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# Should Firms Encourage Their Customers to Vaccinate?



By Pavel Kireyev , INSEAD Assistant Professor of Marketing; Vivek Choudhary , Assistant Professor of Information Technology and Operations Management, Nanyang Technological University; and Zhaoyan Liu, PhD Student, National University of Singapore

## **Private firms can boost their bottom line while promoting pro-social information.**

Outside of China, the first Covid-19 lockdowns were announced March 2020. Professionals from science, academia, hospitals, governments – all joined forces to find solutions to the crisis. Soon, a vaccine, and then a few more, were produced that could potentially save billions of lives.

Yet, by late 2021, and more than 5 million deaths and 260 million infections later, only 38 percent of the global population has been fully vaccinated – still far from the 60-70 percent necessary for herd immunity, when most of the population is immune to the disease. The reasons why people aren't fully vaccinated include social and economic factors like religion, a lack of information and awareness, individual hesitation and fears, limited financial resources, poor access to vaccines, government policy, a wait-and-see approach and so on.

While many studies have focused on what public health organisations are doing to encourage vaccination, few have examined the role of private sector firms in nudging their customers. This is an important topic as it may help the world achieve that all-important herd immunity.

In our [working paper](#) (co-authored with Selim Turki, Olesya Borzdyko and Abderrahmane Boutaib from Careem), we describe a “natural experiment” that enabled us to understand if private firms can indeed help spread awareness, increase vaccination rates and potentially enhance their own profits in the process.

### **A ridesharing app widget**

The data for our study were provided by Careem, the largest ridesharing company in the Middle East (recently acquired by Uber). The sample included over 1.59 million trips taken by customers over a six-month period from January to June 2021. In March 2021, Careem released an information widget on its app to provide information about the closest vaccination centres, assistance with booking appointments and reminders.

Part of an app update, the information widget was only available for later app versions. We considered the timing of the update to be “quasi-random”. This means that it wasn’t equivalent to a randomised controlled trial or A/B test (which would have been unethical to conduct in this setting). However, the variation in the timing of the app update was likely independent of potential confounding variables that may affect customer rides and vaccination behaviour.

We conducted several tests to reinforce this assumption. For instance, we focused only on users with automatic app updates (as manual updaters are more likely to do so when they plan on using the app more regularly). We also acquired a deep understanding of how app updates work (in iOS and Android) to ensure our results were robust. The quasi-random variation in app update timings across customers led us to some interesting findings regarding the social and economic impact of this initiative.

### **Impact of a private business intervention**

We found that the vaccine widget contributed to improving vaccination rates in the focal city by about 60 percent. This was similar to a [2021 study](#) that saw an 84 percent increase in vaccination appointments as a result of a

simple text-based intervention, in a different context and geography.

We couldn't measure actual vaccinations because such data are private, but we were able to construct a proxy based on the number of visits made by customers to vaccination centres. Our results should be interpreted in light of this constraint. They may be over-estimated if customers travelled to vaccination centres for reasons other than getting vaccinated. But they may also be under-estimated. For instance, the widget may have motivated customers to go to a vaccination centre, but they may have used another means of travel, such as walking or their own vehicle.

### **Economic benefits to a private firm**

Interestingly, Careem also experienced an uptick in profits from customers who had the widget during the test period. We found that approximately 12,000 additional trips could be attributed to the widget in that timeframe. Customers who had been to vaccination centres twice took almost one additional trip per week on average. This suggests that once vaccinated, customers felt it was safer to travel around, which increased the number of trips and associated profits. This simple informational widget did not offer any trip discounts or other incentives, yet it led to a 7.67 percent increase in ridesharing usage.

On a broader level, the provision of vaccine information by Careem can be viewed as a CSR initiative. While most studies have focused on costly CSR initiatives, our research team measured the economic impact of a relatively costless intervention (akin to a "nudge"). By simply communicating useful vaccine-related information to their customers, Careem helped alter customer behaviour while inducing desirable outcomes for the business.

A smartphone and a widget that costs next to nothing can empower the public and private sectors to become a joint force for good in raising vaccination rates, socio-economic conditions permitting. With negligible implementation costs, this profitable intervention could be applied to other prosocial causes.

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