## The Relationship between Schools' Instruction Time and Students' Test Score: Evidence from Japan<sup>\*</sup>

Hiroyuki Motegi<sup>†</sup> Masato Oikawa<sup>‡</sup>

January 22, 2016

## Abstract

This paper estimates the effect of the schools' instruction time on students' test score in Japan by using the Trends in International Mathematics and Science Study (TIMSS). We make use of the curriculum standards revision in 2002 to derive variations of instruction time. In addition, characteristics of schools and information about socioeconomic background can be controlled. Applying time dimension of panel data structure to two subjects, mathematics and science, allows us to control individual fixed effects and schools fixed effect. We find that an increase in instruction time raises students' test score even though there are little effects. The impact is larger for students who are not good at studying.

JEL Classification Numbers: I21, I28, J24

Keywords: instruction time, test score, Japanese curriculum standards revision, fixed effects, subjects effects, TIMSS

<sup>\*</sup>This research is partially supported by the Grants-in-Aid for Scientific Research [Research project number: 13J09809] for the Japan Society for the Promotion of Science (JSPS) Fellows by the Ministry of Education, Science and Culture in Japan.

 $<sup>^{\</sup>dagger}\mathrm{Graduate}$  School of Economics, the University of Tokyo, Japan. Email: motegihiro@gmail.com

<sup>&</sup>lt;sup>‡</sup>Graduate School of Economics, the University of Tokyo, Japan. Email: masato.oikawa1991@gmail.com