

Chapter 14 Solidarity in crisis: diplomacy, production capacity and the challenges of vaccine procurement in Latin America

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1 Introduction

COVID-19 proved that infectious diseases with a pandemic potential are a serious threat to global health and well-being. Differential factors in health system capacities locate Latin American countries in a vulnerable spot in comparison to higher-income countries. This resulted in elevated infection and fatality rates in the region, seemingly parallel to pre-pandemic health burdens. The region was almost as affected by Covid-19 as Europe and North America, with more than 1,200 confirmed deaths per million inhabitants.¹

Although the increased burden of disease in Latin America is not something new, the dynamic for international vaccine procurement introduced by COVID-19 surely is. Before the Corona crisis, most states in the region relied on the Pan American Health Organization (PAHO) Revolving Fund for Access to Vaccines to ensure transparent negotiations with suppliers as well as fair and affordable prices. This mechanism has proven successful in two ways: by increasing immunization across the region, and by maintaining its legitimacy as the main coordination mechanism over the past 30 years. Notwithstanding, this body which could have become a united front for the negotiation of COVID-19 vaccines in better conditions for the region, was relegated to less crucial activities during the pandemic while the procurement of vaccines was channeled through the COVAX mechanism.

Considering this, this paper analyzes the strategies used by eight Latin American countries to procure COVID-19 vaccines between August 2020

1 Thomas J Bollyky, Christopher J L Murray and Robert C Reiner, 'Epidemiology, Not Geopolitics, Should Guide COVID-19 Vaccine Donations' (2021) 398 *The Lancet* 97 [https://doi.org/10.1016/S0140-6736\(21\)01323-4](https://doi.org/10.1016/S0140-6736(21)01323-4) accessed 20 May 2024.

and November 2021. We combined several sources of information, especially the Global Health Center and the UNICEF agreement databases. Additionally, we monitored official announcements and newspaper articles for over a year to identify other agreements signed, partners, terms of the agreements, and doses delivered over this period. Furthermore, we confirmed some of the information through informal interviews with key government informants.

We show that coherent with the theoretical framework provided in this book, vaccine procurement in Latin America is an example of desolidarization after a crisis. The findings underscore a paradigm shift in solidarity dynamics, illustrating a departure from cooperative endeavors towards self-serving actions. In navigating the complexities of vaccine procurement, states departed from cooperative mechanisms like PAHO's in favor of autonomous approaches such as direct negotiations, concessions and direct negotiations, and concessions and charitable contributions. Instead of a cooperative attitude, the course of the pandemic highlighted the self-interest behavior of states. To procure vaccines, Latin American countries abandoned PAHO's collective procurement mechanisms and engaged in independent strategies such as direct negotiations with medical producers, special contracts, concessions, and donations. Different procurement strategies, in turn, resulted in different timing and overall access to vaccines. Thus, the Corona crisis induced a transnational solidarity conflict, in which involved parties responded with self-interested behaviors.

The paper compares PAHO's revolving fund and COVAX as solidaristic mechanisms. The contrast between PAHO's revolving fund and the COVAX initiative highlights different facets of solidarity – respectively, cooperative, and philanthropic. While the former prioritizes equity and transparency, the latter has a narrower scope and shows tolerance for opacity. We suggest that, although both can be considered expressions of transnational solidarity, the PAHO revolving fund expresses *cooperative solidarity*, with equity and transparency as core values, whereas the COVAX mechanism expresses what we call *philanthropic solidarity*, where only the poorest are meant to benefit, and secrecy is tolerated in the name of increased coverage. Moreover, the fact that philanthropic solidarity was preferred over a cooperative one may threaten the future of Latin America's vaccine regional integration mechanisms in the future.

It is interesting, however, to note that while Latin America was experiencing a desolidarization moment, the European Union was developing an emerging mechanism close to the Revolving fund to procure COVID-19

vaccines. This may suggest that moments of crisis can destabilize established norms to produce both desolidarization and solidarization at the same time.

In the following sections, we develop the above arguments. First, we show the inequities in vaccine procurement in the region; second, we analyze the possible causes of such procurement inequities and attribute them to secrecy, unilateral negotiation strategies and legal and regulatory exceptions; third, we contrast PAHO Revolving Fund and COVAX as solidarity mechanisms; and fourth, we conclude with a discussion about the lessons learned from the COVID-19 vaccine procurement in Latin America.

2 Vaccine Procurement Inequity in Latin America

In 1977, PAHO's Board of Directors created a financial mechanism (a Revolving Fund) to jointly purchase vaccines, syringes, and cold chain equipment for member states. This mechanism would not only guarantee the affordability of vaccines and other associated health products but also their quality. Although only Bolivia incorporated the revolving fund purchasing mechanism in its legislation,² other member states have used it yearly for over 40 years, making it the legal and legitimate solidaristic mechanism for vaccine purchase in Latin America before the Corona crisis hit.

