1. Introduction

In this paper, my focus is on intergenerational class mobility in South Korea. To be specific, I examine the cohort trends in class mobility and the relevant factors which has led to observed mobility trends. While previous research has examined temporal changes in class mobility in many Western countries, Korean case has been rarely investigated (Breen 2004; Park and Cha 2008). That is, we lack a full understanding of the determinants of long-term mobility trends in Korea. My aim is to compare the relative importance of several factors on changes (or stability) in social fluidity. We particularly do not know the extent to which social mobility trends have been shaped by education and shifts in its distribution. Focusing on the educational expansion and the changes in other relevant factors, I investigate whether and how they contributes to social fluidity.

Three aspects of trends in mobility research motivate this study. First, since Korea has experienced both rapid industrialization and an exceptionally huge educational expansion over the decades, it enables us to assess the role of education in achieving intergenerational mobility. Nevertheless, few research – mostly conducted in the 1990s and the early 2000s- has investigated this topic. Second, the lack of research regarding Korean case is partly attributable to the lack of large and representative data. Although there is still no huge dataset to investigate this topic systematically, I can have a larger sample by combining several datasets including most recent surveys. Third, a decomposition method developed by Breen allows us to compare the partial effects of different factors on observed mobility trend (Breen 2010; Torche and Ribeiro 2010; Pfeffer and Hertel 2015).
Since the 1970s, Korea has experienced huge economic and societal changes (figure 1). The pace of educational expansion in South Korea is extraordinarily fast especially since the 1980s (although the expansion before the 1980s is also remarkable). Rapid industrialization has led to dramatic changes in occupational structure (occupational distribution), which is associated with changes in class structure. Although these conditions are expected to lead to increase in social mobility, previous research – although there is no consensus - has concluded that relative chances of social mobility (i.e. social fluidity) has not changed over time. This makes Korean case interesting research topic. In this study, I revisit this topic with a new method and data.

Although some sociologists have studied changes in class structure and intergenerational mobility trends in Korea, only few has focused on relatively long-term trends in class mobility (Park and Cha 2008). This is mainly due to the lack of relevant data. Class analysis requires data which include information on both parental class position (based on their broad occupational category) and their children’s class position. Unfortunately, only few datasets in Korea contain the relevant information and each survey has fewer observations compared to many large surveys in European countries and the United States. Although my research is also susceptible to this limitation, I try to combine as many datasets (i.e. mobility tables) as possible in this
research and it enables us to have more observations in each cohort than previous research on this topic. My aim is to partly overcome the limitation of previous research on South Korean case in which some results are in doubt due to its smaller sample size.

2. Theoretical background and prior research

(1) Trends in Social fluidity

Previous research has consistently shown that many countries have experienced absolute mobility over the 20th century. Industrialization and changes in occupational structure have mostly led to upward mobility in terms of the absolute mobility. With respect to relative mobility, however, findings show different results depending on the data and methods. In their famous comparative study, ‘The Constant Flux’ (CASMIN project), Erikson and Goldthorpe investigate mobility trends in 15 industrial countries (in 12 European countries, the US, Australia, and Japan) and conclude that there is no evidence that social fluidity has increased from the late 1960s and early or mid-1970s (Erikson and Goldthorpe 1992). Based on data from 11 countries (9 countries in Erikson and Goldthorpe’s study are included here), however, Breen and other contributors of ‘Social mobility in Europe’ found the overall increase in social fluidity in most of those countries (Israel and Britain show no change in social fluidity) (Breen 2004). Pfeffer and Hertel’s recent research on the US case also find the origin-destination association has been declining over the 20th century (Pfeffer and Hertel 2015). Torche and Ribeiro also found the similar trend in Brazil (Torche and Ribeiro 2010).

