

# **Exploring Substitutability across age groups and College-High school wage gap in Korea**

*Joobong, KIM*

*Osaka university*

## Abstract

Although the relative supply of highly educated workers in Korea has increased over the past 30 years, the college-high school wage gap for workers has remained nearly constant since the early 1990s.

The motivation of this paper is because of the fact that college-high school wage gaps of different age groups have not moved together over the past three decades. In particular, the college premium for older workers has declined substantially, while the premium for younger workers is about the same today as it was in the early 1990s.

Using a model with imperfect substitution between similarly educated workers in different age groups, we find definite evidence that different age groups, younger or older workers, are imperfect substitutes.

To be more specific, elasticity of substitution between different age groups is in the range of 8~20; larger than U.S., U.K., Canada, and Japan. It is even bigger for lower educated workers more than highly educated workers. In case of firm size, the estimate is bigger in large firms than in small firms.

Indeed, the evidence suggests that the reason why college-high school wage gaps differ by age groups can be explained by the cohort-specific relative supply of college labor, because of imperfect substitutability across age groups.

However, we cannot deny the possibility that different educational groups are perfectly substitutable in Korea. This result can become one possible explanation why the college premium has remained nearly constant without decline, despite a soaring supply of college-educated labor.

In other words, at least in Korea, the relative supply of college labor does not affect the college-high school wage gaps because of the perfect substitutability between educational groups.

Furthermore, these findings suggest that “Age(or seniority)” can be one of the contributing factors other than education to explain the college-high school wage premium for specific age group  $j$ , in terms of labor supply.