According to PAHO, the Revolving Fund for Access to Vaccines operates under four principles: transparency, quality, solidarity, and equity. It consolidates forecasted member states' demand requirements to leverage economies of scale and guarantee better prices. It also promotes transparent negotiations with suppliers, improving the purchasing power of countries in the Latin American region and contributing to the sustainability of National Immunization Programs. In addition to the negotiation and purchase activities, the Revolving Fund offers a line of credit for member states and guarantees the distribution of purchased vaccines.³

Comparing 1979 with 2021, Cornejo et. al show how participant countries in the Revolving Fund increased from 19 to 41 and the products purchased from 6 to 47. Similarly, the Fund's line of credit capital, which

2 Vaccines Law 12 December 2005 (*Ley de Vacunas Bolivia*), Gaceta Oficial de Bolivia, available at <https://www.lexivox.org/norms/BO-L-3300.html> accessed 20 May 2024.

3 Pan American Health Organization, 'PAHO Revolving Fund' (*paho.org*) <https://www.paho.org/en/revolving-fund> accessed 13 April 2024.

offers credits without interest for up to 60 days, increased from US\$ 1 million to US\$ 249 million and the purchased value from US\$ 47 million to US\$ 1000 million.⁴

Despite its long-lasting reputation, the Revolving Fund was not the place to go for Latin American countries to purchase COVID-19 vaccines. Instead, there were three ways in which countries could theoretically purchase COVID-19 vaccines: (1) through multilateral negotiations and agreements; (2) through bilateral negotiations and agreements; and (3) through donations. In Latin America, the Global Access Mechanism for COVID-19 Vaccines (COVAX) was the only multilateral negotiation platform available to procure vaccines. Under this procurement scheme, among the countries included in this chapter, Bolivia was the only country eligible to be financed. The other seven countries included in this analysis were self-financed, i.e., they paid for the vaccines they had reserved on their own.⁵

Considering that COVAX was not enough to reach the full vaccination of the population and that the first delays in delivering the doses proved that the mechanism was unreliable, most Latin American countries realized that a variety of procurement sources had to be used to balance the risk of supply shortages and delays in access to COVID 19 vaccines. In this sense, the Corona crisis, was a “point of intersection” in which predictability was shaken and the dominant mechanism for procurement became dislocated.⁶ More importantly, the changes in procurement legal agreements produced important inequities in what used to be a pretty just procurement and access regional mechanism thanks to the Revolving Fund.

Production of major Coronavirus vaccines at the time was concentrated in 35 countries, most of them wealthy, according to data compiled by Duke University's Center for Global Health Innovation. All of them with facilities involved at some point in the production of the Oxford/AstraZeneca, Pfizer-BioNTech, Janssen (Johnson and Johnson), Moderna, Sinovac and

4 Santiago Cornejo and others, 'El Fondo Rotatorio para el Acceso a las Vacunas de la Organización Panamericana de la Salud: 43 Años Respondiendo al Programa Regional de Inmunizaciones' (2023) 47 Revista Panamericana de Salud Pública <https://doi.org/10.26633/RPSP.2023.50> accessed 20 May 2024.

5 The other eligible countries for the COVAX mechanism were Dominica, El Salvador, Grenada, Guyana, Haiti, Honduras, Nicaragua, St. Lucia, St. Vincent & the Grenadines.

6 Brian Milstein 'Thinking Politically about Crisis: A Pragmatist Perspective' (2015) 14 European Journal of Political Theory 141.

Sinopharm Beijing formulations, the vaccines that have received World Health Organization (WHO) approval, as well as that of the Gamaleya Institute (Sputnik V), which was under review in the EU at the time and had received emergency authorization in dozens of countries, including some of the Latin American countries in focus.

To secure enough vaccines, Latin American countries used a combination of strategies to complement COVAX, which included signing different kinds of agreements with pharmaceutical companies and receiving donations. All the countries analyzed here advanced purchase agreements (APAs) while also participating in COVAX. However, the speed and the number of agreements varied considerably across countries.

By the end of 2021, Brazil and Mexico had signed the most bilateral agreements with companies (14 and 11, respectively), followed by Peru (8), Bolivia, Chile and Colombia (5), Argentina (4) and Ecuador (3). While the number of agreements does not necessarily coincide with the number of treatments secured, in this case, the order is maintained (see Figure 1). We use the term treatment to refer to the number of doses a vaccine requires for the immunization process to be completed without boost shots. For most vaccines, this means two doses; however, for vaccines produced by Johnson&Johnson or CanSino a treatment is equivalent to one dose.

