Volume XIX, No. 1
Fall Issue 2025

Global Health Governance

The Scholarly Journal For The New Health Security Paradigm

2025 Fall Issue

Editor-in-Chief: Yanzhong Huang, Ph.D.

www.ghgj.org

GLOBAL HEALTH GOVERNANCE

THE SCHOLARLY JOURNAL FOR THE NEW HEALTH SECURITY PARADIGM
PEER REVIEWED, OPEN ACCESS JOURNAL

ISSN 1939-2389

GLOBAL HEALTH GOVERNANCE IS AN OPEN ACCESS, PEER-REVIEWED, ONLINE JOURNAL THAT PROVIDES A PLATFORM FOR ACADEMICS AND PRACTITIONERS TO EXPLORE GLOBAL HEALTH ISSUES AND THEIR IMPLICATIONS FOR GOVERNANCE AND SECURITY AT NATIONAL AND INTERNATIONAL LEVELS.

THE JOURNAL PROVIDES INTERDISCIPLINARY ANALYSES AND A VIGOROUS EXCHANGE OF PERSPECTIVES THAT ARE ESSENTIAL TO THE UNDERSTANDING OF THE NATURE OF GLOBAL HEALTH CHALLENGES AND THE STRATEGIES AIMED AT THEIR SOLUTION. THE JOURNAL IS PARTICULARLY INTERESTED IN ADDRESSING THE POLITICAL, ECONOMIC, SOCIAL, MILITARY AND STRATEGIC ASPECTS OF GLOBAL HEALTH ISSUES.

GLOBAL HEALTH GOVERNANCE

GLOBAL HEALTH GOVERNANCE

VOLUME XIX, NO. 1
FALL 2025 ISSUE

TABLE OF CONTENTS

CARROTS, STICKS, AND DIRTY TRICKS: REEVALUATING VACCINE DIPLOMACY AFTER THE COVID-19 PANDEMIC

Olivia N. Parker

The theory of 'vaccine diplomacy,' as developed by Dr. Peter Hotez, predicts that the life-saving potential of vaccines motivates public health-minded collaboration between otherwise adversarial states. The COVID-19 pandemic provided a global-scale natural experiment of this theory, and the actual behavior of three principal vaccine-sharing states – the People's Republic of China, the Russian Federation, and the United States – indicates that states use vaccines as tools to further their foreign policy goals, rather than changing their behavior to meet public health needs. Hotez's theory may not be generalizable beyond the specific Cold War dynamics that inspired it, though it presents an aspirational normative ideal for international vaccine sharing policy. Further research into vaccine diplomacy should build on more established models of state behavior.

INTRODUCTION

'Vaccine diplomacy' is one of several terms of art in the field of public health that, as SARS-CoV-2 swept through the global community in the spring of 2020, suddenly commanded the intense interest of billions around the world. Pulled from relative obscurity into our collective lexicon in the wake of COVID-19, the term has been used as a catch-all to describe diplomatic interactions between nations involving vaccines. However, this post-pandemic normative definition differs greatly from the term's original theoretical meaning as first defined in the public health literature and thus demands reexamination.

This study compares pre-2020 theories of vaccine diplomacy with real-world state behavior during the COVID-19 pandemic using case studies of three principal COVID-19 vaccine producing nations: The People's Republic of China, the Russian Federation, and the United States of America.[1] The experience of the COVID-19 pandemic suggests that the public health power of vaccines does not change the nature or character of relations among states. Rather, contrary to original conceptions of vaccine diplomacy as a force for conflict resolution, there is considerable evidence that states used COVID-19 vaccines as a tool to further their preexisting foreign policies.[2]

This article has three sections. The first reviews the theoretical origins of vaccine diplomacy as first articulated in the public health literature by Dr. Peter Hotez. The second examines real-world vaccine diplomacy behavior during the COVID-19 pandemic. Following a short discussion of new definitions of vaccine diplomacy proposed after the outbreak of SARS-CoV-2, the second section provides an overview of the global vaccine manufacturing landscape during the COVID-19 pandemic and evaluates the specific vaccine sharing behavior of China, Russia, and the United States. In addition to being among the world's great powers, the trio were also among the world's most prolific COVID-19 vaccine-producing nations. The third section considers the implications of states' use of vaccines as a foreign policy tool. This final section reexamines Hotez's

original theory considering new evidence provided by COVID-19 and suggests directions for future empirical study of vaccine diplomacy.

THE ORIGINS OF VACCINE DIPLOMACY: PRE-COVID THEORIES AND DEFINITIONS

Vaccine diplomacy, a subset of global health diplomacy, was first described in 2001 by Dr. Peter Hotez, an American scientist, pediatrician, and global health advocate.[3] Hotez defines vaccine diplomacy as "almost any aspect of global health diplomacy that relies on the use or delivery of vaccines," offering "innovative opportunities to promote United States (US) foreign policy and diplomatic relations between adversarial nations." [4] According to Hotez, vaccines have historically played a distinct role in diplomacy due to their unique lifesaving potential.[5] Given that modern vaccines are estimated to have saved more human lives in the 20th century than were lost in both world wars together, Hotez argues that the advent of vaccines has created novel opportunities for cooperation between adversarial states by appealing to a common interest in defending the health and wellbeing of their respective populations.[6]

Hotez's theory is best understood in the context of vaccine diplomacy's historical successes, beginning with the discovery of the first modern vaccine by British physician Edward Jenner in 1798.[7] Jenner quickly attained international acclaim for his breakthrough on smallpox and soon thereafter began advising the governments of Russia, Spain, Turkey, and Native American tribes across Canada and Mexico on how to use his vaccine.[8] Jenner was later deputized to serve in other diplomatic roles, including helping to secure the release of British prisoners of war during the Napoleonic Wars.[9] Napoleon held Jenner and his work in particularly high regard – he specifically sought out Jenner's advice and had his soldiers inoculated against smallpox using Jenner's vaccine despite being at war with Britain at the time.[10] Napoleon even once wrote in correspondence: "Jenner – we can't refuse that man anything."[11]

According to Hotez, the "golden age" of vaccine diplomacy occurred during the Cold War, when an unlikely collaboration between American and Soviet scientists resulted in the successful development, testing, and licensure of the oral polio vaccine, which is still administered around the world today.[12] From 1956 to 1959 – a period in which Soviet-American relations were strained by the recent formation of the Warsaw Pact, the Suez Crisis, the launch of Sputnik, and an intensifying competition in nuclear arms and missiles – both governments quietly allowed visits by Soviet researchers to the U.S., and by American researchers to the USSR, to facilitate their partnership on polio vaccine research.[13] American live-attenuated polio vaccine technology, developed by Dr. Albert Sabin, was tested in large-scale clinical trials in the Soviet Union in 1959 and soon after administered to virtually everyone under 20 years of age behind the Iron Curtain – nearly 100 million people.[14] Less than a year later the World Health Organization (WHO), the United Nations body concerned with public health, acknowledged the vaccine's safety and efficacy, marking a diplomatic and public health achievement for both the U.S. and USSR.[15]

In the 1960s Soviet scientists refined a unique process for freeze-drying smallpox vaccine, making it heat-stable and transportable to tropical climates without refrigeration.[16] The USSR supplied 450 million doses of this vaccine to support the global smallpox eradication campaign while the U.S. contributed critical funding to finance the effort, laying the foundation for the complete eradication of smallpox worldwide in 1980

and again demonstrating the power of vaccines to inspire collaboration between otherwise adversarial states.[17]

Hotez distinguishes vaccine-related cooperation among scientists whose governments are hostile to each other as 'vaccine science diplomacy.' [18] A subset of vaccine diplomacy, vaccine science diplomacy describes peer-to-peer interactions between individual scientists.[19] The Soviet-American collaboration on the oral polio vaccine is an example of both vaccine diplomacy and vaccine science diplomacy since individual American and Soviet scientists, in addition to the American and Soviet governments, participated in the effort. The Soviet-American cooperation on the smallpox vaccine is an example of vaccine diplomacy only, since governments were cooperating, but individual scientists were not.

Cold War-era collaboration is the basis of Hotez's vision for vaccine diplomacy: If such significant public health cooperation was possible between the U.S. and USSR even as the nations teetered on the brink of mutual nuclear destruction, his argument goes, similar efforts should also be achievable today.[20] Per Hotez, the only scholar writing on theories of vaccine diplomacy prior to 2020, vaccines motivate adversaries to "put aside their differences" and cooperate on public health issues because of the demonstrable lifesaving benefits for their own populations and beyond.[21]

Implicit in Hotez's argument is an assumption that states prioritize humanitarian considerations alongside, or even above, other foreign policy goals. The emergence of SARS-CoV-2 tested this idea. In a natural experiment of global dimensions, COVID-19 vaccines certainly created new opportunities for diplomatic engagement, but, contra Hotez, states notably did not employ vaccine diplomacy for purely – or even mostly – humanitarian ends.

THE COVID-19 PANDEMIC: VACCINE DIPLOMACY IN PRACTICE

While researchers around the world raced to develop the first COVID-19 vaccines in 2020, governments focused their diplomatic attention on negotiating access to the anticipated supply. By early 2021 the term 'vaccine diplomacy' had made headlines in some of the world's most influential publications, and quickly became synonymous both colloquially and in the scholarly literature with official government-sponsored efforts to buy, sell, or donate COVID-19 vaccine stock.[22]

International relations researchers and scholars often used this new definition, or variations of it, to discuss vaccine-related state behavior during the COVID-19 pandemic. In contrast to Hotez, whose perspectives on global affairs are admirably public health-minded and rooted in the Hippocratic principles of benevolence and equity, international relations scholars have taken a decidedly more pragmatic view. According to Matthew Sparke and Orly Levi, countries share vaccines "strategically" in pursuit of "various kinds of global and regional advantages in international relations."[23] Naoise McDonagh defined vaccine diplomacy as "leveraging an ability to produce and distribute vaccines to populations other than a government's own national population in order to achieve political purposes."[24] Seow Ting Lee may have distilled it most aptly when she described vaccines simply as "instruments of soft power and nation branding."[25]

These scholars cited by name are just a few examples of an expansive body of literature describing how states actually *did* use vaccine technology for diplomatic aims during the COVID-19 pandemic, in contrast to theories of how states *should* behave when

public health incentives are seemingly aligned. Following a brief overview of the global COVID-19 vaccine manufacturing landscape, this section draws on the existing literature to evaluate the vaccine donation behavior of China, Russia, and the United States during the COVID-19 pandemic. The following analysis describes how each nation used domestically produced vaccines to achieve their foreign policy goals: As incentives, or 'carrots'; as punishment, or 'sticks'; or to mislead, deceive, or foment discord abroad, i.e. 'dirty tricks.'

Vaccine Manufacturing Landscape During the COVID-19 Pandemic

By December 2022, roughly three years after the SARS-CoV-2 genome was first sequenced, a total of 50 COVID-19 vaccines developed by manufacturers in 17 different countries had been approved for use worldwide, as detailed in Table 1.[26] However, just five of those 50 – those produced by Oxford/AstraZeneca (United Kingdom), Moderna (United States), Pfizer/BioNTech (United States/Germany), Sinopharm (China), and Sinovac (China) – were manufactured, approved for use, and distributed early enough in the pandemic to significantly reduce mortality worldwide.[27] Pfizer/BioNTech's shot was the first to receive WHO emergency use approval in December 2020, followed soon after by Moderna and Oxford/AstraZeneca in April 2021, Sinopharm in May 2021, and Sinovac in June 2021.[28]

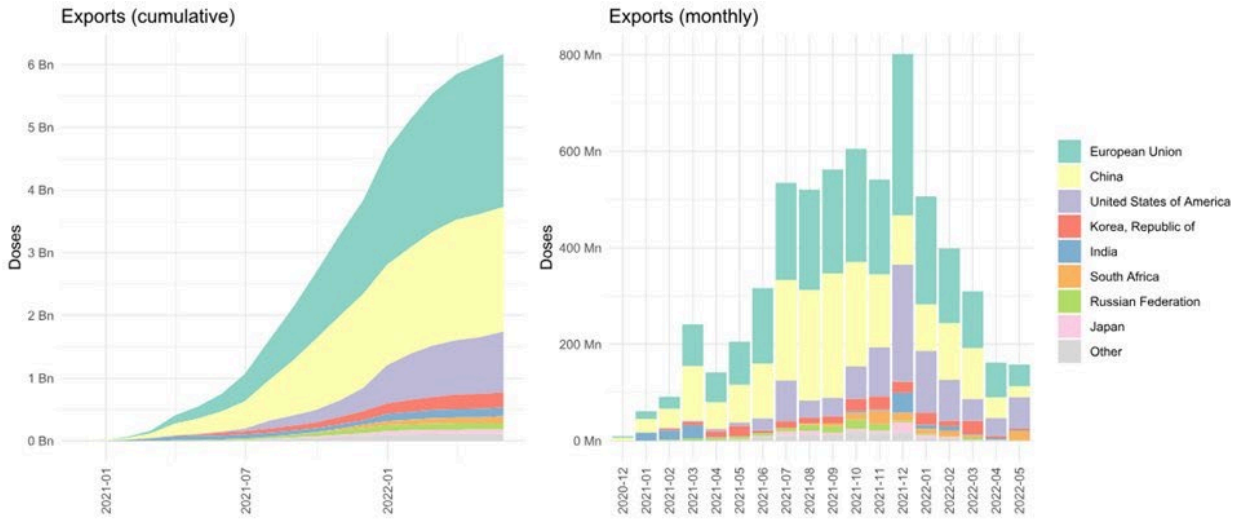
The race to develop COVID-19 vaccines moved at an unprecedented pace. Bringing a single vaccine to market typically takes between ten and 15 years, illustrating how dramatically pharmaceutical manufacturers were able to truncate their typical research and development processes.[29] The shots produced globally employed a diversity of technologies, including inactivated, protein subunit, non-replicating viral vector, and DNA vaccines, in addition to breakthrough mRNA platforms, as noted in Table 1.[30]

In addition to technical differences, state involvement in research and development also varied depending on country of origin. COVID-19 vaccines produced by American companies – Johnson & Johnson, Moderna, Novavax, and Pfizer – were purchased by the U.S. government for domestic distribution and foreign donation.[31] While the U.S. government provided financing to support the development of vaccine candidates, American pharmaceutical manufacturers are for-profit, private sector companies and are not owned or operated by the U.S. government.[32] This distinction becomes blurred, or disappears entirely, in other parts of the world: In China, for example, more than one third of major biopharmaceutical companies are state-owned, including Sinopharm, the manufacturer of one of China's two primary COVID-19 shots.[33] All three Russian COVID-19 vaccine makers – the Gamaleya Research Institute, the Vector Institute, and the Chumakov Center – are federal government agencies.[34]

As of May 2022, when COVID-19 vaccine uptake worldwide plateaued, China had shared nearly two billion COVID-19 vaccine doses with other countries abroad, the most of any individual export country.[35] The U.S. exported 968 million doses and Russia exported 102 million over the same timeframe.[36] As noted in **Figure 1**, the U.S. ranked second after China for most individual country exports, and Russia ranked sixth.[37] The vaccines manufactured by Moderna, Pfizer/BioNTech, Sinopharm, and Sinovac, in addition to the United Kingdom's Oxford/AstraZeneca shot, amounted to a combined 90 percent of global vaccine supply, as illustrated in **Figure 2.**[38] The Sputnik V shots produced by Russia's Gamaleya Research Institute and those produced by American

manufacturer Johnson & Johnson accounted for an additional two and six percent of total global supply, respectively.[39]

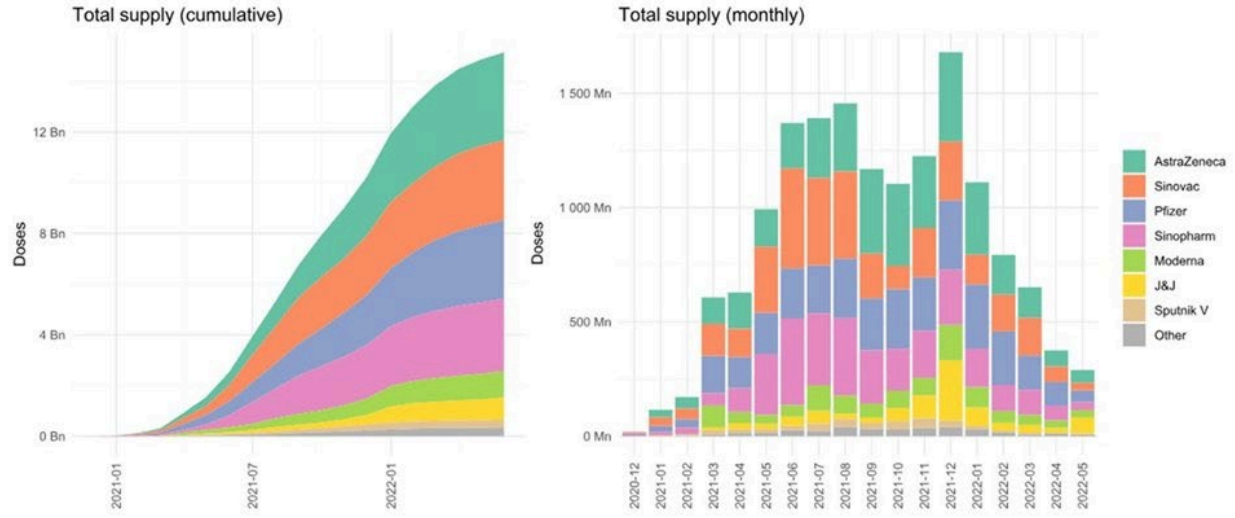
Figure 1
Total COVID-19 vaccine exports as of May 2022



Graphic source: "Vaccine Trade Tracker," World Trade Organization and International Monetary Fund, May 31, 2022, https://www.wto.org/english/tratop_e/covid19_e/vaccine_trade_tracker_e.htm

The ability of Chinese, Russian, and American vaccine manufacturers to rapidly pivot to developing COVID-19 shots following the outbreak of SARS-CoV-2 provided their governments the opportunity to exploit their vaccine supply as a tool of foreign policy.

Figure 2
Total global COVID-19 vaccine supply as of May 2022



Accounts for both exported vaccine supply and doses delivered domestically. Graphic source: "Vaccine Trade Tracker," World Trade Organization and International Monetary Fund, May 31, 2022, https://www.wto.org/english/tratop_e/covid19_e/vaccine_trade_tracker_e.htm

China

Chinese President Xi Jinping spoke directly to growing anxiety around vaccine equity and access worldwide when he pledged to make China's COVID-19 shots "a global public good" before the World Health Assembly, the WHO's decision-making body formed of representatives from all WHO member states, in May 2020.[40] Xi's depiction of China as a responsible, even generous world power stood in contrast to the dearth of Western pandemic response leadership in the spring of 2020.[41] U.S. President Donald Trump's announcement of the U.S.'s withdrawal from the WHO also occurred in May 2020, nearly coinciding with Xi's World Health Assembly address.[42] Xi made effective use of this vacuum, capitalizing on the opportunity to cast Chinese stewardship as a benevolent alternative to the U.S.-led global health order.[43]

China's vaccine sharing behavior, however, deviated considerably from Xi's rhetoric. Instead of sending COVID-19 shots abroad equitably based on recipient nation population size or outbreak intensity, the Chinese government used its vaccine supply to reward friends and punish opponents. Chinese vaccine sharing across Central America provides an illustrative example of this pattern: Despite the region's lack of vaccine manufacturing capability and widespread humanitarian need, China appears to have distributed vaccine supplies based on each countries' Taiwan policy.[44]

El Salvador, for example – which derecognized Taiwan in 2018 – received 150,000 donated doses of Sinovac's shot in the spring of 2021, in addition to the 2 million doses El Salvador's government had already purchased from the Chinese manufacturer.[45] The Chinese embassy in San Salvador attributed the donation to "excellent existing bilateral relations" with a "friendly country."[46] El Salvador's neighbors, Guatemala and Honduras – both of which maintained diplomatic recognition of Taiwan at the time – were offered Chinese vaccines on the condition that they recognize Beijing over Taipei.[47] This coercion proved effective: In May 2021, Honduran President Juan Orlando Hernandez announced his openness to establishing a trade office in China to facilitate the acquisition of vaccine supplies, marking a diplomatic shift.[48] That shift turned into an outright reversal when Honduras severed ties with Taiwan and established formal diplomatic relations with China in March 2023.[49] Nicaragua, another long-standing ally of Taiwan, derecognized the island nation in favor of China in December 2021; just days later, Beijing delivered one million doses of donated Sinopharm vaccines to the country.[50]

While Central America provides striking examples, it is certainly not the only region where the Chinese government deployed its COVID-19 vaccine supply strategically. Pakistan, China's "all-weather friend," was the first country to receive donated Chinese shots – half a million Sinopharm doses – in February 2021.[51] Chinese Ambassador to Pakistan Nong Rong lauded Pakistan as China's "closest friend," and declared the donated vaccines a "manifestation of our brotherhood." [52]

Overall, Beijing's vaccine diplomacy behavior during the COVID-19 pandemic aligned with China's Belt and Road Initiative (BRI).[53] Also known as One Belt, One Road or the New Silk Road, BRI is an international infrastructure development project seeking to accelerate Chinese trade connectivity with African, Asian, and European economies; the program is a central pillar of Xi's foreign policy.[54] Of the 112 countries across Africa, Asia, Central and Eastern Europe, Latin America, the Middle East, and Oceania that received COVID-19 vaccines from China by the end of 2022, just five – Bhutan, Brazil, Colombia, Mexico, and Ukraine – were not BRI members.[55] Of note, Bhutan, Brazil, and

Colombia have all publicly considered joining, likely informing Beijing's use of vaccines as a carrot rather than a stick in these cases.[56]

In addition, the vast majority of Chinese COVID-19 shots shared with the world were sold commercially, not donated, contradicting Xi's humanitarian messaging.[57] As of December 2022, China had donated just 328 million doses, compared to 1.85 billion doses sold.[58] The Chinese government also extended loans to help developing countries purchase Chinese vaccine supplies, primarily in Latin America and the Caribbean.[59] China's use of loans to fund BRI projects in developing countries – and the ensnarement of those countries in overwhelming debt if they cannot repay their loans – has been dubbed "debt trap diplomacy."[60] Critics have denounced such lending practices as predatory and accused Beijing of deliberately deploying debt traps to pull strategically important nations further into China's political orbit.[61]

The alignment between Chinese COVID-19 vaccine sharing behavior and BRI indicates that China's vaccine diplomacy efforts supported Xi's foreign policy goals. Additionally, pharmaceutical manufacturing is a key industry highlighted in Beijing's Made in China 2025 strategic plan to establish Chinese supremacy in emerging technologies, originally announced in 2015, further underscoring how thoroughly Chinese vaccine sharing behavior during the pandemic comported with Beijing's pre-established foreign policy objectives.[62]

Russia

In August 2020, Russian regulators approved the Gamaleya Research Institute's Sputnik V vaccine, making it the world's first COVID-19 shot registered for use.[63] Russian Health Minister Mikhail Murashko lauded the vaccine as a critical factor in "humankind's victory" over the virus, and the Kremlin hailed the approval as a triumph of Russian science and innovation over the West.[64] Like Xi, Putin seized the opportunity to cast his country's vaccines as the solution to the ongoing public health crisis, describing the approval of Sputnik V as a "first, very important step for our country, and generally for the whole world."[65]

Moscow's rush to be first, however, soon proved a liability as concerns about Sputnik V's hasty clinical trial and regulatory review process proliferated. The vaccine's initial emergency use authorization was granted following testing on only 38 people and before Phase III trials had been completed, sparking international doubts about the reliability of early trial data.[66] The controversy prompted a group of scientists from twelve countries to sign an open letter in September 2020 expressing distrust of the data, including concerns that the published trial information had been manipulated.[67] The open letter requested Gamaleya publish the original raw data for independent verification by the broader scientific community.[68] Gamaleya responded by announcing a new 91.6 percent efficacy rate based on an interim analysis of Phase III data in November 2020, but conspicuously neglected to publish any raw data underpinning the claim.[69] Gamaleya has still not reported raw clinical trial data for Sputnik V, leaving the controversy unresolved.[70]

Although more than 70 countries have approved the Russian vaccine for use, lingering safety and efficacy concerns hampered uptake among potential recipient populations.[71] Slovakia, one of the only European countries to order COVID-19 vaccines from Russia, stopped administering Sputnik V in August 2021 because of low domestic

demand.[72] Hospitals in India began cancelling orders for Russian shots in September 2021 for the same reason, and in March 2022, more than a million doses expired in Guatemala after local health officials failed to find enough willing recipients to exhaust the supply.[73] Russia's population was similarly unenthusiastic about Sputnik V: In the spring of 2021, more than 60 percent of Russians said they were unwilling to get the vaccine, helping to illustrate why COVID-19 vaccination rates in Russia have lagged far behind other industrialized countries despite access to a homegrown shot.[74] Even Putin waited seven months following the vaccine's approval by Russian regulators to be inoculated – though the Kremlin did not publish any photos or videos of him doing so.[75]

Despite having beaten the world to market, by mid-2022 Russia had exported just 102 million COVID-19 vaccine doses, amounting to less than 2 percent of the world's supply.[76] Sputnik V's failure to win the approval of international regulatory authorities, including the WHO and the European Medicines Agency, further stymied uptake abroad since many countries require approval from at least one of those organizations prior to distributing a vaccine domestically.[77]

Russia's full-scale invasion of Ukraine further complicated the vaccine's rollout. On February 28, 2022, just days after the start of the Russian offensive, the U.S. Treasury Department included the Russian Direct Investment Fund – Russia's sovereign wealth fund, which financed the development of both the Sputnik V and Sputnik Light vaccines – on its list of Russian entities designated for sanctions.[78] Australia, the European Union (EU), Ukraine, and the United Kingdom followed suit shortly thereafter.[79] The Russian Direct Investment Fund condemned the sanctions as politically motivated and driven by unnamed "large Western pharmaceutical companies" seeking to gain an advantage over Russian shots in the international vaccine market.[80]

Although Russian officials secured manufacturing agreements and modest purchase deals with countries in Africa, Asia, Europe, Latin America, and the Middle East, COVID-19 vaccines produced by other nations far exceeded Russian exports – and thus, Russian influence via vaccine diplomacy – from the earliest shipments.[81] The specific details of Russian bilateral deals remain scant compared to the robust public information on Chinese and American vaccine agreements, but it is evident that Sputnik V was not accepted abroad in the way the Kremlin intended, limiting its utility for soft power promotion. Instead of addressing global reticence directly by sharing raw clinical trial data or improving transparency into research and development processes, however, the Russian government instead employed a sophisticated propaganda and disinformation campaign to convince foreign populations and governments that Sputnik V had been unfairly maligned and that competitor vaccines – namely, Western ones – should not be trusted.

Russia's state-controlled media apparatus – which has long functioned at the pleasure and direction of the Kremlin – shifted its focus to foreign vaccine candidates months before the first Sputnik V competitors came to market.[82] The Pfizer/BioNTech shot was the most frequent target of Russian disinformation, likely because it was the first vaccine to be approved for use by the WHO and thus was viewed by the Kremlin as Sputnik V's primary rival.[83] State media reports seeking to disparage Western vaccines were typically based on real incidents, but exaggerated or taken out of context to the point of becoming wildly misleading.[84] Coverage of Pfizer/BioNTech by *RT* (formerly *Russia Today*), one of the Kremlin's largest propaganda outlets, selectively focused on safety concerns, tapping into growing global vaccine hesitancy and mistrust.[85] *RT* frequently

reported on the deaths of Western vaccine recipients while omitting critical context that the deaths occurred due to causes unrelated to the shot, or as the result of SARS-CoV-2 infection rather than vaccination against it.[86]

Of note, posts disparaging the Pfizer/BioNTech vaccine that reached the widest audience on Twitter (now X) were published by state media outlets, while the most popular posts in support of Sputnik V were published by official government accounts, underscoring the Kremlin's calculated approach to vaccine-related information operations.[87] Pro-Sputnik V messaging largely centered around efforts by anti-Russian actors in the West to vilify the vaccine, which surged in February 2021 following the publication of a new set of positive efficacy results in *The Lancet*.[88] Russian propaganda cited the paper as proof that early Sputnik V criticism was rooted in anti-Russian bias rather than bona fide data reliability and tampering concerns.[89]

During the pandemic, Russian propaganda outlets masqueraded as reputable sources of public health news to earn the trust of new audiences, which they peppered with large volumes of COVID-19 case and death count reports.[90] These morbidity and mortality tallies generally fell in line with mainstream estimates, creating a "basis of reliability" that helped state media attract new followers seeking simple pandemic updates and enabled the seamless injection of false or misleading content supporting the Russian government's goals.[91] Separate state media platforms targeted liberal-leaning and conservative-leaning English speakers, exaggerating the severity of the pandemic to left-wing audiences and minimizing the risk to right-wing ones.[92] In addition to efforts to inflate Sputnik V's reputation and denigrate Western vaccines, Russian disinformation also sought to deepen domestic divisions abroad, including the promotion of anti-vaccine conspiracy theories – in direct contradiction to propaganda encouraging Sputnik V uptake.[93]

Russia was not the only country that employed such dirty tricks. The Chinese government also used disinformation to advance their strategic objectives during the pandemic, and there is evidence that China and Russia learned from each other's disinformation campaigns and borrowed each other's tactics.[94] In contrast to the Russian approach, the Chinese government deployed disinformation to refute the global scientific consensus that SARS-CoV-2 first emerged in Wuhan, augment perceptions of China as a benevolent superpower helping to end the pandemic, and blame the U.S. for the pandemic's outbreak.[95] The Americans also participated: The Pentagon has publicly acknowledged that the U.S. military conducted its own disinformation campaign to discredit China's Sinovac shot across Asia and the Middle East between the spring of 2020 and mid-2021.[96] Although more limited in duration and scope than the Russian and Chinese analogues, the American vaccine disinformation effort similarly prioritized damaging an adversary's reputation over the health and wellbeing of civilian populations.

The Kremlin's use of COVID-19 vaccines as fodder for its disinformation machine fully aligned with Russia's broader foreign policy objectives, including fomenting discord within democratic societies and undermining confidence in Western governments and institutions. Russia's pandemic disinformation closely adhered to the Kremlin's preexisting playbook of using crises as opportunities to inflame tensions among foreign populations.[97] The Russian government has labeled the West – in particular the U.S. – as the greatest threat to Russia and has made the weakening of Western institutions a top priority.[98] Even the Kremlin's promotion of anti-vaccine conspiracy theories, seemingly at the expense of improving public trust of Sputnik V, is logical in this context: Since the

Kremlin viewed the vaccine as a tool to manipulate rival societies, so long as the effect was anti-Western, Sputnik V had been successful – even if the vaccine itself had not succeeded by any objective public health metric.

United States

The U.S. also wielded COVID-19 vaccines as a tool to shape global politics, but pursued different – and often opposite – foreign policy objectives from China and Russia. After resisting calls to share American-made vaccines with the world until domestic demand had been sated – widely decried by the international community as "hoarding" and "vaccine nationalism" – the U.S. exported its first tranche of shots in April 2021.[99] The protracted delay between WHO approval of American vaccines, the first of which was granted in December 2020, and the sharing of American shots abroad, which did not begin in earnest until June 2021, left a void that China and Russia sought to fill.[100]

Following President Trump's withdrawal of the U.S. from the WHO and refusal to join COVAX, the WHO-supported global COVID-19 vaccine distribution initiative, U.S. President Joe Biden aimed to "salvage our reputation, rebuild confidence in our leadership, and mobilize our country and our allies to rapidly meet new challenges" after taking office in January 2021.[101] Most relevant to this analysis are the Biden administration's efforts to offset Chinese, and to a lesser extent Russian, soft power gains achieved using COVID-19 vaccine supplies prior to U.S. engagement. When the U.S. began sharing its vaccine supply with other countries, the Biden administration did so broadly – as of December 2023, American shots had been delivered to 117 countries, both bilaterally and in partnership with the African Vaccine Acquisition Trust (AVAT), the Caribbean Community (CARICOM), and COVAX.[102] Contrasting with Russian and Chinese sales of vaccines or aggressive financing arrangements, all COVID-19 shots distributed abroad by the U.S. government were donated free of charge.[103] Biden frequently touted that American donations were made with "no strings attached," emphasizing the U.S.'s leading role in ending the pandemic and the contrast between American and Chinese policies.[104] By July 2023, the U.S. had donated COVID-19 shots to almost every low or middle-income country in the world, with the notable exception of nations with whom the U.S. government has adversarial relations, including Cuba, Iran, North Korea, Venezuela, and Syria.[105]

The U.S.'s intent to use COVID-19 vaccines to counter Chinese influence was made obvious in March 2021 when the members of the Quadrilateral Security Dialogue (Quad) – a security partnership between the U.S. and Australia, India, and Japan – announced the Quad Vaccine Partnership.[106] Launched with the stated goal of donating 1.2 billion doses of COVID-19 vaccines to the Indo-Pacific by the end of 2022, the agreement entailed the U.S. supplying the financing, India contributing manufacturing capacity, and Australia and Japan providing regional last-mile delivery expertise.[107] The Quad's shot-sharing scheme was a thinly veiled attempt to counterbalance Chinese vaccine sharing in the region.[108] Although India's vaccine export ban, imposed between April and October 2021, ultimately hampered the program's intended impact significantly – the Quad did not deliver its first shots until April 2022 – the partnership underscores the importance ascribed to countering Chinese influence by the U.S. and its allies and partners, and their willingness to use vaccines to do so.[109]

The special attention the Biden administration paid to the Indo-Pacific region matches the administration's prioritization of that region in its broader foreign policy, especially in relation to the American rivalry with China.[110] Of note, of the 117 country recipients of American vaccines, the five that received the most were, in order, Bangladesh, Pakistan, Indonesia, Vietnam, and the Philippines.[111] All five are neighbors or near-neighbors of China, demonstrating the high priority given to the region by U.S. vaccine distribution efforts. Like Beijing's use of Chinese-made shots to encourage preferred political behavior from recipient governments, Washington similarly deployed American-made vaccines strategically to deepen and expand U.S. influence abroad – albeit to opposite ends, and without coercion.

The Philippines provides a revealing example of this pattern in practice: In the wake of revelations that Beijing was attempting to leverage Philippine dependence on Chinese vaccines to expand military activities in the South China Sea, Rodrigo Duterte, then president of the Philippines, made a televised address in July 2021 to thank the U.S. for their donation of more than six million doses of Johnson & Johnson and Moderna.[112] He also announced that, because of the donation, he would restore the Visiting Forces Agreement (VFA), a security cooperation agreement providing legal status for U.S. military personnel operating in the Philippines, which Duterte had cancelled in February 2020.[113] This is a clear example of the U.S.'s use of vaccine donations as a carrot to incent pro-U.S. behavior – and there is evidence that Duterte used sticks of his own to secure the donation.[114] In a December 2020 speech, he directly linked VFA restoration to receipt of American COVID-19 shots: "If they fail to deliver a minimum of 20 million vaccines, they better get out – no vaccine, no stay here."[115] Although the U.S. provided fewer than 20 million doses, Duterte's explicit coupling of vaccine aid with VFA restoration highlights the transactional view of vaccine diplomacy for recipients as well as exporters.

Like Chinese and Russian vaccine sharing behavior, the U.S. government's use of American-made COVID-19 shots aligned fully with broader foreign policy goals. The unprecedented success of Pfizer/BioNTech's and Moderna's mRNA vaccines, combined with the U.S.'s emphasis on donating shots without strings attached, supported the Biden administration's aim to reassert the U.S. as the world's public health agenda setter. The U.S.'s focus on using vaccine supplies to counter Chinese influence comported with the Biden administration's "threefold" policy toward China:

> 1) to invest in the foundations of our strength at home – our competitiveness, our innovation, our resilience, our democracy, 2) to align our efforts with our network of allies and partners, acting with common purpose and in common cause, and 3) compete responsibly with the PRC to defend our interests and build our vision for the future.[116]

Further, the Biden administration's prioritization of donating shots to a broad diversity of low and middle-income countries harmonized with U.S. policy since World War II to use foreign aid, including public health programs, to maintain wide-ranging influence around the world.[117] One such example is the President's Emergency Plan for AIDS Relief (PEPFAR): In addition to expanding access to HIV treatment and prevention, including antiretroviral drugs, in developing countries, PEPFAR has also served to improve the U.S.'s image abroad and promote American hegemony.[118]

ANALYSIS, LESSONS, AND IMPLICATIONS

While China, Russia, and the U.S. sought to achieve different ends on the international stage, the vaccine sharing behavior of all three during the COVID-19 pandemic supported each government's foreign policy goals. Even as the deadliest pandemic in a century killed millions worldwide, vaccine distribution policies remained self-interested – not altruistic, as Hotez hypothesized – despite their unique power to end the scourge.[119]

Hotez's theory that the life-saving power of vaccines motivates public health-minded collaboration between otherwise adversarial states is based on Cold War-era cooperation between the U.S. and USSR to create and distribute polio and smallpox vaccines.[120] While these examples are historically noteworthy, it is necessary to consider whether the U.S. and USSR "put aside their differences" to protect public health, as Hotez postulated, or if their incentives just happened to be aligned at that point in time.[121] There are numerous other instances of diplomatic collaboration between the U.S. and USSR during the Cold War, including the 1963 Limited Test Ban Treaty, the 1968 Nuclear Non-Proliferation Treaty, the 1972 Biological Weapons Convention, and the 1987 Intermediate Range Nuclear Forces Treaty, to name a few examples.[122] Cooperation was a frequent occurrence throughout the Cold War not in spite of the rivalry, but because of it: Such efforts were possible because of a shared interest in avoiding a nuclear confrontation and helped to ameliorate sources of friction, build trust and rapport, and ultimately lower the chances of direct conflict.[123] Hotez's Cold War examples appear to align with this broader trend, not contradict it.

Hotez's concept of vaccine diplomacy hinges on an assumption that the world's governments all value human life and prioritize protecting it among, or even above, other objectives. Lamentably, this is not the case – although the governments of China, Russia, and the United States all publicly touted humanitarian intentions, their use of vaccines in practice reveals a collective view of domestically produced shots as a foreign policy tool like any other. Though this aspect of Hotez's theory is not supported by the body of evidence considered in this article, his vision for vaccine diplomacy – and by extension, international relations – is admirable. While we have not yet seen that vision achieved, the world's governments certainly should strive to make their foreign and domestic policies align with public health and humanitarian needs. If global leaders – especially those helming authoritarian and totalitarian regimes – placed the same value in human life that Hotez expects, public health crises like COVID-19 (not to mention many other issues) would be easier to mitigate.

Although the evidence of state vaccine sharing behavior during the COVID-19 pandemic does not support Hotez's argument, collaboration between individual scientists from different countries – dubbed by Hotez 'vaccine science diplomacy' – often did. The international scientific community's reaction to the Sputnik V clinical trial data controversy is one such example. The open letter expressing concerns that Gamaleya's trial data had been manipulated was signed by 37 scientists from 12 different countries, including the U.S. and Venezuela, despite their governments' adversarial relations.[124] In addition, the scientific research and development of COVID-19 vaccines often involved international collaboration. While the American-German Pfizer/BioNTech partnership may be the most famous, SpikoGen, a COVID-19 shot developed jointly by scientists from Australia and Iran, is another noteworthy example.[125] Vaxine, an Australian biotechnology company, partnered with CinnaGen, an Iranian firm, for assistance

conducting human trials on its vaccine candidate in Iran, emphasizing the ability of individual scientists and biotechnology companies to work together to protect human health, even if their governments cannot.[126]

Altogether, Hotez's perspective reflects the values of his field: Public health seeks to protect the health and wellbeing of entire populations with the goal of maximizing benefits for the largest possible number of people.[127] This is not, and never has been, the purpose of diplomacy, used by a country's leaders to advance their national interests abroad.[128] As the new field of health security bridges the gap between public health and international relations, future scholarship should endeavor to integrate the unique contributions of each, rather than bend the truths of one to suit the aims of the other.[129]

While some scholars argue that public health and security are best kept separate, the wide-ranging effects of the COVID-19 pandemic on governments, economies, and societies writ large demonstrate that these fields are already inextricably linked.[130] When we study either in a vacuum, we do so to our own detriment.

CONCLUSION

Future research should investigate the vaccine sharing behavior of countries outside of the three analyzed in this article and consider the role of the EU as an intermediary between vaccine export and import countries. Given that the EU exported more COVID-19 vaccines than any other producing economy – nearly 2.5 billion shots by May 2022 per Figure 1, amounting to roughly 40 percent of the world's total exports – evaluating how vaccine sharing aligns with the foreign policy objectives of individual member states, or with the goals of member states in aggregate, will be instructive.[131] In the same vein, the intermediary role of multilateral vaccine sharing entities such as COVAX and AVAT also warrants further examination. Finally, additional studies should consider a broader scope of public health emergencies, in addition to a wider range of vaccine sharing entities. While the COVID-19 pandemic provided a global case study, there is certainly more to be learned from vaccine diplomacy efforts during regional epidemics. Answering these questions will inform our understanding of how states use vaccines in practice and, perhaps, generate new, more empirical theories of vaccine diplomacy.

Given that the spillover of zoonotic diseases into human populations is becoming increasingly frequent, COVID-19 is unlikely to be this century's last global pandemic.[132] As the next pandemic looms, policymakers in public health and foreign policy should be armed with empirical, updated theories to understand how states are likely to act in response to global health crises and a scarcity of countermeasures. Scholars of health security should structure their research on established theories and paradigms of international relations, while keeping in mind the altruistic and Hippocratic ideals of public health.

