

## KDI SCHOOL WORKING PAPER SERIES

# Higher Education, Productivity Revelation and Performance Pay Jobs

Jisun Baek
KDI School of Public Policy and Management

WooRam Park
Korea Development Institute

December, 2015
Working Paper 15-13



This paper can be downloaded without charge at:

KDI School of Public Policy and Management Working Paper Series Index:

http://www.kdischool.ac.kr/new/eng/faculty/working.jsp

The Social Science Network Electronic Paper Collection:

http://ssrn.com/abstract=2707581

<sup>\*</sup> We are grateful to the KDI School of Public Policy and Management for providing financial support.

Higher Education, Productivity Revelation and

Performance Pay Jobs

Jisun Baek and WooRam Park \*

November 2015

**Abstract** 

This paper examines the impact of college education on workers' subsequent

careers, based on a direct role of college graduation on the revelation of workers'

individual ability. Using NLSY79, we document a positive relationship between

ability and signaling behavior for high school graduates and a non-positive rela-

tionship for college graduates. Moreover, we show active job mobility for high

ability high school graduates. We argue that these patterns are the result of post-

schooling signaling of high school graduates whose individual ability, unlike col-

lege graduates, is not observed in the beginning of their careers.

JEL code: I20; J24

**Keywords:** productivity revealing; off-the-job training; performance pay jobs; job

mobility; college education; NLSY79

\*Baek: Assistant professor, KDI School of Public Policy and Management; 263 Namsejong-ro, Sejong-si 339-007, Korea; Contact at jbaek@kdischool.ac.kr

Park: Associate Fellow, Korea Development Institute; 263 Namsejong-ro, Sejong-si 339-007, Korea;

Contact at woorpark@kdi.re.kr

1

#### I INTRODUCTION

Since Spence (1973), a well-known function of higher education includes the signaling of ability. In the traditional signaling model, individuals with high ability reveal their ability by sorting into higher education. However, a recent paper by Arcidiacono, Bayer, and Hizmo (2010) (ABH (2010) hereafter) documents that college graduation plays a direct role in revealing the productivity of individuals to the labor market rather than simply categorizing them as college graduates. In particular, ABH (2010) documents that the wages of college graduates are correlated with their own abilities while the wages of high school graduates are not, at least not in the beginning of their careers. There are several additional studies that document pooling of young high school graduates. For instance, Bishop (1994) and Rosenbaum (1990) demonstrate that having both cognitive and non-cognitive skills—both of which are believed to be related to productivity—is not reflected in the wages of young high school graduates. Thus, at the early stages of their careers, high ability high school graduates tend to be "pooled" with low ability high school graduates.

The goal of this paper is to document the effects of higher education on post-schooling careers of workers based on the role of higher education in revealing ability. In particular, based on the evidence of the role of higher education in revealing ability, we argue that this role yields clear implications regarding workers' productivity revealing behaviors after they enter the job market. To be concrete, if individual ability of high school graduates is not directly observable, high ability high school graduates will not be appropriately compensated. Thus their wages will be set based on the average ability of high school graduates. As a result, it is likely that high ability high school graduates will engage in activities that will separate them from low ability high school graduates after they start their careers. More specifically, we predict that the high ability high school graduates will be more likely to obtain off-the-job training, and more

<sup>&</sup>lt;sup>1</sup>Many aspects of college education make the abilities of young college graduates readily identifiable. In particular, as Hoxby (1997) documents, the abilities of college students are homogeneous within a university but heterogeneous across universities. Given the sorting of students by ranking or selectivity of colleges, potential employers can obtain relatively accurate information about college graduates by simply observing the names of their alma maters.

likely to sort themselves into performance-pay jobs in which wages are closely related to individual ability.

Unlike high school graduates, high ability college graduates are not expected to engage in costly activities to separate themselves from those with low ability since the abilities of college graduates are already apparent from the beginning of their careers. Thus, the probability of participating in off-the-job training and sorting into performance pay jobs would not be positively correlated with the measure of ability among college graduates at the early stages of their careers. Moreover, we expect that the job mobility of high ability high school graduates will be higher than that of their low ability counterparts since they move to better jobs and differentiate themselves from low ability workers by revealing their ability. However, the job mobility of college graduates will not necessarily depend on ability, since they are assigned to jobs according to their abilities from the beginning of their careers. Thus, the job mobility of college graduate workers will be determined by the factors that are not related to a worker's ability such as a random job match between employer and employee. This mechanism provides an alternative explanation as to the traditional search theory that has been applied to explain the positive return to job mobility among high school graduates in Topel and Ward (1992).

We examine these patterns of worker's post-schooling behaviors using NLSY79 data by documenting the different relationships between AFQT scores and productivity revealing activities across high school and college graduates. Those patterns coincide with the prediction of the signaling model under a different degree of asymmetric information between employers and workers across those two groups.

This paper contributes to the literature by illustrating the role of post-schooling signaling as a possible mechanism explaining that wages of high school workers eventually reflect their individual abilities. Since the seminal work by Farber and Gibbons (1996), the role of the employer learning on wage dynamics—the wages of young workers eventually being positively related to AFQT scores—has been well documented by several papers (Altonji & Pierret, 2001; Bauer & Haisken-Denew, 2001). The

basic employer learning model hinges on the public or symmetric employer learning which assumes that the current employer's information about the workers is being shared with *all* potential employers. However, the existence of private or asymmetric learning of employers—and the game theory issues related to it—makes the plausible mechanism of employer learning complicated. As a result, only a small number of papers—Schoenberg (2007) and Pinkston (2009)— proposed an employer learning mechanism that explains wage dynamics under the private or asymmetric learning of employers. However, given the high mobility of high school graduates in the early stages of their career (Topel & Ward, 1992), it seems unrealistic that information about average young workers could be accumulated in a short time and then passed to outside employers through a rather complicated process without a significant loss in the information.

By focusing on the incentives of high ability workers to reveal their productivity, this paper provides an alternative story for the wage dynamics of young workers. Unlike the employers who do not have an incentive to reveal information about their high ability workers, the high ability workers have a strong incentive to reveal their abilities to their potential employers through productivity revealing activities. Since the worker will signal their abilities to all potential employers, one does not have to consider the transmission of information across employers. Moreover, explaining the wage dynamics using workers' incentives is more intuitive than relying on employer learning as it emphasizes the role of workers who will actually gain from the revelation of productivity and its related wage increases.<sup>2</sup>

The rest of the paper is organized into the following sections. Section II provides an overview of NLSY79 and the sample construction. In section III, we describe individual's sorting behavior into higher education, and draw testable implications regarding subsequent aspects of post-schooling careers followed by the identification strategy and the estimating equations. In Section IV, we present the main empirical results that verify the hypotheses regarding productivity revealing activities and job mobility of

<sup>&</sup>lt;sup>2</sup>The employers will be indifferent about the wage distribution in this setting as long as the average wage equals the average productivity of workers.

workers. Section V presents concluding remarks.

#### II DATA

To empirically verify our hypotheses regarding workers' post-schooling careers, we use NLSY79 data for 1979-2006 period. The data have been collected annually since 1979 and biannually since 1994. The respondents were aged between 14 and 22 at the beginning of the survey. The data have a number of advantages for analyzing post-schooling signaling behaviors. In particular, NLSY79 is focused on the early stage of respondents' career when productivity revealing activities are most likely to have an impact. Moreover, for the analysis of post-schooling behaviors that are a focus in this paper, information regarding workers' ability is essential. NLSY79 contains the results of AVSAB test which can be converted to an AFQT score. The AFQT score in NLSY79 has been widely accepted as a pre-market measure of ability. Lastly, the data contain detailed information about the training of workers and their job characteristics, including the payment structure of jobs.

For the main analysis, we restrict the sample to white males in order to avoid tracking the variations in careers that might arise from differences in race and/or gender. Following ABH (2010), we also limit the sample to the respondents who have completed 12 or 16 years of education and exclude high school dropouts and individuals who have completed some college education. We exclude respondents who have military jobs or, jobs without pay, who are self-employed in CPS (main) jobs, or who work for a family business. We also drop labor market experience accumulated before individuals left school for the first time. Furthermore, we restrict our scope of the analysis to individuals for whom potential experience is less than 13 years, thereby focusing on the early stages of their careers.<sup>3</sup> Another reason for this criterion of sample construction, as explained in ABH (2010), is to keep the analysis simple by focusing on the approximately linear region of the relation between log wages, AFQT scores, and potential experience.

<sup>&</sup>lt;sup>3</sup>The potential experience is defined as the number of years since a respondent first finished schooling.