With respect to social mobility in South Korea, high rate of absolute mobility has been reported in previous literature (Cha 1991 ; Shin 1994 ; Park 1999 ; Park and Cha 2008). Rapid industrialization and changes in industrial structure have driven this trend and it is characterized by the dramatic decrease in the number of farmers. This result is not very different from the findings in other industrialized countries. Relative mobility in Korea,
however, shows a different trend. Although Korea has experienced industrialization and educational expansion over the decades, the effect of origin on class position has not changed significantly over time (Shin 1994; Park 1999; Chang 2001; Park and Cha 2008). Another studies found a modest level of social fluidity (Cha 1991) and the higher level of overall fluidity in Korea relative to England, France, and Sweden (Park 2001a). Although all these studies use the same data (One (1990) or two (1990 and 1995) surveys of ‘Social justice and inequality’. See ‘Data and Methods’ below), their findings are a little different from each other depending on their sample selection and methods (i.e. specific adaptation of log-linear models). For example, to overcome the small sample size, Park included all men aged 20-64 in the analyses (using a single 1990 survey) while Chang used all men aged 25-64 using two surveys (1990 and 1995 surveys). Furthermore, this line of research is susceptible to a small sample size especially when they investigate cohort trends. These limitations might lead to incorrect conclusion or, at least, miss an important feature of mobility trend. To sum up, although most research has concluded that Korean case shows a persistent relative mobility trend, it is worthwhile to reassess whether this finding is conclusive. In addition to examining trends in social fluidity, it is equally important to investigate which factors contribute to the observed trend. Although I find a similar trend in different countries, the main driver of the observed trend might differ according to their specific socioeconomic context.

(2) Educational expansion and its impacts on social fluidity

The mobility triad provides a useful tool to understand the partial effects of total association between origin and destination. It consists of three parts - the direct transmission of socioeconomic status across generations (OD association), the extent of socioeconomic inequality in educational attainment (OE association), and the socioeconomic returns to education (ED association). All three associations, however, may be subject to change over time. Furthermore, there may be interaction effects among three variables (Pfeffer and Hertel 2005). If there have been changes in the opportunities of education by cohorts (CE –
educational expansion), for example, it might have affected the changes in social fluidity over time. Altogether, examining this triad (combination of three associations, and their more complex forms) at the backdrop of educational expansion provides a theoretical and practical tool to elucidate the mechanism of the temporal changes of social fluidity.

- Trends in educational inequalities: (C)OE

In their comparative work of 13 countries, *Persistent inequality*, Shavit and Blossfeld concluded that, in 11 countries, educational expansion did not result in an increase in the relative chances of receiving higher level of education by their social origins. According to their findings, socioeconomic inequalities in educational attainment have been stable over the 20th century (Shavit and Blossfeld 1993). Breen and colleagues, however, reached the different conclusion – ‘non-persistent inequality’ in educational attainment. In many countries, educational expansion in 20th century has contributed to the increase in educational opportunities among people from disadvantaged class origins (Breen, Luijkx, Muller, and Pollak 2009).

With respect to Korean case, Park found no significant change in the association between origin and education over cohorts (COE) although the deviation parameters seem to have slightly (but not significantly) decline across cohorts (Park and Cha 2008). This implies that educational expansion has not led to educational equality in Korea (Park 2001b). Chang also found that educational expansion did not mitigate the inequalities in educational attainments by class origins (Chang 2001). Focusing on the transition to higher education (2-year and 4-year college), Park observed “no evidence that the influences of the father’s education or class on attending higher education decreased for the members of cohorts who entered college in the 1980s and 1990s, when higher education in Korea underwent a dramatic expansion” (Park 2007, p.111). It seems that all evidence supports no significant change in educational inequalities (especially, inequalities in higher education) in Korea.

- Trends in returns to education: (C)ED
In their book, *The race between education and technology*, Goldin and Katz argue that income (earnings) returns to education has been increasing due to the rising demand for high-skilled workers with college degree in the United States (Goldin and Katz 2008). This argument has an important implication for the ‘ED’ association (although we should keep in mind that their focus is not on class but on income and earnings). If there is no substantial changes or weakening in the association between origin and education (inequality in educational opportunities), increasing return to education might be a key to increasing social fluidity. In their analysis of the US data, Pfeffer and Hertel found that the trend in returns to education (ED association) shows no trend over cohorts (Pfeffer and Hertel 2015). In Brazil, Torche and Ribeiro found that growing fluidity in Brazil is partly attributable to the decline in the economic returns to schooling (Torche and Ribeiro 2010).

I rarely found literature on class return to education in South Korea. In his study, Park and Cha found that the partial association between education and destination on origin changes little across cohorts (Park and Cha 2008).

