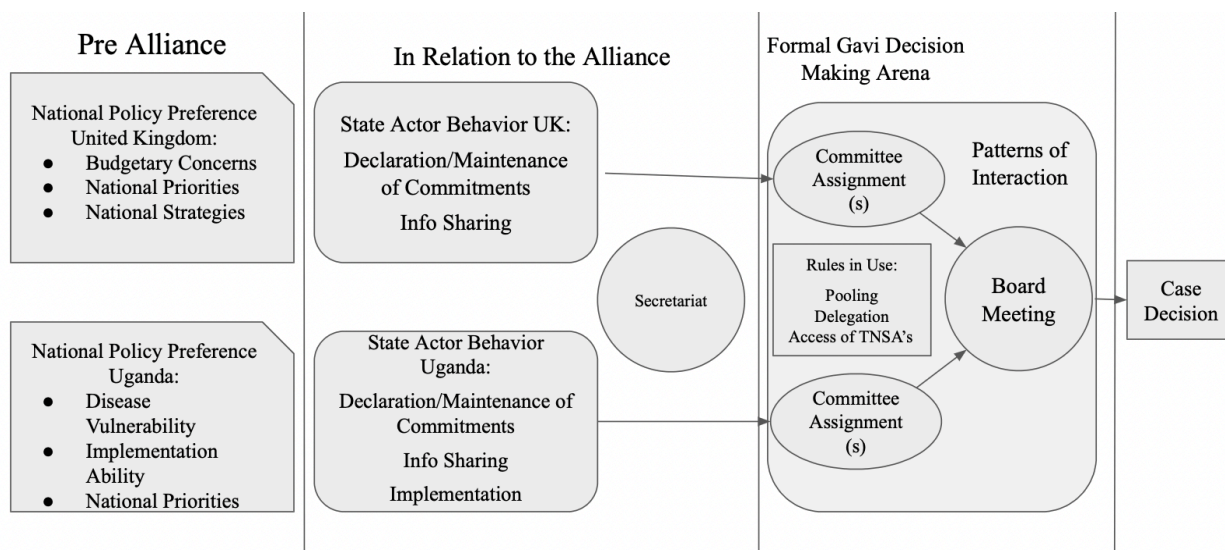
In order to select the cases, a list of decisions reached by the Gavi board between December of 2010 up into the present day was assembled. There are many decisions made at all levels of the organization, but limiting the list of decisions to those of the Gavi Board allowed for the entire Alliance decision making process made at the collective choice level to be included when analyzing each case. This also allowed for the analysis of the level of the process in which states are most involved, and for which the greatest amount of data is available.

Out of this list, there were certain criteria for decision selection. Firstly, the decision had to be concerned with the governance function of Gavi: service provision. In other words, decisions concerning new board members, organizational rules/maintenance, finance mechanisms, etc. were not included, because those decisions were not primarily focused with the organization's purpose. However the programmatic issues were included. Secondly, concerning the state actor, there had to be enough interpretable data, as in a sufficient amount as possible of policy, diplomatic communications, and english language (or verifiable translations) documents had to be publicly available. This is where there are limitations to the research design. In order to fit with the other requirements, there are instances in the following case chapter where there is a lack of direct documentation concerning a certain view of the state actor. However, this was supplemented with several other sources of data that helps account for this gap in available documentation and is more in line with the independence from the strategic setting that is required by Frieden's preference-strategy-outcome approach.

Thirdly, the two state actors had to represent the two different types of state actors in the Alliance: donor countries and implementing countries. This is because the two types of state actors have different motivations, level of participation, and roles within the Alliance. While donor countries primarily provide information, funds, and legitimacy, implementing countries do all of this, as well as having to apply Gavi policy onto its own citizens. The purpose of having a research design that includes the analysis of both country types is based on a desire to have multiple perspectives and organs of the decision making process reflected in the cases and the analysis. After accounting for board specific decisions, service provision relevance, data availability, and two state actor type representation, a case was selected at random.

The Decision selected is one made in a board meeting that took place on November 21st 2013. It was decisions number 12 and 15, concerning the Alliance's response to combating Yellow Fever. The state actors whose actions will be analyzed are the United Kingdom, representing the donor states, and Uganda representing the implementing country states. The United Kingdom was chosen for all the reasons stated above, and because it is one of Gavi's top state donors. This allows the researcher to look at the process from the perspective of an actor who has much more leverage over the Alliance as a primary contributor of financial resources. For Uganda, looking at this state actor allows for more information about a state particularly vulnerable to tropical diseases due to its location, in other words in particular great need of Gavi's services.

3.3 Data Source and Scope



In order to capture the full scope of the cases, data essentially falls into two categories: data specific to the two state actors, and data specific to the case decision. The figure above is for the purposes of understanding how the theoretical framework fits in the real world process of the two cases. The state actor data, particularly those concerning the national policy preference and some, but not all of the state actor behaviors, are required to be much broader in scope because it has to include the national policy preference of that state, their contributions to the Alliance in the past, and any other relevant information. This means that most of the data will be limited to the timeframe between Gavi's funding (2000), and the time of the case decision (November 2013). Data sources for this type of data will include press releases from state officials, policy strategy papers concerning health and/or development policy relevant to the decisions, state budget documents on funding the combating of case relevant diseases or Gavi itself, and any Gavi documents concerning the long term, non case specific contributions the two states made to the Alliance. A smaller separate category is that of Gavi specific information, where an outline of Gavi's founding, operations, and governance is given using Gavi's charters and resources concerning its origins and governance. This will be used to explain Gavi's operating model and

context concerning the strategic setting. This will include details about the rules in use that are relevant for the patterns of interaction section.

For the second category, that of case information specific data, the scope is far more limited to approximately two years before the case decision was passed. This time frame is able to capture the entry into the Alliance of all relevant state actor delegates, and in addition, captures the entire decision making process from slightly before the first mention of the Yellow Fever Stockpile funding problem and the Vaccine Investment Strategy reports concerning whether or not to include the Yellow Fever vaccine among the standard list of vaccines that Gavi provides, these documents are produced by the Gavi Secretariat and occur before the entry into the official decision making process. When it comes to the data needed to capture what each state actor did *within* the formal decision making environment, this is found in the Gavi meeting minute documents. Finally, the information on the case decision will be found in the meeting minutes of the Gavi Board meeting of November 2013. To summarize, data will fall into a few categories, state actor information in general, state actor behavior specific to the case, general Gavi information, and decision making process information.

3.4 Validity and Weaknesses

There are significant weaknesses to the research design that affect the validity of all analysis of findings. There are three main missing pieces of evidence or data sources that would significantly improve the validity of this research. One is concrete policy documents that declare each state actor's preference on the proposed Yellow Fever decision. Unfortunately these documents have not been added to any public archive database as the documents are matters of foreign policy that occurred less than 20 years ago, when documents of this type tend to be allowed to be made public. This could have been solved by picking a case decision from 20+

years ago, but unfortunately this predates any of Gavi's implementational abilities and also there are far less records on the Gavi decide before 2009. Due to the preference-strategy-outcome approach's position on independent national preference though, this has been supplemented somewhat with information on how each state actor has dealt with Yellow Fever outside the Alliance. However a lack of direct statement of preference inevitably calls the validity of the finding of each state actor's preference into question.

Another flaw in the data sources is a lack of complete transcripts from each committee and Board meeting. Although there are meeting minutes documents that do show various members' questions and objections to certain decisions, there is no way to know for certain with the given evidence whether the questions and objections by various committee/board members listed on the minutes documents are indeed a complete reflection of the activities of the actors during each meeting. Interviews with Gavi board members and others involved in the decision making process are thus an obvious way to help supplement the lack of data present in the case. Most of those present in the collective choice sphere of Gavi during the decision making time frame have gone on to high profile positions in their respective governments or in organizations such as the United Nations, making scheduling particularly difficult. Unfortunately although all Board Members and several of those present at the meeting of November 2013 were contacted, none of them agreed to an interview and thus the data is limited to the aforementioned sources. With more time and connections to members of the Gavi Alliance, these data limitations could be potentially overcome, but as it stands the researcher acknowledges that the data available makes validity of the findings much more suspect.

Chapter 4. Cases

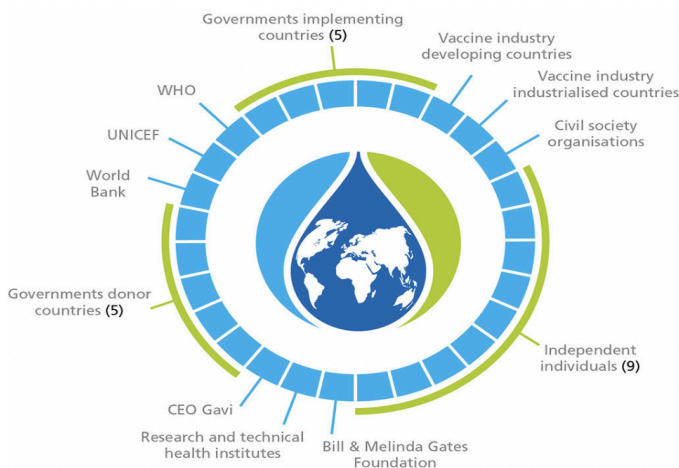
4.1.1 Gavi Origins and Governance

Before going into the specifics of the cases, it is important to discuss an overview of Gavi, its origins, its rules of engagement, and the national policy perspectives of the two chosen states: the United Kingdom and Uganda. The Global Access to Vaccines Alliance was founded in 2000 thanks to the seed money of the Bill and Melinda Gates Foundation, and the contributions of six donor countries, of which the UK was the largest contributor. It was founded to develop programmes that poorer countries could use to acquire and distribute vaccines. The idea was that Gavi would foot the bill for most of the costs, and the country would pay a percentage of those costs. Ideally, the aim was for states to shoulder a greater amount of the costs until the country “graduated” and was able to run and finance all the necessary vaccination campaigns on their own (Muraskin, 2002).

A secondary goal of Gavi was to harness purchasing power to lower the costs of vaccines across the board. Finally, the inclusion of the pharmaceutical industry within the Alliance was meant to ensure that more vaccines were developed and produced, particularly the industry players present in the developing world, thus also driving down costs (Gilchrest and Nanni, 2013). Gavi is a formal institution established in Switzerland and has its own set of charters and statutes. These will be discussed further in the Patterns of Interaction section which will explain the constants of the organizational makeup and how they affect the individual actor’s experience throughout the decision making process.

What is important to know before proceeding with the case information is the makeup of the board seats in the Gavi Alliance. With 30 total seats on the Gavi board, only 10 of them belong to states. Of the 20 remaining, 10 belong to non affiliated board members (those not representing any kind of constituency) and an additional 10 belong to various non state actors like Unicef, Civil Society Organizations, Pharmaceutical Companies, etc. This means that formal

access of non-state actors is quite high as they form the majority of voting board positions, shown in the diagram below (Gavi, Board Composition, 2023).



