

Discussion Papers in Economics

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Discussion Paper 04-02

February 2004



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February 24, 2004

Abstract

Presidential elections in Korea in the eighties and nineties provide an opportunity to examine the role of political patronage in a newly formed democracy. We examine whether the bureaucratic reshuffling which accompanies presidential changes depends on the political connections of bureaucrats and whether bureaucratic reassignment is associated with changes in administrative performance. We use data on all public prosecutors in Korea between 1992-2000 and find that sharing birth and school environments with the incumbent president roughly doubled the odds of being assigned to a range of influential positions within the Public Prosecutor's Office. In the last of the three presidential regimes we consider, we also find that branch offices with high fractions of connected prosecutors performed poorly relative to other branches. Observations over multiple years allow us to control for unobservable characteristics of prosecutors and offices while estimating these effects of political patronage.

*We thank Soohyung Lee for providing the initial data and other valuable information on the Korean Public Prosecutors' Office. Abhijit Banerjee, Julie Cullen, Zvi Hercowitz, Gary Saxonhouse, E. Somanathan, Jan Svejnar and seminar participants at the University of Michigan and the NEUDC provided valuable comments. We are also grateful to those within the PPO who provided us with an insider's perspective.

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1 Introduction

Political appointments of bureaucrats often make news, yet our impressions about the extent to which political connections have influenced distribution of talent within the government bureaucracy are formed mainly on the basis of anecdotes and case studies rather than broad based econometric evidence. Available case studies do suggest that political interference with bureaucratic assignments is associated with large rents and sizable efficiency costs. Robert Wade, based on interviews with farmers, bureaucrats and contractors of the public works department in South India estimated that between a quarter and a half of the budget allocated for the maintenance of irrigation works found its way back into the private purses of these officials and a sizable fraction of these earnings were used to *purchase* transfers to desirable positions within the department (Wade, 1982, 1985). Similar evidence from other countries suggests that legislators across the world have used patronage appointments to favor those who have provided them with political and financial support.¹

In this paper we attempt to quantify the role of political connections on the position assignments and performance of an important set of bureaucrats in South Korea, following the introduction of direct presidential elections in 1987. Using data on all public prosecutors in South Korea between 1992-2000, we estimate the extent to which connections to the president through shared schools and birth environments affected the likelihood of favorable assignments. We also study the changes in the performance of offices that received these prosecutors in order to assess the efficiency implications of political involvement in bureaucratic assignments. We focus on presidential, rather than other kinds of political connections because, in spite of the existence of the National Assembly, power is still concentrated in presidential hands and the president is involved in many executive decisions. We emphasize birthplace and high school ties because these have been emphasized by sociologists and political commentators as important in the formation of group identities in Korea. Birthplace has been shown to be the most important predictor of electoral behavior in Korea, with the majority of the electorate in each province voting for locally born presidential candidates (Sun Kwang-Bae, 1997) and friendships formed in a few elite high

¹Political patronage in post-war Italy is discussed in Godlen (2003). Menes (1999) provides evidence to show that an important aspect of the functioning of machine governments in the United States at the turn of the twentieth century was the creation of well paid jobs and contracts in return for political support.

schools have been shown to have long standing effects.² Finally, we feel that public prosecutors, as a group are of special interest in this type of analysis because the integrity of the justice system is at the heart of well functioning democracy.

A general problem with identifying political patronage based on these types of background characteristics is that individuals from different regions and schools are likely to differ along other dimensions which affect their performance but are not easily observed. Some schools may be better in ways that cannot be easily quantified, or cultural social and historical characteristics of certain regionally concentrated communities may affect skills and work habits. A president may share a birth place, high school or university with top bureaucrats simply because families and institutions within a particular region successfully produce talented administrators and politicians. It is therefore important, from the point of view of our study that we have repeated observations on individual prosecutors and that the two presidents in power during most of our period, Kim Young Sam and Kim Dae Jung, differed in their regions of birth and education. The longitudinal nature of our data allows us to control for unobservable time-invariant characteristics of both prosecutors and branch offices.