- Compositional effects and educational expansion

The effect of origins on destinations may differ by level of education (*compositional effect*). After investigating 14 occupational categories, Hout concluded that the effect of origins on destination differs by level of education. This is especially the case for college graduates. In other words, college degree makes them to achieve their occupational status independent of class origins (Hout 1988). Recently, Torche comes to the same conclusion although she also found that the effect of social origin is meaningful among those who have post-graduate degrees (Torche 2011). This compositional effect has been found in many countries (Vallet 2004; Beller and Hout 2006; Breen and Jonsson 2007; Pfeffer and Hertel 2015). In Germany, Sweden, and Great Britain, the compositional effect had a positive effect on social fluidity (Breen 2010). In many western countries, education expansion has led to an increase in social
fluidity since it allows more individuals move to a higher educational level (college education) and a college degree tends to weaken their origin-destination association.

In Korea, only few research have examined the trends in compositional effect and the results are inconclusive. Park and Cha did not find significant difference in the compositional effect over cohorts (Park and Cha 2008). Recent study, however, finds a modest increase in the compositional effect in a recent cohort (Park et al 2010).

3. Research framework

Following previous research, I begin with analyzing the overall changes in class structure and distribution of educational achievement over several cohorts. Then, I examine the temporal trend in social fluidity (COD or overall origin-destination association over cohorts), trends in educational inequality tied to parental class (COE), and trends in class return to education (CED). I fit different log-linear models and find which model best fits the data. With respect to education, previous literature has used three categories of education-less than high school, high school, and 2-year or 4-year college education in Korean case. This is mainly due to the fact that the sample size is too small and there are very few individuals who received tertiary level education among old cohorts. Given that 2-year and 4-year college graduates usually achieve a different occupational status and expected earnings, however, it is probable that four-year college graduates have a better chance of overcoming their class origin compared to 2-year college graduates (differential association). This implies that a finding might be different if I use finer educational categories- less than high school, high school, 2-year college, and 4-year college. As more people get 4-year college education, however, its effect on the origin-destination association might be weakened.

My primary aim is to investigate the partial effects (relative impact of each mechanism) of changes in different factors (COE, CED, OED) in the context of educational expansion (CE). Breen’s decomposition method allows us to assess the relative impact of each component. The
three-way probability distribution of cohort by origin by destination (COD) can be derived from two log-linear models \((1)\) and \((2)\) below. By omitting theoretically meaningful parameters from \((1)\) and \((2)\), we can produce counterfactual COED distributions. We can get the implied three-way relationship between C, O, and D by collapsing counterfactual distributions over E. To be specific, based on the decomposition method, we can generate counterfactual COD tables and assess the relative importance of each mechanism in explaining observed mobility trend.

\[
f_{ijkl} = \mu_{ij} \gamma_{ik} \gamma_{jkl} \gamma_{ijk} \gamma_{i} \gamma_{j} \gamma_{k} \gamma_{l} = 0 \quad (1)
\]

\[
f_{ijkl} = \alpha_{ij} \beta_{ik} \beta_{jl} \beta_{jk} \beta_{k} \beta_{l} \beta_{ikj} \beta_{ikl} = 0 \quad (2)
\]

Pfeffer and Hertel’s study also used this method although their adaptation is a little different from Breen’s original approach. Rather than removing terms from an initial log-linear model that includes all four parameters and their interactions, they free up a single parameter that identifies a specific mechanism in order to investigate its net effects (Pfeffer and Hertel 2015).

Following Pfeffer and Hertel’s approach, I will fit four counterfactual COD tables and compare them with the observed COD trend.

First, baseline model fits parameters in both COE and COED tables, including all single parameters and their two-way interactions except CE interaction (cohort changes in the education distribution, that is, educational expansion). No three-way interaction is included in this model.

Second, by adding OED and CE terms to the baseline model, I assess the impact of compositional effect (OED) on mobility trend through educational expansion.

Third, by adding COE and CE terms to the baseline model, I assess the impact of changing educational inequalities (COE) on mobility trend in the context of educational expansion.