Table 1
COVID-19 vaccines approved for use worldwide by December 2022

National Affiliation	Manufacturer	Name	Type	WHO Emergency Use Approval Date
Canada	Medicago	Covifenz	VLP	-
China	Anhui Zhifei Longcom	Zifivax	Protein Subunit	-
China	CanSino	Convidecia	Non-Replicating Viral Vector	19-May-22
China	CanSino	Convidecia Air	Non-Replicating Viral Vector	-
China	Livzon Mabpharm Inc	V-01	Protein Subunit	-
China	National Vaccine and Serum Institute	Recombinant SARS-CoV-2 Vaccine (CHO Cell)	Protein Subunit	-
China	Shenzhen Kangtai Biological Products Co.	KCONVAC	Inactivated	-
China	Sinopharm (Beijing)	Covilo	Inactivated	7-May-21
China	Sinopharm (Wuhan)	Inactivated (Vero Cells)	Inactivated	-
China	Sinovac	CoronaVac	Inactivated	1-Jun-21
China	Walvax	AWcorna	RNA	-
Cuba	Center for Genetic Engineering and Biotechnology (CIGB)	Abdala	Protein Subunit	-
Cuba	Instituto Finlay de Vacunas Cuba	Soberana 02	Protein Subunit	-
Cuba	Instituto Finlay de Vacunas Cuba	Soberana Plus	Protein Subunit	-
France	Valneva	VLA2001	Inactivated	-
France/United Kingdom	Sanofi/GSK	VidPrevtyn Beta	Protein Subunit	-
India	Bharat Biotech	Covaxin	Inactivated	30-Nov-21

India	Bharat Biotech	iNCOVACC	Non-Replicating Viral Vector	-
India	Biological E Limited	Corbevax	Protein Subunit	-
India	Gennova Biopharmaceuticals Limited	GEMCOVAC-19	RNA	-
India	Serum Institute of India	Covishield (Oxford/ AstraZeneca formulation)	Non-Replicating Viral Vector	15-Feb-21
India	Serum Institute of India	COVOVAX (Novavax formulation)	Protein Subunit	17-Dec-21
India	Zydus Cadila	ZyCoV-D	DNA	-
Indonesia	PT Bio Farma	IndoVac	Protein Subunit	-
Iran	Bagheiat-allah University of Medical Sciences	Noora vaccine	Protein Subunit	-
Iran	Organization of Defensive Innovation and Research	FAKHRAVAC (MIVAC)	Inactivated	-
Iran	Razi Vaccine and Serum Research Institute	Razi Cov Pars	Protein Subunit	-
Iran	Shifa Pharmed Industrial Co.	COVIran Barekat	Inactivated	-
Iran/Australia	CinnaGen Co./Vaxine	SpikoGen	Protein Subunit	-
Japan	Takeda	TAK-019 (Novavax formulation)	Protein Subunit	-
Japan	Takeda	TAK-919 (Moderna formulation)	RNA	-
Kazakhstan	Research Institute for Biological Safety Problems (RIBSP)	QazVac	Inactivated	-
Russia	Chumakov Center	KoviVac	Inactivated	-
Russia	Gamaleya	Gam-COVID-Vac	Non-Replicating Viral Vector	-
Russia	Gamaleya	Sputnik Light	Non-Replicating Viral Vector	-
Russia	Gamaleya	Sputnik V	Non-Replicating Viral Vector	-
Russia	Vector State Research Center of	Aurora-CoV	Protein Subunit	-

	Virology and Biotechnology			
Russia	Vector State Research Center of Virology and Biotechnology	EpiVacCorona	Protein Subunit	-
South Korea	SK Bioscience Co. Ltd	SKYCovione	Protein Subunit	16-Jun-23
Taiwan	Medigen	MVC-COV1901	Protein Subunit	-
Turkey	Health Institutes of Turkey	Turkovac	Inactivated	-
United Kingdom	Oxford/AstraZeneca	Vaxzevria	Non-Replicating Viral Vector	15-Apr-21
United States	Janssen (Johnson & Johnson)	Jcovden	Non-Replicating Viral Vector	21-Mar-21
United States	Moderna	Spikevax	RNA	30-Apr-21
United States	Moderna	Spikevax Bivalent Original/Omicron BA.1	RNA	-
United States	Moderna	Spikevax Bivalent Original/Omicron BA.4/BA.5	RNA	-
United States	Novavax	Nuvaxovid	Protein Subunit	20-Dec-21
United States/Germany	Pfizer/BioNTech	Comirnaty	RNA	31-Dec-20
United States/Germany	Pfizer/BioNTech	Comirnaty Bivalent Original/Omicron BA.1	RNA	-
United States/Germany	Pfizer/BioNTech	Comirnaty Bivalent Original/Omicron BA.4/BA.5	RNA	-

Data source: "Approved Vaccines," COVID-19 Vaccine Tracker, https://covid19.trackvaccines.org/vaccines/approved

[1] Peter J. Hotez, "Vaccines as Instruments of Foreign Policy," *EMBO Reports* 2, no. 10 (October 15, 2001): 862–68, https://doi.org/10.1093/embo-reports/kve215.
[2] Seow Ting Lee, "Vaccine Diplomacy: Nation Branding and China's COVID-19 Soft Power Play," *Place Branding and Public Diplomacy* 19, no. 1 (March 2023): 64–78, https://doi.org/10.1057/s41254-021-00224-4.
[3] Hotez, "Vaccines as Instruments."
[4] Peter J. Hotez, *Preventing the Next Pandemic: Vaccine Diplomacy in a Time of Anti-Science* (Johns Hopkins University Press, 2021); Peter J. Hotez, "'Vaccine Diplomacy': Historical Perspectives and Future Directions," ed. Sara Lustigman, *PLoS Neglected Tropical Diseases* 8, no. 6 (June 26, 2014): e2808, https://doi.org/10.1371/journal.pntd.0002808.
[5] Hotez, "'Vaccine Diplomacy': Historical Perspectives."
[6] Hotez, "'Vaccine Diplomacy': Historical Perspectives."
[7] Hotez, "'Vaccine Diplomacy': Historical Perspectives."
[8] Hotez, "'Vaccine Diplomacy': Historical Perspectives."
[9] Hotez, "'Vaccine Diplomacy': Historical Perspectives"; J. A. Nixon, "British Prisoners Released by Napoleon at Jenner's Request," *Proceedings of the Royal Society of Medicine* 887 (February 1939): 49-55. https://journals.sagepub.com/doi/pdf/10.1177/003591573903200812; Edmund Adam, "The Tale of Two Pandemics," *University Affairs*, April 29, 2020, https://universityaffairs.ca/features/feature-article/the-tale-of-two-pandemics/.
[10] Hotez, "'Vaccine Diplomacy': Historical Perspectives"; "Pasteur, Jenner and History Vaccines," German Patent and Trademark Office, March 7, 2024, https://www.dpma.de/english/our_office/publications/milestones/greatinventors/pasteur/index.html; Adam, "The Tale of Two Pandemics."
[11] Adam, "The Tale of Two Pandemics."
[12] Hotez, "'Vaccine Diplomacy': Historical Perspectives"; Hotez, "Vaccines as Instruments"; "When Should You Get a Polio Vaccination?," Washington State Department of Health, accessed May 1, 2024, https://doh.wa.gov/you-and-your-family/immunization/diseases-and-vaccines-can-prevent-them/polio-0/when-should-you-get-polio-vaccination.
[13] William Swanson, "Revealed: How Cold War Scientists Joined Forces to Conquer Polio," *Scientific American*, February 20, 2024, https://www.scientificamerican.com/article/birth-of-a-cold-war-vaccine/.
[14] Swanson, "How Cold War Scientists Joined Forces."
[15] Swanson, "How Cold War Scientists Joined Forces;" Hotez, "'Vaccine Diplomacy': Historical Perspectives."
[16] Nellie Bristol, "Smallpox Eradication: A Model for Global Cooperation," Center for Strategic and International Studies, May 17, 2023, https://www.csis.org/analysis/smallpox-eradication-model-global-cooperation; Peter J. Hotez and K. M. Narayan, "Restoring Vaccine Diplomacy," *JAMA* 325, no. 23 (June 15, 2021): 2337, https://doi.org/10.1001/jama.2021.7439; A Science Odyssey: People and Discoveries: World Health Organization Declares Smallpox Eradicated," *PBS*, May 8, 1980, https://www.pbs.org/wgbh/aso/databank/entries/dm79sp.html; Peter J. Hotez, "Russian–United States Vaccine Science Diplomacy: Preserving the Legacy," *PLOS Neglected Tropical Diseases* 11, no. 5 (May 25, 2017), https://doi.org/10.1371/journal.pntd.0005320.
[17] Hotez, "'Vaccine Diplomacy': Historical Perspectives;" The Global Eradication of Smallpox: Final Report of the Global Commission for the Certification of Smallpox Eradication, December 1980, https://iris.who.int/bitstream/handle/10665/39253/a41438.pdf.
[18] Hotez, "'Vaccine Diplomacy': Historical Perspectives."
[19] Hotez, "'Vaccine Diplomacy': Historical Perspectives."
[20] Hotez, "Vaccines as Instruments"; Peter J. Hotez, "COVID-19 Vaccines: The Imperfect Instruments of Vaccine Diplomacy," *Journal of Travel Medicine* 29, no. 8 (December 27, 2022): taac063, https://doi.org/10.1093/jtm/taac063; Peter J. Hotez, "Vaccine Science Diplomacy: Expanding Capacity to Prevent Emerging and Neglected Tropical Diseases Arising from Islamic State (IS)–Held Territories," *PLOS Neglected Tropical Diseases* 9, no. 9 (September 24, 2015): e0003852, https://doi.org/10.1371/journal.pntd.0003852; Hotez, "'Vaccine Diplomacy': Historical Perspectives."
[21] Hotez, "COVID-19 Vaccines: Imperfect Instruments."

[22] "India's Vaccine Diplomacy Wins Friends in Caribbean, Draws Global Praise," *The Times of India*, February 19, 2021, https://timesofindia.indiatimes.com/india/indias-vaccine-diplomacy-wins-friends-in-caribbean-draws-global-praise/articleshow/81112044.cms; The Editorial Board, "The Era of Vaccine Diplomacy Is Here," *The New York Times*, February 28, 2021, https://www.nytimes.com/2021/02/28/opinion/covid-vaccine-global.html; "Taiwan Accuses China of 'vaccine Diplomacy' in Paraguay," *BBC News*, April 7, 2021, https://www.bbc.com/news/world-asia-56661303; Yanzhong Huang, "Vaccine Diplomacy Is Paying off for China," Foreign Affairs, March 11, 2021, https://www.foreignaffairs.com/articles/china/2021-03-11/vaccine-diplomacy-paying-china.
[23] Matthew Sparke and Orly Levy, "Competing Responses to Global Inequalities in Access to COVID Vaccines: Vaccine Diplomacy and Vaccine Charity Versus Vaccine Liberty," *Clinical Infectious Diseases* 75, no. Supplement_1 (August 15, 2022): S86–92, https://doi.org/10.1093/cid/ciac361.
[24] Naoise McDonagh, "System rivalry during pandemic times: An institutional political economy view of great power vaccine diplomacy," In *A Research Agenda for COVID-19 and Society* (2022): 105-120, https://doi.org/10.4337/9781800885141.00013.
[25] Lee, "Vaccine Diplomacy."
[26] Martin Enserink, "Dispute Simmers over Who First Shared SARS-CoV-2's Genome," *Science*, March 29, 2023, https://www.science.org/content/article/dispute-simmers-over-who-first-shared-sars-cov-2-s-genome; "Approved Vaccines," COVID-19 Vaccine Tracker, accessed May 1, 2024, https://covid19.trackvaccines.org/vaccines/approved/.
[27] Michael L. King, "How Manufacturing Won or Lost the COVID-19 Vaccine Race," *Vaccine* 42, no. 5 (February 2024): 1004–12, https://doi.org/10.1016/j.vaccine.2023.12.031.
[28] Johnson & Johnson's COVID-19 vaccine received WHO emergency authorization in March 2021, but its rollout was paused in April 2021 after a rare but life-threatening blood clotting disorder – thrombotic thrombocytopenia syndrome – was reported in a small number of recipients. After safety was confirmed by regulators, manufacturing errors and distribution delays further stymied the shot's rollout both in the U.S. and abroad. See: Matthew Herper, "The Tragedy of Johnson & Johnson's Covid Vaccine," *STAT*, December 17, 2021, https://www.statnews.com/2021/12/17/the-tragedy-of-johnson-johnsons-covid-vaccine/; Fraiser Kansteiner, "How Did 75m J&J Vaccines Get Ruined? FDA Details the Manufacturing Woes at Emergent's Beleaguered Site," *Fierce Pharma*, June 14, 2021, https://www.fiercepharma.com/manufacturing/some-j-j-covid-19-doses-now-cleared-from-emergent-but-several-countries-are-already; "Approved Vaccines," COVID-19 Vaccine Tracker, accessed May 1, 2024, https://covid19.trackvaccines.org/vaccines/approved/.
[29] Talha Burki, "First Shared SARS-COV-2 Genome: Gisaid vs Virological.Org," *Lancet Microbe* 4, no. 6 (June 2023), https://doi.org/10.1016/s2666-5247(23)00133-7.
[30] King, "How Manufacturing Won or Lost the Vaccine Race"; "Approved Vaccines," COVID-19 Vaccine Tracker, accessed May 1, 2024, https://covid19.trackvaccines.org/vaccines/approved/.
[31] Simi V. Siddalingaiah, "Operation Warp Speed Contracts for Covid 19 Vaccines and Ancillary Vaccination Materials," Congressional Research Service, March 1, 2021, https://crsreports.congress.gov/product/pdf/IN/IN11560; "Fact Sheet: Explaining Operation Warp Speed," HHS.gov, December 14, 2020, https://web.archive.org/web/20201219231756/https:/www.hhs.gov/coronavirus/explaining-operation-warp-speed/index.html.
[32] "Explaining Operation Warp Speed," HHS.gov.
[33] Robert D. Atkinson, "The Impact of China's Policies on Global Biopharmaceutical Industry Innovation," The Impact of China's Policies on Global Biopharmaceutical Industry Innovation, September 8, 2020, https://itif.org/publications/2020/09/08/impact-chinas-policies-global-biopharmaceutical-industry-innovation/#_edn162; Fadel Allassan, "China Approves State-Owned Sinopharm Vaccine," *Axios*, December 31, 2020, https://www.axios.com/2020/12/31/china-sinopharm-vaccine.
[34] The Gamaleya National Center for Epidemiology and Microbiology, accessed May 1, 2024, https://gamaleya.org/en/; State Research Center of Virology and Biotechnology Vector, accessed May 1, 2024, https://www.bionity.com/en/encyclopedia/State_Research_Center_of_Virology_and_Biotechnology_VECTOR.html#google_vignette; Olga E. Ivanova et al., "Cases of Acute Flaccid Paralysis Associated with Coxsackievirus A2: Findings of a 20-Year Surveillance in the Russian Federation," *Microorganisms* 10, no. 1 (January 6, 2022): 112, https://doi.org/10.3390/microorganisms10010112.

[35] "Total Covid-19 Vaccine Doses Administered," Our World in Data, April 30, 2024, https://ourworldindata.org/grapher/cumulative-covid-vaccinations; "Vaccine Trade Tracker," World Trade Organization and International Monetary Fund, May 31, 2022, https://www.wto.org/spanish/tratop_s/covid19_s/vaccine_trade_tracker_s.htm.
[36] "Vaccine Trade Tracker," WTO and IMF.
[37] "Vaccine Trade Tracker," WTO and IMF.
[38] "Vaccine Trade Tracker," WTO and IMF.
[39] "Vaccine Trade Tracker," WTO and IMF.
[40] Sarah Wheaton, "Chinese Vaccine Would Be 'Global Public Good,' Xi Says," *Politico*, May 18, 2020, https://www.politico.com/news/2020/05/18/chinese-vaccine-would-be-global-public-good-xi-says-265039; Ben Doherty, Daniel Hurst, and Kate Lyons, "Coercion or Altruism: Is China Using Its Covid Vaccines to Wield Global Power?," *The Guardian*, March 27, 2021, https://www.theguardian.com/australia-news/2021/mar/28/coercion-or-altruism-is-china-using-its-covid-vaccines-to-wield-global-power.
[41] For contrasting rhetoric from Western leaders, see: Dartunorro Clark, "Trump Suggests 'injection' of Disinfectant to Beat Coronavirus and 'Clean' the Lungs," *NBC News*, April 24, 2020, https://www.nbcnews.com/politics/donald-trump/trump-suggests-injection-disinfectant-beat-coronavirus-clean-lungs-n1191216; Suisheng Zhao, "Why China's Vaccine Diplomacy Is Winning," *East Asia Forum*, April 29, 2021, https://eastasiaforum.org/2021/04/29/why-chinas-vaccine-diplomacy-is-winning/.
[42] Sebastian Rotella, James Bandler, and Patricia Callahan, "Inside the Trump Administration's Decision to Leave the World Health Organization," *ProPublica*, June 20, 2020, https://www.propublica.org/article/inside-the-trump-administrations-decision-to-leave-the-world-health-organization; "Full Text: Speech by President Xi Jinping at Opening of 73rd World Health Assembly," *Xinhua*, May 18, 2020, http://www.xinhuanet.com/english/2020-05/18/c_139067018.htm.
[43] Ashish Jha, "System Failure: America Needs a Global Health Policy for the Pandemic Age," *Foreign Affairs*, February 16, 2021, https://www.foreignaffairs.com/articles/united-states/2021-02-16/system-failure.
[44] "PAHO Director Calls for Closing 'Glaring' Vaccine Gap by Expanding Vaccine Production in Latin America and the Caribbean," Pan American Health Organization, May 19, 2021, https://www.paho.org/en/news/19-5-2021-paho-director-calls-closing-glaring-vaccine-gap-expanding-vaccine-production-latin; "Central America and Mexico," European Commission, European Civil Protection and Humanitarian Aid Operations, November 22, 2023, https://civil-protection-humanitarian-aid.ec.europa.eu/where/latin-america-and-caribbean/central-america-and-mexico_en.
[45] Sasha Ingber, "Taiwan Grows Isolated as El Salvador Recognizes Beijing," *NPR*, August 21, 2018, https://www.npr.org/2018/08/21/640571141/taiwan-grows-isolated-as-el-salvador-recognizes-beijing; "China to Donate 150,000 Sinovac COVID-19 Vaccine Doses to El Salvador," *Reuters*, April 4, 2021, https://www.reuters.com/business/healthcare-pharmaceuticals/china-donate-150000-sinovac-covid-19-vaccine-doses-el-salvador-2021-04-04/.
[46] "China to Send Fifth Batch of COVID-19 Vaccines to El Salvador," The State Council, The People's Republic of China, July 7, 2021, https://english.www.gov.cn/news/internationalexchanges/202107/07/content_WS60e50849c6d0df57f98dc833.html.
[47] "Taiwan Ally Guatemala Fends off Beijing Overtures," *Financial Times*, December 13, 2021, https://www.ft.com/content/7e22bc8c-31e4-4a4b-a0a1-e29000fdddc6; Dan De Luce, "China Is Using Covid Vaccine to Flex Its Muscles in America's Backyard," NBC News, May 23, 2021, https://www.nbcnews.com/news/world/china-using-vaccines-push-its-agenda-latin-america-u-s-n1268146.
[48] "Honduras, in Diplomatic Shift, May Open China Office to Acquire Covid-19 Vaccines," The Straits Times, May 12, 2021, https://www.straitstimes.com/world/honduras-in-diplomatic-shift-may-open-china-office-to-acquire-covid-19-vaccines; "Honduran President, in Diplomatic Shift, Says He May Open China Office," *Reuters*, May 11, 2021, https://www.reuters.com/world/americas/honduran-president-diplomatic-shift-says-he-may-open-china-office-2021-05-12/.

[49] "Honduras Establishes Ties with China after Break from Taiwan," *NPR*, March 27, 2023, https://www.npr.org/2023/03/27/1166177955/honduras-establishes-ties-with-china-after-break-from-taiwan.
[50] Karol Suarez, Isa Soares, and Ben Westcott, "Nicaragua Ends Relations with Taiwan in Diplomatic Victory for China," *CNN*, December 10, 2021, https://www.cnn.com/2021/12/09/americas/nicaragua-taiwan-china-intl-latam/index.html; "Nicaragua Receives China Vaccines after Cutting Ties with Taiwan," *BBC News*, December 13, 2021, https://www.bbc.com/news/world-asia-59633388.
[51] Eleanor Albert, "China Gifts Pakistan 1.2 Million COVID-19 Vaccine Doses," *The Diplomat*, February 4, 2021, https://thediplomat.com/2021/02/china-gifts-pakistan-1-2-million-covid-19-vaccine-doses/; Asad Hashim, "Pakistan Receives First COVID Vaccine Shipment from China," *Al Jazeera*, February 1, 2021, https://www.aljazeera.com/news/2021/2/1/pakistan-receives-first-shipment-of-coronavirus-vaccine; "The China-Pakistan Axis," German Marshall Fund of the United States, accessed May 1, 2024, https://www.gmfus.org/china-pakistan-axis.
[52] Albert, "China Gifts Pakistan 1.2 Million Vaccine Doses."
[53] "Countries of the Belt and Road Initiative (BRI)," Green Finance & Development Center, accessed May 1, 2024, https://greenfdc.org/countries-of-the-belt-and-road-initiative-bri/; "Tracking China's COVID-19 Vaccine Distribution," Bridge Beijing, December 28, 2022, https://bridgebeijing.com/our-publications/our-publications-1/china-covid-19-vaccines-tracker/; Katharina Buchholz, "Infographic: Where Chinese Vaccines Are Used," Statista, July 30, 2021, https://www.statista.com/chart/25446/countries-authorizing-coronavirus-vaccines-of-chinese-origin/.
[54] Spencer Feingold, "China's Belt and Road Initiative Turns 10. Here's What to Know," World Economic Forum, November 20, 2023, https://www.weforum.org/agenda/2023/11/china-belt-road-initiative-trade-bri-silk-road/; Yu Jie and Jon Wallace, "What Is China's Belt and Road Initiative (BRI)?," Chatham House, September 13, 2021, https://www.chathamhouse.org/2021/09/what-chinas-belt-and-road-initiative-bri; "How Is the Belt and Road Initiative Advancing China's Interests?," ChinaPower Project, Center for Strategic and International Studies, May 8, 2017, https://chinapower.csis.org/china-belt-and-road-initiative/; David Sacks, "China's Belt and Road Initiative Enters Its Second Decade: Which Leaders Went to Beijing to Celebrate with Xi Jinping?," Council on Foreign Relations, October 17, 2023, https://www.cfr.org/blog/chinas-belt-and-road-initiative-enters-its-second-decade-which-leaders-went-beijing-celebrate.
[55] "Tracking China's Vaccine Distribution," Bridge Beijing; "Belt and Road Portal," Yidaiyilu.gov.cn, https://www.yidaiyilu.gov.cn/country.
[56] "China Wants Bhutan's 'active Participation' in the Belt and Road Initiative," *The Wire*, July 25, 2018, https://thewire.in/diplomacy/china-bhutan-belt-and-road-initiative-doklam; Igor Patrick, "China's Ambassador to Brazil Makes Belt and Road Initiative Pitch," *South China Morning Post*, October 24, 2023, https://www.scmp.com/news/china/article/3238928/chinas-ambassador-brazil-makes-belt-and-road-initiative-pitch-appealing-higher-level-ties; Michael Zarate, "The Goal Is to Join the Belt and Road — Interview with Luis Diego Monsalve, Colombian Ambassador to China," *China Today*, June 23, 2021, http://www.chinatoday.com.cn/ctenglish/2018/ii/202106/t20210623_800250337.html.
[57] "Is China's Covid-19 Diplomacy Succeeding?," ChinaPower Project, Center for Strategic and International Studies, September 23, 2021, https://chinapower.csis.org/china-covid-medical-vaccine-diplomacy/.
[58] "Tracking China's Vaccine Distribution," Bridge Beijing.
[59] Diego Oré, "Mexico Says China Plans $1 Billion Loan to Ease Latam Access to Virus Vaccine," *Reuters*, July 22, 2020, https://www.reuters.com/article/us-health-coronavirus-mexico-china-idUSKCN24O08L; Sui-lee Wee, "From Asia to Africa, China Promotes Its Vaccines to Win Friends," *The New York Times*, September 11, 2020, https://www.nytimes.com/2020/09/11/business/china-vaccine-diplomacy.html.
[60] Bernard Condon, "China's Loans Pushing World's Poorest Countries to Brink of Collapse," *AP News*, May 18, 2023, https://apnews.com/article/china-debt-banking-loans-financial-developing-countries-collapse-8df6f9fac3e1e758d0e6d8d5dfbd3ed6; Ambassador Mark A. Green, "Debt Distress on the Road to 'Belt and Road,'" Wilson Center, January 16, 2024, https://www.wilsoncenter.org/blog-post/debt-distress-road-belt-and-road.

[61] "Lankford Counters Communist China's Predatory Economic Tactics," Office of U.S. Senator James Lankford, September 7, 2023, https://www.lankford.senate.gov/news/press-releases/lankford-counters-communist-chinas-predatory-economic-tactics/; Ajit Singh, "The Myth of 'Debt-Trap Diplomacy' and Realities of Chinese Development Finance," *Third World Quarterly* 42, no. 2 (August 29, 2020): 239–53, https://doi.org/10.1080/01436597.2020.1807318.
[62] "Made in China 2025," U.S. Chamber of Commerce, 2017, https://www.uschamber.com/sites/default/files/final_made_in_china_2025_report_full.pdf.
[63] "Putin Says Russia First to Approve a Covid-19 Vaccine, Dubbed 'Sputnik V,'" *France 24*, August 11, 2020, https://www.france24.com/en/20200811-putin-says-russia-first-to-approve-a-covid-19-vaccine-dubbed-sputnik-v.
[64] Grace Kier and Paul Stronski, "Russia's Vaccine Diplomacy Is Mostly Smoke and Mirrors," Carnegie Endowment for International Peace, August 3, 2021, https://carnegieendowment.org/2021/08/03/russia-s-vaccine-diplomacy-is-mostly-smoke-and-mirrors-pub-85074; "Coronavirus: Putin Says Vaccine Has Been Approved for Use," *BBC News*, August 11, 2020, https://www.bbc.com/news/world-europe-53735718.
[65] Andrew E. Kramer, "Russia Approves Coronavirus Vaccine before Completing Tests," *The New York Times*, August 11, 2020, https://www.nytimes.com/2020/08/11/world/europe/russia-coronavirus-vaccine-approval.html.
[66] Kezia Parkins, "Sputnik V Controversy: Still No Raw Data," Clinical Trials Arena, June 2, 2021, https://www.clinicaltrialsarena.com/features/sputnik-v-controversy-still-no-raw-data/.
[67] Enrico Bucci, "Note of Concern," Cattivi Scienziati, September 7, 2020, https://cattiviscienziati.com/2020/09/07/note-of-concern/.
[68] Bucci, "Note of Concern."
[69] Parkins, "Sputnik V Controversy."
[70] Parkins, "Sputnik V Controversy."
[71] "Gamaleya: Sputnik V," COVID-19 Vaccine Tracker, accessed May 1, 2024, https://covid19.trackvaccines.org/vaccines/12/; "Frequently Asked Questions," Sputnik V Official Website, accessed May 1, 2024, https://sputnikvaccine.com/faq/; Paul Stronski, "What Went Wrong with Russia's Sputnik V Vaccine Rollout?," Carnegie Endowment for International Peace, November 15, 2021, https://carnegieendowment.org/2021/11/15/what-went-wrong-with-russia-s-sputnik-v-vaccine-rollout-pub-85783.
[72] "Slovakia Ends Vaccination with Russia's Sputnik V amid Slow Uptake," *The Moscow Times*, August 31, 2021, https://www.themoscowtimes.com/2021/08/31/slovakia-ends-vaccination-with-russias-sputnik-v-amid-slow-uptake-a74940.
[73] Krishna Das and Jatindra Dash, "Low Demand, Storage Issues Spur India's PVT Hospitals to Cancel Sputnik V Orders," *Mint*, September 29, 2021, https://www.livemint.com/news/india/low-demand-storage-issues-spur-india-s-pvt-hospitals-to-cancel-sputnik-v-vaccine-orders-11632907290897.html; "1 Million Sputnik Coronavirus Vaccines Expire in Guatemala," *AP News*, March 1, 2022, https://apnews.com/article/coronavirus-pandemic-health-caribbean-guatemala-guatemala-city-93d77d3756239584f098de5916c83976.
[74] "Over 60% of Russians Don't Want Sputnik V Vaccine, See Coronavirus as Biological Weapon - Poll," *Reuters*, March 1, 2021, https://www.reuters.com/article/us-health-coronavirus-russia-poll-idUSKBN2AT2XK/; "Understanding Vaccination Progress," Johns Hopkins Coronavirus Resource Center, March 10, 2023, https://coronavirus.jhu.edu/vaccines/international.
[75] Stronski, "What Went Wrong with Russia's Sputnik V?"; Isabelle Khurshudyan, "Putin Gets His Vaccine but the Rest Is Wrapped in Secrecy," *The Washington Post*, March 24, 2021, https://www.washingtonpost.com/world/europe/putin-vaccine-secret-sputnik/2021/03/24/7a57a852-8bd3-11eb-a33e-da28941cb9ac_story.html; Andrew E. Kramer, "Putin, Months after Becoming Eligible, Has Finally Gotten a Vaccine Shot," *The New York Times*, March 23, 2021, https://www.nytimes.com/2021/03/23/world/covid-vaccine-putin.html.
[76] "Vaccine Trade Tracker," WTO and IMF.

[77] Lillian Posner, Sarah Nance, and Samantha Kiernan, "How Russia's Invasion Shot down Sputnik V," ThinkGlobalHealth, March 28, 2022, https://www.thinkglobalhealth.org/article/how-russias-invasion-shot-down-sputnik-v; "Russia Admits WHO yet to Approve Sputnik Jab over Lack of Data," *Barron's*, December 14, 2021, https://www.barrons.com/news/russia-admits-who-yet-to-approve-sputnik-jab-over-lack-of-data-01639482607.
[78] Serena Tinari, "Covid-19: Ukraine Conflict Calls Russia's Vaccine Diplomacy into Question," *BMJ*, March 9, 2022, https://doi.org/10.1136/bmj.o626; "Treasury Prohibits Transactions with Central Bank of Russia and Imposes Sanctions on Key Sources of Russia's Wealth," U.S. Department of the Treasury, February 28, 2022, https://home.treasury.gov/news/press-releases/jy0612.
[79] "Russian Direct Investment Fund," OpenSanctions.org, accessed May 1, 2024, https://www.opensanctions.org/entities/NK-CSTHWr7TNQckHEURKfFGMH/.
[80] Tinari, "Ukraine Conflict Calls Russia's Vaccine Diplomacy into Question"; "RDIF Statement," Sputnik V Official Website, accessed May 1, 2024, https://sputnikvaccine.com/newsroom/pressreleases/rdif-statement-28/.
[81] Adrián Alonso Ruiz and Gurgen Tadevosyan, "Russian Covid-19 Vaccines," Geneva Graduate Institute Global Health Centre, October 17, 2022, https://www.knowledgeportalia.org/russian-covid-19-vaccines; Andrew E. Kramer, "Russia Trumpets Vaccine Exports, While Quietly Importing Doses," *The New York Times*, March 28, 2021, https://www.nytimes.com/2021/03/28/world/europe/sputnik-vaccine-russia.html; "Vaccine Trade Tracker," WTO and IMF.
[82] Elise Thomas, "Covid-19 Disinformation Campaigns Shift Focus to Vaccines," Australian Strategic Policy Institute, August 24, 2020, https://www.aspistrategist.org.au/covid-19-disinformation-campaigns-shift-focus-to-vaccines/; Alexey Kovalev, "In Putin's Russia, the Hollowed-out Media Mirrors the State," *The Guardian*, March 24, 2017, https://www.theguardian.com/commentisfree/2017/mar/24/putin-russia-media-state-government-control; Bret Schafer et al., "Influence-Enza: How Russia, China, and Iran Have Shaped and Manipulated Coronavirus Vaccine Narratives," German Marshall Fund of the United States, March 6, 2021, https://securingdemocracy.gmfus.org/russia-china-iran-covid-vaccine-disinformation/.
[83] Ben Dubow, Edward Lucas, and Jake Morris, "Jabbed in the Back: Mapping Russian and Chinese Information Operations during the COVID-19 Pandemic," Center for European Policy Analysis, December 2, 2021, https://cepa.org/comprehensive-reports/jabbed-in-the-back-mapping-russian-and-chinese-information-operations-during-the-covid-19-pandemic/#footnote_1_489.
[84] Schafer et al., "Influence-Enza."
[85] Oliver Darcy, "I Spent an Entire Day Watching Russia's Propaganda Network. Here's the Warped Reality I Saw Presented to Viewers," *CNN*, March 3, 2022, https://www.cnn.com/2022/03/02/media/rt-propaganda-network/index.html; Schafer et al., "Influence-Enza"; Rina Fajri Nuwarda et al., "Vaccine Hesitancy: Contemporary Issues and Historical Background," *Vaccines* 10, no. 10 (September 22, 2022): 1595, https://doi.org/10.3390/vaccines10101595.
[86] Darcy, "I Spent an Entire Day Watching Russia's Propaganda Network"; Schafer et al., "Influence-Enza."
[87] "Twitter Is Biggest Outlet for Russian Disinformation, Says EU," *The Telegraph*, September 26, 2023, https://www.telegraph.co.uk/world-news/2023/09/26/twitter-is-biggest-outlet-for-russian-disinformation-eu/; Schafer et al., "Influence-Enza."
[88] Schafer et al., "Influence-Enza"; Ian Jones and Polly Roy, "Sputnik V COVID-19 Vaccine Candidate Appears Safe and Effective," *The Lancet* 397, no. 10275 (February 2021): 642–43, https://doi.org/10.1016/s0140-6736(21)00191-4.
[89] Schafer et al., "Influence-Enza."
[90] Dubow, Lucas, and Morris, "Jabbed in the Back."
[91] Dubow, Lucas, and Morris, "Jabbed in the Back."
[92] Dubow, Lucas, and Morris, "Jabbed in the Back."
[93] Edward Lucas, Jake Morris, and Corina Rebegea, "Information Bedlam: Russian and Chinese Information Operations during the COVID-19 Pandemic," Center for European Policy Analysis, March 15, 2021, https://cepa.org/comprehensive-reports/information-bedlam-russian-and-chinese-information-operations-during-the-covid-19-pandemic/; Jamie Dettmer, "Russian Anti-Vaccine Disinformation Campaign Backfires," Voice of America, November 18, 2021, https://www.voanews.com/a/russian-anti-vaccine-disinformation-campaign-backfires/6318536.html.

[94] Dubow, Lucas, and Morris, "Jabbed in the Back."
[95] Dubow, Lucas, and Morris, "Jabbed in the Back"; Chris Bing and Joel Schectman, "Pentagon ran secret anti-vax campaign to undermine China during pandemic," *Reuters*, June 14, 2024, https://www.reuters.com/investigates/special-report/usa-covid-propaganda/.
[96] Bing and Schectman, "Pentagon ran secret anti-vax campaign."
[97] Dubow, Lucas, and Morris, "Jabbed in the Back."
[98] Eugene Rumer, "Russia and the West in a New Standoff," Carnegie Endowment for International Peace, 2017, https://carnegieendowment.org/files/Rumer_RussiaandtheWestStandoff.pdf; "Russia Military Power: Building a Military to Support Great Power Aspirations," Defense Intelligence Agency, 2017, https://www.dia.mil/Portals/110/Images/News/Military_Powers_Publications/Russia_Military_Power_Report_2017.pdf.
[99] Marco Hafner et al., "Covid-19 and the Cost of Vaccine Nationalism," *Rand Health Quarterly*, August 31, 2022, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9519117/; "Vaccine Nationalism, Hoarding Putting Us All at Risk, Secretary-general Tells World Health Summit, Warning Covid-19 Will Not Be Last Global Pandemic | Meetings Coverage and Press Releases," United Nations, October 24, 2021, https://press.un.org/en/2021/sgsm20986.doc.htm; "Pfizer Begins to Export US-Made Covid Shots: Report," *Al Jazeera*, April 30, 2021, https://www.aljazeera.com/economy/2021/4/30/pfizer-begins-to-export-us-made-covid-shots-report.
[100] "WHO Issues Its First Emergency Use Validation for a COVID-19 Vaccine and Emphasizes Need for Equitable Global Access," World Health Organization, December 31, 2020, https://www.who.int/news/item/31-12-2020-who-issues-its-first-emergency-use-validation-for-a-covid-19-vaccine-and-emphasizes-need-for-equitable-global-access; "Vaccine Trade Tracker," WTO and IMF; "U.S. International COVID-19 Vaccine Donations Tracker," Kaiser Family Foundation, July 24, 2023, https://www.kff.org/coronavirus-covid-19/issue-brief/u-s-international-covid-19-vaccine-donations-tracker/.
[101] "Coronavirus: Trump Moves to Pull Us out of World Health Organization," *BBC News*, July 7, 2020, https://www.bbc.com/news/world-us-canada-53327906; Emily Rauhala and Yasmeen Abutaleb, "U.S. Says It Won't Join Who-Linked Effort to Develop, Distribute Coronavirus Vaccine - The Washington Post," *The Washington Post*, September 1, 2020, https://www.washingtonpost.com/world/coronavirus-vaccine-trump/2020/09/01/b44b42be-e965-11ea-bf44-0d31c85838a5_story.html; Joseph R. Biden, Jr., "Why America Must Lead Again," *Foreign Affairs*, January 23, 2020, https://www.foreignaffairs.com/articles/united-states/2020-01-23/why-america-must-lead-again.
[102] "Covid-19 Vaccine Deliveries," United States Department of State, accessed February 18, 2025, https://web.archive.org/web/20231231194048/https://www.state.gov/covid-19-recovery/vaccine-deliveries/.
[103] "Marking Delivery of Half a Billion U.S.-Donated COVID-19 Vaccines: Press Release," U.S. Agency for International Development, March 17, 2022, https://web.archive.org/web/20240624210256/https://www.usaid.gov/news-information/press-releases/mar-17-2022-marking-delivery-half-billion-us-donated-covid-19-vaccines.
[104] "Biden Announces 'No Strings Attached' Global Vaccine Donation," *Al Jazeera*, June 10, 2021, https://www.aljazeera.com/news/2021/6/10/biden-announces-no-strings-attached-global-vaccine-donation.
[105] "U.S. International COVID-19 Vaccine Donations Tracker," Kaiser Family Foundation; "Classification of Countries in Income Classes," OECD iLibrary, 2020, https://www.oecd-ilibrary.org/sites/8976b9c2-en/index.html?itemId=%2Fcontent%2Fcomponent%2F8976b9c2-en; Thomas Carothers and Benjamin Feldman, "Examining U.S. Relations with Authoritarian Countries," Carnegie Endowment for International Peace, December 13, 2023, https://carnegieendowment.org/2023/12/13/examining-u.s.-relations-with-authoritarian-countries-pub-91231.
[106] Sarosh Nagar and Sergio Imparato, "The Disappointment of the Quad Vaccine Partnership," The Diplomat, July 1, 2022, https://thediplomat.com/2022/07/the-disappointment-of-the-quad-vaccine-partnership/.
[107] Nagar and Imparato, "The Disappointment of the Quad Vaccine Partnership"; Mutiara Indriani and Andree Surianta, "How the Quad Can Help Build a Better Indo-Pacific via Health Diplomacy," East Asia Forum, April 6, 2024, https://eastasiaforum.org/2024/04/06/how-the-quad-can-help-build-a-better-indo-pacific-via-health-diplomacy/.
[108] Indriani and Surianta, "How the Quad Can Help Build a Better Indo-Pacific."

[109] "Covid Vaccine: India to Resume Vaccine Exports from October," BBC News, September 21, 2021, https://www.bbc.com/news/world-asia-india-58634570; Indriani and Surianta, "How the Quad Can Help Build a Better Indo-Pacific."
[110] "U.S. International COVID-19 Vaccine Donations Tracker," Kaiser Family Foundation.
[111] "U.S. International COVID-19 Vaccine Donations Tracker," Kaiser Family Foundation.
[112] Remco Johan Leonard van Dijk and Catherine Yuk-ping Lo, "The Effect of Chinese Vaccine Diplomacy during COVID-19 in the Philippines and Vietnam: A Multiple Case Study from a Soft Power Perspective," *Humanities and Social Sciences Communications* 10, no. 1 (October 11, 2023), https://doi.org/10.1057/s41599-023-02073-3; Andrea Chloe Wong, "Duterte's Back-down on US Forces in Philippines," Lowy Institute, August 24, 2021, https://www.lowyinstitute.org/the-interpreter/duterte-s-back-down-us-forces-philippines.
[113] van Dijk and Lo, "The Effect of Chinese Vaccine Diplomacy during COVID-19"; Wong, "Duterte's Back-down"; Andrew Yeo, "President Duterte Wants to Scrap a Philippines-U.S. Military Agreement. This Could Mean Trouble," *The Washington Post*, February 13, 2020, https://www.washingtonpost.com/politics/2020/02/13/president-duterte-wants-scrap-philippines-us-military-agreement-this-could-mean-trouble/.
[114] Lian Buan, "Duterte Dangles VFA for US-Made Vaccine: 'No Vaccine, Get Out,'" *RAPPLER*, December 26, 2020, https://www.rappler.com/nation/duterte-dangles-vfa-us-made-vaccine-december-2020/.
[115] Cliff Venzon, "Duterte Threatens to End US Military Pact If No Vaccines," Nikkei Asia, December 27, 2020, https://asia.nikkei.com/Politics/International-relations/Duterte-threatens-to-end-US-military-pact-if-no-vaccines.
[116] "National Security Strategy," The Biden-Harris Administration, October 2022, https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf.
[117] Emily M. Morgenstern and Nick M. Brown, "Foreign Assistance: An Introduction to U.S. Programs and Policy," Congressional Research Service, January 10, 2022, https://crsreports.congress.gov/product/pdf/R/R40213.
[118] "The U.S. President's Emergency Plan for AIDS Relief (PEPFAR)," Kaiser Family Foundation, July 26, 2023, https://www.kff.org/global-health-policy/fact-sheet/the-u-s-presidents-emergency-plan-for-aids-relief-pepfar/; Anthony S. Fauci and Robert W. Eisinger, "PEPFAR — 15 Years and Counting the Lives Saved," *New England Journal of Medicine* 378, no. 4 (January 25, 2018): 314–16, https://doi.org/10.1056/nejmp1714773.
[119] Edouard Mathieu et al., "Coronavirus (COVID-19) Deaths," Our World in Data, May 1, 2024, https://ourworldindata.org/covid-deaths.
[120] Hotez, "'Vaccine Diplomacy': Historical Perspectives."
[121] Hotez, "COVID-19 Vaccines: Imperfect Instruments."
[122] "The Limited Test Ban Treaty, 1963," U.S. Department of State, accessed May 1, 2024, https://history.state.gov/milestones/1961-1968/limited-ban; "The Nuclear Non-Proliferation Treaty (NPT), 1968," U.S. Department of State, accessed May 1, 2024, https://history.state.gov/milestones/1961-1968/npt; "History of the Biological Weapons Convention," United Nations Office for Disarmament Affairs, accessed May 1, 2024, https://disarmament.unoda.org/biological-weapons/about/history/; The Intermediate-Range Nuclear Forces (INF) Treaty at a Glance," Arms Control Association, accessed May 1, 2024, https://www.armscontrol.org/factsheets/INFtreaty; Melvyn P. Leffler, "Cooperation amidst Great Power Rivalry," Center for Strategic and International Studies and the Brookings Institution, September 2023, https://csis-website-prod.s3.amazonaws.com/s3fs-public/2023-09/230911_Leffler_Cooperation_Rivalry.pdf?VersionId=bpTB.scnHWhJPUUF9va7d.5dbhE55D00.
[123] For additional analysis of Cold War-era cooperation between the U.S. and USSR, see: Leffler, "Cooperation amidst Great Power Rivalry."
[124] Bucci, "Note of Concern"; Clare Ribando Seelke, "Venezuela: Overview of U.S. Sanctions Policy - CRS Reports," Congressional Research Service, April 24, 2024, https://crsreports.congress.gov/product/pdf/IF/IF10715.
[125] Emma Koehn, "In Iran, an Aussie Startup Hopes for Covid-19 Vaccine Success," The Sydney Morning Herald, July 4, 2021, https://www.smh.com.au/business/entrepreneurship/in-iran-an-aussie-startup-hopes-for-covid-19-vaccine-success-20210701-p585tk.html; "Approved Vaccines," COVID-19 Vaccine Tracker, accessed May 1, 2024, https://covid19.trackvaccines.org/vaccines/approved/.

