

## Measuring time poverty and its relation with well-being

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### Abstract

This study develops and compares alternative measures of time poverty using original survey data collected in Japan in 2024, complemented with official time-use statistics. Although time poverty has become an important topic in labor economics and social policy, there is no consensus on its definition, and alternative measurement approaches have rarely been compared systematically within a unified empirical framework.

In comparing alternative measures, an important issue is how different approaches treat time allocations that reflect preferences or social norms rather than binding constraints. Absolute approaches rely on externally fixed minimum requirements and may overclassify time poverty, while relative approaches focus on low leisure and can flag time poverty even when reduced leisure reflects longer sleep, personal care, or housework.

To address these limitations, this study draws on subjective approaches developed in the income poverty literature and proposes a hybrid measurement framework combining subjective and relative elements. Specifically, we estimate a Subjective Minimum necessary Housework (SMH) threshold based on respondents' assessments under a zero-outsourcing assumption, while benchmarking leisure using a fixed proportion of the population average.

Using this framework, we compare four time-poverty models: a conventional Relative Time Poverty (RTP) model, a conventional Absolute Time Poverty (ATP) model, an SMH model, and an SMH with Relative Leisure (SMH-RL) model. We examine differences in time-poverty incidence and assess validity by relating time-poverty status to well-being indicators, including leisure satisfaction, life satisfaction, weekday–weekend sleep gaps, and diet quality.

The results show substantial variation in incidence and classification. The ATP model yields the highest time-poverty rates, particularly among households with young children, suggesting systematic overclassification. The RTP model tends to flag low leisure even when reductions are driven by longer sleep, personal care, or housework. By contrast, the SMH-RL model shows the most consistent associations with poorer well-being outcomes, indicating that it more plausibly captures binding time constraints.

These findings suggest that policy evaluations of working-time regulation and work–life balance initiatives should move beyond simple indicators of working hours or leisure time and instead incorporate measures that account for household production and the composition of daily time use.