

# Estimating Upward Bias in the Japanese CPI Using the Engel's Law

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## Abstract

The Japanese Consumer Price Index (CPI) has been discussed to be upwardly biased. To measure size of bias, this paper estimates the Engel curve with National Survey of Family Income and Expenditure. The estimated annual bias is 0.5 percentage point between 1989 and 2004. Correcting bias leads to the low inflation rate. The inflation rate becomes 0.14 percent per year between 1989 and 2004. In addition, this paper analyzes the relationship between the magnitudes of bias and family characteristics. The bias for households with two adults and two children is 0.31 percentage point per year. The bias for households with a 40-49 aged household head is 0.75 percentage point per year.

**Keywords:** consumer price index bias; the Engel's law

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