[126] Koehn, "In Iran, an Aussie Startup Hopes for Covid-19 Vaccine Success."
[127] "What Is Public Health?," U.S. Centers for Disease Control and Prevention Foundation, accessed May 1, 2024, https://www.cdcfoundation.org/what-public-health; "Violence Prevention Alliance Approach," World Health Organization, accessed May 1, 2024, https://www.who.int/groups/violence-prevention-alliance/approach.
[128] "What Is Diplomacy?," Council on Foreign Relations, accessed May 1, 2024, https://education.cfr.org/learn/reading/what-diplomacy.
[129] David Fidler's "health as foreign policy" framework, which acknowledges the tendency of states to use global health as an instrument of statecraft rather than treating it as an end in and of itself, may provide a useful starting point. See: David P. Fidler, "Health as Foreign Policy: Between Principle and Power," *Whitehead Journal of Diplomacy and International Relations* 6 (2005).
[130] Jeremy Youde, "Securitization and Health," In *The Routledge Handbook of Philosophy of Public Health* (Routledge, 2022): 300-312.
[131] "Vaccine Trade Tracker," WTO and IMF.
[132] Amanda Jean Meadows et al., "Historical Trends Demonstrate a Pattern of Increasingly Frequent and Severe Spillover Events of High-Consequence Zoonotic Viruses," *BMJ Global Health* 8, no. 11 (November 2023), https://doi.org/10.1136/bmjgh-2023-012026.

REFOCUSING GLOBAL HEALTH PRIORITIES: THE DYNAMICS OF AGENDA SETTING IN GLOBAL HEALTH IN THE GLOBAL SOUTH

Vivek N.D.

This paper examines the complex process of global health agenda-setting, focusing on the Global South, particularly India. It explores how various stakeholders – governments, international organizations, and civil society, shape health priorities and policies. Drawing on critical political economy and historical perspectives, the study analyzes the role of political, economic, and social factors influencing health agenda-setting. The methodology incorporates both qualitative and quantitative research methods, using a combination of primary and secondary sources to offer empirical insights. Key findings reveal a shift in global health financing dynamics, with increasing reliance on philanthrocapitalist and multi-bi funding mechanisms, diverting focus from traditional multilateral institutions like WHO. This shift raises concerns about the short-term prioritization of health issues at the expense of long-term goals, while also highlighting the growing influence of private actors on global health policy. The analysis emphasizes the importance of international norms, economic interests, and institutional frameworks in shaping health policies, particularly in low-income countries. The paper concludes by addressing the power imbalances in global health governance, underscoring the need for more inclusive and equitable approaches to health policy. It advocates for collaboration across borders and the prioritization of marginalized communities to address systemic health disparities in the Global South.

INTRODUCTION

Global health priorities have undergone profound shifts over the past two decades, shaped by the emergence of new financing mechanisms, political agendas and economic interests. A major turning point has been the rise of vertical funding mechanisms like the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM) and the Bill and Melinda Gates Foundation's (BMGF) large-scale interventions. These actors, along with other private philanthropies and international organizations, have significantly influenced the global health landscape, particularly in the Global South.
One key aspect of this shift is how global health financing has become more project-oriented, often focused on specific diseases rather than strengthening overall health systems. For instance, the focus on combating HIV/AIDS through vertical programs has often diverted attention from broader systemic issues like healthcare infrastructure and workforce development. While disease-specific funding has brought much-needed resources to countries like India, it has also led to an imbalance in health priorities, where systemic reforms are sidelined in favor of short-term gains in disease reduction.

In India, the influence of these global health priorities is particularly evident. The country has been a recipient of substantial funding from international organizations like the Global Fund and Gavi, the Vaccine Alliance. However, this influx of resources has also sparked debates around health sovereignty and agenda-setting. The Indian government, while engaging with global health actors, has had to navigate

tensions between externally driven priorities and domestic health needs. For example, India's emphasis on universal health coverage under the Ayushman Bharat program contrasts with the more disease-specific focus of global health donors. This creates a complex interplay between local and global actors in shaping health policies.

Moreover, global health agenda-setting in the Global South often reflects broader geopolitical and economic realities. In the case of India, the country's growing economic power and political influence have enabled it to play a more assertive role in global health governance. India's leadership in advocating for affordable generic drugs during the HIV/AIDS crisis in the early 2000s is a prime example of its ability to shape global health narratives in favor of equity and access, even as powerful pharmaceutical companies and Western governments pushed for stringent intellectual property protections under the WTO's TRIPS agreement.

Beyond governments and international organizations, civil society has also played a critical role in shaping health policies in the Global South. In India, civil society organizations have been pivotal in advocating for equitable access to healthcare, particularly in areas neglected by both the government and international donors. For instance, grassroots movements such as the Jan Swasthya Abhiyan (People's Health Movement) have pushed for better access to maternal and child health services in rural areas, which often fall outside the purview of global health programs focused on urban centers and more "visible" health crises.

However, the growing influence of private sector actors, including philanthropic organizations, raises questions about accountability and the broader implications for health equity. In many cases, the priorities of these actors reflect neoliberal ideologies that prioritize efficiency and market-based solutions, sometimes at the expense of addressing social determinants of health and structural inequities. For example, while digital health solutions are being promoted as a way to improve access to healthcare in rural India, these technologies often fail to address the underlying issues of poverty, education and infrastructure that limit their effectiveness.

The institutional frameworks guiding global health governance also play a critical role in determining whose interests are prioritized. The World Health Organization (WHO), despite being the primary international body for global health, has seen its influence wane in favor of donor-driven institutions. This shift has significant implications for countries like India, where health challenges are deeply rooted in social inequalities and require holistic, long-term solutions rather than fragmented, disease-specific interventions.

In sum, the process of global health agenda-setting in the Global South, and particularly in India, is shaped by a complex web of actors and interests. Governments, international organizations and civil society each play a role in shaping health policies, but power imbalances, economic incentives and institutional priorities often skew the agenda in ways that undermine health equity and social justice. By understanding these dynamics, we can better advocate for health policies that truly reflect the needs of marginalized populations and promote more just and inclusive health systems.

GLOBAL HEALTH AGENDA SETTING: A CONCEPTUAL FRAMEWORK

Global health agenda-setting refers to the process by which certain health issues rise to prominence in international forums and shape national policies. Traditionally, governments, international organizations like the WHO, and increasingly, private actors such as philanthrocapitalists (e.g., the BMGF) play key roles in defining these priorities. According to Kingdon's[1] agenda-setting theory, certain issues rise to

prominence due to the convergence of problem recognition, policy proposals and political will, often termed "windows of opportunity." These windows open when issues gain enough attention due to crises, changes in the political landscape or shifts in public opinion.

In the Global South, agenda-setting in health is more complex. The legacy of colonialism, coupled with deep economic and political disparities, heavily influences how health priorities are established. Scholars such as Sen, Qadeer, and Missoni[2] point out that many health policies in the Global South are still shaped by post-colonial dynamics, where external actors, often from the Global North, have a significant influence on policy formulation. For example, global health initiatives such as the Global Fund and Gavi have provided substantial funding to countries like India, but these funds often come with predetermined priorities, pushing governments to focus on specific diseases like HIV/AIDS or malaria, sometimes at the expense of broader health system strengthening.

Under Prime Minister Narendra Modi's leadership, India has made significant strides in combating infectious diseases, particularly tuberculosis, with a commitment to eliminate TB by 2025[3]. India, one of the largest recipients of Global Fund grants, has received over US$2.36 billion since 2003 to fight TB, HIV, and malaria[4]. Each year, the Global Fund invests at least US$ 600 million in India to procure essential health supplies, including HIV medications, mosquito nets and diagnostic kits[5]. These critical resources support the country's efforts in controlling and eradicating diseases such as HIV/AIDS, malaria, and tuberculosis. It must be noted that, India has been making significant strides toward the Sustainable Development Goals (SDGs), outpacing the global average. Between 2015 and 2022, the country achieved a 16% reduction in tuberculosis incidence, from 237 per 100,000 population to 199, alongside an 18% decrease in TB-related deaths during this period[6]. This progress reflects India's robust efforts in combating infectious diseases and strengthening its healthcare system. In 2023, Gavi, the Vaccine Alliance, and the Government of India partnered on a new three-year initiative to deliver life-saving vaccines to millions of children. Gavi will contribute US$ 250 million to identify unvaccinated children and introduce the HPV and typhoid conjugate vaccines into India's routine immunization program[7]. Further, the BMGF Annual Report 2023 states it had invested US$ 123 million in India out of the total US $ 1.86 billion allocated to global health[8].

This external influence can create a situation where governments are in a reactive position, responding to global priorities rather than setting their own. In India, for instance, while international funding has helped tackle specific health challenges, it has also led to fragmented health policies that sometimes neglect systemic issues such as healthcare access, workforce development and infrastructure improvement[9]. As a result, local health needs—particularly in rural and marginalized communities—are often overshadowed by donor-driven priorities that focus on more "visible" health crises.

The recent COVID-19 pandemic further highlighted the agenda-setting power of external actors. Global priorities around vaccination and pandemic preparedness have been shaped by multilateral organizations like the WHO, alongside private sector and philanthropic players. While these efforts have been crucial in addressing the global pandemic, they have also raised concerns about equity in access to vaccines and healthcare resources. In India, the initial vaccine rollout underscored the disparities between urban and rural areas, with wealthier regions receiving more resources while marginalized groups faced delays in access[10]. This dynamic illustrates how agenda-setting can sometimes exacerbate existing inequalities within national health systems.

Moreover, the growing influence of private actors in global health agenda-setting has led to the rise of philanthrocapitalism. This phenomenon, where wealthy individuals or organizations wield significant influence over public health priorities, has reshaped how global health policies are formulated. Scholars like Storeng and de Bengy Puyvallée[11] argue that while philanthrocapitalism brings much-needed resources to global health, it can also narrow the focus of health interventions, prioritizing technological solutions over long-term systemic change.

Thus, global health agenda-setting is a complex process shaped by various stakeholders, each with their own interests and influence. In the Global South, these dynamics are further complicated by historical legacies of inequality, economic dependence and external pressures. For countries like India, the challenge lies in balancing external health priorities with local needs, ensuring that global health interventions promote equity and sustainability in their health systems. Recent scholarship and the COVID-19 pandemic underscore the importance of local leadership and inclusive governance in setting health agendas that truly reflect the needs of the most vulnerable populations.

INDIA AS A CASE STUDY

India's role in global health is significant due to its size, population, and geopolitical influence[12]. It is home to a significant portion of the global disease burden, including non-communicable diseases (NCDs), infectious diseases, and malnutrition. In India, febrile illnesses are commonly caused by diseases such as dengue, malaria, typhoid, and tuberculosis. India holds the highest global burden of tuberculosis, accounting for 27% of the world's TB cases[13]. By contrast, Global South countries such as Indonesia contributes around 10% of the global TB burden, while Nigeria carries 4.5%, both reflecting high incidence relative to their smaller populations[14]. India ranks third globally in terms of the human immunodeficiency virus (HIV) burden[15]. In terms of absolute numbers South Africa accounts for the highest HIV burden with a total HIV prevalence among the population from 15-49 years at 17.8%[16]. India has the highest number of undernourished people globally, with 194.6 million suffering from inadequate nutrition[17]. Yet, the country has also become a leader in health innovation and public health interventions, particularly in vaccine production and distribution, as seen in the COVID-19 pandemic.

However, India's health agenda is shaped not only by domestic needs but also by international influences. The government's health priorities, such as the National Health Policy[18] and Ayushman Bharat[1], reflect a blend of national interests and global health imperatives. International financial institutions (IFIs) such as the International Monetary Fund and World Bank as well as philanthropic foundations such as the BMGF have played a significant role in shaping India's health agenda. Through partnerships with government agencies and non-governmental organizations (NGOs), BMGF has supported initiatives in maternal and child health, sanitation and disease control[19].

Similarly, in Africa the legal and regulatory conditions for greater participation of IFIs and private actors have been laid on the ground in many countries. The World Bank Group has especially promoted public-private partnerships (PPPs) in healthcare across Africa, embedding financialization into health systems[20]. This shift often

[1] Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY) is a public health insurance scheme by the Government of India aimed at providing free healthcare coverage to low-income individuals, specifically targeting the bottom 50% of the population.

undermines universal healthcare goals in the Global South by prioritizing market logics over public health needs.

India's health policy landscape exemplifies the growing influence of private and international actors in shaping health priorities in the Global South. This has resulted in a shift away from traditional multilateral institutions like the WHO toward more flexible, multi-bi[2] funding arrangements[21].

THE SHIFT FROM MULTILATERALISM TO PHILANTHROCAPITALISM

One of the most significant changes in global health governance is the rise of philanthrocapitalism. Foundations such as BMGF, Bloomberg Philanthropies, and Gavi, the Vaccine Alliance, have become major players in global health. These organizations often operate outside traditional multilateral structures, focusing instead on targeted initiatives and public-private partnerships. Philanthrocapitalist entities are now increasingly major contributors to global health aid, accounting for at least 20% of the total since 2000[22] – a substantial portion of the overall funding for health interventions in low- and middle-income countries.

This shift in funding dynamics has both positive and negative implications. On one hand, philanthrocapitalist organizations have introduced innovation and flexibility into global health financing[23]. They can mobilize resources quickly and implement targeted interventions, often addressing gaps left by more bureaucratic multilateral organizations. On the other hand, there are concerns that their priorities may not always align with national needs. Philanthrocapitalists are often criticized for prioritizing high-visibility, short-term interventions over long-term health systems strengthening[24].

The BMGF has played a pivotal role in global health, particularly in the fight against polio. As of 2023, polio cases have been reduced by over 99% since the launch of global eradication initiatives in 1988, and BMGF's efforts have been central to this progress, contributing billions of dollars to the cause[25]. However, critics argue that this narrow focus has drawn attention and resources away from other significant public health challenges in the Global South, such as malnutrition and maternal mortality. For instance, malnutrition remains a significant issue in countries like India, where an estimated 35.5% of children under five are stunted and 19.3% are wasted, according to UNICEF's 2023 data[26]. Meanwhile, maternal mortality rates in low-income countries remain high, with an estimated 536 deaths per 100,000 live births in sub-Saharan Africa in 2020[27], underscoring the need for broader health interventions beyond disease-specific initiatives.

Similarly, Gavi, the Vaccine Alliance, has been instrumental in expanding vaccine access across the Global South, with over 1.1 billion children worldwide having received immunizations between 2000 and 2023[28]. However, its emphasis on vaccine distribution has sparked debate about the neglect of broader health system strengthening, such as improving healthcare infrastructure and workforce capacity. While Gavi's efforts have ensured that millions of children receive life-saving vaccines, some health experts argue that without sustainable investments in primary healthcare systems, these gains may not be enduring[29]. For instance, during the COVID-19 pandemic, fragile health systems in many low-income countries struggled to respond

[2] Funding allocated to multilateral organisations for designated purposes, sectors, regions, or countries, including contributions to trust funds and collaborative initiatives, is termed "multi-bi" aid. In other words, multi-bi aid refers to all designated voluntary donations to multilateral organizations, which are often made through specific trust accounts and fall beyond the core financing.

effectively, highlighting the need for more comprehensive health system reforms alongside targeted vaccination efforts[30].

These examples illustrate the tension between disease-specific interventions and the broader goal of strengthening health systems to address the root causes of health disparities in the Global South. While the contributions of organizations like BMGF and Gavi are undeniable, the sustainability and equity of global health efforts hinge on a more holistic approach that integrates systemic improvements with targeted health initiatives.

In India, philanthrocapitalism has significantly influenced health policy. BMGF, for instance, has partnered with the Indian government on several initiatives, including polio eradication, maternal and child health, and sanitation under the Swachh Bharat mission[31]. These partnerships have had a profound impact on health outcomes in the country, but they have also raised concerns about accountability and transparency. On a side note, in India too private philanthropy is on the rise. The sector grew by 10% in FY 2023, reaching US$15 billion[32].

SHIFT FROM MULTILATERAL FUNDING TO MULTI-BI FINANCING

While the involvement of philanthropic organizations has accelerated progress in some areas, there is a risk that health priorities are being driven by donor interests rather than local needs[33]. This highlights the importance of ensuring that philanthrocapitalist funding aligns with national health strategies and priorities. Further, multi-bi financing, where donors channel their contributions toward specific projects through multilateral institutions, has had a profound impact on global health agenda-setting. This approach allows donors, such as governments or private foundations, to earmark funds for particular health priorities, often aligned with their own strategic interests. However, this targeted funding can distort the broader health agenda by sidelining underfunded but crucial areas of health, particularly long-term challenges faced by low-income countries.

A key example of this phenomenon is the WHO. While WHO's overall budget has increased over the years, largely due to earmarked contributions from donors, its core budget has remained relatively stagnant. According to WHO's 2022–2023 budget data, only 16% of the organization's funding was derived from assessed contributions (unrestricted core funding), while the remaining 84% came from voluntary contributions, much of which was earmarked for specific initiatives such as polio eradication, COVID-19 response and immunization programs[34]. This heavy reliance on earmarked funds limits the WHO's ability to direct resources toward broader, long-term health system strengthening and primary healthcare, which are critical for addressing health inequities in low-income countries.

The consequences of this funding model are visible in the underfunding of global health initiatives such as health workforce development and the fight against non-communicable diseases (NCDs). For example, WHO reported in 2022 that nearly 10 million more healthcare workers would be needed by 2030 to meet Sustainable Development Goals (SDGs), with the most severe shortages occurring in low- and middle-income countries[35]. However, only a fraction of the WHO's budget is allocated to support health workforce development, as donor priorities often focus on disease-specific interventions such as vaccines or pandemic preparedness[36].

Similarly, while NCDs account for 74% of global deaths or 41 million people annually[37], funding for NCD prevention and treatment remains inadequate, particularly in low-income countries where healthcare infrastructure is weaker. According to a 2024 study published by the Global Alliance for Tobacco Control

(GATC) with support of the NCD Alliance[38], global spending on NCDs is only about 1-2% of development assistance for health, far below the levels needed to address this growing health burden.

The reliance on multi-bi financing also affects the capacity of multilateral organizations like WHO to respond to emerging health threats with flexibility. During the COVID-19 pandemic, the organization faced criticism for its slow response, partly due to the constraints posed by its earmarked funding, which limited its ability to pivot resources quickly to address the evolving crisis[39]. Without sufficient core funding, WHO struggled to support the broader health system infrastructure in many low-income countries, which was crucial in mounting an effective pandemic response[40].

While multi-bi financing enables donors to fund priority projects, it creates challenges for global health governance by undermining the autonomy and capacity of multilateral institutions to set comprehensive health agendas. The imbalance between earmarked and core funding not only limits organizations like the WHO from addressing long-term systemic health issues but also raises concerns about the sustainability and equity of global health initiatives, particularly in the Global South. To rectify this, there is an urgent need for increased core contributions that would allow WHO and similar organizations to operate with greater flexibility and effectiveness in tackling global health challenges.

THE ROLE OF CIVIL SOCIETY AND ADVOCACY GROUPS

Civil society organizations (CSOs) and advocacy groups play a crucial role in shaping health priorities in the Global South. In India, CSOs have been instrumental in pushing for health equity and accountability in government health policies. Organizations such as the Public Health Foundation of India (PHFI) and Jan Swasthya Abhiyan (JSA) have been vocal in advocating for stronger public health systems and universal health coverage. The JSA's 2024 manifesto opens thus – "Our Health, Our Right! – Right to Healthcare legislation must be passed to ensure guaranteed availability of free quality treatment of all conditions, in close proximity to place of residence. Expand, improve & strengthen public healthcare infrastructure to provide such essential care. Denial, delay and incomplete treatment to be strictly prevented"[41].

However, the influence of CSOs in global health agenda-setting is often limited by the dominance of international actors. According to a 2023 study by Gostin, Friedman and Finch[42], while civil society participation in global health forums has increased, their influence is often marginalized by more powerful stakeholders, such as philanthropic foundations and international organizations. This has led to calls for greater inclusivity and transparency in the global health governance process.

In the context of the COVID-19 pandemic, the role of CSOs became even more critical. In India, grassroots organizations played a key role in providing healthcare services and raising awareness about public health measures, particularly in underserved areas[43]. However, their contributions were often overshadowed by the larger international response, including the efforts of organizations such as WHO and Gavi[44].

INTERNATIONAL NORMS AND INSTITUTIONAL FRAMEWORKS

The global health agenda is influenced by a complex web of international norms and institutional frameworks, with organizations like WHO, the World Bank, and the GFTAM playing pivotal roles. These organizations operate within a broader

geopolitical context where the interests of powerful states, private donors and philanthrocapitalists increasingly shape priorities in the Global South.

For example, the World Bank has become a central player in health systems strengthening and universal health coverage (UHC) initiatives across the Global South. In India, the World Bank has supported the Pradhan Mantri-Ayushman Bharat Health Infrastructure Mission (PM-ABHIM), launched in October 2021, which aims to strengthen public healthcare infrastructure across India through a loan of US$ 1 billion[45]. However, the World Bank's emphasis on financial sustainability and cost-effectiveness has raised concerns about underfunding essential health services, especially for marginalized populations[46].

Similarly, the WHO has played a key role in shaping global health norms, particularly through its leadership in infectious disease control and health emergencies. During the COVID-19 pandemic, the WHO's efforts to coordinate vaccine distribution through the COVAX initiative were instrumental in ensuring some level of global access to vaccines. As of early 2023, COVAX had distributed nearly 2 billion doses of COVID-19 vaccines to 146 participating economies[47]. However, the WHO's limited resources—due to its reliance on voluntary contributions, which account for more than 80% of its budget (WHO, 2023c)—have constrained its ability to address the broader, long-term health needs of LMICs. The pandemic exposed these limitations, with the WHO struggling to fully address health system resilience in these regions. As global health challenges extend beyond immediate crises, there is a growing recognition of the need for increased core funding to enable the WHO to operate with more autonomy and long-term impact.

GFTAM has also made significant contributions to the health landscape, particularly in combating HIV/AIDS, tuberculosis, and malaria. Since its inception in 2002, GFTAM has saved over 65 million lives through its targeted interventions[48]. However, as GFTAM continues to focus on disease-specific interventions, critics argue that this approach can overshadow the importance of strengthening health systems as a whole, which is essential for sustainable health outcomes, especially in fragile settings[49].

The intersection of geopolitical interests, financial dependencies and institutional priorities creates both opportunities and challenges in the Global South's health agenda. As private actors such as philanthrocapitalists (e.g., the BMGF) and bilateral donors increase their influence in global health, questions arise about the alignment of their priorities with the needs of low-income populations. The Gates Foundation, for instance, has been a major player in polio eradication efforts, but its focus on vertical programs has raised concerns about the neglect of broader health systems that require strengthening[50].

In summary, while international organizations like WHO, the World Bank, and GFTAM play crucial roles in shaping global health norms, their operations are deeply intertwined with geopolitical forces and funding constraints that often complicate long-term health equity goals in the Global South. Ensuring that these institutions have both the resources and the autonomy to prioritize sustainable health systems strengthening is essential for achieving equitable health outcomes.

GLOBAL HEALTH UNDER TRUMP 2.0

Sustainable health systems strengthening faces a further challenge with the second Trump presidency which has profoundly reshaped the global health landscape. His focus on nationalism and skepticism of multilateralism has further fragmented global efforts to address health inequities. The second Trump presidency's executive orders

to cut foreign aid, freeze USAID programs, and withdraw from the WHO in 2025 carry profound implications for global health. The U.S. historically accounts for the largest share of global health assistance, and these measures have created an estimated $11–13 billion shortfall, directly threatening the sustainability of HIV, tuberculosis, and malaria interventions across the Global South[51]. The withdrawal from the WHO could possibly result in a 21% reduction in the organization's biennial budget, undermining pandemic preparedness, vaccine distribution, and polio eradication initiatives[52]. Further, in 2025, preliminary estimates from the Institute for Health Metrics and Evaluation[53] indicate that Development Assistance for Health (DAH) declined to $39.1 billion, marking its lowest level in over 15 years. This represents a reduction of more than 20% compared to 2024. For context, current DAH is less than half of what it was at the peak of the COVID-19 pandemic in 2021, when unprecedented resources were mobilized globally to support countries during the health emergency.

As a result, countries such as Nigeria, Bangladesh, and India face heightened risks of setbacks in immunization coverage and maternal–child health outcomes due to reduced donor flows, while Brazil and South Africa confront gaps in infectious disease and health systems financing. Although China and the European Union have pledged to increase contributions, these compensatory efforts are insufficient to fully offset U.S. disengagement, marking a shift toward a more fragmented and regionally driven global health governance system that may weaken coordinated responses to future global health crises.

DISCUSSION: POWER DYNAMICS AND INEQUITIES IN GLOBAL HEALTH GOVERNANCE

The global health architecture is characterized by significant power imbalances, with a small number of powerful actors—governments, international organizations and philanthropic foundations—exerting disproportionate influence over health priorities. These power dynamics often result in the marginalization of the Global South, where health policies are shaped by external actors rather than local needs.

Philanthrocapitalism, in particular, has raised concerns about accountability and inclusivity in global health governance. While organizations like BMGF and Gavi have made significant contributions to improving health outcomes in the Global South, their focus on short-term, high-visibility interventions can undermine long-term health systems strengthening. Moreover, the lack of transparency in their decision-making processes raises questions about whose interests are being served.

In the case of India, the influence of philanthrocapitalist organizations has been both positive and negative. While these organizations have helped to accelerate progress in areas such as polio eradication and vaccine distribution, their priorities have sometimes diverged from national health needs. This highlights the importance of ensuring that global health funding is aligned with national health strategies and that local stakeholders, including civil society organizations and marginalized communities, are meaningfully involved in the agenda-setting process.

CONCLUSION

The dynamics of global health agenda-setting in the Global South are shaped by a complex interplay of political, economic and social factors. Philanthrocapitalist organizations, while contributing to health innovation and funding, also pose challenges to the transparency and inclusivity of the global health governance process.

In India, as in other parts of the Global South, the influence of external actors has shaped national health policies in ways that are not always aligned with local needs.

Under Trump 2.0, the U.S. retreat from multilateral health engagement—through cuts to USAID, reductions in foreign aid, and withdrawal from the WHO—has disrupted established funding streams and weakened the role of multilateral institutions in agenda-setting. This vacuum has shifted influence toward emerging donors, regional blocs, and private foundations, further fragmenting the global health governance landscape and especially affecting countries in the Global South.

To ensure that global health governance promotes health equity and social justice, it is essential to prioritize the voices of national governments, civil society organizations, and marginalized communities in the agenda-setting process. By adopting more inclusive and transparent approaches, global health actors can work together to address health disparities and build stronger, more resilient health systems in the Global South.

The next phase of global health governance must be marked by collective action, accountability and a commitment to health equity. Only by refocusing global health priorities to center the needs of vulnerable populations can we achieve the goals of universal health coverage and sustainable development.

This paper provided an analysis of the changing dynamics of global health agenda-setting in the Global South, with a particular focus on India. By exploring the roles of various stakeholders, the paper has underscored the importance of inclusive approaches that prioritize marginalized communities. As the global health landscape continues to evolve, it is imperative that all stakeholders work together to promote health equity and social justice for all.

Vivek N.D. *is Adjunct Faculty, School of Legal Studies and Governance, Vidyashilp University, Bangalore, India. He has a PhD in Political Science from the University of Hyderabad. He specialises in global health governance, development issues, and non-traditional areas of international relations in relation to Asia and Africa.*

Acknowledgements: *The author is grateful to the anonymous reviewer for their kind suggestions and inputs in making the paper more comprehensive. The author also thanks Dr. Jobeth Ann Warjri for her sharp edits and bringing the article to this shape.*

---

[1] Kingdon, J.W. (2011 (1984)). *Agendas, Alternatives, and Public Policies*, 2nd ed. New York: Longman.

[2] Sen, K., Qadeer, I. and Missoni, E. (2022). Understanding the Context of Global Health Policies. *World Review of Political Economy*. Vol. 13(3):322-343. Accessed on October 7, 2024 from https://www.scienceopen.com/hosted-document?doi=10.13169/worlrevipoliecon.13.3.0322

[3] Hindustan Times. (2024). *India's triumphs in the battle against TB*. Accessed on October 7, 2024 from https://www.hindustantimes.com/ht-insight/public-health/indias-triumphs-in-the-battle-against-tb-101711198771457.html

[4] Global Fund (n.d.) *Profiles India*. Accessed on October 7, 2024 from https://www.theglobalfund.org/en/government/profiles/india/

[5] Global Fund. (2023). *India and the Global Fund: A strategic partnership with a national, regional, and global future*. Accessed on October 7, 2024 from

https://www.theglobalfund.org/en/opinion/2023/2023-08-29-india-global-fund-a-strategic-partnership-with-a-national-regional-and-global-future/
[6] Ministry of Health & Family Welfare. (2017). Government of India. *National Health Policy 2017.* Accessed on October 7, 2024 from https://main.mohfw.gov.in/sites/default/files/9147562941489753121.pdf
[7] Gavi. (2023a). *Gavi and Government of India establish new partnership to protect millions of children by 2026*. Accessed on October 7, 2024 from https://www.gavi.org/news/media-room/gavi-and-government-india-establish-new-partnership-protect-millions-children-2026
[8] BMGF. (2023). *Annual Report 2023.* Accessed on October 7, 2024 from https://www.gatesfoundation.org/about/financials/annual-reports/annual-report-2023
[9] Kumar A. (2023). The Transformation of the Indian Healthcare System. *Cureus*, *15*(5), e39079. Accessed on October 7, 2024 from https://doi.org/10.7759/cureus.39079
[10] Madan, A. (2021). *Disparity in access to COVID-19 vaccination: The plight of poor vulnerable households*. Observer Research Foundation. Accessed on October 7, 2024 from https://www.orfonline.org/expert-speak/disparity-in-access-to-covid-19-vaccination
[11] Storeng K.T., de Bengy Puyvallée A., Stein F. (2023). COVAX and the rise of the 'super public private partnership' for global health. *Global Public Health*. Jan; 18(1):1987502. Accessed on October 7, 2024 from https://pubmed.ncbi.nlm.nih.gov/34686103/
[12] Fogarty International Center. (2024). *India's impact on global health*. January/February. Vol. 23 No. 1. Accessed on October 7, 2024 from https://www.fic.nih.gov/News/GlobalHealthMatters/january-february-2024/Pages/india-impact-on-global-health.aspx
[13] WHO. (2023a). *Global Tuberculosis Report*. Accessed on October 7, 2024 from https://iris.who.int/bitstream/handle/10665/373828/9789240083851-eng.pdf?sequence=1 p2.
[14] Ibid.
[15] Avert. (2018). *HIV and AIDS in India*. Mumbai, India. Accessed on October 7, 2024 from https://www.avert.org/professionals/hiv-around-world/asia-pacific/india
[16] UNAIDS (2024). *The Urgency of Now: AIDS at a Crossroads*. Global AIDS Update. Accessed on September 1, 2025 from https://www.unaids.org/sites/default/files/media_asset/2024-unaids-global-aids-update_en.pdf
[17] Kaur, B. (2024). Globally, Highest Number of 'Undernourished' People Are In India: UN Report. *The Wire*. July 25. Accessed on October 7, 2024 from https://thewire.in/health/undernourished-highest-global-india-un-report
[18] Ministry of Health & Family Welfare. (2017). Government of India. *National Health Policy 2017.* Accessed on October 7, 2024 from https://main.mohfw.gov.in/sites/default/files/9147562941489753121.pdf
[19] BMGF. (n.d.). *India*. Accessed on October 7, 2024 from https://www.gatesfoundation.org/our-work/places/india
[20] Chukwuma, J.N., Romero, M.J. & Van Waeyenberge, E. (2025). Healthcare financialization in the Global South: examining the role of the World Bank Group in promoting public private partnerships in health in Africa. *Review of Evolutionary Political Economy*. January 28. Accessed on September 1, 2025 from https://doi.org/10.1007/s43253-024-00140-2
[21] OECD. (2012). *Multilateral Aid Report. The Development Assistance Committee: Enabling effective development*. Organization for Economic Cooperation and Development. Accessed on October 7, 2024 from https://www.oecd.org/dac/aid-architecture/DCD_DAC(2012)33_FINAL.pdf p4.
[22] Youde, J. (2020). Philanthropy and Global Health in Colin McInnes, Kelley Lee, and Jeremy Youde (eds), *The Oxford Handbook of Global Health Politics*. Oxford Handbooks.
[23] Berkeley Economic Review. (2019). *The Merits and Drawbacks of Philanthrocapitalism*. March 14. Accessed on October 8, 2024 from https://econreview.studentorg.berkeley.edu/the-merits-and-drawbacks-of-philanthrocapitalism/
[24] Butler, C.D. (2019). Philanthrocapitalism: Promoting Global Health but Failing Planetary Health. *Challenges. 10*, 24. Accessed on October 8, 2024 from https://doi.org/10.3390/challe10010024
[25] GPEI. (2023). Global Polio Eradication Initiative. *About Polio*. Accessed on October 8, 2024 from https://polioeradication.org/about-polio/
[26] United Nations Children's Fund (UNICEF), World Health Organization (WHO), International Bank for Reconstruction and Development/The World Bank. (2023). *Levels and trends in child malnutrition: UNICEF / WHO / World Bank Group Joint Child Malnutrition Estimates: Key findings of the 2023 edition*. Accessed on October 8, 2024 from https://www.who.int/publications/i/item/9789240073791

[27] World Bank (n.d.). *Maternal mortality ratio in Sub-Saharan Africa*. Accessed on October 8, 2024 from https://genderdata.worldbank.org/en/regions/sub-saharan-africa
[28] Gavi. (2023b). *Gavi's impact in 2023 in seven key statistics*. Accessed on October 8, 2024 from https://www.gavi.org/vaccineswork/gavis-impact-2023-seven-key-statistics
[29] Kruk, M. E., Gage, A. D., Arsenault, C., Jordan, K., Leslie, H. H., Roder-DeWan, S., Adeyi, O., Barker, P., Daelmans, B., Doubova, S. V., English, M., García-Elorrio, E., Guanais, F., Gureje, O., Hirschhorn, L. R., Jiang, L., Kelley, E., Lemango, E. T., Liljestrand, J., Malata, A., ... Pate, M. (2018). High-quality health systems in the Sustainable Development Goals era: time for a revolution. *The Lancet. Global health*, *6*(11), e1196–e1252. Accessed on October 7, 2024 from https://doi.org/10.1016/S2214-109X(18)30386-3
[30] Filip, R., Gheorghita Puscaselu, R., Anchidin-Norocel, L., Dimian, M., & Savage, W. K. (2022). Global Challenges to Public Health Care Systems during the COVID-19 Pandemic: A Review of Pandemic Measures and Problems. *Journal of personalized medicine*, *12*(8), 1295. Accessed on October 8, 2024 from https://doi.org/10.3390/jpm12081295
[31] BMGF. (n.d.). *India-Health*. Accessed on October 8, 2024 from https://www.gatesfoundation.org/our-work/places/india/health
[32] Bain &Co (2024). *India Philanthropy Report 2024*. Accessed on October 8, 2024 from https://www.bain.com/insights/india-philanthropy-report-2024/
[33] Committee on Investing in Health Systems in Low- and Middle-Income Countries. (2014). *An Effective Donor Strategy for Health*. Board on Global Health. Institute of Medicine. Buckley GJ, Lange JE, Peterson EA, editors. Investing in Global Health Systems: Sustaining Gains, Transforming Lives. Washington (DC): National Academies Press (US). Sep 25. 3, Accessed on October 8, 2024 from https://www.ncbi.nlm.nih.gov/books/NBK247110/
[34] WHO. (2023a). *Global Tuberculosis Report*. Accessed on October 7, 2024 from https://iris.who.int/bitstream/handle/10665/373828/9789240083851-eng.pdf?sequence=1 p2.
[35] WHO. (n.d.). *Health workforce-Overview*. Accessed on October 8, 2024 from https://www.who.int/health-topics/health-workforce#tab=tab_1
[36] WHO. (2023c). *Proposed programme budget 2024–2025*. Accessed on October 8, 2024 from https://apps.who.int/gb/ebwha/pdf_files/WHA76/A76_4-en.pdf
[37] WHO. (2024). *Noncommunicable diseases: Mortality*. Accessed on October 8, 2024 from https://www.who.int/data/gho/data/themes/topics/topic-details/GHO/ncd-mortality
[38] Global Alliance for Tobacco Control (GATC) with support of the NCD Alliance (2024). *Tracking NCD Funding Flows: Urgent Calls and Global Solutions*. Accessed on October 7, 2024 from https://ncdalliance.org/sites/default/files/resource_files/Tracking%20NCD%20funding%20flows%20-%20Urgent%20calls%20%26%20global%20solutions_REPORT.pdf
[39] M'ikanatha, N.M., Welliver, D.P. (2021). Strengthening the WHO in the pandemic era by removing a persistent structural defect in financing. *Global Health* 17, 142. Accessed on October 8, 2024 from https://doi.org/10.1186/s12992-021-00780-7
[40] Iwunna, O., Kennedy, J., & Harmer, A. (2023). Flexibly funding WHO? An analysis of its donors' voluntary contributions. *BMJ global health*, *8*(4), e011232. Accessed on October 8, 2024 from https://doi.org/10.1136/bmjgh-2022-011232
[41] JSA. (2024). *Jan Swasthya Abhiyan: People's Manifesto on Right to Health and Healthcare*. Accessed on October 8, 2024 from https://phmindia.org/jan-swasthya-abhiyan-peoples-manifesto-on-right-to-health-and-healthcare-2024/
[42] Gostin, L. O., Friedman, E. A., & Finch, A. (2023). The Global Health Architecture: Governance and International Institutions to Advance Population Health Worldwide. *The Milbank quarterly*, *101*(S1), 734–769. Accessed on October 8, 2024 from https://doi.org/10.1111/1468-0009.12627
[43] Levine, A. C., Park, A., Adhikari, A., Alejandria, M. C. P., Bradlow, B. H., Lopez-Portillo, M. F., Mutwafy, S., Zumbyte, I., & Heller, P. (2023). The role of civil society organizations (CSOs) in the COVID-19 response across the Global South: A multinational, qualitative study. *PLOS global public health*, *3*(9), e0002341. Accessed on October 8, 2024 from https://doi.org/10.1371/journal.pgph.0002341
[44] Ashraf, A., Muhammad, A., Fazal, Z., Zeeshan, N., & Shafiq, Y. (2023). The role of civil society organizations in fostering equitable vaccine delivery through COVAX. *Eastern Mediterranean health journal = La revue de sante de la Mediterranee orientale = al-Majallah al-sihhiyah li-sharq al-mutawassit*, *29*(4), 232–235. Accessed on October 8, 2024 from https://doi.org/10.26729/emhj.23.053
[45] World Bank. (2023). *World Bank Signs a $1 Billion Program to Support India's Health Sector for Pandemic Preparedness and Enhanced Health Service Delivery*. Accessed on October 8, 2024 from https://www.worldbank.org/en/news/press-release/2023/03/03/world-bank-signs-a-1-billion-program-to-support-india-s-health-sector-for-pandemic-preparedness-and-enhanced-health-serv

[46] Brown, G. W., Rhodes, N., Tacheva, B., Loewenson, R., Shahid, M., & Poitier, F. (2023). Challenges in international health financing and implications for the new pandemic fund. *Globalization and health*, *19*(1), 97. Accessed on October 8, 2024 from https://doi.org/10.1186/s12992-023-00999-6
[47] WHO (2023d). *COVID-19 vaccinations shift to regular immunization as COVAX draws to a close*. Accessed on October 8, 2024 from https://www.who.int/news/item/19-12-2023-covid-19-vaccinations-shift-to-regular-immunization-as-covax-draws-to-a-close
[48] Global Fund. (2023). *India and the Global Fund: A strategic partnership with a national, regional, and global future*. Accessed on October 7, 2024 from https://www.theglobalfund.org/en/opinion/2023/2023-08-29-india-global-fund-a-strategic-partnership-with-a-national-regional-and-global-future/
[49] Hanefeld J. (2014). The Global Fund to Fight AIDS, Tuberculosis and Malaria: 10 years on. *Clinical medicine (London, England)*, *14*(1), 54–57. Accessed on October 8, 2024 https://doi.org/10.7861/clinmedicine.14-1-54
[50] Rodriguez, D. C., Neel, A. H., Mahendradhata, Y., Deressa, W., Owoaje, E., Akinyemi, O., Sarker, M., Mafuta, E., Gupta, S. D., Salehi, A. S., Jain, A., & Alonge, O. (2021). The effects of polio eradication efforts on health systems: a cross-country analysis using the Develop-Distort Dilemma. *Health policy and planning*, *36*(5), 707–719. Accessed on October 8, 2024 from https://doi.org/10.1093/heapol/czab044
[51] Kates, J, Wexler, A, & Rouw. (2025). *The Trump Administration's Foreign Aid Freeze and Global Health: The Biggest Gaps Left on the Donor Landscape*. KFF. March 6. Accessed on September 1, 2025 from https://www.kff.org/global-health-policy/the-trump-administrations-foreign-aid-freeze-and-global-health-the-biggest-gaps-left-on-the-donor-landscape/
[52] Fletcher, E.R. (2025). *Despite DG Promises, WHO Staff Association In Dark Over Budget Cut Deliberations*. Health Policy Watch. March 31. Accessed on September 1, 2025 from https://healthpolicy-watch.news/despite-dg-promises-who-staff-association-in-dark-over-budget-cut-deliberations/
[53] IHME. (2025). Institute for Health Metrics and Evaluation. *Financing Global Health 2025: Cuts in Aid and Future Outlook*. Accessed on September 1, 2025 from https://www.healthdata.org/sites/default/files/2025-07/FGHReport_2025_2025.07.15_0.pdf

WHEN CIVIL SOCIETY PERSISTS: EXPLAINING THE COMPLEX POLITICS OF SODA AND ULTRA-PROCESSED FOOD TAXATION AND REGULATION POLICY REFORM IN COLOMBIA

Eduardo Gómez

In the area of global health and development, the new field of the commercial determinants of health has highlighted the various ways that major food and beverage industries shape politics, policy, and society in industries' favor. However, little is known about the conditions under which industries gradually lose their policymaking power. Filling in this lacuna in the literature, this article examines the case of Colombia and reveals the important role that civil society, i.e., NGOs, activists, and academics, play in gradually overcoming corporate power and introducing beverage taxation and food labeling regulations that go against industry preferences. The concept of civil society's *power in persistence* is introduced to encapsulate this general process: i.e., despite business opposition and threats, societal persistence in pressuring government for reform can gradually alter the perceptions and interests of congressional leaders and even previously opposed presidents in favor of reform. This power in persistence derives from broad public support and financial backing, in turn motivating activists to use policy tactics such as information sharing and educating policymakers. The healthcare bureaucracy can also supplement society's efforts by maintaining similar policy interests, while the shifting political aspirations of bureaucratic leaders can provide further support.

INTRODUCTION

The recent corporate political activity and commercial determinants of health literature has done a commendable job of highlighting the various ways that major beverage, ultra-processed food, and tobacco companies hamper the creation of much needed regulatory policies[1,2,3]. Through several political, social, and policy tactics [4,5,6], it seems that these companies, especially within emerging markets, have insurmountable power and policy influence. However, we know little about the conditions under which these companies begin to lose their power and influence in the areas of taxation and regulation policy. How and when does this happen? And which actors – political, bureaucratic, social, or even academic – play the most important role in this process? Recently scholars such as Julia Anaf et al.[7] have discussed that civil society in Australia, through a variety of strategies, is starting to resist the power and to alter the practices of transnational corporations in the food and extractive sector in defense of public health. Other researchers have shown that NGOs have through several governance practices sought to resist and manage the practices of alcohol and ultra-processed food companies in Australia [8].