4.1.2 Gavi Case Decision and Secretariat

Now that the general rules of the Alliance have been established, it is necessary to discuss the specific topic area of the Gavi Board decision that was selected: Yellow Fever. In the mid 2010's, a funding gap had emerged for the global Yellow Fever stockpile that the CEO of Gavi had flagged as an issue of concern. Following a meeting of the Programme and Policy Committee, PPC members "Recommended to the GAVI Alliance Board that it decide to support new yellow fever vaccine campaigns and request the Secretariat to develop a process for the funding of individual campaigns on the basis of robust risk assessments." (Gavi, PPC Meeting Minutes, 2013)

Although this next information concerns a stage of the process that technically comes later in the order of events, after state actor behavior, the information on the decision itself is important to include up front in order to be clearer on what the Gavi policy topic was about. The Secretariat can be described as a 'pre decision-making' phase. The Secretariat is made up of a staff of experts in public health, immunology, logistics, etc. It is their work which generates some

of the raw data with which the task teams, committees, and ultimately the Gavi board use to make their decisions (Gavi, Operating Model, 2023). To that end, the Secretariat generated a report on the Vaccine Investment Strategy (VIS) of Gavi, and of the new vaccine landscape at the end of the strategy's first phase which ended in 2013 (Gavi, VIS Report, June 2013). Before disclosing the specifics of that report, it is important to note that the secretariat is perhaps the most crucial example in the Alliance of delegation. The Secretariat acts independently of state actors and can be requested to perform tasks by other non state actors. The Secretariat generates the bulk of the information by which the state actors, as well as other board members, base their decisions on, and therefore has a crucial role to play within the Alliance, despite not being a voting member of the Gavi Board.

Having discussed the Secretariat's importance as a non-state actor to which large authorities are delegated, it is important to discuss the information the Secretariat generated on the Alliance's Vaccine Investment Strategy. Each vaccine was graded against specific indicators, shown in the table below, then given a green, yellow, or red rating for each criteria (meets the criteria and then some, meets the criteria, does not meet the criteria, respectively). Out of the eight criteria for which data was included in the report, Yellow Fever scored in the red zone for four of them. These red graded criteria were largely related to how many expected cases there were, and the lower number of under 5 year olds infected/killed by the disease as Yellow Fever is not expected to have nearly as many cases or impact on children as, for example, Malaria or Cholera. However, Yellow Fever's higher death rate accounts for the vaccine's yellow scores in deaths prevented. Finally, Yellow Fever scored in the green in terms of cost and value for money (ranking behind only Hepatitis and Rabies respectively).

This presents a picture of a vaccine that is a safe financial bet, fighting a disease that has less potential harm. These findings about the various vaccines being considered for the upcoming phase of Gavi investment, is the primary documents that all of the state representatives discussed in the two cases would have had in order to assess their decision vis-a-vis funding the Yellow Fever Vaccine Stockpile and to fund additional Yellow Fever vaccination campaigns (Gavi, Board Meeting Minutes, November 2013).

Category	VIS Criteria	Phase I Indicator
Health impact	Impact on child mortality	U5 future deaths averted, 2015 – 2030
	Impact on overall mortality	U5 future deaths averted per 100,000 vaccinated population
		Total future deaths averted, 2015 – 2030
	Impact on overall morbidity	Total future deaths averted per 100,000 vaccinated population
Total future cases averted, 2015 - 2030		
Additional impact considerations	Long-term sequelae (yes / no)	Total future cases averted per 100,000 vaccinated population
	Epidemic potential	Disruptive epidemic potential of disease (yes / no)
	Global or regional public health priority	Presence of global / regional (UN) resolution on elimination or eradication (yes / no)
	Herd immunity	Herd immunity threshold (above or below 70%)
	Availability of alternative interventions	Current use of alternative interventions for effective disease control (prevention and treatment) and potential for scale up (yes / no)
	Socio-economic inequity	Disproportionate impact on poor (yes / no)
	Gender inequity	Disproportionate impact on one gender (yes / no)
Implementation feasibility	Disease of regional importance	Burden concentrated in a subset of GAVI countries within same region (yes / no)
	Capacity and supplier base	Capacity to meet GAVI demand (<75% / 75-100% / >100%) and # of manufacturers by 2020 (1 / 2 / 3+)
	GAVI market shaping potential	GAVI demand as % of global demand (<10% / 10-25% / >25% by volume)
	Ease of supply chain integration	Packed volume (cm3) compared to benchmarks
	Ease of programmatic integration	Alignment with other vaccine schedules (fully / partially / not aligned) and significant change in health worker practices/behavior required (yes / no)
Cost and value for money	Vaccine efficacy and safety	Vaccine efficacy (above or below 50%, as defined by clinical endpoints) and safety (evidence or no evidence of causal link with severe adverse events)
	Vaccine procurement cost ¹	Total procurement cost to GAVI and countries, 2015 – 2030
	In-country operational cost	Incremental in-country operational cost per vaccinated person (high / medium / low)
	Procurement cost per event averted ²	Procurement cost per death / case averted

1. Procurement cost includes vaccine, syringe, safety box, and freight 2. Scoring based on cost per future death averted

On the 21st of November 2013, the Gavi board held their biannual meeting. The majority of programmatic discussion and decision making concerned possible strategies for the procurement, stockpiling, and rollout of Yellow Fever vaccines. Decision 12 of the minutes document stated that the board has agreed to a contribution from Gavi to the Yellow Fever Vaccine Stockpile, an increase of 12.2 million dollars for the year 2014. Decision 15 adds on this and states that the board supported new yellow fever vaccine campaigns and requested the

secretariat to develop a process for funding of individual campaigns, resulting in a 114.5 million dollar increase for the period of 2014 to 2018 (Gavi, Board Meeting Minutes, November 2013).

4.1.3 United Kingdom National Policy Preference

Having discussed the specifics of the case decision and before diving into the case and applying the theoretical framework, it is important to discuss the assumptions that precede the framework. It is assumed that the United Kingdom had a preexisting policy preference when it came to the case decision. The United Kingdom unfortunately has not made direct diplomatic communications between the Department for International Development (DFID) and their delegate to the Gavi Alliance publicly available. So it is not possible to state with certainty the exact policy position that the United Kingdom had vis a vis the case decision. However there are several sources of data that can allow the researcher to infer the policy position that the UK had going into the decision making arena.

Firstly, there is the matter of the DFID's most recent strategy publications at the time of the 2013 decision. These publications state the department's priorities and goals. Then there is also information about the budget that the UK had already pledged to Gavi, the length of time the funds were intended to cover, and how much of those funds had already been spent at the time of the case decision. In addition there is also the most recent Multilateral Aid Review (MAR) documents that state the UK's ranking of Gavi's ability to achieve the DFID's development goals, given the UK's overall share of the funding. These data streams provide insight into the UK's assessment of Gavi's effectiveness and progress more broadly. Finally there is also the data available on the UK's (and the DFID more specifically) past actions toward combating Yellow Fever, which are discussed more indirectly in the previous three types of data. Between these four types of data, it is possible to infer the UK's position on the Gavi case decision, despite the

lack of communication documents to the Gavi delegate specifically. However, it is still possible for their policy position to have been the opposite of what the evidence points to, and this inevitably affects the validity of any findings concerning the UK's influence on Gavi decision making.

To begin with, there is the matter of the Policy Publications of the DFID in the years leading up to the case decision. There are several statements in the policy documents that are in line with wanting to fund cost effective vaccines, especially those for diseases with high mortality. The first is: "We will prioritise aid spending on programmes to ensure that everyone has access to ...healthcare; to reduce maternal and infant mortality; and to restrict the spread of diseases" stated in the Operational Plan for 2011-2015 for the DFID Human Development Department. This shows that the UK government's priorities were in line with the proposed Gavi policy, because funding Yellow Fever vaccines would both provide healthcare to communities that otherwise would not access this healthcare, reduce maternal and infant mortality due to the fact that Yellow Fever is particularly damaging to infants and pregnant woman, and would obviously restrict the spread of a disease.

There is also mention of investment in vaccines in the DFID's 2006 White Paper on International Development: Eliminating World Poverty "The UK will, as part of the doubling of our research spending, increase our funding for a new generation of drugs and vaccines against major killer diseases, particularly through new public-private partnerships." This is exactly what the Vaccine Investment strategy does is increase investment in a disease with a high mortality rate: Yellow Fever. These are just two of several examples that highlight the DFID's intention to target high mortality diseases and to invest in vaccines more directly.

Having covered policy and strategy statements, It stands to reason that one of the main determinants of what policy a state like the United Kingdom would prefer is budget concerns. At the time of the decision, the UK had already pledged 1.3 billion pounds which was intended to cover the UK's contribution to the Alliance from 2007 until 2027. In other words at the time of the case decision the UK's funding time window was about 33.4% elapsed. However, the amount of money Gavi had spent up to this point was only 14.8% of the funds. In other words, Gavi could have doubled their spending up to this point and still been under budget with the UK's investment, meaning a relatively small investment in Yellow Fever vaccines would not have amounted to any budgetary concerns for the UK's investment (UK Development Tracker, IFFIm, 2013).

Another potential reason for the UK to be hesitant to support this Gavi decision would be lack of confidence in the Alliance itself. However a Multilateral Aid Review conducted on UK's Gavi contributions for the year 2013 rated Gavi very highly in value for money, and also that Gavi had improved in several of the sub categories of the evaluation since the last report (DFID, Multilateral Aid Review Update 2013 Progress Rating, 2013). Because of this report, it is clear that the British government did not have any reason to mistrust the Alliance or the soundness of an investment with them. The final potential reason for being against the decision is a lack of concern for the particular disease being invested in with the Gavi decision: Yellow Fever. However the UK had recently intervened to aid Sudan in dealing with an outbreak of Yellow Fever, helping to vaccinate 2 million people (UK Government, 2012). So there was a clear and recent precedent for the UK wishing to curb the spread of that disease in particular.

In summary, the UK government had highlighted their policy strategies that were in line with the Gavi decisions, had room in the budget for Gavi to make further investments, and had

released a favorable report as to the UK investment with Gavi at the time of the decision. This in combination with the UK's previous actions in protecting against Yellow Fever leads the researcher to infer that the United Kingdom was in favor of the new Vaccine Investment Strategy including Yellow Fever investment and to fund the Yellow Fever Vaccine Stockpile. However, there is always a chance that were those diplomatic communication records available, they would show an opposition to the investment, and thus it is impossible to state any of the findings with certainty.

4.1.4 Uganda National Policy Preference

Of course, it is also assumed that Uganda had a preexisting policy preference. Unfortunately, similarly to the UK, Uganda has not made its records available concerning diplomatic communications between the Ugandan Ministry of Health and its Gavi delegate. However, this is less surprising as the delegate was the Ministry of Health themselves, so communications from the top health authority to the delegate would not exist because they were in fact the same person. The sources of information for which it is impossible to infer a policy position is slightly different. Budgetary concerns are nonexistent for Uganda as they themselves had no investment directly in Gavi at this time. This is the same reason they conducted no aid review. The most crucial factor in Uganda's decision as a recipient state to the case decision, is how at risk Uganda was for outbreaks of Yellow Fever, and how confident Uganda was that they would be able to deliver and administer any vaccines they received to their citizenry.