The measure of ability, AFQT score, is constructed using the definition provided by the Department of Defense, and is standardized by the age of the individual at the time of the test. The construction of the performance pay indicator variable follows Lemieux, MacLeod, and Parent (2009). The performance pay indicator variable takes a value equal to one if the wage of CPS jobs includes a variable pay component such as a bonus, commission or piece-rate. For the off-the-job training variable, we follow Parent (1999) and re-classify 12 training categories into three groups—on-the-job training (OJT), off-the-job training (OFT), and apprenticeship. In particular, the OFT indicator variable takes a value equal to one if the respondent took any form of OFT—business colleges, nursing programs, vocational-technical institutes, etc.—in a given year. We use the hourly wage rate of CPS jobs from the work history file as a measure of wages and obtain the real wage by using the CPI index. The number of jobs in a given year is used as a proxy for the job mobility of workers.

Table 1 shows the summary statistics for the main analysis sample. As expected, the average of log wages and the average AFQT scores are higher for college graduates than for high school graduates. College graduates are more likely to sort themselves into performance pay jobs and to obtain training. Additionally, the compositions of training differ between the two groups as high school graduates are more likely to obtain OFT and apprenticeships and are less likely to obtain OJT. However, there is little difference in the number of jobs per year between college and high school graduates.

#### III EMPIRICAL FRAMEWORK

This section describes the implications of post-schooling careers based on the role of higher education. We also explain the estimation equation to test those implications.

As briefly noted in Section I, some literature suggests that college graduation plays a direct role in revealing individuals' abilities. Thus, given the competitive labor market, college graduates will receive wages according to their individual abilities. However, in regards to wages, high school graduates will be pooled at the beginning of their careers, since employers cannot verify the individual abilities of fresh high school

graduates. Given these initial wages of high school graduates, some proportion of high ability high school graduates have incentives to engage in productivity revealing activities to separate themselves from low ability high school graduates, and to ultimately get paid for their individual abilities. However, high ability college graduates will not engage in costly productivity revealing activities since they are already separated from *both* high school graduates and low ability college graduates. We exploit this difference in productivity revealing activities such as off-the-job training and sorting into performance pay jobs between high school and college graduates to identify the effects of higher education on individual's post-schooling careers. In addition, we argue that the job mobility will exhibit different patterns among high school and college graduates.

The different patterns of relationship between ability and outcomes among high school and college graduates confirm our hypothesis. We claim this difference as evidence supporting the effects of higher education on the subsequent careers of the workers. To be specific, we verify a positive and statistically significant relationship between the incidence of productivity revealing activities and the ability among high school graduates, while we find a non-positive relationship among college graduates. We attribute this difference between the two groups to the differences in the productivity revealing activities across the two groups given the role of college graduation.

The main empirical specification regresses the outcome variable on a measure of ability, potential experience and the interaction of the two. The following equation will be estimated separately for high school and college workers:

$$Y_{it} = \beta_0 + \beta_1 AFQT_i + \beta_2 Exp_{it} + \beta_3 AFQT_i * Exp_{it} + \delta_t + \Phi' \mathbf{X}_{it} + \epsilon_{it}$$
 (1)

where  $Y_i$  is the outcome variable such as the wages of the workers, the number of jobs held in a given year and the dummy variable for a having performance pay jobs and engaging in off-the-job training. The coefficient of AFQT<sub>i</sub>,  $\beta_1$ , indicates the correlation between the outcome variable and AFQT scores at the beginning of individual's career—when their potential experience is equal to zero. The coefficient of the in-

teraction term,  $\beta_3$ , captures the difference in the correlation between experience and outcome across workers with different ability. Our hypothesis will be supported by the examining difference in the statistical significance and the sign of coefficients in each group.

#### IV RESULTS

This section provides the empirical results that verify our hypotheses regarding productivity revealing activities and job mobility of workers.

#### Off-the-Job Training

The previous literature on training focuses mainly on the human-capital-mediated effect of training on wage increases or job mobility (Lynch, 1991, 1992; Parent, 1999). In contrast, we view training mainly as a mean to reveal the productivity of workers. In particular, off-the-job training (OFT) is similar to schooling in the sense that the worker bears the cost of the training, and the contents of the training are not firm-specific. Given the similarities between off-the-job training and schooling, off-the-job training can be also used as a signaling device. Thus, as traditional signaling theory (Spence, 1973) would predict, high ability workers would be more likely to obtain OFT than their low ability counterparts if they are not differentiated from their low ability counterparts.

Therefore, for the high school graduates whose abilities are not revealed at the beginning of their careers, the probability of getting off-the-job training will be positively related with their AFQT scores, as high ability high school graduates would participate in OFT to reveal their ability. However, for college graduates whose individual abilities are already apparent, the probability of obtaining OFT will not necessarily depend positively on the measured ability. Moreover, since the return of being separated from low ability workers decreases with time, the probability of getting OFT will decrease faster with experience for high ability high school graduates compared to their low ability counterparts. In other words, the experience gradient will be steeper for

high ability high school graduates whose motivation for taking OFT depends on both signaling (revelation of productivity) and human capital accumulation. However, we do not expect different experience gradients across abilities among college graduates since high ability college graduates do not have additional incentives to receive OFT in the early stage of their careers.

Table 2 confirms our hypotheses, summarizing the results from the regression (1) regarding off-the-job training. The probability of taking OFT does not depend positively on the AFQT scores of college graduates in the early stages of their careers as the AFQT coefficient in column (6) is not statistically significant at 5%. Further, the coefficient of the interaction term between AFQT scores and potential experience is positive which is the evidence against the possibility of OFT being used as a productivity revealing device for high ability college graduates. In other words, if OFT is used as a productivity revealing device, it is likely to be used more intensively by high ability college graduates in the early stages of their careers. Overall, the evidence supports the view that for college graduates, revealing productivity is not a dominant motivation for receiving OFT. Column (4) shows that there is little correlation between the incidence of off-the-job training and individual ability in the first 13 years of the careers of college graduates.

However, for high school graduates, the results coincide with the hypotheses that high ability high school graduates will receive OFT to reveal their individual productivity. The AFQT coefficient in column (3) is positive and significant, which implies that high ability high school graduates are more likely to engage in OFT than their low ability counterparts at the beginning of careers. Moreover, the negative coefficient of the interaction term between AFQT scores and potential experience implies that high ability high school graduates are more likely to undertake an OFT at the beginning of their careers compared to low ability high school graduates. This result also supports our hypotheses since the return for revealing productivity through OFT is higher in the early stages of a career. Thus high ability high school graduates will engage in OFT more intensively in the earlier stages of their careers.

#### Performance-Pay Jobs

A recent paper by Lemieux et al. (2009) asserts that due to the imperfect information about workers, high ability workers will have an incentive to sort themselves into performance pay jobs so that they can reveal their high productivity and receive wages that more closely reflect their abilities. Lemieux et al. (2009) supports this argument by comparing the average AFQT score of the workers in performance-pay jobs with that of the workers in non-performance-pay jobs. Adopting their view on performance-pay jobs, one can categorize sorting behavior into performance-pay jobs as a means to reveal individual worker's productivity. Thus, given the role of higher education, the relation between ability and having a performance-pay job among high school graduates will be different from that among college graduates.

To be more specific, since high school graduates are pooled with each other at the beginning of their careers, high ability high school graduates will try to sort themselves into performance-pay jobs and to receive pay in relation to their individual abilities. However, unlike high school graduates, college graduates are differentiated by their ability from the beginning of their careers. Thus, high ability college graduates will have little incentive to have performance-pay jobs and to pay additional monitoring costs to reveal their high abilities. In other words, it is not necessary for high ability college graduates to sort themselves into performance-pay jobs; in fact, it could be considered wasteful in the early stages of their careers. In sum, the probability of getting performance-pay jobs will depend positively on AFQT scores among high school graduates in the early stages of their careers, whereas among college graduates the correlation between the probability of working at performance-pay jobs and AFQT scores will not be positive.<sup>4</sup>

Our estimation results also support the described difference in sorting behavior into performance pay jobs between high school and college graduate workers. As

<sup>&</sup>lt;sup>4</sup>The difference in the probability of working at performance-pay jobs between high school and college graduate workers can still exist, as college graduates are more likely to sort themselves into performance-pay jobs. This fact does not contradict our explanation since the difference between average high school and college graduates can be explained by other factors such as the differences in job characteristics of college and high school graduates.

shown in column (1) of Table 3, the probability of having performance-pay jobs depends positively on the AFQT scores for high school graduates in the first 13 years of their careers. Thus, the result implies that high ability high school graduates are more likely to sort themselves into performance-pay jobs. However, for college graduates, AFQT scores do not affect the probability of obtaining performance-pay jobs during the early stages of their careers as the coefficient in column (4) is not statistically significant. Moreover, columns (3) and (6) also show that our estimation result using the potential experience and the interaction term between AFQT scores and experience is fairly consistent with our hypothesis. In particular, the result shows that for high school graduates, the probability of having performance-pay jobs is positively correlated with ability in the beginning of their career. Moreover, the sign of the coefficient on the interaction term implies that high ability high school graduates are less likely to sort themselves into performance-pay jobs as they gain experience, thus their productivity is revealed. This result is consistent with our prediction that high ability high school graduates will work at performance-pay jobs to reveal their ability in the early stage of their career. However, the magnitude and the sign of the coefficients on AFQT score and the interaction term in column (6) suggest that, unlike to high school graduates, high ability college graduates have little incentive to sort themselves into performance-jobs under productivity revealing motives.