In answering the above questions, this article critically examines the country of Colombia and the government's efforts to tax and regulate the food and beverage sector. Following the United States, Colombia is the region's second oldest democracy and has seen a burgeoning growth of foreign direct investment in this sector, a rapid change in dietary patterns towards the consumption of ultra-processed foods, and a rise in

noncommunicable diseases (NCDs) and risk factors associated with the consumption of these products, such as type-2 diabetes, heart disease, and obesity.

In this context, major food and beverage companies have had a substantial amount of political and policymaking influence in Colombia, aided by presidents who were supportive of their cause. However, in contrast to the literature's emphasis on crisis conditions, industry culpability, and electoral incentives contributing to a decline in business power and influence, this case of Colombia reveals the vital role that civil society, i.e., NGOs, activists, and academic researchers, can play in reducing business power and introducing policies that go against business preferences, such as soda and ultra-processed food taxes and improved food labeling regulations. In explaining this process, I introduce the concept of civil societal *power in persistence*. This is a conceptual term that encapsulates civil society's political and policy influence through its ongoing efforts to pursue its goals in a context of business opposition, threats, and policy failure. This power in persistence entails several processes, beginning with public and financial support, in turn motivating civil societal actors to adopt several tactics to successfully influence the policy reform process. Indeed, previous years of vehement industry opposition—and in some instances, death threats towards activists— and policy failure generated the broad public support that civil societal actors needed to persist in their information and pressure tactics, a process that was also aided by philanthropic support. This persistence in informing and educating the government about the importance of these policies gradually altered the perceptions and interests of congressional leaders and previously opposed presidents, while elevating national discussions to the point of making these policies an important electoral campaign issue for future presidents.

However, the health bureaucracy also played an important supplemental role. Specifically, mid-level officials within the Ministry of Health (MoH) aided these civil societal efforts by sustaining support for taxation and improved food labeling regulations, facilitated by their stable civil servant employment contracts, and the international political aspirations of MoH leaders.

The case of Colombia, therefore, reveals how civil society's *power in persistence* can gradually transform the politics of food and beverage policy in ways that benefit the public's health. As we will see, civil society has the power to achieve what many governments have not been able to accomplish: that is, to take on the power and influence of big businesses in defense of the public's health.

METHODOLOGY

This study conducted a qualitative methodological approach to research. Qualitative data were obtained from primary and secondary documents found via online search engines, such as *PubMed*, *Web of Science*, *Google Scholar*, and *Academic Search Ultimate*. Primary sources are publications that are written in a country's particular language and by authors from that country, whereas secondary documents are written in a different language and often by authors not from that country. When searching for these primary and secondary documents in these search engines, keyword search terms were used, such as "Colombia," "name of presidents," "Congress," "politics," "NCDs," and "policy." The search criteria for selecting documents included those that were either peer-reviewed or from credible policy and media sources, while also focusing on the specific topics of

interest in this study. The information obtained from these documents was used to provide supportive causal and empirical evidence.

Additional qualitative data were obtained from interviews with NGO leaders, attorney activists, and professors. A total of 6 interviews were conducted in the Spanish and English languages, for 30 minutes each via Zoom communication, and were conducted from January through June 2023. One of these interviewees is an attorney and activist (Andres Velez Serna, *Estudio Jurídico ye de Educación*); a university professor (Luis Fernando Gómez, *Pontificia Universidad Javeriana*); an executive director of an NGO (Carolina Piñeros, *Red PaPaz*); a staff member and NGO attorney (Diana Guarnizo, *Dejusticia*); a nationally-recognized journalist, professor, and attorney (Judith Sarmiento); and the final interviewee asked to remain anonymous. Interviewees were selected based on recommendations from trustworthy, known experts in the field and through snowballing processes, i.e., where those interviewed recommended other trusted experts to be interviewed. Interviewees were not selected for their particular political or policy views. The interviewees provided written and verbal consent, and the interview questions were reviewed and approved by the Office of Research Integrity at the author's university. The Office of Research Integrity deemed this study exempt from IRB review due to it being classified as non-human subject research. The interview data were used to provide additional supportive evidence.

With respect to case study selection, Colombia was chosen for several reasons. First, this case was chosen because of the government's well-known history of being incapable of adopting fiscal and regulatory policies in response to major food and beverage conglomerates and the harmful effects of their products; second, because of the well-documented power and influence of these companies over politicians and society. Colombia was therefore chosen because of its well-known values on the dependent variable of industry power over politics, society, and policy, with the goal of providing an alternative causal explanation to explaining these outcomes[9] and others. Colombia was also selected to critically evaluate existing approaches and theories about the political, economic, and social contexts contributing to a decline in corporate power and policy influence. Finally, examining Colombia allowed for an analysis of industry, civil society, and government actors over a long period of time, i.e., prior to and after industry power and policymaking influence; this approach facilitates our understanding of the contexts leading to a decline in industry power and influence, a perspective that is much needed in the corporate political activity literature[10].

REASSESSING INDUSTRY POWER AND POLITICS

Recently, the corporate political activity (CPA) and the commercial determinants of health literature have underscored the political, economic, and policy strategies that industries use to influence NCD policies in their favor, such as lobbying, partnering with supportive civil societal actors, and shaping the policy discourse[11]. Through these avenues of influence, industries have shown their ongoing political and policymaker power[12]. The study of power has therefore become increasingly important for CPA researchers seeking to better understand how and why industries acquire and maintain such power[13,14].

Nevertheless, the study of corporate power and politics also has a long tradition in the field of political science[15]. Rekindled by the 2008 financial crisis, political scientists have been interested in revisiting the structural sources of power that major banks and

corporations have over government[16]. To that end, distinctions have been made with respect to the invisible *structural* sources of power, e.g., where corporations use their overall importance to the economy to influence politicians' policymaking decisions, versus the visible *instrumental* sources of power, where industries lobby and partner with government to manipulate policy[17,18,19].

However, in the CPA and commercial determinants of health literature, we still do not know enough about the conditions under which major soda and ultra-processed food companies either maintain or begin to lose their power and influence within government. Answering these questions requires that we analyze government-business relations over a long period of time, highlighting the contexts that empower governments or industries over each other[20]. Such an approach, taken in this article, underscores the importance of comparative within-case historical analysis, a neglected topic in this literature[21].

Several approaches have been taken to explain why industries either maintain or lose their policy power and influence over time. With respect to maintaining power and influence, scholars have discussed the ongoing economic structural power that industries have, such as their perceived overall importance to the economy (e.g., economic growth, employment opportunities) and politicians' concern with maintaining business confidence, which, in turn, compels politicians not to pursue policies that industries oppose[22]. This context motivates the government to be dependent on capital[23]. Alternatively, major industries have had the resources needed to consistently lobby the government while engaging in policy partnerships that develop legitimacy and political support, in turn helping industry maintain its influence over time[24]. Engaging in various forms of corporate social responsibility, such as providing employment or educational opportunities, has also served to continuously increase corporate legitimacy while persuading governments not to pursue regulatory policies that go against industry preferences[25,26].

In contrast, with respect to industry's gradual loss in power and policy influence, some have argued that major economic and public health crises have, in the past, empowered governments to recentralize policy authority away from big business[27]. Other times, governments have distanced themselves from businesses that are perceived as illegitimate in periods of crisis (e.g., major businesses are seen as the culprit) or when they are perceived as scandalous[28]. Finally, some politicians may eventually prioritize the preferences of their voting constituents on salient policy issues and will support constituents' policy desires even if they go against the business community's preferences[29].

However, the case of Colombia reveals the importance of understanding the civil societal contexts within which industries experience a decline in their power and policy influence. While scholars have revealed the importance of civic mobilization and holding politicians accountable for policy reform[30], they have not considered the importance of civil society's *power in persistence* by way of consistently mobilizing and pressuring government for reform even in a context of business resistance, threats, and policy failure; the public, financial, and policy tactic sources of this power, and how these efforts eventually garner congressional and presidential support for fiscal and regulatory policies that are vehemently opposed by businesses.

Indeed, in Colombia, civil societal *power in persistence* is introduced as a concept that entails several components: it is a by-product of broad public support for civil societal actors. This support is fueled by years of industry resistance, threats, and policy failure.

At the same time, access to financial support facilitates civil society's ability to persist in its cause. Finally, in this context, civil society is further compelled and has the means with which to engage in several policy tactics to pressure and gradually alter the perceptions of congressional lawmakers, such as providing them with information and educating them about the importance of SSB taxes and improved food labels, while elevating national discussion and the electoral salience of these policies. Over time, these persistent efforts not only motivate political parties and presidential hopefuls to support these policies, but they can even force previously opposing presidents to support reforms.

Several broader contextual contexts also facilitate the emergence of *power in persistence*. The first is years of successful industry policy opposition and threats towards civic activists seeking policy reform. This context generates the broad social and financial support that activists need to encourage them to pursue their cause. Second, it is important to note that these civic efforts have taken place at a time when there has been heightened global awareness and support for fiscal and regulatory policies that go against industry interests in defense of public health, such as preventing noncommunicable diseases (NCDs), e.g., type-2 diabetes, associated with the consumption of unhealthy foods. This global context and concern can facilitate the emergence of *power in persistence*.

However, the case of Colombia also reveals the important role that the federal health bureaucracy plays in supplementing civil society's efforts. Specifically, the role that mid-level ministry of health officials play in pressuring higher-level officials to pursue new taxation and food labeling regulations. When safeguarded by stable civil servant contracts, these mid-level officials have no fear in pursuing policies that are not supported by higher-level officials and the president. At the same time, politically-appointed health ministers with aspirations to become leaders of international health organizations can eventually find it advantageous to support civil society and the international community's interests in more effective regulatory policies, such as improved food labels. This finding joins others in revealing the positive role that the health bureaucracy plays in overcoming industry resistance to much-needed fiscal and regulatory policies[31].

THE RISE AND INFLUENCE OF SODA AND ULTRA-PROCESSED FOOD COMPANIES IN COLOMBIA

By the turn of the 21st century, Colombia saw the burgeoning rise of NCDs associated with a nutrition transition and lifestyle changes. These factors were facilitated by the unfettered emergence of soda and ultra-processed food companies. These companies have also had a historically strong connection to government and the media[32]. It helped that major beverage and media companies were owned by the same powerful company: the *Organización Ardila Lüle* (OAL) (*Federación Colombiana de Periodistas*, 2018). OAL owns *Postobon*, Colombia's largest non-alcoholic beverage company, and the *RCN Radio Network*, the largest radio station[33] (*Federación Colombiana de Periodistas*, 2018). Other major companies, such as FEMSA Mexico, have invested and distributed their franchised products in Colombia and other Latin American countries, while making plans to increase their popular *OXXO* convenience stores throughout the country[34]. FEMSA Mexico has also contributed substantially to employment in Colombia, growing by 44.4% in total employees from 2013 to 2015, a growth rate that is higher than the company's

Mexican home base [35]. Thus, it seems that FEMSA Mexico's ownership, expansion, and contributions to the economy have made it a powerful and influential force in Colombia.

The historic political and economic context also favored industry and its rapid expansion. In addition to recognizing the nation's need for private investors[36], former conservative President Alvaro Uribe Vélez (2002-2010) recognized a major ultra-processed food company, *Nestlé*, for its contribution to Colombia. In August 2004, President Uribe Vélez awarded *Nestlé's* Colombia market leader, Juan Carlos Marroquín, with the "*Orden Nacional al Mérito*" (the National Order of Merit)[37]. Uribe's presidential successor, Juan Manuel Santos (2010-2018), a centrist politician from the *Social Party of National Unity*, also underscored the benefits of a thriving industry sector and believed in establishing strong public-private partnerships[38]. Thus, within the past two to three decades, there has been strong presidential support for food companies that were eager to expand and advance their profits in Colombia.

INITIAL GOVERNMENT RESPONSE AND POLICY CHALLENGES

In this context, presidential interest in imposing taxes and regulating the soda and ultra-processed food sectors was essentially absent. Presidential interests were shaped by their close association with major food and beverage companies. For example, President Juan Manuel Santos (2010-2018), who favored industry growth and strong public-private partnerships, was not in favor of policies that went against industry's preferences, such as a sugary-sweetened beverage (SSB) tax[39]. Santos also displayed little interest in addressing Colombia's burgeoning NCD problem[40].

Colombia's next president, Iván Duque Márquez (2018-2022) of the conservative *Democratic Center* political party, behaved in a similar manner and was closely aligned with industry leaders[41]. For instance, in what appeared to be a public sign of support for big business, Mialon[42] claims that Duque Márquez gave the concluding speech in 2019 at the ANDI (*Asociación Nacional de Empresarios de Colombia*) Bogota section and posted this event on his website. ANDI is a trade organization located in *Santa Fé De Bogotá*, the nation's capital[43]. Mialon et al.'s research also suggests that this direct relationship between the president and industry had a direct impact on policy formulation. At the same time, the food industry worked with Colombia's Ministry of Health, Presidential Council for Children and Adolescents, as well as the National Association of Neonatology (which also included a pact signed by the Attorney General) through a public-private partnership devised by the industry called the *Alianza por la Nutrición Infantil*, with the goal of eliminating chronic malnutrition by 2030[44].

It therefore came as no surprise that Duque Márquez was supportive of the industry's policy preferences. This was especially the case when it came to considering a national SSB tax. Even prior to becoming president, in 2016, when the first attempt to introduce this tax emerged in Congress, an idea that was backed by the Ministry of Health and Finance, as a senator, Duque Márquez opposed the idea[45]. After becoming president in 2018, Duque Márquez maintained his position on the tax and preferred not to talk much about it[46]. There were also no congressional attempts to reintroduce the tax[47,48]. Add to this Duque Márquez's belief in the importance of individual responsibility in addressing NCD challenges, rather than the importance of social context and policies as a solution to the problem[49]. At the same time, major industries had contributed to Duque Márquez's presidential campaign[50,51], which, in turn, appeared to fuel his loyalty to the

beverage industry. Meanwhile, these industrial actors were successfully lobbying Congress in opposition to the SSB tax[52]. This lobbying process occurred in a context that favored industry due to the president's support for this sector. In addition, the government's focus on establishing a peace referendum with the Revolutionary Armed Forces (FARC) distracted and took away much of the attention to the importance of adopting this tax, which some believe could have contributed to its rejection[53]. The industry lobbied against the tax, which included successfully winning a lawsuit in 2016 against the state for allowing activists to use media campaigns about the tax based on false and misleading information, a suit which was filed by the National Association of Businessmen in Colombia (ANE) and *Postobón*[54]. In addition, there were also reports of the anonymous harassment of activists in favor of the tax[55]. By 2017, this challenging political context was so daunting that activists in favor of the SSB tax were losing hope that a tax was feasible[56]. During this time, Duque Márquez also had strong connections and support from senior Ministry of Health officials and influenced them to refrain from introducing regulatory policies[57].

Duque Márquez's position on other food regulations showed similar resistance. With respect to introducing improved food labels, initially, he did not seem as opposed to the idea when compared to an SSB tax, deciding to take a "let's see" approach on the labeling issue[58]. However, towards the end of his presidential term in 2019, Duque Márquez made it clear that he opposed the idea and proceeded to block proposals for improving food labels[59]. At the same time, there was an intense amount of industry lobbying with several companies and food sector organizations present at the Congress seeking allies to undermine the initiative[60]. With respect to advertising and sales regulations, such as selling soda and ultra-processed foods in schools, none of these issues were pursued under Duque Márquez[61]. Duque Márquez's lack of support for this issue, and within government in general, upset activists; they viewed this situation as too difficult, eventually deciding to move on to other regulatory matters, such as food labeling[62].

Initial Bureaucratic and Congressional Interests

Under Duque Márquez, Colombia's Ministry of Health (MoH) appeared to have a mixed relationship with the soda and ultra-processed food industry, depending on the policy issue at hand. In the area of food labeling and the improved nutritional content of foods, the initial bureaucratic context appeared to support the industry's preferences. With respect to food labels, senior MoH officials during this time favored a label that was aligned with the industry's preferences[63]. The MoH started to meet with industry leaders about what improved food labels should look like[64]. It also did not help that the Minister of Health was a former director of the "Santa Fé Foundation, which receives funding from the Grupo Ardila Lulle, owner of Postobón"[65]. Mialon's[66] interview research found that this may have been the reason why the Minister supported the government's relationship with industry. Mialon[67] also states that an industry organization, ACTA, worked with the Ministry of Health on striving to reduce salt intake, while the food industry in general participated in the policymaking process. Colombia, therefore, appeared to exhibit a context of "regulatory capture," where industry interests were firmly represented within government[68].

When it came to the SSB tax, however, bureaucratic interests were somewhat divided. In fact, during the conservative president Juan Manuel Santos' administration (2010-2018), it was his Minister of Health, Alejandro Gaviria, who proposed the idea of introducing a tax in 2016[69]. However, no one within government understood why Gaviria was proposing this tax and what to do about it[70]. When the tax policy was being considered (along with a tobacco tax), an interdisciplinary team of lawyers, economists, political scientists and epidemiologists on the topic was created and reported back to Gaviria[71]. Therefore, there were several mid-level health officials interested in supporting the tax[72]. However, later, President Duque Márquez's appointed Minister of Health, Fernando Ruiz Gómez, while he probably realized the importance of the tax due to his medical background, he was under a conservative president and consequently did not show much interest in supporting this idea due to his lack of confidence in the tax's prospects under Duque, while also being focused on COVID-19[73]. The SSB tax proposal was eventually defeated in 2016[74], in turn reinforcing industry's prowess—although the tobacco tax was adopted[75].

Finally, prior to and throughout the Duque Márquez administration, the Congress did not display as much interest in pursuing regulatory policies. There appeared to be very little understanding of the topic among congressional leaders. There was some congressional interest in pursuing new food labeling regulations in 2017, but no further discussions on the matter were held[76]. While the green party faction initially liked the idea of an SSB tax, other congressional members on the political left, especially those who were supportive of the workers' movement, were concerned that a tax on sugary beverages would negatively impact employment[77]. There was therefore no initial consensus among leftist political parties that the SSB tax should be pursued, while conservative party members were at the time completely opposed to the idea[78].

FOOD LABELING AND TAX POLICY REFORMS

Despite the absence of a strong government commitment to pursuing fiscal and regulatory policies, these reforms eventually began to emerge. Notwithstanding repeated attempts to improve food warning labels under the Duque Márquez administration[79], by the end of his term in 2021, Congress approved the Law 2021, aka, *Ley de Comida Chatarra* (Junk Food Act)[80]. This Act requires the presence of highly visible, legible, and easy to understand front of package warning labels for products containing an excessive amount of nutrients defined by the MoH[81]. In 2021, just prior to the Junk Food Act's passage, the MoH also enacted Resolution 810 on food and beverage labels. Resolution 810 required warning labels with visible circles on the front of packages that were deemed "high in" sugar, salt, and saturated fat[82,83,84]. Historically, in Colombia, the usage of circles on products was adopted to signify the positive aspect of products, services, and conduct, whereas octagon symbols were used to signal their harms and warnings as such[85]. Resolution 810 emerged through an agreement between the government and the food and beverage industry, but it failed to comply with the Junk Food Act's policy provisions[86,87].

How Resolution 810 emerged is telling and reflects the government's motivations and the food industry's influence. In 2018, industry association representatives responded to the House of Representatives proposing front-of-package warning labels, rejected this effort, and requested that the Ministry of Health and Social Protection

(MHSP) regulate the matter, while later again requesting that the House not vote on the issue in 2019[88]. During the review period prior to the Draft 810 Resolution of 2021, the MHSP did not respond to 2,244 observations made about the draft despite saying that it would[89]. While in 2020 the MHSP provided a draft that adopted the more scientific based rectangles warning labels along with an implementation phase of 6 months and 12 months for remaining provisions, stating that the initially proposed circular warning label had quality issues, *Dejusticia* (2021) notes that the next draft sent to the World Trade Organization (WTO) in 2021 was revised yet again and was more similar to the original draft showing a circular label. The 810 Resolution of 2021 reflected the food industry's suggestions about the front-of-package warning label, positive seal, cut-off points, health claims, and the implementation time frame[90]. The resolution did not consider civil society's comments, nor did it consider the best scientific evidence devoid of vested interests[91]. This situation, along with other regulatory violations, prompted the NGO *Desjustia* to file a legal motion requesting the nullification of Resolution 810 dealing with warning labels, positive seals, and nutrition and health claims based on the MHSP's false motivations and abuse of its power[92].

Shortly after the approval of Resolution 810 and its circular warning labels, the activist community questioned its effectiveness. Nutrition activists had two concerns: first, the ultra-processed food packages with circular images warning about products "high in" poor nutrients at the same time could have on the same package circles indicating that the food contained nutritious properties, thus potentially confusing the consumer [93,94] ; second, the term "high in" had been use in the past through MoH Resolution 333 of 2011 and was associated with foods "high in" healthy nutritional content, thus potentially confusing the consumer as they may perceive "high in" salt, sugar, and saturated fat as something good[95].

In response to activist pressures for a re-evaluation of these labels, the MoH hired researchers for an academic study conducted by the University of Antioquia about its efficacy, while a MoH technical reassessment was conducted[96,97]. Based on the results of this study and in direct response, as well as the MoH technical reassessment, on December 13, 2022, the MoH issued Resolution 2492, which is an amendment to Resolution 810 and implements the Junk Food Act Law 2021[98,99,100]. Resolution 2492 follows PAHO's "Nutrient Profile Model" definition of what constitutes an effective front-of-package warning label, which is based on scientific evidence[101]. Resolution 2492 also introduces the large black octagon warning labels –first introduced in Chile--on food and beverage packages which classifies if a product with an excessive amount of sodium, excess sugar, saturated fats, and trans-fat, and classifications for processed foods based on if they are ultra-processed foods, processed, minimally processed, and unprocessed, as well as new definitions for sweeteners[102],[103],[104]. Products will also be required to have a black octagon seal if they contain non-caloric sweeteners[105]. Products with one or more of these warning sign labels are also forbidden to make health and nutritional claims[106,107]. The decision to adopt black octagon warning labels also emerged from a previous experimental study, taken into account in the University of Antioquia study, that provided evidence showing that consumers in Colombia were able to better understand the black octagons with "Excess in" free sugar, sodium, trans- and saturated-fats, and octagon seals if products contained non-caloric sweeteners[108,109].

Progress was also made on the taxation of sodas. While the government succeeded in introducing a VAT on these sodas and beers in 2019, its impact on beverage prices was

expected to be minimal[110]. The 19 percent tax was imposed onto several phases of the soda and beer production process, with suppliers, wholesalers, distributors, and merchants selling 2.8 billion pesos each year subject to the VAT tax[111]. Activists nevertheless claimed that the tax was insufficient and not what they wanted[112]. However, in 2022, the current liberal Gustavo Petro administration (*Colombia Humana* political party) followed through with its promise to introduce a new tax on sugary-sweetened beverages (including not only sodas, but also fruit juices, energy drinks, powder mixes, and flavored waters), which will become effective in July 2023[113] through 2025. The amount of tax will vary based on the amount of sugar contained within the beverage[114]. However, the Petro administration went a step further and introduced a tax on ultra-processed foods high in salt, saturated fats, sugar, and included sauces, purees, jellies, jams, and cereals[115]; beginning in 2023, these foods will see a 10 percent tax, increasing to 15% in 2024 and 20% in 2025[116]. This tax passed in the Congress despite the presence of some opposition due to its effects on the poor amidst price inflation, which some believe was concealing the interests of industry and who have connections to politicians[117]. However, the activist community never demanded this tax on ultra-processed foods though nevertheless agreed with its implementation[118],[119]. As I explain shortly, this tax idea emerged from within the Petro administration, reflecting the government's knowledge and understanding of the issue[120], a by-product of unwavering civil societal efforts to inform and educate the government of the importance of these tax efforts.

After several years of government and industry resistance, why did these policy reforms eventually emerge? Why was the government eventually willing to take on the power and interests of major food and beverage businesses through these innovative taxation and labeling policies? As the next sections explain, civil societal persistence was vital for achieving this result.

CIVIL SOCIETAL PERSISTENCE AND THE COMPLEX POLITICS OF REFORM

Colombia's success story can primarily be attributed to civil society's persistence in advocacy and pressuring the government for policy reform. However, it is important to note that civic mobilization in support of regulatory policies was slow to emerge. This mainly reflected the fact that as in other emerging markets, public knowledge about the harmful effects of sugary beverages and ultra-processed foods was new. Few NGOs and academics worked on these issues[121]. The activist community that was present worked together on several issues, such as nutrition, health, and policy regulation; however, prior to working together, activist organizations were working on some of these issues on their own[122,123]. Some NGOs, such as *Educar Consumidores*, and the academic community, had always worked on nutrition and regulatory policies, while for other NGOs, such as *Dejusticia*, a group that was focused on human rights (with health being one of several areas of focus), this topic was new and gradually became of interest[124]. Over time, this community realized that they needed to work together and that they believed in similar common themes addressing the commercial determinants of health, noncommunicable diseases, and access to nutritious food as a human right. The activist community's interests gradually began to unite, realizing that these causes aligned with their interests[125].

For instance, shortly after the MoH's announcement of a potential soda tax in 2016, a group of NGOs and activists formed the *Alliance for Food Health*[126]. The *Alliance*

brought together activists, academics, and citizens committed to health as a human right, health education, establishing a healthy environment, and food security[127]. Moreover, the *Alliance* called on the government to promote healthy eating and to warn society of the harmful effects of unhealthy foods[128]. The *Alliance* appeared to focus on raising awareness about the importance of the soda tax through public awareness campaigns in the media. Indeed, NGOs such as the *Red PaPaz*, *Dejusticia*, *Fian International*, and *Educar Consumidores* were supporting the tax and other regulatory policies during this period[129]. The *Alliance* also benefited from receiving a generous grant from the Bloomberg Foundation for US$260,000[130]. This funding was used to pay for advertisements and security at activist offices[131]. It is also important to point out, however, that in addition to supporting these activist activities, the international activist organization, Global Health Advocacy Incubator (GHAI), an organization that is supported by the Bloomberg Foundation, also played a very important role in working with Colombian activists to introduced the aforementioned taxes[132] while also providing technical assistance to GHAI partners in Colombia on legal, research, advocacy initiatives and civic mobilization[133].

Thus by 2016, during the conservative Juan Manuel Santos administration (2010-2018), the activist community began in earnest to pressure the government for policy reform[134,135]. However, despite being united and having access to funds, for several years the *Alliance* was not successful in influencing policy, especially with respect to the proposed SSB tax. The Duque Márquez administration was unresponsive to activist demands for a tax and other regulatory policies[136]. Furthermore, despite efforts by organizations such as *Red PaPaz* and *Educar Consumidores* to create radio and TV advertisements emphasizing the importance of an SSB tax and improved food labels[137], these and the *Alliance's* media advertisements were eventually shut down by a federal agency ruling in response to industry complaints that activists could not advertise about these taxes based on wrongful scientific information[138]. While the Constitutional Court eventually ruled in these activists' favor, thus upholding the constitution's commitment to guaranteeing free speech, this situation appeared to dampen activists' ability to prioritize the importance of an SSB tax. These civic organizations also continued to face threats from industry on this issue[139,140]

Despite these challenges, NGOs, activists, and academic researchers remained united and persisted in their efforts to pursue policy reform. Neither direct threats from industry, an unreceptive president, nor a temporary ban on advertising kept this community from pursuing an SSB tax and improved food labels. But why were these civil societal actors so persistent?

In essence, repeated failure and industry opposition generated the public support needed to help sustain and advance these civil societal actors' cause. Indeed, according to a legal attorney and consultant involved in the policy reform process that the author interviewed, Andres Velez Serna, each of the small policy defeats and roadblocks that the activist community encountered transformed into strong public support for this community[141]. These obstructions made it clear to society that public health policies should not be affected by industry's interests[142]. Other NGO leaders, such as Carolina Piñeros, director of *Red PaPaz*, claimed that for every attack that she received from industry, society supported her even more[143]. The public agreed with her and other activists' views that improved food labels were a human right[144]. At the same time, Andres

Velez Serna mentioned that the activist community's small victories also provided public support[145].

Generous financial support also aided the activist community. As previously mentioned, in 2016, the Bloomberg Foundation provided funding to support NGOs to engage in public communication campaigns. Other funders, such as the Global Health Advocacy Incubator and Tobacco Free Kids, provided technical support for the civic coalition that emerged[146]. In general, the support of foundations was critical for helping activists communicate the importance of health regulations[147].

Civil Society's Policy Tactics

Supported and united in their cause, next, civil societal actors engaged in several strategies to eventually convince the president and the Congress to adopt the aforementioned SSB tax and food labeling legislation. One of the first strategies pursued was to continuously meet with congressional members to inform them of the importance of adopting these policies[148,149,150,151,152]. The NGO *Red PaPaz* played a key role in explaining to congressional members and staffers all the arguments surrounding these policies[153]. Activists also located specific congressional members who were uncertain about these policies and helped convince them of their importance (interview with Luis Fernando Gómez, April 21, 2023). When it came to reforming food labels, activists went to Congress to organize workshops and met with congressional members and their technical consultants to teach them about the new labels and their importance[154].

Activists also used TV, radio, and social media, such as *Twitter* and *YouTube*, to inform congressional members and to apply further pressure on them[155,156]. *Red PaPaz*, for example, approach a nationally recognized reporter, Judith Sarmiento, and asked to join her show on the radio station, *Caracol*, one of Colombia's most popular radio channels[157]; on this show *Red PaPaz* discussed the importance of improving children's nutrition[158]. *Red PaPaz* worked with Judith to see how they could work with Congress to adopt the policies that they were interested in[159]. During the Duque Márquez administration, public awareness and discussions of these policy issues were getting so much attention that they were starting to show up on the front page of major newspapers and in the economic and lifestyle sections[160].

These communication and pressure tactics had significant implications for presidential perceptions and policy support. Even during the recalcitrant Duque Márquez administration, with respect to improved food labels, civic communication, pressures, and public awareness were so high that by the end of his administration, Duque Márquez believed that there was no avoiding the creation of new food labeling legislation[161,162]. In this context, it seems that Duque Márquez was essentially forced to change his position on the issue due to pressures from civil society, and he may also have been concerned about his reputation on the matter[163,164]. In fact, when he saw that the Congress was on the verge of approving improvements to food labels through the 2021 Junk Food Act and Resolution 810, two days before this was supposed to happen, Duque Márquez issued a presidential decree mandating the new labels[165]. It seems that this was done so that he could get credit for a policy that was about to be approved by Congress.

Yet another implication of civil societal activism and its strategies was that it transformed the SSB tax and food labeling issues into a national electoral matter[166,167]. This was particularly apparent during the 2020 presidential campaigns, when

presidential candidates started to address whether or not they wanted a SSB tax ([168]). This was the first time that presidential candidates discussed SSB taxes on the campaign trail. When the current liberal president, Gustavo Petro, campaigned for the presidency in 2020, he stated that he would pursue a tax if elected to office[169]. By November 2022, several months after he was elected, Petro claimed that the tax was not designed for raising revenue but for discouraging individuals from consuming sodas, which he perceived as bad for one's health, with many drinking these products also sick with diabetes[170]. After the tax was adopted by the Congress that November, Petro continued to support the tax idea but was not involved as much in its implementation[171]; interestingly, it was the Minister of the economy that led this process[172]. One reason could have been that because Petro was focused on reforming the entire tax structure, that he relied on his economic Minister to lead the SSB and other tax reform issues[173].

Civil society's efforts also eventually generated incentives for congressional political parties to support the introduction of a SSB tax and support improvements to food labels. Because activists increased the public's attention to these policies and turned them into a popular electoral issue, congressional parties were very attentive and interested. Given their broad popularity, these policies looked good for most political parties and incentivized them to be involved[174]. While there are still some unsupportive conservative parties, most are riding the boat of popularity on the junk food regulatory policy issue[175]. At the same time, NGOs, such as *Red PaPaz*, were working hard to get as many political parties involved and supportive[176].

Finally, civil society's public awareness campaigns and the decimation of knowledge within government ultimately led to the introduction of new taxation ideas. To the activist community's surprise, in December 2022, not only did the Petro administration and the Congress adopt an SSB tax, but they also introduced a tax on ultra-processed foods, as mentioned earlier. However, the ultra-processed foods tax was not the activist community's idea[177]. Activists believe that because they had been talking about ultra-processed foods for many years, there is now a strong understanding of this issue within the government[178].

Bureaucratic Commitment and Political Aspirations

Bureaucratic officials also played an important role in reinforcing civil society's reform efforts. As mentioned earlier, while high-level MoH political appointees were mainly aligned with President Duque Márquez's lack of interest in reform, mid-level MoH officials were consistently focused on pursuing reform, like the SSB tax[179]. This was mainly because these mid-level officials had permanent civil servant contracts, and therefore had no fear of vocalizing their views and pursuing reform[180]. With respect to food labels, while politically appointed ministers were not initially focused on this issue, as seen under Duque Márquez's health minister, Fernando Ruiz Gómez, mid-level officials were always operating behind the scenes and pressuring for labeling reform[181]. In essence, these permanent civil servant contracts gave mid-level officials power and compelled them to confront politically appointed ministers[182]. Interestingly, amidst these internal pressures from mid-level officials, before retiring from office, minister Ruiz Gómez changed his views about the food labeling issue and supported the 2021 Junk Food Act and Resolution 810[183]. Nevertheless, it seems that other factors could have contributed to his change in views, such as his alternative political aspirations.

Indeed, by the end of his term as health minister, Ruiz Gómez expressed his interest in becoming the next director of the Pan American Health Organization (PAHO)[184]. In hopes of achieving this goal, Ruiz Gómez wanted to improve his image with PAHO and, despite his initial resistance to the idea, eventually used improvements to food labels as a means to this end[185]. He wanted a label that looked good to PAHO[186] and claimed that pursuing an improvement to the label benefited him[187]. Some believe that it was his aspiration to become PAHO's next leader that, when combined with civil societal pressures, eventually motivated him to support food labeling reform[188].

CONCLUSION

Within emerging markets, many examples exist of major soda and ultra-processed food companies shaping politics, society, and policy in the business community's favor[189]. However, in the corporate political activity (CPA) and the commercial determinants of health literature, we know very little about the conditions under which these companies gradually experience a decline in power and policymaking influence. Researchers have started to address these issues, highlighting the fact that civil society is resisting these forms of transnational corporate power, establishing several strategies to address harmful corporate practices in defense of the public's health[190,191]. Addressing this question requires that we take a historical, within-case comparative analysis of the contexts contributing to this process. As seen in Colombia, despite years of industry political capture and policy influence, civil society's persistence in informing, educating, and pressuring the government, when combined with supportive bureaucratic officials, led to the introduction of SSB and ultra-processed food taxes and improved food labels. Colombia has shown that civil society can establish the conditions necessary for an emerging market, hampered by years of industry political capture and public threats, to gradually overcome business power, resistance, and introduce much-needed fiscal and regulatory policies.

Indeed, the case of Colombia has shown the importance of understanding the sources of civil societal *power in persistence* when seeking policy reform. In the CPA and the commercial determinants of health literature, little is known about the public, financial, and policy tactic sources of civil society's policymaking power and how NGOs, activists, and academics can gradually shape political preferences and electoral incentives in favor of adopting society's policy preferences. Findings from Colombia suggest that the sources of civil society's *power in persistence* not only derive from broad public support due to ongoing policy failure, industry resistance, threats, and philanthropic support, but also the policy tactics that civil society uses to inform and educate congressional policymakers about the importance of beverage taxation and food labeling regulation. Success in building congressional support can eventually force previously opposing presidents to realize the inevitability of adopting regulatory policies, such as improved food labels, and eventually provide support—as seen with conservative president Iván Duque Márquez. But we also learned that civil society's public awareness campaigns can transform these policy issues into national electoral issues, eventually motivating presidential candidates to campaign on these policies and commit to policy reform—as seen with the current president, Gustavo Petro. What's more, due to civil societal persistence in providing information and educating the government, governments can go a step further and introduce taxes that civil society did not request, such as the Petro

administration's new tax on ultra-processed foods. This, in essence, is the ultimate payoff for civil society: educating government so much that it introduces controversial taxation policies that activists did not demand.

But what are some potential alternative explanations that the author has not addressed? For example, when is civic *power in persistence* potentially not necessary for introducing policy reforms in response to the food and beverage sector? This may occur in a context where, in the absence of robust civic pressures, the Ministry of Health is committed to policy reform, and when there is a strong charismatic leader within government who uses several tactics to help build policy consensus. For example, in Chile, when fiscal and regulatory policy reforms were introduced in 2012, the Ministry of Health was firmly committed to pursuing these policies in response to unhealthy food and beverage products. At the same time, individuals within the Senate were also important, such as Senator Guido Girardi, who helped mobilize awareness about the importance of these policies[192]. During the policy formulation process, broad civic mobilization and pressures did not seem to account for Chile's successful reforms due to the fact that there were not many civil societal actors, save for periodic activists working with Senator Girardo, mobilizing and pressuring the government[193]. Yet another alternative approach could emphasize the influence of international pressures on governments, for instance, from international organizations (e.g., United Nations) and NGOs, to pursue policies protecting the public from the harms of unhealthy food and beverage products. Further research is needed to explore if these other potential causes are equally as, if not more important than, the author's emphasis on civil societal *power in persistence*.

Future research will need to further explore the public sources of civil societal power and policy influence. Specifically, how can repeated policy failure, industry threats towards society, and periodic policy success motivate the public to consistently provide support to those NGOs, activists, and academics striving to build consensus for policy reform? How does this public support dovetail with these civil societal actors' normative commitment, often grounded in human rights principles, to generate persistence in information and pressure tactics? Future researchers will need to explore these issues.

However, civil society's *power in persistence* provides a necessary but insufficient condition for understanding a gradual decline in industry power and policy influence. The public health bureaucracy also plays a supplemental role. Indeed, the case of Colombia suggests that we combine our analysis of civil society's role with an institutional analysis of how mid-level health officials and their policy commitment reinforce civil society's information and policy tactics. Furthermore, the eventual political aspirations of senior health officials can generate further incentives to support regulatory policies, such as improved food labels, as seen with Minister of Health Fernando Ruiz Gómez and his aspiration to become PAHO's next leader.

Going forward, CPA and commercial determinants of health researchers will need to examine other countries from a historical perspective. Colombia now joins other countries in Latin America, such as Mexico and Chile, in seeing a gradual decline in industry power and policymaking influence[194]. As seen in these countries, researchers will need to pay close attention to other low- and middle-income countries where industry has historically captured politics, policy, and society, where the public is becoming increasingly knowledgeable and concerned about this situation, and where the nutrition activist and research community is growing. This appears to provide the context within which civil societal actors, when supported by government institutions, can be successful

in pursuing their policy preferences despite industry opposition. However, this kind of historical within-case analysis will require an in-depth qualitative assessment of one or few case studies. When achieved, this methodological approach can provide invaluable insights into how civil society and governments can take back authority from big business in defense of the public's health.

Dr. Eduardo J. Gómez *is a Professor and Director of the Institute of Health Policy and Politics. A political scientist by training, his research focuses on the politics of global health policy, with a focus on emerging middle-income countries.*

---

[1] Lawton T, McGuire S, Rajwani T. 2013. "Corporate Political Activity: A Literature Review and Research Agenda," *International Journal of Management Review* 15(1): 86-105.
[2] Savell E, Gilmore A, Fooks G. 2014. "How does the tobacco industry attempt to influence marketing regulations? A systematic review." *PLoS One* 9:e87389.
[3] Hillman A, Hitt M. 1999. "Corporate Political Strategy Formulation: A Model of Approach, Participation, and Strategy Decisions," *The Academy of Management Review* 24: 825-42.
[4] Gómez, Eduardo J. 2023a. "Understanding the Politics of the Commercial Determinants of Health," In Nason Maani, Mark Petticrew, and Sandro Galea (Eds). *The Commercial Determinants of Health* (Oxford University Press), pp. 38-46.
[5] Madureira Lima J, Galea S. 2018. "Corporate Practices and Health: A Framework and Mechanisms," *Global Health* 14(1): 221.
[6] Kickbusch I, Allen L, Franz C. 2016. "The Commercial Determinants of Health," *Lancet Global Health* 4(12): e895-e896.
[7] Anaf, Julia, Fran Baum, Matthew Fisher, and Sharon Friel. 2019. "Civil society action against transnational corporations: implications for health promotion," *Health Promotion International*; doi: 10.1093/heapro/daz088
[8] Patay, Dori, Sharon Friel, Belinda Townsend, Fran Baum, Jeff Colliin, Katherine Cullerton, Katie Dain, Rodney Holmes, Jane Martin, Rob Ralston, and Lucy Westerman. 2022. "Governing ultra-processed food and alcohol industries: the presence and role of non-government organizations in Australia," *Australian and New Zealand Journal of Public Health* 46(4): 455-462.
[9] Collier, David and James Mahoney. 1996. "Insights and Pitfalls: Selection Bias in Qualitative Research," *World Politics* 49(1): 56-91.
[10] Gómez, Eduardo J. 2022. "Addressing the Corporate Political Activity Literature: Emphasizing Theory and Method." *Social Science & Medicine* Vol. 301.
[11] Hillman A, Hitt M. 1999. "Corporate Political Strategy Formulation: A Model of Approach, Participation, and Strategy Decisions," *The Academy of Management Review* 24: 825-42.
[12] Madureira Lima J, Galea S. 2018. "Corporate Practices and Health: A Framework and Mechanisms," *Global Health* 14(1): 221.
[13] Lacey-Nichols, Jennifer and Robert Marten. 2021. "Power and the Commercial Determinants of Health: Ideas for a Research Agenda," *BMJ Global Health* 6; e003850.
[14] Madureira Lima J, Galea S. 2018. "Corporate Practices and Health: A Framework and Mechanisms," *Global Health* 14(1): 221.
[15] Vogel, David. 1987. "Political Science and the Study of Corporate Power: A Dissent from the New Conventional Wisdom," *British Journal of Political Science* 17(4): 385-408.
[16] Culpepper, Pepper. 2015. "Structural Power and Political Science in the Post-Crisis Era," *Business Politics* 17(3): 391-409.
[17] Fairfield, Tasha. 2015. "Structural Power in Comparative Political Economy: Perspectives from Policy Formulation in Latin America," *Business Politics* 17(3): 411-441.