On the former point, Uganda is at risk geographically for Yellow Fever due to it being a mosquito borne disease that primarily affects the northern parts of South America and sub saharan Africa. Indeed, shortly before the decision making process began in late 2010, Uganda had suffered an outbreak that had infected hundreds and killed dozens (WHO, 2011). This had

been the first outbreak in several decades, and the outbreak had put officials on alert and more likely to be concerned with preventative measures. “Dr. Stephen Mallinga, the health minister, said a national yellow fever response plan with a budget of \$5,609,000 had been developed. The plan, he said, would focus on phased vaccination in the affected districts, public education, treatment of patients, vector control and continued vigilance to identify additional cases at the health facilities. He also said an appeal had been made to partners to support the response to the outbreak” (OCHA, 2011). For this reason, the researcher has concluded that the Ugandan Gavi delegate was most likely told to support the case decision. This is because Uganda had appealed to the international community to control the spread of Yellow Fever.

On the latter point, based on the implementation of previous Gavi campaigns, Uganda had been able to successfully deliver vaccinations and meet Gavi targets, meaning their co financing agreements were not in jeopardy. There is no apparent reason why the situation on the ground in Uganda would have not allowed the delivery of Yellow Fever vaccines in addition to the preexisting Gavi vaccinations. This information indicates that Uganda’s implementation abilities were not in question and thus this would not have been an issue of concern for the Ugandan Ministry of Health. Having reviewed the lack of budgetary concern and aid review, the state’s increased Yellow Fever vulnerability, and the promising implementation reports that indicate the addition of Yellow Fever vaccinations would not have jeopardized Uganda’s co financing agreements, the researcher can infer that Uganda would have advised its delegates to support the Gavi decision.

4.2 State Actor Behavior

4.2.1 United Kingdom

Declaration of Commitments

Gavi was founded on the basis of a collection of stakeholders declaring a global health commitment, namely to reduce the number of children that went unimmunized, and to reduce the number of preventable deaths as a result. Looking at the UK's financial commitments, at the start of the Gavi partnership in 2000, there were a handful of countries which had pledged the lionshare of Gavi's funding, one of which was the United Kingdom. "The UK announced that it would purchase 250,000 shares in the Global Fund to vaccinate 250,000 additional children, at a value of £3 million." (Center for Public Impact, 2016) This was a large share of Gavi's start-up funding. Since then the United Kingdom has continued to raise their financial and other resource commitments. This includes 137 million from 2000 to 2010 and an additional 1.4 billion from 2011 to 2015 (Gavi, UK Donor Profile, 2023). The donation of these funds by the United Kingdom has affected Gavi decision making by increasing the financial resources of Gavi itself. 1.4 billion pounds opens up significant room for vaccine investment, health systems strengthening, and vaccine delivery. However, these financial commitments tend to be taken into account *before* the decision making process, because the Gavi Secretariat begins researching and proposing policies based on the resources it already knows that Gavi possesses. For example the Secretariat won't propose a policy or program they know will cost millions or billions more than Gavi already possesses, as this would waste valuable resources and time.

Publicly stated approval of causes/organizations by government officials is also a way of demonstrating commitment, because it is a spending of political capital. David Cameron, the UK prime minister at the time of the 2011 pledge drive, spoke highly of the UK's relationship with Gavi, stating that "Gavi was one of the very top performers in our root-and-branch review of the agencies that deliver British aid because it demonstrates tangible results. Britain will play its full part and our support to Gavi will help vaccinate over 80 million children and save 1.4 million

lives. That's one child vaccinated every two seconds for five years" (ibid). The UK government also declared their intent to continue funding Gavi in a press release "As part of the Government's drive to deliver maximum value for taxpayers' money, the International Development Secretary promised to increase funding to high performing organisations" (National Archives, 2011). Public statements of trust relate back to the discussion of process based trust from Mollering's 2005 work, about it being "tied to past or expected exchanges between specific actors which can be first-hand or by reputation." In this case David Cameron is using his statement to encourage process based trust in Gavi by other potential donors and actors through boosting their reputation.

These displays of commitment also extended to combating Yellow Fever, British International Development Secretary Justine Greening said "British support will protect millions of Sudanese people against yellow fever and stop this regional outbreak from turning into a nationwide epidemic. The international community needs to continue to help" (Department for International Development, 2012). This shows also a commitment and encouragement of others to combat Yellow Fever specifically. In summary, the United Kingdom's behavior of the declaration and maintenance of commitments to the Gavi Alliance in general has allowed Gavi to tackle a wider range of issues and fund additional programs and encouraged process based trust in the institution and in its goal of fighting Yellow Fever.

Information Sharing

The UK has not just contributed financial and political support, they also have furthered the Alliance through information sharing, the second indicator of state actor behavior from the theoretical framework. One of the ways this is discoverable is due to the knowledge products put out by Gavi on a variety of subjects, many of which site UK government information such as

from the UK Department for International Developments (DFID) (Gavi, Lessons on Market Commitment, 2011), or discuss lessons learned from partnerships or projects with DFID. This information sharing helps develop the institutional knowledge of Gavi by increasing its information resources.

However, when it comes to Yellow Fever and its vaccine specifically, the United Kingdom's government does not appear to have provided information to the Gavi Alliance. In the Vaccine Investment Strategy Report compiled by the Gavi secretariat concerning the assessment of both Yellow Fever's disease impact and its vaccine impact, No UK government agency is included among the list of experts consulted. However there are several UK academic institutions that are included (Gavi, VIS Report, June 2013). For this reason, there is no evidence to support that the UK government shared information with the Gavi Alliance concerning Yellow Fever and/or its vaccine that was used in the specific case decision making process. Therefore, there is no evidence that the UK's behavior of information sharing had any effect on decisional output.

Domestic Policy Implementation

As for the third indicator of state actor behavior, the UK government is not responsible for Gavi policy implementation over its own constituency. This is because Gavi only implements programmatic decisions in countries with a need for Gavi's services, namely co-financed supplies of vaccines, which the United Kingdom is able to obtain without Gavi assistance. For this reason, domestic policy implementation of the United Kingdom did not impact the decisional output of the November 2013 Yellow Fever Decision.

4.2.2 Uganda

Declaration of Commitments

Uganda does not have the same resources as the United Kingdom has, so its commitment to Gavi and its mission manifests differently. If donor countries make commitments in the form of encouraging donations, then implementing countries make commitments in the form of encouraging similar states to implement programs of immunization, both generally and specifically with the Gavi Alliance. One way Uganda shows its support is by encouraging similar states to support immunization and disease prevention efforts. For example in April of 2012, Uganda hosted an intergovernmental panel on vaccines and immunization, with the attendants drafting a declaration that included concrete statements in favor of Gavi's mission: "It is not acceptable that every year, 1.7 million children die from vaccine-preventable diseases, We members of Parliament from across the globe, are committed to advocating for vaccines and immunisation, a cost-effective public health intervention for improving the health of women and children" (Gavi, International Parliamentarians Commit to Immunisation, 2012). By providing a forum where this kind of declaration can be created amongst states, Uganda increases the number of states and the extent to which those states are willing to participate in Gavi programming. However, this affects decision making far more broadly, for example if Uganda encourages X state to participate in Gavi and apply for programming, the effect on general Gavi Policy is simply that that policy will apply to that one additional state. Unless the decision making involved concerns one state specifically, these kinds of commitments and encouragement of participation by the state of Uganda does not have any observable effect on Gavi decision making or the case decision at hand.

However, going beyond just encouraging different state's trust in Gavi, Uganda also plays a role in Gavi's trust in implementing states by successfully following through on the commitment to successfully implement Gavi programs. In 2002 after applying for Gavi

co-financing, Uganda was one of the first nations to implement the Hib meningitis vaccine, eliminating the disease from Uganda in just four years. "We are proud of the results of this study. It's encouraging to know that these kinds of interventions in Uganda and elsewhere are making a significant contribution towards achieving the Millennium Development Goal of reducing mortality in children less than 5 years of age," said Dr Sam Zaramba, Director General of Uganda Ministry of Health (Gavi, Deadly Disease Eliminated in Uganda, 2008). Gavi also celebrated this early achievement, with Executive Secretary of the Alliance Dr. Julian Lob-Levyt stating "GAVI welcomes these extremely positive results, thanks to the collaborative efforts of the Ugandan Ministry of Health, the WHO, UNICEF and other partners, we can applaud a true success in controlling this deadly disease that has too often claimed so many lives" (ibid).

These early commitments and maintenance of those commitments on the part of Uganda, and implementing countries in general, helped foster international trust in Gavi by demonstrating that Gavi could achieve its disease prevention goals. Although it is impossible to say how much this particular success affected Gavi decision making, Uganda is ranked highly on its follow through of implementation targets and helps boost the institution's credibility for implementational success. In the case of the Yellow Fever decision, there is no direct evidence that Uganda's implementational trustworthiness affected decision making. That being said, since the number of countries at risk for Yellow Fever is more limited, the presence of trusted implementing states among those most in need of Yellow Fever vaccinations, was more likely to help the decision's chances rather than hurt. But because we only have information about Uganda's participation and not the other Yellow Fever prone states, extensive research on the states beyond the scope of this research would be required to make any conclusive statements as to the impact of Uganda's implementation commitment follow through on the Yellow Fever

investment decision specifically. In summary, Uganda's commitments helped build institutional trust by providing early successes in the organization's history, as well as maintaining a good record of implementing Gavi policies since.

Information Sharing

In the same vein as the trust fostered by effective implementation strategy, Uganda also uses these implementation commitments to share information on supply chain bottlenecks, logistical concerns, vaccine hesitancy, infection rates, and other types of information that Gavi can use to perfect their collective and operational decision making. The government of Uganda submits annual progress reports to Gavi, including cost analyses, identifying problem areas, reporting successes/failures etc. In addition, the government of Uganda also submits proposals via dialogues with Gavi that includes the sharing of information concerning capacity for aid delivery, cost estimations, etc. (Gavi, Uganda Documents, 2022).

For example, a 2008 application for Health Service Support included details on where the bottlenecks of the vaccine delivery system exist when it comes to delivering aid: "Supplies are usually delivered at district level, however they get stuck there because of lack of transport to take these supplies to health centres. Since there are 80 districts and (there are enough vehicles already purchased to cover 12 of them) this proposal seeks funding to purchase vehicles for the remaining 68 districts" (Gavi, Proposal for HSS Support, 2008). These types of updates allow Gavi to make more cost effective decisions. For example, if they know that there are not currently enough delivery trucks in Uganda to deliver vaccines from preexisting programs, they know that they should not continue wasting money on those programs or additional programs without first addressing the transportation needs.

Another example comes from a 2011 proposal for new and underused vaccines: “A national cold chain review and inventory was conducted in all health facilities providing immunization in 2007. As a follow up, a cold chain assessment was done countrywide in 2010... The programme used ... support to procure cold chain equipment to close the gaps at national and sub-national levels identified in the cold chain review and inventory. There is adequate space to introduce PCV at national, district and health facility level” (Gavi, Proposal for NVS-PCV Support, 2011). By sharing this information, Gavi knows that were it to decide to approve NVS-PCV support, Uganda had the capacity to implement that support effectively. From the country reports and service proposal documents submitted by the Government of Uganda, it is possible to trace back a consistent history of information sharing and self reporting of both positive and negative updates that have helped Gavi make more cost effective decisions and helped Gavi be aware that more ambitious projects are possible in the state of Uganda.

