



Exams, districts, and intergenerational mobility: Evidence from South Korea[☆]



Yong Suk Lee

Department of Economics, Williams College, 24 Hopkins Hall Drive, Williamstown, MA 01267, USA

ARTICLE INFO

Article history:

Received 9 April 2013

Received in revised form 5 May 2014

Accepted 8 May 2014

Available online 28 May 2014

JEL classification:

I24

I28

J62

R23

Keywords:

Intergenerational mobility

Merit based admission

School districts

Migration

ABSTRACT

This paper examines how student assignment rules impact intergenerational mobility. High school admission had traditionally been exam based in South Korea. However, between 1974 and 1980 the central government shifted several cities to a school district based admission system. I estimate the impact of this reform on the intergenerational income elasticity. Results indicate that the reform increased the intergenerational income elasticity from 0.15 to 0.31. Furthermore, I find that district assignment increases the impact of parental income on migration to reform cities. The probability of migration associated with a 10% increase in parental income increased by 1.7 percentage points after the reform. In sum, I find that the shift from a merit to a location based student assignment rule decreases intergenerational mobility and promotes selective migration by higher income households.

© 2014 Elsevier B.V. All rights reserved.

1. Introduction

This paper examines how educational policy impacts intergenerational mobility. Specifically, I compare two secondary school student allocation rules: an exam based system, where schools choose students based on entrance exam results, and a district based system, where residential location determines school choice. How does the shift from an exam to a district based system affect the intergenerational income elasticity and through what channels? Attending a better secondary school could result in higher income, either directly through human capital accumulation, or indirectly through access to better colleges, alumni networks, or jobs in higher wage locations. Richer households can use more resources to send their children to the better secondary schools in either regime, e.g., by tutoring under the exam regime or by moving to the better districts under the district regime. Hence, it is unclear ex-ante whether intergenerational income elasticity should be higher under one regime relative to another. I empirically examine this question in the context of South Korea.

[☆] I thank Bas van der Klaauw, two anonymous referees, Nathaniel Baum-Snow, Kenneth Chay, Andrew Foster, Vernon Henderson, the seminar participants at Stanford University Freeman Spogli Institute, Georgetown University School of Foreign Service, UC Berkeley Haas School of Business, Williams College, Brown University, the Urban Economics Association Annual Meetings, and the Northeast Universities Development Economics Consortium Conference for their helpful comments.

E-mail address: yong.s.lee@williams.edu.

South Korea shifted away from an exam based student allocation system to a district based system during the 1970s. The main motivation behind the reform was the concern that a merit based system likely perpetuates inequality and randomly allocating students in districts would lead to more equitable outcomes (Kang et al., 2007). Several countries have made similar transitions and whether secondary education should track students by prior achievement continues to be an important debate for education policy.¹ The literature has examined how student allocation rules impact intergenerational mobility but the results have been inconclusive. Using cross-country data, Hanushek and Wobmann (2006) find that ability tracking exacerbates the impact of family background on test scores, but Waldinger (2007) finds no impact in a difference-in-difference framework.² Within country studies have also found conflicting results. Pekkarinen et al. (2009) find that the Finnish school reform from a selective education system to a comprehensive one reduced intergenerational income elasticity from 0.3 to 0.23. Similarly, Meghir and Palme (2005) find that the Swedish reform to

¹ The UK, Sweden, and Finland also shifted away from an achievement based student allocation system during the 1960s and 1970s. More recently some major Chinese cities have made similar transitions for middle school admission.

² Secondary school admission rules vary extensively in the degree of ability tracking across countries. Some countries do not track students and simply allocate students based on residential location. Some track students across schools by entrance exams. Some track students within schools. The different institutional details of tracking present a challenge for cross-country analysis.

comprehensive education increased educational attainment of students from low socio-economic status. However, Galindo-Rueda and Vignoles (2007) find that tracking increases test scores of high ability students, and district based allocation increases test scores of low ability wealthy students in the UK. Manning and Pischke (2006) find evidence consistent with households selecting into districts with the UK reform. I contribute to this literature by examining the impact of a similar reform not only on intergenerational mobility but also on selective migration in South Korea (hereafter Korea).

The reform in Korea has several advantages for analysis. In the UK the local education authorities determined whether or not and when to implement the reform, which raises the concern of policy endogeneity. In Korea the military dictatorship centrally implemented the regime change on short notice across several cities between 1974 and 1980. The reforms in Finland and Sweden were accompanied by the expansion of compulsory education and the unification of curricula. The policy change in Korea centered on the student allocation rule, enabling a focused evaluation rather than an analysis of a package of reforms. Another difference is student migration during the pre-reform periods. In the European countries, students were channeled into certain, e.g., academic versus vocational, tracks based on prior achievement and attended schools in their locality. However, the exam based regime in Korea was strictly individual school based. Anyone could apply to any school in the country and it was common for high achieving students from smaller cities or rural areas to live with relatives or board in small rooms if they gained admissions to prestigious high schools in the major cities. During the exam regime years, 25% of high school students had graduated from a middle school in a different city.