#### Job Mobility(Number of Jobs)

The positive relationship between job mobility and wage increases for young high school graduates is well documented by Topel and Ward (1992). They interpret the results as supportive evidence for the search theory, viewing job mobility as an important means for wage increases and as a step toward stable long-term employment for high school graduates.

In our paper, the positive return of job mobility among high school graduates is regarded as a result of the positive return to productivity revealing activities. More concretely, high ability high school graduates will have higher job mobility than low ability high school graduates as they engage in productivity revealing activities to differentiate themselves from their low ability counterparts and move to better jobs. Thus, there will be a positive relation between wage increases and job mobility among high school graduates, as high ability high school workers move to better jobs with higher wages. Moreover, as high ability high school graduates obtain the jobs they deserve, the incentive to move to other jobs will decrease over time, and their careers will eventually stabilize. This implies that the negative relationship between job mobility and potential experience will be steeper for the high ability high school graduates than for low ability high school graduates.

However, high ability college graduate workers will not have an incentive to move between jobs at the cost of firm-specific human capital, since college graduates are offered jobs according to their individual abilities from the beginning of their careers. That is, high ability college graduate workers will not have to engage in costly job searches, thus the related job mobility to separate themselves from their low ability counterparts will not be exhibited in the early stages of their careers. Moreover, the relationships between job mobility and potential experience will not differ across ability among college graduates since high ability college graduates do not have high job mobility at the beginning of their careers.

Table 4 describes the empirical results for the job mobility of workers. As expected, the job mobility of high school graduates is positively related with ability at the beginning of their careers. The coefficient of AFQT in column (3) is positive and significant at the 5% level. In particular, one standard deviation increase in AFQT is associated with 0.12 more jobs per year in the early stage of high school graduates' careers. The coefficient for the interaction term is negative and significant for high school graduates. This result coincides with our hypothesis regarding the career of high ability high school graduates which eventually stabilizes over time. In other words, the potential experience gradient is steeper for high ability high school graduates since they would take more jobs in the beginning of their careers than low ability high school graduate workers would take, but they would have similar job mobility later in their careers.

Column (1) also shows that the job mobility in the first 13 years of career is positively related with the ability for high school graduates.

However, the results for college graduates display different patterns. In particular, the result in column (6) suggests that, unlike the high school graduates, job mobility does not depend on AFQT scores for college graduates. The coefficients on both AFQT scores and the interaction term are statistically insignificant for college graduate workers. These results suggest that other factors that do not depend on the abilities of workers, might be major determinants of the job mobility among young college graduates. The results from column (4) also show that job mobility and ability are not positively related in the first 13 years of college graduates' careers.

Overall, the results show that job mobility exhibits different patterns among high school and college graduates. These differences could shed light on the source of return from job mobility described in Topel and Ward (1992). In particular, the results suggest that the return from job mobility among high school graduates arises from the correlation between ability—which is positively related with wages in the long run—and job mobility.

#### V CONCLUSION AND DISCUSSION

In this paper, we document the effects of higher education on post-schooling careers of workers based on the role of higher education in revealing abilities. In particular, we argue that high ability high school graduates will actively engage in productivity revealing activities while high ability college graduates will not actively participate in those activities. Moreover, we expect that high ability high school graduates will have higher mobility than low ability high school graduates at the beginning of their careers as they are differentiated from low ability high school graduate workers by revealing their ability and move to the better jobs. Unlike high school graduates, the job mobility of college graduates will not positively depend on their ability since the high ability college graduates will have decent jobs from the beginning of their career and will not have an incentive to move between jobs at the cost of firm specific human

capital. Using NLSY79 data, we test our hypotheses by regressing the measure of job mobility and productivity revealing activities on the measure of ability separately for high school graduates and college graduates. Overall, the data precisely confirm our hypotheses.

Our findings highlight the importance of the role of higher education in understanding post-schooling behavior of high school and college graduates. In particular, the traditional signaling model and the employer learning literature that categorize young workers into two groups—high school and college graduates—could be misleading since the employers will more closely observe heterogeneity among college graduates. We believe that acknowledging the role of higher education in revealing abilities will improve traditional signaling theory, giving it richer empirical implications.

#### REFERENCES

- Altonji, J. G., & Pierret, C. R. (2001). Employer learning and statistical discrimination. *Quarterly Journal of Economics*, *116*(1), 313-350.
- Arcidiacono, P., Bayer, P., & Hizmo, A. (2010). Beyond signaling and human capital: Education and the revelation of ability. *American Economic Journal: Applied Economics*, 2(4), 76-104.
- Bauer, T. K., & Haisken-Denew, J. P. (2001). Employer learning and the returns to schooling. *Labour Economics*, *8*, 104-123.
- Bishop, J. H. (1994). Signaling the competencies of high school students to employers. *CAHRS Working Paper Series, Working Paper 94-18*.
- Farber, H. S., & Gibbons, R. (1996, November). Learning and wage dynamics. *The Quarterly Journal of Economics*, 111(4), 1007-47.
- Hoxby, C. M. (1997). How the changing market structure of u.s higher education explains college tuition. *NBER Working Paper Series*(6323).
- Lemieux, T., MacLeod, W. B., & Parent, D. (2009, Feb). Performance pay and wage inequality. *Quarterly Journal of Economics*, 124(1), 1-49.
- Lynch, L. M. (1991, May). The role of off-the-job vs on-the-job training for the mobility of women workers. *American Economic Review : Papers and Proceedings*, 81, 151-156.
- Lynch, L. M. (1992, May). Private-sector training and the earning of young workers. *American Economic Review*, 82(1), 299-312.
- Parent, D. (1999, Apr.). Wages and mobility: The impact of employer-provided training. *Journal of Labor Economics*, 17(2), 298-317.
- Pinkston, J. C. (2009). A model of asymmetric employer learning with testable implications. *Review of Economics Studies*, *76*, 367-394.
- Rosenbaum, J. (1990). Do school achievements affect the early jobs of high school graduates? results from the high school and beyond surveys in the us and japan. *Northwestern University, Mimeo*.

- Schoenberg, U. (2007). Testing for asymmetric employer learning. *Journal of Labor Economics*, 25(4), 651-691.
- Spence, A. M. (1973). Job market signaling. *The Quarterly Journal of Economics*, 87(3), 355-74.
- Topel, R. H., & Ward, M. P. (1992). Job mobility and the careers of young men. *Quarterly Journal of Economics*, 107(2), 439-479.

Table 1: Summary Statistics

	High School		Col	lege	То	tal	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	
AFQT	0.2303	0.7761	1.2391	0.4569	0.4753	0.8329	
Number of jobs per year	2.2212	0.9003	2.2025	0.7362	2.2167	0.8641	
Log of real wage	6.4233	0.4856	6.8430	0.5913	6.5227	0.5428	
Potential experience	6.4272	3.2861	5.6792	3.3683	6.2495	3.3210	
% Performance pay	23.21		42.64		29.69		
Training (%)	9.42		16.94		11.21		
% On the job training	34.12		61.11		43.81		
% apprenticeship	10.65		0.51		7.01		
% Off the job training	55.23		38.38		49.18		
Region(%)							
Northeast	19.25		25.82		20.8		
North Central	36.73		30.79		35.32		
South	27.66		28.06		27.75		
West	16.36		15.32		16.12		
Urban residence(%)	70.89		86.73		74.60		
Observations	11258		3507		14765		
# of individuals	1815		569		2384		

The average and standard deviations are calculated over individual-by-year observations coming from a panel of 1979-2006. S.D. stands for standard deviation. Please refer to Section II for the detailed description of the variables.