Figure 1. Number of secured treatments (08/2020 – 11/2021)n

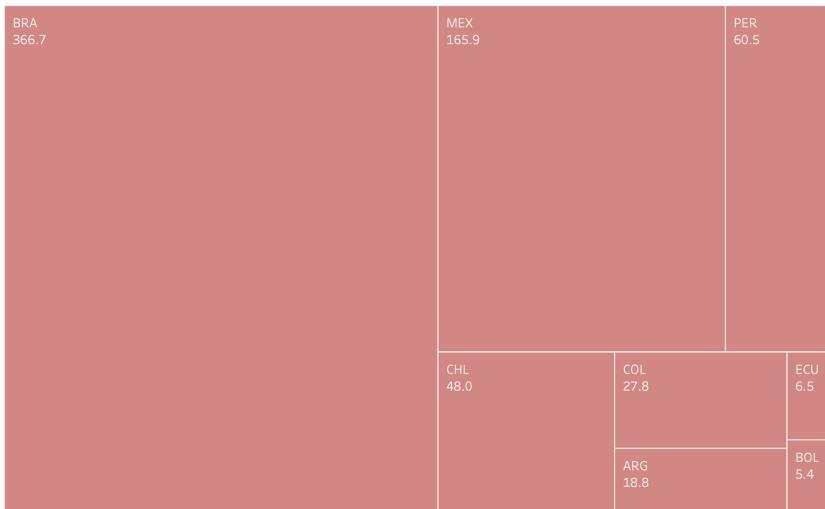


Figure 1. Number of secured treatments (08/2020 – 11/2021)n

When the secured treatments are analyzed as percentage of the country population, however, things change considerably. As shown in Figure 2, by this metric, Chile was able to secure more than 2.5 times the treatments needed to immunize its population, Peru two times, Brazil 1.9 times and Bolivia 1.8 times. Meanwhile, Argentina, Colombia and Ecuador struggled to secure the doses for half of their population. Moreover, as of April 2021, only Chile and Brazil had more than 25 % of the treatments agreed to be delivered.

Figure 2. Agreed and delivered treatments as a percentage of the population of the recipient country

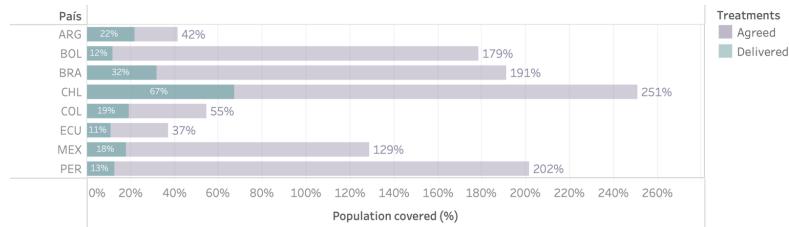


Figure 2. Agreed and delivered treatments as a percentage of the population of the recipient country

The delivery of vaccines was unequal across countries because it was strictly dependent on the time of agreement. As Figure 3 shows, bilateral agreements with companies account for most treatments delivered and explain Chile's and Brazil's relative success compared with other countries in the region. By contrast, COVAX was responsible for an important number of treatments delivered only in Bolivia.

Figure 3. Delivery of vaccine treatments by procurement strategy

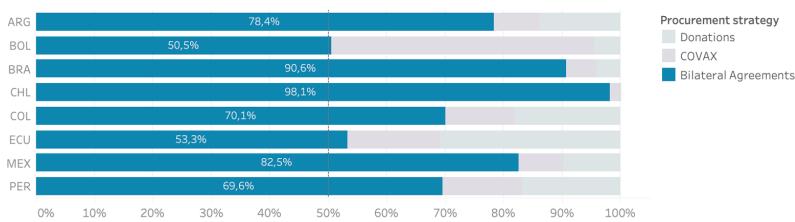


Figure 3. Delivery of vaccine treatments by procurement strategy

If we analyze the treatments delivered as a percentage of the population, however, we see further inequities. By July 2021, only Chile had enough treatments to cover more than 60 % of its population, followed by Brazil, with delivered treatments for 30 % of its population and Argentina, with treatments for a mere 20 % (Figure 4). The rest of the countries struggled to secure enough treatments for prioritized populations.

Figure 4. Treatments delivered as a percentage of the population of the recipient country

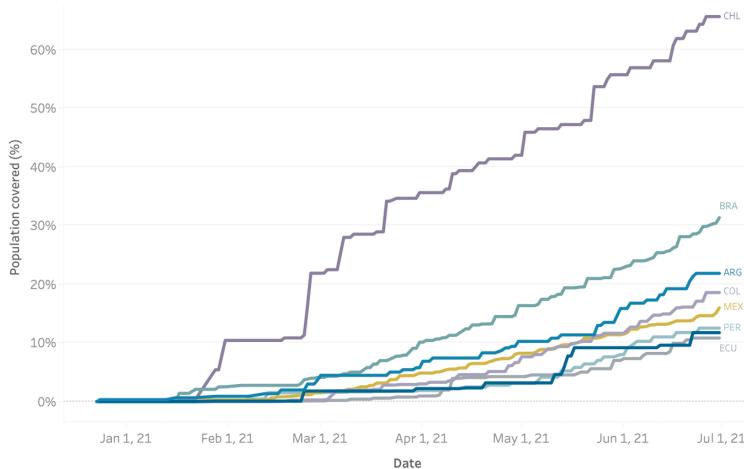


Figure 4. Treatments delivered as a percentage of the population of the recipient country

These inequities could be attributed to several differences in negotiating strategies. First, countries could not learn from the experiences of other countries nor have an international reference price because agreements were confidential. Second, countries had more leverage depending on their previous capacities. For instance, countries with manufacturing capacity were able to secure agreements that involved technology transfer and participation in the manufacturing processes. By contrast, the countries with limited capacities could either offer to conduct local clinical trials or simply purchase the necessary doses in the marketplace. Third, the sheer need for doses obliged countries to agree to clauses that would otherwise seem unthinkable. Some countries had to change their laws to guarantee the conditions posed by pharmaceutical companies.

