99-076

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Yasheng Huang

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Yasheng Huang
Associate Professor
Morgan 267
Harvard Business School
Boston, MA 02163
Yhuang@hbs.edu

Yasheng Huang is associate professor at Harvard Business School. He is the author of Inflation and Investment Controls in China: The Political Economy of Central and Local Relations during the Reform Era, (Cambridge University Press 1996) and of FDI in China (Jointly published by Institute of Southeast Asian Studies in Singapore, Chinese University Press in Hong Kong and University of Michigan Press 1998). I have benefited from a discussion with Professor David Li in writing this paper. All errors are those of the author alone.

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Abstract:

Conventional analysis of government typically focuses on “politics,” i.e., interests, conflicts or personalities. But governing a country is not only task of successfully governing its people but also an administrative task of managing subordinate officials. This is a very relevant issue in a country such as China. In China, there are around forty ministries, thirty provincial governments, 2,400 county governments, and some 30,000 township governments; the entire political system employs over ten million people. The top "managers" of the country--some thirty national leaders--not only make policies but also manage a large number of bureaucratic personnel. As in business organizations, control problems occur when subordinates have different interests from those of the organization and when the behavior of subordinates is imperfectly monitored. Control mechanisms are designed to minimize control problems by either aligning interests or improving information. This article uses this framework to explain a wide variety of administrative phenomena in Chinese government organizations. One implication of the findings is that the Chinese political system seems to be able to select the "right" people to the top levels of the government.

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On November 15, 1979, an oil rig capsized during a storm in the Bohai Sea. Seventy-two lives were lost.[1] The Minister of Petroleum Industry (MPI), Song Zhenming, was held responsible for the capsizing of the rig and for the cover-up of the accident. Song stepped down from office in August 1980. The man who replaced him, Kang Shien, had spent his entire career in China's oil industry and indeed had preceded Song as minister of the MPI between 1975 and 1978.

In 1987, Ni Xiance stepped down as the governor of Jiangxi province amid charges of corruption. He was replaced by Wu Guanzheng, a man who had spent most of his career in another province, as an engineer and as the mayor of Wuhan in Hubei province.

What explains the replacement by an insider at a ministerial post and the replacement by an outsider a provincial post after ignominious dismissals of the predecessors? Why does the turnover rate of provincial governors average about 15 percent higher than that of ministers? What explains that the turnover rate, for both ministers and governors, nearly doubled during the 1980s and the 1990s as compared with during the Maoist era of the 1950s and the 1960s? Is it purely accidental that the Chinese top leadership in recent years has tended to come from the provinces?

These questions are not posed--let alone answered--by any existing discussions on Chinese government and bureaucracy. Typically, scholarship on the Chinese bureaucracy focuses on changes in the norms and procedures of appointment and promotion decisions or explains the socioeconomic factors behind the mobility of Chinese cadres.[2] Although these studies have significantly advanced our understanding of the Chinese bureaucracy, they do have their limitations. Because they treat bureaucratic appointment and promotion decisions mainly as a function of changes in policies, ideologies, or socioeconomic factors, they pay little attention to the intrinsic characteristics of the Chinese bureaucratic system. This is a limitation to the extent that common control problems afflict large organizations such as the Chinese bureaucracy. These problems arise on account of preference divergence and informational asymmetry regardless of the political and ideological environment. Those appointment and promotion rules that are shaped by these intrinsic bureaucratic characteristics remain considerably under-researched.

This article adapts some ideas from institutional economics and industrial organization and offers a simple explanation for a number of regularly observed patterns in appointment and promotion decisions. The gist of the argument is that these patterns of promotion and turnovers are in fact evidence of the indirect devices that simultaneously overcome information imperfections and maintain controls in China's large and complex political system.

The first section describes information imperfections and incentive devices in firms and in bureaucracy. The second section applies these ideas to test data on the Chinese bureaucracy.[3] The third section ponders some large implications of the findings.

