

# Nobel Prize for Economic Sciences, 2021

## Relevant to GCO

The 2021 Nobel Prize for economic sciences has been awarded in one half to Canadian-born David Card and the other half jointly to Israeli-American Joshua D Angrist and Dutch-American Guido W Imbens, for their contributions to **an evidence-based approach in relation to their research on the effects of minimum wages, immigration, and education on labour market outcomes**, which uses natural experiments to better understand the impact of policy.

- **David Card, University of California, Berkeley, USA - for** his empirical contributions to labour economics
- **Joshua D. Angrist, Massachusetts Institute of Technology, Cambridge, USA & Guido W. Imbens Stanford University, USA - for** their methodological contributions to the analysis of causal relationships”

This year, the award is also relevant for those of us trying to promote the use of impact evaluation to improve government policy. It's about trying to get more scientific tie-in and evidence-based analysis in economics.

## Key contribution:

- David Card, Joshua Angrist and Guido Imbens have presented new insights about the labour market and shown what conclusions about cause and effect can be drawn from natural experiments. Their approach has spread to other fields and revolutionised empirical research.
- Many of the big questions in the social sciences deal with cause and effect. How does immigration affect pay and employment levels? How does a longer education affect

someone's future income? These questions are difficult to answer because we have nothing to use as a comparison. We do not know what would have happened if there had been less immigration or if that person had not continued studying.

- This year's Nobel Laureates have shown that it is possible to answer these and similar questions using *natural experiments*. The key is to use situations in which chance events or policy changes result in groups of people being treated differently, in a way that resembles clinical trials in medicine.
- Using natural experiments, **David Card** has analysed the labour market effects of minimum wages, immigration, and education. His studies from the early 1990s challenged conventional wisdom, leading to new analyses and additional insights. The results showed, among other things, that increasing the minimum wage does not necessarily lead to fewer jobs. His works have established that the incomes of people who were born in a country can benefit from new immigration, while people who immigrated at an earlier time risk being negatively affected. It has also been realised that resources in schools are far more important for students' future labour market success than was previously thought.
- In this way, Card's work challenged the commonly held idea that immigrants depress wages for native-born workers. He found that incomes of the native-born can benefit from new immigration, while it is earlier immigrants who are at risk of being negatively affected.
- Data from a natural experiment are difficult to interpret. For example, extending compulsory education by a year for one group of students (but not another) will not affect everyone in that group in the same way. Some students would have kept studying anyway and, for them, the value of education is often not representative of the entire group. So, is it even possible to draw any conclusions about the effect of an extra year in school? In the mid-1990s, **Joshua Angrist** and **Guido Imbens** solved this methodological problem, demonstrating how precise conclusions about cause and effect can be drawn from natural experiments.
- "Card's studies of core questions for society and Angrist and Imbens' methodological contributions have shown that natural experiments are a rich source of knowledge. Their research has substantially improved our ability to answer key causal questions, which has been of great benefit to society," says Peter Fredriksson, chair of the Economic Sciences Prize Committee.



## Conclusion

Since economists cannot conduct strict clinical trials, real-life situations are studied instead. The Nobel Prize Committee says the trio's research efforts have been "of great benefit to society" as they "substantially improved our ability to answer key causal questions". One experiment on minimum wage increase was used by the Biden administration in its push for legislation