We find that the presidential changes were accompanied by dramatic changes in the patterns of personnel assignment. Political connections are shown to matter most for the positions in strategic and politically sensitive departments and least for the positions with seniority requirements. In 1997, the last year that President Kim Young Sam was in power, over half of all positions which we identify as being of strategic importance were held by public prosecutors from his region of birth. By the year 2000 this figure had fallen to about a quarter with most of this decline being offset by an increase in numbers from the region of the incoming president, Kim Dae Jung. We find that the effects of these connections on assignments are strongest during the Kim Dae Jung years at the end of our period and that regions, rather than the provinces or schools they contain, have the largest and most systematic effects on assignment. Our work therefore supports commonly made claims of strong regional identities in Korea.

Patronage in position assignments implies that equally able bureaucrats are

²Roh Tae Woo, who was elected president in 1987, was from the Kyongbuk High School in Taegu (in the south east) and the benefits showered on graduates from that school led to them being called the T-K (Taegu-Kyongbuk) mafia (Woon-Tai Kim (2001), pp 27-30).

not treated equally. This need not however result in a less efficient bureaucracy. If, for instance, communication within hierarchies is made easier when members share a common birthplace or local culture, such cliquism might actually improve performance. Menes (2003) finds, for example, that although patronage and graft were central to the functioning of *machine* governments in cities within the United States at the turn of the twentieth century, these governments were effective in providing public goods and services. To explore efficiency issues, we use the number of public prosecutors aligned with an incumbent president in each of roughly 50 branch offices and examine whether higher fractions aligned with the president affected branch office performance. We measure performance by the number of individuals indicted by a prosecutor and then acquitted by the first criminal court. These acquittals are commonly regarded as resulting from inappropriate indictments made without adequate evidence (Yoon, 1990). It may be that these arrests are politically motivated or simply a result of prosecutor incompetence. What matters from our perspective is that they reflect inefficiencies in the justice system. We find negative effects of presidential alignment only during the presidency of Kim Dae Jung, the last of the three presidential regimes we consider. It is hard to determine whether this is due to lower average prosecutor ability or from greater political control over prosecutor activities over this period. The regime of Kim Dae Jung was rocked by large numbers of corruption scandals and the group of prosecutors aligned with him also had relatively less illustrious educational backgrounds than those aligned with previous presidents. Both these explanations are therefore plausible and the nature of our data does not allow us to separately identify their importance. Our evidence suggests that while political interference in the bureaucracy was widespread, the circumstances in which it affected performance were more particular.

Our work is closely related to a number of recent studies that examine private benefits from political connections by combining data over multiple periods with unexpected political changes. All these studies find, to different degrees, evidence that political connections were valuable to firms and were capitalized in their market values. Fisman (2001) finds that negative announcements on the health status of the President Suharto in Indonesia were accompanied by declines in the share prices of Indonesian firms, Ramalho (2003) finds the impeachment of the Brazilian president in 1992 had immediate but short-lived effects on the stock prices of firms whose owners had some connections to his

family, Johnson and Mitton (2001) find that capital controls in Malaysia favored politically connected firms and the Asian financial crisis therefore hurt them disproportionately and Jayachandran (2003) finds that the market value of firms aligned with the Republic Party fell substantially when the party lost control of the U.S. Senate. We see our study as complementing and extending this literature in important respects. Bureaucrats are, in many ways, a natural channel through which politicians influence firms. We find that administrative reassignments were an important means of political control which under some circumstances lowered bureaucratic efficiency. Since both rents and better policies can change firm values, it was difficult for the previous literature to address questions of efficiency.

Our paper also links two issues that have been at the center of heated debates about Asian development. The first is the importance of group identities in explaining behavior and, in particular, the role of kinship, regional and school ties, in the formation of these identities. The second, is the exercise of political patronage in newly formed democracies. Over the last decade, South Korea, at least as much as any other country in the region, has witnessed a series of high level corruption scandals implicating each of the last few presidents, their families, and important members of the bureaucracy. Both of the presidents which came to power during the period we consider have had their children arrested on charges of large-scale corruption. Kim Dae Jung, within his first two years in office had reshuffled dozens of senior officials and came under severe accusations of filling ministerial positions with officials from his home province (Hoon, 2000). In a recent survey conducted by the Korean Development Institute, a majority of respondents believed that political connections played a bigger role in the process of restructuring after the financial crisis than firm competitiveness (Korean Development Institute, 2001). We provide support for the existence of strong regional identities and show that the patronage exercised through them was quantitatively important.