Information and Incentive Devices

Both bureaus and firms are hierarchies and they organize their activities by a set of authority relationships.[4] As hierarchies, both incur agency costs--the transaction costs of operating a hierarchy. Eggertsson (1990, 164) observes, "The costs of transacting across markets are reduced as *one* transaction replaces a *set* of transactions, but a new type of cost emerges, the transaction cost of forming and maintaining a coalition of producers--often referred to, in the literature, as agency costs." (italics in the original text) Two circumstances in particular give rise to agency costs. The first is a divergence in interests. Jensen and Meckling give the examples of managers pursuing "non-pecuniary" consumption of perquisites out of the firm's resources and risk-averse behavior to avoid uncertain, albeit potentially profitable, ventures because of their unwillingness to sacrifice their leisure and effort (Jensen and Meckling, 1976, 312-13). Both of these managerial activities are carried out at the expense of the stockholders' interests in maximizing the returns on their equity.

The second circumstance compounds the difficulties related to the first; it refers to the "information asymmetry" between owner and managers. Managers, in general, have superior information about the tasks assigned to them, either because of the attached technical details or because of their proximity to the tasks, and about their own abilities and preferences. The net effect from the presence of these two factors is the managers' "shirking" or "opportunistic" behavior: managers will maximize their own interests, whether in leisure or in non-pecuniary consumption, because the costs of these activities are disproportionately borne by the owner and the costs of being detected are small.

Control problems occur when interests diverge and when information is distributed imperfectly. Here, control is defined as the process whereby subordinates behave in ways that are consistent with and/or beneficial to the interests of the organization as a whole. Organizations can reduce agency costs either by converging preferences or by improving information distribution (or by some combination of the two). The first method is an implicit control mechanism that structures incentives in such a way that subordinates automatically behave in the interests of the organization. In business, an example of implicit control is the stock option. When stockholders have difficulties monitoring the performance of managers, they can assign property rights to the managers so that

the managers' incentives are aligned with the interests of the stockholders--managers are thus concerned about capital appreciation. The second method is an explicit control mechanism that directly rewards or punishes specified behavior. Examples include direct supervision and performance evaluations of subordinates.

There are tradeoffs between these two methods. Explicit control requires ex ante, precise specification of behavior. But such a specification is costly either because many contingencies are impossible to foresee or because of the unobservability of some behavior. It is well known that incomplete contracts give rise to shirking and in order to deter shirking,[5] organizations rely on implicit control when direct monitoring is costly. Theoretically speaking, implicit control seeks to reduce preference divergence between the organization and its subordinates and to minimize shirking without having to incur the costs of improving information distribution. This article is about those implicit control mechanisms upon which the Chinese political system relies when direct monitoring of the output or effort of the subordinates is costly.

Imperfect Information and Firm Employment Contracts

The starting point of our analysis is that information is distributed unevenly between the firm and its employees. In general, the firm has less information than the employees about the abilities of the employees and/or about the exertion of their efforts. In the presence of such information imperfection, it is to the advantage of the employees to "shirk"--i.e., to deliver less effort than one is compensated for. Firms can engage in explicit control by exerting direct efforts to reduce employee shirking. These methods include direct supervision and regular performance evaluations. Direct supervision, however, is difficult because often the tasks employees perform are technically and operationally complex and are multi-dimensional. Supervising one aspect of the performance is not enough and may even be counterproductive. Similarly, performance evaluations are also difficult because often the eventual output is a result of joint efforts on the part of many employees and it is difficult to separate these efforts into discrete components.

The difficulties with direct supervision and performance evaluations point to the two common problems identified in the agency literature--problems of monitoring effort and problems of monitoring output. These two monitoring problems explain the universal absence of what on the surface seems to be the most efficient payment scheme--piece-rate pay. A piece-rate pay scheme pays the employee by each unit of the product he/she produces or in proportion to the amount he/she may produce. They also explain why performance evaluations in firms are conducted in a

highly *pro forma* manner--e.g., almost all employees get similarly high scores in the performance evaluations, which cast doubts on their usefulness as a basis to determine merit pay or promotion.[6]

Institutional economists focus their attention on alternative forms of compensation contracts and model them as either explicit or implicit mechanisms to overcome problems in monitoring effort and output. Below is a list of these mechanisms and a brief explanation as to why they serve to overcome monitoring problems. A common characteristic of such devices is that they seek to align the interests of the agent with those of the principal so that incentives to engage in shirking are reduced.