In sum, although centralizing vaccine procurement in a unique global mechanism such as COVAX that promised to work with governments and manufacturers to ensure safe and effective COVID-19 vaccines were available to the highest risk populations worldwide, regardless of income level, for the Latin American region this meant undermining of the PAHO's Revolving Fund. This implied a crisis-induced process of desolidarization. A strong external shock (the Corona crisis) provoked solidarity conflicts, un-

dermined previously agreed upon norms, and replaced a legitimate regional solidaristic negotiation and procurement mechanism with a fragmented self-interested one.

3 Sources of Vaccine Procurement Inequities

In this section, we identify the multiple ways in which Latin American countries' independent negotiation and procurement strategies were inferior to the Revolving Fund solidaristic mechanism.

3.1 Secrecy of vaccine agreements

Following a trend that had already made its way into negotiations between pharmaceutical companies and governments to acquire drugs for high-cost diseases such as cancer, vaccine producers insisted on the confidentiality of all their supply agreements. This meant that countries could not publicize the contracts they signed to access vaccines despite the fact that these are clearly in the public interest. This confidentiality status also further prevented governments from negotiating on equal terms.

According to the information known at the time, the approval of new regulations in Latin America, including laws, decrees, and resolutions, strengthened the opacity of the purchase of vaccines and granted economic indemnity and confidentiality to pharmaceutical companies. Several of these changes, including the confidentiality of contracts, were made at the request of the laboratories.

The information blackout was also replicated in Mexico. Four of the documents that were marked as confidential by the Government for the contracts with Pfizer, AstraZeneca, and CanSinoBIO, are called: "Indemnification", "Insurance and Liability", "Exclusion of Liability" and "Release; Limitation of Liability for Claims Other than Third Party Indemnity, Disclaimer of Warranties".

Taking advantage of existing or recently created norms and laws to mark confidentiality, none of the Latin American countries made public the documents related to the purchase of vaccines (except Chile, where the chapter of Transparency International had access to a copy of the contract with the Covax Fund with erasures) or to the negotiations with the laboratories. However, Mexico set a deadline for the confidentiality of negotiations and

contracts for the purchase of vaccines. The Mexican government used its transparency law to define the end of confidentiality in five years.

Despite the advantages of pricing transparency for vaccine distribution, price per dose – the contractual information perhaps most highly valued by the global community – has also been systematically unpublished. Whilst there have been reports from parties involved in agreements, pricing information is incomplete in all formally published contracts other than those of the Dominican Republic and the United States.

Analysis of prices sourced from UNICEF's Market dashboard indicates concerning price variation both as a whole and when assessing specific vaccines. For example, for the AstraZeneca-developed vaccine, the dashboard showed that on average High-Income Economies are paying the least at US \$6.26 per dose, second are the Lower-Middle Income Economies at US \$6.72, and the most spent on vaccines is by UpperMiddle Economies at US \$7.81.

Table 1 shows the prices per dose for some Latin American countries when available through public sources, including prices of COVAX or leaked documents. Unfortunately, there is only information about Argentina, Brazil, Mexico and Colombia.

Table 1. Available prices for certain vaccines and certain countries (several sources)

Country	Vaccine developer	Price per dose (US)
Argentina	Sinopharm	\$40,00
Brazil	AstraZeneca	\$3,16
Brazil	Bharat Biotech	\$15,00
Brazil	Serum Institute of India	\$5,00
Brazil	Sinovac	\$10,30
Colombia	Pfizer	\$12,00
Colombia	Sinovac	\$6,00
Latin America	AstraZeneca	\$4,00
Latin America	Gamaleya Research Institute	\$3,00
Mexico	Serum Institute of India	\$4,00
COVAX AMC	AstraZeneca	\$3,00
COVAX AMC	Covavax	\$3,00
Perú	Pfizer BioNTech	\$12,00

3.2 Minilateral negotiation strategies

Another source of difference across countries is the type of agreements signed. Some involved manufacturing and technology transfer compromises, others included the development of clinical trials in the recipient country, and some were simple purchases.

3.2.1. Manufacturing agreements

In late 2020 and early 2021, procurement was the main indicator of who would receive vaccines and who would be left behind. However, manufacturing and supply quickly became crucial constraints for vaccine equity. Manufacturers could be categorized into two systems or approaches: one "global and decentralized" and one "centralized and internal" approach. Most were somewhere in between, but there were groups at both ends of the spectrum.

Global purchasing patterns tended to reflect the manufacturing approach. Those adopting a decentralized one had generally prioritized this in their sales and had a wider reach regarding the number of countries and regions purchasing their vaccine.

On the other hand, those who opted for a centralized approach tended to prioritize their manufacturing sites for 2021 sales and deliveries. A clear example in this regard may be that of US-based Moderna, whose mRNA vaccine is being manufactured in the US, South Korea and Europe (at plants in Spain, France, Switzerland, and the Netherlands). It had been purchased mainly in North America, Europe, South Korea, Japan, and Australia. At the time, Moderna had been one of the most expensive vaccines, and the cold chain conditions required for its conservation were less ideal for countries with fewer resources.