The following section describes presidential backgrounds, political changes and the institutional structure of the Korean Public Prosecutors Office over the period of our study. Section 3 describes our data and empirical strategy. Section 4 presents our results and Section 5 concludes.

2 The Institutional Setting

2.1 Presidential Backgrounds and Regional Divides

South Korea has 7 major cities and 9 provinces. Regional economic differences are large, in spite of no major ethnic or other cultural divides. The capital city of Seoul and southeastern region are the most prosperous. The Seoul metropolitan area houses most corporate headquarters, half of all manufacturing employment and accounts for nearly all the population growth that has taken place during the 1980s.³

Regional conflicts in Korea have deep historical roots. Regional antagonism is particularly acute between the two south eastern provinces collectively known as the Youngnam region, and the south western provinces collectively known as Honam. The Japanese were believed to exploit regional sentiments and, after Independence, government policy under the military leaders Park and Chun was often seen as actively discriminating against Honam.⁴ Youngnam, with less than 15% of the country's population, provided 35% of South Korea's ministers and vice-ministers and 31% of generals between 1960 and 1988. The owners of over 50% of Korean *chaebols* were from Youngnam, in contrast with only 5% from Honam. In the seventies and eighties nearly 31% of appointed legislators were from Youngnam as opposed to 14.5% from Honam.

On June 29th, 1987, the military government, in response to widespread civil protests, declared its intention to make major constitutional amendments and hold presidential elections.⁵ This declaration speech is widely regarded as having ushered democracy into South Korea. The constitution was amended and Roh Tae-Woo, who was part of the preceding military government and made the historic June declaration, became the first democratically elected president since Park Chung Hee's military coup in 1961. Presidents were restricted to single five year terms, and we therefore observe three presidential regimes during the period 1992-2000: In 1993, at the end of Roh's term, Kim Young Sam came into office, followed in 1998 by Kim Dae Jung. The first two of these presidents were from the southeastern region of Youngnam, while Kim Dae Jung was from Honam. The regional identities described above were clearly reflected in each of

³All reported figures are based on Kim and Kim (2002)

⁴Lee (1990), pp 49-52.

⁵Manwoo Lee (1990) contains a copy of the declaration (pp. 145-148) and a description of the events leading up to it (pp.19-44)

these elections. Parties were divided on regional, rather than class or ideological lines. Close to 90 per cent of the electorate in Honam, the region of Dae Jung Kim's birth, voted for him in each election.⁶

2.2 The Public Prosecutor's Office

The Public Prosecutors' Office is headed by the Prosecutor General. It is responsible for the investigation of crimes, the supervision of the police and other investigative agencies, and civil lawsuits which involve the government. To become a public prosecutor requires passing a judicial exam, analogous to a bar exam in that those who pass are eligible to work as an attorney, public prosecutor or judge. Prosecutors then go through a two-year training course at the Judicial Research and Training Institute. The year of entry to the institute determines the public prosecutor's seniority. This is an important criterion for future promotions as high ranks within the bureaucracy have especially stringent seniority requirements.

The incumbent administration has complete authority in prosecutor appointments and assignments, subject to seniority requirements. The President directly controls most assignments based on recommendations by the Minister of Justice. Statements referring to the historical importance of political connections for public prosecutors can be found in speeches by presidents and bureaucrats.⁷ There is also survey evidence suggesting that many Koreans attribute injustices in the process of criminal investigation to the excessive political orientation of public prosecutors.

We classified positions by relying on newspaper articles and interviews with public prosecutors.⁸ We found, in fact, very little disagreement about which

⁶Sun Kwang-Bae notes that in the first presidential election of 1987 "role played by the regional cleavage ... was thus far-reaching, in that each of the candidates clearly dominated the others, rather than enjoying only relative advantage, in the respective regional strongholds." (1997, p9)

⁷Soon after Kim Dae Jung came to power in 1998, he addressed public prosecutors, with the words, "I am sorry to say this, but the previous Public Prosecutors' Office has been controlled by the past political powers and has worked for them....I promise you that this incumbent political power will never discriminate against you on the basis of your local origin or school ties, and will not ask you to work for us." (Quoted from a speech at the Ministry of Justice, April 9, 1998.)