Using the variation in the timing of the regime shift across several cities, I find that the intergenerational income elasticity increases from 0.15 to 0.31 after the regime shift. In other words, a 10% increase in parental income was associated with a 1.5% increase in the child's income under the exam regime but doubles to about 3% under the district regime. I also find that the intergenerational income elasticity increases predominantly for students from higher income households. Why would the shift from an exam to a district based assignment rule reduce intergenerational mobility? Cities that shifted to the district system were the larger cities with many of the nation's prestigious high schools. If families desire better educational opportunities, then the district system could incentivize families to move or find ways to send their children to high schools in the reform cities. Higher income households would be more likely to support such move. Consistent with this hypothesized channel, I find evidence consistent with selective migration by parental income. The probability of migration associated with a 10% increase in parental income increased by 1.7 percentage points after the reform.

Many studies on ability tracking and comprehensive education are based on the US or European countries. Duflo et al. (2008) examine how tracking within elementary school affects individual achievement and teacher incentives in Kenya. However, I believe this is the first paper that examines how student allocation rules to schools affect intergenerational mobility in a developing country context, that of South Korea in the 1970s. Moreover, the exam based high school admission policies that we see in China, Romania, Kenya, and Ghana today are similar to that of Korea then. As many developing countries achieve universal primary education, their governments are now focusing on extending compulsory education and reforming secondary schools (World Bank, 2005). Understanding how different student allocation rules impact intergenerational mobility would be important for structuring secondary education policies in these countries.

The paper proceeds as follows. Section 2 describes the shift from an exam to a district based system in Korea. Section 3 explains the identification strategy and Section 4 the data used in the analysis. Section 5 presents the empirical results on intergenerational mobility and selective migration. Section 6 concludes.

2. The shift from exam to district based student assignment in South Korea

Students in Korea enter elementary school at age seven and after six years of education can advance to three years of middle school and then to three years of high school. Traditionally, students had to take school specific entrance exams in order to advance to middle school or high school. Demand for education in Korea surged when the Japanese rule ended in 1945 and by 1959 elementary school entrance rate reached 96%. To accommodate more students, the government increased access to middle schools and abolished exam based assignment to middle schools in the late 1960s. Furthermore, the government closed down multiple elite middle schools in major cities with the objective to equalize middle school education.³ However, high school entrance continued to be exam based. Students would apply to high schools of their choice, take exams offered by each individual high school, and each school would admit students based on test scores. This system naturally generated a "tracked" system of high schools and high schools were implicitly ranked based on how successful schools did in sending students to the top universities. The prestigious high schools were located in Seoul and the major regional cities and households across the nation aspired to send their children to these high schools. However, excessive competition and tutoring among the wealthier middle school students was a recurring social issue and the military government announced in 1973 that individual high school entrance exams would be abolished in order to standardize high school education. This reform was known as the High School Equalization Policy (HSEP).

The HSEP initially had three goals: to equalize student mix, teachers, and facility. Equalizing student mix was the least costly to implement: student allocation would be determined based on school districts and not on exams. The other components of the policy were not as successfully implemented because of the high costs associated with teacher training and facility improvement, and limited government budget (KEDI, 1998). Under the new district system, students would take a city wide eligibility exam and those above the cutoff would be allocated to a high school within their district by a lottery. However, the government centrally implemented the reform only on a subset of cities. The HSEP started with the largest cities shifting in 1974 and then to the smaller cities. By 1980 when the central government initiated shift ended, 20 cities had transitioned to the district system. Table 1 lists the cities and the years of reform and the number of high school districts created in each city. Other than the two largest cities, Seoul and Busan, all reform cities formed one district. Seoul allocated the 80 high schools into five districts and Busan allocated 29 high schools to two districts. The smaller cities usually had less than 10 high schools that would comprise one district. Though the shift initially mixed student composition within cities, the quality of high school students across cities differed considerably. Appendix Table 1 presents a simple regression that compares the average middle school score of high school students in the different set of cities grouped by reform year. Middle school score of high school students in every reform city group is statistically significantly higher relative to the non-reform areas.

Eventually in the 1990s, the central government allowed each city to determine its own student admission rule. Some cities that initially shifted to the district system reverted back to the exam system in the 1990s. Other cities newly shifted to the district system in the 2000s. Now over 70% of all high school students in Korea are under the district system. Also, starting in the mid-1980s elite special purpose high schools that administered their own competitive exams were being

³ Before the middle school reform, the fierce competition among young elementary (6th grade) students to enter prestigious middle schools had become a severe social problem. Like high schools there had been traditionally well-regarded middle schools across Korea. The government's response was to rid the source of such unhealthy competition among children by simply eliminating those schools, quite a drastic response. Nothing like that happened for the high school reform. The traditionally prestigious high schools all remained in place and the only thing that changed was the student allocation rule.

Download English Version:

<https://daneshyari.com/en/article/971809>

Download Persian Version:

<https://daneshyari.com/article/971809>

[Daneshyari.com](https://daneshyari.com)