Stock options. Executive managers are often given stock options--options to buy the firm's stock during a specified period--as a large proportion of their total compensation. According to surveys conducted by Forbes in 1990, 43 percent of CEO compensation in 800 large American firms comes from long-term incentive schemes such as stock options; in the oil industry, as a common practice, engineers and geologists are often given shares in the income from the wells they successfully drill (Milgrom and Roberts, 1992, 424).[7]

The basic idea is that risk aversion on the part of the managers is unobservable. Stock options and other similar incentive schemes assign constrained property rights to managers so that they benefit from undertaking those risk-taking activities that increase the value of the firm. This is a special case of profit sharing as a solution to monitoring problems in team production problems; as Alchian and Demsetz (1972) show, team leaders can be given a stake in the residual income so that they have an incentive to monitor production.

Efficiency wage. Many firms typically pay their employees more than market-clearing rates. One effect associated with a wage premium is "authority enhancing"--managers acquire additional power because the supply of labor increases relative to demand on account of a higher wage level. In a celebrated case, Henry Ford raised his workers pay to 5 dollars a day in 1914, when the going rate was only 2.34 dollars. This pay raise was accompanied with stringent eligibility rules and draconian controls, including frequent home visits and acquiring information about the savings habits and the marital status of the employees. This dramatic innovation in management was credited with large reductions in absenteeism and productivity increases.[8]

A related explanation for the practice of efficiency wage is that employee performance can only be imperfectly monitored. According to this argument, the firm cannot set precise piece rates because it cannot evaluate a worker's effort or output perfectly. In such a case, the wage level needs to be set, not exactly at the level of the alternative employment, but at a level that

incorporates also the income derived from shirking. As imperfect information implies that the probability of detecting shirking is always less than one, the efficiency wage thus exceeds the alternative wage by an appropriate margin. Thus a wage premium is a negative function of firm supervision and it always exists if such supervision is imperfect.[9]

Tenure. Tenure--the practice of granting life-long employment--is widely practiced in academia and law and accounting partnerships. A common rationale for the tenure system in universities is that it protects freedom of speech for the faculty, but this explanation does not extend to such fields as law and accounting where freedom of speech is a less vital characteristic of the job. A more general explanation, however, points to the role of the asymmetrical distribution of "expertise" in structuring this particular aspect of the employment contract and to the role of tenure to obviate the monitoring problems.[10]

This argument starts from the empirical observation that all new hires are evaluated by the incumbents--tenured professors or law partners--as the incumbents control the process to evaluate the competence and the expertise of the job applicants. In order to induce them to give an honest evaluation of new faculty, it is first necessary to allow them job security to alleviate fears that they may be replaced by younger and more productive colleagues. The tenure system, thus, is a device on the part of the university or law firms to solicit honest representations when dishonest representations essentially are not known to those other than tenured professors and lawyers. The tenure system has its costs--in the form of deadwood--but it is more efficient than the alternative system given the fact that incumbent evaluations are unavoidable.

Promotion. Promotion is often viewed as more than rewarding "the right performance"; it is also an information-saving device that has incentive-aligning effects. The incentive-aligning effects arise when employees know in advance that there is a likelihood of promotion and when they observe that upper-level positions will not be snatched up by outsiders every time they become open. This incentive consideration associated with promotion policies explains why firms only have a limited number of "ports of entry," usually at a low level. It is information-saving because promotion decisions are, by definition, based on *relative* performance among peer employees, not on information about some absolute performance that is often unavailable. This economizing feature of promotion policies is one of the reasons why pay is often attached to jobs rather than to specific skills and to the abilities of the individuals.[11]

Information Distribution and Public Bureaucracy

While bureaus and firms may share some common origins for control problems, there are important differences between them that have implications on the choice of control mechanisms. The most obvious difference, of course, is that a bureaucracy is not profit maximizing. Bureaucrats often pursue slack or expansions or other economically inefficient goals. Although, as Niskenen (1971) contends, bureaus may maximize revenue, the fundamental difference is that bureaus are subject to softer budget constraints in the sense that they are not selected out on the grounds of not maximizing profits. "Bureaus," Moe (1984, 762) observes, "survive by securing political support--from congressmen in committees, the institutionalized presidency, interest groups--sufficient to veto life-threatening legislation by enemies; and they expand the scope of their activities by building on this base of political support."

