

Too much inequality impedes support for public goods

August 14 2019



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Too much inequality in society can result in a damaging lack of support for public goods and services, which could disadvantage the rich as well as the poor, according to new research from the University of Exeter Business School, the Institute of Science and Technology Austria (IST Austria) and Harvard University. It is published in the journal *Nature*.

However, while too much inequality is harmful, the researchers also find that complete equality isn't always required in order to bring about the greatest benefits to the public. Some inequality within groups can actually help to ensure that everyone contributes sufficiently to the group, according to the findings. The results could help policymakers to ensure continuing support for [public goods](#) and services such as taxes, healthcare and education.

The research, including co-first authors Dr. Oliver Hauser (University of Exeter) and Dr. Christian Hilbe (IST Austria), developed a [mathematical theory](#) that took into account the extent to which people with differing incomes and productivities were able to cooperate with one another by measuring their willingness to contribute part of their [income](#) to the public good.

They discovered that in a very unequal society, those people with [higher incomes](#) were less inclined to contribute their proportional share toward public goods and services. This, in turn, also led people on the lowest incomes to contribute less. The breakdown of cooperation under high inequality has implications for funding of essential services for society.

"To ensure our public goods are maintained, we need to understand what impact inequality plays," said Dr. Hauser. "Many people view inequality as either categorically bad or good, but our research demonstrates that it is more complicated than that. We looked at it in a slightly different way—under what conditions does inequality become harmful and are there cases where it can also be beneficial? The main takeaway from our research is that if inequality runs away with us, we are threatening the maintenance of public services. Eventually, too much inequality negatively affects everyone's outcomes—both for the poorest but even the rich."

The researchers showed that in groups of two people with unequal

incomes, high inequality reduces the willingness to cooperate. Yet when people have different productivities (such as more experience or skills on a work task), some inequality in incomes can be beneficial to ensure they both continue to contribute.

"We found that when there is some inequality, both people still have enough influence to hold each other accountable for their contributions. We also discovered that those who are highly productive in the task are more motivated to contribute. They will give more of their income—even if that is a large amount," said Dr. Hilbe.

"But there is a limit: Once the inequality between the two people becomes too large, the influence over the other person is lost and the poorer player is at the mercy of the more powerful rich player. Neither of them has much incentive to cooperate anymore and cooperation breaks down quickly."

The research was also carried out by Professor Martin Nowak (Harvard University) and Professor Krishnendu Chatterjee (IST Austria). The team used [game theory](#), [computer simulations](#) and a behavioral experiment to develop their model and find empirical support for its conclusions. Where previous studies have typically looked at individual interactions, the team's modeling technique looked at group interactions across millions of scenarios, which makes the finding of this study unique—particularly toward understanding societal interaction.

"Our research demonstrates the impact that [inequality](#) can have on support for public goods," said Dr. Chatterjee. "We hope that more research will be carried out in this area in the future to better understand the forces that affect our decision-making, particularly in the critical area of supporting the goods and services which serve society. Now, we have a more realistic model to emulate societal interaction and the analytical, theoretical and behavioral results are all in excellent

agreement. To me, this is the greatest aspect of this paper."

The paper, "Social dilemmas among unequals," is published in *Nature*.

More information: Social dilemmas among unequals, *Nature* (2019).
[DOI: 10.1038/s41586-019-1488-5](https://doi.org/10.1038/s41586-019-1488-5) ,
www.nature.com/articles/s41586-019-1488-5

Provided by Institute of Science and Technology Austria

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