To pivot back to the case decision more specifically, when it comes to Yellow Fever, Uganda is required to keep the WHO updated on any Yellow Fever cases that occur in Uganda so that the international community can stop the spread and also assess the need for emergency vaccine deployment. In past outbreaks, Uganda has been in compliance with those reporting requirements.

On 23 December 2010, the Minister of Health in Uganda reported 3 laboratory confirmed cases of yellow fever, detected through a special investigation following an outbreak in the country in October 2010. The cases were reported in 3 districts of Abim, Agago and Kitgum near the border with South Sudan... Following field investigations by the Ministry of Health with the support of WHO, Médecins Sans Frontières (MSF), the US and others partners, a decision was made to conduct a reactive mass vaccination

campaign in 5 districts (Abim, Agago, Kitgum, Lamwo and Pader). On 31 December 2010, WHO deployed three additional experts to support risk assessment, and planning and implementation of control measures which include strengthening of the surveillance system and the vaccination campaign (WHO, 2011)

The 2010 Yellow Fever outbreak indicated that Uganda's information sharing was vital in determining vaccine demand as well as risk level, outbreak spread, etc. however this information sharing, as well as the previous examples, were limited to information specifically about Uganda. Any Yellow Fever case information shared by Uganda, or indeed any state in which an outbreak occurred, has a large impact on Gavi decisional output because the information would determine what actions were necessary for the Alliance to take in order to curb the spread of the disease. In this case the outbreak of Uganda helped spur on Gavi to develop the Yellow Fever roadmap as board documents in 2011 reference the Ugandan outbreak as cause for alarm and action.

Domestic Policy Implementation

As mentioned in the declaration and maintenance of commitments section, Uganda is responsible for the success of in-country immunization programmes and other related efforts. This can take the form of laws, appropriations money, calling for task forces etc. The aforementioned Hib meningitis campaign of the early 2000's was a good example of this domestic policy implementation. "On 1 June 2002, the Uganda National Expanded Programme on Immunization (UNEPI) introduced Hib vaccine nationwide in a pentavalent formulation" (Lewis et al., 2008). UNEPI is Uganda's state run immunization and disease monitoring program "The program offers the following services; 1. Routine Immunization services which are provided through static health facilities. 2. Supplemental Immunization Activities (SIAs) which

are organized periodically to interrupt the transmission and spread of diseases like measles or polio eradication and MNT elimination. 3. Accelerated routine immunization 4. Surveillance and Outbreak response” (UNEPI, 2008) UNEPI’s pentavalent vaccine was highly effective in combating hib meningitis, and by 2006 the disease was eliminated among Ugandans (Lewis et al., 2008).

Uganda’s early success with implementing Gavi policy and programmes, leading to the elimination of the targeted disease, therefore helped build a process-based trust on two levels. The first was that Gavi could build trust based on Uganda's proven successful track record, and more broadly potential donors and actors could build trust based on Gavi's successful track record as a whole. In this way Uganda’s successful domestic implementation of Gavi’s policies helped build Gavi’s trust in the government of Uganda, therefore making Gavi more likely to support investment in programmes relevant to Uganda in the future.

When it comes to Yellow Fever specific policy implementation, Uganda had exhibited relatively quick and effective vaccination programs when outbreaks had occurred in the country leading up to the case decision. According to a report from the Ugandan Red Cross Society:

As per the standard requirement, the Ugandan Government conducted emergency vaccination campaigns following the laboratory confirmation of 10 cases in Kitgum, Lamwo, Pader, Abim and Agago districts with the help of 996,180 doses of the Yellow Fever vaccine received from the Interagency Coordination Group (ICG). This intervention benefited 727,255 residents in the five districts with an average coverage of 80.3% that met the recommended standard to disrupt the outbreak. The Minister of State for Health together with the WHO Country Representative launched the vaccination campaign in Kitgum Matidi on 21st January 2011 (URCS, 2011).

This quick and wide reaching vaccination campaign showed the government's cooperation with the ICG and demonstrates that the international authorities concerning Yellow Fever vaccination programs could rely on the State of Uganda to implement effective vaccination programs. In addition, the government's relationships with these external organizations such as the WHO and the various Red Cross organizations involved in the campaign showed a robust communication system when it came to adapting immunization programs and addressing specific vaccination and logistics needs for more specific regions of Uganda. It is important to remember that while Yellow Fever has occurred in Uganda in the past, it would not have been the only country that the Gavi Yellow Fever Policy would potentially apply to. This means that Uganda's domestic policy implementation would only affect Gavi decisions concerning the vaccination campaigns and vaccine stockpile needs specific to Uganda.

There are other Gavi decisions that focus solely on one implementing state's vaccination programmes, in which that state's domestic policy implementation capability would be the primary matter of concern. However, in the case of the Yellow Fever Policy, Uganda's concerns, as one of the many states vulnerable to Yellow Fever, would have largely arisen in the operational choice sphere, rather than the collective choice sphere relevant to the specific case decisions. To summarize, Uganda primarily had an effect on decisional output via the behavior of information sharing and domestic policy implementation. This is because by exhibiting those two behaviors, Gavi was able to build trust in the State of Uganda and vice versa over time, as well as gain information that could shape decisional output based on the needs of the country.

4.3 Patterns of Interaction

4.3.1 Constants and Rules in Use

Pooling

In terms of the patterns of interaction indicators discussed in the theoretical framework and how they are shaped by the institution's rules of use, these can be found within those founding documents, which are applicable to both state actors as well as all other actors. Pooling, the first indicator is addressed in Gavi Statute article 15 making it a constant for both state actors: "The Board will use all reasonable efforts to make decisions by consensus. If no consensus can be reached, any decision of the Board shall require a two-thirds majority of Board members (or their Alternate Board Members) present and voting" (Gavi, Gavi Alliance Statutes, 2020). This means that no individual member has veto power, and that the threshold for decision making is higher because it requires two thirds of voting members to agree as opposed to a simple majority of one half.

In practice, this means that a potential actor to the Alliance knows that if they were to hold a dissenting opinion on a decision, they could not simply veto it themselves. It would require convincing a maximum of 1/3rd (minus themselves) of the voting board members to side with them. This is quite an undertaking in an organization that has overwhelming consensus. For that reason, Gavi's pooling rules discourages actors who are in disagreement with Gavi's core mission from joining the Alliance in the first place. This also means that pooling does not have as much of an effect on the patterns of interactions within the decision making process itself, but rather has an effect on who becomes an actor in the process in the first place. For this reason, in the context of the case decision, and within the scopes of this research, pooling rules did not affect the case decision.

Delegation

Moving on to the second indicator, Delegation to external supranational bodies is a hallmark of TGI's in general and Gavi is no exception. Beyond simply just the makeup of the

board itself, supranational bodies such as Unicef, the WHO, and other international partners are given large amounts of discretion in implementing Gavi policies, and bringing up topics for meeting agendas. Unicef for example, as the institution in charge of much of Gavi's service delivery, must make day to day delivery decisions that the Gavi board is not privy to. WHO, as the leading expert in health policy has the ability to bring certain policy concerns up at board meetings, or to in general make policy recommendations. This indicates that there is a large amount of delegation of authority to supranational bodies. In addition, state actors within the Gavi board will often delegate certain tasks to the Gavi secretariat, which is run by independent staff members and not states (Gavi, Partnership Model, 2023). In short, delegation is present in all levels of the Alliance, as no part of Gavi decision making, agenda setting, policy implementation, etc. is conducted solely by states. This has a large effect within the decision arena for the case decision. To explain why, it is important to review the VIS document brought up previously.

The VIS had an independent expert committee (IEC) that was made up of independent experts representing supranational aid and health organizations, as well as partners from within the Alliance. The IEC recommended that in the case of Yellow Fever “The IEC supported the "base case" vaccination strategy of one-off, mass campaigns in selected countries based on a WHO risk assessment... The IEC felt that, given the relatively small size of the overall investment in a limited number of campaigns within an established policy environment, support for expanding yellow fever vaccination could be worthwhile considering, depending on the resource envelope.” (Gavi, VIS Report, 2013). This means that the topic of Yellow Fever in the overall strategy was analyzed, critiqued, and recommended by individuals outside of the Alliance. In essence, independent supranational bodies were delegated the role of policy analysis

and recommendation in the topic of the case decision, affecting the decision by affecting the initial recommendations that both state actors received about the VIS for 2013.

Access of Transnational Non State Actors

As the delegation and governance sections stated, access by non-state actors within the Gavi Alliance is high. This means that states are not the only ones with decision making power within the decision making body of the Alliance, and that other interests besides states are represented on the board level. In essence, state actors must compromise and take the interests of non states into account when operating within the Alliance. This does not manifest the same for the two state actors due to their different roles and jurisdictions within the Alliance.

The UK on the one hand is primarily concerned with matters of finance and governance policy, meaning the non-state actors it is most involved with in the decision making process tend to be focused on the same matters such as the World Bank and the Bill and Melinda Gates Foundation. These organizations in cooperation with the UK helped develop the financing mechanism for Gavi, IFFIm. On the other hand Uganda is primarily focused with implementation, meaning it is more aligned with non-state actors such as Civil Society Organizations, Unicef, and the WHO. The delivery partners work closely together in the operational choice sphere. In short, access of transnational non state actors contrasts with the previous two variables because it has different effects on the different state actors. As covered in the delegation section, these non-state actors had an effect on the decision making process both by shaping the policy during the secretariat stage, and by using their voting power in the ultimate approval of the Gavi case decision.

4.3.2 The UK Throughout the Decision Making Process

Now it is time to recenter the perspective of state actors in the description of the cases. In the case of the United Kingdom and the Yellow Fever decision, It is important to discuss the meetings, roles, and attendance of the United Kingdom Representative at the time: Donal Brown. Donal Brown was nominated to the Gavi Board in July of 2013 during the meeting that took place in June of that year, taking over from fellow UK representative and DFID senior staff member Simon Bland. Brown was also nominated to the Governance Committee at the same meeting and for the same timeframe (Gavi, Board Meeting Minutes, June 2013). At the time, Brown was working as Head of the Global Funds Department for the DFID, and had previously worked in the DFID's Policy Division, Inter Agency Ebola Taskforce, and several other Africa focused directorial roles (IFAD, 2010).

It is clear from the expertise of their representative that the United Kingdom wanted to send to the Alliance someone with expertise in International Development and policy making. This is in keeping with representatives that the UK has sent throughout Gavi's history. What can be inferred from this is that the British government views their participation in the Alliance as primarily being connected with development policy (and the finance policy that goes along with it), as well as general skills of diplomacy. This is in contrast with the skills of the delegates that Uganda and implementing countries more broadly tend to send to the Alliance, which will be discussed in more detail in the Uganda patterns of interaction section.

Donal Brown entered Gavi somewhat in the middle of the Yellow Fever policy making decision process. Discussions on the beginnings of a "Yellow Fever Roadmap" date back to October 2012 during a meeting of the Programme and Policy Committee (Gavi, PPC Meeting Minutes, 2012). The roadmap's progress is also mentioned in the CEO's report to the board in December of that year (Gavi, Board Meeting Minutes, December 2012). In April of 2013, the

meeting of the PPC that preceded the general board meeting at which Donal Brown was nominated, The PPC recommended that the Alliance prioritize in its Vaccine Investment Strategy those vaccines with the greatest potential for health impact, and highest value per money (Gavi, PPC Meeting Minutes, 2013). In other words, cheaper vaccines that had a greater chance at preventing more severe health outcomes such as death or lifetime disability.

