

# Economic Perspectives on the Impact of COVID Vaccines

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## Abstract

*Vaccination and the impact on health on the world's people is very difficult to exaggerate. The main aim is to treat people with mental health issues and substance use of disorder. Vaccination is crucial in terms of ensuring the overall health conditions and well-being. The development of vaccines is an expensive and lengthy process. Depreciation is high and takes multiple candidates and long years to produce a licensed vaccine. The access to vaccines that prevent life-threatening infectious diseases remains not equal to all the population. The benefits of vaccination derive from health and economic benefits and the health benefits have diminishing returns as a result of high-risk individuals been vaccinated first. Economic benefits depend both on the health benefits and on how reduced risk of infection and death translates into a leading general economic activity. Department of Government is required to perform a systematic economic analyses of vaccines and to justify their given pressure on both private and public finances on a global level; provoke in the year 2008 financial crash. Mostly, the government supports charities and non-governmental organizations, where people invest in these, with the hope of improving the health conditions.*

**Keywords:** Vaccine, Diseases, Activity, Infection, Justify, Programs, Expectancy, Morbidity

## Introduction

The development of vaccines is an expensive and lengthy process. Depreciation is high and takes multiple candidates and long years to produce a licensed vaccine. The access to vaccines that prevent life-threatening infectious diseases remains not equal to all the population. It estimates that vaccines have prevented six million deaths annually from vaccine – preventable disease. For the past few decades, the vaccine industry and scientific community have asked to respond immediately to epidemics of H1N1 influenza, Zika, Ebola and now it is SARS COV-2. By 2055, it is estimated that the earth's population to reach almost ten billion given by (Department of Economic and Vaccines that can prevent most of the disease and prolong life expectancy across many countries.

(Charlene M.C Rodrigues et al. 2020). Pandemic will cause high demand for vaccines all around the world. Both serologic studies and clinical studies will need to confirm which populations remain at the highest level of risk once the vaccines are available and could form the basis for establishing a fair vaccine for allocation system. Group of seven countries has already called it a global organization in which the planning must get starts while the vaccine development activity proceeds. COVID-19 – a pandemic situation has caused the hundreds or thousands of people upended the lives in billions and causes a trillion dollars in economic loss. Life is unlikely to return to normal life. What's unique about India is that it has the expertise for low-cost per-unit vaccine production of vaccines.

Due to the low budget vaccine making history, new products against COVID-19 will be of great use in many low-income countries worldwide, benefiting millions of people who cannot afford expensive vaccines. India has manufactured the oral polio vaccine and distributed it freely across the country as part of the polio eradication initiative by the WHO. Prices send signals about consumer preferences and thus stimulate producers to make more of what people want. Pricing in a pandemic is complicated and fraught. The policy puzzle involves balancing lower prices to ensure access to essential medications, vaccines, and tests, and adequate revenue streams to provide manufacturers incentives to make the substantial, risky investments needed to develop products in the first place. Vaccines can be powerful tools for preventing potential outbreaks of epidemic infectious diseases from becoming humanitarian crises. Developing these vaccines requires investment. However, evidence shows what it would cost to successful development, an epidemic infectious disease caused by vaccine portfolio is scarce.

### Benefits of Vaccination

The benefits of vaccination derive from health and economic benefits and the health benefits have diminishing returns as a result of high-risk individuals been vaccinated first. Economic benefits depend both on the health benefits and on how reduced risk of infection and death translates into higher general economic activity. The latter relationship is relatively unknown. If the elderly are vaccinated first, for example, will the young go back to work, or will they still be worried about infection? An epidemiological model of COVID-19 vaccination suggests diminishing but a linear impact of dose on disease until society approaches the level required for herd immunity. Our framework allows the diminishing-returns factor and the linear epidemiological factor to receive some weight. Putting an enormous weight on the diminishing returns factor would mean that health and economic activity improves so quickly as we vaccinate.

In contrast, broad weight on the linear function would mean that more people need to be vaccinated, approaching close to herd immunity, before most

of the economic benefits are realized (IDB 2020). COVID-19, a pandemic situation outbreak is foremost a public health crisis; it is also caused damage to the global economy. The government is spending trillions of dollars to fight against the negative economic impact; still, until there is a vaccine or any other treatment is available, the financial cost will continue to be felt worldwide.

**Table 1: Types of Vaccines for COVID-19**

Virus	Type of Vaccine
Ebola	Adenovirus Type 5 Vector
Lassa, Nipah HIV Filovirus HPV Cancer indications Zika Hepatitis B	DNA plasmid vaccine Electroporation devices
SARS	Plasmid DNA, Needle- Free Delivery
HAV, ZIKV, FMD, SIV, RSV, DENV	Deoptimized live attenuated vaccines
MERS, , TB, Chikungunya, Zika, MenB, plague	ChADOx1
LASV, EBOV, MARV, HIV	MVA encoded VLP
HIV, RSV	Ad26 (alone or with MVA boost)
Influenza	Adenovirus-based NasoVAX expressing SARS2-CoV spike protein
MERS	Ad5 S (GREVAX™ platform)
Flu, Rotavirus, Norovirus, West Nile virus, Cancer	Plant-derived VLP

### Economic Benefits of Vaccines

- (Shearley, 1999) with the comparison of other public health interventions (Bloom et al. 2005). Vaccines are highly beneficial based on a population level and also cost-effective. Department of government is required to perform an economic analysis and vaccine programs to justify their purchase give the pressure on both private and public finance globally; this provoked in the year 2008 financial crash.
- The vaccination program has a fair direct cost, including infrastructure and vaccine purchase to run the program and maintain the cold chain, health care/ administrative personnel. Sometimes

government supported the charities and non – governmental organizations who invest in developing the health conditions.

- The decrease rate in morbidity and mortality is associated with the successful vaccination programs, to a combination of both direct and indirect protection, lead to reduced incidences of disease and their associated treatment and health care costs. This leads to economic growth with the less amount of money which owes to the value through few medical tests, procedures, treatments and less time off work by COVID-19 patients / parents.
- (Deogaonkar et al. 2012), Additionally, we use the combination of vaccines, e.g., DTap / IPV / H1b / HepB, which protects the increased number of diseases with no additional infrastructure costs, i.e., the number of injections for one child within an existing immunization programs.

## Conclusion

A global financial system that supports through the end-end process and large scale manufacturing sectors and formation, which ensures fair allocation and protects the private sector partners from significant financial losses, will cause a critical components of future COVID-19 pandemic alertness.

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