⁸We rely heavily on information collected through interviews with current and retired prosecutors by Soo Hyung Lee at the Donga Daily Newspaper (Donga Daily, Dec. 12, 2000) and supplemented this with our own interviews.

positions are influential. We identify three categories of desirable positions, based on alternative criteria. We refer to these collectively as *notable* positions.

1. *Star positions*: This is the term used within the prosecutor’s office for positions near the top of the formal Public Prosecutor’s Office hierarchy. They require at least 10 years of legal experience and are held by less than 4 per cent of public prosecutors.
2. *Seoul area positions*: This category includes all positions in the Seoul metropolitan area. Residing in Seoul is attractive both because of its amenities and opportunities for education and employment. An average of 18 per cent of all prosecutors were located in one of the Seoul area offices during our period.
3. *Strategic positions*: These are positions in one of three important departments in the Public Prosecutor’s Office: Public Security, Special Investigation and Planning. These positions are held by about 5 per cent of all prosecutors. Positions in Public Security and Special Investigation are politically sensitive because they deal with “Grand Crime” (*Geo Ahk*), such as corruption, election fraud, labor unrest, and anti-communist activities.

3 Data and Empirical Strategy

Data on the rank and positions of prosecutors are available in the *Annual Report on the Nationwide Placement of Prosecutors* published by the Public Prosecutor’s Office. We combine these with demographic data on individual prosecutors available in the *Overview of Legal Professionals*. Data on acquittals have been taken from the *Yearbook of Judicature* published by the Supreme Court.

Position assignments for all but the lowest ranked prosecutors are available for 7 out of the 9 years between 1992-2000.⁹ The total number of these prosecutors rose over the period from 267 in 1992 to 413 in 2000. For each year, we create alignment variables which measure the extent to which a prosecutor shared a birth or school environment with the incumbent president. Although we know the town of each prosecutor’s birth, we aggregate this data to the province level, because of the small numbers born in each town. Most of our

⁹We were not able to get data on assignments for 1994 and 1996.

analysis is then conducted at the level of provinces and regions. This allows us to examine, in particular, whether effects of shared provincial backgrounds are encompassed in broader regional identities. To examine the importance of school ties, we consider the high school from which each president graduated and other prestigious high schools in the area with which students from these schools are likely to have interacted. Students often travel quite far outside their town to attend one of many prestigious Korean high schools. We therefore have more prosecutors from these schools than we do from individual towns.

We model the likelihood of obtaining an influential position as a function of a prosecutor’s political and human capital. Political capital depends on connections with the incumbent president and human capital is captured by background characteristics such as education, experience and ability, some of which may not be easily observable. We denote the sum of political and human capital for prosecutor i at time period t by the latent variable y_{it}^* , and postulate the following relationship:

$$y_{it}^* = \gamma P_{it} + \sum_{k=1}^K \beta_k x_{kit} + \alpha_i + \epsilon_{it}.$$

P refers to political connections to the incumbent president, x_1, \dots, x_K denote observable background characteristics, α captures unobserved time-invariant heterogeneity across prosecutors and ϵ is an error term which may include idiosyncratic factors that influence favorable assignments. A prosecutor is assigned to a notable position of type j whenever y_{it}^* is above a threshold value y_j^* . These positions are not mutually exclusive. If, for example, a prosecutor holds a high ranked position in the Special Investigation department of the Supreme Public Prosecutor’s Office in Seoul, all three dummy variables would be equal to 1.

Given some (symmetric) distribution of the error term, $F(\cdot)$, the probability of being assigned a key position can be written as:

$$\text{Prob}(y_j = 1) = F\left(\gamma P_{it} + \sum_{k=1}^K \beta_k x_{kit} + \alpha_i\right). \quad (1)$$

We are interested primarily in an estimate of γ . In the presence of the incidental parameters α_i , the maximum likelihood estimator of γ will not be consistent. We follow the approach of Chamberlain (1980) who showed, using the logit model, that the likelihood function obtained by conditioning on the sum of the dependent variable for each group individual, was independent of the incidental parameters and can provide consistent estimates of the parameters of interest.