These power asymmetries reflected in vaccine access are influenced by other strategies such as manufacturing agreements. Survey results from the Coalition for Epidemic Preparedness Innovations (CEPI) highlighted that potential manufacturing capacity is concentrated in a few high-income and emerging economies, with the United States, China and India being the largest potential producers. These are followed by several economies in the European Union, Australia, Brazil, Canada, the Russian Federation, and the United Kingdom (CEPI, 2020). This underlines the strong degree of concentration of producers and distributors in emerging and high-income economies (ADB, 2020). Through manufacturing agreements, Latin

American countries found a way to compete in the vaccine market and gained procurement security. Below we compiled the information on public manufacturing agreements in the countries we reviewed using data from the UNICEF's Market dashboard. According to this, only Argentina, Brazil, and Mexico signed technology transfer agreements. Presumably, this has implications for the number of vaccines purchased by these countries and the speed of vaccine delivery.

Agreement type	Vaccine developer	Manufacturer	Vaccine name	Country
TechTransfer	Gamaleya Research Institute	Laboratorios Richmond	Sputnik V	Argentina
TechTransfer	AstraZeneca	mAbxience	Vaxzevria	Argentina
TechTransfer	Sinpharm (Beijing)	Unknown	BBIBP-CorV	Argentina
TechTransfer	AstraZeneca	Fiocruz	Vaxzevria	Brazil
TechTransfer	Sinovac	Instituto Butantan	Vaxzevria	Brazil
TechTransfer	Gamaleya Research Institute	União Química	Sputnik V	Brazil
TechTransfer	Gamaleya Research Institute	BIRMEC	Sputnik V	Mexico
TechTransfer	AstraZeneca	Laboratorios Liamont	Vaxzevria	Mexico

3.2.2. Clinical trials

Another strategy used by Latin American countries in this vaccine race concerns the approval of clinical trials in their territories. Below we mention the different clinical trials known and carried out in the countries we reviewed, according to information from Americas Society/ Council of the Americas (AS/COA):

Brazil	June 3, 2020 — Brazilian health regulator Anvisa announces it's approved human clinical trials to begin for an Oxford University vaccine in São Paulo. June 20, 2020 — Anvisa approves the third and final testing stage for the Oxford-AstraZeneca vaccine. July 3, 2020 — The Butantan Institute has reached Phase 3 for the Sinovac Biotech vaccine. July 21, 2020 — Brazil's government approves the country's third clinical trial for August, U.S. pharmaceutical firm Pfizer and German laboratory BioNTech's joint study.
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	<p>August 18, 2020 — Brazil's Anvisa approves human trials for over 6,000 volunteers for the Johnson & Johnson vaccine, the fourth candidate to enter Phase 3 trials in the country, joining the Oxford-AstraZeneca, Sinovac Biotech, and Pfizer-BioNTech vaccines.</p> <p>September 9, 2020 — Brazilian laboratory DASA announces it agreed to conduct Phase 2 and 3 trials of the U.S. COVAXX vaccine, pending regulatory approval, once the first phase of trials concludes in Asia.</p> <p>September 10, 2020 — The Brazilian state of Bahia agrees to conduct Phase 3 trials of the Russian Sputnik-V vaccine, pending regulatory approval. The state plans to purchase 50 million doses.</p> <p>September 15, 2020 — Brazil's Anvisa gives AstraZeneca approval to test the Oxford vaccine on an additional 5,000 Brazilians in Phase 3 trials.</p> <p>May 16, 2021 — Authorities in the city of Botucatu in the Brazilian state of São Paulo began inoculating citizens 18 to 60 years of age with the AstraZeneca-Oxford shot.</p> <p>July 6, 2021 — Brazil's Anvisa announces it approved phase 1 and 2 clinical trials involving 150 volunteers for a Covid vaccine by French developer Sanofi Pasteur in collaboration with British firm GlaxoSmithKline.</p> <p>July 19, 2021 — Brazil's health ministry approves a trial of a third dose of AstraZeneca that will involve 10,000 volunteers.</p>
Chile	<p>August 2, 2020 — The Chilean Science and Health Ministries announce the start of Phase 3 clinical trials for the Chinese Sinovac vaccine trial, in collaboration with the country's Catholic University. The university's immunology center signed an agreement of cooperation with the Chinese pharmaceutical firm on July 16.</p> <p>November 4, 2020 — Chile announces that national regulator ISP approved Phase 3 trials for the AstraZeneca-Oxford vaccine.</p> <p>May 5, 2021 — Chile announces a new Sinovac clinical trial in a university study involving 5,000 children between 3 and 17 years of age.</p>
Colombia	<p>August 26, 2020 — Colombia's National Food and Drug Surveillance Institute approves clinical trials for Johnson & Johnson's vaccine at various study centers across the country.</p>
Mexico	<p>August 11, 2020 — The Mexican Foreign Ministry announces it will conduct Phase 3 clinical trials developed by U.S. firm Johnson & Johnson's pharmaceutical branch, Janssen, as well as two Chinese companies, CanSino Biologics and Walvax Biotechnology Co Ltd.</p> <p>August 25, 2020 — The Mexican government announces that 2,000 Mexicans have volunteered to participate in Phase 3 trials of the Russian vaccine Sputnik V.</p> <p>January 8, 2021 — Mexico's Foreign Ministry announces that health regulator Cofepris has approved Phase 3 clinical trials for Germany's CureVac vaccine.</p> <p>February 2, 2021 — Mexico's Foreign Minister Ebrard announces that Phase 3 joint trials with the United States for the Novavax vaccine will begin involving 2,000 Mexican participants in seven medical centers nationwide.</p>
Peru	<p>August 28, 2020 — Per Reuters, Peru looks to begin separate testing of Chinese and U.S. vaccines. In the case of the Chinese tests, clinical tests will be led by Sinopharm, in collaboration with Lima's Cayetano</p>

