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Vaccines From India, with Love?

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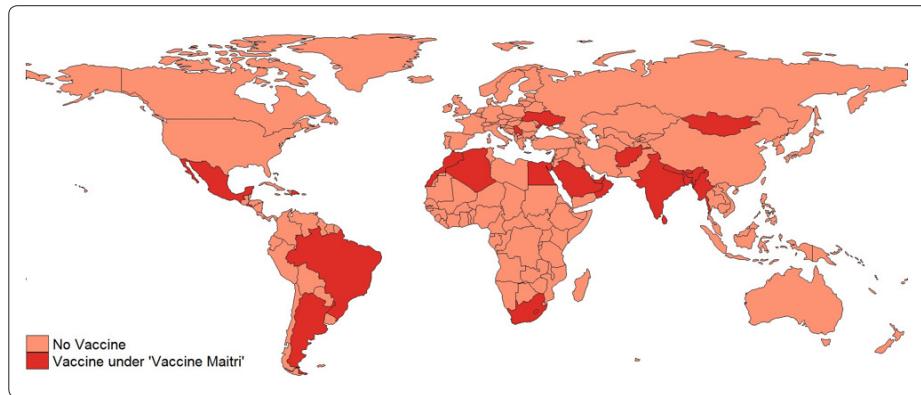
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Since the beginning of the COVID-19 pandemic, India joined the club of select countries that announced vaccine development and roll out within a year. The Serum Institute of India based in Pune led the vaccine manufacturing in India in partnership with the main developer - University of Oxford. On the first day of 2021, the Drug Controller General of India approved the emergency use of the vaccine marketed as Covishield (AZD1222). Subsequently, the world's largest vaccination drive began on 16 January 2021 with over half a million people vaccinated in the first three days.

As of 23 February, 28 sovereign states and the UN Health workers received vaccines from India as grants or under commercial terms¹. The total number of doses reached 33.49 million with 20% of these being grants. This provision of vaccines to countries in its immediate neighbourhood and to countries in far west including West Asia, Africa and Latin America, is termed as **Vaccine Maitri** by the Indian government.

Vaccine Diplomacy - A Key Instrument in India's Foreign Policy



Countries that have Received Covid Vaccine from India under Vaccine Maitri

In under Global Pandemic Influenza Action Plan, six countries—Brazil, India, Indonesia, Mexico, Thailand, and Vietnam—received grants from ¹Refer Table1 for details [7]. Hindi title, translated to English as Vaccine friendship.

Table 1: Made-in-India COVID19 vaccine supplies to foreign countries as on 23 Feb 2021

Sr.No.	Country	Region	Income	Grant Qty	Commerical Qty	Total Supplies
1	Afghanistan	South Asia	Low income	0.5		0.5
2	UAE	Middle East & North Africa	High income		0.2	0.2
3	Argentina	Latin America & Caribbean	Upper middle income		0.58	0.58
4	Bangladesh	South Asia	Lower middle income	2	7	9
5	Bahrain	Middle East & North Africa	High income	0.1		0.1
6	Brazil	Latin America & Caribbean	Upper middle income		4	4
7	Barbados	Latin America & Caribbean	High income	0.1		0.1
8	Bhutan	South Asia	Lower middle income	0.15		0.15
9	Dominica	Latin America & Caribbean	Upper middle income	0.07		0.07

10	Dominican Republic	Latin America & Caribbean	Upper middle income	0.03	0.02	0.05
11	Algeria	Middle East & North Africa	Lower middle income		0.05	0.05
12	Egypt	Middle East & North Africa	Lower middle income		0.05	0.05
13	Kuwait	Middle East & North Africa	High income		0.2	0.2
14	Sri Lanka	South Asia	Lower middle income	0.5		0.5
15	Morocco	Middle East & North Africa	Lower middle income		6	6
16	Maldives	South Asia	Upper middle income	0.2		0.2
17	Mexico	Latin America & Caribbean	Upper middle income		0.87	0.87
18	Myanmar	East Asia & Pacific	Lower middle income	1.7	2	3.7
19	Mongolia	East Asia & Pacific	Lower middle income	0.15		0.15
20	Mauritius	Sub-Saharan Africa	High income	0.1	0.1	0.2
21	Nepal	South Asia	Lower middle income	1	1	2
22	Oman	Middle East & North Africa	High income	0.1		0.1
23	Saudi Arabia	Middle East & North Africa	High income		3	3
24	El Salvador	Latin America & Caribbean	Lower middle income		0.02	0.02
25	Serbia	Europe & Central Asia	Upper middle income		0.15	0.15
26	Seychelles	Sub-Saharan Africa	High income	0.05		0.05
27	Ukraine	Europe & Central Asia	Lower middle income		0.5	0.5
28	South Africa	Sub-Saharan Africa	Upper middle income		1	1

