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Do Travel Restrictions Work Against COVID-19?

A new study from Germany analyses the impact of travel restrictions on COVID-19 mortality and compares outcomes in different countries.

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Despite the fact that at the early stages of the pandemic the World Health Organization, the EU and many national governments were against the introduction of travel restrictions as a means to curb the infection spread, "this belief was fatally mistaken," argues Ruud Koopmans, director at the WZB Berlin Social Science Center, in a new paper (Koopmans 2020).

After examining data on travel restrictions and COVID-19 mortality in 181 countries, the author concludes that international t ravel restrictions implemented early on in the pandemic – by February or early March – have been crucial in slowing the spread of the coronavirus and keeping death rates low. "This holds true for containing upcoming waves of the COVID-19 pandemic as well as similar pandemics in the future," Koopmans notes.

The theoretical basis of the study draws from sociological accounts of network diffusion, specifically on the roles of the so-called 'weak' and 'strong' ties in the spread of social innovations and information. International travel here falls into the 'weak ties' category, because the density of social networks is much higher within ('strong' ties) than between countries. According to the author, cutting these weak ties, i.e. restricting travel, is much more efficient than cutting 'strong ties' (i.e. containing the spread of the virus through national lockdowns). The analysis shows that that countries that are heavily exposed to international travel and tourism , e.g. France, Italy, or the USA, have had much higher COVID-19 mortality compared to those on the periphery of international travel networks and island states.

The study examines six different mitigation strategies, namely entry bans and mandatory quarantines for travellers from China, Italy, or all foreign states. The key findings include:

- The earlier travel restriction measures have been introduced, the lower have been the COVID-19 mortality rates.
- The biggest effect was observed in countries that have been capable of implementing those restrictions before the local spread of the virus was out of control; this threshold appears to be around the 10th death in the country.
- The mortality in the countries that had banned international travel before early March (e.g. Australia, Israel and the Czech Republic) is estimated to be 62% lower than in those who closed their borders from mid-March onward or not at all, such as the UK, France, or Brazil. Regression results indicate a 0.8% reduction in cumulative mortality per day in countries where travel restrictions have been introduced earlier.
- The type of travel restriction is also important, with mandatory quarantines for traveller inflow being more effective than entry bans. This is possibly due to the fact that, unlike quarantine policies, entry bans do not usually cover repatriation of citizens and permanent residents leading to increased introduction of the virus into a country.
- Targeted travel restrictions, which in this particular study are represented by entry bans and mandatory quarantines for China or Italy, have had more impact than restrictions targeted against all foreign countries, which "have no measurable added value beyond what targeted travel restrictions can achieve".
- There is evidence that more affluent countries and democracies have higher death tolls. This, however, might be because they are more willing "to admit the true extent of the pandemic".

In conclusion, the author outlines some important policy implications. Particularly that countries with high exposure to international travel and tourism are at a higher risk of early and multiple seeding from pandemic source regions. Therefore, early implementation of targeted travel bans and mandatory quarantines are crucial for the success of all mitigating policies.

Source: WZB

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