Fourth, by adding CED and CE terms to the baseline model, I assess the impact of changing educational returns (CED) to mobility trend at the backdrop of educational expansion.
In addition to investigating the mechanisms of how class origin is associated with class destination in the context of educational expansion, I also conduct the same analyses using a different socioeconomic (origin) indicator: parents’ level of education. Although parental class position partly reflects their educational attainment, it is likely that their education alone capture a different dimension of (dis)advantage tied to their children’s educational achievement and class position. Furthermore, a recent debate on whether social class (big classes) scheme provides a valid tool of measuring inequality motivates us to consider an alternative view on social origin and its association with social destination (Pfeffer and Hertel 2015). I examine this possibility and show how the results differ by using two different origin indicators - parental class and education. Park found that father’s education has a larger effect on the likelihood of university entry for those who were born in the 1960s compared to the older cohorts (Park 2001b).

In this study, I conduct a cohort-based analysis (Hout 1988; Breen and Jonsson 2007; Breen 2010). With respect to defining cohorts in the analyses, I should consider two aspects - finding meaningful cohorts (those who have experienced similar social and economic changes) and data availability (in terms of our samples’ range of birth year and the number of observations in each group). I tentatively define five cohorts: born before 1943, 1943-1952, 1953-1962, 1963-1972, 1972 or later. This is based on the trends in educational expansion in South Korea. The sample size of the youngest cohorts is smaller than other cohorts and it may restrict our analyses. (In our datasets, only two recent surveys cover this cohort.) However, given that huge college expansion occurred in the 1990s, it might be instructive to examine this cohort separately. Also, since I combine several datasets and build a relatively large sample compared to previous research on Korean case, it may allow me to partly overcome the small sample problem and capture detailed characteristics of recent mobility trends.

With respect to class scheme, I construct five or six classes based on EGP class scheme (Erikson and Goldthorpe 1992; Shin 1994; Park 1998).
I only analyze data for men, aged 30-64 (also 25-64 as many of previous research did, and 35-64). Although more women tend to participate in labor force than before, labor force participation rate among women is still lower than other industrialized countries in South Korea. This trend is even pronounced among older cohort members.

With respect to age, one concern is that our samples consist of people with a broad range of age (either 30-64 or 25-64) and the age effect could be a problem. Although previous research has used either 25 or 30 as a minimum age, it is highly probable that people experienced changes in their class positions after 30 (or 35). If this is the case, when we measure the current class position of men aged 30-64, older cohorts’ class position will be measured at an older age than the class positions of the younger cohorts. To avoid this, I need to control for these differences. There might be two ways of avoiding this problem. The first way is restricting the minimum age of the samples to an age after which very few people change their class. For example, I only consider the samples aged 40-64, assuming that few people change their class position after 40 (matured class position). The main problem of this approach is, however, that I cannot deal with the class fluidity among recent cohorts (people who were born after 1970 who experienced a huge educational expansion during the 1990s). The second way is analyzing five way tables of cohort by origin by education by destination by age group. Age groups can be 30-36, 37-43, 44-50, 51-57, and 58-64 if we construct five age groups. In this case, I can have a larger sample size, but more cells resulted from 5 way tables might offset it. I will try to both and choose one which is better in terms of the sample size and other analytic issues.¹

4. Data and Methods

I plan to use – at least – nine surveys from four different sources. The first source is a set of ‘Inequality and social justice’ surveys (three cross-sectional surveys conducted in 1990, 1995, and 2000). The second source is ‘Social stratification and mobility’ survey (a single survey

¹ Pfeffer and Hertel’s study also faces the same problem. They used men aged 25-64 in GSS (1972-2012) data. To assess whether age effect matters, they conducted sensitivity analyses, using respondents aged 30-64 and 35-64. They didn’t find a substantial difference between them (Pfeffer and Hertel 2015).
conducted in 2005). The third source is a set of ‘Education and social mobility’ surveys (four cross-sectional surveys conducted in 2008, 2009, 2010, and 2011). The last source is Korean Labor and Income Panel Study (KLIPS). The first wave of KLIPS includes a question on parental education. The second and third waves also include the same question for new (additional) samples. If possible, I plan to include one or two additional surveys (‘Regional conflict study’ survey conducted in 1988) which contain the information on parental and respondents’ occupation. Previous research on social mobility has mostly relied on the first source and more recent research (especially those published after 2000) has also used KLIPS data. Among those four, the third source is the most recent one and has been rarely used in previous research.

I use the decomposition method. I also use log-linear and log-multiplicative models to describe trends in each leg of the mobility triad, assessing whether each association is constant across cohorts (Powers and Xie 2008; Pfeffer and Hertel 2015).

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