

# THE INFLUENZA PANDEMIC AND 'NATIONS WITHIN A NATION'

Relevant for: Developmental Issues | Topic: Health & Sanitation and related issues

'The findings also bring useful insights for transnational organisations' | Photo Credit: Getty Images/iStockphoto

Few questions in business and public policy are as complex as the question of how to save lives. Lives matter, not only of those who are fortunate to live in more developed regions, but also of those who live in less developed regions. Many governments around the world struggle to address the problem of inequity in access to life-saving products such as vaccines. The struggle becomes even more complex when there is a sudden increase in demand for such life-saving products, for example, during a pandemic. When there is a sudden increase in demand for life-saving products (e.g., flu vaccines during the 2009-10 H1N1 pandemic), how do firms respond across the more versus less developed regions within a nation? Why might foreign incumbents and rival domestic firms respond differently?

To answer such intricate questions, it is crucial to first understand the sources of competitive advantage under normal conditions, i.e., in the absence of the pandemic. Product demand is central to the development of capabilities and the resources of firms as it incentivises their engagement in the high-fixed-cost research and development activities required to produce life-saving products such as vaccines. Typically, in developing economies, relatively muted demand for prophylactic products (i.e., products for which consumer pays now for some uncertain benefits in future) due to lower disposable income and present bias serves as a disincentive for domestic firms as they fear they may not sell enough vaccines at a price sufficient to recover their costs. In contrast, large foreign multinationals (henceforth MNEs) originating from developed economies can still generate additional economic returns by selling their products in developing economies so long as they can recover the variable costs of their products. Therefore, *ceteris paribus*, greater demand for prophylactic products in developed economies relative to developing economies enable MNEs from developed economies to become dominant incumbents in prophylactic product markets in developing economies.

However, sudden disease outbreaks can bring unanticipated changes in the business environment that could give rise to within-country spatial heterogeneity in business opportunities and challenges for MNEs and domestic firms. It is not straightforward to predict how these different kinds of firms will strategically respond to such changes. On the one hand, incumbent MNEs may be in a better position to leverage their global scale and reinforce their market dominance across regions within a nation.

On the other hand, however, MNEs may face greater opportunity costs in serving the underdeveloped regions under a condition when there is a spike in global demand. Not only capacity constraints but also opportunity costs of different kinds of firms may limit the extent to which additional product supplies can be distributed across various regions in response to the sudden increase in pandemic-induced demand. Therefore, in a [recent paper \(Adbi, Chatterjee, Mishra, 2022\) published in Management Science, we carefully investigate](#) how MNEs and domestic firms respond in different local markets to a global demand shock.

Our research analytically leverages the 2009-10 H1N1 influenza pandemic as a source of a sudden increase in global demand for flu vaccines. In the wake of this demand increase, we examine how subnational heterogeneity in health-care infrastructure and political alignment

between the federal/ central and regional governments in India influence the market share and revenues of MNEs and domestic firms in the influenza vaccine market relative to non-influenza vaccine markets.

We find strong evidence of a decline in the market share of MNEs in regions on an average. Intriguingly, however, the market share of MNEs fell much more in regions low in per capita public health expenditures and a lack of political alignment between federal-regional governments. It was not as if the revenues of MNEs decreased. The revenues of MNEs increased post pandemic, as one would expect should happen in the wake of a pandemic-induced sudden demand increase. The market entry of de alio domestic firms (that were selling other vaccines) was the core driver of the erosion of the market share of MNEs following the pandemic. Unlike domestic firms, foreign firms did not enter the influenza vaccine market or expand in underdeveloped regions.

In sum, our findings demonstrate that direct costs and opportunity costs are two defining features that can lead to heterogeneity across regions within a nation in the choice sets of foreign and domestic firms. Our findings directly speak to the tensions, which policymakers across several developing economies face; that is, the complex challenge of attracting foreign firms to supply vaccines while also seeking self-sufficiency in domestic vaccine production. The findings of our research enable identifying what type of regions within a nation may require additional policy support to attract different kinds of firms to deliver life-saving products. To encourage the capability development of domestic firms in markets with positive externalities (such as vaccines), policymakers can award advance market commitments to reduce demand uncertainty for firms.

We propose that making such awards contingent on distribution to underdeveloped regions could be a vital step toward incentivising managers of both foreign and domestic firms in considering the dual imperatives of innovation and inclusion.

Our findings also bring useful insights for transnational organisations (e.g., the World Health Organization, the Gates Foundation, GAVI). Typically, transnational organisations use the country's per capita income as the cut-off line to determine a country's eligibility to receive vaccine donations. While this criterion is a less controversial heuristic, an underdeveloped region within a nation, made worse by the lack of health infrastructure and the lack of political alignment between federal and regional governments, may deserve additional attention during pandemics. Given the subnational heterogeneity within large developing economies, rather than classifying an entire nation as ineligible for vaccine donations, recognising how different subnational regions may fare in health infrastructure and political alignment may lead to a more equitable allocation of supplies for managing the challenges stemming from competitive dynamics in the wake of a pandemic.

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