

# How ageing population could help to save the world

June 9 2015

---



A finance expert at Murdoch University has hypothesized that a worldwide ageing population could result in a natural reduction of carbon dioxide (CO<sub>2</sub>) emissions without the need for policy interventions.

Dr Kamrul Hassan from Murdoch's School of Management and Governance examined the effects of [population ageing](#) on CO<sub>2</sub> emissions in 25 high income and highly developed countries, including Australia and the United States, over the course of 30 years using mathematical formulas to calculate that a 1 per cent increase in the share of the aged [population](#) will reduce per capita CO<sub>2</sub> emission by 1.55 per

cent.

"The findings of the study imply that the harmful effect of environmental degradation on [economic growth](#) is a self-limiting phenomenon," said Dr Hassan, whose co-authored research was recently published in the Journal of Economic Studies.

"According to existing research in this subject, retired people generally consume greenhouse gas-producing resources like fuel at a slower rate than those of a working [age](#), resulting in reduced emission rates.

"An [ageing population](#) can also be associated with a lower labour participation rate, slowing down economic growth which in turn has been shown to reduce emissions.

"At the same time, globally the proportion of people aged 60 and over is growing faster than any other age group. For example, the Australian government's [Intergenerational Report](#) projects that over the next 40 years, the proportion of Australia's population over 65 years will almost double to around 25 per cent."

Dr Hassan used figures on ageing populations from 25 Organisation for Economic Cooperation and Development (OECD) countries from 1980 to 2010 and [carbon dioxide](#) emission data was collected from the US Energy Information Administration. He then applied the economic hypothesis known as the Environmental Kuznets Curve to analyse the effect of ageing on CO2 emission.

The results showed that population ageing reduces CO2 emission in the long run.

But Dr Hassan said the statistics for the time period studied did not take into account more recent trends which showed that workers were being

encouraged to remain in employment for longer.

"The retirement age has been increased in many countries, meaning workers are likely to be high level consumers for longer," he said.

"This may mean that the ageing population will not have such an impact on reducing emissions so governments should not abandon policies which seek to reduce CO2 emissions.

"Our research also does not investigate the effect of an ageing population on other types of pollutants like sulphur dioxide."

Dr Hassan said the area required further research and he is looking to write another paper on how the effective age of retirement (the age that people actually stop working rather than the age at which they are officially supposed to retire) affects CO2 emissions.

**More information:** "Population ageing, income growth and CO2 emission: Empirical evidence from high income OECD countries." [dx.doi.org/10.1108/JES-04-2013-0046](https://doi.org/10.1108/JES-04-2013-0046)

Provided by Murdoch University

Citation: How ageing population could help to save the world (2015, June 9) retrieved 17 July 2024 from <https://phys.org/news/2015-06-ageing-population-world.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.