We therefore use a conditional logit model to estimate the influence of different types of presidential connections on the likelihood of favorable assignments.¹⁰ Since the prosecutor fixed effects α_i are not directly estimated, we cannot calculate the marginal effects of political connections on the probability of getting a favorable assignment. Instead, we compare the odds of getting such positions for groups with and without such connections. In practice, we estimate (1) with three different patronage parameters, γ_1 , γ_2 and γ_3 , representing the importance of shared regions, provinces and schools respectively. Odds ratios are calculated for each of these separately.

To measure changes in the performance of different branches of the Public Prosecutor's Office, we use acquittal rates. These refer to the proportion of individuals indicted by prosecutors at a given branch and then judged innocent at the first criminal court. These acquittals are commonly regarded as representing *false arrests* that are often politically motivated, although they might equally well reflect incompetence of the concerned prosecutor. In either case, they can be used to reflect inefficiencies in branch office performance. We use data from all 53 branch offices where acquittals are observed. We are interested in the extent to which high acquittal rates are related to the fraction of prosecutors at each office with birthplace or school ties to the incumbent president. Since observed acquittal rates are much higher during the last presidential regime than in earlier years, we estimate the above model separately for two time periods, 1992-1997 and 1998-2000.

We estimate:

$$A_{jt} = \gamma P_{jt} + \sum_{m=1}^M \beta_m x_{mjt} + \alpha_j + \epsilon_{jt} \quad (2)$$

where A_{jt} is the acquittal rate for branch j at time t and P_{jt} refers to the fraction of prosecutors at branch office j that are aligned with the incumbent president. As before, we include connections through shared regions, provinces and high schools and estimate each of these effects separately. Time-varying branch level characteristics that might reflect the ability of the group of prosecutors at that office and its performance are denoted by x_1, \dots, x_M . These include the average rank and seniority of prosecutors assigned to the branch office and the fraction from Seoul National University, the most prestigious university in the country.

¹⁰We favor the logit specification over a probit model since the conditional likelihood function in the probit model is not independent of the individual fixed effects. See Chamberlain (1980), Maddala (1987), Greene(2003) for discussions of consistency in the conditional logit model.

In addition, we allow for branch-level unobservables, and denote these by α_j . We assume these are random draws from a given distribution and are not therefore correlated with the other explanatory variables in the model. We favor the random effects to the fixed effects estimator since it uses the variation across offices which is an important part of the total variation in acquittals observed in our data. We use a Hausman specification test to examine whether differences in the random effects and fixed effects estimators are statistically significant. We find support for the random effects specification: there are no statistically significant differences between our estimates and those obtained from the fixed effects model.

4 Results

4.1 Descriptive Statistics

Some summary statistics on position assignments are presented in Table 1. The most dramatic changes are seen in the share of prosecutors from different backgrounds in *strategic* positions. Over the course of the third presidential regime, the share of prosecutors in these positions from the region of the incumbent president, Kim Dae Jung, doubled from 15 to 30 per cent while the share from the region of both the previous presidents declined from 53 to 28 per cent. Figure 1 illustrates these trends.