	Heredia University and National University of San Marcos, with 6,000 volunteers. Johnson & Johnson's will involve 4,000. September 9, 2020 — Peru begins clinical trials for the Sinopharm vaccine.
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While many countries used clinical trials as a bargaining tool, it is unclear whether this strategy secured treatments faster than other strategies.

3.2.3. Diplomatic approaches

Success in vaccine negotiations was also mediated by timelines in international relations. In earlier stages of the pandemic, there were greater economic and scientific risks deriving from the uncertainty of whether vaccine candidates would be effective and successful in clearing sanitary regulations. Thus, the prospect of negotiating earlier was more costly. However, some countries were able to mobilize their diplomatic capital to advance strategies to mitigate some of these costs. Chile's strategy, for example, consisted not only of building a diverse negotiation portfolio with different pharmaceutical companies but also of including mechanisms that could compensate for scientific failure in the contracts they negotiated. This could be dependent on the early timeline of the negotiations but also due to Chile's reputation, relations, and experience in international trade. Therefore, state-level differences both in diplomatic capital and the timeline of negotiation strategies are factors we consider necessary to understand the variance in vaccine procurement we find in the region.

The ability to employ diplomacy to negotiate earlier helped some countries reduce the costs of uncertainty and put the region on the map of vaccine procurement. For example, Argentina's diplomacy with Russia managed to get the Latin American region onto Sputnik's radar. Also, early agreements between Chile and China, allowed for the latter to identify Latin American countries as potential buyers and to offer them credits for the purchase.

3.3 Legal and regulatory exceptions

3.3.1. Arbitration clauses

Arbitration clauses are especially important if we consider that among the conditions imposed by the pharmaceutical companies in these contracts

was being exempted from any responsibility for adverse effects that their vaccines may generate and the requirement that Latin American countries have sufficient funds reserved to address any lawsuit for such adverse effects.

Brazil, Argentina, Colombia, and Peru were also exposed to the economic indemnity requirements imposed by the laboratories. Colombia made explicit in the new regulations the possibility of contracting a "global coverage policy to cover possible convictions that may arise", one of the requirements imposed by Pfizer to sell its vaccine.

Pfizer was later questioned by various governments in the region, which have accused it of demanding unacceptable conditions for the sale of vaccines -e.g., Argentina. To cover itself against possible lawsuits, the pharmaceutical company asked countries to support the company by safeguarding their sovereign assets, which are federal reserves and military assets.

In Peru, government officials revealed that during the negotiation process, this laboratory requested clauses exempting it from liability for possible adverse effects of the antigen, delays in the delivery of batches, or other types of protection against future lawsuits. Amid the negotiations, the Government issued a supreme decree expressing its commitment to submit to international arbitration in case of disputes arising from the purchase of vaccines. Negotiations went on for several months. Finally, in February 2021, the contract for 20 million vaccines was signed, five months after the signing of binding terms and conditions between the Peruvian Ministry of Health and Pfizer. This first agreement contemplated the payment of US\$118.8 million for an initial 9.9 million vaccines. That is US\$12 per dose and US\$ 24 for each complete vaccine.

3.3.2 Tax and law exemptions

In addition to the confidentiality agreement and arbitration clauses granted by different countries to laboratories, some tax exemptions were also imposed to purchase vaccines. In the case of Mexico, the Law of General Import and Export Taxes was modified, the first in July 2020, to create the table that established a 5 % import tax per kilogram of vaccine and exemption for exports. In February 2021, it was modified again to make the import and export of vaccines tax-free. Argentina also included the tax exemption for vaccines in its law created on October 29, 2020, specifically for vaccination in the country. Article 6° established that no import duties or any other taxes or levies have to be paid for COVID-19 vaccines.

Peru was one of the first countries to make changes to its regulations. In September 2020, as part of the negotiations with Pfizer, Sinopharm, and other laboratories, the Executive issued an Emergency Decree that excluded vaccine purchases from the State Contracting Law. These advantages also covered the distribution, application, and other complementary contracting processes to carry out the vaccination plan.

Another similar case is Mexico, which included in the amendments to its regulations the possibility of making payments more flexible for vaccine manufacturers. The regulation stated that "payments and necessary advances may be granted to enable them to obtain better conditions of opportunity and in the shortest possible time".

4 PAHO and COVAX as solidarity mechanisms

Solidarity is intrinsic to vaccine procurement and distribution in at least two ways. On the one hand, the underlying public health logic states that vaccines imply solidarity between the individual and the immediate group to which she belongs – be it a community, a family, a school, etc. In this type of concrete solidarity, one protects the group by immunizing oneself –i.e., herd immunity. On the other hand, vaccines imply a more extended type of solidarity that could transcend the immediate group to reach fellow city, nation, and world citizens. In this latter, more abstract type of solidarity, access to vaccines becomes an issue of human rights rather than an issue of herd immunity.

