

The nexus between economic inequality and social welfare

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Equity (or, its counterpart, inequity) plays a fundamental role in the evaluation of the different dimensions of social welfare. But how can we consider and compare its different dimensions? These issues are in fact

traditionally considered and compared across individuals—be it within national boundaries or across countries, but also over time, when we consider the distribution of resources over time and the related questions of savings, intergenerational distribution stemming from capital dynamics or the intertemporal use of natural resources. Finally, there's a third dimension ("states of the world" or future worlds) that takes into account the presence of uncertainty affecting the realizations of random variables.

While the economics research has historically considered the fundamentally different dimensions of individuals, time, and states of the world separately, it is now clear that different potential dimensions of "inequity" (i.e., unequal distribution of resources in a particular dimension) are potentially closely intertwined: Inequality between contemporaneous individuals might be correlated with intergenerational inequality between generations, uncertainty might affect individuals differently, and so on. Focusing on one [dimension](#) of inequity in isolation therefore runs the risk of neglecting potentially important interaction effects.

A new paper just published in the *Journal of Economic Surveys* revisits the concept of inequity—in the sense of unequal distributions—across individuals, time, and states of the world using a unified framework that generalizes the standard approach typically used to aggregate the different dimensions of social welfare. The study, co-authored by Johannes Emmerling, senior scientist at the CMCC Foundation and head of the Integrated Assessment Modeling Unit at EIEE, proposes a general measure of welfare as "equity equivalents" and a corresponding inequity index.

This generalized framework enables researchers to gather different concepts that have been investigated separately in previous researches.

"Unequal distribution of consumption or income," explains Johannes Emmerling, "comes in different 'dimensions': spatial, or across individuals within a country or in different countries; temporal between different generations, or in different 'states of the world' or uncertain worlds in which we could possibly live in the future. The aggregation of and comparison between individuals in these dimensions is crucial for studying issues with global, uncertain, and long-term consequences, such as climate change. Our study shows how inequity in these dimensions can be treated in a similar and analytical equivalent way. Moreover, we allowed for different preferences towards [inequality](#) in different dimensions, and found out that the order of aggregation across them matters for the evaluation of economic and environmental policies."

The study highlights that people tend to evaluate inequality differently in different dimensions: People tend to be very much concerned about the future (so we have a strong preference for giving something to the future generations), while are less concerned about current inequality (e.g., people living in different countries with different income levels). Moreover, people tend to have a higher degree of inequity aversion in terms of uncertainty compared to inequality and intertemporal distribution.

Climate change is a classic example that combines the three dimensions of individuals, time, and states together: Issues that have been raised in this context include intergenerational inequity (e.g., the social discount rate), the notion of inequality and distributional justice, and the role of (deep) uncertainty together with the related idea of a precautionary principle. The common feature across these seemingly unrelated concepts is that losses and benefits of given policies need to be compared along different dimensions. "It's not obvious," adds J. Emmerling, "How taking into account inequality in [climate change](#) evaluation, but our research underlines the importance of inequality in the evaluation of long-term climate policies."

More information: Loïc Berger et al, Welfare As Equity Equivalents, *Journal of Economic Surveys* (2020). [DOI: 10.1111/joes.12368](https://doi.org/10.1111/joes.12368)

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