Although Donal Brown was not a voting member at the June 2013 meeting, he was in attendance as an observer representing the UK constituency (Gavi, Board Meeting Minutes, June 2013) and thus was privy to the same information and discussions concerning the Vaccine Investment Strategy, and specifically Yellow Fever's proposed prioritization. Yellow Fever was designated among the highest priority vaccines "included on the basis of epidemic potential and value for money outcomes" (ibid). Thus Donal Brown was aware that the Programme and Policy Committee had deemed Yellow Fever an appropriate investment, and would have been aware this meant the decision was already supported by board members specializing in developing Gavi policy and representing the constituencies of the WHO, Bill and Melinda Gates Foundation, the World Bank, the implementing countries of Honduras, Mali, and Afghanistan, research and technical institutes, civil society organizations, and his fellow donor countries of Norway and the United States (Gavi, PPC Meeting Minutes, 2013). This is important for two reasons. One, he knew that the VIS policy in this instance was in line with his constituency's position, and two, he knew that the VIS policy had broad consensus over a diversity of stakeholders. This means that he was aware that no coalition building or influence was required in order for Gavi to enact a decision in line with UK policy.

Having discussed the awareness Donal Brown had concerning the status of the case decision and the number and type of its supporters, it is possible to discuss Donal Brown's

activities in the Gavi decision making process as a whole during this time. Donal Brown's role within the Alliance was as a member of the Governance Committee. The Governance committee handles nominating people to the board and other various committees, as well as handles governance policy of the Alliance itself (Gavi, Governance Committee Charter, 2020). The committee had slightly more frequent meetings than the board or the PPC, and so Brown attended two Governance committee meetings before the general board meeting in which the Yellow Fever decision was made. At the first one, held in September of 2013, the most pressing issue (and the one most relevant to assessing the patterns of interaction for Gavi as a whole) was deciding what questions the Alliance wanted answered from its proposed McKinsey & Co.

Evaluation:

The Committee agreed upon four key and inter-related areas that the self-assessment must address: a) Board composition: What constituencies should be represented on the Board and what purpose will they serve in the GAVI Alliance's next phase of operations? How many of each constituency are needed? What complementary roles do the unaffiliated members play? b) Committees: What kind of composition is right for each of the committees and who among Board members, alternate Board members, delegates, and experts should sit on them?... c) Individual commitment and turnover: How does the GAVI Alliance get a long-term, sustained commitment from individual Board members so that the Board does not have to restart conversations each meeting with a new group of people around the table? What stands in the way of that, particularly with the representative Board members who share their seats among large/diverse constituencies? d) Agility/speed of decision-making: How does the Board become more nimble, flexible,

and agile in its decision-making while still being inclusive and thorough? (Gavi, Governance Meeting Minutes, 2013)

The results of the McKinsey evaluation is outside the scope of this research, but the questions posed for the evaluation reflect a repetitive theme within Gavi and TGI's more broadly. When you have a diverse group of stakeholders that mutually agree that a problem needs solving, consensus of policy decision making is commonplace. However, the inverse of this is that the purpose of each individual stakeholder within that decision making stage is far more elusive and unknown. When the research (Secretariat) phase for a programmatic policy already includes the approval of an Independent Expert Committee which includes both Board Members and unaffiliated individuals, Gavi's institutional framework therefore provides no real forum once the policy is officially proposed within the decision making arena for an individual actor, state or otherwise, to try and exert influence in order to change a specific policy. It only provides a forum for that actor to exert influence either in the state actor behavior phase before the decision making arena (by increasing or decreasing the alliance's resources, whether that be financial, informational, or trust/legitimacy based), by persuasively approving or disapproving the policy in the research stage also before the decision making arena, or by exercising their board vote (which only succeeds in reversing a decision if the decision is already controversial).

Unfortunately, this also means that this segment of the research structure of trying to determine an individual actor's role in influencing a specific decision within the patterns of interaction/decision making arena stage is nearly impossible. What these McKinsey questions reflect is that much of the influence of state actors, and indeed any actors within the decision making stage where the actors interact, is in how these actors drive systemic changes over time, particularly through Committees such as Governance and Finance. Having established that Donal

Brown's Governance Committee Meetings had no impact on the case decision (beyond simply nominating individuals to the same constituencies), it is possible to move on to the final Board Meeting of 2013 in which the case decision was made.

Going into the meeting, the CEO's report stated:

We have not yet finalised... the Board's decision on the vaccine investment strategy (VIS). However, current projections suggest that we will require only a modest increase in the average level of annual donor contributions 2013-15 to fully fund our current portfolio of vaccines (including additional introductions post- 2015). In addition, we may require some incremental resources to fund the VIS and any other new programmes that the Board approves as part of our 2016-20 strategy. (Gavi, CEO Report, 2013)

This reaffirms that Gavi's plans for expanding certain immunization programs were not seen as being a departure from Gavi's norms, and that large increases in budget were not viewed as necessary in order to expand the VIS.

When it comes to discussions and recommendations for the new Vaccine Investment Strategy, the report previously discussed concerning the VIS was again presented at the general board meeting, along with the recommendations of the previous committees that had discussed the report. "The PPC, and where appropriate, the AFC and the EC recommended to the GAVI Alliance Board that it decide to support new yellow fever vaccine campaigns and request the Secretariat to develop a process for the funding of individual campaigns on the basis of robust risk assessments" (Gavi, Board Meeting, November 2013). This indicated there was broad support amongst multiple committees that the UK was not represented in that the Vaccine Investment Strategy include resources for Yellow Fever campaigns.

As stated previously in the Gavi Case Decision section, the Board ended up passing both the Yellow Fever Stockpile Decision, and the VIS decision which included the funding of Yellow Fever vaccines and immunization programs for those vaccines. As there are no listed objections from any actor concerning either Yellow Fever decision, indicating the decision was not unanimous, the minutes indicate that both decisions were passed unanimously, and that no voting members declared a conflict of interest and/or recused themselves for either decision. This indicates that Donal Brown voted in favor of both decisions, however his vote would not have changed the Gavi decision had he voted against the rest of the body.

Overall, the first case of the United Kingdom as a state actor showed that state actors have the greatest effect on decisional output when it comes to their overall behaviors rather than in the decision making environment of the Gavi Alliance. There is no evidence that Donal Brown as a representative of the state actor attempted to influence or change the decision once the information and recommendations concerning the Yellow Fever issue made its way to the organs of Gavi in which he was a participant.

4.3.3 Uganda Throughout the Decision Making Process

Moving on to Uganda's participation in the decision making sphere and the consequent patterns of interaction, unlike the United Kingdom's state representative, in order to include all of the decision making process, it is necessary to include two state representatives for Uganda, Dr. Christine J.D. Ondo, and Ruhakana Rugunda. This is because in the case of the latter representative, the meeting in which the Yellow Fever decisions took place was in fact the representative's first meeting.

To begin with, a brief description of Dr. Ondo and her participation/role within the Alliance. Dr. Ondo was nominated to the board in November 2011 (Gavi, Board Meeting

Minutes, November 2011). Dr. Ondoa was Uganda's Minister of Health at the time of her participation in the Gavi Alliance, having a background in medicine, hospital administration, and public management (Ondoa, 2018). This is because implementing countries value expertise in public health and administration over international development and diplomacy, due to their roles as implementers of Gavi health policy. Dr. Ondoa was nominated to the Executive Committee in December of 2012 (Gavi, Board Meeting Minutes, December 2012). The Executive Committee is responsible for monitoring the overall budget of Gavi, and making sure that the proposals sent by other committees are financially feasible. Crucially though, decisions as to whether or not the Alliance will spend any given amount of money on any given program, is still in the hands of the Board itself (Gavi, Committee Minutes, June 2013). There were several meetings of the Executive Committee in between Dr. Ondoa's nomination and the ultimate Yellow Fever Decisions.

Two are irrelevant, but the meetings in the latter half of the year, specifically the Executive Committee meeting of November 1st 2013, included this decision: "Approve an amount up to US\$1.5 million to be added to the 2014 Business Plan to implement the Board's Vaccine Investment Strategy (VIS) decisions through Secretariat and partner activities as described in section 5.2 of Doc 07 to the Programme and Policy Committee" (Gavi, Committee Minutes, November 2013). In other words, the Executive Committee increased the amount of funds available for the 2014 Business Plan in order to enable more investment for the vaccines of the Programme and Policy Committee's, and ultimately the Gavi Board's choosing. In this way, the Executive Committee had an effect on the overall Yellow Fever Board Decisions, but because this was approved by the committee more broadly and there is no evidence that there

any controversy existed on this point, Dr. Ondo and the state of Uganda specifically had no influence over the case decision as a result of these meetings.

Moving on from the Executive Committee it is possible to discuss the second Uganda representative, Ruhakana Rugunda. Mr. Rugunda took over from Dr. Ondo as Minister of Health in 2013. At the time of the decision, Mr. Rugunda had not yet been nominated to any committees, so his participation occurred purely at Board Level. As discussed in the UK Patterns of Interaction Section, the November 2013 general board meeting approved the categorization of the Yellow Fever Vaccine and agreed it needed to be stockpiled. As a voting member. Mr. Rugunda joined in the unanimous vote to approve these decisions.

However, one document that had been under the purview of the Executive Committee that was then presented to the greater board was a report on the Financial Forecast and Programme Funding Approvals This essentially reaffirmed the findings that expansion of the programmatic budget was possible, and that the financial forecast could accommodate the support of the Yellow Fever vaccination campaigns and stockpile maintenance.

“This report informs the GAVI Alliance Board of the updated GAVI financial forecast for 2011-2020 (Version 8.0Fb1) and requests the Board to approve: A programme funding request for a yellow fever stockpile in 2014” (Gavi, Financial Forecast and Programme Funding Approvals, 2013). In addition, the document explained the need for the stockpile funding.

The Yellow Fever Investment Case and related MOUs expire at the end of 2013, and the YF-ICG, subject to vaccine supply availability, is requesting financial support for 9 million doses, equivalent to US\$10 million for vaccines and US\$ 2.2 million to cover operational costs in 2014. The proposed investment by GAVI for 2014 is relatively small, approximately US\$ 12.2 million, compared to the long term health impact, value for

money, and more importantly will avoid future disruptions of the stockpile before a possible Board decision on support for yellow fever in the context of the VIS becomes effective or another suitable mechanism outside GAVI has been identified. (ibid)

This shows that those in charge of the executive and finance committees also supported the maintenance of the Yellow Fever Stockpile and encouraged the Board's investment in the vaccine. When Dr. Ondo left the Alliance, her replacement was able to effectively approve his predecessor's decision from the executive committee, as Dr. Ondo was able to attend the last Executive Committee meeting before the general board meeting of November 2013, so there was no participation gap for the constituency of Uganda. In conclusion, Uganda showed no individual influence over the Yellow Fever case decisions, but was involved in committees that were in charge of financially reviewing and recommending further Yellow Fever vaccine investment to the board. Much like in the case of the United Kingdom, Uganda's influence primarily occurred in the pre decision phase, by exhibiting certain behaviors as a state actor, and likely during the post decision operational choice sphere which lies beyond the scope of the research.

