Can we estimate the time until the next recession?

May 7 2020

Credit: CC0 Public Domain

As the world economy is falling into one of the biggest contractions of the last decades, a new study of economic recession patterns finds that

the likelihood of a downturn was high even before the onset of the Coronavirus crisis.

Recessions are business cycle contractions that happen when there is a general decline in economic activity. They may entail varying duration and intensity and could lead to substantial losses in terms of GDP, employment, household income, and investment spending. When a country falls into a recession, governments can employ multiple tools to recover, such as increasing spending, reducing taxes, or selling bonds.

Several economists warned that ominous signs were present in terms of the state of the global economy long before the COVID-19 outbreak at the end of 2019, pointing to specific vulnerabilities of current economic structures. The authors of the study, which was published in the journal *PLOS ONE*, found evidence that a recession stipulates adjustments to the economy at the aggregate level, which in turn influence the length of the following recovery period. In fact, according to the authors there was an 85% probability that after the great economic crisis of 2008, the next recession would happen before the start of 2020.

To capture the combined effect of adjustments in the economy and policy interventions on the remaining time before the next recession, the researchers built a diagnostic model to estimate the duration of expansion periods and the onset of the next recession in the business cycle. The recession data indicated that the length and depth of recessions have an impact on the time between these events.

"Recessions do not feature any regular periodicity and this statistical study tried to understand how corrective actions like market adjustments, stimulus packages, regulations of the financial sector, and trade reforms, affect the arrival times of new recessions. Our model accounts for the combined effect of these adjustment processes, as well as for the length and depth of previous recessions," explains study

coauthor Matthias Wildemeersch, a researcher in the IIASA Advanced Systems Analysis Program.

The researchers applied their model to historical recessions in the US and European markets and the results show that adjustments of economic systems can indeed be detected in this type of data. Moreover, the newly developed statistical tool enables comparison between adjustment processes in different economies. Both in the US and Europe, the results indicate that the economy achieves a more stable state through corrective measures and adjustment processes taking place after each recession. However, the results further reflect that adjustments in the American economy were more profound than in Europe, which can imply that historically, the American economy has been more effective in their adjustments than the European economy.

"This suggests that closer integration of countries in the European Union, of which many share the same currency but no common fiscal policy, could allow for a more effective European response to future crises," says IIASA researcher Piotr Zebrowski, another coauthor of this study.

The authors hope that their statistical model can be of use to policymakers by providing broader insights into the long-term effects of adjustment processes.

More information: Cristino CT, Zebrowski P, & Wildemeersch M (2020). Assessing the time intervals between economic recessions. *PLOS ONE* (2020). DOI: 10.1371/journal.pone.0232615

Provided by International Institute for Applied Systems Analysis