

How has vaccine manufacturing capacity evolved in the Asia-Pacific region over the past decade?

May 1, 2025 | Opinion

Shri Sarkar, Partner at L.E.K. Consulting, shares insights into how vaccine manufacturing capacity has evolved and which Asia-Pacific countries now lead as the region's top vaccine exporters.



How has vaccine manufacturing capacity evolved in the Asia-Pacific region over the past decade?

Over the past decade, India and China have expanded their vaccine manufacturing capacity significantly, driven by the need to supply global south countries and respond to pandemic demands

- India has the capacity to manufacture ~4 billion doses of vaccines. Vaccine manufacturers such as Serum Institute of India, Bharat Biotech, Biological E have added capacity over the last decade to become leading suppliers catering to not just domestic, but also playing a key role in global immunisation efforts
- China has seen a major shift, rapidly expanding both traditional vaccine production (hepatitis A, hepatitis B, rabies) and next-generation platforms like mRNA vaccines triggered by the COVID-19 pandemic
 - The dominant player in China's vaccine industry is state-owned Sinopharm's subsidiary, China National Biotechnology Group (CNBG), which consists of seven manufacturers, including the Chengdu Institute of Biological Products
 - mRNA vaccine manufacturing capabilities emerged strongly in China during the pandemic, with companies like Walvax, Suzhou Abogen, and others establishing local production of mRNA vaccines

Within Southeast Asia, Indonesia through its state-owned enterprise PT Bio Farma has built up substantial vaccine manufacturing capacity (e.g., hepatitis B, polio, DTP) and supports international immunization efforts through exports

Which Asia-Pacific countries are currently the biggest vaccine exporters, and what are their key markets?

- India and China dominate exports within the APAC region
 - India exports ~50 per cent of vaccines supply globally (constituting low-cost vaccines such as Polio, measles), primarily to GAVI and COVAX countries such as Africa, SEA, LATAM
- China has become a key vaccine exporter, particularly with COVID-19 vaccines (Sinovac) and hepatitis vaccines, targeting Southeast Asia, the Middle East, and parts of Latin America
- Within Southeast Asia, Indonesia, through its state-owned entity PT BioFarma is a key manufacturer and exporter of vaccines (DTP, Hep-B and OPV) to countries across Africa, SEA and LATAM

What lessons have vaccine manufacturers learned from the COVID-19 pandemic that will shape future vaccine production and distribution?

- Countries like Indonesia, Vietnam, and Thailand committed to investing in domestic vaccine production to ensure self-sufficiency
- Vaccine diplomacy became central; strategic use of vaccines for international relations (India's "Vaccine Maitri", China's donations to SEA)
 - Southeast Asia has been a major focus of China's vaccine diplomacy, receiving ~30% of China's total vaccine donations
- Cold chain logistics strengthened for both vaccine distribution and care administration, led by private distributors (e.g., Zuellig Pharma in SEA)
- Streamlined regulatory frameworks for emergency authorizations / fast-track approvals across the APAC region
- Trends towards diversification of vaccine platforms to cater to both domestic and regional demand (beyond traditional vaccine production towards mRNA, viral vector capabilities)