This could be mapped into the classic Durkheimian concepts of mechanical and organic solidarity. The term "herd" immunity suggests the existence of a "collective conscience", the sense of belonging to a group and owing to it. Also, immunization to achieve herd immunity is the focus of a good amount of group pressure with its legal deployment in vaccine mandates and travel requirements. By contrast, when vaccination solidarity is expanded to the transnational level, the connections become loose, and the common conscience must rise above all diversities. Solidarity becomes more abstract and feebler, as in organic solidarity. In this case, legal mandates should be contractual and not discriminatory, as organic solidarity is more explicitly the result of the free will of autonomous individuals⁷.

⁷ Émile Durkheim, *The Division of Labor in Society*, (Free Press, 1997); Peter Thijssen, 'From Mechanical to Organic Solidarity, and Back: With Honneth be-

With these lenses, we want to argue that, despite both being forms of purposeful transnational solidarity, the PAHO Revolving Fund falls closer to mechanical solidarity in the sense of responding to a Pan American binding collective conscience, while mechanisms such as GAVI and COV-AX fall closer to organic solidarity, with a more abstract and loose sense of the collective with voluntary participation.

As stated above, the PAHO Revolving Fund helps countries accurately estimate their requirements for vaccines and related supplies and consolidates regional demand so that vaccines can be procured in bulk at the lowest price and shipped to each participating country. The Fund praises conducting competitive, transparent tenders for WHO-prequalified products and suppliers.

The activities of the PAHO Revolving Fund, coupled with the provision of high-quality technical assistance, were crucial to the successful control, elimination, or eradication of most of the region's great childhood killers, including polio, measles, and rubella. Between 1987 and 2010, measles elimination efforts led to the implementation of 157 national vaccination campaigns, vaccinating a total of 440 million people of all ages.

yond Durkheim' (2012) 15 European Journal of Social Theory 454 <https://doi.org/10.1177/136843101423589> accessed 20 May 2024.

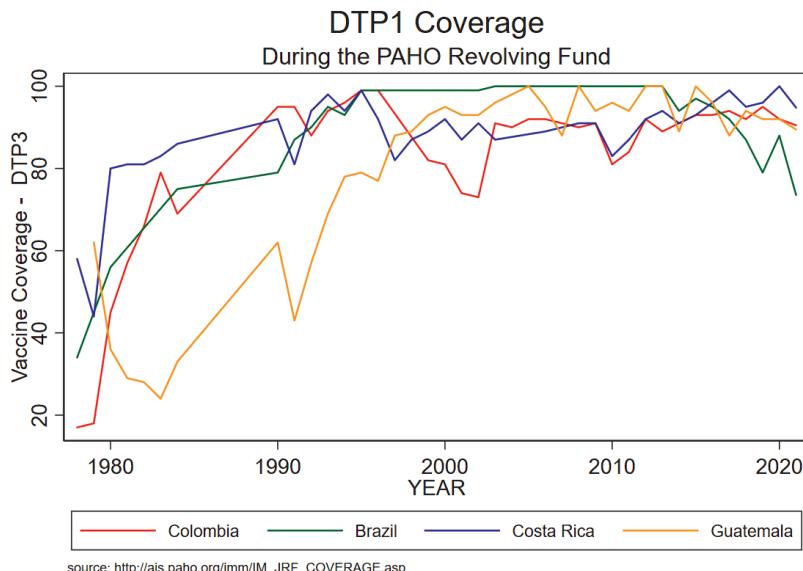


Figure 5. DPT1 Coverage (selected countries)

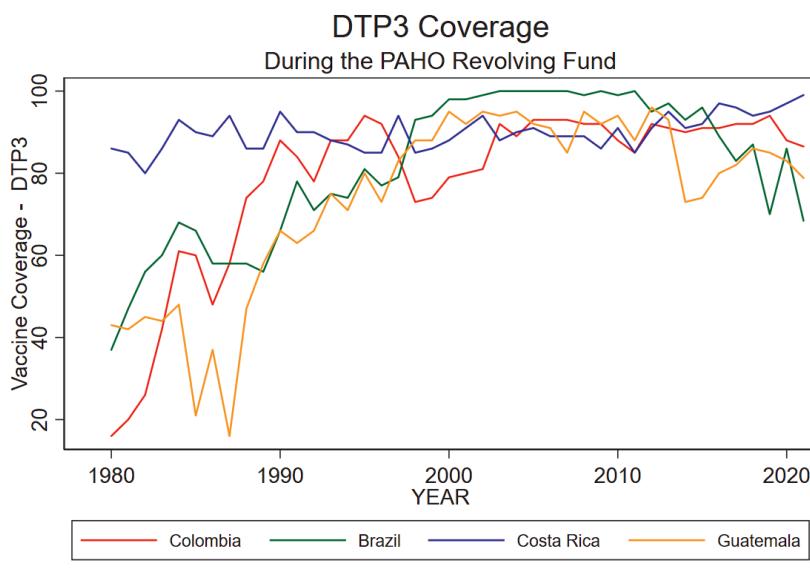


Figure 6. DPT3 Coverage (selected countries)

Immunization rates have grown steadily in the region, independent of the size, state capacity, and purchasing power of the country. As illustrated by Figures 5 and 6, for example, countries as diverse as Brazil, Colombia, Costa Rica, and Guatemala up took DPT1 and DPT3 vaccines in the 1980s and have been able to maintain vaccination coverage close to 80 % since the mid-1990s. Also, countries in Latin America and the Caribbean vaccinate over 100 million adults and children annually against seasonal flu.