This difference gives rise to different methods of internal control. Monetary rewards play a much less prominent role either to perform the function of the implicit contract or that of remuneration in a bureau. This is related to the difficulties to measure bureaucratic performance precisely to construct a piece-rate reward schedule; in part, this is due to the fact that the relationship between a bureaucratic superior and his/her subordinates is more authoritative in nature and administrative compulsion is more likely to elicit compliance than in a firm. Bureaucratic organizations rely heavily on administrative means, such as appointment, promotion, or firing, for control mechanisms. Despite this and other differences between a bureau and a firm, the informational framework proves useful for analyses of how political control of a public bureaucracy is achieved and this kind of framework is often known as “positive analysis” of politics.[12] The positive analysis typically begins with the following line of inquiry:

> The principal-agent model focuses on information asymmetry and, in particular, on information available to bureaucrats--about their true "types" (honesty, personal goals, policy positions) and their true performance--that politicians do not automatically possess and often can only acquire with much imprecision and expense. It then encourages us to inquire into the monitoring devices and incentive structures--aspects of institutional design--that mitigate the asymmetry and thus minimize the problems of adverse selection and moral hazard that will otherwise cause bureaucrats to depart from their political directives (Moe 1984: 764).

Positive theorists typically focus on those "unobtrusive" or implicit control mechanisms that either serve monitoring functions or that align incentives. This line of analysis acknowledges

difficulties of monitoring directly the actions of bureaucrats given the fact that bureaucrats command far more knowledge and expertise as compared with those entrusted with performing the monitoring functions--the members of Congress. These devices focus on monitoring the consequences of bureaucratic actions or aligning the career motives of bureaucrats via the design of the appointment system. This is indirect, *de fault* monitoring.

Weingast (1984), for example, shows that Congress exercises effective oversight by what he calls a "decibel meter," i.e., the supply of information about constituency reactions to bureaucratic output. McCubbins and Schwartz (1984) offer the analogy of a "fire alarm": Congressional monitoring is *ex post* and is selective, i.e., it is activated only when violations (as perceived by citizens) occur. There are also mechanisms to align bureaucratic and congressional incentives. Congressional controls over resources and over appointments result in the *ex ante* expectation that faithful bureaucratic service is rewarded (Weingast 1984).

Information and Incentive Devices in China's Political System

Conventional analysis of the Chinese political system starts from the simplistic notion that control is a function of resources. These resources may be tangible, such as money or coercion; they may also be intangible such as legitimacy or the personal charisma of individual leaders. When these resources are abundant in the hands of the controllers, control problems are minimized. Such analysis, for example, would predict problems in China's central governance because of the declining shares of central taxes or because of the erosion of communist ideology during the reform era.

The informational framework approaches control problems very differently. It focuses on control problems arising as a result of the imperfect distribution of information and of monitoring problems.[13] The framework also explains certain practices or characteristics of an organization in terms of their effect on monitoring and incentive alignments. This article documents a number of employment or promotion characteristics of the Chinese political system and relates them to the effects they have on monitoring and incentive alignments.

The gist of the argument is that explicit and implicit controls are traded off against each other depending on the costs of monitoring the output/effort of Chinese bureaucrats. I demonstrate this argument by comparing the control mechanisms that are applied to two types of bureaucrats in the Chinese system--multi-task bureaucrats (MTBs) and single-task bureaucrats (STBs). For STBs, direct monitoring of their output is feasible; for MTBs, because direct monitoring is more problematic, the control methods are mainly to align incentives. The first section below briefly

describes China's control hierarchy; the second section compares these two types of bureaucrats and the third section presents some evidence.

