The Effect of Educational Quality on Poverty Measurements : Study Case of Japan

Imen Maddouri
Tokyo International University, Japan

Abstract:

The present study examines the impact of educational quality on poverty levels across Japanese prefectures from 2004 to 2019, using a time series cross-sectional dataset. We used the student-teacher ratio (ST) as a proxy for educational quality in Japan and the Engel coefficient as a proxy for poverty level.The results show a positive and significant relationship between ST and the Engel coefficient. Initially, it suggests that larger class sizes correlate with higher Engel coefficients, which in turn lead to higher levels of poverty. The negative coefficient on the square of ST indicates a diminishing marginal effect of class size on poverty level. This implies a nonlinear, inverted U-shaped relationship. Beyond a certain threshold, further increases in ST have a less pronounced effect or might even reduce the Engel coefficient slightly due to compensating mechanisms (e.g., urban infrastructure or economies of scale in populous areas).

Beyond the direct effect, we also investigated the indirect effect of educational quality on poverty level through the decision of migrating to more economically attractive prefectures . The results suggest an inverted U-shaped relationship. While class sizes increase, it leads to more migration out. However , beyond a threshold, the effect becomes negative, suggesting that the decision to move to more economically appealing prefectures is positively affected by educational quality till a certain point when a decrease in the quality of education will have a diminishing marginal effect. The results emphasize the dual role of education quality in leveraging the economic welfare over direct or indirect channels.

Key words:

fixed effect model, poverty measurements , Engel coefficient, educational quality , student-teacher ratio, internal migration.