Table 2: Off-the-Job Training

	High School			College			Test : College=HS P-value		
Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
AFQT	0.0111*** (0.00268)	0.0255*** (0.00601)	0.0238*** (0.00603)	-0.000465 (0.00928)	-0.0291* (0.0172)	-0.0287 (0.0177)	0.255	0.002	0.003
Exper	-0.0253*** (0.00771)	-0.0234*** (0.00767)	-0.0223*** (0.00774)	0.0150 (0.0116)	0.00768 (0.0125)	0.00817 (0.0127)	0.008	0.054	0.068
AFQT*Exper/10		-0.0227*** (0.00866)	-0.0216** (0.00867)		0.0518* (0.0274)	0.0518* (0.0280)		0.006	0.008
Observations R_sq	10,559 0.015	10,559 0.015	10,254 0.017	3,386 0.022	3,386 0.023	3,238 0.025			
Additional Controls	No	No	Yes	No	No	Yes	No	No	Yes

All specifications include a year fixed effect and a cubic in potential experience. Specifications (3) and (6) additionally control for the location of residence. In column (7), we report the p-values for the difference in the coefficients from specifications (1) and (3). Similarly, specifications (8) and (9) provide pairwise comparison between (2) & (4), and (3) & (6), respectively. The White/Huber standard errors in parentheses control for the correlation at individual level.

Table 3: Performance Pay Jobs

		High School			College			Test : College=HS P-value	
Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
AFQT	0.0335*** (0.0109)	0.105** (0.0505)	0.102** (0.0508)	-0.0503 (0.0326)	-0.154** (0.0720)	-0.149** (0.0726)	0.014	0.004	0.004
Exper	0.00888 (0.0728)	-0.00428 (0.0736)	-0.000391 (0.0741)	0.237*** (0.0633)	0.219*** (0.0646)	0.223*** (0.0655)	0.020	0.025	0.038
AFQT*Exper/10	, ,	-0.0785 (0.0545)	-0.0768 (0.0547)	, ,	0.164 (0.103)	0.166 (0.103)		0.047	0.030
Observations R_sq	2145 .009	2145 0.010	2,128 0.014	1093 0.019	1,093 0.022	1,076 0.031			
Additional Controls	No	No	Yes	No	No	Yes	No	No	Yes

All specifications include a year fixed effect and a cubic in potential experience. Specifications (3) and (6) additionally control for the location of residence. In column (7), we report the p-values for the difference in the coefficients from specifications (1) and (3). Similarly, specifications (8) and (9) provide pairwise comparison between (2) & (4), and (3) & (6), respectively. The White/Huber standard errors in parentheses control for the correlation at individual level.

<sup>\*\*\*</sup> statistical significance at the 99% level

<sup>\*\*</sup> statistical significance at 95% level

<sup>\*</sup> statistical significance at 90% level

<sup>\*\*\*</sup> statistical significance at the 99% level

<sup>\*\*</sup> statistical significance at 95% level

<sup>\*</sup> statistical significance at 90% level

Table 4: Number of Jobs

	High School			College			Test : College=HS P-value		
Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
AFQT	0.0389*** (0.0110)	0.126*** (0.0255)	0.126*** (0.0257)	-0.0738** (0.0295)	-0.0970 (0.0699)	-0.0971 (0.0710)	0.000	0.000	0.001
Exper	-0.0643** (0.0310)	-0.0528* (0.0311)	-0.0453 (0.0315)	0.106** (0.0439)	0.100** (0.0473)	0.0875* (0.0483)	0.014	0.024	0.030
AFQT*Exper/10		-0.137*** (0.0327)	-0.135*** (0.0328)		0.0420 (0.0942)	0.0301 (0.0950)		0.053	0.139
Observations R_sq	10,559 0.029	10,559 0.031	10,254 0.035	3,386 0.082	3,386 0.082	3,238 0.082			
Additional Controls	No	No	Yes	No	No	Yes	No	No	Yes

All specifications include a year fixed effect and a cubic in potential experience. Specifications (3) and (6) additionally control for the location of residence. In column (7), we report the p-values for the difference in the coefficients from specifications (1) and (3). Similarly, specifications (8) and (9) provide pairwise comparison between (2) & (4), and (3) & (6), respectively. The White/Huber standard errors in parentheses control for the correlation at individual level.

<sup>\*\*\*</sup> statistical significance at the 99% level \*\* statistical significance at 95% level \* statistical significance at 90% level

Category	Serial #	Author	Title
Working Paper	99-01	Se-Il Park	Labor Market Policy and The Social Safety Net in Korea: After 1997 Crisis
Working Paper	99-02	Sang-Woo Nam	Korea's Economic Crisis and Corporate Governance
Working Paper	99-03	Sangmoon Hahm	Monetary Bands and Monetary Neutrality
Working Paper	99-04	Jong-Il You Ju-Ho Lee	Economic and Social Consequences of globalization: The Case of South Korea
Working Paper	99-05	Sang-Woo Nam	Reform of the Financial Sector in East Asia
Working Paper	99-06	Hun-Joo Park	Dirigiste Modernization, Coalition Politics, and Financial Policy Towards Small Business: Korea, Japan, and Taiwan Compared
Working Paper	99-07	Kong-Kyun Ro	Mother's Education and Child's Health: Economic Anlaysis of Korean Data
Working Paper	99-08	Euysung Kim	Trade Liberalization and Productivity Growth in Korean Manufacturing Industries: Price Protection, Market Power, and Scale Efficiency
Working Paper	99-09	Gill-Chin Lim	Global Political-Economic System and Financial Crisis: Korea, Brazil and the IMF
Working Paper	99-10 (C99-01)	Seung-Joo Lee	LG Household & Health Care: Building a High-Performing Organization
Working Paper	00-01	Sangmoon Hahm Kyung-Soo Kim Ho-Mou Wu	Gains from Currency Convertibility: A Case of Incomplete Markets
Working Paper	00-02	Jong-Il You	The Bretton Woods Institutions: Evolution, Reform and Change
Working Paper	00-03	Dukgeun Ahn	Linkages between International Financial and Trade Institutions: IMF, World Bank and WTO
Working Paper	00-04	Woochan Kim	Does Capital Account Liberalization Discipline Budget Deficit?
Working Paper	00-05	Sunwoong Kim Shale Horowitz	Public Interest "blackballing" in South Korea's Elections: One-Trick Pony, or Wave of the Future?
Working Paper	00-06	Woochan Kim	Do Foreign Investors Perform Better than Locals? Information Asymmetry versus Investor Sophistication
Working Paper	00-07	Gill-Chin Lim Joon Han	North-South Cooperation for Food Supply: Demographic Analysis and Policy Directions
Working Paper	00-08 (C00-01)	Seung-Joo Lee	Strategic Newspaper Management: Case Study of Maeil Business
Working Paper	01-01	Seung-Joo Lee	Nokia: Strategic Transformation and Growth
Working Paper	01-02	Woochan Kim Shang-Jin Wei	Offshore Investment Funds: Monsters in Emerging Markets?
Working Paper	01-03	Dukgeun Ahn	Comparative Analysis of the SPS and the TBT Agreements
Working Paper	01-04	Sunwoong Kim Ju-Ho Lee	Demand for Education and Developmental State: Private Tutoring in South Korea
Working Paper	01-05	Ju-Ho Lee Young-Kyu Moh Dae-Il Kim	Do Unions Inhibit Labor Flexibility? Lessons from Korea
Working Paper	01-06	Woochan Kim Yangho Byeon	Restructuring Korean Bank's Short-Term Debts in 1998 - Detailed Accounts and Their Implications -
Working Paper	01-07	Yoon-Ha YOO	Private Tutoring as Rent Seeking Activity Under Tuition Control

<sup>\*</sup> The above papers are available at KDI School Website <a href="http://www.kdischool.ac.kr/new/eng/faculty/working.jsp">http://www.kdischool.ac.kr/new/eng/faculty/working.jsp</a>. You may get additional copy of the documents by downloading it using the Acrobat Reader.