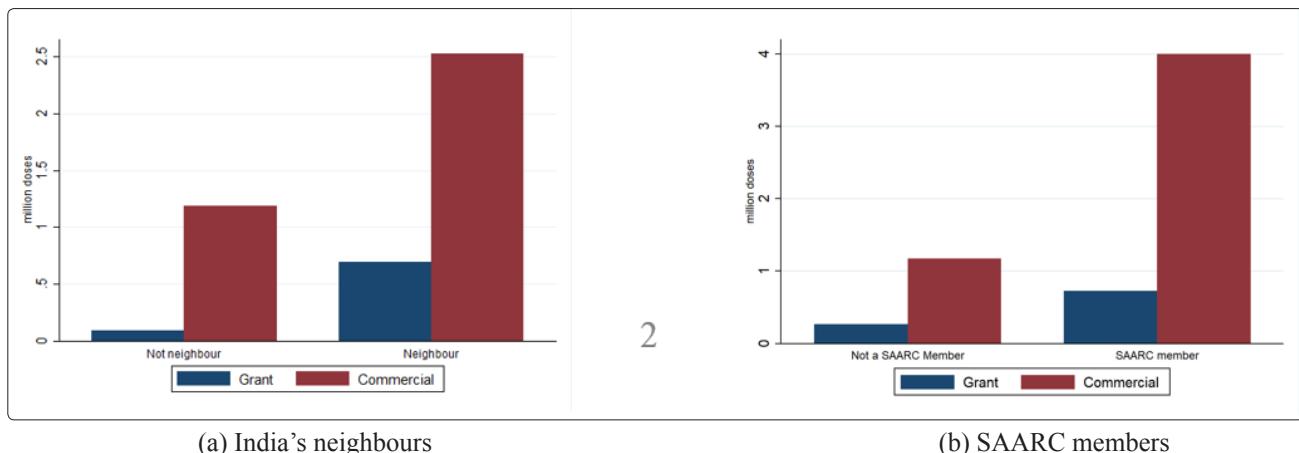
Source: <https://mea.gov.in/vaccine-supply.htm>

The US and Japanese governments to establish in-country manufacturing capacity for influenza vaccines [1]. In the past few decades, India has acquired production capacities such that it manufactures 60% of the vaccines administered the world over. United Nations Secretary-General Antonio Guterres termed the vaccine production capacity of India as the “best asset” that the world has today [4].

An underlying theme of both vaccine and vaccine science diplomacies is that vaccines are unique in comparison to other medical or public health interventions. By some estimates, vaccines are the single most powerful intervention ever developed by humankind in terms of the lives that they save. By one estimate, modern vaccines have saved more lives than those that were lost in the world wars during the 20th century [2]. Vaccine diplomacy seems to have become a key aspect of India’s foreign policy. In this brief, we analyse the numbers that help uncover what do you have to do to get vaccines from India?

For one, it helps if you are a neighbour. Barring, of course, China and Pakistan - both neighbours with whom India’s diplomatic relations are anything but tense for several geo-political and historical reasons.

India has also favoured countries that are part of SAARC (South Asian Association for Regional



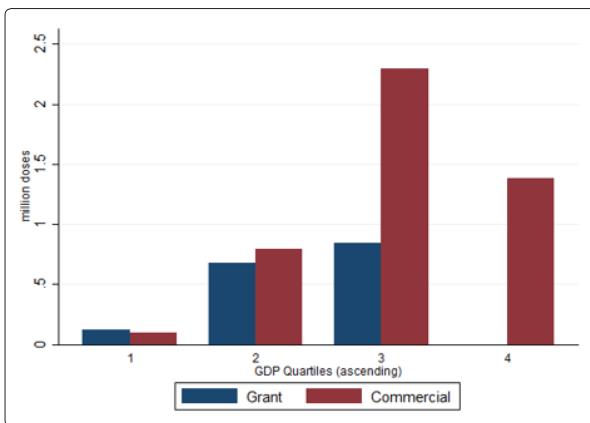
How Vaccines vary with Geographical Proximity to India?

Cooperation) when sending grants and commercial doses of vaccines. SAARC members (Afghanistan, Bangladesh, Bhutan, Maldives, Nepal and Sri Lanka i.e. all SAARC members except Pakistan) have received 4 times the doses when compared to non-SAARC members.

We divided the countries in our data set into quartiles, in ascending order of GDP4. As can be seen, the fourth quartile, which represents the richest 25 percent (UAE, Saudi Arabia, Argentina, Brazil, Mexico, Egypt and South Africa), do not get any vaccine doses as grants. The third quartile with mean GDP of USD 150 billion receive maximum grants as well as commercial vaccine doses from India under the *Vaccine Maitri* programme.

To evaluate whether India favours, for vaccine disbursal, the countries with whom it has strong people ties, we use data on population of overseas Indians in these countries. We find that countries with higher population of overseas Indians (OCI) receive higher grant of COVID 19 vaccine doses as grants. However, the prediction for Commercial vaccine doses is lower for The data for our graphics and analysis comes from <https://mea.gov.in/vaccine-supply.htm>

Data taken from World Bank [5].



How Vaccines vary with GDP?

Countries with larger population of OCIs. This seems to be intuitive given the fact that countries with larger OCI population might be given more grants than commercial vaccines by Indian government.

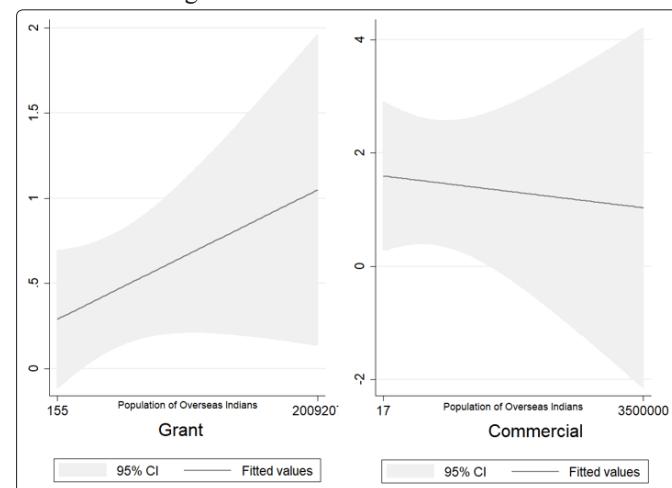
Previous research has shown that diplomatic exchanges between trading partners foster bilateral trade through diplomatic representations and state visits [3]. Not only this, researchers have also found the deleterious effects on trade if the state visits of country's enemies are encouraged by a trade partner. For instance, Fuchs and Klann find that the Chinese government frequently threatens that meetings between its trading partners' officials and the Dalai Lama will be met with animosity and ultimately harm trade ties. Thus, state visits may enhance as well as diminish economic relations.

In case of India, Prime Minister Narendra Modi who earned the reputation of a globetrotter (drawing severe criticism at home) has visited 60 countries during 108 foreign trips⁵. A striking feature of PM Modi's visits is the Modi hug. His characteristic bear hug has been a discussion point in foreign and Indian media alike⁶. While some counterparts respond equally warmly, sometimes the Modi hug has ended in an awkward photo-op. In this analysis, we look at the intersection between Modi's diplomacy and India's vaccine diplomacy. We find that countries that have received the PM for 1, 2 or 4 visits in his tenure have higher grant as well as commercial allocation of India made vaccines. State leaders that have received the Modi hug also have higher disbursal of vaccines (both grants and commercial) by India.

