

New data could help policy makers boost cycling as sustainable transport

December 2 2015

It's time for us to get on our bikes if we want cycling to make an impact as a sustainable mode of transport. New research published in the *Journal of Transport & Health* shows that the proportion of households that own bikes has declined globally, with the average over 148 countries falling by half in the last few decades.

The authors of the study, from Johns Hopkins University in the US, say their analysis could give policy makers good examples from where ownership is highest, helping them boost [cycling](#) as a sustainable mode of transport.

"Everyone is focused on what's happening now, but looking to the past can really help policy makers - it can show them what worked and what didn't and give them ideas," said Olufolajimi Oke, lead author of the study. "By pulling together and analyzing many sources of data, we have produced a database that we hope will give policy makers the information they need to take action."

The researchers analyzed data from 1.25 billion households in the first global study of bicycle ownership over time, revealing the patterns of ownership in four groups of countries. Although ownership has increased in some countries and plateaued in others, it is decreasing rapidly in some, showing that cycling is not yet proving to be a widespread sustainable [transport](#) solution.

According to the study, 42% of households worldwide own at least one

bicycle, adding up to an estimated 580 million bicycles owned privately worldwide.. Generally, bicycle ownership is highest in northern Europe and lowest in parts of Africa and central Asia.

The number of bicycles is highest in India and China, which account for a quarter of the world's household population, having a big effect on the global average. The most dramatic changes in ownership are seen in China, where almost all households—more than 97%—owned a bicycle in 1992, plummeting to less than half—just 48.7%—in 2007 and rising again to 63.2% in 2009.

Taking China and India out of the picture reveals a steady global decline in bicycle ownership, falling from an average of 60% of households owning a bike in 1989 to just 32% in 2012.

There are many different sources of data on bicycle ownership, but until now no one single source was tracking global ownership over time. The team gathered the information that was already available from 150 countries, representing 1.25 billion households, from 1981 to 2012. They analyzed the data, weighting results and converting data to make everything comparable between countries and over time. They then put everything into a single database.

The team conducted what's called a gap test to find the optimal number of groups in the dataset. This gave them four main clusters of countries with similar bicycle ownership rates, with an average of 81% of households owning a bike in group 1, 60% in group 2, 40% in group 3 and 20% in group 4.

Patterns started to emerge in the groups, with geographic proximity and cultural similarities leading to similar levels of ownership. "If a country doing well in terms of bicycle ownership, surrounding countries also seem to do well," explained Oke.

However, there were surprises. Burkina Faso, for example, is surrounded by countries in groups 3 and 4, but it has a high average bike ownership, putting it in group 1. Looking at [countries](#) like this can help [policy makers](#) put measures in place to increase cycling, say the researchers.

"We've done all the work, now we want people to use the data - we want it to have the biggest possible [impact](#)," said Oke.

The data is freely accessible online at: ce.jhu.edu/sauleh/obls-gbu/

More information: Olufolajimi Oke et al. Tracking global bicycle ownership patterns, *Journal of Transport & Health* (2015). [DOI: 10.1016/j.jth.2015.08.006](#)

Provided by Elsevier

Citation: New data could help policy makers boost cycling as sustainable transport (2015, December 2) retrieved 4 May 2024 from <https://medicalxpress.com/news/2015-12-policy-makers-boost-sustainable.html>

<p>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.</p>
--