Control Hierarchy

At the top of the Chinese political hierarchy is the Politburo and the State Council, China's cabinet. The Politburo is the supreme decision-making body of the Chinese Communist Party (CCP); all major strategic decisions are deliberated and made within the Politburo. The State Council is in charge of translating strategic decisions into concrete economic and political policies. It has its own coordinating secretariat and staff but mainly it relies on a number of supra-ministerial "commissions" for coordinating tasks. In the economic area, the State Planning Commission and the State Economic and Trade Commission are the most important of such agencies. Commissions are at a higher bureaucratic level than ministries and therefore can issue instructions to ministries and provinces in their own spheres of administration. Commissions are comprehensive agencies, which integrate and coordinate activities either across functional lines of ministries or across regional lines of provinces. Below the commissions are the ministries and the provincial governments. An important detail here is that ministries and provincial governments are of the same bureaucratic rank.[14]

On an official Chinese organizational chart, the government is divided into central and local levels. The central level consists of the State Council, commissions, and ministries and the local level consists of provincial and subprovincial governments, as presented in Figure 1. This description is geographic in nature: Government agencies are divided between those located in Beijing and those located elsewhere. From a control point of view, this division is quite misleading. For example, the official description gives the impression that provincial agencies are subordinate to ministerial agencies. In fact they are exactly equal in bureaucratic rank and the ministerial agencies exercise no personnel control over their counterparts in the provinces; ministers are explicitly forbidden to issue instructions to governors.[15]

Figure 1

An alternative way to view the Chinese government is that it consists of two hierarchical levels that are divided by control functions. The first level is the control-level, which consists of the Politburo, the State Council, and its commissions, and the second level--the controlled level--which consists of ministerial and provincial agencies. The main reason for this division is that the control-level agencies all exercise personnel power over those agencies at the controlled level. Another reason is that preference divergences are the sharpest between these two levels. By design, both

ministries and provinces have well-defined spheres of interests and they often pursue their own sectoral or territorial interests at the expense of the "encompassing interests" of the whole system. In contrast, agencies such as the State Planning Commission have interests across sectors and territories and therefore are comparatively more likely to pursue encompassing interests. Although it is quite likely that ministerial bureaucrats and provincial bureaucrats may also diverge in their preferences, for our purposes, this kind of preference divergence is less interesting because ministerial bureaucrats do not occupy a control position vis-a-vis provincial bureaucrats since they have no appointment power over provincial bureaucrats. Figure 2 presents this conception of the Chinese government.

Figure 2

Single and Multi-Task Bureaucrats

There are two types of bureaucrats in the Chinese political system: those who perform multiple tasks that entail complex relationships among these tasks and those who perform single and relatively homogenous tasks. My basic premise is that it is intrinsically more difficult to measure the output of multiple-task bureaucrats than it is to measure the output of single-task bureaucrats. The implication is that the incentive devices used to motivate performance should differ because of this difference in the measurability of their tasks.

This division between MTBs and STBs roughly corresponds to the division between provincial bureaucrats and ministerial bureaucrats. By definition, ministries are specialized either by product areas (Ministry of Petroleum Industry) or by functions (Ministry of Finance). While the product of one depends on the products of others, the chief task of a minister is his own often well-defined sphere of responsibilities. The Ministry of Finance collects taxes and dispenses expenditures but it does not concern itself with agricultural or steel production. Provincial bureaucrats are in a different position altogether. A provincial governor's job description encompasses agriculture, industry, finance, population planning, education, and public security, etc.

This simple and straightforward difference between ministerial bureaucrats and provincial bureaucrats has implications for the way in which their performance is evaluated and rewarded. First, in the presence of multiple tasks, it is undesirable to monitor the performance of only one of the tasks. This would encourage directing excessive attention to the one particular task to which the incentive scheme is linked, reducing the time and effort allocated to the other tasks with which the agent is also charged. This issue is illustrated in the debate in American education about the

wisdom to link teachers' pay with students' test scores. While proponents argue that the scheme will make teachers work harder to raise test scores, opponents point out that the scheme will discourage creative thinking and intellectual curiosity--qualities not easily captured by test scores.[16] In our case, it is impossible to compare the performance of two successive governors if one excelled in agricultural production while the other excelled in enhancing the quality of local schools. In contrast, a comparison of the performance of two successive ministers of finance is fairly straightforward--by the amount of the taxes they collect, for example.

