ABSTRACT

This study examines the influence of several socioeconomic variables on students' academic performance, as measured by the Programme for International Student Assessment (PISA) scores, across 30 countries from 2009 to 2022. The independent variables include government spending on education, parental education (proxied by ISCED levels 0–3), GDP per capita (as a proxy for household income), gross enrolment ratio in secondary education, and total fertility rate. Using panel data analysis with the Fixed Effects Model (FEM), the study finds that, partially, ISCED levels 0–3 have a significant and positive effect on PISA scores. Fertility rate is also found to have a significant effect on PISA scores, but with a negative coefficient. Meanwhile, government education spending and GDP per capita exhibit statistically insignificant negative effects. The gross enrolment ratio also show no significant partial effect. However, based on the F-test, the model as a whole is statistically significant, indicating that the independent variables collectively influence PISA scores. These findings highlight the importance of parental education in shaping student performance and raise questions about the effectivity of income and education spending as predictors of learning outcomes.

Keywords: PISA, Education, Socioeconomic Factors, Panel Data, ISCED, Government Spending