To examine India's vaccine diplomacy strategy by location of the recipient, we grouped the countries by geographical classifications

proposed by the World Bank [6]. As expected, India's regional neighbours in South Asia have received the highest number of vaccine doses both as grants and commercial supplies. East Asian and Pacific countries are close second in India's vaccine disbursal. Countries in Europe and Central Asia have received no grants and a small quantity of commercial supplies (Ukraine and Serbia). Both Ukraine and Serbia have aligned themselves with India in several UN resolutions and a new cooperative alliance in space technology. In both Latin America & Caribbean and Middle East & North Africa, the vaccine commercial supplies exceed vaccine grants. This could be because the 'PM Modi made no visits in 2020 due to the COVID 19 pandemic.

For an analysis on Who Modi hugs? read <https://caravanmagazine.in/modimeter/hugs>

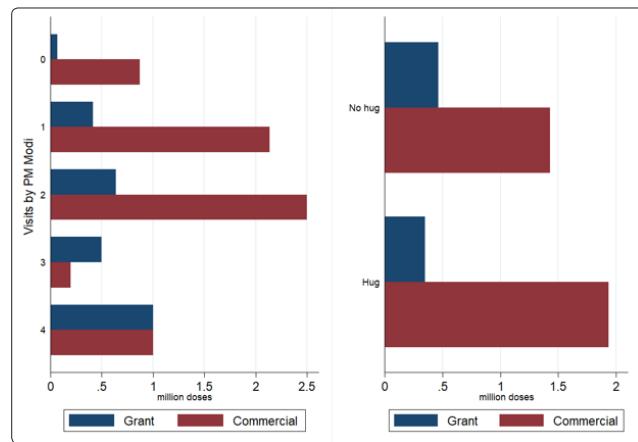


How Vaccines vary with Population of Overseas Citizens of India?

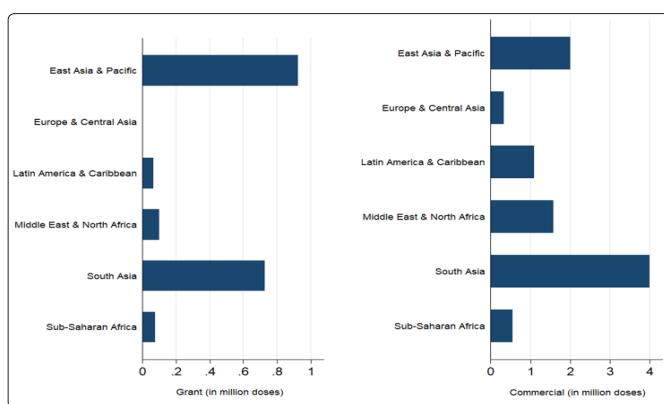
Fitted values are predictions.

Richer recipients in these geographical areas have secured vaccines from India under commercial agreements.

Thus, India has been acting fast on its vaccine disbursal to foreign states under its vaccine diplomacy initiative. Critics have often questioned this in view of the large number of doses India will need in coming weeks to inoculate its own 1.3 billion people. Nevertheless, India's vaccine supply to other countries has a profound underlying strategic motive. If India aspires to acquire the regional supremacy where it is in stiff competition with China, Vaccine Maitri seems to be a move in the right direction.



Interactions of recipient countries with Prime Minister Modi



Vaccine disbursal by geography

References

1. Fuchs A, Klann NH (2013) Paying a visit: The dalai lama effect on international trade *Journal of International Economics*. 91: 164-177.
2. Hotez PJ (2014) “vaccine diplomacy”: historical perspectives and future directions *PLoS Negl Trop Dis*. 8: e2808.
3. Nitsch V (2007) State visits and international trade *World Economy* 30: 1797-1816.
4. United Nations (2021) Remarks to member states on priorities for 2021. URL <https://www.ndtv.com/india-news/indias-vaccine-production-capacity-one-of-wor>.
5. World Bank (2020a) Gdp (current usd) World Bank national accounts data, and oecd national accounts data files. URL <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD>.
6. World Bank (2020b) World Bank country and lending groups. URL <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>.
7. World Health Organisation (2007) who facilitates influenza vaccine technology transfer to developing countries. URL <https://www.who.int/mediacentre/news/notes/2007/np18/en/>.

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