Second, different tasks may entail sharp tradeoffs among them: One task may only be performed well at the expense of other tasks. Provincial bureaucrats are more afflicted with these kinds of problems than ministerial bureaucrats because the former are entrusted with several tasks that are substitutes for one another. For example, a governor rewarded excessively for industrial production may enforce anti-pollution regulations less stringently. In contrast, the efforts of a minister of industry to increase steel production does not diminish the efforts of a minister of environmental protection to preserve clean air. The incentive effects are not as interdependent.

Implicit Controls

The above discussion suggests that there are intrinsic differences in measuring the performance of the provincial bureaucrats as MTBs and the ministerial bureaucrats as STBs. For ministerial bureaucrats, because their output is measurable directly, direct monitoring devices can be applied. These direct monitoring devices include the issuing of instructions or demotion in the case of significant performance failures. For provincial bureaucrats, the control devices are indirect and must aim at aligning incentives with those of the entire political system. Because there is no information about the issuance of instructions to ministerial bureaucrats, our evidentiary procedure is to show that implicit controls are applied more frequently to provincial bureaucrats than to ministerial bureaucrats and to deduce from this that explicit controls are imposed more on ministerial bureaucrats. The following implicit control mechanisms are discussed: cross-posting, appointment, rotation, and promotion.

Cross-posting. Cross-posting refers to the practice whereby an official is simultaneously posted to two positions. In this case, one position typically is a seat on the Politburo, i.e., a control-level position. As a self-enforcing implicit contract, cross-posting can align the interests of the controlled-level bureaucrats with those at the control level. This comes about in three ways. First, cross-posted officials calculate that their long-term career prospects lie with the control level rather than solely with the agencies over which they preside. This is a bundling arrangement--one who

pursues his own interests also pursues the interests of the community.[17] Second, the costs of noncompliance at the control level increase for cross-posted officials because their actions are more discernible at the control level. The high probability of detection increases the costs of pursuing narrow self-interests. Third, cross-posting is analogous to assigning residual ownership rights in institutional economics, i.e., cross-posted officials become control-level officials and therefore their incentives are effectively aligned.[18]

The logic that cross-posting is an implicit control mechanism suggests that there might be differences between ministerial bureaucrats and provincial bureaucrats in the way it is employed. Since the actions of ministerial bureaucrats are more directly observable and therefore can be controlled via a more explicit mechanism, there is less need to employ an implicit approach; thus more provincial bureaucrats should be cross-posted. This is shown in Table 1, which displays the number of ministers and provincial secretaries who have also served as the Politburo members and their shares in the total number of officials and of Politburo members for two sessions of the Chinese Central Committee.[19] Cross-postings are far more frequent among provincial secretaries than among ministers. Secretaries are roughly between twice and five times likely to be on the Politburo than ministers. For example, for the 13th Central Committee, about 6 percent of all ministers held Politburo cross-postings; 14 percent of provincial secretaries held cross postings. Despite a smaller pool, provinces are represented on the Politburo to a far greater extent than ministers. For the 13th Central Committee, ministers represented about 12 percent of all Politburo members, which was half of the share of the provincial secretaries.

Table 1

Appointment. Appointment acts as a control device in two ways. Each appointment decision conveys information about the officials in the ministerial bureaucracy and about provincial bureaucrats and thus affects information distributions. Ministers, provincial secretaries, and governors are all appointed by the Politburo in conjunction with the Department of Organization of the Party Central Committee. Each appointment decision is based on a relatively systematic screening of the credentials and the past performance of the candidates under consideration. Thus the highly centralized appointment procedure serves to filter out undesirable candidates; it is equivalent to an *ex ante* monitoring.[20] Appointment decisions also affect preference divergence between the control level on one hand and the controlled-level bureaucrats on the other. More frequent appointment decisions bring about a higher rate of turnovers, which should help

converge preferences because shorter tenure reduces the time available for officials to build up an identity with their current positions and to form local political alliances.

Again, differences between ministerial bureaucrats and provincial bureaucrats should be observed along the logic suggested above. Because appointment is an implicit control device, it should be used more frequently in situations where deployment of explicit control is problematic. