

## Is growth passé?

Some suggest that the Paris climate agreement's target for limiting global warming can be achieved only by stopping economic expansion. But there is ample room to change the quality of growth and significantly reduce its environmental impact without condemning billions of people to lives of deprivation **writes Joseph E. Stiglitz**



Joseph Stiglitz

### Nowhere else to go

It's clear: we are living beyond our planet's limits. Unless we change something, the consequences will be dire. Should that something be our focus on economic growth?

Climate change represents the most salient risk we face, and we are already getting a glimpse of

the costs. And in “we,” I include Americans. The United States, where a major political party is dominated by climate-change deniers, is the highest per capita emitter of greenhouse gases and the only country refusing to adhere to the 2015 Paris climate agreement. So there is a certain irony in the fact that the US has also become one of the countries with the highest levels of property damage associated with extreme weather events such as floods, fires, hurricanes, droughts, and bitter cold.

---

*Americans even hoped that climate change might benefit them*

---

At one time, some Americans even hoped that climate change might benefit them. Maine's coastal waters, for example, would become swimmable. Even today, a few economists still believe that there is not much to worry about, so long as we limit the increase in average global temperature to 3-4° Celsius, compared to the 2°C limit set by the Paris agreement. This is a foolish gamble. Greenhouse-gas concentrations are projected to be at their highest level in millions of years, and we have nowhere else to go if we lose.

## High future losses at stake

Studies suggesting that we could tolerate higher temperatures are deeply flawed. For example, because appropriate risk analyses are systematically omitted, their models do not give sufficient weight to the probability of “bad outcomes.” The greater the weight we assign to the risk of bad outcomes, and the worse those outcomes are, the more precautions we should take. By assigning little weight – far too little weight – to very adverse outcomes, these studies systematically bias the analysis against doing anything.

Moreover, these studies underestimate the non-linearities in the damage functions. In other words, our economic and ecological systems may be resilient to small changes in temperature, with damage increasing only proportionally to temperature, but once climate change reaches a certain threshold, the increase in damages accelerates relative to the rise in temperature. For example, crop loss becomes serious as a result of frosts and droughts. Whereas a below-threshold level of climate change may not affect the risk of frost or drought, a higher level increases disproportionately the risk of these extreme events.

---

*One wouldn't want to spend more than roughly three cents today to prevent a dollar loss in 50 years*

---

It is precisely when the consequences of climate change are large that we are least able to absorb the costs. There's no insurance fund to draw upon if we need investments to respond to large increases in sea levels, unforeseen health risks, and migration on a massive scale as a result of climate change. The fact is that in these circumstances, our world will be poorer, and less able to absorb these losses.

Finally, those who argue for a wait-and-see approach to climate change – that it's a waste of money to take large actions today for an uncertain risk far in the future – typically discount these

future losses at a high rate. That is, whenever one takes an action that has a future cost or benefit, one must assess the present value of these future costs or benefits. If a dollar 50 years from now is worth the same as a dollar today, one might be motivated to take strong action to prevent a loss; but if a dollar 50 years from now is worth three cents, one wouldn't.

The discount rate (how we value future costs and benefits relative to today) thus becomes critical. US President Donald Trump's administration has in fact said that one wouldn't want to spend more than roughly three cents today to prevent a dollar loss in 50 years. Future generations just don't count much. This is morally wrong. But the do-nothing advocates, ignoring all the advances in public economics over the past half-century that have explained otherwise, argue that economic efficiency requires it. They are wrong.

## Transition to a green economy

We must take strong action now to avoid the climate disaster toward which the world is heading. And it is a welcome development that so many European leaders are spearheading efforts to ensure that the world is carbon-neutral by 2050. The report of the High-Level Commission on Carbon Prices, which I co-chaired with Nicholas Stern, argued that we could achieve the Paris agreement's goal of limiting global warming to 2°C in a way that enhanced living standards: the transition to a green economy could spur innovation and prosperity.

---

*But it won't happen on its own, and it won't happen if we just leave it to the market*

---

That view sets us apart from those who suggest that the Paris agreement's goals can be achieved only by stopping economic expansion. I believe that is wrong. However misguided the obsession with ever-increasing GDP may be, without economic growth, billions of people will remain without inadequate food, housing, clothing, education, and medical care. But there is ample room to change the quality of growth, to reduce its environmental impact significantly. For example, even without major technological advances, we can achieve carbon neutrality by 2050.

But it won't happen on its own, and it won't happen if we just leave it to the market. It will happen only if we combine high levels of public investment with strong regulation and appropriate environmental pricing. And it can't, or won't, happen if we put the burden of adjustment on the poor: environmental sustainability can be achieved only in tandem with efforts to achieve greater social justice.

[This article first appeared in Project Syndicate on 9 December, 2019](#)

### Author

**Amrita Naik Nimbalkar**

Junior Economist, Global Macro

[amrita.naik.nimbalkar@ing.com](mailto:amrita.naik.nimbalkar@ing.com)

**Mateusz Sutowicz**

Senior Economist, Poland

[mateusz.sutowicz@ing.pl](mailto:mateusz.sutowicz@ing.pl)

**Alissa Lefebvre**

Economist

[alissa.lefebvre@ing.com](mailto:alissa.lefebvre@ing.com)

**Deepali Bhargava**

Regional Head of Research, Asia-Pacific

[Deepali.Bhargava@ing.com](mailto:Deepali.Bhargava@ing.com)

**Ruben Dewitte**

Economist

+32495364780

[ruben.dewitte@ing.com](mailto:ruben.dewitte@ing.com)

**Kinga Havasi**

Economic research trainee

[kinga.havasi@ing.com](mailto:kinga.havasi@ing.com)

**Marten van Garderen**

Consumer Economist, Netherlands

[marten.van.garderen@ing.com](mailto:marten.van.garderen@ing.com)

**David Havrlant**

Chief Economist, Czech Republic

420 770 321 486

[david.havrlant@ing.com](mailto:david.havrlant@ing.com)

**Sander Burgers**

Senior Economist, Dutch Housing

[sander.burgers@ing.com](mailto:sander.burgers@ing.com)

**Lynn Song**

Chief Economist, Greater China

[lynn.song@asia.ing.com](mailto:lynn.song@asia.ing.com)

**Michiel Tukker**

Senior European Rates Strategist

[michiel.tukker@ing.com](mailto:michiel.tukker@ing.com)

**Michal Rubaszek**

Senior Economist, Poland

[michal.rubaszek@ing.pl](mailto:michal.rubaszek@ing.pl)

**This is a test author**

**Stefan Posea**

Economist, Romania

[tiberiu-stefan.posea@ing.com](mailto:tiberiu-stefan.posea@ing.com)

**Marine Leleux**

Sector Strategist, Financials

[marine.leleux2@ing.com](mailto:marine.leleux2@ing.com)

**Jesse Norcross**

Senior Sector Strategist, Real Estate

[jesse.norcross@ing.com](mailto:jesse.norcross@ing.com)

**Teise Stellema**

Research Assistant, Energy Transition

[teise.stellema@ing.com](mailto:teise.stellema@ing.com)

**Diederik Stadig**

Sector Economist, TMT & Healthcare

[diederik.stadig@ing.com](mailto:diederik.stadig@ing.com)

**Diogo Gouveia**

Sector Economist

[diogo.duarte.vieira.de.gouveia@ing.com](mailto:diogo.duarte.vieira.de.gouveia@ing.com)

**Marine Leleux**

Sector Strategist, Financials

[marine.leleux2@ing.com](mailto:marine.leleux2@ing.com)

**Ewa Manthey**

Commodities Strategist

[ewa.manthey@ing.com](mailto:ewa.manthey@ing.com)

**ING Analysts**

**James Wilson**

EM Sovereign Strategist

[James.wilson@ing.com](mailto:James.wilson@ing.com)

**Sophie Smith**

Digital Editor

[sophie.smith@ing.com](mailto:sophie.smith@ing.com)

**Frantisek Taborsky**

EMEA FX & FI Strategist

[frantisek.taborsky@ing.com](mailto:frantisek.taborsky@ing.com)

**Adam Antoniak**

Senior Economist, Poland

[adam.antoniak@ing.pl](mailto:adam.antoniak@ing.pl)

**Min Joo Kang**

Senior Economist, South Korea and Japan

[min.joo.kang@asia.ing.com](mailto:min.joo.kang@asia.ing.com)

**Coco Zhang**

ESG Research

[coco.zhang@ing.com](mailto:coco.zhang@ing.com)

**Jan Frederik Slijkerman**

Senior Sector Strategist, TMT

[jan.frederik.slijkerman@ing.com](mailto:jan.frederik.slijkerman@ing.com)

**Katinka Jongkind**

Senior Economist, Services and Leisure

[Katinka.Jongkind@ing.com](mailto:Katinka.Jongkind@ing.com)