[18] Bernhagen, Patrick and Thomas Bräuninger. 2005. "Structural Power and Public Policy: A Signaling Model of Business Lobbying in Democratic Capitalism," *Political Studies* 53: 43-64.
[19] Przeworski, Adam and Michael Wallerstein. 1988. "Structural Dependence of the State ono Capital," *American Political Science Review* 82(1): 11-29.
[20] Pierson, Paul and Jacob Hacker. 2002. "Business Power and Social Policy: Employers and the Formation of the American Welfare State," *Politics & Society* 30(2): 277-325.
[21] Gómez, Eduardo J. 2022. "Addressing the Corporate Political Activity Literature: Emphasizing Theory and Method." *Social Science & Medicine* Vol. 301.
[22] Bernhagen, Patrick and Thomas Bräuninger. 2005. "Structural Power and Public Policy: A Signaling Model of Business Lobbying in Democratic Capitalism," *Political Studies* 53: 43-64.
[23] Przeworski, Adam and Michael Wallerstein. 1988. "Structural Dependence of the State ono Capital," *American Political Science Review* 82(1): 11-29.
[24] Gómez, Eduardo J. 2023b. *Junk Food Politics: How Beverage and Fast Food Industries are Reshaping Emerging Economies* (Baltimore: Johns Hopkins University Press).
[25] Ibid..
[26] Vogel, David. 2008. "Private Global Business Regulation," *Annual Review of Political Science* 11(1): 261-282.
[27] Pierson, Paul and Jacob Hacker. 2002. "Business Power and Social Policy: Employers and the Formation of the American Welfare State," *Politics & Society* 30(2): 277-325.
[28] Bernhagen, Patrick and Thomas Bräuninger. 2005. "Structural Power and Public Policy: A Signaling Model of Business Lobbying in Democratic Capitalism," *Political Studies* 53: 43-64.
[29] Fairfield, Tasha. 2015. "Structural Power in Comparative Political Economy: Perspectives from Policy Formulation in Latin America," *Business Politics* 17(3): 411-441.
[30] Ibid.
[31] Gómez, Eduardo J. 2023c. "The Limits to Ultra-Processed Food and Soda Industry Power and Policy Influence in Latin America: Political, Institutional, and Social Contexts in Historical Perspective." Unpublished manuscript, Lehigh University.
[32] Mialon, Melissa, Diego Alejandro Gaitan Charry, Gustavo Cediel, Eric Crosbie, Fernanda Baeza Scagliusi, and Eliana María Pérez Tomayo. 2020a. "'The architecture of the state was transformed in favor of the interests of companies': corporate political activity of the food industry in Colombia," *Globalization and Health* 16(97).
[33] *Federación Colombiana de Periodistas*. 2018. "Carlos Ardila Lülle," March 14; https://colombia.mom-rsf.org/en/owners/individual-owners/detail/owner/owner/show/carlos-ardila-luelle/
[34] Reuters and LABS. 2022. "Mexico's Femsa plans as much as 50% more OXXO stores across Latin America over the next decade," *LABS Latin America Business Stories*, March 1; accessed on September 1, 2023; https://labsnews.com/en/news/business/femsa-oxxo-stores/
[35] López-Morales, José Satsumi and Isabel Ortega-Ridaura. 2018. "Internationalization, Corporate Social Responsibility, and Poverty Alleviation: The Case of FEMSA in Latin America," in Scott Hipsher (ed). 2018. *Examining the Private Sector's Role in Wealth Creation and Poverty Reduction* (Hershey: IBI Global), pp. 110-137.
[36] C-Span.org. 2008. "Future of Colombia," President Alvaro Uribe, luncheon keynote speech, National Press Club, September 19, C-Span 2; https://www.c-span.org/video/?281221-1/future-colombia
[37] Nestlé S.A. 2006. *The Nestlé Concept of Corporate Social Responsibility: As Implemented in Latin America*. Nestlé Public Affairs, Switzerland; https://www.nestle.com/sites/default/files/asset-library/documents/library/documents/corporate_social_responsibility/concept-corp-social-responsibility-mar2006-en.pdf
[38] Max Bell School of Public Policy. 2022. "Video: Shaping Local and Global Policies for Small Business: Insights from Former President of Colombia, Juan Manuel Santos," McGill University, March 30; https://www.mcgill.ca/maxbellschool/article/articles-event-recap/video-shaping-local-and-global-policies-small-business-insights-former-president-colombia-juan
[39] Interview with Diana Guarnizo, April 28, 2023.
[40] Ibid.
[41]Interview with Andres Velez Serna, March 31, 2023.
[42] Mialon, Melissa, Diego Alejandro Gaitan Charry, Gustavo Cediel, Eric Crosbie, Fernanda Baeza Scagliusi, and Eliana María Pérez Tomayo. 2020a. "'The architecture of the state was transformed in favor of the interests of companies': corporate political activity of the food industry in Colombia," *Globalization and Health* 16(97).

[43] Ibid.
[44] Mialon, Melissa, Diego Alejandro Gaitan Charry, Gustavo Cediel, Eric Crosbie, Fernanda Baeza Scagliusi, and Eliana Maria Perez Tamayo. 2020b. "'I had never seen so many lobbyists': food industry political practices during the development of a new nutrition front-of-pack labelling system in Colombia," *Public Health Nutrition*, doi:10.1017/S1368980020002268.
[45] Mialon, Melissa, Diego Alejandro Gaitan Charry, Gustavo Cediel, Eric Crosbie, Fernanda Baeza Scagliusi, and Eliana María Pérez Tomayo. 2020a. "'The architecture of the state was transformed in favor of the interests of companies': corporate political activity of the food industry in Colombia," *Globalization and Health* 16(97).
[46] Interview with Diana Guarnizo, April 28, 2023.
[47] Interview with Andres Velez Serna, March 31, 2023.
[48] Interview with anonymous source, January 13, 2023.
[49] Interview with Luis Fernando Gómez, April 21, 2023.
[50] Interview with an anonymous source, January 13, 2023.
[51] *La Liga Contra el Silencio*. 2019. *Donaciones dulces aceitan la política en Colombia*, 070, August 19; https://cerosetenta.uniandes.edu.co/donaciones-dulces/
[52] interview with Carolina Piñeros, February 13, 2023
[53] Carriedo, Angela, Adam Koon, Luis Manuel Encarnación, Kelley Lee, Richard Smith, and Helen Walls. 2021. "The Political Economy of Sugar-Sweetened Beverage Taxation in Latin America: Lessons from Mexico, Chile, and Colombia," *Globalization and Health* 17(5).
[54] Ibid.
[55] Ibid.
[56] Interview with Carolina Piñeros, February 13, 2023.
[57] Interview with anonymous source January 13, 2023.
[58] Interview with Andres Velez Serna, March 31, 2023.
[59] Ibid.
[60] Mialon, Melissa, Diego Alejandro Gaitan Charry, Gustavo Cediel, Eric Crosbie, Fernanda Baeza Scagliusi, and Eliana Maria Perez Tamayo. 2020b. "'I had never seen so many lobbyists': food industry political practices during the development of a new nutrition front-of-pack labelling system in Colombia," *Public Health Nutrition*, doi:10.1017/S1368980020002268.
[61] Interview with Andres Velez Serna, March 31, 2023.
[62] Interview with Carolina Piñeros, February 13, 2023.
[63] Interview with Andres Velez Serna, March 31, 2023.
[64] Interview with anonymous source, January 13, 2023.
[65] Mialon, Melissa, Diego Alejandro Gaitan Charry, Gustavo Cediel, Eric Crosbie, Fernanda Baeza Scagliusi, and Eliana Maria Perez Tamayo. 2020b. "'I had never seen so many lobbyists': food industry political practices during the development of a new nutrition front-of-pack labelling system in Colombia," *Public Health Nutrition*, doi:10.1017/S1368980020002268.
[66] Ibid.
[67] Mialon, Melissa, Diego Alejandro Gaitan Charry, Gustavo Cediel, Eric Crosbie, Fernanda Baeza Scagliusi, and Eliana María Pérez Tomayo. 2020a. "'The architecture of the state was transformed in favor of the interests of companies': corporate political activity of the food industry in Colombia," *Globalization and Health* 16(97).
[68] Mialon, Melissa, Diego Alejandro Gaitan Charry, Gustavo Cediel, Eric Crosbie, Fernanda Baeza Scagliusi, and Eliana Maria Perez Tamayo. 2020b. "'I had never seen so many lobbyists': food industry political practices during the development of a new nutrition front-of-pack labelling system in Colombia," *Public Health Nutrition*, doi:10.1017/S1368980020002268.
[69] See García, Maria Isabel, Manuela Villar Uribe, and Roberto Lunes. 2017. *The Political Economy of the 2016 Tobacco and Proposed Sugar-Sweetened Beverage Tax Increases in Colombia*. Washington DC: The World Bank Group.
[70] Interview with Diana Guarnizo, April 28, 2023.
[71] García, Maria Isabel, Manuela Villar Uribe, and Roberto Lunes. 2017. *The Political Economy of the 2016 Tobacco and Proposed Sugar-Sweetened Beverage Tax Increases in Colombia*. Washington DC: The World Bank Group.
[72] Interview with Diana Guarnizo, April 28, 2023.
[73] Ibid.

[74] García, Maria Isabel, Manuela Villar Uribe, and Roberto Lunes. 2017. *The Political Economy of the 2016 Tobacco and Proposed Sugar-Sweetened Beverage Tax Increases in Colombia*. Washington DC: The World Bank Group.
[75] Ibid.
[76] Interview with an anonymous source, January 13, 2023.
[77] Interview with Diana Guarnizo, April 28, 2023.
[78] Ibid.
[79] Mayett-Moreno, Yesica and Mauricio Sabogal-Salamanca. 2022. "Efforts in Adopting the Ultra-Processed Food and Soft Drinks Labeling Legislation in a COVID-19 Environment: The Cases of Colombia and Mexico," *Business and Society Review*; DOI: 10.1111/basr.12272; 1-32.
[80] *El Tiempo*. 2021. "El Nuevo 'Round' Por el Etiquetado de Alimentos," June 26; https://www.eltiempo.com/vida/familia/etiquetado-de-alimentos-criticas-a-resolucion-810-del-ministerio-de-salud-599028
[81] Mayett-Moreno, Yesica and Mauricio Sabogal-Salamanca. 2022. "Efforts in Adopting the Ultra-Processed Food and Soft Drinks Labeling Legislation in a COVID-19 Environment: The Cases of Colombia and Mexico," *Business and Society Review*; DOI: 10.1111/basr.12272; 1-32.
[82] Interview with anonymous source, January 13, 2023.
[83] Michail, Niamh. 2020. "Colombian Government and Food Industry Reveal Mandatory Warning Label Design," *Food Navigator*, March 2; https://www.foodnavigator-latam.com/Article/2020/03/02/Colombian-government-and-food-industry-reveal-mandatory-warning-label-design
[84] Information from anonymous source during initial draft review via email, July 1, 2023.
[85] *Dejusticia*. 2021. *Medio de control de nulidad simple, con medida cautelar de suspensión provisional, contra la Resolución 810 del 16 de junio de 2021 de Ministerio de Salud y Preotección Social, y, subsidiariamente, contra sus artículos 32, 33, 16 y 25*; https://www.dejusticia.org/wp-content/uploads/2021/11/Demanda-nulidad-Resolución-810-de-2021.docx.pdf
[86] Interview with anonymous source, January 13, 2023.
[87] Information from anonymous source during initial draft review via email, July 1, 2023.
[88] *Dejusticia*. 2021. *Medio de control de nulidad simple, con medida cautelar de suspensión provisional, contra la Resolución 810 del 16 de junio de 2021 de Ministerio de Salud y Preotección Social, y, subsidiariamente, contra sus artículos 32, 33, 16 y 25*; https://www.dejusticia.org/wp-content/uploads/2021/11/Demanda-nulidad-Resolución-810-de-2021.docx.pdf
[89] Ibid.
[90] Ibid.
[91] Ibid.
[92] Ibid.
[93] Anonymous, personal communication, January 13, 2023.
[94] Anonymous, personal communication, July 1, 2023
[95] Ibid.
[96] Republic of Colombia. 2022. *Resolution Number 2492/2022*. Ministry of Health and Social Protection
[97] Information from anonymous source during initial draft review via email, July 1, 2023.
[98] Republic of Colombia. 2022. *Resolution Number 2492/2022*. Ministry of Health and Social Protection
[99] Foreign Agricultural Service. 2022. "Colombia Issues New Resolution on Nutrition and Front of Pack Labeling Requirements for Processed Foods," United States Department of Agriculture, Report CO2022-0026;
https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Colombia%20Issues%20New%20Resolution%20on%20Nutrition%20and%20Front%20of%20Pack%20Labeling%20Requirements%20for%20Processed%20Foods_Bogota_Colombia_CO2022-0026.pdf
[100] Information from anonymous source during initial draft review via email, July 1, 2023.
[101] Republic of Colombia. 2022. *Resolution Number 2492/2022*. Ministry of Health and Social Protection
[102] Ibid.
[103] Foreign Agricultural Service. 2022. "Colombia Issues New Resolution on Nutrition and Front of Pack Labeling Requirements for Processed Foods," United States Department of Agriculture, Report CO2022-0026;
https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Colombia%20Issues%20New%20Resolution%20on%20Nutrition%20and%20Front%20of%20Pack%20Labeling%20Requirements%20for%20Processed%20Foods_Bogota_Colombia_CO2022-0026.pdf

[104] Information from anonymous source during initial draft review via email, July 5, 2023.
[105] Information from anonymous source during initial draft review via email, July 1, 2023.
[106] Foreign Agricultural Service. 2022. "Colombia Issues New Resolution on Nutrition and Front of Pack Labeling Requirements for Processed Foods," United States Department of Agriculture, Report CO2022-0026;
https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Colombia%20Issues%20New%20Resolution%20on%20Nutrition%20and%20Front%20of%20Pack%20Labeling%20Requirements%20for%20Processed%20Foods_Bogota_Colombia_CO2022-0026.pdf
[107] Information from anonymous source during initial draft review via email, July 1, 2023.
[108] Taillie, L.S., Hall, M.G., Gómez, L.F., Higgins, I., Bercholz, M., Murukutla, N., Mora-Plazas, M. 2020. "Designing an Effective Front-of-Package Warning Label for Food and Drinks High in Added Sugar, Sodium, or Saturated Fat in Colombia: An Online Experiment," *Nutrients* 12(3124): https://doi.org/10.3390/nu12103124
[109] Information from anonymous source during initial draft review via email, July 1 and 5, 2023.
[110] Lowery, Caitlin, Mercedes Mora-Plazas, Luis Fernando Gómez, Barry Popkin, and Lindsey Smith Taillie. 2020. "Reformulation of Packaged Foods and Beverages in the Colombian Food Supply," *Nutrients* 12(11): 3260.
[111] Lozano, Rolando. 2019. "Así funciona IVA plurifásico a cerveza y gaseosa," *El Tiempo*, March 2; https://www.eltiempo.com/economia/comenzo-el-iva-plurifasico-a-cervezas-y-bebidas-en-colombia-332944
[112] Interview with anonymous source, January 13, 2023.
[113] Cullinan, Kerry. 2022. "Colombia Votes to Tax Junk Food and Sugary Drinks," Health Policy Watch, November 14; https://healthpolicy-watch.news/colombia-votes-to-tax-junk-food-and-sugary-drinks/
[114] Ibid
[115] Cullinan, Kerry. 2022. "Colombia Votes to Tax Junk Food and Sugary Drinks," Health Policy Watch, November 14; https://healthpolicy-watch.news/colombia-votes-to-tax-junk-food-and-sugary-drinks/
[116] Ibid
[117] Lucena, Anais. N/D. "The controversial points of the tax reform in Colombia," *elciudadano.com*, on-line news, accessed on September 1, 2023; https://www.elciudadano.com/en/the-controversial-points-of-the-tax-reform-in-colombia/11/07/
[118] Interview with anonymous source, January 13, 2023.
[119] Information from anonymous source during initial draft review via email, July 1, 2023.
[120] Interview with Carolina Piñeros, February 13, 2023.
[121] Interview with Luis Fernando Gómez, April 21, 2023.
[122] Interview with anonymous source, January 13, 2023.
[123] Information from anonymous source during initial draft review via email, July 1, 2023.
[124] Interview with Diana Guarnizo, April 28, 2023.
[125] Interview with Luis Fernando Gómez, April 21, 2023.
[126] Jacobs, Andrew and Matt Richtel. 2017. "She Took On Colombia's Soda Industry. Then She Was Silenced," *The New York Times*, November 13.
[127] Slow Food. 2016. "30 Organizaciones de la Sociedad Civil se unen por el Derecho a una Buena Alimentación para los Colombianos," August 12; accessed on March 26, 2022; https://www.slowfood.com/press-release/30-organizaciones-de-la-sociedad-civil-se-unen-por-el-derecho-una-buena-alimentacion-para-los-colombianos/
[128] Ibid.
[129] Interview with Diana Guarnizo, April 28, 2023.
[130] Jacobs, Andrew and Matt Richtel. 2017. "She Took On Colombia's Soda Industry. Then She Was Silenced," *The New York Times*, November 13.
[131] Ibid.
[132] Global Health Advocacy Incubator. 2022. GHAI Year in Review: Highlights from 2022; on-line report, accessed on September 2, 2023; https://www.advocacyincubator.org/featured-stories/2022-12-20-2022-12-20-year-in-review
[133] Global Health Advocacy Incubator. 2023. Colombia Enacts Two Major Healthy Food Policies. On-line policy report, accessed on September 2, 2023; https://www.advocacyincubator.org/featured-stories/2023-01-04-colombia-enacts-two-major-healthy-food-policies
[134] Interview with Andres Velez Serna, March 31, 2023.
[135] Interview with anonymous source, January 13, 2023.

[136] Interview with Diana Guarnizo, April 28, 2023.
[137] Ibid.
[138] Jacobs, Andrew and Matt Richtel. 2017. "She Took On Colombia's Soda Industry. Then She Was Silenced," *The New York Times*, November 13.
[139] Ibid.
[140] Aliança pela Alimentação Adquada e Saudável. 2017. "Líder de Organização Social Relata Ameaças na Luta Contra a Obesidade na Colômbia," *Blog, Noticias*; accessed March 26, 2022; https://alimentacaosaudavel.org.br/blog/noticias/na-colombia-violencia-e-intimidacao-contra-o-imposto-do-refrigerante/2597/
[141] Interview with Andres Velez Serna, March 31, 2023.
[142] Ibid.
[143] Interview with Carolina Piñeros, February 13, 2023.
[144] Ibid.
[145] Interview with Andres Velez Serna, March 31, 2023.
[146] Interview with Diana Guarnizo, April 28, 2023.
[147] Interview with Andres Velez Serna, March 31, 2023.
[148] Interview with Judith Sarmiento, February 13, 2023.
[149] Interview with anonymous source, January 13, 2023.
[150] Interview with Carolina Piñeros, February 13, 2023.
[151] Interview with Andres Velez Serna, March 31, 2023.
[152] Interview with Diana Guarnizo, April 28, 2023.
[153] Ibid.
[154] Interview with anonymous source, January 13, 2023.
[155] Ibid.
[156] Interview with Luis Fernando Gómez, April 21, 2023.
[157] Interview with Judith Sarmiento, February 13, 2023.
[158] Ibid.
[159] Ibid.
[160] Interview with Diana Guarnizo, April 28, 2023.
[161] Interview with anonymous source, January 13, 2023.
[162] Interview with Carolina Piñeros, 2023.
[163] Interview with anonymous source, January 13, 2023.
[164] Information from anonymous source during initial draft review via email, July 1, 2023.
[165] Interview with Carolina Piñeros, February 13, 2023.
[166] Interview with Diana Guarnizo, April 28, 2023.
[167] Interview with Carolina Piñeros, February 13, 2023.
[168] Interview with Diana Guarnizo, April 28, 2023.
[169] Ibid.
[170] *Semana*. 2022. "'Tomar gaseosa es malo,' presidente Petro dice que produce 'diabetes' y explica que le pondrá impuesto para que la gente 'deje de tomar tanta,'" November 8; https://www.semana.com/politica/articulo/el-impuesto-a-las-gaseosas-no-es-para-recaudar-plata-es-para-que-la-gente-deje-de-tomar-tanta-petro/202256/
[171] Interview with Diana Guarnizo, April 28, 2023.
[172] Ibid.
[173] Ibid.
[174] Interview with Carolina Piñeros, February 13, 2023.
[175] Ibid.
[176] Ibid.
[177] Ibid.
[178] Ibid.
[179] Interview with Diana Guarnizo, April 28, 2023.
[180] Interview with Luis Fernando Gómez, April 21, 2023.
[181] Ibid.
[182] Ibid.
[183] Ibid.
[184] Interview with Andres Velez Serna, March 31, 2023.
[185] Ibid.

[186] Ibid.
[187] Interview with Carolina Piñeros, February 13, 2023.
[188] Interview with Andres Velez Serna, March 31, 2023.
[189] Gómez, Eduardo J. 2023b. *Junk Food Politics: How Beverage and Fast Food Industries are Reshaping Emerging Economies* (Baltimore: Johns Hopkins University Press).
[190] Anaf, Julia, Fran Baum, Matthew Fisher, and Sharon Friel (2019). "Civil society action against transnational corporations: implications for health promotion," *Health Promotion International*; doi: 10.1093/heapro/daz088
[191] Patay, Dori, Sharon Friel, Belinda Townsend, Fran Baum, Jeff Colliin, Katherine Cullerton, Katie Dain, Rodney Holmes, Jane Martin, Rob Ralston, and Lucy Westerman. 2022. "Governing ultra-processed food and alcohol industries: the presence and role of non-government organizations in Australia," *Australian and New Zealand Journal of Public Health* 46(4): 455-462.
[192] Ibid.
[193] Ibid.
[194] Gómez, Eduardo J. 2023c. "The Limits to Ultra-Processed Food and Soda Industry Power and Policy Influence in Latin America: Political, Institutional, and Social Contexts in Historical Perspective." Unpublished manuscript, Lehigh University.

THE LOSS OF CONSTITUTIONAL PROTECTIONS FOR SAFE ABORTION IN THE UNITED STATES: IMPLICATIONS FOR DOMESTIC AND GLOBAL REPRODUCTIVE HEALTHCARE

Christopher P. Foran

The 2022 U.S. Supreme Court decision, *Dobbs v. Jackson Women's Health Organization,* ended constitutional protections for safe abortion care in the U.S. Many states now have laws restricting access to safe abortion care, increasing risks for pregnant patients and healthcare providers. Physicians are hesitant to provide standard-of-care treatment for fear of reprisal. Obstetric providers are also exiting states with restrictive abortion laws, creating maternal care deserts in states already lacking access to reproductive healthcare. Worldwide, the *Dobbs* decision cannot directly affect global health policy. However, global health practitioners must view the *Dobbs* decision in the context of the political movement that achieved it and consider how this empowered political movement may affect global reproductive healthcare in the future. This political movement will manifest its power by pressuring or defunding global health governance organizations, expanding the Protecting Life in Global Health Assistance rules, and gathering global support around the tenets of the Geneva Consensus Declaration, attempting to sever the contemporary connection of abortion care to global human rights.

INTRODUCTION

The 2022 *Dobbs v. Jackson Women's Health Organization* decision by the U.S. Supreme Court fundamentally changed U.S. domestic policy toward reproductive healthcare by eliminating constitutionally backed protections for abortion care. Understandably, the discourse surrounding the decision has been global in scale, with worldwide interest in the implications of this new precedent.

The domestic effects of the *Dobbs* decision are manifest and profound. However, despite the sensational reaction, in nearly three years since the *Dobbs* decision, little to no quantitative effects on global health have been published. Instead, publications on the subject have been largely qualitative or predictive in nature. Public and global health professionals must understand the domestic effects of *Dobbs* but clearly differentiate the implications of this individual U.S. Supreme Court decision from other far more consequential, globally impactful U.S. policies toward reproductive healthcare.

This work seeks to provide public and global health professionals with an understanding of the three most important legal cases that shaped reproductive rights in the U.S. over the last half-century: *Roe vs. Wade, Planned Parenthood of Southern Pa. v. Casey,* and *Dobbs v. Jackson Women's Health Organization*. Additionally, this work will describe the negative consequences of the *Dobbs* decision for domestic reproductive healthcare within the U.S. Finally, this work will examine the role of U.S. policy on global reproductive healthcare, how *Dobbs* may affect this policy, and what global health practitioners can expect in a second Donald Trump presidency concerning global reproductive healthcare.

METHODS

This work is the result of a literature review on the topics of abortion law and reproductive healthcare, both domestic and global. The author's primary, but not sole, legal reference is the Legal Information Institute of Cornell University.[1] The literature review was conducted using PubMed[2], MEDLINE[3], and Google Scholar[4] with search phrases to include but not limited to "Roe vs. Wade," "Dobbs vs. Jackson," "Effects of Dobbs vs. Jackson," "Mexico City Policy," "Geneva Consensus Declaration," "Protecting Life in Global Health Assistance," and "EMTALA." Publications pertaining to the search topics from peer-reviewed journals in biomedical and social science disciplines were evaluated for inclusion by impact factor. Work from journals possessing an impact factor of less than 1.0 was excluded. Work from 21 peer-reviewed journals was included. The impact factors of cited peer-reviewed publications ranged from 1.44 (American Journal of Perinatology) to 98.4 (The Lancet), with a mean impact factor of 20.39 and a median of 5.6. A broad level of evidence was allowed within the literature review to include expert commentary or editorial.

Research published by well-established non-profit organizations studying healthcare policy or reproductive healthcare in the U.S., such as the Commonwealth Fund, Kaiser Family Foundation, the Center for Reproductive Rights, and the Guttmacher Institute, was included in the review. Established journalism outlets, including but not limited to the Washington Post, New York Times, Reuters, and local periodicals, were examined for reporting related to abortion law and reproductive healthcare from 2017-2025. Publications from global health governance organizations, including the United Nations (UN) and the World Health Organization (WHO), were reviewed for contemporary recommendations and human rights standards concerning reproductive healthcare. Published data, press releases, or official statements concerning reproductive healthcare from prominent professional medical organizations, including but not limited to the American Medical Association, the Association of American Medical Colleges, and The American College of Obstetricians and Gynecologists, were reviewed and included in the literature review when pertinent. Official press releases, memos, and executive orders from the U.S. Government on reproductive healthcare were reviewed and included in the literature review as relevant.

A potential bias of this work is its emphasis on the medical and public health aspects of abortion care rather than religiously based or other ethical objections to abortion, which are not discussed. The preponderance of publications from established peer-reviewed biomedical journals views the loss of constitutional protections for abortion access as harmful to public health, which may bias the literature review. As such, this work focuses on the negative public health consequences of the *Dobbs* decision. Any positive ethical or philosophical outcome to the *Dobbs* decision perceived by opponents of abortion rights is beyond the scope of this work. Additionally, this work does not seek to weigh in on the correctness or quality of the jurisprudence demonstrated by the three U.S. Supreme Court cases examined.

For the purposes of this work, the author, a practicing physician, accepts the official Statement of Policy of The American College of Obstetricians and Gynecologists that "abortion is an essential component of comprehensive, evidence-based health care,"[5] and also accepts the position of the World Health Organization that access to comprehensive abortion care services, defined as information, management of abortion,

and post-abortion care, is a human right.[6] Consistent with contemporary medical ethics, the author gives precedence to the health and bodily autonomy of the mother over that of an egg, embryo, or fetus when the two are in conflict. These professional practice considerations may bias the author's review and analysis of the available data.

Potential weaknesses within this work include a lack of high-quality longitudinal data examining the effects of the *Dobbs* decision on domestic and global reproductive healthcare. Much of the literature on the latter is qualitative and predictive rather than quantitative and proven. Data cited in this work that is qualitative or survey-based is identified as such within the text, along with the identity of its publication. As Donald Trump was inaugurated in January of 2025, much of the analysis of expectations for his second term is predictive in nature.

Part I: The Legal Path to Dobbs v. Jackson Women's Health Organization

A basic knowledge of the U.S. judicial and legislative systems is required to understand the path to and full legal ramifications of the *Dobbs* decision. The U.S. is a federal republic consisting of 50 states. In broad terms, the U.S. has two parallel systems of government: the state and federal systems. Within these two governing systems are parallel governance institutions, including state and federal judicial systems. This framework is named within the Constitution as *Dual Sovereignty*.[7] The federal system governs the union of the 50 individual states as a single republic. The state systems govern within the borders of an individual state, such as California or Texas.

Federal and state powers are defined within the text of the U.S. Constitution.[8] The Tenth Amendment to the Constitution distinguishes federal power from state power, stating that if the Constitution does not explicitly empower the federal government to carry out a policy or legislate on a particular subject, the individual states are empowered to do so.[9] States may attempt to pass laws that contradict federal law. In such cases, Article VI, Clause II of the Constitution, or the *Supremacy Clause,* is relevant. The *Supremacy Clause* establishes that federal laws supersede state laws when in conflict with one another.[10]

All state and federal laws must follow the edicts of the U.S. Constitution. Any entity may challenge a state or federal law over its "constitutionality" so long as that entity has standing to bring the case forward. In general, challenges to state laws based on the tenets of the U.S. (federal) Constitution will be heard in federal district courts, appealed to federal appellate courts, and possibly appealed to the level of the U.S. Supreme Court. States have distinct constitutions and court systems, including state appellate and supreme courts. In each of the cases examined in this work, *Roe v. Wade, Planned Parenthood of Southern Pa. v. Casey,* and *Dobbs v. Jackson Women's Health Organization*, state-level laws were passed, which were then challenged via lawsuits based on arguments that the state laws violated the U.S., or federal, Constitution. These challenges were, therefore, heard in the federal court system, with the ultimate authority resting with the U.S. Supreme Court.

ROE v. WADE

Before 1973, the abortion laws in the U.S. were exclusively in the hands of the individual states. At the time of the *Roe* decision, 30 states had laws banning abortion at

all gestational stages.[11] "Roe" is a pseudonym for the plaintiff in the case, a Texas woman named Norma McCorvey. She desired to undergo a termination of her pregnancy, but Texas law forbade abortion except to save a mother's life. She and her attorneys challenged the state's law in federal court. "Wade" refers to defendant Henry Wade, the district attorney of Dallas County, Texas, in 1973.[12]

The federal district court, the initial point of litigation, ruled in favor of Ms. McCorvey, citing the Ninth Amendment of the U.S. Constitution. In the district court's interpretation, the Ninth Amendment provided a right to privacy that included a woman's decision to terminate her pregnancy. The decision was appealed to the level of the U.S. Supreme Court, which confirmed the district court's decision and ruled in favor of the plaintiffs. The logic of the Supreme Court differed slightly from the district court in that the Supreme Court believed a woman's right to terminate a pregnancy was found in the Due Process Clause of the Fourteenth Amendment of the U.S. Constitution rather than the Ninth Amendment.[13]

The U.S. Supreme Court did not, however, grant that a woman's right to obtain an abortion was absolute.[14] In the text of the decision, the Court explored the question of when the state's interest in safeguarding potential life outweighed the woman's Fourteenth Amendment rights. It decided that the "compelling point" was fetal viability, the gestational age at which a fetus "has the capability of meaningful life outside the mother's womb." The Court then took the controversial approach of imposing a novel trimester-based framework for when a state may or may not regulate abortion. States could regulate or proscribe abortion after the end of the second trimester.[15]

PLANNED PARENTHOOD OF SOUTHERN PA v. CASEY

The *Roe v. Wade* decision would be challenged in U.S. courts many times in the years following the case. Before the recent *Dobbs* ruling, the most salient challenge came in the 1992 *Planned Parenthood of Southern Pa. v. Casey* ruling. This ruling fundamentally reframed how the Court saw abortion access laws, and its jurisprudence was specifically refuted in the *Dobbs* ruling.

The State of Pennsylvania passed The Pennsylvania Abortion Control Act of 1992, which listed five provisions limiting access to abortion care.[16] This law was challenged by Planned Parenthood of Southeastern Pennsylvania in federal district court and was eventually appealed to the U.S. Supreme Court. While the core of the *Roe* decision was upheld, the Court enacted two consequential changes to the original *Roe* ruling.

The first was that while the Court upheld the right to obtain an abortion prior to viability, it did away with the trimester framework, allowing for the "compelling point" at which states may prohibit abortion to change with medical advancements that lowered the gestational age of viability. The second change was that the standard of review was modified for laws state laws concerning abortion from *strict scrutiny* to *undue burden*.[17] *Strict scrutiny* is the highest standard of review that the court may use to decide the constitutionality of a law. This standard is invoked when a law may discriminate or infringe on a fundamental right.[18] Fundamentally, the shift to the *undue burden* standard from the *strict scrutiny* standard meant that the court no longer needed to assess new abortion regulations as potential challenges to a fundamental right or a means of discrimination.

Another critical aspect of the *Casey* decision that would be cited in the future *Dobbs* decision was the Court's invocation of *stare decisis*. This Latin term translates as "to stand by things decided." The doctrine of *stare decisis* posits that courts should adhere to precedent when deciding on a similar case. Based on this doctrine, the U.S. Supreme Court rarely overturns precedent. However, the Court is not strictly bound to follow *stare decisis*.[19]

DOBBS V. JACKSON WOMEN'S HEALTH ORGANIZATION

In 2018, the state of Mississippi passed the Gestational Age Act[20]. Within this piece of legislation was a ban on abortion after 15 weeks gestation except in "medical emergency and in cases of severe fetal abnormality." To perform an abortion after 15 weeks would result in severe professional sanctions and civil liability. Fifteen weeks is considered prior to viability, which violated the constitutional precedents set by both the *Roe* and *Casey* decisions.

Jackson's Women's Health Organization, the only clinic in the state offering abortion services, sued the State Health Officer of the Mississippi Department of Health and the Mississippi State Board of Medical Licensure over the new law, citing the Fourteenth Amendment.[21] Dr. Thomas Dobbs was a Mississippi State Health Officer who petitioned for the lawsuit to be elevated to higher legal authority. The U.S. Supreme Court began hearing arguments for the case in 2021. The Supreme Court was asked to resolve the question of whether "all pre-viability prohibitions on elective abortions are unconstitutional."[22]

On June 24, 2022, the U.S. Supreme Court released its decision. The Court sided with the defendants in the lawsuit and, in doing so, overruled the findings of both the *Roe* and *Casey* decisions. In an instant, the right of a woman to obtain an abortion was no longer constitutionally protected in the United States. Individual states could now regulate or prohibit abortion at any stage of gestation.

The majority decision, authored by Justice Samuel Alito, refuted three foundational issues with the jurisprudence of *Roe* and *Casey*: the application of the Fourteenth Amendment, the use of *stare decisis,* and balancing the interest of a person desiring abortion and a state's interest in protecting potential life. The U.S. Supreme Court ruled in the *Dobbs v. Jackson Women's Health Organization* decision that a woman's right to obtain an abortion was no longer protected by the Fourteenth Amendment of the U.S. Constitution, that the Court was not bound by the doctrine of *stare decisis* to follow the precedents outlined in *Roe* and *Casey,* and that the state's interest in protecting potential life could supersede the interest of a woman seeking to obtain an abortion at any point in the pregnancy. Additionally, the Court again changed the standard of review for any new laws concerning abortion restrictions to *rational basis* scrutiny, the lowest level of legal scrutiny.[23]

Roe and *Casey* did not "legalize" abortion in all cases. Instead, they offered a period during which the interests of a woman seeking an abortion were constitutionally protected by the Fourteenth Amendment, namely the period of pre-viability. Likewise, *Dobbs* in and of itself did not criminalize abortion. Rather, it removed the ability for any entity to impose a federal constitutional challenge to state-level laws regulating abortion.

Part II- Negative Impacts Within the U.S.

Justice Elena Kagan wrote the dissenting opinion in *Dobbs*. In her writing, she proved prescient in her predictions of how reproductive rights would become threatened in a post-*Roe*, post-*Casey* world.

> *"From the very moment of fertilization, a woman has no rights to speak of. A State can force her to bring a pregnancy to term, even at the steepest personal and familial costs. An abortion restriction, the majority holds, is permissible whenever rational, the lowest level of scrutiny known to the law. And because, as the Court has often stated, protecting fetal life is rational, States will feel free to enact all manner of restrictions."*[24]

She continued to methodically list the ways in which reversing *Roe* and *Casey* would enable states to pass the most "draconian" of reproductive health laws:

- States may ban abortion at any gestational age, including at the perceived moment of fertilization.
- States may pass abortion bans even in the case of incest or rape.
- States may force a woman to carry a fetus to term that possesses severe genetic or physical abnormalities that may be incompatible with life or permissive of only a short life.
- States may criminalize support for women traveling to another state where abortion is legal to obtain an abortion.
- States may pass abortion bans even in cases in which the health of the mother is at risk due to pregnancy or labor.

Three years after the *Dobbs* decision, several states within the U.S. have passed new laws affecting reproductive healthcare. Twelve states have outright abortion bans, six states have a gestational limit on abortion to between 6-12 weeks of last menstrual period (LMP), four states have a gestational limit between 18-22 weeks LMP, 19 states limit abortion at or near viability, and nine states plus the District of Columbia have no gestational limits on obtaining an abortion.[25]

The results of these policies are far-reaching and consequential for patients, healthcare providers, and the U.S. medical system writ large. States with total abortion bans are seeing an exodus of young citizens, with the National Bureau of Economic Research estimating a collective net loss of 36,000 young people each quarter.[26]

Impacts on Patients and Medical Providers

Pregnancy and childbirth carry the risk of morbidity and mortality to both the mother and the fetus. Maternal mortality rates in the U.S. are increasing over recent decades, with black women demonstrating a disproportionately high maternal mortality rate compared to all other ethnic groups.[27]

A study of 50 years of U.S. maternal mortality data found that women in rural areas had a 50% higher maternal mortality rate, the maternal mortality of Black women was 5.3 times that of white women, and women from economically deprived areas had a 120% to

182% increase in mortality risk compared with women from affluent areas.[28] As many as 8% of all pregnancies in the U.S. are considered "high-risk" to the mother, carrying a higher chance of maternal morbidity and mortality.[29]

The maternal mortality rate in the U.S. is double that of most other high-income nations.[30] A 2024 study by The Commonwealth Fund compared the U.S. to fourteen other high-income nations with modern medical systems. The U.S. had the highest maternal mortality rate (22.3/100,000 live births) of all wealthy nations, 56% higher than second place (Chile, 14.3/100,000). Additionally, the U.S. had the second-lowest supply of midwives or obstetricians (16/1,000 live births), was the only high-income nation not to guarantee paid maternal leave or post-partum home health visits, and was the only high-income nation without universal health coverage for pregnant women, with approximately 8 million uninsured women of reproductive age.[31]

States with the most stringent abortion laws also possess an ignominious history of having poorer access to maternal healthcare, higher child poverty rates, and worse maternal morbidity and mortality rates compared with states in the U.S. with fewer abortion restrictions.[32] Even before the *Dobbs* decision, states with the most robust allowable abortion restrictions had higher maternal death rates[33] [34]and higher infant mortality rates[35] compared to states with greater access to abortion care.

These startling mortality statistics and the comparative lack of maternal resources serve as a backdrop to the new post-*Roe* reality for pregnant women in the U.S. Notably, maternal mortality rates have proven challenging to assess post-*Dobbs,* as researchers from the University of Colorado have described.[36] 2021, the year preceding the *Dobbs* decision, saw a spike in maternal mortality due to COVID-19. The *Dobbs* decision in June of 2022 coincided with a decline in overall COVID mortality rates, which included pregnant women. This finding of decreasing maternal mortality from the year immediately preceding the *Dobbs* decision may be inaccurately attributed to post-*Dobbs* laws restricting abortion.

Currently, eight states have no rape or incest exemption written into their abortion bans.[37] The Journal of the American College of Medicine (JAMA) published a study in 2024 chronicling the effects of post-*Dobbs* abortion restrictions on victims of rape. In states with total abortion bans, 519,981 survivors of rape experienced 64,565 rape-related pregnancies. 91% of these pregnancies occurred in states with no rape exemption written into their abortion laws. Even in states with rape exemptions, the rape victim is required to report the crime to police. It is estimated that 79% of rape goes unreported to law enforcement.[38]

Ten states with abortion bans have no exemption for fetal abnormalities diagnosed during pregnancy.[39] Many detectable structural or chromosomal fetal abnormalities are incompatible with life outside the womb or possess a minuscule chance of life beyond 12 months. Unable to terminate the pregnancy early, women in these ten states will be required to bring these fetuses to term, placing unnecessary physical and emotional risks on the mother.

Eighteen states with abortion restrictions possess exemptions for the "life of the mother"; however, six states have no exemption for the "health of the mother."[40] Healthcare providers are frequently required to make medical decisions based on risks to the health and well-being of pregnant mothers. These laws have placed a new and unsettling specter of prosecution on mothers and their healthcare providers as they navigate complex medical decisions.

The increasing risks to pregnant women are a direct result of anti-abortion laws affecting the ability of physicians to practice standard-of-care medicine. A study published in JAMA[41] surveyed practicing obstetricians in 13 states with abortion bans. The physicians reported "deep and pervasive impacts of state laws, with implications for workforce sustainability, physician health, and patient outcomes." The obstetricians cited delays in care until patients became sicker, restrictions on counseling patients on pregnancy options, and an overall inability to provide appropriate patient care.

Further illustrating this trend, a qualitative study performed by the University of California San Francisco reviewed cases over the first two years post-*Dobbs* in 19 states with abortion restrictions. The cases examined demonstrate pathologies such as preterm labor, premature rupture of membranes, hemorrhage, ectopic pregnancy, severe fetal abnormalities, infections, miscarriages, and severe hypertension, all of which may require or result in the termination of pregnancy while properly treating the mother. The report describes the paralysis of healthcare providers in rendering timely care, fearing prosecution.

> *"The post-Dobbs laws and their interpretations altered the standard of care across these scenarios in ways that contributed to delays, worsened health outcomes, and increased the cost and logistic complexity of care. In several cases, patients experienced preventable complications, such as severe infection or having the placenta grow deep into the uterine wall and surrounding structures, because clinicians reported their "hands were tied," making it impossible for them to provide treatment sooner."*[42]

The study further documents that physicians felt compelled to transfer patients in their care to other states for fear that providing standard-of-care treatment would somehow be deemed a violation of state law. In multiple cases, women transported themselves without medical escort to different states to receive care at immense personal cost, delaying their time to proper treatment. Further literature documents increased maternal morbidity in states with rigid abortion restrictions for obstetric pathologies such as pre-labor rupture of membranes (PPROM), molar pregnancy, [43] [44]and increased risk for maternal morbidity in patients with elevated cardiovascular risk factors for whom abortion may become an essential therapeutic option in cardiovascular emergencies.[45] [46] In several cases, pregnant women were inappropriately discharged from hospitals and instructed to come back at the onset of serious illness so as not to risk running afoul of state abortion bans. [47]

This new and evolving form of defensive medicine is labeled by Lilly et al.[48] as "hesitant medicine." The phenomenon describes physicians feeling a conflict between the best interests of the patient and their own legal protection, making them hesitant to provide proper reproductive care or counseling. Rather than intervening early in a pregnancy complication, new laws are encouraging physicians to withhold care for pregnant women until the threat to the patient's life or health is so significant that it outweighs new risks of prosecution. Notably, malpractice insurance coverage excludes criminal charges, placing physicians at substantial financial risk in states where abortion care is criminalized.

The Emergency Medical Treatment and Labor Act (EMTALA),[49] passed in 1986, requires that any patient who presents to an emergency room with an emergency medical

condition receives stabilizing care. If the appropriate level of care is unavailable at the presenting medical center, the patient must be expeditiously transferred to a facility that can provide such care. A physician or hospital who does not render this care violates federal law and is liable for additional civil penalties. The Department of Health and Human Services (HHS) under the Biden Administration issued guidance stating that if a physician or hospital is treating a patient for a medical emergency in which abortion is the stabilizing treatment, the physician or hospital must provide the necessary abortion treatment under EMTALA.[50] As of the writing of this piece, the question of whether federal EMTALA requirements supersede state-level abortion laws remains legally unsettled nationally, [51] leaving physicians in states with strict anti-abortion laws to wonder if their decision to treat or not treat a pregnant woman requiring an abortion for medical stabilization will be a violation of state or federal law.