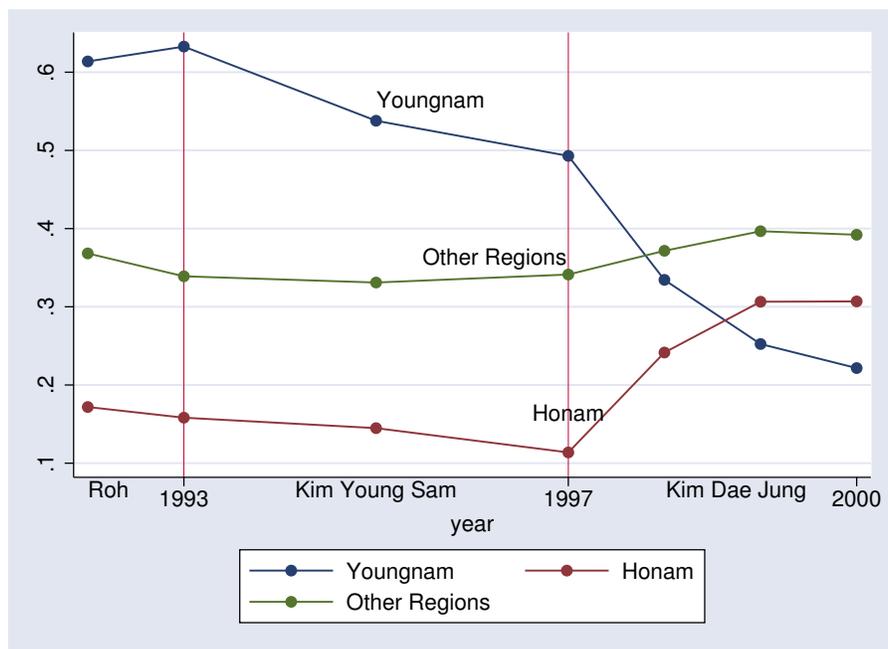


Figure 1: Public Prosecutors in *Strategic Positions* by Region of Birth, 1992-2000

The trends in the shares of provinces and high schools seem to be qualitatively similar, though somewhat less systematic. The largest changes are seen at the end of our period during the regime of Kim Dae Jung. About 13 per cent of prosecutors in strategic positions in 1997 were connected to Kim Dae Jung through a shared province or high school. Three years later, this figure had gone up to almost one-third. In contrast, there were 10 prosecutors with high school ties to the president Kim Young Sam who held strategic positions in 1997 and only one of them retained such a position in 2000.

Changes in the backgrounds of prosecutors holding other types of notable positions were somewhat smaller, though qualitatively similar. The share of prosecutors in the Seoul region who were born in Youngnam went down from 42 to 35 per cent and those from Honam went up from 18 to 25 per cent. For star positions, the Honam share increased from 18 to 26 per cent, but this was offset largely by declines in the shares from other regions and Youngnam's share was almost unchanged. This is not surprising, since such positions can only be lost through retirements, either voluntary or mandated, and changes in assignment policies therefore take longer to manifest themselves in actual assignments.¹¹

¹¹The figures are combined under the category of *notable* positions in Table 1.

If we do not restrict ourselves to *notable* positions but consider the backgrounds of all prosecutors in the Public Prosecutor's Office, we observe no major changes. Over the period there was a small decline in the share from Youngnam (42 to 38 per cent) and a small increase in the share from Honam (19 to 21 per cent). Neither these, nor any of the provincial changes are statistically significant at conventional levels. There was a decline in the total number of prosecutors with high school connections to Kim Dae Jung, and so the large increase in the share of such prosecutors in strategic positions was offset by declines in other departments. These figures suggest that presidents reallocated prosecutors across departments and offices rather than bring about changes the overall composition of the Public Prosecutor's Office.

Acquittal rates, our index of branch office performance considerably increased over the period. Acquittal rates are typically low (below 2% of all cases) throughout the period, but registered a sharp rise during the last presidential regime. Average rates during the Kim Young Sam years were 8% higher than those at the start of the period, and went up by a further 19% during the Kim Dae Jung years.

Table 1: Proportions of Korean Public Prosecutors by Affiliation, 1992-2000

		1992	1993-97	1998-2000
	<i>Strategic Positions</i>			
Regions	Youngnam (Roh/Young Sam)	.53	.54	.28
	Honam (Dae Jung)	.15	.13	.30
Provinces	Gyoungbuk (Roh)	.19	.23	.16
	Gyoungnam (Young Sam)	.34	.30	.13
	Jeonnam (Dae Jung)	.11	.11	.25
High Schools	Gyoungbuk (Roh)	.11	.12	.07
	Gyoungnam (Young Sam)	.19	.17	.08
	Jeonnam (Dae Jung)	.11	.10	.20
	<i>All Notable Positions</i>			
Regions	Youngnam (Roh/Young Sam)	.43	.41	.34
	Honam (Dae Jung)	.18	.18	.25
Provinces	Gyoungbuk (Roh)	.20	.20	.19
	Gyoungnam (Young Sam)	.23	.22	.16
	Jeonnam (Dae Jung)	.12	.11	.17
High Schools	Gyoungbuk (Roh)	.11	.09	.06
	Gyoungnam (Young Sam)	.11	.10	.06
	Jeonnam (Dae Jung)	.11	.11	.11
	<i>All Positions</i>			
Regions	Youngnam (Roh/Young Sam)	.41	.40	.38
	Honam (Dae Jung)	.19	.20	.21
Provinces	Gyoungbuk (Roh)	.20	.20	.20
	Gyoungnam (Young Sam)	.21	.20	.19
	Jeonnam (Dae Jung)	.12	.13	.14
High Schools	Gyoungbuk (Roh)	.08	.06	.04
	Gyoungnam (Young Sam)	.10	.08	.06
	Jeonnam (Dae Jung)	.11	.09	.07