4.4 Outcome

4.4.1 United Kingdom Outcome

Now that the analysis of the previous variables has been conducted, it is possible to compare the TGI real world outcome with the preferred outcome of the United Kingdom. Since the United Kingdom's main concerns were protecting its citizens from Yellow Fever, making sure its investment in Gavi would not be spent at too quick a pace, and achieving goals of reducing maternal and child mortality, the outcome of the TGI concerning investing in Yellow Fever vaccines and ensuring an adequate stockpile was the preferred outcome of the United

Kingdom. However, given the limited data in stating the UK's preference concretely, this finding's validity is questionable.

4.4.2 Uganda Outcome

To compare Uganda's preferred outcome with the real world Gavi Policy output requires examining different sources for that preference. Uganda is directly vulnerable to Yellow Fever and thus desired more investment in combating the disease for the benefit of its own citizens. There is also nothing to indicate that Uganda would struggle implementing this particular vaccination campaign, thereby posing no threat to its implementation abilities or Gavi's trust in those abilities. For those reasons, Uganda was able to achieve its preferred policy outcome, but on different sources of preference from the United Kingdom.

Chapter 5. Conclusion

5.1 Main Findings

Now that the cases have been explained, it is possible to answer the research question: How does state actor behavior and patterns of interaction within the Gavi Alliance affect the Alliance's decisional output? Setting aside problems with the validity, particularly with conclusively stating the preferences, it is necessary to start with the first behavior from the framework. When it came to Declaration and Maintenance of Commitments, this behavior helped the Alliance maximize their resources. It would not have been possible to expand the Vaccine Investment Strategy to include Yellow Fever vaccines and fund the Yellow Fever Stockpile without the funding from the United Kingdom (and by extension the funds from the pledge drive that the UK hosted). Similarly, without the proven track record of maintenance of implementation commitments from state actors like Uganda, Gavi would not have financed programmes it couldn't trust to be carried out. Both State Actors showed a national policy

commitment to stopping Yellow Fever, and this was reflected in their commitments. In summary, the indicator of declaration and maintenance of commitments did affect decisional output by the Alliance because the commitments broadened the choices the Alliance was able to make due to a larger amount of resources and a greater amount of trust amongst actors and partners.

Information sharing yielded more nuanced results. While implementation information from implementing state actors was necessary for Gavi in designing and financing vaccine programmes, including those for Yellow Fever vaccination campaigns, the donor country side was more complicated. Expertise on the dangers, cost, and estimates of mortality for diseases was needed. However, unlike implementing states which could share information from their own individual state, the UK did not provide that information type to the Alliance because they had no such cases. Instead they primarily contributed information about development programmes in general that was not needed for the Yellow Fever decision, or the information type was also shared by other Gavi Alliance actors with greater expertise in that area (such as UNICEF and CSO's). Therefore, information sharing is a behavior not universally exhibited in the same way by all state actors, and is far more specific to the topic and scope of each decision under consideration.

Domestic policy implementation resulted in a similar specialization. In this case, Uganda's previous programmatic implementation did not appear to have any direct influence on decisional output. This is largely because the decision was not made based on the needs of one state, but rather global Yellow Fever vaccination demand. In other words, the specific adjustments that Uganda would have had to make would likely have occurred after the Gavi Board's authorization, within the operational choice sphere.

Moving on to the patterns of interaction indicators, Pooling did not appear to have had any effect on decisional output within the scope of the research because of the preexisting broad consensus within the actors in the Alliance. Delegation and Access of Non State Actors proved to be a large driver of decisional output. Because non-state actors and independent supranational bodies played such a vital role in implementation, their expertise and knowledge provided much of the information the decision was based on, as evidenced by the citations and data given in the VIS reports, and their institutional knowledge has helped to shape Gavi's programming in all areas of the Alliance. WHO and UNICEF's contributions to the VIS and Stockpile reports show how their information helped shape Gavi policy.

When it comes to how the Gavi cases are measured up against the existing literature surrounding PPP's, there were several findings, especially when it comes to how TGI's differ from the more traditional PPP models. One thing that sets Gavi apart from the PPP model is the presence of Civil Society Organizations and International Government Organizations among the Alliance's actors. When it comes to those types of actors' relationships with public actors within the Alliance, there is a clear distinction between the relationships with donor countries and implementing countries. This is related to the indicator of domestic policy implementation. As these non purely public and non purely private actors are largely involved in the implementation stage of the service provision TGI's, this means they work much closer with implementing country governments than donor country governments. Oftentimes, they aren't even allowed to work within those implementing countries at all if for whatever reason the public actor does not give them permission. This results in another cleavage between donor state actors and implementing state actors, because implementing state actors have relationships with these non

public or private actors that are both closer and have more risk attached than their donor state counterparts.

One idea brought up in the PPP literature was the concept of contractual restraint being the limitations of a PPP rather than market or social ones. This is why the indicators concerning the rules of the Gavi Alliance were important, as they represent those contractual restraints. Since the Gavi partners are all there voluntarily, it is assumed that all board members are interested in curbing disease and reducing preventable deaths as a result. Membership in Gavi requires a certain amount of commitment, both in finances, manpower, and attendance. It would not be in an actor's best interest to dedicate those resources to an organization whose goals the actor opposes. One of the things that would potentially make that process worthwhile is if they could block Gavi's goals via their voting board seat. However, the high degree of pooling in the Gavi rules means that such an actor would be incapable of obstructing Gavi's mission without convincing a third of Gavi's membership to also be against Gavi's goals. This is unlikely. It is more logical to assume that these pooling rules will act as a deterrent for joining the Alliance in the first place. In other words, the contractual constraints of the Alliance when it came to pooling, deterred actors from joining the Alliance in the first place. Other findings concerning the contractual rules will be discussed in tandem with some of the other concepts from the literature chapter.

One key concept from the earlier literature had to do with the idea of public values, and the different schools of thought with which to frame those values (Alkire and Chen, 2004). The different schools of thought for each actor was highlighted in their various interactions with Gavi. For the UK, David Cameron's comments praising Gavi's value for money and reliability indicated a more utilitarian approach. Put simply: The UK was interested in investing in

organizations for which their investments in those organizations was as low as possible, but for which their positive impact was as high as possible. The school of thought is different for Uganda, in which they are dealing with the health of their own citizens. Uganda's applications for support highlighted a need to equalize services across the country, specifically in the concerns about logistic chain bottlenecks that were resulting in some districts receiving vaccines, and other more remote districts to receive no vaccines at all.

Moving on to Institutional Theory, there were several occurrences within the cases that historical institutionalism and sociological institutionalism respectively can help explain. The questions that the Governance Committee wanted the McKinsey survey to help answer shows a historical institutionalist perspective based approach on behalf of the Gavi actors. This is because the survey was designed to ask questions concerning why a similar policy decision in a similar environment can lead to very different outcomes due to the preexisting structural design. This relates back to the idea of contractual restraint, as the Governance Committee members wanted to ensure that the contractual rules did in fact yield the best results for the goals of the Alliance.

Sociological Institutionalism on the other hand can help explain the broad levels of consensus within the partnership. This is because it is primarily concerned with norms and culture building. Because Gavi is so heavily values focused, the culture that Gavi builds is built by those whose values are largely in alignment, resulting in an institution that has broad consensus despite wide heterogeneities. Within that same vein, there is also the idea of institutional trust. The concerns of the Governance Committee vis a vis the McKinsey survey demonstrate a lack of institutional trust, a trust in the institution's strength derived from its structure and rules. On the other hand, the broad consensus in the Alliance does indicate a

process based trust, trust that is built on past or expected exchanges between the various state and non state actors.

Addressing specifically some of the definitions and expectations for PPP's created by Gerrard (2001) and Van Ham & Koppenjam and how Gavi affirmed or diverged from those expectations, it is necessary to address the roles of the public and private sectors within these PPP's. Gerrard states that the public sector's role in these partnerships is to define the scope of the partnership and specify priorities and goals. While public actors did play a role in defining scope and goal setting, to say that was the role of public actors exclusively would be inaccurate in the case of Gavi. As institutional rules set up public actors as being only one third of the voting members of the Alliance, states could not have been the lone voice in dictating scope and priorities. This largely goes back to the indicator of the inclusion of non-state actors. As more non-state actors are included in TGI's the less states have the monopoly on their traditional roles in PPP's. This is also the case when it comes to the private sector. Gerrard states that their role in a PPP is to help improve value for money for the public sector. Once again, the actions of the private sector actor, in this case the vaccine industry, did help improve value for money by increasing the production, development, and supply of vaccines. However, the leveraging of the purchasing power of states and of IGO's like Unicef, also helped bring more value for money when it came to public purchase of vaccines. Again, including more non-state actors led to the private sector not having the monopoly on that specific function within the Alliance.

When it comes to the limitations of the theoretical framework, Information sharing as one of the indicators of state actor behavior proved to be more situational than expected. In the case of the Yellow Fever Decisions, there seemed to exist another cleavage between donor state actors and implementing state actors. Although some donor state actors do have the resources and

existing public institutions that generate information shared and utilized by Gavi, for example, the United States and its Center for Disease Control, the United Kingdom did not appear to have as much expertise to share when it came to disease specifically.

Domestic policy implementation proved an imperfect behavior to analyze for the particular kind of decision making focused on in the specific cases. This is because the Yellow Fever decision was made on an Alliance wide scale, not in relation to a Uganda (or indeed any implementing state actor) specific program. Any impact Ugandan domestic policy implementation would have made would not be on Ostrom's Collective Choice level which was the scope of the research, but more on the operational choice level having to do with implementation. In other words, the Gavi board would not have adjusted or adapted a global policy for the relatively small scale particular needs of one implementing state actor, when these needs would have been addressed by the actors in charge of implementation.

The indicators for patterns of interaction were more flawed. Firstly, the nature of TGI's appeared to have made the indicator of pooling rules more of a gatekeeper from the Alliance, rather than affecting the patterns of interaction *within* the Alliance. In other words, The indicator of pooling rules, would then act not as a constraint of internal decision making, but rather a deterrent to participating in the Alliance in the first place. The scope of the research would not include those actors deterred from the Alliance, and therefore pooling was not a particularly useful indicator in this framework.

Although looking at decision making from two state actors from the two types of actor groups in the Gavi Alliance did yield revealing findings, the limitation of looking at a single case makes it very difficult to find a case in which all relatively common patterns of interaction occurred. Although the Yellow Fever decision did contain certain common patterns that were to

be expected, such as high levels of consensus, different decision making organs contributing to the decision in a way that was in line with that respective organ's overall mandate, There are many different types of scenarios where patterns of interaction are quite different, for example in the case of emergent outbreaks, pandemics (such as the Gavi's covid specific COVAX Alliance), cases with high levels of dissent amongst Board and Committee members, etc. Information sharing as an indicator was not well suited to the single decision case design, because the type of information necessary to make decisions in the Gavi Alliance varies widely based on the topic of the decision under consideration. Therefore, it is difficult to draw any wider conclusions about the nature of information sharing in the Alliance based on the process of one decision.