Over the past 40 years, and on all sides of the political spectrum, PAHO Member States have maintained their commitment to the PAHO Revolving Fund, safeguarding its principles that are “solidarity, Pan-Americanism, and equitable access.” Following these principles, the fund does not classify countries by gross national income. “Instead, the Revolving Fund establishes practices and procedures to offer quality vaccines to all participating countries and territories at the same lowest price per vaccine.”⁸

Unlike PAHO Revolving Fund, GAVI was founded in the late 1990s to respond to the emergence and unaffordability of new vaccines. Rather than being an effort of nation-states, this was an initiative championed by the Bill & Melinda Gates Foundation and a group of founding partners who came up with “an elegant solution to encourage manufacturers to lower vaccine prices for the poorest countries in return for long-term, high-volume and predictable demand from those countries.”⁹

Unlike PAHO’s Revolving Fund, GAVI and later COVAX expand beyond nation-states to incorporate private actors, philanthropies, civil society organizations, banks, and other international organizations. Rather than using a language of collective conscience, they use the language of donors and beneficiaries.

But far from falling under a social evolutionist conception of solidarity whereby there is a unidirectional path from mechanical towards organic solidarity, we follow other authors that suggest that a historical cyclical model that links mechanical solidarity to organic solidarity, and vice versa, is possible.¹⁰ Rather than thinking of mechanical solidarity as an archaic form of solidarity, we view it as the moral complement to healthy organic solidarity.

8 Pan American Health Organization (n 3).

9 Gavi, ‘About Our Alliance’ ([gavi.org](https://www.gavi.org/our-alliance), 22 April 2024) <https://www.gavi.org/our-alliance> /about accessed 14 March 2023.

10 Craig J Calhoun, ‘Imagining Solidarity: Cosmopolitanism, Constitutional Patriotism, and the Public Sphere’ (2002) 14 *Public Culture* 147; Thijssen (n 6); Graham Crow, *Social Solidarities: Theories, Identities and Social Change* (Open University, 2002).

This is consistent with Andrea Sangiovanni's understanding that solidarity should not be grounded in "identity or fellow feeling", but in the recognition and endorsement of "reciprocity" and "joint action". Thus, we suggest that PAHO's Revolving Fund is a form of transnational solidarity that managed to last for a long time and foster cooperation, becoming a co-operative transnational solidarity. By contrast, GAVI and COVAX became voluntary and loose cooperation mechanisms with philanthropic elements.

5 Conclusion

What happened in the eight Latin American countries analyzed here reveals the need for a renewed framework for global collective action to promote effective prevention and response to pandemic infectious diseases and to ensure equitable access to medicines.

In the Latin American context, with the difficulties we have pointed out throughout this paper and the strategies that countries have adopted to deal with the lack of manufacturing capacity and uncertainty in the purchase of vaccines, we believe that emphasis should be placed on strengthening national capacities through multilateral institutions. Both binding agreements and effective resource sharing could help build a balanced governance framework that appropriately allocates subnational, national, and global responsibilities and does not constrain national initiative while providing a global safety net to support countries and geographic areas that have not yet developed such capacities. This treaty could achieve these objectives by building on the existing infrastructure of WHO and other agencies.¹¹

Ensuring access to information on contracts, what is purchased, at what price, what is received, and how and with what criteria vaccines are distributed and applied is essential to control what the government does. Secrecy opens the opportunity for corruption and deepens the gaps in access to vaccines amid the transnational health crisis.

The philanthropic notion of solidarity, which may be consistent with that of Gould and Sangiovanni, should be expanded because in moments of crisis

11 Fariza Nasreen Seraj Ahmad and others, 'Southeast Asia Needs a Revolving Fund for Vaccines' (2022) 10 *The Lancet Global Health* e1557 [https://doi.org/10.1016/S2214-109X\(22\)00406-5](https://doi.org/10.1016/S2214-109X(22)00406-5) accessed 20 May 2024.

when we need to remember that we are all humans and interdependent, it may be insufficient.¹²

12 Jon Kim Andrus and others, 'New Vaccines for Developing Countries: Will It Be Feast or Famine?' (2009) 35 American Journal of Law & Medicine 311, <https://doi.org/10.1177/009885880903500204> accessed 20 May 2024; Carol C Gould 'Solidarity between the National and the Transnational: What Do We Owe to "Outsiders"?' in Helle Krunk, Hanne Petersen, and Ian Manners (eds) *Transnational Solidarity: Concept, Challenges, and Opportunities* (Cambridge University Press, 2020).