4.2 Estimates

4.2.1 Position Assignments

Table 2 presents estimates and odds-ratios from a conditional logit model. The probability of each type of notable position is estimated as a function of prosecutor background characteristics, dummy variables for different years, and dummy variables for presidential alignment which take the value 1 for years in which a prosecutor’s school, province or region matched that of the incumbent president. The likelihood function for each notable position is constructed conditional on the total number of years such a position is held by a prosecutor. The use of this procedure implies that, for each type of position, we exclude prosecutors who never held the position during the period as well as those who held it throughout the period, because for this group, the sum of the dependent variable is not a sufficient statistic for their unobserved fixed effect. The effects of patronage are identified through the career paths of those prosecutors who move in and out of notable positions when presidential power changes hands. In the absence of estimates of the individual α_i s, we cannot compute marginal effects. Odds-ratios are reported.

The estimates reveal some interesting patterns. The first is that the effects of presidential connections varied substantially across the different categories of *notable* positions. The largest effects of presidential alignment are observed for *strategic* positions. Effects on *Seoul* area positions are smaller and presidential connections have no discernable effects on the *star* positions. Also, regional ties that have the largest and most systematic effects on favorable position assignments. Belonging to the same region as the president more than doubled the odds of being assigned to a position in a *strategic* department. Provincial and high-school ties do not seem to have any additional effects. In other words, the inter-regional differences in patronage effects that we observe in our data are large in comparison with the intra-regional effects.

It is not clear that the correct interpretation of these results is that provincial and high school ties do not matter. It may just be that our measure of patronage, namely the likelihood of an influential assignment, is too coarse to capture the additional benefits of these provincial and high school-ties. It may be, for example, that prosecutors from the incumbent president’s region face improved chances of favorable assignments, and those from who were also from the same high-school or province received additional benefits, such as jobs for their

children or other types of transfers on which we do not have data. On the other hand, it is also possible that incumbent political power was, to some extent, concerned with efficiency. By favoring a larger set of prosecutors it could ensure that those in important positions were both reasonably capable and suitably aligned.

Table 2: Presidential Connections and Position Assignments: Conditional Logit Estimates.

	Regions	Provinces	High Schools
All Notable Positions	.38**	.06	.09
<i>standard errors</i>	(.12)	(.14)	(.17)
<i>odds-ratios</i>	(1.46)	(1.06)	(1.10)
Seoul positions	.32**	.01	-.02
<i>standard errors</i>	(.12)	(.14)	(.17)
<i>odds-ratios</i>	(1.38)	(1.0)	(.98)
Star positions	.22	.08	.18
<i>standard errors</i>	(.40)	(.44)	(.53)
<i>odds-ratios</i>	(1.25)	(1.09)	(1.20)
Strategic positions	.98**	.08	.07
<i>standard errors</i>	(.24)	(.28)	(.31)
<i>odds-ratios</i>	(2.67)	(1.08)	(1.07)

Notes: Here and in Table 3 below, * and ** indicate that a coefficient is statistically significant at the 5% and 1% level respectively

4.2.2 Performance

The considerable reassignment of prosecutors which accompanied presidential change transformed the composition of certain branch offices. The Seoul district office, for example, which is the largest branch in the country, experienced the entry of a large numbers of prosecutors affiliated to Kim Dae Jung after he came to power and the corresponding exit of those affiliated to earlier presidents. The share of prosecutors in this office from Honam rose from 18% to 28%, and those from Youngnam, the birth region of the previous two presidents, fell from