Adding to this uncertainty, exemption clauses within state abortion laws are dangerously vague. An investigation by the Washington Post[52] found that physicians faced with reproductive care decisions in states with abortion bans were unable to obtain adequate guidance on interpreting state law from their employers. Urgent medical care is a 24-hour job, and many physicians could not contact administrators or attorneys when uncertainty arose after working hours. Hospital executives and attorneys made policy decisions in fear of retribution from state lawmakers rather than being solely guided by standard-of-care practice. This uncertainty and the risk of financial penalties, loss of license, or imprisonment placed physicians in challenging medical-legal positions, potentially harming patient outcomes.

In addition to increasing risks to pregnant patients, post-*Dobbs* abortion laws are harming physician well-being. In states with strict anti-abortion laws, clinicians are reporting increases in fear, moral distress, anxiety, depression, and expressing desires to practice elsewhere. The reasons cited include delays in care, inability to provide standard-of-care treatment, counseling restrictions, and fear of legal repercussions. [53] [54] [55]
States with strict abortion bans now face concerns with access to reproductive healthcare. Before the *Dobbs* decision, states with more substantial abortion restrictions had a 32% lower obstetrician-to-birth ratio and 59% lower nurse midwife-to-birth ratio compared with states with greater access to abortion care. This disparity in access is likely to worsen.[56]

To maintain access to reproductive healthcare for their citizens, states rely on the input of fresh medical school graduates to staff teaching hospitals, the retention of graduating residents, the retention of actively practicing attending physicians, and the recruitment of new attending physicians from outside the state. On the input side, a survey of medical students presented at the American Congress of Obstetricians and Gynecologists reported that 77% of respondents stated that access to abortion care would influence where they would pursue residency, and 58% stated they "were unlikely or very unlikely to apply to a single residency program in a state with abortion restrictions."[57] Consistent with these survey findings, the Association of American Medical Colleges (AAMC) reports that medical school graduate applications for residency in states with strict abortion bans have dropped for the second year in a row following the *Dobbs* decision, stating:

> "*The examination of two years of data suggests that restrictions on women's health care may continue to disproportionately decrease the likelihood that U.S.*

MD seniors will apply for residencies in states with the most restrictive practice environments."[58]

Budding OBGYN physicians are also not applying to residency positions in abortion-restricted states due to fears about their own reproductive health. 86% of OBGYN residents and fellows identify as female and have the potential to need reproductive healthcare themselves during their residency training.[59] The *Dobbs* ruling will also affect the quality of training for OBGYN residents. The procedure for non-emergent abortion is the same for emergent abortion or miscarriage, and trainees practicing in states with abortion bans will likely need to travel out of state to obtain the requisite experience to perform the procedure competently. This requirement dissuades medical school graduates, residents, and fellows from practicing in states with abortion restrictions.[60]

On the recruitment and retention side, many graduating OBGYN residents have changed the location of their future practice away from abortion-restrictive states due to the *Dobbs* decision.[61] Practicing attending physicians are proactively leaving states with abortion bans to practice in states without restrictive abortion laws.[62] A survey published in JAMA of obstetricians practicing in states with abortion bans found that 11% percent had already moved their practice to states with stronger abortion protections, and an additional 60% were entertaining leaving their current practice to work in another state.[63] Another survey conducted by the Journal of General Internal Medicine found that 82.3% of medical students, residents, and attending physicians surveyed preferred to work in states with preserved abortion access, and 76.4% would not apply to work in states with legal consequences for providing abortion care.[64]

The most concerning consequence of these trends is a decrease in access to reproductive healthcare for women nationally or an increase in "maternity care deserts," defined as areas without obstetric providers or medical centers that can provide maternity care. Maternity care deserts were identified in approximately one-third of counties in the U.S.[65] Post-*Dobbs,* some healthcare centers are discontinuing labor and delivery services or closing altogether due to a lack of qualified staff.[66] At least 2.2 million women live in maternity care deserts, with an additional 4.7 million living in areas with limited access to obstetric care.[67] These numbers are likely to increase as more obstetricians choose not to practice in states with abortion restrictions. This loss of reproductive healthcare professionals affects not only pregnant patients. Obstetricians and gynecologists also provide cancer screenings and treatment, sexually transmitted disease prevention and treatment, fertility counseling and treatment, family planning counseling and treatment, and general women's health management.

According to the New England Journal of Medicine[68], these new abortion restrictions will undoubtedly exacerbate existing healthcare inequities in the U.S. Poor women from marginalized racial and ethnic groups most acutely feel the economic, educational, physical, and mental health consequences of unwanted pregnancy. Many of these women will not have the means to leave a state with reproductive healthcare restrictions to seek care in a state with access to comprehensive reproductive healthcare.

What Happens Next in the U.S.?

The domestic effects of the *Dobbs* decision are far-reaching, extending beyond inpatient abortion care. Countless questions remain, as individual states can now create fifty different legal realities for reproductive healthcare within the U.S.

Anti-abortion state legislators and activist groups are now working to prevent or discourage pregnant patients from seeking abortion in states where abortion is legal. Several state and local governments are attempting to pass legislation on "abortion trafficking." These laws aim to use various strategies to prevent or discourage out-of-state abortions, including prohibiting the use of public roads to transport oneself to another state to seek an abortion, targeting individuals or organizations that fund travel for abortion care, or criminalizing any assistance to a minor seeking to leave a state to obtain an abortion.[69] Additionally, states have passed or attempted to pass measures that allow private citizens to sue in civil court anyone who is perceived to assist a pregnant patient in obtaining an out-of-state abortion.[70]

Another tactic used to prevent women from obtaining abortions in states without abortion bans is to target federal regulations on medications, such as mifepristone, used in most abortions. Medication (as opposed to procedural) abortion accounts for nearly two-thirds of all abortions in the U.S.[71] Anti-abortion activists are currently suing to have the U.S. Food and Drug Association (FDA) approvals of mifepristone reversed. If successful, medication abortion may be severely restricted in all states. The case remains undecided at the time of writing.[72]

According to the *Dobbs* ruling, states may now consider laws prohibiting abortion at any gestational age. Republicans in the U.S. House of Representatives are working on the "Life at Conception Act," which recognizes a fertilized egg as a person with equal protection under the Constitution.[73] Individual states have already sought to define "life" as the moment in which a sperm fertilizes an egg, not requiring implantation of the fertilized egg into the uterine lining of the woman. Such interpretations leave certain forms of contraception, such as intra-uterine devices (IUD) or emergency oral contraception, vulnerable to attack by legislators who claim that these treatments may terminate a fertilized egg by preventing implantation into the uterine lining. [74]

A February 2024 decision by the Alabama Supreme Court, which stated that embryos created through in vitro fertilization (IVF) are considered children, opened the door for massive liability to healthcare entities offering fertility assistance treatments. Some fertility clinics in Alabama have paused offering IVF treatments as a result. The full implications of this new legal precedent are still uncertain but predict a future in which couples seeking fertility support find fewer options available to them in states with such laws.[75]

As President Donald Trump begins his second term in office, the future of reproductive healthcare in the U.S. remains uncertain. He has not ruled out signing a national abortion ban if passed through Congress, though President Trump has repeatedly called abortion law a state-level issue. A more certain outcome of his second presidency will be judicial appointments of federal judges sympathetic to anti-abortion legislation. [76] Reproductive healthcare advocates fear that the second Trump term will see attacks on access to medications used for abortion nationwide, reinstatement of "gag rules" impeding abortion care counseling and referral, elimination of Medicaid support for patients traveling out-of-state for abortion care, attempts to reverse the Affordable

Care Act's contraception coverage guarantee, and the elimination of all federal funding for public health organizations such as Planned Parenthood. [77]

The U.S. has several possible paths forward in the abortion debate domestically. The first is that the Congress of the United States may pass a federal law on abortion, which will make state-level laws subject to the *Supremacy Clause*. Whether a federal law will favor restriction or legalization of abortion will likely depend on the ideological makeup of Congress and the sitting president. The second path is for individual states to decide abortion laws through citizen or legislatively generated state ballot initiatives. This means that voters in certain states are allowed to approve or reject a citizen-created proposal on abortion law. After the *Dobbs* decision, citizens in ten states voted on state constitutional amendments codifying access to abortion. Three states attempted to pass ballot measures ensuring abortion rights which failed. One ballot measure seeking to curtail abortion rights passed. Two states with current abortion bans allow for citizen-initiated constitutional amendments; however, no ballot initiative has yet been put forth. Due to the heterogeneity of individual state government structures, 13 states with current abortion restrictions cannot create citizen-driven state ballot initiatives.[78] The third path forward is for the Supreme Court to hear a future challenge to *Dobbs* and overturn the decision, as the present Court reversed *Roe* and *Casey*. The current conservative majority is expected to remain in place for many years, making this possibility unlikely in the short term.

Part III- Global Health and Human Rights

The *Dobbs* decision is not, in and of itself, a U.S. foreign policy. The U.S. Supreme Court decision only has direct legal implications on state-level laws concerning the restriction of abortion that had previously been deemed unconstitutional under the *Roe* decision. High-quality quantitative research demonstrating a clear correlation between the *Dobbs* decision and global health practice and outcomes is scant. Qualitative and predictive pieces discussing the possible effects of *Dobbs* on the state of international reproductive rights have been published and are not without merit. The *Dobbs* decision has been cited by other nations in legislatures or courtrooms to bolster anti-abortion or anti-LGBTQ legislation.[79] Additionally, a significant portion of the global antiabortion movement emanates from a non-governmental coalition within the U.S. This coalition includes powerful religious groups that exert international influence. The *Dobbs* decision will likely energize and legitimize this movement further, inspiring it to continue seeking changes to international human rights norms and influence abortion policy worldwide.[80] However, despite these likely consequential trends, high-level evidence suggesting a direct link between *Dobbs* and the practice of reproductive healthcare globally is lacking.

Global health practitioners should not take comfort in this fact. Instead of seeking direct connections between a single U.S. court case and global health outcomes, global health practitioners are better served by understanding that *Dobbs* is part of a larger, long-term discourse on reproductive healthcare emanating from the U.S. that will directly affect global health. Practitioners must understand four critical themes that surround the domestic loss of constitutionally protected reproductive healthcare in the U.S.:

1. The U.S. is now an outlier as it pertains to global trends in access to abortion care.

2. By eliminating constitutional protections for abortion care, the U.S. rejects contemporary human rights doctrine and standard-of-care medical practices set forth by global health governance organizations.
3. The U.S. is the world's largest financial and material benefactor to global health causes, including reproductive healthcare and family planning. Its resulting influence on global healthcare infrastructure is immense, including through its elective absence.
4. For decades prior to *Dobbs,* the U.S. had already enacted foreign policies that harmed global reproductive healthcare, though the policies were selectively enforced depending on the presidential administration. The political movement that created these foreign policies and manifested the *Dobbs* decision now controls all three branches of the U.S. government and its foreign policy apparatus.

The U.S. and Global Health Doctrine on Safe Abortion

The loss of constitutional protections for reproductive health places many states within the U.S. in contra to recommendations by global health organizations, contemporary human rights doctrine, and global trends that have overwhelmingly expanded safe abortion access.[81] For women globally, reproductive health is intimately linked to personal safety, education, economic empowerment, autonomy, and self-determination. The UN Human Rights Committee has recognized this fact, as have the European Court of Human Rights, the Inter-American Court of Human Rights, and the African Commission on Human and Peoples' Rights.[82]

Approximately 60% of reproductive-age women globally live in nations where pre-viability abortion is legal in most cases. In the last 30 years, over 60 nations have liberalized their abortion laws, while four, the U.S., El Salvador, Poland, and Nicaragua, have regressed to more restrictive abortion laws. Currently, 77 nations allow "abortion on request" with gestational limits (most commonly 12 weeks), 12 additional nations allow abortion on "broad social or economic grounds," 44 nations allow abortions to save the life of the mother, and 21 nations have complete prohibitions on abortion. Several other nations have assorted laws which allow abortion if there is a risk to the health of the mother or in cases of rape and incest. The U.S. and Mexico are unique in that the laws governing abortion differ from state to state.[83] After the *Roe* decision and before *Dobbs,* the U.S. stood out for having more protected abortion access than even most Western liberal democracies. After *Dobbs,* abortion access in the U.S. now varies wildly between states, with some states having relatively liberal policies and other states possessing some of the most restrictive abortion access laws in the world.[84]

The World Health Organization (WHO) considers comprehensive abortion care to be an essential healthcare service and the prohibition of safe abortion services to be a violation of human rights.[85] The United Nations Office of the High Commissioner on Human Rights (OHCHR) considers women's reproductive health, including access to abortion, to be a human right. The OHCHR quickly condemned the *Dobbs* decision, stating:

> *"Access to safe, legal and effective abortion is firmly rooted in international human right law and is at the core of women and girls' autonomy and ability to*

> *make their own choices about their bodies and lives, free of discrimination, violence and coercion. This decision strips such autonomy from millions of women in the US, in particular those with low incomes and those belonging to racial and ethnic minorities, to the detriment of their fundamental rights."* [86]

The OHCHR called upon the United States to end the criminalization of abortion and become party to the Convention on the Elimination of All Forms of Discrimination Against Women. The Convention is a treaty that protects women's human rights, including their sexual and reproductive health rights. The U.S. is one of only seven nations not a party to the convention.[87]

The Human Rights Committee of the United Nations considers banning abortion services to be a violation of a woman's right to life and nondiscrimination. The Committee addresses abortion access in its description of the right to life:

> *"Although States parties may adopt measures designed to regulate voluntary termination of pregnancy, those measures must not result in violation of the right to life of a pregnant woman or girl, or her other rights under the Covenant. Thus, restrictions on the ability of women or girls to seek abortion must not, inter alia, jeopardize their lives, subject them to physical or mental pain or suffering that violates Article 7 of the Covenant, discriminate against them, or arbitrarily interfere with their privacy. States parties must provide safe, legal, and effective access to abortion where the life and health of the pregnant woman or girl are at risk, or where carrying a pregnancy to term would cause the pregnant woman or girl substantial pain or suffering, most notably where the pregnancy is the result of rape or incest or where the pregnancy is not viable."*[88]

The United Nations Committee Against Torture holds that complete bans on abortion may constitute torture or ill-treatment and that states have an obligation to provide access to abortion for women who are the victims of sexual violence, carry non-viable fetuses, or have a threat to their health.[89]

It is well established that restrictive abortion laws do not reduce the number of abortions that occur worldwide. On the contrary, over the last 30 years, abortion rates have decreased in nations with less restrictive abortion laws, while abortion rates have increased in countries with more restrictive laws. Furthermore, nations that have expanded reproductive healthcare, including abortion services, have seen improvements in overall maternal survival.[90]

What restrictive abortion laws undoubtedly accomplish is to increase the number of women who undergo unsafe abortions. The WHO asserts that an unsafe abortion occurs when "pregnancy is terminated either by persons lacking necessary skills or an environment that does not conform to minimal medical standards, or both."[91] The Human Rights Committee of the United Nations also specifically addresses unsafe abortion in its description of the right to life:

> *"In addition, States parties may not regulate pregnancy or abortion in all other cases in a manner that runs contrary to their duty to ensure that women and girls do not have to resort to unsafe abortions, and they should revise their abortion laws accordingly. For example, they should not take measures such as*

> *criminalizing pregnancy of unmarried women or applying criminal sanctions to women and girls who undergo abortion or to medical service providers who assist them in doing so, since taking such measures compels women and girls to resort to unsafe abortion.*"[92]

The rate of abortions considered to be "unsafe" is 45 times higher in countries with restrictive abortion laws than in countries where abortion is legal or less restricted.[93] Globally, 45% of induced abortions are considered unsafe, accounting for as many as 13.2% of all maternal deaths worldwide. The rate of death from unsafe abortion is significantly higher in the developing world. [94] Many of these deaths would have been preventable if safe abortion access had been available.

U.S. Foreign Policy and Global Reproductive Healthcare

The potential impacts of the domestic political movement that resulted in the *Dobbs* decision on global health must first be understood in the context of the massive influence the U.S. exerts on global health initiatives and the history of U.S. foreign policy towards abortion globally. The U.S. has a unique, paradoxical history of being the world's leading global health sponsor while also architecting policies that limit access to comprehensive reproductive healthcare for millions of women worldwide. The *Dobbs* decision now becomes part of this complicated legacy.

The U.S. is the most prolific financial and material benefactor to global health worldwide. Over the last decade, the U.S. has contributed over $133 billion to global health initiatives in various sectors, such as infectious disease, nutrition, and global health security. Approximately $18 billion was spent on projects addressing global family planning, reproductive health, and maternal & child health. This makes the U.S. the largest donor to global reproductive health initiatives.[95]

Despite the immense financial contribution to family planning and reproductive health initiatives, the U.S. has a history of inconsistent support for programs that allow access to abortion. In 1973, the U.S. passed the Helms Amendment, which stated that "no foreign assistance funds may be used to pay for the performance of abortion as a method of family planning or to motivate or coerce any person to practice abortions."[96] The functional result of this legislation was that no global health organizations could use U.S. foreign assistance dollars for abortion-related services. Later, the Siljander Amendment was added, which prohibited U.S. foreign aid from being "used to lobby for or against abortion." This language would impair the ability of healthcare workers to counsel patients on abortion.[97]

The U.S. provides most of its financial assistance to lower-income nations. Lower-income nations have a disproportionate share of unsafe abortions globally. Given the enormous U.S. contributions to these nations, the Guttmacher Institute estimates that repeal of the Helms Amendment and permitting U.S. funding for abortion services could result in 19 million fewer unsafe abortions and 17,000 fewer maternal deaths.[98]

Another policy affecting U.S. foreign aid for reproductive health services is what is known as the "Mexico City Policy." This U.S. government policy was instituted in 1984 under President Ronald Reagan. The policy stated:[99]

- "The U.S. does not consider abortion an acceptable element of family planning."
- "The U.S. will not contribute directly to programs that have abortion as an element of family planning."
- Nations that support abortion with non-U.S. funds must prove that U.S. funds were in a separate account segregated from money used to fund abortion support.
  "The U.S. will no longer contribute to nongovernmental organizations (NGOs) that perform or actively promote abortion as a method of family planning."

In the original policy of 1984, the language applied to U.S. global family planning assistance but did not necessarily affect U.S. assistance in areas outside of family planning. Policy enforcement was either in effect or withdrawn based on executive order. Generally speaking, Republican presidents have enforced the policy while Democrat presidents, including President Joe Biden, have not.

In 2017 and 2019, Republican President Donald Trump expanded the Mexico City Policy, renaming it "Protecting Life in Global Health Assistance" (PLGHA). The PLGHA required that foreign (non-U.S.) NGOs that received any global health assistance from the U.S. must agree that "they will not perform or actively promote abortions as a method of family planning or provide financial support to any other organization that conducts such activities." The act does not yet require U.S.-based NGOs receiving global health assistance to agree to the policy. However, it prohibits U.S.-based NGOs from providing "subawards" to foreign NGOs unless the foreign NGO is compliant with PLGHA. Importantly, to be compliant with PLGHA, awardees or sub-awardees cannot use assistance from any source, even non-U.S. sources, to "perform or actively promote abortions."[100]

The first iteration of the Mexico City Policy threatened only funding for family planning initiatives, approximately $600 million. The new PLGHA threatened total loss of funding to foreign NGOs that received global health assistance for any number of issues, including HIV/AIDS, malaria, tuberculosis, nutrition, or maternal and child health. This greatly increased the number of NGOs and global health projects subject to the expanded mandate of the original Mexico City Policy. Now, instead of $600 million, over $12 billion in global health funding was threatened.[101] [102]

The expanded language of PLGHA also threatened critical global health programs outside of reproductive healthcare.[103] NGOs that wished to remain compliant with the PLGHA were forced to change services and sever clinical and financial ties to any partners who might be non-compliant with the PLGHA, even if the nature of those partnerships had nothing to do with abortion services. Global health infrastructure is not so easily compartmentalized in the manner PLGHA sought. Partnerships are needed to enhance effectiveness and sustainability. These policies have resulted in "losses of service integration, a weakened advocacy environment, and fractured partnerships and referral networks."[104]

The U.S. government estimated that 54 NGOs declined to comply with PLGHA, resulting in a loss of $150 million in funding. However, its effect on global health is felt well beyond this loss of funding.[105] Qualitative studies describe a "chilling effect" the Mexico City Policy and PLGHA have had on reproductive healthcare initiatives globally. Organizations that are deeply dependent on financial aid have over-interpreted and over-

implemented the mandates of these policies, fearing even the appearance of non-compliance and loss of funding. This affects treatment, counseling, networking, and referral services for a host of other healthcare issues not explicitly prohibited by PLGHA. Additionally, even when the Mexico City Policy and PLGHA have been rescinded, NGOs fear restarting or replacing services due to the uncertain future of the policies. The net effects of these policies have resulted in clinic closures, decreases in access to healthcare, reduced quality of care, reduced use of contraception, disruptions to healthcare networks, and, in certain nations, increases in the prevalence of abortion.[106] [107] [108] [109]

Overall, it is estimated that the expansion of the Mexico City Policy contributed to approximately 108,000 maternal and child deaths and 360,000 new HIV infections globally between 2017 and 2021.[110]

Donald Trump was elected President of the United States for a second term in November 2024, officially taking office in January 2025. Global health governance organizations and experts in the field must forecast how Trump's reelection and the *Dobbs* decision will affect global reproductive health. Trump explicitly campaigned on ending constitutional protections for abortion in his first term and selected three Supreme Court justices who voted to overturn *Roe*. While most Republican presidents have diminished U.S. global health commitments when taking office, President Trump's first term and the successful reversal of *Roe* are a harbinger of a more aggressive anti-abortion global health policy from the U.S.[111]

Actions taken during the first Trump Administration and halted by the Biden Administration will be re-instated. These include:

1. There will be an immediate reinstatement[112] and likely expansion of the PLGHA to encompass all U.S. foreign assistance. Included in the language of the original PLGHA was explicit support for anti-abortion initiatives globally and promotion of "abstinence-only" contraception education. Global health practitioners should expect that U.S. funding for reproductive healthcare services of all kinds, particularly in lower-income nations, will be severely scrutinized or cut.
2. The U.S. will likely withdraw funding again for the United Nations Population Fund (UNFPA), which provides reproductive health services and education in over 150 countries.[113]
3. The U.S. will renew membership to the Geneva Consensus Declaration, which rejects the United Nations Universal Declaration of Human Rights, the framework for considering abortion a human right.[114]
4. The U.S. will withdraw from the World Health Organization,[115] resulting in a loss of 22% of the assessed contributions and nearly half a billion dollars in voluntary contributions to the WHO base segment.[116] The U.S. is the leading financial contributor to the WHO.
5. The U.S. will likely withdraw again from the U.N. Human Rights Council.[117]

Additionally, new legislation proposed during the Biden Administration will almost certainly die in the current Republican-led Congress. These include H.R. 1670, the Abortion is Health Care Everywhere Act of 2021, and H.R. 1838, the Global Health, Empowerment, and Rights Act. These pieces of legislation would have repealed the

Helm's Amendment and PLGHA, respectively. This legislation was proposed to the House Committee on Foreign Affairs but did not progress to a floor vote.[118] [119]

On January 24, 2025, Secretary of State Marco Rubio issued a memo pausing all U.S. foreign aid, including all global health aid, with some exceptions for military and food aid.[120] A 90-day review of all foreign aid will follow, with Secretary Rubio presenting a report and recommendations to President Trump. As part of this review, and as funding is re-awarded, global health practitioners should expect an expansion of the PLGHA's mandates to affect non-abortion-related global health initiatives. This phenomenon has already taken place with one of the most successful global health initiatives in U.S. history, the President's Emergency Program for AIDS Relief (PEPFAR), an HIV initiative that has saved tens of millions of lives and allowed over five million babies to be born free of HIV.[121] Its funding ends in March 2025, and long-term reauthorization negotiations have been stalled by accusations, without evidence, from Republican lawmakers that PEPFAR provided funding for abortion services.[122] If even the most wildly successful U.S. global health initiative has been threatened by the abortion debates in the U.S., global health practitioners must plan for all U.S.-backed global health initiatives concerning sexual and reproductive health to be scrutinized for PLGHA compliance. Expect that all recipients of global health funding currently under review will need to agree to more expansive and binding language that sharply limits association with any project or NGO that has even the faintest suggestion of sexual or reproductive healthcare.

Some $600 million in U.S.-based funding for reproductive health and family planning initiatives is at risk with the new administration. The Guttmacher Institute estimates that for every $10 million in funding for family planning lost, 56,000 more unsafe abortions occur and 300 additional women are at risk for maternal death.[123] During the last reinstatement of the Mexico City Rule in 2017, European Union nations could only make up for 460 million euros of the shortfall from the loss of U.S. funding.[124] Global health organizations and practitioners must expect increases in unsafe abortions worldwide and should seek out alternative funding routes for sexual and reproductive healthcare initiatives early in the second Trump term.

Global health organizations should consider the Geneva Consensus Declaration a harbinger of the Trump Administration's intention to exert pressure on global health governance organizations' policymaking toward sexual and reproductive healthcare. The Geneva Consensus Declaration[125] is a U.S.-led non-binding manifesto signed by 34 nations and filed with the United Nations in December 2020. The declaration states that "in no case should abortion be promoted as a method of family planning," and "there is no international right to abortion, nor any international obligation on the part of States to finance or facilitate abortion."[126] In a letter accompanying the declaration, U.S. Representative to the UN Kelly Craft stated that:

> *"The United States, along with our like-minded partners, believes strongly that there is no international right to abortion and that the United Nations must respect national laws and policies on the matter, absent external pressure."* [127]

Such rhetoric, though non-binding, is meant to exonerate the U.S. and its "like-minded partners" from dismissing contemporary ethical norms that consider abortion as a component of comprehensive reproductive healthcare and a human right. It is expected that the U.S. under the Trump Administration will continue to pressure the U.N. to

expunge language declaring abortion care a human right. Additionally, global health practitioners should prepare for the possibility that future U.S. global health aid may require a recipient to sign the Geneva Consensus Declaration.

The sum of the Trump Administration's expected actions and those already executed will make the U.S. an unreliable partner in global health, especially sexual and reproductive health. This is consequential, given the U.S.'s outsized role in providing funding and expertise in global health initiatives.

CONCLUSION

Roe v. Wade was an imperfect and vulnerable means to securing reproductive healthcare rights in the U.S. The ease with which the U.S. Supreme Court, on June 24, 2022, rejected a half-century of Fourteenth Amendment precedent and the doctrine of *stare decisis* was a jarring demonstration of the fragility of the constitutional right to abortion in the U.S. The results of the Dobbs decision are far-reaching and affect the safety and autonomy of millions of women in states restricting access to comprehensive reproductive healthcare. Healthcare professionals will continue to practice defensively, hesitant to apply standard-of-care practice for fear of legal jeopardy, and their patients will suffer for it. The exodus of healthcare professionals from states with restrictive abortion laws will continue, creating reproductive healthcare deserts in states already suffering from poorer maternal health outcomes. Those affected most by this regressive evolution in U.S. healthcare will be economically insecure women, women with high-risk pregnancies, women of color, rape or incest victims, and women living in rural parts of the country.

The U.S. now finds itself at odds with the growing contemporary global consensus that access to safe abortion care is a human right. At this time, it is difficult to quantify the impact the *Dobbs* decision will have globally. Still, it is reasonable to predict that the harm to comprehensive reproductive healthcare worldwide already caused by the Helm's Amendment, the Mexico City Policy, and PLGHA will be amplified. Global health governance organizations must reckon with the notion that the world's leading global health contributor is an unreliable partner in comprehensive reproductive healthcare and will remain so for the foreseeable future. The tentacles of the politicized arguments surrounding abortion in the U.S., many lacking in medical expertise, nuance, and good faith, will reach a myriad of other non-abortion-related global health initiatives. Finally, both state and non-state actors within the U.S. will continue to attempt to change contemporary global human rights doctrines, seeking to exclude safe abortion access. The consequences of such actions globally will affect the poorest, most vulnerable populations first and worst.

The Dobbs decision has not only dismantled a critical legal precedent but has also set a dangerous trajectory for reproductive healthcare in the U.S. and beyond. Policymakers, healthcare providers, and advocates must unite in protecting and advancing reproductive rights. The global healthcare community must remain vigilant and proactive in countering regressive policies and ensuring that access to safe abortion care is upheld as a fundamental human right.

Christopher Foran, MD, MS, *is a practicing board-certified general surgeon. He holds a BA from Temple University and an MD from Jefferson Medical College. He recently earned an MS degree in International Affairs and Diplomatic Practice, specializing in global health, from the Seton Hall School of Diplomacy and International Relations. The views expressed in this article are solely those of the author in his private capacity as a student of the Seton Hall School of Diplomacy and International Relations and do not necessarily reflect the views of the U.S. Government, the U.S. Department of War, or the U.S. Navy.*

The opinions expressed in this commentary are solely those of the author in his private capacity as a student at the Seton Hall University School of Diplomacy and do not in any way represent the views of the United States Navy or any other United States government entity.

---

[1] LII / Legal Information Institute. "Welcome to LII." Accessed January 12, 2025. https://www.law.cornell.edu/.
[2] PubMed. "PubMed," n.d. https://pubmed.ncbi.nlm.nih.gov/
[3] U.S. National Library of Medicine. "MEDLINE Overview," n.d. https://www.nlm.nih.gov/medline/medline_overview.html.
[4] "Google Scholar," n.d., https://scholar.google.com/.
[5] The American College of Obstetricians and Gynecologists. "Abortion Policy Statement of Policy of the American College of Obstetricians and Gynecologists," May 2022. Accessed January 12, 2025. https://www.acog.org/clinical-information/policy-and-position-statements/statements-of-policy/2022/abortion-policy.
[6] World Health Organization: WHO. "Abortion," October 11, 2019. https://www.who.int/health-topics/abortion#tab=tab_1
[7] LII / Legal Information Institute. "Federalism," n.d. https://www.law.cornell.edu/wex/federalism.
[8] LII / Legal Information Institute. "Enumerated, Implied, Resulting, and Inherent Powers," n.d. https://www.law.cornell.edu/constitution-conan/article-1/section-1/enumerated-implied-resulting-and-inherent-powers.
[9] LII / Legal Information Institute. "Tenth Amendment," n.d. https://www.law.cornell.edu/constitution/tenth_amendment.
[10] LII / Legal Information Institute. "Federalism," n.d. https://www.law.cornell.edu/wex/federalism.
[11] Justia Law. "Dobbs V. Jackson Women's Health Organization, 597 U.S. _(2022)," n.d. https://supreme.justia.com/cases/federal/us/597/19-1392/#tab-opinion-4600822.
[12] Taylor, Derrick Bryson. "What Is Roe V. Wade? Here's a Short History of the Case." The New York Times, May 4, 2022. https://www.nytimes.com/2022/05/25/us/what-is-roe-v-wade-heres-a-short-history-of-the-case.html.
[13] Justia Law. "Roe V. Wade, 410 U.S. 113 (1973)," n.d. https://supreme.justia.com/cases/federal/us/410/113/.
[14] Justia Law. "Roe V. Wade, 410 U.S. 113 (1973)," n.d. https://supreme.justia.com/cases/federal/us/410/113/.
[15] Justia Law. "Roe V. Wade, 410 U.S. 113 (1973)," n.d. https://supreme.justia.com/cases/federal/us/410/113/.
[16] Justia Law. "Planned Parenthood of Southeastern Pa. V. Casey, 505 U.S. 833 (1992)," n.d. https://supreme.justia.com/cases/federal/us/505/833/.
[17] Justia Law. "Planned Parenthood of Southeastern Pa. V. Casey, 505 U.S. 833 (1992)," n.d. https://supreme.justia.com/cases/federal/us/505/833/.
[18] LII / Legal Information Institute. "Strict Scrutiny," n.d. https://www.law.cornell.edu/wex/strict_scrutiny#:~:text=To%20pass%20strict%20scrutiny%2C%20the,the%20constitutionality%20of%20governmental%20discrimination.

[19] LII / Legal Information Institute. "Stare Decisis," n.d. https://www.law.cornell.edu/wex/stare_decisis#:~:text=Stare%20decisis%20is%20the%20doctrine,precedent%20in%20making%20their%20decisions.
[20] Justia Law. "2019 Mississippi Code :: Title 41 - Public Health :: Chapter 41 - Surgical or Medical Procedures; Consents :: Gestational Age Act :: &Sect; 41-41-191. Gestational Age Act; Legislative Findings and Purpose; Definitions; Abortion Limited to Fifteen Weeks' Gestation; Exceptions; Requisite Report; Reporting Forms; Professional Sanctions; Civil Penalties; Additional Enforcement; Construction; Severability; Right to Intervene if Constitutionality Challenged," n.d. https://law.justia.com/codes/mississippi/2019/title-41/chapter-41/gestational-age-act/section-41-41-191.
[21] LII / Legal Information Institute. "DOBBS V. JACKSON WOMEN'S HEALTH ORGANIZATION," June 24, 2022. https://www.law.cornell.edu/supremecourt/text/19-1392.
[22] Times, New York. "Read the Decision That Overturned Roe V. Wade: Dobbs V. Jackson, Annotated." The New York Times, July 22, 2022. https://www.nytimes.com/interactive/2022/06/24/us/politics/supreme-court-dobbs-jackson-analysis-roe-wade.html?auth=login-google1tap&login=google1tap.
[23] Justia Law. "Dobbs V. Jackson Women's Health Organization, 597 U.S. ___ (2022)," n.d. https://supreme.justia.com/cases/federal/us/597/19-1392/#tab-opinion-4600822.
[24] LII / Legal Information Institute. "DOBBS V. JACKSON WOMEN'S HEALTH ORGANIZATION," June 24, 2022. https://www.law.cornell.edu/supremecourt/text/19-1392#writing-19-1392_DISSENT_8.
[25] "Abortion in the United States Dashboard | KFF," Kaiser Family Foundation, December 19, 2024, accessed January 12, 2025, https://www.kff.org/womens-health-policy/dashboard/abortion-in-the-u-s-dashboard/.
[26] Shefali Luthra and Shefali Luthra, "Abortion Bans Seem to Be Driving Young People to Move Out of State," The 19th, January 9, 2025, https://19thnews.org/2025/01/abortion-bans-young-people-moving-analysis/.
[27] Laura G. Fleszar et al., "Trends in State-Level Maternal Mortality by Racial and Ethnic Group in the United States," *JAMA* 330, no. 1 (July 3, 2023): 52, https://doi.org/10.1001/jama.2023.9043.
[28] Singh, Gopal K. "Trends and Social Inequalities in Maternal Mortality in the United States, 1969-2018." International Journal of MCH and AIDS (Online) 10, no. 1 (December 30, 2020): 29–42. https://doi.org/10.21106/ijma.444.
[29] University of California San Francisco. "High-Risk Pregnancy," n.d. https://www.ucsfhealth.org/conditions/high-risk-pregnancy#:~:text=High%2Drisk%20complications%20occur%20in,ensure%20the%20best%20possible%20outcome.
[30] James A. O'Brien et al., "The Ongoing U.S. Struggle With Maternal Mortality," *American Journal of Perinatology*, October 10, 2024, https://doi.org/10.1055/a-2404-8035.
[31] Munira Gunja et al., *Insights into the U.S. Maternal Mortality Crisis: An International Comparison* (Commonwealth Fund, June 2024). https://doi.org/10.26099/cthn-st75
[32] Treisman, Rachel. "States With the Toughest Abortion Laws Have the Weakest Maternal Supports, Data Shows." NPR, August 18, 2022. https://www.npr.org/2022/08/18/1111344810/abortion-ban-states-social-safety-net-health-outcomes.
[33] Kheyfets, Anna, Shubhecchha Dhaurali, Paige Feyock, Farinaz Khan, April Lockley, Brenna Miller, and Ndidiamaka Amutah-Onukagha. "The Impact of Hostile Abortion Legislation on the United States Maternal Mortality Crisis: A Call for Increased Abortion Education." Frontiers in Public Health 11 (December 5, 2023). https://doi.org/10.3389/fpubh.2023.1291668.
[34] Vilda, Dovile, Maeve E. Wallace, Clare Daniel, Melissa Goldin Evans, Charles Stoecker, and Katherine P. Theall. "State Abortion Policies and Maternal Death in the United States, 2015–2018." *American Journal of Public Health* 111, no. 9 (August 19, 2021): 1696–1704. https://doi.org/10.2105/ajph.2021.306396.
[35] Gemmill A, Margerison CE, Stuart EA, Bell SO. Infant Deaths After Texas' 2021 Ban on Abortion in Early Pregnancy. *JAMA Pediatr*. 2024;178(8):784–791. doi:10.1001/jamapediatrics.2024.0885
[36] Stevenson AJ, Root L. Trends in Maternal Death Post-*Dobbs v Jackson Women's Health*. *JAMA Netw Open*. 2024;7(8):e2430035. doi:10.1001/jamanetworkopen.2024.30035

[37] Kaiser Family Foundation. "Policy Tracker: Exceptions to State Abortion Bans and Early Gestational Limits | KFF," January 6, 2025. https://www.kff.org/womens-health-policy/dashboard/exceptions-in-state-abortion-bans-and-early-gestational-limits/.
[38] Dickman, Samuel, Kari White, David U. Himmelstein, Emily Lupez, Elizabeth Schrier, and Steffie Woolhandler. "Rape-Related Pregnancies in the 14 US States With Total Abortion Bans." JAMA Internal Medicine (Print), January 24, 2024. https://doi.org/10.1001/jamainternmed.2024.0014.
[39] Kaiser Family Foundation. "Policy Tracker: Exceptions to State Abortion Bans and Early Gestational Limits | KFF," January 6, 2025. https://www.kff.org/womens-health-policy/dashboard/exceptions-in-state-abortion-bans-and-early-gestational-limits/.
[40] Kaiser Family Foundation. "Policy Tracker: Exceptions to State Abortion Bans and Early Gestational Limits | KFF," January 6, 2025. https://www.kff.org/womens-health-policy/dashboard/exceptions-in-state-abortion-bans-and-early-gestational-limits/.
[41] Sabbath, Erika L., Samantha M. McKetchnie, Kavita Shah Arora, and Mara Buchbinder. "US Obstetrician-Gynecologists' Perceived Impacts of Post–Dobbs V Jackson State Abortion Bans." JAMA Network Open 7, no. 1 (January 17, 2024): e2352109. https://doi.org/10.1001/jamanetworkopen.2023.52109.
[42] Grossman, Daniel, Joffe Carole, and Shelly Kaller. "Care Post-Roe: Documenting Cases of Poor-quality Care Since the Dobbs Decision." *The University of California San Francisco*. University of California San Francisco, September 9, 2024. Accessed January 14, 2025. https://www.ansirh.org/research/research/care-post-roe-how-post-roe-laws-are-obstructing-clinical-care.
[43] Nambiar, Anjali, and Shivani Patel. "Maternal morbidity and fetal outcomes among pregnant women at 22 weeks' gestation or less with complications in 2 Texas hospitals after legislation on abortion." American Journal of Obstetrics & Gynecology, October 2022. https://doi.org/10.1016/j.ajog.2022.06.060.
[44] Chernoby, Kimberly, and Brian Acunto. "Pregnancy Complications After Dobbs: The Role of EMTALA." *Western Journal of Emergency Medicine* 25, no. 1 (January 4, 2024). https://doi.org/10.5811/westjem.61457.
[45] Sarma, Amy A., Emily S. Lau, Garima Sharma, Louise P. King, Katherine E. Economy, Rachel Wood, Malissa J. Wood, et al. "Maternal Cardiovascular Health Post-Dobbs." *NEJM Evidence* 3, no. 2 (January 23, 2024). https://doi.org/10.1056/evidra2300273.
[46] Abernathy, Alice, Courtney A. Schreiber, and Sindhu K. Srinivas. "State Restrictions on Abortion Are Associated With Fewer Abortions in Patients With High-risk Cardiovascular Conditions." *Contraception* 124 (May 3, 2023): 110057. https://doi.org/10.1016/j.contraception.2023.110057.
[47] Chernoby, Kimberly, and Brian Acunto. "Pregnancy Complications After Dobbs: The Role of EMTALA." *Western Journal of Emergency Medicine* 25, no. 1 (January 4, 2024). https://doi.org/10.5811/westjem.61457.
[48] Lilly, Anna-Grace, Isabelle P Newman, and Sophie Bjork-James. "Our Hands Are Tied: Abortion Bans and Hesitant Medicine." *Social Science & Medicine* 350 (April 26, 2024): 116912. https://doi.org/10.1016/j.socscimed.2024.116912.
[49] Department of Health and Human Services-Office of the Inspector General. "The Emergency Medical Treatment and Labor Act (EMTALA) | HHS-OIG," August 30, 2024. https://oig.hhs.gov/reports-and-publications/featured-topics/emtala/.
[50] Chernoby, Kimberly, and Brian Acunto. "Pregnancy Complications After Dobbs: The Role of EMTALA." *Western Journal of Emergency Medicine* 25, no. 1 (January 4, 2024). https://doi.org/10.5811/westjem.61457.
[51] Marimow, Ann E., and Caroline Kitchener. "Supreme Court Declines to Intervene in Texas Emergency Abortion Case." *Washington Post*, October 7, 2024. https://www.washingtonpost.com/politics/2024/10/07/supreme-court-emergency-abortion-texas-case/.
[52] Kitchener, Caroline, and Dan Diamond. "Faced With Abortion Bans, Doctors Beg Hospitals for Help With Key Decisions." Washington Post, November 1, 2023. https://www.washingtonpost.com/politics/2023/10/28/abortion-bans-medical-exceptions/.
[53] Sabbath, Erika L., Samantha M. McKetchnie, Kavita S. Arora, and Mara Buchbinder. "US Obstetrician-Gynecologists' Perceived Impacts of Post–Dobbs V Jackson State Abortion Bans." *JAMA Network Open* 7, no. 1 (January 17, 2024): e2352109. https://doi.org/10.1001/jamanetworkopen.2023.52109.
[54] Rivlin, Katherine, Marta Bornstein, Jocelyn Wascher, Abigail Norris Turner, Alison H. Norris, and Dana Howard. "State Abortion Policy and Moral Distress Among Clinicians Providing Abortion After the