Category	Serial #	Author	Title
Working Paper	01-08	Kong-Kyun Ro	경제활동인구 변동의 요인분석: 선진국과의 비교분석
Working Paper	02-01	Sangmoon Hahm	Restructuring of the Public Enterprise after the Crisis: The Case of Deposit Insurance Fund
Working Paper	02-02	Kyong-Dong KIM	The Culture of Industrial Relations in Korea: An alternative Sociological Approach
Working Paper	02-03	Dukgeun Ahn	Korean Experience of the Dispute Settlement in the world Trading System
Working Paper	02-04	BERNARD S. BLACK Hasung Jang Woochan Kim	Does Corporate Governance Matter? (Evidence from the Korean Market)
Working Paper	02-05	Sunwoong Kim Ju-Ho Lee	Secondary School Equalization Policies in South Korea
Working Paper	02-06	Yoon-Ha YOO	Penalty for Mismatch Between Ability and Quality, and School Choice
Working Paper	02-07	Dukgeun Ahn Han-Young Lie	Legal Issues of Privatization in Government Procurement Agreements: Experience of Korea from Bilateral and WTO Agreements
Working Paper	02-08	David J. Behling Kyong Shik Eom	U.S. Mortgage Markets and Institutions and Their Relevance for Korea
Working Paper	03-01	Sang-Moon Hahm	Transmission of Stock Returns and Volatility: the Case of Korea
Working Paper	03-02	Yoon Ha Yoo	Does Evidentiary Uncertainty Induce Excessive Injurer Care?
Working Paper	03-03	Yoon Ha Yoo	Competition to Enter a Better School and Private Tutoring
Working Paper	03-04	Sunwoong Kim Ju-Ho Lee	Hierarchy and Market Competition in South Korea's Higher Education Sector
Working Paper	03-05	Chul Chung	Factor Content of Trade: Nonhomothetic Preferences and "Missing Trade"
Working Paper	03-06	Hun Joo Park	RECASTING KOREAN <i>DIRIGISME</i>
Working Paper	03-07	Taejong Kim Ju-Ho Lee Young Lee	Mixing <i>versus</i> Sorting in Schooling: Evidence from the Equalization Policy in South Korea
Working Paper	03-08	Naohito Abe	Managerial Incentive Mechanisms and Turnover of Company Presidents and Directors in Japan
Working Paper	03-09	Naohito Abe Noel Gaston Katsuyuki Kubo	EXECUTIVE PAY IN JAPAN: THE ROLE OF BANK-APPOINTED MONITORS AND THE MAIN BANK RELATIONSHIP
Working Paper	03-10	Chai-On Lee	Foreign Exchange Rates Determination in the light of Marx's Labor-Value Theory
Working Paper	03-11	Taejong Kim	Political Economy and Population Growth in Early Modern Japan
Working Paper	03-12	II-Horn Hann Kai-Lung Hui Tom S. Lee I.P.L. Png	Direct Marketing: Privacy and Competition
Working Paper	03-13	Marcus Noland	RELIGION, CULTURE, AND ECONOMIC PERFORMANCE
Working Paper	04-01	Takao Kato Woochan Kim Ju Ho Lee	EXECUTIVE COMPENSATION AND FIRM PERFORMANCE IN KOREA
Working Paper	04-02	Kyoung-Dong Kim	Korean Modernization Revisited: An Alternative View from the Other Side of History

<sup>\*</sup> The above papers are available at KDI School Website <a href="http://www.kdischool.ac.kr/new/eng/faculty/working.jsp">http://www.kdischool.ac.kr/new/eng/faculty/working.jsp</a>. You may get additional copy of the documents by downloading it using the Acrobat Reader.

Category	Serial #	Author	Title
Working Paper	04-03	Lee Seok Hwang	Ultimate Ownership, Income Management, and Legal and Extra-Legal Institutions
Working Paper	04-04	Dongsoo Kang	Key Success Factors in the Revitalization of Distressed Firms:  A Case of the Korean Corporate Workouts
Working Paper	04-05	Il Chong Nam Woochan Kim	Corporate Governance of Newly Privatized Firms: The Remaining Issues in Korea
Working Paper	04-06	Hee Soo Chung Jeong Ho Kim Hyuk Il Kwon	Housing Speculation and Housing Price Bubble in Korea
Working Paper	04-07	Yoon-Ha Yoo	Uncertainty and Negligence Rules
Working Paper	04-08	Young Ki Lee	Pension and Retirement Fund Management
Working Paper	04-09	Wooheon Rhee Tack Yun	Implications of Quasi-Geometric Discountingon the Observable Sharp e Ratio
Working Paper	04-10	Seung-Joo Lee	Growth Strategy: A Conceptual Framework
Working Paper	04-11	Boon-Young Lee Seung-Joo Lee	Case Study of Samsung's Mobile Phone Business
Working Paper	04-12	Sung Yeung Kwack Young Sun Lee	What Determines Saving Rate in Korea?: the Role of Demography
Working Paper	04-13	Ki-Eun Rhee	Collusion in Repeated Auctions with Externalities
Working Paper	04-14	Jaeun Shin Sangho Moon	IMPACT OF DUAL ELIGIBILITY ON HEALTHCARE USE BY MEDICARE BENEFICIARIES
Working Paper	04-15	Hun Joo Park Yeun-Sook Park	Riding into the Sunset: The Political Economy of Bicycles as a Declining Industry in Korea
Working Paper	04-16	Woochan Kim Hasung Jang Bernard S. Black	Predicting Firm's Corporate Governance Choices: Evidence from Korea
Working Paper	04-17	Tae Hee Choi	Characteristics of Firms that Persistently Meet or Beat Analysts' Forecasts
Working Paper	04-18	Taejong Kim Yoichi Okita	Is There a Premium for Elite College Education: Evidence from a Natural Experiment in Japan
Working Paper	04-19	Leonard K. Cheng Jae Nahm	Product Boundary, Vertical Competition, and the Double Mark-up Problem
Working Paper	04-20	Woochan Kim Young-Jae Lim Taeyoon Sung	What Determines the Ownership Structure of Business Conglomerates?: On the Cash Flow Rights of Korea's Chaebol
Working Paper	04-21	Taejong Kim	Shadow Education: School Quality and Demand for Private Tutoring in Korea
Working Paper	04-22	Ki-Eun Rhee Raphael Thomadsen	Costly Collusion in Differentiated Industries
Working Paper	04-23	Jaeun Shin Sangho Moon	HMO plans, Self-selection, and Utilization of Health Care Services
Working Paper	04-24	Yoon-Ha Yoo	Risk Aversion and Incentive to Abide By Legal Rules
Working Paper	04-25	Ji Hong Kim	Speculative Attack and Korean Exchange Rate Regime
Working Paper	05-01	Woochan Kim Taeyoon Sung	What Makes Firms Manage FX Risk? : Evidence from an Emerging Market
Working Paper	05-02	Janghyuk Lee Laoucine Kerbache	Internet Media Planning: An Optimization Model
Working Paper	05-03	Kun-Ho Lee	Risk in the Credit Card Industry When Consumer Types are Not Observable
Working Paper	05-04	Kyong-Dong KIM	Why Korea Is So Prone To Conflict: An Alternative Sociological Analysis

<sup>\*</sup> The above papers are available at KDI School Website <a href="http://www.kdischool.ac.kr/new/eng/faculty/working.jsp">http://www.kdischool.ac.kr/new/eng/faculty/working.jsp</a>. You may get additional copy of the documents by downloading it using the Acrobat Reader.

Category	Serial #	Author	Title
Working Paper	05-05	Dukgeun AHN	Why Should Non-actionable Subsidy Be Non-actionable?
Working Paper	05-06	Seung-Joo LEE	Case Study of L'Oréal: Innovation and Growth Strategy
Working Paper	05-07	Seung-Joo LEE	Case Study of BMW: The Ultimate Driving Machine
Working Paper	05-08	Taejong KIM	Do School Ties Matter? Evidence from the Promotion of Public Prosecutors in Korea
Working Paper	05-09	Hun Joo PARK	Paradigms and Fallacies: Rethinking Northeast Asian Security
Working Paper	05-10	WOOCHAN KIM TAEYOON SUNG	What Makes Group-Affiliated Firms Go Public?
Working Paper	05-11	BERNARD S. BLACK WOOCHAN KIM HASUNG JANG KYUNG-SUH PARK	Does Corporate Governance Predict Firms' Market Values?  Time Series Evidence from Korea
Working Paper	05-12	Kun-Ho Lee	Estimating Probability of Default For the Foundation IRB Approach In Countries That Had Experienced Extreme Credit Crises
Working Paper	05-13	Ji-Hong KIM	Optimal Policy Response To Speculative Attack
Working Paper	05-14	Kwon Jung Boon Young Lee	Coupon Redemption Behaviors among Korean Consumers: Effects of Distribution Method, Face Value, and Benefits on Coupon Redemption Rates in Service Sector
Working Paper	06-01	Kee-Hong Bae Seung-Bo Kim Woochan Kim	Family Control and Expropriation of Not-for-Profit Organizations: Evidence from Korean Private Universities
Working Paper	06-02	Jaeun Shin	How Good is Korean Health Care? An International Comparison of Health Care Systems
Working Paper	06-03	Tae Hee Choi	Timeliness of Asset Write-offs
Working Paper	06-04	Jin PARK	Conflict Resolution Case Study: The National Education Information System (NEIS)
Working Paper	06-05	YuSang CHANG	DYNAMIC COMPETITIVE PARADIGM OF MANAGING MOVING TARGETS; IMPLICATIONS FOR KOREAN INDUSTY
Working Paper	06-06	Jin PARK	A Tale of Two Government Reforms in Korea
Working Paper	06-07	Ilho YOO	Fiscal Balance Forecast of Cambodia 2007-2011
Working Paper	06-08	Ilho YOO	PAYG pension in a small open economy
Working Paper	06-09	Kwon JUNG Clement LIM	IMPULSE BUYING BEHAVIORS ON THE INTERNET
Working Paper	06-10	Joong H. HAN	Liquidation Value and Debt Availability: An Empirical Investigation
Working Paper	06-11	Brandon Julio, Woojin Kim Michael S. Weisbach	Uses of Funds and the Sources of Financing: Corporate Investment and Debt Contract Design
Working Paper	06-12	Hun Joo Park	Toward People-centered Development: A Reflection on the Korean Experience
Working Paper	06-13	Hun Joo Park	The Perspective of Small Business in South Korea
Working Paper	06-14	Younguck KANG	Collective Experience and Civil Society in Governance
Working Paper	06-15	Dong-Young KIM	The Roles of Government Officials as Policy Entrepreneurs in Consensus Building Process
Working Paper	06-16	Ji Hong KIM	Military Service : draft or recruit