41% to 33%. Interestingly, over this same period there was a doubling of the fraction of those arrested by the Seoul branch office and then acquitted. Such acquittals usually result from arrests with insufficient evidence and can therefore represent inefficiencies in the functioning of the Public Prosecutor's Office. To examine whether the reassignments that accompanied presidential changes were systematically accompanied by changes in acquittal rates, we combine our data on prosecutor backgrounds and assignments with branch office data on acquittals. We estimate the effects of presidential alignment on acquittal rates using a random-effects model. These results are presented in Table 3. We also provide p-values from a Hausman specification test based on a comparison of coefficients from the random effects model and the corresponding fixed effects specification. These justify our use of random effects.

We find that increases in the fraction of affiliated prosecutors were accompanied by higher acquittal rates during the last presidential regime, but not under the first two presidents. As can be seen from Table 3, this is true whether we look at the fraction of affiliated prosecutors in all positions or focus only on the changes in affiliated prosecutors in strategic positions. A one standard deviation change in the fraction of regionally affiliated prosecutors at a branch office during the period 1998-2000 is associated with a change of two-fifths of a standard deviation in acquittal rates. The size of these effects are much larger for the strategic positions, however the coefficient for regions in this case is statistically significant only at the 10% level.

The negative effects of political patronage on the performance of the Public Prosecutor's Office observed during the last of our three presidential regimes may be indicative of greater political interference with these bureaucrats during this regime or it may simply be a result of less competent bureaucrats being moved into influential positions. During the first two regimes, 80 per cent of prosecutors in influential positions were graduates of Seoul National University in contrast to only 61 per cent during the Kim Dae Jung years. The last of our 3 regimes also witnessed an unprecedented number of corruption scandals involving the president's family, so both these explanations seem plausible.

Table 3: Acquittal Rates and the Composition Branch Offices:
 Random Effects Estimates
 Dependent Variable: Acquittal rates

	1992-1997	1998-2000
Strategic Positions		
Regions	.005 (0.06)	.06 (.033)
Provinces	-.001 (.011)	-.04 (.068)
High Schools	.0003 (.011)	-.02 (.042)
Hausman p-value	.87	.64
All Positions		
Regions	.00004 (.001)	.006* (.003)
Provinces	-.0006 (.002)	-.003 (.003)
High Schools	.003 (.002)	-.006 (.003)
Hausman p-value	.85	.61
observations	203	158
acquittal rates		$\mu=.006, \sigma=.003$
fraction affiliated by region		$\mu=.21, \sigma=.20$

Notes: Standard-errors are in parentheses below the coefficients.

5 Discussion

Authoritarian governments that had controlled the Korea for most of the post war years gave way, in the late 1980s, to elected presidents who maintained considerable executive power. We exploit the frequent presidential changes in

the newly formed Korean democracy to understand the role played by political connections on career paths and performance within the bureaucracy.

We use panel data on the population of public prosecutors in Korea between 1992 and 2000 and measure political connections by the extent to which prosecutors shared schools and birth places with incumbent presidents. The imposition of single five year terms for each president resulted in two presidential changes during the period of our study and we identify the importance of regional and school networks by examining whether position reassignments tracked presidential changes in systematic ways.

We find that shared regional backgrounds have been an important determinant of political patronage in Korea. Belonging to the same region as the incumbent president more than doubled a prosecutor's odds of being assigned to strategic positions within the bureaucracy. Closer ties through provinces and high schools do not have any additional explanatory power in our data. It may be that favoring those with closer ties below the level of the region would have made it difficult to maintain capable prosecutors in influential positions. It could also be that connections at these levels resulted in other benefits which we do not observe in our data.

A natural question in this context is whether the efficiency effects of these changed allocations are large. We relate acquittal rates in branch offices, commonly regarded as inversely related to performance, to the fraction in those offices that are connected to the incumbent president. We find high acquittal rates accompany high fractions of connected prosecutors in one of our 3 presidential regimes. Not surprisingly, our analysis suggests that the extent to which patronage in bureaucratic assignments affects the efficiency of the bureaucracy depends on who is in power and the characteristics of those being favored.

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