Dobbs Decision." *JAMA Network Open* 7, no. 8 (August 1, 2024): e2426248. https://doi.org/10.1001/jamanetworkopen.2024.26248.
[55] Schultz, Abby, Cambray Smith, Madelyn Johnson, Amy Bryant, and Mara Buchbinder. "Impact of Post-Dobbs Abortion Restrictions on Maternal Fetal Medicine Physicians in the Southeast: A Qualitative Study." *American Journal of Obstetrics & Gynecology MFM* 6, no. 7 (May 19, 2024): 101387. https://doi.org/10.1016/j.ajogmf.2024.101387.
[56] Anna Kheyfets et al., "The Impact of Hostile Abortion Legislation on the United States Maternal Mortality Crisis: A Call for Increased Abortion Education," Frontiers in Public Health 11 (December 5, 2023), https://doi.org/10.3389/fpubh.2023.1291668.
[57] Dean, Bari Faye. "Some Physicians, Residents Refuse to Practice, Train in States With Abortion Bans," n.d. https://www.beckershospitalreview.com/hospital-physician-relationships/some-physicians-residents-refuse-to-practice-train-in-states-with-abortion-bans.html.
[58] Orgera, Kendal, and Atul Grover. "States With Abortion Bans See Continued Decrease in U.S. MD Senior Residency Applicants." *Association of American Medical Colleges*. Association of American Medical Colleges, May 9, 2024. Accessed January 20, 2025. https://doi.org/10.15766/rai_dnhob2ma.
[59] Weiner, Stacy. "The Fallout of Dobbs on the Field of OB-GYN." AAMC, August 23, 2023. https://www.aamc.org/news/fallout-dobbs-field-ob-gyn.
[60] Klingensmith, Mary E., Gabriella G. Gosman, Dineo Khabele, and Beth S. Brinkmann. "Roe V Wade, Dobbs, and the Future of Graduate Medical Education." Journal of Graduate Medical Education 15, no. 3 (June 1, 2023): 407–10. https://doi.org/10.4300/jgme-d-23-00279.1.
[61] Woodcock, Alexandra L., Gentry Carter, Jami Baayd, David K. Turok, Jema Turk, Jessica N. Sanders, Misha Pangasa, Lori M. Gawron, and Jennifer E. Kaiser. "Effects of the Dobbs V Jackson Women's Health Organization Decision on Obstetrics and Gynecology Graduating Residents' Practice Plans." Obstetrics and Gynecology, September 28, 2023. https://doi.org/10.1097/aog.0000000000005383.
[62] Stolberg, Sheryl Gay. "As Abortion Laws Drive Obstetricians From Red States, Maternity Care Suffers." *The New York Times*, September 7, 2023. https://www.nytimes.com/2023/09/06/us/politics/abortion-obstetricians-maternity-care.html.
[63] Erika L. Sabbath et al., "US Obstetrician-Gynecologists' Perceived Impacts of Post–Dobbs V Jackson State Abortion Bans," JAMA Network Open 7, no. 1 (January 17, 2024): e2352109, https://doi.org/10.1001/jamanetworkopen.2023.52109.
[64] Bernstein, Simone A, Mark R. Levy, Sarah McNeilly, Shira Fishbach, Shailesh Jain, Jessica A. Gold, and Vineet M. Arora. "Practice Location Preferences in Response to State Abortion Restrictions Among Physicians and Trainees on Social Media." Journal of General Internal Medicine 38, no. 10 (February 23, 2023): 2419–23. https://doi.org/10.1007/s11606-023-08096-5.
[65] Stoneburner A, Lucas R, Fontenot J, Brigance C, Jones E, DeMaria AL. Nowhere to Go: Maternity Care Deserts Across the US. (Report No 4). March of Dimes. 2024. https://www.marchofdimes.org/maternity-care-deserts-report
[66] Stolberg, S. G. (2023, September 7). As abortion laws drive obstetricians from red states, maternity care suffers. The New York Times. https://www.nytimes.com/2023/09/06/us/politics/abortion-obstetricians-maternity-care.html
[67] Stacy Weiner, "The Fallout of Dobbs on the Field of OB-GYN," AAMC, August 23, 2023, https://www.aamc.org/news/fallout-dobbs-field-ob-gyn.
[68] Harvey, S. Marie, Annie E Larson, and Jocelyn T. Warren. "The Dobbs Decision — Exacerbating U.S. Health Inequity." The New England Journal of Medicine (Print) 388, no. 16 (April 20, 2023): 1444–47. https://doi.org/10.1056/nejmp2216698.
[69] Kitchener, C. (2023, September 6). Highways are the next antiabortion target. One Texas town is resisting. Washington Post. https://www.washingtonpost.com/politics/2023/09/01/texas-abortion-highways/
[70] Legal vigilantism: a discussion of the new wave of abortion restrictions and the fugitive slave acts. (n.d.). Georgetown Journal of Gender and the Law | Georgetown Law. https://www.law.georgetown.edu/gender-journal/online/volume-xxiii-online/legal-vigilantism-a-discussion-of-the-new-wave-of-abortion-restrictions-and-the-fugitive-slave-acts/
[71] Medication Abortion Accounted for 63% of All US Abortions in 2023—An Increase from 53% in 2020. (2024, March 19). Guttmacher Institute. https://www.guttmacher.org/2024/03/medication-abortion-accounted-63-all-us-abortions-2023-increase-53-2020

[72] Belluck, P., & VanSickle, A. (2024, March 25). Abortion pill rulings: What to know about availability of Mifepristone. The New York Times. https://www.nytimes.com/article/supreme-court-abortion-pill-ruling.html?auth=login-google1tap&login=google1tap
[73] Karni, A. (2024, February 26). Republican opposition to birth control bill could alienate voters, poll finds. The New York Times. https://www.nytimes.com/2024/02/26/us/politics/republicans-birth-control-ivf.html
[74] Felix, M., Sobel, L., & Salganicoff, A. (2024, March 21). The right to contraception: state and federal actions, misinformation, and the courts | KFF. KFF. https://www.kff.org/womens-health-policy/issue-brief/the-right-to-contraception-state-and-federal-actions-misinformation-and-the-courts/
[75] The Alabama Supreme Court's ruling on frozen embryos. (2024, February 27). Johns Hopkins Bloomberg School of Public Health. https://publichealth.jhu.edu/2024/the-alabama-supreme-courts-ruling-on-frozen-embryos
[76] Lee, Chantelle. "What Donald Trump's Win Means for Abortion." *TIME*, November 6, 2024. https://time.com/7096575/donald-trump-abortion-plan-2024/.
[77] Guttmacher Institute. "10 Reasons a Second Trump Presidency Will Decimate Sexual and Reproductive Health," January 8, 2025. https://www.guttmacher.org/2024/11/10-reasons-second-trump-presidency-will-decimate-sexual-and-reproductive-health.
[78] Felix, Mabel, Laurie Sobel, and Alina Salganicoff. "What's Next for State Abortion Ballot Initiatives? | KFF." Kaiser Family Foundation, December 17, 2024. Accessed January 20, 2025. https://www.kff.org/policy-watch/whats-next-for-state-abortion-ballot-initiatives/.
[79] Think Global Health. "Post-Roe Era Tests Abortion Laws Worldwide | Think Global Health," June 5, 2024. https://www.thinkglobalhealth.org/article/post-roe-era-tests-abortion-laws-worldwide.
[80] Lynn M. Morgan, "Global Reproductive Governance After Dobbs," Current History (New York, N.Y. 1941. Online)/Current History 122, no. 840 (January 1, 2023): 22–28, https://doi.org/10.1525/curh.2023.122.840.22.
[81] The role of international human rights norms in the liberalization of abortion laws globally. (2017, June 2). Health and Human Rights Journal. https://www.hhrjournal.org/2017/06/the-role-of-international-human-rights-norms-in-the-liberalization-of-abortion-laws-globally/
[82] Staff, W. a. F. P. P. (2024, March 8). Abortion Law: global comparisons. Council on Foreign Relations. https://www.cfr.org/article/abortion-law-global-comparisons
[83] Center for Reproductive Rights. (2024, April 11). The World's Abortion Laws - Center for Reproductive Rights. https://reproductiverights.org/maps/worlds-abortion-laws/
[84] Miller, C. C., & Sanger-Katz, M. (2022, May 4). How U.S. abortion law compares with other nations. The New York Times. https://www.nytimes.com/2022/01/22/upshot/abortion-us-roe-global.html
[85] World Health Organization: WHO. (2021, November 25). Abortion. https://www.who.int/news-room/fact-sheets/detail/abortion
[86] OHCHR. (n.d.). Bachelet on US ruling on Dobbs v Jackson Women's Health Organization. https://www.ohchr.org/en/statements/2022/06/bachelet-us-ruling-dobbs-v-jackson-womens-health-organization
[87] OHCHR. "Access to Safe and Legal Abortion: Urgent Call for United States to Adhere to Women's Rights Convention, UN Committee," July 1, 2022. https://www.ohchr.org/en/statements/2022/07/access-safe-and-legal-abortion-urgent-call-united-states-adhere-womens-rights.
[88] Refworld - UNHCR's Global Law and Policy Database, "General Comment No. 36, Article 6 (Right to Life)," Refworld, February 12, 2024, https://www.refworld.org/legal/general/hrc/2019/en/123145.
[89] Center for Reproductive Rights. "REPRODUCTIVE RIGHTS VIOLATIONS AS TORTURE OR ILL-TREATMENT." Accessed April 12, 2024. https://reproductiverights.org/sites/crr.civicactions.net/files/documents/Reproductive_Rights_Violations_As_Torture.pdf.
[90] Women and Foreign Policy Program Staff, "Abortion Law: Global Comparisons," Council on Foreign Relations, March 8, 2024, https://www.cfr.org/article/abortion-law-global-comparisons.
[91] Sexual and Reproductive Health and Research (SRH) and World Health Organization Sexual and Reproductive Health Research, "Preventing Unsafe Abortion: Evidence Brief," November 11, 2019, accessed April 12, 2024, https://www.who.int/publications/i/item/WHO-RHR-19.21.
[92] Refworld - UNHCR's Global Law and Policy Database, "General Comment No. 36, Article 6 (Right to Life)," Refworld, February 12, 2024, https://www.refworld.org/legal/general/hrc/2019/en/123145.

[93] "Q&A: Access to Abortion Is a Human Right," Human Rights Watch, July 5, 2022, https://www.hrw.org/news/2022/06/24/qa-access-abortion-human-right.
[94] World Health Organization: WHO, "Abortion," November 25, 2021, https://www.who.int/news-room/fact-sheets/detail/abortion.
[95] "Breaking Down the U.S. Global Health Budget by Program Area | KFF," KFF, February 27, 2024, https://www.kff.org/global-health-policy/fact-sheet/breaking-down-the-u-s-global-health-budget-by-program-area/.
[96] "Global Health Legislative & Policy Requirements | Global Health | U.S. Agency for International Development," U.S. Agency For International Development, n.d., https://www.usaid.gov/global-health/legislative-policy-requirements.
[97] USAID, "USAID GUIDANCE FOR IMPLEMENTING THE SILJANDER AMENDMENT," United States Agency for International Development, accessed April 12, 2024, https://www.usaid.gov/sites/default/files/2022-05/USAIDGuidanceForImplementingSiljanderAmendment_508.pdf.
[98] "The Global Gag Rule and the Helms Amendment: Dual Policies, Deadly Impact," Guttmacher Institute, August 24, 2022, https://www.guttmacher.org/fact-sheet/ggr-helms-amendment.
[99] The White House Office of Policy Development. "US Policy Statement for the International Conference on Population." Population and Development Review 10, no. 3 (September 1984): 574–79. https://www.jstor.org/stable/1973537.
[100] United States Department of State. "Protecting Life in Global Health Assistance Frequently Asked Questions and Answers," September 2019. Accessed April 12, 2024. https://www.state.gov/wp-content/uploads/2019/10/PLGHA-FAQs-September-2019.pdf.
[101] "The Mexico City Policy: An Explainer | KFF," KFF, January 28, 2021, https://www.kff.org/global-health-policy/fact-sheet/mexico-city-policy-explainer/#footnote-509511-2.
[102] Elizabeth Sully et al., "Impact of the Trump Administration's Expanded Global Gag Rule Policy on Family Planning Service Provision in Ethiopia," *Studies in Family Planning* 53, no. 2 (May 31, 2022): 339–59, https://doi.org/10.1111/sifp.12196.
[103] Emily Maistrellis et al., "Beyond Abortion: Impacts of the Expanded Global Gag Rule in Kenya, Madagascar and Nepal," BMJ Global Health 7, no. 7 (July 1, 2022): e008752, https://doi.org/10.1136/bmjgh-2022-008752.
[104] Elizabeth Sully et al., "Impact of the Trump Administration's Expanded Global Gag Rule Policy on Family Planning Service Provision in Ethiopia," Studies in Family Planning 53, no. 2 (May 31, 2022): 339–59, https://doi.org/10.1111/sifp.12196.
[105] "Global Health Assistance: Awardees' Declinations of U.S. Planned Funding Due to Abortion-Related Restrictions," U.S. GAO, n.d., https://www.gao.gov/products/gao-20-347.
[106] Emily Maistrellis et al., "Beyond Abortion: Impacts of the Expanded Global Gag Rule in Kenya, Madagascar and Nepal," BMJ Global Health 7, no. 7 (July 1, 2022): e008752, https://doi.org/10.1136/bmjgh-2022-008752.
[107] Marta Schaaf et al., "'Protecting Life in Global Health Assistance'? Towards a Framework for Assessing the Health Systems Impact of the Expanded Global Gag Rule," BMJ Global Health 4, no. 5 (September 1, 2019): e001786, https://doi.org/10.1136/bmjgh-2019-001786.
[108] Nina Brooks et al., "U.S. Global Health Aid Policy and Family Planning in sub-Saharan Africa," Science Advances 9, no. 49 (December 8, 2023), https://doi.org/10.1126/sciadv.adk2684.
[109] Nina Brooks, Eran Bendavid, and Grant Miller, "USA Aid Policy and Induced Abortion in sub-Saharan Africa: An Analysis of the Mexico City Policy," the Lancet. Global Health/the Lancet. Global Health 7, no. 8 (August 1, 2019): e1046–53, https://doi.org/10.1016/s2214-109x(19)30267-0.
[110] Kavakli, Kerim Can, and Valentina Rotondi. "US Foreign Aid Restrictions and Maternal and Children's Health: Evidence From the 'Mexico City Policy.'" *Proceedings of the National Academy of Sciences* 119, no. 19 (May 2, 2022). https://doi.org/10.1073/pnas.2123177119.
[111] Liu, Yuming, Brian J. Hall, and Minghui Ren. "How The U.S. Presidential Election Impacts Global Health: Governance, Funding, and Beyond." *Global Health Research and Policy* 9, no. 1 (November 20, 2024). https://doi.org/10.1186/s41256-024-00391-w.
[112] Westfall, Sammy. "How a Rule Imposed by Trump Shapes Abortion Access Around the World." *Washington Post*, January 25, 2025. https://www.washingtonpost.com/world/2025/01/25/trump-abortion-global-gag-rule-mexico-city-policy/.

[113] Reuters. "U.S. Withdraws Funding For U.N. Population Fund." *Reuters*, April 4, 2017. https://www.reuters.com/article/world/us-politics/us-withdraws-funding-for-un-population-fund-idUSKBN17600Q/.
[114] United States Department of State. "United States Renewed Membership in the Geneva Consensus Declaration on Promoting Women's Health and Strengthening the Family - United States Department of State," January 25, 2025. https://www.state.gov/united-states-renewed-membership-in-the-geneva-consensus-declaration-on-promoting-womens-health-and-strengthening-the-family/.
[115] The White House. "Withdrawing the United States From the World Health Organization," January 21, 2025. https://www.whitehouse.gov/presidential-actions/2025/01/withdrawing-the-united-states-from-the-worldhealth-organization/.
[116] Liu, Yuming, Brian J. Hall, and Minghui Ren. "How The U.S. Presidential Election Impacts Global Health: Governance, Funding, and Beyond." *Global Health Research and Policy* 9, no. 1 (November 20, 2024). https://doi.org/10.1186/s41256-024-00391-w.
[117] Geneva, U.S. Mission. "Remarks on the UN Human Rights Council - U.S. Mission to International Organizations in Geneva." U.S. Mission to International Organizations in Geneva, January 6, 2022. https://geneva.usmission.gov/2018/06/21/remarks-on-the-un-human-rights-council/.
[118] "H.R.1670 - 117th Congress (2021-2022): Abortion Is Health Care Everywhere Act of 2021," Congress.gov | Library of Congress, n.d., https://www.congress.gov/bill/117th-congress/house-bill/1670.
[119] "H.R.1838 - 118th Congress (2023-2024): Global Health, Empowerment and Rights Act," Congress.gov | Library of Congress, n.d., https://www.congress.gov/bill/118th-congress/house-bill/1838
[120] Cohen, Jon. "Trump Pause on Foreign Aid Could Threaten Distribution of Lifesaving Drugs, Experts Say." *Science | AAAS*, January 24, 2025. https://www.science.org/content/article/trump-pause-foreign-aid-could-threaten-distribution-lifesaving-drugs-experts-say.
[121] United States Department of State. "Results and Impact – PEPFAR - United States Department of State," January 15, 2025. https://www.state.gov/results-and-impact-pepfar.
[122] Kellie Moss and Jennifer Kates, "PEPFAR's Short-Term Reauthorization Sets an Uncertain Course for Its Long-Term Future | KFF," KFF, April 9, 2024, https://www.kff.org/policy-watch/pepfars-short-term-reauthorization-sets-an-uncertain-course-for-its-long-term-future/.
[123] Guttmacher Institute. "Just the Numbers: The Impact of US International Family Planning Assistance, 2023," August 27, 2024. https://www.guttmacher.org/2024/01/just-numbers-impact-us-international-family-planning-assistance-2023.
[124] Galvin, Gabriela. "How Trump's Ban on Funding for Overseas Abortion Groups Will Transform Global Health." *Euronews*, January 25, 2025. https://www.euronews.com/health/2025/01/25/how-trumps-ban-on-funding-for-overseas-abortion-groups-will-transform-global-health.
[125] Miriam Berger, "U.S. Signs International Declaration Challenging Right to Abortion and Upholding 'Role of The Family,'" Washington Post, October 23, 2020, https://www.washingtonpost.com/world/2020/10/22/trump-geneva-consensus-abortion-family/
[125] Congress.gov | Library of Congress. "Text - S.1098 - 118th Congress (2023-2024): Global Health, Empowerment and Rights Act," n.d. https://www.congress.gov/bill/118th-congress/senate-bill/1098/text/is.
[126] United Nations. "Letter dated 2 December 2020 from the Permanent Representative of the United States of America to the United Nations addressed to the Secretary-General." A/75/626. General Assembly, 7 December 2020. https://undocs.org/A/75/626.
[127] United Nations. "Letter dated 2 December 2020 from the Permanent Representative of the United States of America to the United Nations addressed to the Secretary-General." A/75/626. General Assembly, 7 December 2020. https://undocs.org/A/75/626.

A Cross-Sectional Analysis of the Relationship Between Government Effectiveness, Corruption, and Health

Fawziah Rabiah-Mohammed, Abe Oudshoorn, Chengqian Xian, Panagiota Tryphonopoulos, Carles Muntaner, and Maxwell J. Smith

This study examines the relationships between government effectiveness, corruption, economic indicators, and disability-adjusted life years (DALYs) using a cross-sectional correlational design with secondary data from international organizations and health databases. Hierarchical regression analysis showed that government effectiveness is a significant predictor of DALYs, accounting for 6.4% of the variability in population health outcomes, while corruption, GDP per capita, and health expenditures were also statistically associated with DALYs but contributed less to their prediction. These findings suggest that governance performance, particularly government effectiveness, plays a meaningful role in shaping population health and should be considered alongside economic factors in public health policy and planning.

Introduction

Weighing the relationship between government actions and the health of populations has proven controversial. The core idea of examining the effects of government decisions on population health lies in the understanding that governments have significant involvement in the social and economic domains that determine health. However, this also makes the design of health systems inherently political. Regardless of concerns of politicizing health systems science, the impact of the social and economic outcomes can be observed on a population's health, which can be traced back to the governance of those systems and determinants. For example, level of education is linked to overall health; the higher the level of education individuals can obtain, the better health they enjoy[1]. Likewise, people with strong financial resources report better health outcomes than people who live on low incomes, both on a local and a national scale [2] [3] [4]. This relationship has been described most simply as, "Wealthier nations are healthier nations"[5] [6]. In other words, the association between income and health presents a statistical causality; if per capita income increases 1% in developing countries, cases of infant mortality and child mortality will be averted annually by 33,000 and 53,000, respectively[7]. This wealth is in turn significantly determined by factors within governance such as availability of income supports, access to employment, tools for sharing of public wealth and resources, and forms of taxation and redistribution. Therefore, government decisions that are made on a national or sub-national level regarding such determinants as education and employment can improve or worsen the health of populations over time. This is also supported by decades of research on the 'social determinants of health'.

Although 'government' and 'governance' are similar and are frequently used interchangeably, 'government' specifically refers to a group of people who run the legislative and administrative duties of a country [8], whereas 'governance' denotes the administrative performance of a specific issues, challenges, or organization, which can include governments but also other private and non-governmental (e.g., civil society)

actors. With various definitions applied to the concept of governance in the health literature, the meaning of governance applied for this study is drawn from the Worldwide Governance Indicators: "… the traditions and institutions by which authority in a country is exercised"[9] [10]. The Worldwide Governance Indicators identify six components of governance, these are: 1) voice and accountability, 2) political stability and absence of violence/terrorism, 3) government effectiveness, 4) regulatory quality, 5) rule of law, and 6) control of corruption[11]. While all six indicators have been statistically examined in relation to population health[12] [13], the government effectiveness indicator yields the strongest correlation with health outcomes in a given country[14].

Among several factors that have been associated with health spending is corruption. Conflicting findings of previous studies that have tested the relationship between health spending and health outcomes across countries suggest that a lesser-addressed concept, namely corruption, may play a role in downstream health outcomes, with the strength of this relationship still being debated [15] [16]. This is because health spending and health outcomes are not necessarily directly related if some proportion of spending is diverted out of the system. Corruption may be entrenched in health systems to a varying degree and hinder the effective use of resources [17] or the overall availability of resources. While several studies have documented the negative impact of corruption on health [18] [19], the role that governments play in curbing corruption can also be critical in determining the health outcomes of populations. Therefore, measuring the impact of government effectiveness and perceived corruption on health outcomes, with health outcomes being actualized as disability-adjusted life years (DALYs), can provide new empirical knowledge on how governance relates to and potentially influences the health of populations.

DALYs are a health metric that measure the burden of diseases or disabilities that interfere with peoples' daily lives and cause suffering. DALYs as a measure provide a single metric that represents the numbers of lost years to illness or disability and premature deaths[20]. The word disability in the DALYs measure refers to any health condition that impacts physical or mental health for a long or short duration[21]. Disabilities can range from communicable diseases, as in infectious and parasitic conditions, to non-communicable diseases, such as cardiovascular disorders, neuropsychiatric conditions, autoimmune diseases, cancers, diabetes, osteoarthritis, Alzheimer's disease as well as developmental disorders, nutritional deficiencies, and maternal and perinatal conditions[22]. In this analysis, the DALYs rate that is calculated from the burden resulting from non-communicable diseases is used as a measure of population health. DALYs from non-communicable diseases have been selected since these are the leading cause of 71% of all deaths globally [23] [24].

As average life expectancy has increased globally[25], the current study focuses on quality of life through the extent of the burden of disease rather than addressing national mortality rates alone. Disability-adjusted life years (DALYs) is preferred to be used over other population health measures, such as early death prevalence or specific health condition rates (obesity or respiratory conditions), because DALYs as a metric takes into account morbidity and mortality data to draw a broader picture of the health of a population[26]. Further, DALYs captures the gap between the current population health condition and the optimal health that a nation can achieve [18], which allows for comparative analysis and gives some insights on differences of health conditions between several populations[27].

LITERATURE REVIEW

A broad search was undertaken to explore the literature on the topic of governance and its relationship to health. Databases such as Scopus, PubMed, ProQuest Dissertations & Theses Global, and Google scholar (up to page No 7) were searched. The keywords that guided this search were governance, government effectiveness, corruption, and population health. Full text, peer-reviewed, empirical quantitative studies in English were included. The search timeline was selected from 2011 to 2021 since the concept of governance is a relatively a new topic within health literature. Boolean operators (and/or) were applied. Qualitative papers, books, politics and democracy-focused studies, and governance studies not related to health were excluded. Qualitative studies were excluded to maintain the literature review entirely focused on reporting statistical methods and findings while studies that investigate the role of democracy and politics in health did not primary examine governance components. The exclusion activities occurred in the title and abstract screening.

Included studies in this review can be divided into three categories starting from the most common to the least common. The first category consists of studies that test the relationship between governance indicators and population health, either using the six Worldwide Governance Indicators or focusing particularly on government effectiveness and corruption. The second category is the studies that analyze the relationship between the different concepts/components of governance e.g., poor governance, good governance, bureaucracy, institutional quality, and quality of government. Under this group, a few studies investigate one particular form of corruption in relation to public health measures, which is bribes.

GOVERNMENT EFFECTIVENESS AND CORRUPTION

Worldwide Governance Indicators as presented by the World Bank have been widely employed and analyzed in health governance literature. In quantitative research, there is a common consensus that a significant positive relationship exists between government effectiveness and health outcomes while a significant negative association between corruption and health outcomes is established. Government effectiveness is defined as "perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies" [28] [29]. In addition, corruption is defined as "the abuse of entrusted power for private gain" [30] [31].

Studies linking government effectiveness and corruption with health can be categorized into four groups. First are the studies that analyze the relationship between government effectiveness and/or corruption with a wide range of health outcomes such as mortality rates [32] [33] [34] [35] [36], life expectancy [37] [38], immunization rate [39], quality of health [40], chronic diseases [41], communicable diseases [42], non-communicable diseases [43], healthy life expectancy [44], use of antibiotics [45], self-reported poor general health [46], undernutrition [47], homicide [48], wellbeing inequalities [49], concern and awareness about disabilities [50], and public healthcare system and health policy [51] [52] [53] [54]. Applying multiple logistic regression analysis, Ruiz-Cantero and colleagues [55] found that the higher government effectiveness, the fewer number of maternal deaths registered, and this

association has been almost similar between low and middle-income countries. This can explain that the gap between low and middle-income countries in terms of GDP or health expenditure can be eliminated with high government effectiveness. Li et al., [56] focus mainly on corruption by using Corruption Perception Index (the same measure used in this analysis). Using OLS with modified structure for error variance, they concluded that corruption is negatively correlated with different mortality rates (coefficients value is −0.11 (0.029) for neonatal mortality.

The second group includes studies that have established empirical associations between government effectiveness and/or corruption, as independent indicators of the six Worldwide governance indicators, with healthcare expenditure/health financing [57] [58] [59] [60] [61] [62] [63] [64] [65] [66]. Kim and Wang attempted to establish a causal relationship between infant mortality, under-5 mortality, maternal mortality, and life expectancy with the six Worldwide Governance Indicators [67]. By using a panel regression model to capture variabilities between different countries from 2013 to 2015, they found that high spending on the health system reduces the infant mortality rate. In addition, government effectiveness has the highest explanatory power on the health indicators compared to the rest of Worldwide governance indicators with Coefficient values of −6.773 for infant mortality, 2.563 life expectancy, and −7.634 under-five mortality [68].

The third group of studies in the health governance literature reflects the type of studies that focuses on combining government effectiveness and/or corruption with broader systematic factors that ultimately impact the health of the populations in terms of education [69] [70] [71] [72], water and sanitation [73] [74], food security [75] [76] [77], human development [78], and water pollution [79]. A few studies that have treated government effectiveness and/or corruption as intermediate factors fall under the fourth group [80] [81] [82] [83]. Governance indicators can mediate the relationship between public health spending and health outcomes, maternity rate, in that the number of maternal deaths declined by 35 per 100,000 when public health spending increase conditional to an increase in government effectiveness [84]. The interaction between government effectiveness and public healthcare spending precedes any improvement in health outcomes.

A BROAD CONCEPT OF GOVERNANCE

While control of corruption has been linked to political institutions [85] and institutional quality[86], Helliwell and colleagues [87] examine the statistical relationship between good governance and national well-being in 157 countries over 7 years. Another two studies analyze the relationship between governance and health outcomes, mostly using different data sources other than the World Bank Worldwide Governance Indicators. Using data from Round 6 of the Afrobarometer survey (2014–2015), Hsiao, Vogt, & Quentin, [88]looked at one form of corruption-bribes- and its relationship to health care access. They reported that patients' report of paying bribes once or twice was associated with increasing difficulties in accessing healthcare by 4.11 times than those who never pied bribes. The relationship between corruption in terms of bribes and health accessibility represents a vicious cycle, meaning paying more bribes leads to difficulties accessing care, and difficulties accessing care prompt people to pay more bribes. It is important to mention that this analysis has been conducted in 32 Sub-Saharan African countries where the health system structures and financing differ from one country to another. Sitienei, Nangami, & Manderson, [89] alternate between the term good governance and governance

in their study. They tested the attempts of good governance/governance implementation by 108 decision-makers in the health sector in Kenya. A 5-point Likert-type scale self-administered questionnaire consisting of 42 statement items related to governance attributes operationalized in terms of accountability, equity, community participation, consensus orientation, strategic vision, and regulation and oversight, was the mode of data collection (Cronbach's α for the items was between 0.72 and 0.84). Over half of the decision makers agree that good governance in terms of strategic vision, regulation, and oversight has been implemented in their current workplace. Another half of the study subjects said that they are undecided regarding the implementation of intelligence and information, transparency, participation, and consensus orientation. Items related to accountability and equity were poorly implemented as reported by the subjects, which could, to some degree, explain the existence of corruption in the health system. Overall, all governance indicators have a degree of association with different health outcomes; however, government effectiveness has been reported to have either the highest effect or one of the highest effects among governance indicators.

All studies included in this review have tested the association between governance concept and different aspects of population health. Collectively, these studies establish a positive correlation between governance indicators and health outcomes and a negative correlation with corruption. However, some studies have focused on specific countries to draw the connection between the study variables while the analysis presented herein includes all world countries with available data (n=144). This scale of analysis is required to make more conclusive our current theoretical understandings that are based in single-country analyses. No study has considered modelling the relationship between governance indicators and DALYs, which is the dependent variable in this analysis. Moreover, the literature review shows that the degree to which the governance indicators impacted the health of populations has not been explored in previous research. This analysis builds on the existing literature pertaining to the association between governance and health and measures the accumulative effect of governance indicators on health outcomes.

THEORETICAL FRAMEWORK

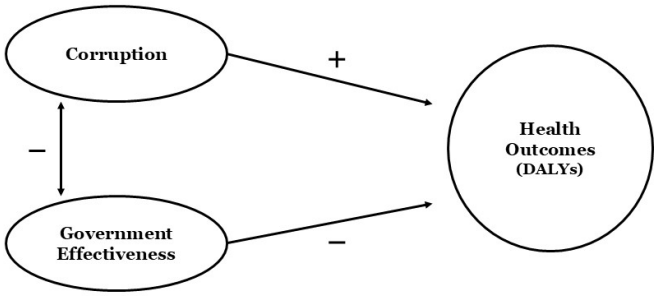
Although the impact of governance on health systems has been highlighted in several theories and empirical work [90] [91] [92] [93] [94], this study applied specific hypotheses linking governance indicators, i.e., government effectiveness, corruption, with indicators of the health of populations, i.e., DALYs. This study is guided by the governance framework adopted by Islam [95] which consists of two major components. The first component is composed of the overall governance indicators by the World Bank, namely: 1) voice and accountability, 2) political stability and absence of violence/terrorism, 3) government effectiveness, 4) regulatory quality, 5) rule of law, and 6) control of corruption. The six indicators measure the concept of governance outside the health sector. However, the second component defines the concept of governance that is more specific to the health sector in terms of stewardship. Despite the focus of the second component on modelling the effect of the governance concept in the health sector, it does not offer a practical measure to examine the proposed relationship between governance and the health sector. Moreover, the concept of governance in the health sector that is used in Islam's framework explains a narrow aspect of governance that is related to the management of

the healthcare system on a meso level. Therefore, the first component is going to inform this study.

Relying on the first component of the governance framework provided by Islam [96] that evaluates the concept of governance outside the health sector can help in two ways. First is the practical aspect of the governance indicators that allows for statistical comparison between countries. Second is that the governance indicators account for factors in governance that shape the social determinants of health. This is particularly important when policies related to social determinants of health impact the health of populations more significantly than healthcare policies themselves [97]. The use of overall governance indicators by the World Bank aligns with the assumptions underlying this study in that governance indicators evaluate the context of population health that lies outside the health sector. For example, the indicators of government effectiveness and Corruption were built based on surveying several decision-makers, experts, and citizens about the quality of government services pertaining to public sectors [98] [99].

METHODS

Figure 1
Conceptual Model



Research Questions

This study tests the relationship between two independent indicators of governance (government effectiveness and corruption) with health (DALYs). Three questions underpin this analysis, which are: 1) What are the relationships between government effectiveness, Corruption Perceptions Index, and DALYs? 2) To what degree is the relationship between government effectiveness and DALYS moderated by Corruption? 3) How much do government effectiveness and corruption separately impact DALYs?

Hypotheses and Rationale for Hypotheses

- H_{1o}: There will be no statistical correlation between Government effectiveness and Corruption Perceptions Index.
- H_{1a}: There will be a statistical correlation between Government effectiveness and Corruption Perceptions Index.

- H_{2o}: There will be no statistical correlation between Corruption Perceptions Index and DALYs.
- H_{2a}: There will be a statistical correlation between Corruption Perceptions Index and DALYs.
- H_{3o}: There will be no statistical correlation between Government effectiveness and DALYs.
- H_{3a}: There will be a statistical correlation between Government effectiveness and DALYs.

The rationale for testing these three variables comes after a thorough search of the literature presented earlier in this analysis. While the relationship between government effectiveness and corruption, and corruption and health outcomes, has been presented in previous research, most studies utilize mortality rates to measure population health and look at outcomes in only single countries. Therefore, there is a gap of in-depth understanding of how these health system variables relate to health outcomes measured beyond mortality. The scale of current analyses also limits the degree of confidence in conclusions we can make. The significance of examining the burden of disease as the dependent variable is to expand our knowledge not only on what leads to premature mortality but more broadly what creates risks or benefits for overall health. Using all available countries allows us to have much higher confidence in any relationships detected.

Design

In order to examine variables and test hypotheses, a cross-sectional correlational design was used for this study as the original data were previously collated by organizations and health databases that publish cross-sectional data. The cross-sectional correlational design allows researchers to observe how the dependent variable is influenced by the independent variables. The analysis aims to determine if relationships between independent variables, government effectiveness and corruption, and the dependent variable, DALYs, exist.

Sample and Setting

The data obtained for 144 countries were used for this analysis (see **Table 1** in **Appendix B**). The data time frame for this study was drawn for 2018 to analyze the most recent data available for all countries. Data for countries were obtained from publicly accessible databases for non-commercial use.

Data collection and Instruments

The data were obtained from different resources for each variable. For the purpose of this study, the government effectiveness variable is defined as "perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies"[100] [101]. The data for this variable were drawn from Worldwide Governance Indicators (WGI). The data for government effectiveness are collected from several data sources to construct each measure. These data are compiled and summarized from 30 sources that report citizens' opinions and experts' experiences on the quality of different aspects of government performance.

For the Government Effectiveness measure, The Worldwide Governance Indicators include data from four main sources: surveys of households and firms, commercial business information providers, non-governmental organizations, and public sector organizations [8]. The Worldwide Governance Indicators are aggregated data from different sources, averaged and rescaled by using min-max rescaling. The final scoring system for this indicator is from 0 to 100, in which the higher value corresponds to the better performance [102].

Data for corruption was drawn from Transparency International, Corruption Perceptions Index (CPI). The Control of Corruption measure from the World Governance Indicators was avoided to prevent any issue of multicollinearity between government effectiveness and control of corruption, both of which were collected by the same methodology from the World Bank. The data for Corruption Perceptions Index (CPI) from Transparency International is aggregated from 13 data sources, including, but not limited to, African Development Bank Country Policy and Institutional Assessment 2016, Bertelsmann Stiftung Sustainable Governance Indicators 2018, Bertelsmann Stiftung Transformation Index 2017-2018, Economist Intelligence Unit Country Risk Service 2018, and Freedom House Nations in Transit 2018 [103]. Corruption Perceptions Index (CPI) is generated from expert evaluations, a combination of quantitative data and qualitative expert assessments, qualitative expert survey, commercial business expert assessment, executive opinion survey, and risk assessment [104]. Since each source has a different scale, all scales have been standardized to produce the CPI scoring system, ranging from 0 to 100, where 0 is assigned to a country with the highest level of corruption, and 100 indicates lowest corruption.

The data from Worldwide Governance Indicators have been widely used in previous studies with population health indicators such as mortality rates [105] [106] [107], as well as the data from International Transparency Corruption Perceptions Index [108] [109]. Worldwide Governance Indicators have been used to measure Governance relationships with public expenditure on health, child mortality, and population health [110] [111] [112] [113] [114]. Corruption is reported to reduce immunization rates, delay child vaccination, and hinder the effective use of public clinics [77]. Also, corruption is found to reduce health outcomes [115], whereas the quality of governance has a higher impact on health outcomes through health spending [116].

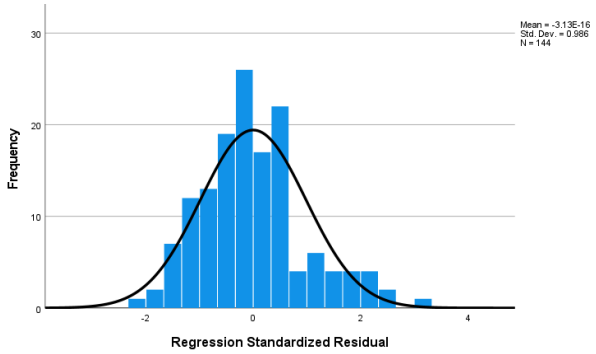
The last variable is DALYs, which represents combined causes of morbidity and mortality [117]. The data for DALYs are taken from 23 age groups, males and females, from 204 countries. The data are aggregated from multiple sources such as censuses,

household surveys, civil registration and vital statistics, disease registries, health service use, air pollution monitors, satellite imaging, and disease notifications. These data are gathered from a systematic review of published studies, searches of government and international organization websites, published reports, and the Demographic and Health Surveys [118]. The way DALYs is scored is that one value of DALYs equals one lost year. So, the more years a country has, the more years are lost due to illness or disability. DALYs data are going to be accessed from the Global Burden of Disease Collaborative Network. The data for DALYs were adjusted by age per 100,000.

Two confounding variables, GDP per capita and health expenditure (both in USD), were obtained from World Bank national accounts data and OECD National Accounts data files and the World Health Organization Global Health Expenditure database, respectively. Data for the five variables were downloaded in separate excel files, which were combined into one file matched by country names, then imported to SPSS.

Data preparation

Figure 2
Regression Standardized Residual of DALYs



Source: Author.

Analyses for multicollinearity, homoscedasticity, independence of errors, normally distributed errors, linearity, missing values, outliers, and non-zero variances were carried out [119]. The sample size entered into SPSS was 192 countries, but 144 countries end up being analyzed due to the removal of missing values and outliers (48 countries). We decided to remove the missing values because these were not missing at random (NMAR). The analysis of standard residuals was conducted to confirm the absence of any further outliers. The analysis showed no outliers as the minimum Std. Residual = -2.244 and the maximum Std. Residual = 3.142, which are both within 3.29 and -3.29 which makes them clustered within the 99.95% interval [120]. The averaged residual of the 144 data points equals 0, which means the linearity assumption holds (see **Table 1** in **Appendix A**) . The analysis showed no multicollinearity between the four independent variables. By looking at the Variance Indicator Factor (VIF) in **Table 2** in **Appendix A**, VIF for each variable was under 7. The cut-off used for this analysis is 10, which is widely used in regression analysis [121]. Independence of errors was not a concern since the Durbin-Watson value equals 1.8 (see **Table 3** in **Appendix A**). The data met the assumption of normality as

the normal distribution curve is seen in the Regression Standardized Residual Histogram in **Figure 2**.

The scatterplot of standardized predicted value/scatterplot of standardized residual in **Figures 3a and 3b** further show that assumptions for homoscedasticity (homogeneity of variance) and linearity are satisfied. All variables, including independent and dependent, meet the assumption of non-zero variances. This can be seen in **Table 4** in **Appendix A** where each variable's variance value is over zero. Overall, all assumptions for running multiple linear regressions (MLR) have been met in our data.

Figure 3a
The scatterplot of standardized residual

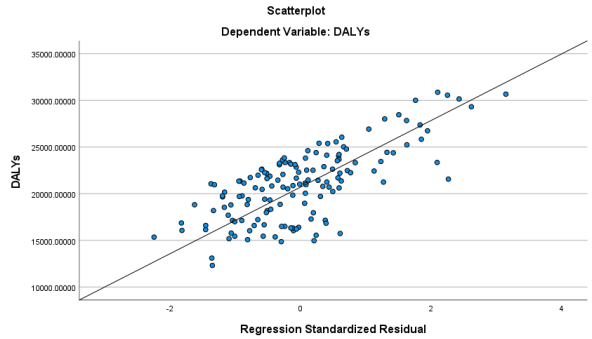
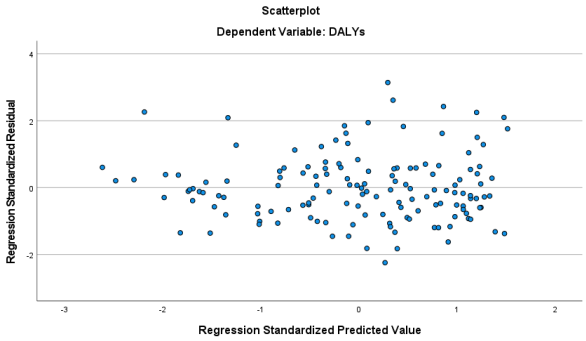


Figure 3b
The scatterplot of standardized predicted value



Source: Author.

Data analysis

The analysis was conducted in IBM SPSS Statistics 28.0.0.0. Two parametric measures have been conducted to draw a conclusion on how GE and CPI relate to DALYs. First, pearson correlation has been measured to determine the relationship between the independent and dependent variables. Second, regression analysis was carried out to identify what variables have significant impacts on the dependent variable. Multiple linear regression was applied to check the model significance, then stepwise regression analysis was conducted to select the best predictor of DALYs. Lastly, hierarchical regression was used to assess the amount of variance in the dependent variable, DALYs (y), at the entry of each predictor value. Variables for this analysis are two independent variables: Government Effectiveness (GE) (x1) and Corruption Perceptions Index (CPI) (x2) and one dependent variable: DALYs (y). Independent variables and the dependent variable are all continuous. Two confounding variables were considered for control: the economic condition in GDP per capita, and health expenditures per capita. To measure the variances accounted for the dependent variable and the significance of independent variables, the adjusted R^2 was calculated and t-tests were applied at a significance level of alpha equal to 0.05, respectively [122]. The stepwise variable selection procedure with Bayesian information criterion (BIC) as criterion was applied to simplify the model but not decrease the model performance significantly, which can be also considered as a way to assess the importance of independent variables. In the hierarchical regression analysis, data were entered into two blocks from the least known to the best known. Block one contained the second predictor variable CPI, GDP per capita, and HE (Health Expenditure). Block two consisted of the first predictor variable GE (see **Figure 4**). It is

important to notice that this arrangement was adjusted based on initial testing of the assumptions mentioned above.

Figure 4
Blocks in SPSS

	Independent variables		Dependent variable
Block one	• Corruption Perceptions Index • GDP • Health expenditure	→	DALYs
Block two	• Government effectiveness	→	

RESULTS

After preparing the data for the main analysis, Pearson's correlation was measured to test the first research question as stated: what are the relationships between government effectiveness, Corruption Perceptions Index, and DALYs? As seen in **Table 5** in **Appendix A**, the relationships between GE and DALYs and CPI and DALYs are statistically significant r = -.67 and r = -.61 at a p-value of .01, respectively. These correlations explain that when government effectiveness increases, the years lived in disability per 100,000 individuals decreases. Similarly, when the perception of corruption increases, the years lived in disability per 100,000 individuals decreases. This could be interpreted as that once GE increases, CPI influence on DALYs will not be significant. Although a high correlation exists between GE and CPI where r = .904, the following regression tests show that CPI cannot replace GE as the latter remains significant even when CPI is part of the model. CPI becomes insignificant when the GE is entered into the model. In other words, the effect of CPI on DALYs is masked when GE exists in the model.

In the next step, applying multiple regression analysis, DALYs were regressed on GE and CPI to test the model significance. At first, the adjusted R^2 for the model was equal .444. To improve the model performance in terms of R^2, both independent variables (GE and CPI) were squared and then added to the previous model. However, the squared independent variables did not improve the model as expected but brought the issue of multicollinearity. After adding the confounding variables, GDP per capita and Health expenditure, the Adjusted R^2 slightly jumped to .462 (see **Table 6** in **Appendix A**). This result allows us to understand that 46.2% of the variance in DALYs is explained by GE, CPI, GDP per capita, and HE. When looking at the coefficients in **Table 7** in **Appendix A**, only GE has a significant correlation with DALYs. The unstandardized coefficient Beta value for GE is -81.19 which reflects a negative correlation with DALYs, which means when GE increases by one unit, DALYs are reduced by 81 years per 100,000 individuals. In addition, at a 95% confidence interval, the mean score for spending fewer years in DALYs will fall between -120.13 and -42.27, see **Table 7** in **Appendix A**. In other words, with a 95% confidence level, one unit increase in GE saves a maximum of 120 years and a minimum of 42 years lived in DALYs per 100,000 individuals in the entire population (world countries).

Next, we ran a stepwise regression analysis to identify the best predictors of DALYs. The independent variables entered for the stepwise regression were GE and CPI, based on p-values of 0.001 and .735, respectively. Squared GE, Squared CPI, GDP per capita, and HE were also entered into the analysis to select the best predictor for DALYs. The analysis selected two models. The first model contains GE with an adjusted R^2 equal to .448 and a significant p-value less than .001. The R^2 change for this model is .452. The second model selected GE and GDP per capita of an adjusted R^2 equal to .466 and a non-significant p-value. The R^2 change is .022 (see **Table 8** in **Appendix A**). Based on the result from the stepwise regression analysis GE is the best predictor of DALYs (p-value less than .001), which was further confirmed by the following hierarchical regression analysis.

To further determine the incremental effect of independent variables on the dependent variable, in this case, DALYs, hierarchical regression was applied. We entered CPI, GDP per capita, and HE in block one while GE was entered in the second block. The output for the first model (CPI, GDP per capita, HE) had an $R^2 = .413$, Adjusted $R^2 = .401$, and F value = 32.8 which was significant. The R^2 change was .413 with a significant F change of 32.8. the values for the second model are $R^2 = .477$, adjusted $R^2 = .462$, F value = 31.722 that was significant. Regarding the R^2 change, it was equal to .064 with a significant F change of 17.0. The interpretation of these values can be simply understood by looking at the R^2 change in the two models. In the first model when we have CPI, GDP per capita, and HE, the baseline R^2 change was .413 meaning that 41.3% of the variation in DALYs is being accounted for by CPI, GDP per capita, and HE. However, when GE was added to the previous model (in the second model), the R^2 change became .064. This change is significant, and it explains that GE alone accounts for 6.4% variability in DALYs, as noted in **Tables 9 and 10** in **Appendix A**.

DISCUSSION

Our analysis shows that government effectiveness as a variable is a significant predictor of DALYs. Although Corruption, GDP, and health expenditures are all statistically associated with DALYs, government effectiveness can predict 6.4% of the variability in DALYs. Several other studies have shown the relationship between governance effectiveness and corruption with different public health outcomes, such as mortality rates and life expectancy [123] [124] [125] [126] [127] [128] [129]. This analysis expands the investigation to measure the amount of variance in the health of populations. Knowing how much independent variables contribute to the variations in the dependent variable allows us to tailor recommendations that address practice implications and research implications. For example, government effectiveness is found to be the most predictive variable for DALYs. This result helps us in considering the key role of government effectiveness in determining the health outcomes of populations as a whole.

The effect of corruption on health is well documented in previous literature [130]. Corruption is negatively correlated with different public health indicators, including mortality rates and life expectancy [131]. Our results confirmed the statistical relationship established in the literature regarding the correlation between corruption and health expenditure in that the less perceived corruption is present, the more investment in healthcare occurs [132]. Similarly, corruption and GDP have an inverse relationship where higher corruption is negatively associated with GDP per capita in a country [133] [134].

Although our regression analysis shows an insignificant effect of corruption on the health of the population as a whole, there is room for further analyses given the known correlations. One possibility in our dataset is that because there is high multicollinearity between government effectiveness and corruption, the corruption variable is masked when government effectiveness is entered into the model. This specific result aligns with the findings reported by Kim and Wang [135] who found government effectiveness as the only significant variable among the six worldwide governance indicators that affect infant mortality, life expectancy, and the under-5 mortality rate.

This analysis yielded two notable statistical results explaining how governance can be understood in the public provision of healthcare. The first one is prioritizing the importance of government effectiveness in addressing population health issues, especially when the factor of government effectiveness as more modifiable than other governance indicators. For instance, political stability can be greatly influenced by external forces. Another recommendation to consider before increasing health expenditure is to create approaches to improve the structure and performance of governments to utilize health expenditure effectively. For example, while providing health services, ongoing evaluation should be an integral part of the plan to determine what works and does not work, address new challenges, and maintain a reasonable quality of health services. Second is the multicollinearity issue between the two governance indicators, namely government effectiveness and corruption (using the Corruption Perception Index). The issue of multicollinearity can be addressed through conducting methodological research to create a robust instrument that allows for measuring governance indicators while counting for the issue of multicollinearity between different indicators. Also, qualitative studies have partially explored the concept of governance in health; however, using qualitative approaches to explain the particularity of governance are needed to understand how each governance indicator is understood, defined, and applied in practice.

LIMITATIONS

One of the limitations of this study is the utilization of existing quantitative data. The Worldwide Governance Indicators (WGI) have received some criticism regarding the feasibility of comparing governance indicators across countries or over time. The critics of the Worldwide Governance indicators argue that since the data for the indicators are compiled from different sources, they are therefore not identical, and therefore not comparable [136]. Although it is correct that when making a comparison between countries, the governance estimates for the countries of interest may come from different data sources or, in some cases, non-overlapping data sources. However, this does not negate the potential value of comparisons as common units are at least utilized [137]. Second, since the estimates may be obtained from different data sources, each source displays its definition, this allows researchers to understand particularities in the data.

CONCLUSION

It is fair to say that the government plays a measurable role in determining the health of populations. We conclude that the performance of governance as defined as government effectiveness matters in public healthcare services, as well as GDP per capita and health

expenditure. That does not inherently exclude the impact of corruption on health outcomes, but it highlights the need for developing an accurate measure for corruption. Efforts should be made by governments to improve effective provision of healthcare services and curb corruption, and as a result, this may equate to an increase in spending on health. However, to ensure maximum benefits of GDP and effective use of health expenditure, the efficacy of government in terms of planning successful health services is key. This is particularly important because 'effectiveness' can be translated in multiple ways across different health systems in different countries, which requires enough knowledge of the health profile of each country and a carful planning for addressing health issues in different contexts while maintaining the role of governments as a central determinant in the health of populations.

***Fawziah Rabiah-Mohammed**, **RN, PhD, MScN,** is an Assistant Professor, Community Nursing & Healthcare, Nursing Collage, Umm Al-Qura University.*

***Abe Oudshoorn, RN, PhD,** is an Associate Professor and Assistant Dean EDIDA at Western University's Arthur Labatt Family School of Nursing.*

***Dr. Chengqian Xian** is a Data Scientist with a strong academic foundation in statistics. He earned his Ph.D. and M.Sc. in Statistics from Western University, preceded by a B.Sc. from the South China University of Technology. Prior to his current role, he was a Postdoctoral Researcher at the University of Waterloo, where he conducted advanced research from October 2024 to September 2025.*

***Dr. Panagiota ("Penny") Tryphonopoulos** is an Assistant Professor at the Arthur Labatt Family School of Nursing at Western University. Her research program focuses on maternal mental health with an emphasis on supporting parenting and child development within the context of perinatal mood disorders, family violence, and other potential early-life adversities. Her primary focus involves developing/testing strengths-based interventions that support women's parenting and mental health needs and, in turn, promote infant development.*

***Carles Muntaner, PhD, MHS,** is a Professor of Nursing, Public Health, and Psychiatry at the University of Toronto, Canada. He is affiliated with the Keenan Research Center at St. Michaels Hospital and the Department of Mental Health at Johns Hopkins University School of Public Health in Baltimore. He is also currently affiliated with the Universitat Pompeu Fabra through its Johns Hopkins University-UPF Public Policy Center. His research deals with social inequalities in health, politics, policy, and intersectoral action for health.*

***Maxwell Smith, PhD, MSc** is an Associate Professor and CIHR Applied Public Health Chair in Ethics and Health Emergencies in the Faculty of Health Sciences at Western University in London, Ontario, Canada. Professor Smith is the Director of Western's Centre for Bioethics and an Associate Director of the Rotman Institute of Philosophy, and is cross-appointed to the Department of Philosophy, Department of Epidemiology*

and Biostatistics, and Schulich Interfaculty Program in Public Health. His research is in the area of public health ethics, with a focus on infectious disease ethics and the ethical demands that health equity and social justice place on governments and institutions to protect and promote the public's health.

Appendix A

Table 1
Residuals Statistics analysis to detect outliers

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	14025.66	25032.54	20989.56	2666.157	144
Residual	-6351.25	8894.07	.000	2790.490	144
Std. Predicted Value	-2.612	1.516	.000	1.00	144
Std. Residual	-2.244	3.142	.000	.986	144

a. Dependent Variable: DALYs

Table 2
Test of multicollinearity

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	24521.380	796.626		30.782	<.001		
	Gov. Effectiveness	-81.199	19.689	-.596	-4.124	<.001	.180	5.554
	Corruption Perception Index	29.641	32.949	.146	.900	.370	.142	7.050
	GDP per capita	-.035	.029	-.194	-1.186	.238	.140	7.122
	Healthexpenditure	-.163	.295	-.086	-.553	.581	.155	6.439

a. Dependent Variable: DALYs

Table 3
Model summary for Durbin-Watson value

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.691[a]	.477	.462	2830.357	1.823

a. Predictors: (Constant), Healthexpenditure, Gov. Effectiveness, Corruption Perception Index, GDP per capita
b. Dependent Variable: DALYs

Table 4
Descriptive statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Corruption Perception Index	144	16	88	44.81	19.074	363.818
Gov. Effectiveness	144	1.4423	100	50.474	28.329	802.512
DALYs	144	12317.401	30874.436	20989.561	3859.434	14895228.295
Healthexpenditure	144	22.0498	10623.85	1276.46	2035.79	4144437.75
GDP per capita	144	238.784	117197.482	15925.4092	21546.441	464249103.521
Valid N (listwise)	144					

Table 5
Correlations table

Correlations

		Corruption Perception Index	Gov. Effectiveness	DALYs	Health Expenditure	GDP per Capita
Corruption Perception Index	Pearson Correlation	1	.904**	-.617**	.786**	.807**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001
	N	144	144	144	144	144
Gov. Effectiveness	Pearson Correlation	.904**	1	-.672**	.719**	.756**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001
	N	144	144	144	144	144
DALYs	Pearson Correlation	-.617**	-.672**	1	-.577**	-.605**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001
	N	144	144	144	144	144
Health Expenditure	Pearson Correlation	.786**	.719**	-.577**	1	.915**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001
	N	144	144	144	144	144
GDP per capita	Pearson Correlation	.807**	.756**	-.605**	.915**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	

N	144	144	144	144	144

**. Correlation is significant at the 0.01 level (2-tailed).

Table 6
Multiple regression analysis

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.691[a]	.477	.462	2830.35664750	1.823

a. Predictors: (Constant), GDP per capita, Gov. Effectiveness, Healthexpenditure, Corruption Perception Index
b. Dependent Variable: DALYs

Table 7
Multiple regression analysis

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	24521.380	796.626		30.782	<.001	22946.309	26096.451		
	Gov. Effectiveness	-81.199	19.689	-.596	-4.124	<.001	-120.128	-42.269	.180	5.554
	Corruption Perception Index	29.641	32.949	.146	.900	.370	-35.504	94.787	.142	7.050
	Healthexpenditure	-.163	.295	-.086	-.553	.581	-.746	.420	.155	6.439
	GDP per capita	-.035	.029	-.194	-1.186	.238	-.093	.023	.140	7.122

a. Dependent Variable: DALYs

Table 8
Stepwise regression

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.672[a]	.452	.448	2867.942	.452	116.966	1	142	<.001
2	.688[b]	.474	.466	2819.928	.022	5.877	1	141	.017

a. Predictors: (Constant), Gov. Effectiveness
b. Predictors: (Constant), Gov. Effectiveness, GDP per capita
c. Dependent Variable: DALYs

Table 9
Hierarchical regression

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.643[a]	.413	.401	2987.78669202	.413	32.869	3	140	<.001	
2	.691[b]	.477	.462	2830.35664750	.064	17.007	1	139	<.001	1.823

a. Predictors: (Constant), Healthexpenditure, Corruption Perception Index, GDP per capita
b. Predictors: (Constant), Healthexpenditure, Corruption Perception Index, GDP per capita, Gov. Effectiveness
c. Dependent Variable: DALYs

Table 10
Hierarchical regression

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	880255941.851	3	293418647.284	32.869	<.001[b]
	Residual	1249761704.383	140	8926869.317		
	Total	2130017646.235	143			
2	Regression	1016499939.701	4	254124984.925	31.722	<.001[c]
	Residual	1113517706.533	139	8010918.752		
	Total	2130017646.235	143			

a. Dependent Variable: DALYs
b. Predictors: (Constant), Healthexpenditure, Corruption Perception Index, GDP per capita
c. Predictors: (Constant), Healthexpenditure, Corruption Perception Index, GDP per capita, Gov. Effectiveness

Appendix B

Table 1
Countries included in the study

Countries			
Albania	Djibouti	Latvia	Poland
Algeria	Dominica	Lebanon	Portugal
Angola	Dominican Republic	Lesotho	Qatar
Argentina	Ecuador	Liberia	Romania
Armenia	El Salvador	Lithuania	Rwanda
Australia	Equatorial Guinea	Luxembourg	Saudi Arabia
Austria	Estonia	Madagascar	Senegal
Azerbaijan	Ethiopia	Malawi	Serbia
Bahrain	Finland	Malaysia	Seychelles
Bangladesh	France	Maldives	Sierra Leone
Barbados	Gabon	Mali	Singapore
Belarus	Georgia	Malta	Slovenia
Belgium	Germany	Mauritania	South Africa
Benin	Ghana	Mauritius	Spain
Bhutan	Greece	Mexico	Sri Lanka
Bolivia	Grenada	Moldova	Sudan
Bosnia and Herzegovina	Guatemala	Mongolia	Suriname
Botswana	Guinea	Montenegro	Sweden
Brazil	Guinea-Bissau	Morocco	Switzerland
Bulgaria	Guyana	Mozambique	Tajikistan
Burkina Faso	Haiti	Myanmar	Tanzania
Burundi	Honduras	Namibia	Thailand
Cambodia	Hungary	Nepal	Togo
Cameroon	Iceland	Netherlands	Trinidad and Tobago
Canada	India	New Zealand	Tunisia
Central African Republic	Indonesia	Nicaragua	Turkey
Chad	Iraq	Niger	Turkmenistan
Chile	Ireland	Nigeria	Uganda
China	Israel	Norway	Ukraine
Colombia	Italy	Oman	United Arab Emirates
Comoros	Jamaica	Pakistan	United Kingdom
Costa Rica	Japan	Panama	United States
Croatia	Jordan	Papua New Guinea	Uruguay
Cuba	Kazakhstan	Paraguay	Vietnam
Cyprus	Kenya	Peru	Zambia
Denmark	Kuwait	Philippines	Zimbabwe

[1] Raghupathi, Viju, and Wullianallur Raghupathi. "The influence of education on health: an empirical assessment of OECD countries for the period 1995–2015." *Archives of Public Health* 78, no. 1 (2020): 1-18.
[2] Braveman, Paula A., Catherine Cubbin, Susan Egerter, David R. Williams, and Elsie Pamuk. "Socioeconomic disparities in health in the United States: what the patterns tell us." *American journal of public health* 100, no. S1 (2010): S186-S196.
[3] National Center for Health Statistics (US). "Health, United States, 2011: with special feature on socioeconomic status and health". National Center for Health Statistics (US). (2011). https://pubmed.ncbi.nlm.nih.gov/22812021/
[4] Woolf, S. H., Aron, L. Y., Dubay, L., Simon, S. M., Zimmerman, E., & Luk, K. (2016). *How are income and wealth linked to health and longevity?* Urban Institute. https://www.urban.org/sites/default/files/publication/49116/2000178-How-are-Income-and-Wealth-Linked-to-Health-and-Longevity.pdf
[5] Pritchett, Lant, and Lawrence H. Summers. *Wealthier is healthier*. Vol. 1150. World Bank Publications, 1993.
[6] Raghupathi, Viju, and Wullianallur Raghupathi. "The influence of education on health: an empirical assessment of OECD countries for the period 1995–2015." *Archives of Public Health* 78, no. 1 (2020): 1-18.
[7] Pritchett, Lant, and Lawrence H. Summers. *Wealthier is healthier*. Vol. 1150. World Bank Publications, 1993.
[8] Bambra, Clare, Debbie Fox, and Alex Scott-Samuel. "A politics of health glossary." *Journal of Epidemiology & Community Health* 61, no. 7 (2007): 571-574.
[9] Kaufmann, Daniel, Aart Kraay, and Massimo Mastruzzi. "Measuring corruption: myths and realities." (2007).
[10] Woolf, Steven H., Laudan Y. Aron, Lisa Dubay, Sarah M. Simon, Emily Zimmerman, and Kim Luk. "How are income and wealth linked to health and longevity?." (2016).
[11] The World Bank. "WGI-documents ?". World Bank. (2020). https://info.worldbank.org/governance/wgi/Home/Documents#doc-intro
[12] Guisan, Maria-Carmen. *Government effectiveness, education, economic development and well-being: Analysis of European countries in comparison with the United States and Canada, 2000-2007*. SSRN, 2018.
[13] Makuta, Innocent, and Bernadette O'Hare. "Quality of governance, public spending on health and health status in Sub Saharan Africa: a panel data regression analysis." *BMC public health* 15, no. 1 (2015): 1-11.
[14] Kim, Sunhee, and Jaesun Wang. "Does quality of government matter in public health?: comparing the role of quality and quantity of government at the National Level." *Sustainability* 11, no. 11 (2019): 3229.
[15] Factor, Roni, and Minah Kang. "Corruption and population health outcomes: an analysis of data from 133 countries using structural equation modeling." *International journal of public health* 60 (2015): 633-641.
[16] Pritchett, Lant. "Mind your p's and q's: the cost of public investment is not the value of public capital." *Available at SSRN 620621* (1996).
[17] García-Sánchez, Isabel-María, José-Valeriano Frías-Aceituno, and Luis Rodríguez-Domínguez. "Determinants of corporate social disclosure in Spanish local governments." *Journal of Cleaner Production* 39 (2013): 60-72.
[18] Achim, Monica Violeta, Viorela Ligia Văidean, and Sorin Nicolae Borlea. "Corruption and health outcomes within an economic and cultural framework." *The European journal of health economics* 21, no. 2 (2020): 195-207.
[19] Aregbeshola, Bolaji Samson. "Institutional corruption, health-sector reforms, and health status in Nigeria." *The Lancet* 388, no. 10046 (2016): 757.
[20] Murray, Christopher JL, Theo Vos, Rafael Lozano, Mohsen Naghavi, Abraham D. Flaxman, Catherine Michaud, Majid Ezzati et al. "Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010." *The lancet* 380, no. 9859 (2012): 2197-2223.

[21] Chen, Ariel, Kathryn H. Jacobsen, Ashish A. Deshmukh, and Scott B. Cantor. "The evolution of the disability-adjusted life year (DALY)." *Socio-economic planning sciences* 49 (2015): 10-15.
[22] Chen, Ariel, Kathryn H. Jacobsen, Ashish A. Deshmukh, and Scott B. Cantor. "The evolution of the disability-adjusted life year (DALY)." *Socio-economic planning sciences* 49 (2015): 10-15.
[23] Bigna, Jean Joel, and Jean Jacques Noubiap. "The rising burden of non-communicable diseases in sub-Saharan Africa." *The Lancet Global Health* 7, no. 10 (2019): e1295-e1296.
[24] PAHO. "The disease burden of Noncommunicable Diseases, PAHO/WHO | Pan American Health Organization." PAHO. (2021). https://www.paho.org/en/enlace/disease-burden-noncommunicable-diseases
[25] World Health Organization. "Life expectancy increases by 5 years, but inequalities persist, World Health Organization". GENEVA: World Health Organization. (2016). https://www.who.int/news/item/19-05-2016-life-expectancy-increased-by-5-years-since-2000-but-health-inequalities-persist
[26] Chen, Ariel, Kathryn H. Jacobsen, Ashish A. Deshmukh, and Scott B. Cantor. "The evolution of the disability-adjusted life year (DALY)." *Socio-economic planning sciences* 49 (2015): 10-15.
[27] Grosse, Scott D., Donald J. Lollar, Vincent A. Campbell, and Mary Chamie. "Disability and disability-adjusted life years: not the same." *Public Health Reports* 124, no. 2 (2009): 197-202.
[28] The World Bank. "WGI-documents ?". World Bank. (2020). https://info.worldbank.org/governance/wgi/Home/Documents#doc-intro
[29] Raghupathi, Viju, and Wullianallur Raghupathi. "The influence of education on health: an empirical assessment of OECD countries for the period 1995–2015." *Archives of Public Health* 78, no. 1 (2020): 1-18.
[30] Transparency International. "What is corruption?". Transparency.org. (2022). https://www.transparency.org/en/what-is-corruption
[31] Raghupathi, Viju, and Wullianallur Raghupathi. "The influence of education on health: an empirical assessment of OECD countries for the period 1995–2015." *Archives of Public Health* 78, no. 1 (2020): 1-18.
[32] Batniji, Rajaie, Lina Khatib, Melani Cammett, Jeffrey Sweet, Sanjay Basu, Amaney Jamal, Paul Wise, and Rita Giacaman. "Governance and health in the Arab world." *The Lancet* 383, no. 9914 (2014): 343-355.
[33] Hanf, Matthieu, Astrid Van-Melle, Florence Fraisse, Amaury Roger, Bernard Carme, and Mathieu Nacher. "Corruption kills: estimating the global impact of corruption on children deaths." *PLoS One* 6, no. 11 (2011): e26990.
[34] Holmberg, Sören, and Bo Rothstein. "Dying of corruption." *Health Economics, Policy and Law* 6, no. 4 (2011): 529-547.
[35] Li, Qiang, Lian An, Jing Xu, and Mina Baliamoune-Lutz. "Corruption costs lives: evidence from a cross-country study." *The European Journal of Health Economics* 19 (2018): 153-165.
[36] Ruiz-Cantero, María Teresa, Marta Guijarro-Garvi, Donna Rose Bean, José Ramón Martínez-Riera, and José Fernández-Sáez. "Governance commitment to reduce maternal mortality. A political determinant beyond the wealth of the countries." *Health & place* 57 (2019): 313-320.
[37] Ahmad, N. A., NORMAZ WANA Ismail, AUWAL Y. Tilde, and ALHAJI JIBRILLA Aliyu. "Effects of air pollution and corruption control on life expectancy in middle-income countries." *International Journal of Economics and Management* (2021).
[38] Uchendu, Florence Ngozi, and Thaddeus Olatunbosun Abolarin. "Corrupt practices negatively influenced food security and live expectancy in developing countries." *The Pan African Medical Journal* 20 (2015).
[39] Li, Qiang, Lian An, Jing Xu, and Mina Baliamoune-Lutz. "Corruption costs lives: evidence from a cross-country study." *The European Journal of Health Economics* 19 (2018): 153-165.
[40] Nikoloski, Zlatko, and Elias Mossialos. "Corruption, inequality and population perception of healthcare quality in Europe." *BMC health services research* 13 (2013): 1-10.
[41] Ferrari, Lorenzo, and Francesco Salustri. "The relationship between corruption and chronic diseases: evidence from Europeans aged 50 years and older." *International Journal of Public Health* 65 (2020): 345-355.

[42] Lee, Hwa-Young, Bong-Ming Yang, and Minah Kang. "Control of corruption, democratic accountability, and effectiveness of HIV/AIDS official development assistance." *Global health action* 9, no. 1 (2016): 30306.
[43] Botero-Rodríguez, Felipe, Camila Pantoja-Ruiz, and Diego Rosselli. "Corruption and its relation to prevalence and death due to noncommunicable diseases and risk factors: a global perspective." *Revista Panamericana de Salud Pública* 46 (2022).
[44] Minagawa, Yuka. "Inequalities in healthy life expectancy in Eastern Europe." *Population and development review* 39, no. 4 (2013): 649-671.
[45] Rönnerstrand, Björn, and Victor Lapuente. "Corruption and use of antibiotics in regions of Europe." *Health Policy* 121, no. 3 (2017): 250-256.
[46] Witvliet, Margot I., Anton E. Kunst, Onyebuchi A. Arah, and Karien Stronks. "Sick regimes and sick people: a multilevel investigation of the population health consequences of perceived national corruption." *Tropical Medicine & International Health* 18, no. 10 (2013): 1240-1247.
[47] Biadgilign, Sibhatu, Habtamu Yesigat Ayenew, Arega Shumetie, Stanley Chitekwe, Assaye Tolla, Demewoz Haile, Seifu Hagos Gebreyesus, Amare Deribew, and Betemariam Gebre. "Good governance, public health expenditures, urbanization and child undernutrition Nexus in Ethiopia: an ecological analysis." *BMC health services research* 19, no. 1 (2019): 1-10.
[48] Chainey, Spencer P., Gonzalo Croci, and Laura Juliana Rodriguez Forero. "The influence of government effectiveness and corruption on the high levels of homicide in Latin America." *Social Sciences* 10, no. 5 (2021): 172.
[49] Ferrara, Antonella Rita, and Rosanna Nisticò. "Does institutional quality matter for multidimensional well-being inequalities? Insights from Italy." *Social Indicators Research* 145, no. 3 (2019): 1063-1105.
[50] Walker, Gabriela. "Impact of ecological factors on concern and awareness about disability: A statistical analysis." *Research in developmental disabilities* 35, no. 11 (2014): 2781-2789.
[51] Mackenbach, Johan P., and Martin McKee. "A comparative analysis of health policy performance in 43 European countries." *The European Journal of Public Health* 23, no. 2 (2013): 195-201.
[52] Mackenbach, Johan P., and Martin McKee. "Government, politics and health policy: a quantitative analysis of 30 European countries." *Health Policy* 119, no. 10 (2015): 1298-1308.
[53] Machoski, Eduarda, and Jevuks Matheus de Araujo. "Corruption in public health and its effects on the economic growth of Brazilian municipalities." *The European Journal of Health Economics* 21, no. 5 (2020): 669-687.
[54] Rispel, Laetitia C., Pieter De Jager, and Sharon Fonn. "Exploring corruption in the South African health sector." *Health policy and planning* 31, no. 2 (2016): 239-249.
[55] Ruiz-Cantero, María Teresa, Marta Guijarro-Garvi, Donna Rose Bean, José Ramón Martínez-Riera, and José Fernández-Sáez. "Governance commitment to reduce maternal mortality. A political determinant beyond the wealth of the countries." *Health & place* 57 (2019): 313-320.
[56] Li, Qiang, Lian An, Jing Xu, and Mina Baliamoune-Lutz. "Corruption costs lives: evidence from a cross-country study." *The European Journal of Health Economics* 19 (2018): 153-165.
[57] Biadgilign, Sibhatu, Habtamu Yesigat Ayenew, Arega Shumetie, Stanley Chitekwe, Assaye Tolla, Demewoz Haile, Seifu Hagos Gebreyesus, Amare Deribew, and Betemariam Gebre. "Good governance, public health expenditures, urbanization and child undernutrition Nexus in Ethiopia: an ecological analysis." *BMC health services research* 19, no. 1 (2019): 1-10.
[58] Factor, Roni, and Minah Kang. "Corruption and population health outcomes: an analysis of data from 133 countries using structural equation modeling." *International journal of public health* 60 (2015): 633-641.
[59] Kim, Sunhee, and Jaesun Wang. "Does quality of government matter in public health?: comparing the role of quality and quantity of government at the National Level." *Sustainability* 11, no. 11 (2019): 3229.
[60] Farag, Marwa, A. K. Nandakumar, Stanley Wallack, Dominic Hodgkin, Gary Gaumer, and Can Erbil. "Health expenditures, health outcomes and the role of good governance." *International journal of health care finance and economics* 13 (2013): 33-52.
[61] Hassan, A. M., M. N. Norashidah, and Z. M. Nor. "The impact of health care expenditure and infectious diseases on labour productivity performance in Africa: Do institutions matter." *Pertanika Journal of Social Sciences & Humanities* 24, no. 1 (2016): 277-296.
[62] Langnel, Zechariah, and Ponlapat Buracom. "Governance, health expenditure and infant mortality in sub-Saharan Africa." *African Development Review* 32, no. 4 (2020): 673-685.

[63] Novignon, Jacob. "On the efficiency of public health expenditure in Sub-Saharan Africa: Does corruption and quality of public institutions matter?." (2015).
[64] Omotoye, Oluwatobi O., Zaccheaus O. Olonade, and Olumide O. Omodunbi. " Corruption practices and government effectiveness on human capital development in Nigeria." un-pub.eu. 2021. https://www.un-pub.eu/ojs/index.php/gjs/article/view/5550
[65] Sirag, Abdalla, Norashidah Mohamed Nor, and Nik Mustapha Raja Abdullah. "Health Financing: Does Governance Quality Matter?." *Iranian Economic Review* 21, no. 3 (2017): 693-723.
[66] Sommer, Jamie M. "Corruption and health expenditure: A cross-national analysis on infant and child mortality." *The European Journal of Development Research* 32 (2020): 690-717.
[67] Kim, Sunhee, and Jaesun Wang. "Does quality of government matter in public health?: comparing the role of quality and quantity of government at the National Level." *Sustainability* 11, no. 11 (2019): 3229.
[68] Kim, Sunhee, and Jaesun Wang. "Does quality of government matter in public health?: comparing the role of quality and quantity of government at the National Level." *Sustainability* 11, no. 11 (2019): 3229.
[69] Garcia-Sanchez, Isabel Maria, Beatriz Cuadrado-Ballesteros, and Jose Frias-Aceituno. "Determinants of government effectiveness." *International Journal of Public Administration* 36, no. 8 (2013): 567-577.
[70] The World Bank. "WGI-documents ?". World Bank. (2020). https://info.worldbank.org/governance/wgi/Home/Documents#doc-intro
[71] Jermsittiparsert, Kittisak, and Thanaporn Sriyakul. "Impact Of Public Wellness, Competitiveness And Government Effectiveness On Quality Of Education: A Panel Data Analysis Of Asian Countries." *Journal of Security & Sustainability Issues* 9 (2020).
[72] Nikzadian, Ali. "The effects of resource rent, human capital and government effectiveness on government health expenditure in organization of the petroleum exporting countries." In *The effects of resource rent, human capital and government effectiveness on government health expenditure in organization of the petroleum exporting countries: Nikzadian, Ali*. 2019.
[73] Francois, John Nana, Johnson Kakeu, and Cristelle Kouame. "Do Better Institutions Broaden Access To Sanitation In Sub-Sahara Africa?." *Contemporary Economic Policy* 39, no. 2 (2021): 435-452.
[74] Luh, Jeanne, and Jamie Bartram. "Drinking water and sanitation: progress in 73 countries in relation to socioeconomic indicators." *Bulletin of the World Health Organization* 94, no. 2 (2016): 111.
[75] Anser, Muhammad Khalid, Romanus Osabohien, Olawale Olonade, Alhassan Abdulwakeel Karakara, Idowu Bashiru Olalekan, Junaid Ashraf, and Angie Igbinoba. "Impact of ICT adoption and governance interaction on food security in West Africa." *Sustainability* 13, no. 10 (2021): 5570.
[76] Olofin, Olabode Philip, Toyin Joseph Olufolahan, and Taiwo Dayo Jooda. "Food security, income growth and government effectiveness in West African countries." *European Scientific Journal* 11, no. 31 (2015).
[77] Uchendu, Florence Ngozi, and Thaddeus Olatunbosun Abolarin. "Corrupt practices negatively influenced food security and live expectancy in developing countries." *The Pan African Medical Journal* 20 (2015).
[78] Akinbode, Sakiru O., Jayeola Olabisi, Remilekun R. Adegbite, Timothy A. Aderemi, and Abimbola M. Alawode. "Corruption, Government Effectiveness and Human Development in Sub-Saharan Africa." (2020).
[79] Gani, Azmat, and Frank Scrimgeour. "Modeling governance and water pollution using the institutional ecological economic framework." *Economic modelling* 42 (2014): 363-372.
[80] Ash, Ivan K., Ann L. Edwards, and Bryan E. Porter. "An investigation of state population characteristics that moderate the relationship of state seat belt law and use in the United States." *Accident Analysis & Prevention* 71 (2014): 129-136.
[81] Jafari Tadi, Maryam, Mostafa Rajabi, and Bahar Hafezi. "The effect of quality of Institutional corruption and natural resources dependence on health in Iran." *Journal of Health Administration* 24, no. 2 (2021): 94-103.
[82] Osakede, Uche Abamba. "Public health spending and health outcome in Nigeria: the role of governance." *International Journal of Development Issues* 20, no. 1 (2021): 95-112.
[83] Ortega, Bienvenido, Jesús Sanjuán, and Antonio Casquero. "Determinants of efficiency in reducing child mortality in developing countries. The role of inequality and government effectiveness." *Health care management science* 20 (2017): 500-516.
[84] Osakede, Uche Abamba. "Public health spending and health outcome in Nigeria: the role of governance." *International Journal of Development Issues* 20, no. 1 (2021): 95-112.

[85] Chong, Siew Pyng Christine, Chwee Ming Tee, and Seow Voon Cheng. "Political institutions and the control of corruption: a cross-country evidence." *Journal of Financial Crime* 28, no. 1 (2020): 26-48.
[86] Rehmat, Sania, Muhammad Tariq Majeed, and Abida Zainab. "Panel data analysis of institutional quality and population health outcomes." *Empirical Economic Review* 3, no. 1 (2020): 21-42.
[87] Helliwell, John F., Haifang Huang, Shawn Grover, and Shun Wang. "Empirical linkages between good governance and national well-being." *Journal of Comparative Economics* 46, no. 4 (2018): 1332-1346.
[88] Hsiao, Amber, Verena Vogt, and Wilm Quentin. "Effect of corruption on perceived difficulties in healthcare access in sub-Saharan Africa." *PloS one* 14, no. 8 (2019): e0220583.
[89] Sitienei, Jackline, Mabel Nangami, and Lenore Manderson. "The Implementation of Governance Attributes in Health in Uasin Gishu County, Kenya." *The East African Health Research Journal* 2, no. 2 (2018): 91.
[90] Abimbola, Seye, Joel Negin, Stephen Jan, and Alexandra Martiniuk. "Towards people-centred health systems: a multi-level framework for analysing primary health care governance in low-and middle-income countries." *Health Policy and Planning* 29, no. suppl_2 (2014): ii29-ii39.
[91] Baez Camargo, Claudia, and Eelco Jacobs. "A framework to assess governance of health systems in low income countries." (2011).
[92] Brinkerhoff, Derick W., and Thomas J. Bossert. "Health governance: concepts, experience, and programming options." *Bethesda: Health Systems* 20 (2008): 20.
[93] Islam, Mursaleena. "Health systems assessment approach: a how-to manual." *Health systems assessment approach: a how-to manual.* (2007).
[94] Nikoloski, Zlatko, and Elias Mossialos. "Corruption, inequality and population perception of healthcare quality in Europe." *BMC health services research* 13 (2013): 1-10.
[95] Islam, Mursaleena. "Health systems assessment approach: a how-to manual." *Health systems assessment approach: a how-to manual.* (2007).
[96] Ibid.
[97] de Leeuw, Evelyne, and Carole Clavier. "Healthy public in all policies." *Health Promotion International* 26, no. suppl_2 (2011): ii237-ii244.
[98] The World Bank. “WGI-documents ?”. World Bank. (2020). https://info.worldbank.org/governance/wgi/Home/Documents#doc-intro
[99] Transparency International. “What is corruption?”. Transparency.org. (2022). https://www.transparency.org/en/what-is-corruption
[100] Raghupathi, Viju, and Wullianallur Raghupathi. "The influence of education on health: an empirical assessment of OECD countries for the period 1995–2015." *Archives of Public Health* 78, no. 1 (2020): 1-18.
[101] The World Bank. “WGI-documents ?”. World Bank. (2020). https://info.worldbank.org/governance/wgi/Home/Documents#doc-intro
[102] Ibid.
[103] Transparency International. “What is corruption?”. Transparency.org. (2022). https://www.transparency.org/en/what-is-corruption
[104] Ibid.
[105] Kim, Sunhee, and Jaesun Wang. "Does quality of government matter in public health?: comparing the role of quality and quantity of government at the National Level." *Sustainability* 11, no. 11 (2019): 3229.
[106] Lin, Ro-Ting, Lung-Chang Chien, Ya-Mei Chen, and Chang-Chuan Chan. "Governance matters: an ecological association between governance and child mortality." *International health* 6, no. 3 (2014): 249-257.
[107] Makuta, Innocent, and Bernadette O’Hare. "Quality of governance, public spending on health and health status in Sub Saharan Africa: a panel data regression analysis." *BMC public health* 15, no. 1 (2015): 1-11.
[108] Azfar, Omar, and Tugrul Gurgur. "Does corruption affect health outcomes in the Philippines?." *Economics of Governance* 9 (2008): 197-244.
[109] Factor, Roni, and Minah Kang. "Corruption and population health outcomes: an analysis of data from 133 countries using structural equation modeling." *International journal of public health* 60 (2015): 633-641.
[110] Azfar, Omar, and Tugrul Gurgur. "Does corruption affect health outcomes in the Philippines?." *Economics of Governance* 9 (2008): 197-244.

[111] Factor, Roni, and Minah Kang. "Corruption and population health outcomes: an analysis of data from 133 countries using structural equation modeling." *International journal of public health* 60 (2015): 633-641.
[112] Lin, Ro-Ting, Lung-Chang Chien, Ya-Mei Chen, and Chang-Chuan Chan. "Governance matters: an ecological association between governance and child mortality." *International health* 6, no. 3 (2014): 249-257.
[113] Makuta, Innocent, and Bernadette O'Hare. "Quality of governance, public spending on health and health status in Sub Saharan Africa: a panel data regression analysis." *BMC public health* 15, no. 1 (2015): 1-11.
[114] Kim, Sunhee, and Jaesun Wang. "Does quality of government matter in public health?: comparing the role of quality and quantity of government at the National Level." *Sustainability* 11, no. 11 (2019): 3229.
[115] Factor, Roni, and Minah Kang. "Corruption and population health outcomes: an analysis of data from 133 countries using structural equation modeling." *International journal of public health* 60 (2015): 633-641.
[116] Makuta, Innocent, and Bernadette O'Hare. "Quality of governance, public spending on health and health status in Sub Saharan Africa: a panel data regression analysis." *BMC public health* 15, no. 1 (2015): 1-11
[117] Vos, Theo, Stephen S. Lim, Cristiana Abbafati, Kaja M. Abbas, Mohammad Abbasi, Mitra Abbasifard, Mohsen Abbasi-Kangevari et al. "Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019." *The Lancet* 396, no. 10258 (2020): 1204-1222.
[118] Ibid.
[119] Plichta, Stacey Beth, Elizabeth A. Kelvin, and Barbara Hazard Munro. *Munro's statistical methods for health care research*. Wolters Kluwer Health/Lippincott Williams & Wilkins, 2013. (80) Field, Andy P. *Discovering statistics using SPSS:(and sex, drugs and rock'n'roll)*. sage, 2005.
[120] Ash, Ivan K., Ann L. Edwards, and Bryan E. Porter. "An investigation of state population characteristics that moderate the relationship of state seat belt law and use in the United States." *Accident Analysis & Prevention* 71 (2014): 129-136.
[121] Vittinghoff, Eric, David V. Glidden, Stephen C. Shiboski, and Charles E. McCulloch. "Regression methods in biostatistics: linear, logistic, survival, and repeated measures models." (2006): 139-202.
[122] Ash, Ivan K., Ann L. Edwards, and Bryan E. Porter. "An investigation of state population characteristics that moderate the relationship of state seat belt law and use in the United States." *Accident Analysis & Prevention* 71 (2014): 129-136.
[123] Ahmad, N. A., NORMAZ WANA Ismail, AUWAL Y. Tilde, and ALHAJI JIBRILLA Aliyu. "Effects of air pollution and corruption control on life expectancy in middle-income countries." *International Journal of Economics and Management* (2021).
[124] Batniji, Rajaie, Lina Khatib, Melani Cammett, Jeffrey Sweet, Sanjay Basu, Amaney Jamal, Paul Wise, and Rita Giacaman. "Governance and health in the Arab world." *The Lancet* 383, no. 9914 (2014): 343-355.
[125] Holmberg, Sören, and Bo Rothstein. "Dying of corruption." *Health Economics, Policy and Law* 6, no. 4 (2011): 529-547.
[126] Kim, Sunhee, and Jaesun Wang. "Does quality of government matter in public health?: comparing the role of quality and quantity of government at the National Level." *Sustainability* 11, no. 11 (2019): 3229.
[127] Li, Qiang, Lian An, Jing Xu, and Mina Baliamoune-Lutz. "Corruption costs lives: evidence from a cross-country study." *The European Journal of Health Economics* 19 (2018): 153-165.
[128] Ruiz-Cantero, María Teresa, Marta Guijarro-Garvi, Donna Rose Bean, José Ramón Martínez-Riera, and José Fernández-Sáez. "Governance commitment to reduce maternal mortality. A political determinant beyond the wealth of the countries." *Health & place* 57 (2019): 313-320.
[129] Uchendu, Florence Ngozi, and Thaddeus Olatunbosun Abolarin. "Corrupt practices negatively influenced food security and live expectancy in developing countries." *The Pan African Medical Journal* 20 (2015).
[130] National Academies of Sciences, Engineering, and Medicine. "The critical health impacts of corruption." In *crossing the global quality chasm: improving health care worldwide*. National Academies Press (US), 2018.

[131] Hanf, Matthieu, Astrid Van-Melle, Florence Fraisse, Amaury Roger, Bernard Carme, and Mathieu Nacher. "Corruption kills: estimating the global impact of corruption on children deaths." *PLoS One* 6, no. 11 (2011): e26990.
[132] Factor, Roni, and Minah Kang. "Corruption and population health outcomes: an analysis of data from 133 countries using structural equation modeling." *International journal of public health* 60 (2015): 633-641.
[133] Ibid.
[134] Li, Qiang, Lian An, Jing Xu, and Mina Baliamoune-Lutz. "Corruption costs lives: evidence from a cross-country study." *The European Journal of Health Economics* 19 (2018): 153-165.
[135] Kim, Sunhee, and Jaesun Wang. "Does quality of government matter in public health?: comparing the role of quality and quantity of government at the National Level." *Sustainability* 11, no. 11 (2019): 3229.
[136] Kaufmann, Daniel, Aart Kraay, and Massimo Mastruzzi. "Measuring corruption: myths and realities." (2007).
[137] Ibid.

GLOBAL
HEALTH GOVERNANCE

A publication of the Center for Global Health Studies,
The School of Diplomacy and International Relations, Seton Hall University