5.2 Suggestions for Further Research

There were several phenomena that occurred during the two cases which merit further analysis as the field of TGI literature expands. One is the relationships between state actors and actors which do not fall neatly within the Public or the Private Sector, such as IGO's, NGO's, CSO's and non profits, particularly at the implementation level of a TGI, this concept has been broadly touched on in works such as Taninchev (2015), or with a case design focused on a specific state's relationships with one or more CSO's such as HalimatusA'Diyah, (2015), but not in the context of TGI venues. Another is looking at state actors in TGI's through the lens of other cleavages besides donor country and implementing country, as Tosun et al. (2023) suggested. As the research revealed, there are many other potential sources of cleavages, differences in expertise of the state actor, different goals or risk levels for the state actors, etc. It is also worth researching whether or not states are more likely to behave as they do in traditional international relations settings if states make up the majority of decision makers within a TGI, unlike in the Gavi case.

One line of research that could reveal state specific patterns is in the analysis of information specialization among donor or developed state actors, as was alluded to in Jandhyala & Phene (2015). A pattern that stood out for the Gavi Alliance was that different developed countries had different types of information to share with Gavi, the British having more information to share concerning development programs, while the United States had more information concerning disease. Perhaps further research could reveal more into how those information specialization fits into larger national policies, values, and goals. Finally, looking for other indicators of state actor behavior could yield many more findings about the nature of TGI's and the role states have to play within them.

Bibliography

- Abdu, N., Tinch, E., Levitt, C., Volker, P. W., & MacDonald, D. H. (2022). Illegal firewood collection in Tasmania: Approaching the problem with the Institutional Analysis and Development (IAD) framework. *Land Use Policy*, *118*, 106130.
- Alkire, S., & Chen, L. (2004). Global health and moral values. *The Lancet*, *364*(9439), 1069-1074.
- Anckar, C. (2008). On the applicability of the most similar systems design and the most different systems design in comparative research. *International Journal of Social Research Methodology*, *11*(5), 389-401.
- Bachmann, R., & Inkpen, A. C. (2011). Understanding institutional-based trust building processes in inter-organizational relationships. *Organization Studies*, *32*(2), 281-301.
- Barnes, A., & Brown, G. W. (2011). The Global Fund to Fight AIDS, Tuberculosis, and Malaria: expertise, accountability, and the depoliticisation of global health governance. *Partnerships and Foundations in Global Health Governance*, 53-75.
- BBC. (2012, December 18). *Sudan's Yellow Fever Outbreak "worst for 20 Years."* BBC News. <https://www.bbc.com/news/health-20775086>
- Bozeman, B. (2007). *Public values and public interest: Counterbalancing economic individualism*. Georgetown University Press.
- Centre for Public Impact (CPI). (2022). *Gavi, the Vaccine Alliance*. Centre For Public Impact (CPI). <https://www.centreforpublicimpact.org/case-study/gavi-vaccine-alliance#:~:text=GAVI%20secured%20funding%20commitments%20from,systems%20in%20low%2Dincome%20countries>
- Cochi, S. L., Freeman, A., Guirguis, S., Jafari, H., & Aylward, B. (2014). Global polio eradication initiative: lessons learned and legacy. *The Journal of infectious diseases*, *210*(suppl_1), S540-S546.
- Covid Law Lab. (2023). *CHAPTER 281 THE PUBLIC HEALTH ACT*. Public Health Legislation : Uganda. <https://www.covidlawlab.org/wp-content/uploads/2021/02/Public-Health-Act-Uganda.pdf>
- Dawes, S. S., Gharawi, M. A., & Burke, G. B. (2012). Transnational public sector knowledge networks: Knowledge and information sharing in a multi-dimensional context. *Government information quarterly*, *29*, S112-S120.

- Department for International Development. (2012, December 18). *Sudan: UK helps contain yellow fever outbreak*. Gov.UK.
<https://www.gov.uk/government/news/sudan-uk-helps-contain-yellow-fever-outbreak>
- DFID. (2013). *UK government web archive*. The National Archives.
<https://webarchive.nationalarchives.gov.uk/ukgwa/20131204182446/http://devtracker.dfid.gov.uk/projects/GB-1-111073/>
- DFID. (2022, July 21). *Multilateral Aid Review 2013: Gavi*. UK Government Web Archive.
<https://www.nationalarchives.gov.uk/webarchive/>
- Dubash, N.K. (2021) Varieties of climate governance: the emergence and functioning of climate institutions, *Environmental Politics*, 30:sup1, 1-25, DOI: 10.1080/09644016.2021.1979775
- Dye, C. (2012). National and international policies to mitigate disease threats. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 367(1604), 2893-2900.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3427563/>
- Efrat, A., & Newman, A. L. (2018). Divulging data: Domestic determinants of international information sharing. *The Review of International Organizations*, 13, 395-419.
- Erdem Türkelli, Gamze. "Transnational multistakeholder partnerships as vessels to finance development: navigating the accountability waters." *Global Policy* 12.2 (2021): 177-189.
- Frieden, J. A. (1999). Actors and preferences in international relations. *Strategic choice and international relations*, 39-76.
- Fuglsang, L., & Jagd, S. (2015). Making sense of institutional trust in organizations: Bridging institutional context and trust. *Organization*, 22(1), 23-39.
- Gaubatz, K. T. (1996). Democratic States and Commitment in International Relations. *International Organization*, 50(1), 109–139. <http://www.jstor.org/stable/2707000>
- Gavi, the Vaccine Alliance*. Centre For Public Impact (CPI). (2016).
<https://www.centreforpublicimpact.org/case-study/gavi-vaccine-alliance#:~:text=GAVI%20secured%20funding%20commitments%20from,systems%20in%20low%2Dincome%20countries>
- Gerrard, M. (2001). Public-private partnerships. *Finance and development*, 38(3), 48-51.
- Gilchrist, S. A., & Nanni, A. (2013). Lessons learned in shaping vaccine markets in low-income countries: a review of the vaccine market segment supported by the GAVI Alliance. *Health Policy and Planning*, 28(8), 838-846.

- Guy, J., Shears, E., & Meckling, J. (2023). National models of climate governance among major emitters. *Nature Climate Change*, *13*(2), 189-195.
- HalimatusA'Diyah, I. (2015). Zakat and social protection: the relationship between socio-religious CSOs and the government in Indonesia. *Journal of Civil Society*, *11*(1), 79-99.
- Hall, P. A., & Taylor, R. C. (1996). Political science and the three new institutionalisms. *Political studies*, *44*(5), 936-957.
- Hodge, G. A., & Greve, C. (2017). On public–private partnership performance: A contemporary review. *Public Works Management & Policy*, *22*(1), 55-78.
- IFAD. (2017). *Donal Brown : Bio*. IFAD. <https://www.ifad.org/en/w/donal-brown>
- Jandhyala, S., & Phene, A. (2015). The role of intergovernmental organizations in cross-border knowledge transfer and innovation. *Administrative Science Quarterly*, *60*(4), 712-743.
- Jooste, S. F., Levitt, R. E., & Scott, W. R. (2009). Capacity, legitimacy, and interest: Toward a framework for PPP program success. In *Proc., Lead 2009 Conf* (pp. 1-14).
- Josselin, D., & Wallace, W. (2001). Non-state actors in world politics: a framework. In *Non-state actors in world politics* (pp. 1-20). London: Palgrave Macmillan UK.
- Kahler, M., & Lake, D. A. (2003). Globalization and governance. *Governance in a global economy: Political authority in transition*, 1-30.
- Keohane, R. O. (1984). *After hegemony* (Vol. 54). Princeton: Princeton university press.
- Knutzen, A., & Smith, A. (2012, October). *UNICEF Peacebuilding Education and Advocacy Programme - ulster university*. Uganda Conflict Analysis. https://www.ulster.ac.uk/_data/assets/pdf_file/0009/280683/Uganda-conflict-analysis.pdf
- Lazo, K. (2019). *Governing the Health Commons: An Institutional Analysis and Development (Iad) Framework on Health Devolution in Greater Manchester* (Doctoral dissertation, Manchester Metropolitan University).
- Lewis, R. F., Kisakye, A., Gessner, B. D., Duku, C., Odipio, J. B., Iriso, R., Nansera, D., Braka, F., Makumbi, I., & Kekitiinwa, A. (2008). Action for child survival: elimination of Haemophilus influenzae type b meningitis in Uganda. *Bulletin of the World Health Organization*, *86*(4), 292–301. <https://doi.org/10.2471/blt.07.045336>

- McGinnis, M. D. (2011). *Updated guide to IAD and the language of the ostrom workshop: A ... - IU*. A framework for analyzing institutions through individual choices.
https://mcginnis.pages.iu.edu/iad_guide.pdf
- McKee, M., Edwards, N., & Atun, R. (2006). Public-private partnerships for hospitals. *Bulletin of the World Health Organization*, 84, 890-896.
- Metlay, D. (2013). Institutional Trust and Confidence: A Journey into a Conceptual Quagmire 1. In *Social trust and the management of risk* (pp. 100-116). Routledge.
- Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American journal of sociology*, 83(2), 340-363.
- Mitchell, M. (2008). An overview of public private partnerships in health. *International Health Systems Program Publication, Harvard School of Public Health*, 1-28.
- Möllering, G. (2005). The trust/control duality: An integrative perspective on positive expectations of others. *International sociology*, 20(3), 283-305.
- Muraskin, W. (2002). The last years of the CVI and the birth of the GAVI. *Public-private partnerships for public health*, 115-168.
- Murray Buechner, M. (2018, August 27). *UNICEF USA Brandvoice: One Year after Harvey, UNICEF USA is still supporting Houston's kids*. Forbes.
<https://www.forbes.com/sites/unicefusa/2018/08/27/recovering-from-hurricane-harvey/?sh=2761176c443a>
- The National Archives. (2011, June). *British aid will help vaccinate a child in the developing world every two seconds for the next five years, the Prime Minister announced today*. DFID Announces New Aid.
<https://webarchive.nationalarchives.gov.uk/ukgwa/20130123213554/https://www.dfid.gov.uk/News/Press-releases/2011/British-aid-to-vaccinate-a-child-every-two-seconds/>
- OCHA. (2011, January 5). *Uganda: Ministry seeks 12b to fight yellow fever - uganda*. ReliefWeb.
<https://reliefweb.int/report/uganda/uganda-ministry-seeks-12b-fight-yellow-fever>
- Okereke, C., Bulkeley, H., & Schroder, H. (2009, February). Conceptualizing climate governance beyond the international regime.
https://www.researchgate.net/publication/24008744_Conceptualizing_Climate_Governance_Beyond_the_International_Regime