<sup>\*</sup> The above papers are available at KDI School Website <a href="http://www.kdischool.ac.kr/new/eng/faculty/working.jsp">http://www.kdischool.ac.kr/new/eng/faculty/working.jsp</a>. You may get additional copy of the documents by downloading it using the Acrobat Reader.

Category	Serial #	Author	Title
Working Paper	06-17	Ji Hong KIM	Korea-US FTA
Working Paper	06-18	Ki-Eun RHEE	Reevaluating Merger Guidelines for the New Economy
Working Paper	06-19	Taejong KIM Ji-Hong KIM Insook LEE	Economic Assimilation of North Korean Refugees in South Korea: Survey Evidence
Working Paper	06-20	Seong Ho CHO	ON THE STOCK RETURN METHOD TO DETERMINING INDUSTRY SUBSTRUCTURE: AIRLINE, BANKING, AND OIL INDUSTRIES
Working Paper	06-21	Seong Ho CHO	DETECTING INDUSTRY SUBSTRUCTURE: - Case of Banking, Steel and Pharmaceutical Industries-
Working Paper	06-22	Tae Hee Choi	Ethical Commitment, Corporate Financial Factors: A Survey Study of Korean Companies
Working Paper	06-23	Tae Hee Choi	Aggregation, Uncertainty, and Discriminant Analysis
Working Paper	07-01	Jin PARK Seung-Ho JUNG	Ten Years of Economic Knowledge Cooperation with North Korea: Trends and Strategies
Working Paper	07-02	BERNARD S. BLACK WOOCHAN KIM	The Effect of Board Structure on Firm Value in an Emerging Market:  IV, DiD, and Time Series Evidence from Korea
Working Paper	07-03	Jong Bum KIM	FTA Trade in Goods Agreements:  'Entrenching' the benefits of reciprocal tariff concessions
Working Paper	07-04	Ki-Eun Rhee	Price Effects of Entries
Working Paper	07-05	Tae H. Choi	Economic Crises and the Evolution of Business Ethics in Japan and Korea
Working Paper	07-06	Kwon JUNG Leslie TEY	Extending the Fit Hypothesis in Brand Extensions:  Effects of Situational Involvement, Consumer Innovativeness and Extension  Incongruity on Evaluation of Brand Extensions
Working Paper	07-07	Younguck KANG	Identifying the Potential Influences on Income Inequality Changes in Korea – Income Factor Source Analysis
Working Paper	07-08	WOOCHAN KIM TAEYOON SUNG SHANG-JIN WEI	Home-country Ownership Structure of Foreign Institutional Investors and Control- Ownership Disparity in Emerging Markets
Working Paper	07-09	Ilho YOO	The Marginal Effective Tax Rates in Korea for 45 Years: 1960-2004
Working Paper	07-10	Jin PARK	Crisis Management for Emergency in North Korea
Working Paper	07-11	Ji Hong KIM	Three Cases of Foreign Investment in Korean Banks
Working Paper	07-12	Jong Bum Kim	Territoriality Principle under Preferential Rules of Origin
Working Paper	07-13	Seong Ho CHO	THE EFFECT OF TARGET OWNERSHIP STRUCTURE ON THE TAKEOVER PREMIUM IN OWNER-MANAGER DOMINANT ACQUISITIONS: EVIDENCE FROM KOREAN CASES
Working Paper	07-14	Seong Ho CHO Bill McKelvey	Determining Industry Substructure: A Stock Return Approach
Working Paper	07-15	Dong-Young KIM	Enhancing BATNA Analysis in Korean Public Disputes
Working Paper	07-16	Dong-Young KIM	The Use of Integrated Assessment to Support Multi-Stakeholder negotiations for Complex Environmental Decision-Making
Working Paper	07-17	Yuri Mansury	Measuring the Impact of a Catastrophic Event: Integrating Geographic Information System with Social Accounting Matrix
Working Paper	07-18	Yuri Mansury	Promoting Inter-Regional Cooperation between Israel and Palestine: A Structural Path Analysis Approach
Working Paper	07-19	Ilho YOO	Public Finance in Korea since Economic Crisis

<sup>\*</sup> The above papers are available at KDI School Website <a href="http://www.kdischool.ac.kr/new/eng/faculty/working.jsp">http://www.kdischool.ac.kr/new/eng/faculty/working.jsp</a>. You may get additional copy of the documents by downloading it using the Acrobat Reader.

Category	Serial #	Author	Title
Working Paper	07-20	Li GAN Jaeun SHIN Qi LI	Initial Wage, Human Capital and Post Wage Differentials
Working Paper	07-21	Jin PARK	Public Entity Reform during the Roh Administration: Analysis through Best Practices
Working Paper	07-22	Tae Hee Choi	The Equity Premium Puzzle: An Empirical Investigation of Korean Stock Market
Working Paper	07-23	Joong H. HAN	The Dynamic Structure of CEO Compensation: An Empirical Study
Working Paper	07-24	Ki-Eun RHEE	Endogenous Switching Costs in the Face of Poaching
Working Paper	08-01	Sun LEE Kwon JUNG	Effects of Price Comparison Site on Price and Value Perceptions in Online Purchase
Working Paper	08-02	Ilho YOO	Is Korea Moving Toward the Welfare State?: An IECI Approach
Working Paper	08-03	Ilho YOO Inhyouk KOO	DO CHILDREN SUPPORT THEIR PARENTS' APPLICATION FOR THE REVERSE MORTGAGE?: A KOREAN CASE
Working Paper	08-04	Seong-Ho CHO	Raising Seoul's Global Competitiveness: Developing Key Performance Indicators
Working Paper	08-05	Jin PARK	A Critical Review for Best Practices of Public Entities in Korea
Working Paper	08-06	Seong-Ho CHO	How to Value a Private Company? -Case of Miele Korea-
Working Paper	08-07	Yoon Ha Yoo	The East Asian Miracle: Export-led or Investment-led?
Working Paper	08-08	Man Cho	Subprime Mortgage Market: Rise, Fall, and Lessons for Korea
Working Paper	08-09	Woochan KIM Woojin KIM Kap-sok KWON	Value of shareholder activism: evidence from the switchers
Working Paper	08-10	Kun-Ho Lee	Risk Management in Korean Financial Institutions: Ten Years after the Financial Crisis
Working Paper	08-11	Jong Bum KIM	Korea's Institutional Framework for FTA Negotiations and Administration: Tariffs and Rules of Origin
Working Paper	08-12	Yu Sang CHANG	Strategy, Structure, and Channel of Industrial Service Leaders: A Flow Chart Analysis of the Expanded Value Chain
Working Paper	08-13	Younguck KANG	Sensitivity Analysis of Equivalency Scale in Income Inequality Studies
Working Paper	08-14	Younguck KANG	Case Study: Adaptive Implementation of the Five-Year Economic Development Plans
Working Paper	08-15	Joong H. HAN	Is Lending by Banks and Non-banks Different? Evidence from Small Business Financing
Working Paper	08-16	Joong H. HAN	Checking Accounts and Bank Lending
Working Paper	08-17	Seongwuk MOON	How Does the Management of Research Impact the Disclosure of Knowledge?  Evidence from Scientific Publications and Patenting Behavior
Working Paper	08-18	Jungho YOO	How Korea's Rapid Export Expansion Began in the 1960s: The Role of Foreign Exchange Rate
Working Paper	08-19	BERNARD S. BLACK WOOCHAN KIM HASUNG JANG KYUNG SUH PARK	How Corporate Governance Affects Firm Value: Evidence on Channels from Korea
Working Paper	08-20	Tae Hee CHOI	Meeting or Beating Analysts' Forecasts: Empirical Evidence of Firms' Characteristics, Persistence Patterns and Post-scandal Changes
Working Paper	08-21	Jaeun SHIN	Understanding the Role of Private Health Insurance in the Universal Coverage System:  Macro and Micro Evidence

<sup>\*</sup> The above papers are available at KDI School Website <a href="http://www.kdischool.ac.kr/new/eng/faculty/working.jsp">http://www.kdischool.ac.kr/new/eng/faculty/working.jsp</a>. You may get additional copy of the documents by downloading it using the Acrobat Reader.