**Marina Le Blanc**

Sector Strategist, Financials

[Marina.Le.Blanc@ing.com](mailto:Marina.Le.Blanc@ing.com)

**Samuel Abettan**

Junior Economist

[samuel.abettan@ing.com](mailto:samuel.abettan@ing.com)

**Franziska Biehl**

Senior Economist, Germany

[Franziska.Marie.Biehl@ing.de](mailto:Franziska.Marie.Biehl@ing.de)

**Rebecca Byrne**

Senior Editor and Supervisory Analyst

[rebecca.byrne@ing.com](mailto:rebecca.byrne@ing.com)

**Mirjam Bani**

Sector Economist, Commercial Real Estate & Public Sector (Netherlands)

[mirjam.bani@ing.com](mailto:mirjam.bani@ing.com)

**Timothy Rahill**

Credit Strategist

[timothy.rahill@ing.com](mailto:timothy.rahill@ing.com)

**Leszek Kasek**

Senior Economist, Poland

[leszek.kasek@ing.pl](mailto:leszek.kasek@ing.pl)

**Oleksiy Soroka, CFA**

Senior High Yield Credit Strategist

[oleksiy.soroka@ing.com](mailto:oleksiy.soroka@ing.com)

**Antoine Bouvet**

Head of European Rates Strategy

[antoine.bouvet@ing.com](mailto:antoine.bouvet@ing.com)

**Jeroen van den Broek**

Global Head of Sector Research

[jeroen.van.den.broek@ing.com](mailto:jeroen.van.den.broek@ing.com)

**Edse Dantuma**

Senior Sector Economist, Industry and Healthcare

[edse.dantuma@ing.com](mailto:edse.dantuma@ing.com)

**Francesco Pesole**

FX Strategist

[francesco.pesole@ing.com](mailto:francesco.pesole@ing.com)

**Rico Luman**

Senior Sector Economist, Transport and Logistics

[Rico.Luman@ing.com](mailto:Rico.Luman@ing.com)

**Jurjen Witteveen**

Sector Economist

[jurjen.witteveen@ing.com](mailto:jurjen.witteveen@ing.com)

**Dmitry Dolgin**

Chief Economist, CIS

[dmitry.dolgin@ing.de](mailto:dmitry.dolgin@ing.de)

**Nicholas Mapa**

Senior Economist, Philippines

[nicholas.antonio.mapa@asia.ing.com](mailto:nicholas.antonio.mapa@asia.ing.com)

**Egor Fedorov**

Senior Credit Analyst

[egor.fedorov@ing.com](mailto:egor.fedorov@ing.com)

**Sebastian Franke**

Consumer Economist

[sebastian.franke@ing.de](mailto:sebastian.franke@ing.de)

**Gerben Hieminga**

Senior Sector Economist, Energy

[gerben.hieminga@ing.com](mailto:gerben.hieminga@ing.com)

**Nadège Tillier**

Head of Corporates Sector Strategy

[nadege.tillier@ing.com](mailto:nadege.tillier@ing.com)

**Charlotte de Montpellier**

Senior Economist, France and Switzerland

[charlotte.de.montpellier@ing.com](mailto:charlotte.de.montpellier@ing.com)

**Laura Straeter**

Behavioural Scientist

+31(0)611172684

[laura.Straeter@ing.com](mailto:laura.Straeter@ing.com)

**Valentin Tataru**

Chief Economist, Romania

[valentin.tataru@ing.com](mailto:valentin.tataru@ing.com)

**James Smith**

Developed Markets Economist, UK

[james.smith@ing.com](mailto:james.smith@ing.com)

**Suvi Platerink Kosonen**

Senior Sector Strategist, Financials

[suvi.platerink-kosonen@ing.com](mailto:suvi.platerink-kosonen@ing.com)

**Thijs Geijer**

Senior Sector Economist, Food & Agri

[thijs.geijer@ing.com](mailto:thijs.geijer@ing.com)

**Maurice van Sante**

Senior Economist Construction & Team Lead Sectors

[maurice.van.sante@ing.com](mailto:maurice.van.sante@ing.com)

**Marcel Klok**

Senior Economist, Netherlands

[marcel.klok@ing.com](mailto:marcel.klok@ing.com)

**Piotr Poplawski**

Senior Economist, Poland

[piotr.poplawski@ing.pl](mailto:piotr.poplawski@ing.pl)

**Paolo Pizzoli**

Senior Economist, Italy, Greece

[paolo.pizzoli@ing.com](mailto:paolo.pizzoli@ing.com)

**Marieke Blom**



Chief Economist and Global Head of Research  
[marieke.blom@ing.com](mailto:marieke.blom@ing.com)

**Raoul Leering**  
Senior Macro Economist  
[raoul.leering@ing.com](mailto:raoul.leering@ing.com)

**Maarten Leen**  
Head of Global IFRS9 ME Scenarios  
[maarten.leen@ing.com](mailto:maarten.leen@ing.com)

**Maureen Schuller**  
Head of Financials Sector Strategy  
[Maureen.Schuller@ing.com](mailto:Maureen.Schuller@ing.com)

**Warren Patterson**  
Head of Commodities Strategy  
[Warren.Patterson@asia.ing.com](mailto:Warren.Patterson@asia.ing.com)

**Rafal Benecki**  
Chief Economist, Poland  
[rafal.benecki@ing.pl](mailto:rafal.benecki@ing.pl)

**Philippe Ledent**  
Senior Economist, Belgium, Luxembourg  
[philippe.ledent@ing.com](mailto:philippe.ledent@ing.com)

**Peter Virovacz**  
Senior Economist, Hungary  
[peter.virovacz@ing.com](mailto:peter.virovacz@ing.com)

**Inga Fechner**  
Senior Economist, Germany, Global Trade  
[inga.fechner@ing.de](mailto:inga.fechner@ing.de)

**Dimitry Fleming**  
Senior Data Analyst, Netherlands  
[Dimitry.Fleming@ing.com](mailto:Dimitry.Fleming@ing.com)

**Ciprian Dascalu**  
Chief Economist, Romania  
+40 31 406 8990  
[ciprian.dascalu@ing.com](mailto:ciprian.dascalu@ing.com)

**Muhammet Mercan**  
Chief Economist, Turkey  
[muhammet.mercan@ingbank.com.tr](mailto:muhammet.mercan@ingbank.com.tr)

**Iris Pang**

Chief Economist, Greater China

[iris.pang@asia.ing.com](mailto:iris.pang@asia.ing.com)

**Sophie Freeman**

Writer, Group Research

+44 20 7767 6209

[Sophie.Freeman@uk.ing.com](mailto:Sophie.Freeman@uk.ing.com)

**Padhraic Garvey, CFA**

Regional Head of Research, Americas

[padhraic.garvey@ing.com](mailto:padhraic.garvey@ing.com)

**James Knightley**

Chief International Economist, US

[james.knightley@ing.com](mailto:james.knightley@ing.com)

**Tim Condon**

Asia Chief Economist

+65 6232-6020

**Martin van Vliet**

Senior Interest Rate Strategist

+31 20 563 8801

[martin.van.vliet@ing.com](mailto:martin.van.vliet@ing.com)

**Karol Pogorzelski**

Senior Economist, Poland

[Karol.Pogorzelski@ing.pl](mailto:Karol.Pogorzelski@ing.pl)

**Carsten Brzeski**

Global Head of Macro

[carsten.brzeski@ing.de](mailto:carsten.brzeski@ing.de)

**Viraj Patel**

Foreign Exchange Strategist

+44 20 7767 6405

[viraj.patel@ing.com](mailto:viraj.patel@ing.com)

**Owen Thomas**

Global Head of Editorial Content

+44 (0) 207 767 5331

[owen.thomas@ing.com](mailto:owen.thomas@ing.com)

**Bert Colijn**

Chief Economist, Netherlands

[bert.colijn@ing.com](mailto:bert.colijn@ing.com)

**Peter Vanden Houte**

Chief Economist, Belgium, Luxembourg, Eurozone

[peter.vandenhoute@ing.com](mailto:peter.vandenhoute@ing.com)

**Benjamin Schroeder**

Senior Rates Strategist

[benjamin.schroeder@ing.com](mailto:benjamin.schroeder@ing.com)

**Chris Turner**

Global Head of Markets and Regional Head of Research for UK & CEE

[chris.turner@ing.com](mailto:chris.turner@ing.com)

**Gustavo Rangel**

Chief Economist, LATAM

+1 646 424 6464

[gustavo.rangel@ing.com](mailto:gustavo.rangel@ing.com)

**Carlo Cocuzzo**

Economist, Digital Finance

+44 20 7767 5306

[carlo.cocuzzo@ing.com](mailto:carlo.cocuzzo@ing.com)