- Ondoa, C. J. D. (2012, January 3). *Non-communicable Diseases*. Editorial - Dr. Christine J.D Ondoa - the center for global health and development (CGHD).
<https://www.cghd.org/index.php/global-health-challenges/non-communicable-diseases-ncds/cancer/26-editorial-dr-christine-jd-ondoa>
- Ran, A., Fan, J., Zhou, L., & Zhang, C. (2020). Geo-disaster governance under the IAD framework: The case study of Chongqing's three Gorges Reservoir Region, China. *Sustainability*, 12(14), 5517.
- Reich, M. R. (2002, April). *Public-private partnerships for Public Health - Health21 Initiative*. Public Private Partnerships For Public Health.
<http://health21initiative.org/wp-content/uploads/2017/08/2001-Harvard-PPPs-for-Global-Health.pdf>
- Reinsberg, B., & Westerwinter, O. (2021). The global governance of international development: Documenting the rise of multi-stakeholder partnerships and identifying underlying theoretical explanations. *The Review of International Organizations*, 16, 59-94.
- Riker, W. H. (1980). Implications from the Disequilibrium of Majority Rule for the Study of Institutions. *American political science review*, 74(2), 432-446.
- Rosenau, J. N., & Czempel, E. O. (Eds.). (1992). *Governance without government: order and change in world politics* (No. 20). Cambridge University Press.
- Simmons, B. A. (2000). International law and state behavior: Commitment and compliance in international monetary affairs. *American Political Science Review*, 94(4), 819-835.
- Skocpol, T. (1985). Bringing the State Back In: Strategies of Analysis in Current Research. In P. Evans, D. Rueschemeyer, & T. Skocpol (Eds.), *Bringing the State Back In* (pp. 3-38). Cambridge: Cambridge University Press. doi:10.1017/CBO9780511628283.002
- Sommerer, T., Squatrito, T., Tallberg, J., & Lundgren, M. (2021). Decision-making in international organizations: institutional design and performance. *The Review of International Organizations*, 1-31.
- Sønderskov, K. M., & Dinesen, P. T. (2016). Trusting the state, trusting each other? The effect of institutional trust on social trust. *Political Behavior*, 38, 179-202.
- Stone, D. (2008). Global public policy, transnational policy communities, and their networks. *Policy studies journal*, 36(1), 19-38.
- Strange, S. (1995). The defective state. *Daedalus*, 124(2), 55-74.
- Taninchev, S. B. (2015). Intergovernmental organizations, interaction, and member state interest convergence. *International Interactions*, 41(1), 133-157.

- Tomori, O. (2002). Yellow fever in Africa: public health impact and prospects for control in the 21st century. *Biomedica*, 22(2), 194-210.
- Tosun, J., Saad, E. L., Glückler, J., Irigoyen Rios, A., & Lehmann, R. (2023). Country-Specific Participation Patterns in Transnational Governance Initiatives on Sustainability: Preliminary Insights and Research Agenda. *Global Challenges*, 7(8), 2300012.
- UNEPI. (2018). *Uganda National Expanded Program on Immunisation (UNEPI) - ministry of health: Government of Uganda*. Ministry of Health | Government of Uganda. <https://www.health.go.ug/programs/uganda-national-expanded-program-on-immunisation-unepi/>
- URCS. (2011, May 30). *DREF Operations Final Report*. Uganda : Yellow Fever. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjs3fLVs7aDAxWSJzQIHdCEBSAQFnoECA0QAw&url=https%3A%2F%2Fwww.ifrc.org%2Fdocs%2Fappeals%2F10%2FMDRUG019dfr.pdf&usg=AOvVaw0Pxxv4yteeRVjOc1j9y_Dg3&opi=89978449
- Van Ham, H., & Koppenjan, J. (2001). Building public-private partnerships: Assessing and managing risks in port development. *Public management review*, 3(4), 593-616.
- Voss, J. F., Wolfe, C. R., Lawrence, J. A., & Engle, R. A. (2014). From representation to decision: An analysis of problem solving in international relations. In *Complex problem solving* (pp. 119-158). Psychology Press.
- Wamala, J. F., Okot, C., Makumbi, I., Natseri, N., Kisakye, A., Nanyunja, M., ... & Chungong, S. (2010). Assessment of core capacities for the International Health Regulations (IHR [2005])—Uganda, 2009. *BMC Public Health*, 10(1), 1-10. <https://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-10-S1-S9>
- Wang, H., Xiong, W., Wu, G., & Zhu, D. (2018). Public–private partnership in Public Administration discipline: a literature review. *Public management review*, 20(2), 293-316.
- Westerwinter, O. (2019). The evolution of transnational governance overlaps: A network approach. *Transnational business governance interactions: Advancing marginalized actors and enhancing regulatory quality*.
- World Health Organization. (2005). *International Health Regulations (2005) - World Health Organization*. Toolkit for implementation in national legislation. https://cdn.who.int/media/docs/default-source/documents/emergencies/ihr-toolkit-for-implementation-in-national-legislation3ccea0c-4580-48a4-9d4e-2b17a2146b66.pdf?sfvrsn=60aea14d_1&download=true
- World Health Organization. (2011, January 19). *Yellow fever in Uganda*. World Health Organization.

https://www.who.int/emergencies/disease-outbreak-news/item/2011_01_19-en#:~:text=19%20January%202011%20%2D%20On%2023,the%20border%20with%20South%20Sudan.

Yin, R. K. (2003). Design and methods. *Case study research*, 3(9.2), 84.

Gavi Resources

Gavi, the Vaccine Alliance. (2008). *Proposal for hss support*. Gavi, the Vaccine Alliance. (n.d.). [Proposal for HSS support: Uganda](#)

Gavi, the Vaccine Alliance. (2008, March 10). *Deadly disease eliminated in children under five years of age in Uganda*. Gavi, the Vaccine Alliance. (n.d.). <https://www.gavi.org/news/media-room/deadly-disease-eliminated-children-under-five-years-age-uganda>

Gavi, the Vaccine Alliance. (2011). *Lessons on market commitment*. Gavi, the Vaccine Alliance. (n.d.). <https://www.gavi.org/sites/default/files/document/pneumococcal-advance-market-commitment--lessons-learnt-on-disease-and-design-choices-and-processespdf.pdf>

Gavi, the Vaccine Alliance. (2011). *Proposal for nvs - pcv support*. Gavi, the Vaccine Alliance. (n.d.). [Proposal for NVS - PCV support: Uganda](#)

Gavi, the Vaccine Alliance. (2011, June 11). *Gavi pledging conference*. Gavi, the Vaccine Alliance. (n.d.). <https://www.gavi.org/investing-gavi/funding/resource-mobilisation-process/gavi-pledging-conference-june-2011>

Gavi, the Vaccine Alliance. (2011, November 16). *Board meeting minutes*. Gavi, the Vaccine Alliance. (n.d.). <https://www.gavi.org/sites/default/files/board/minutes/2011/16-nov/GAVI%20Alliance%20Board%20Meeting%2C%2016-17%20November%202011%2C%20Final%20Minutes.pdf>

Gavi, the Vaccine Alliance. (2012). *International parliamentarians commit to immunisation*. Gavi, the Vaccine Alliance. (n.d.). <https://www.gavi.org/news/media-room/international-parliamentarians-commit-immunisation>

Gavi, the Vaccine Alliance. (2012). *PPC meeting minutes*. Gavi, the Vaccine Alliance. (n.d.). https://www.gavi.org/sites/default/files/board_meetings/PPC/PPC-2012-Mtg-02-Final%20Minutes_0.pdf

- Gavi, the Vaccine Alliance. (2012, December 4). *Board meeting minutes*. Gavi, the Vaccine Alliance. (n.d.).
<https://www.gavi.org/sites/default/files/board/minutes/2012/4-dec/03%20-%20CEO%20report.pdf>
- Gavi, the Vaccine Alliance. (2013). *Governance meeting minutes*. Gavi, the Vaccine Alliance. (n.d.).
https://www.gavi.org/sites/default/files/gavi-documents/Gov-2013-Mtg-4-Minutes-POSTED_0.PDF
- Gavi, the Vaccine Alliance. (2013, June 11). *Board meeting minutes*. Gavi, the Vaccine Alliance. (n.d.).
<https://www.gavi.org/sites/default/files/board/minutes/2013/11-june/GAVI%20Alliance%20Board%20Minutes%20-%202011-12%20June%202013.pdf>
- Gavi, the Vaccine Alliance. (2013, June 11). *Committee minutes*. Gavi, the Vaccine Alliance. (n.d.).
https://www.gavi.org/sites/default/files/board/minutes/2013/11-june/Annex%20-%20Committee%20minutes%2011-12_June_2013.pdf
- Gavi, the Vaccine Alliance. (2013, June 11). *VIS report*. Gavi, the Vaccine Alliance. (n.d.).
<https://www.gavi.org/sites/default/files/board/minutes/2013/11-june/06%20-%20Vaccine%20investment%20strategy%20document.pdf>
- Gavi, the Vaccine Alliance. (2013, October 9). *PPC meeting minutes*. Gavi, the Vaccine Alliance. (n.d.).
<https://www.gavi.org/sites/default/files/committees/ppc/minutes/2013/PPC-2013-Mtg-02-Minutes.pdf>
- Gavi, the Vaccine Alliance. (2013, November 4). *Governance meeting minutes*. Gavi, the Vaccine Alliance. (n.d.).
https://www.gavi.org/sites/default/files/gavi-documents/Gov-2013-Mtg-5-Minutes%20POSTED_0.PDF
- Gavi, the Vaccine Alliance. (2013, November 21). *Board meeting minutes*. Gavi, the Vaccine Alliance. (n.d.).
<https://www.gavi.org/sites/default/files/board/minutes/2013/21-nov/GAVI%20Alliance%20Board%20Minutes%20-%202021-22%20November%202013.pdf>
- Gavi, the Vaccine Alliance. (2013, November 21). *CEO report*. Gavi, the Vaccine Alliance. (n.d.).

https://www.gavi.org/sites/default/files/board/minutes/2013/21-nov/04%20-%20CEO_s%20report%20document.pdf

Gavi, the Vaccine Alliance. (2013, November 21). *Committee minutes*. Gavi, the Vaccine Alliance. (n.d.).

<https://www.gavi.org/sites/default/files/board/minutes/2013/21-nov/C%20-%20Committee%20minutes.pdf>

Gavi, the Vaccine Alliance. (2013, November 21). *Financial forecast and programme funding approvals*. (n.d.).

<https://www.gavi.org/sites/default/files/board/minutes/2013/21-nov/06%20-%20Financial%20forecast%20and%20programme%20funding%20approvals.pdf>

Gavi, the Vaccine Alliance. (2020, June 9). *Alliance statutes*. Gavi, the Vaccine Alliance. (n.d.).

<https://www.gavi.org/sites/default/files/document/2020/Gavi-Alliance-Statutes---June-2020.pdf>

Gavi, the Vaccine Alliance. (2022). *Uganda documents*. Gavi, the Vaccine Alliance. (n.d.).

<https://www.gavi.org/country-documents/uganda>

Gavi, the Vaccine Alliance. (2023). *UK donor profile*. Gavi, the Vaccine Alliance. (n.d.).

https://www.gavi.org/investing-gavi/funding/donor-profiles/united-kingdom#:~:text=The%20UK%20hosted%20Gavi%27s%204_for%20the%20Gavi%20Matching%20Fund.

Gavi, the Vaccine Alliance. (2023). *Operating model*. Gavi, the Vaccine Alliance. (n.d.).

<https://www.gavi.org/operating-model/gavi-secretariat>

Gavi, the Vaccine Alliance. *Board composition*. Gavi, the Vaccine Alliance. (n.d.-a).

<https://www.gavi.org/governance/gavi-board/composition>

Gavi, the Vaccine Alliance. *Gavi's partnership model*. Gavi, the Vaccine Alliance. (n.d.-c).

<https://www.gavi.org/our-alliance/operating-model/gavis-partnership-model>