Category	Serial #	Author	Title
Working Paper	08-22	Jin PARK	Indonesian Bureaucracy Reform: Lessons from Korea
Working Paper	08-23	Joon-Kyung KIM	Recent Changes in Korean Households' Indebtedness and Debt Service Capacity
Working Paper	08-24	Yuri Mansury	What Do We Know about the Geographic Pattern of Growth across Cities and Regions in South Korea?
Working Paper	08-25	Yuri Mansury & Jae Kyun Shin	Why Do Megacities Coexist with Small Towns? Historical Dependence in the Evolution of Urban Systems
Working Paper	08-26	Jinsoo LEE	When Business Groups Employ Analysts: Are They Biased?
Working Paper	08-27	Cheol S. EUN Jinsoo LEE	Mean-Variance Convergence Around the World
Working Paper	08-28	Seongwuk MOON	How Does Job Design Affect Productivity and Earnings?  Implications of the Organization of Production
Working Paper	08-29	Jaeun SHIN	Smoking, Time Preference and Educational Outcomes
Working Paper	08-30	Dong Young KIM	Reap the Benefits of the Latecomer: From the story of a political, cultural, and social movement of ADR in US
Working Paper	08-31	Ji Hong KIM	Economic Crisis Management in Korea: 1998 & 2008
Working Paper	08-32	Dong-Young KIM	Civility or Creativity?: Application of Dispute Systems Design (DSD) to Korean Public Controversies on Waste Incinerators
Working Paper	08-33	Ki-Eun RHEE	Welfare Effects of Behavior-Based Price Discrimination
Working Paper	08-34	Ji Hong KIM	State Owned Enterprise Reform
Working Paper	09-01	Yu Sang CHANG	Making Strategic Short-term Cost Estimation by Annualized Experience Curve
Working Paper	09-02	Dong Young KIM	When Conflict Management is Institutionalized: A Review of the Executive Order 19886 and government practice
Working Paper	09-03	Man Cho	Managing Mortgage Credit Risk: What went wrong with the subprime and Alt-A markets?
Working Paper	09-04	Tae H. Choi	Business Ethics, Cost of Capital, and Valuation
Working Paper	09-05	Woochan KIM Woojin KIM Hyung-Seok KIM	What makes firms issue death spirals? A control enhancing story
Working Paper	09-06	Yu Sang CHANG Seung Jin BAEK	Limit to Improvement: Myth or Reality? Empirical Analysis of Historical Improvement on Three Technologies Influential in the Evolution of Civilization
Working Paper	09-07	Ji Hong KIM	G20: Global Imbalance and Financial Crisis
Working Paper	09-08	Ji Hong KIM	National Competitiveness in the Globalized Era
Working Paper	09-09	Hao Jiang Woochan Kim Ramesh K. S. Rao	Contract Heterogeneity, Operating Shortfalls, and Corporate Cash Holdings
Working Paper	09-10	Man CHO	Home Price Cycles: A Tale of Two Countries
Working Paper	09-11	Dongcul CHO	The Republic of Korea's Economy in the Swirl of Global Crisis
Working Paper	09-12	Dongcul CHO	House Prices in ASEAN+3: Recent Trends and Inter-Dependence
Working Paper	09-13	Seung-Joo LEE Eun-Hyung LEE	Case Study of POSCO - Analysis of its Growth Strategy and Key Success Factors

<sup>\*</sup> The above papers are available at KDI School Website <a href="http://www.kdischool.ac.kr/new/eng/faculty/working.jsp">http://www.kdischool.ac.kr/new/eng/faculty/working.jsp</a>. You may get additional copy of the documents by downloading it using the Acrobat Reader.

Category	Serial #	Author	Title
Working Paper	09-14	Woochan KIM Taeyoon SUNG Shang-Jin WEI	The Value of Foreign Blockholder Activism: Which Home Country Governance Characteristics Matter?
Working Paper	09-15	Joon-Kyung KIM	Post-Crisis Corporate Reform and Internal Capital Markets in Chaebols
Working Paper	09-16	Jin PARK	Lessons from SOE Management and Privatization in Korea
Working Paper	09-17	Tae Hee CHOI	Implied Cost of Equity Capital, Firm Valuation, and Firm Characteristics
Working Paper	09-18	Kwon JUNG	Are Entrepreneurs and Managers Different?  Values and Ethical Perceptions of Entrepreneurs and Managers
Working Paper	09-19	Seongwuk MOON	When Does a Firm Seek External Knowledge? Limitations of External Knowledge
Working Paper	09-20	Seongwuk MOON	Earnings Inequality within a Firm: Evidence from a Korean Insurance Company
Working Paper	09-21	Jaeun SHIN	Health Care Reforms in South Korea: What Consequences in Financing?
Working Paper	09-22	Younguck KANG	Demand Analysis of Public Education: A Quest for New Public Education System for Next Generation
Working Paper	09-23	Seong-Ho CHO Jinsoo LEE	Valuation and Underpricing of IPOs in Korea
Working Paper	09-24	Seong-Ho CHO	Kumho Asiana's LBO Takeover on Korea Express
Working Paper	10-01	Yun-Yeong KIM Jinsoo LEE	Identification of Momentum and Disposition Effects Through Asset Return Volatility
Working Paper	10-02	Kwon JUNG	Four Faces of Silver Consumers: A Typology, Their Aspirations, and Life Satisfaction of Older Korean Consumers
Working Paper	10-03	Jinsoo LEE Seongwuk MOON	Corporate Governance and International Portfolio Investment in Equities
Working Paper	10-04	Jinsoo LEE	Global Convergence in Tobin's Q Ratios
Working Paper	10-05	Seongwuk MOON	Competition, Capability Buildup and Innovation: The Role of Exogenous Intra-firm  Revenue Sharing
Working Paper	10-06	Kwon JUNG	Credit Card Usage Behaviors among Elderly Korean Consumers
Working Paper	10-07	Yu-Sang CHANG Jinsoo LEE	Forecasting Road Fatalities by the Use of Kinked Experience Curve
Working Paper	10-08	Man CHO	Securitization and Asset Price Cycle: Causality and Post-Crisis Policy Reform
Working Paper	10-09	Man CHO Insik MIN	Asset Market Correlation and Stress Testing: Cases for Housing and Stock Markets
Working Paper	10-10	Yu-Sang CHANG Jinsoo LEE	Is Forecasting Future Suicide Rates Possible? - Application of the Experience Curve -
Working Paper	10-11	Seongwuk MOON	What Determines the Openness of Korean Manufacturing Firms to External Knowledge?
Working Paper	10-12	Joong Ho HAN Kwangwoo PARK George PENNACCHI	Corporate Taxes and Securitization
Working Paper	10-13	Younguck KANG	Housing Policy of Korea: Old Paradigm, New Approach
Working Paper	10-14	Il Chong NAM	A Proposal to Reform the Korean CBP Market
Working Paper	10-15	Younguck KANG	Balanced Regional Growth Strategy based on the Economies of Agglomeration: the Other Side of Story
Working Paper	10-16	Joong Ho HAN	CEO Equity versus Inside Debt Holdings and Private Debt Contracting

<sup>\*</sup> The above papers are available at KDI School Website <a href="http://www.kdischool.ac.kr/new/eng/faculty/working.jsp">http://www.kdischool.ac.kr/new/eng/faculty/working.jsp</a>. You may get additional copy of the documents by downloading it using the Acrobat Reader.

Category	Serial #	Author	Title
Working Paper	11-01	Yeon-Koo CHE Rajiv SETHI	Economic Consequences of Speculative Side Bets: The Case of Naked Credit Default Swaps
Working Paper	11-02	Tae Hee CHOI Martina SIPKOVA	Business Ethics in the Czech Republic
Working Paper	11-03	Sunwoo HWANG Woochan KIM	Anti-Takeover Charter Amendments and Managerial Entrenchment: Evidence from Korea
Working Paper	11-04	Yu Sang CHANG Jinsoo LEE Yun Seok JUNG	The Speed and Impact of a New Technology Diffusion in Organ Transplantation:  A Case Study Approach
Working Paper	11-05	Jin PARK Jiwon LEE	The Direction of Inter-Korean Cooperation Fund Based on ODA Standard
Working Paper	11-06	Woochan KIM	Korea Investment Corporation: Its Origin and Evolution
Working Paper	11-07	Seung-Joo LEE	Dynamic Capabilities at Samsung Electronics: Analysis of its Growth Strategy in Semiconductors
Working Paper	11-08	Joong Ho HAN	Deposit Insurance and Industrial Volatility
Working Paper	11-09	Dong-Young KIM	Transformation from Conflict to Collaboration through Multistakeholder Process: Shihwa Sustainable Development Committee in Korea
Working Paper	11-10	Seongwuk MOON	How will Openness to External Knowledge Impact Service Innovation? Evidence from Korean Service Sector
Working Paper	11-11	Jin PARK	Korea's Technical Assistance for Better Governance: A Case Study in Indonesia
Working Paper	12-01	Seongwuk MOON	How Did Korea Catch Up with Developed Countries in DRAM Industry? The Role of Public Sector in Demand Creation: PART 1
Working Paper	12-02	Yong S. Lee Young U. Kang Hun J Park	The Workplace Ethics of Public Servants in Developing Countries
Working Paper	12-03	Ji-Hong KIM	Deposit Insurance System in Korea and Reform
Working Paper	12-04	Yu Sang Chang Jinsoo Lee Yun Seok Jung	Technology Improvement Rates of Knowledge Industries following Moore's Law? -An Empirical Study of Microprocessor, Mobile Cellular, and Genome Sequencing Technologies-
Working Paper	12-05	Man Cho	Contagious Real Estate Cycles: Causes, Consequences, and Policy Implications
Working Paper	12-06	Younguck KANG Dhani Setvawan	INTERGOVERNMENTAL TRANSFER AND THE FLYPAPER EFFECT  – Evidence from Municipalities/Regencies in Indonesia –
Working Paper	12-07	Younguck KANG	Civil Petitions and Appeals in Korea : Investigating Rhetoric and Institutional settings
Working Paper	12-08	Yu Sang Chang Jinsoo Lee	Alternative Projection of the World Energy Consumption -in Comparison with the 2010 International Energy Outlook
Working Paper	12-09	Hyeok Jeong	The Price of Experience
Working Paper	12-10	Hyeok Jeong	Complementarity and Transition to Modern Economic Growth
Working Paper	13-01	Yu Sang CHANG Jinsoo LEE Hyuk Ju KWON	When Will the Millennium Development Goal on Infant Mortality Rate Be Realized? - Projections for 21 OECD Countries through 2050-
Working Paper	13-02	Yoon-Ha Yoo	Stronger Property Rights Enforcement Does Not Hurt Social Welfare -A Comment on Gonzalez' "Effective Property Rights, Conflict and Growth (JET, 2007)"-
Working Paper	13-03	Yu Sang CHANG Changyong CHOI	Will the Stop TB Partnership Targets on TB Control be Realized on Schedule? - Projection of Future Incidence, Prevalence and Death Rates -
Working Paper	13-04	Yu Sang CHANG Changyong CHOI	Can We Predict Long-Term Future Crime Rates?  – Projection of Crime Rates through 2030 for Individual States in the U.S. –

<sup>\*</sup> The above papers are available at KDI School Website <a href="http://www.kdischool.ac.kr/new/eng/faculty/working.jsp">http://www.kdischool.ac.kr/new/eng/faculty/working.jsp</a>. You may get additional copy of the documents by downloading it using the Acrobat Reader.

Category	Serial #	Author	Title
Working Paper	13-05	Chrysostomos Tabakis	Free-Trade Areas and Special Protection
Working Paper	13-06	Hyeok Jeong	Dynamics of Firms and Trade in General Equilibrium
Working Paper	13-07	Hyeok Jeong	Testing Solow's Implications on the Effective Development Policy
Working Paper	13-08	Jaeun SHIN	Long-Term Care Insurance and Health Care Financing in South Korea
Working Paper	13-09	Ilchong Nam	Investment Incentives for Nuclear Generators and Competition in the Electricity Market of Korea
Working Paper	13-10	Ilchong Nam	Market Structure of the Nuclear Power Industry in Korea and Incentives of Major Firms
Working Paper	13-11	Ji Hong KIM	Global Imbalances
Working Paper	14-01	Woochan KIM	When Heirs Become Major Shareholders
Working Paper	14-02	Chrysostomos Tabakis	Antidumping Echoing
Working Paper	14-03	Ju Ho Lee	Is Korea Number One in Human Capital Accumulation?: Education Bubble Formation and its Labor Market Evidence
Working Paper	14-04	Chrysostomos Tabakis	Regionalism and Conict: Peace Creation and Peace Diversion
Working Paper	14-05	Ju Ho Lee	Making Education Reform Happen: Removal of Education Bubble through Education Diversification
Working Paper	14-06	Sung Joon Paik	Pre-employment VET Investment Strategy in Developing Countries - Based on the Experiences of Korea -
Working Paper	14-07	Ju Ho Lee Josh Sung-Chang Ryoo Sam-Ho Lee	From Multiple Choices to Performance Assessment: Theory, Practice, and Strategy
Working Paper	14-08	Sung Joon Paik	Changes in the effect of education on the earnings differentials between men and women in Korea (1990-2010)
Working Paper	14-09	Shun Wang	Social Capital and Rotating Labor Associations: Evidence from China
Working Paper	14-10	Hun Joo Park	Recasting the North Korean Problem: Towards Critically Rethinking about the Perennial Crisis of the Amoral Family State and How to Resolve It
Working Paper	14-11	Yooncheong Cho	Justice, Dissatisfaction, and Public Confidence in the E-Governance)
Working Paper	14-12	Shun Wang	The Long-Term Consequences of Family Class Origins in Urban China
Working Paper	14-13	Jisun Baek	Effect of High-speed Train Introduction on Consumer Welfare
Working Paper	14-14	Jisun Baek	Effect of High Speed Trains on Passenger Travel: Evidence from Korea
Working Paper	15-01	Tae-Hee Choi	Governance and Business Ethics - An International Analysis
Working Paper	15-02	Jisun Baek	The Impact of Improved Passenger Transport System on Manufacturing Plant Productivity
Working Paper	15-03	Shun Wang	The Unintended Long-term Consequences of Mao's Mass Send-Down Movement:  Marriage, Social Network, and Happiness
Working Paper	15-04	Changyong Choi	Information and Communication Technology and the Authoritarian Regime:  A Case Study of North Korea
Working Paper	15-05	Wonhyuk Lim William P. Mako	AIIB Business Strategy Decisions: What Can It Do Differently to Make a Difference?

<sup>\*</sup> The above papers are available at KDI School Website <a href="http://www.kdischool.ac.kr/new/eng/faculty/working.jsp">http://www.kdischool.ac.kr/new/eng/faculty/working.jsp</a>. You may get additional copy of the documents by downloading it using the Acrobat Reader.

Category	Serial #	Author	Title
Working Paper	15-06	Ju-Ho Lee Kiwan Kim Song-Chang Hong JeeHee Yoon	Can Bureaucrats Stimulate High-Risk High-Payoff Research?
Working Paper	15-07	Seulki Choi	Geographical Proximity with Elderly Parents of Korean Married Women in 30-40s
Working Paper	15-08	Taejun Lee	An Analysis of Retirement Financial Service Providers' Approach to Using Websites to Augment Consumer Financial Acumen
Working Paper	15-09	Sung Joon Paik	Education and Inclusive Growth – Korean Experience
Working Paper	15-10	Sung Joon Paik	Policies to Attract High Quality Foreign Students into Korea
Working Paper	15-11	Changyong Choi	한·중 ODA 전략 비교 분석: 지식공유사업(KSP) 사례연구
Working Paper	15-12	WooRam Park Jisun Baek	Firm's Employment Adjustment in Response to Labor Regulation
Working Paper	15-13	Jisun Baek WooRam Park	Higher Education, Productivity Revelation and Performance Pay Jobs

<sup>\*</sup> The above papers are available at KDI School Website <a href="http://www.kdischool.ac.kr/new/eng/faculty/working.jsp">http://www.kdischool.ac.kr/new/eng/faculty/working.jsp</a>. You may get additional copy of the documents by downloading it using the Acrobat Reader.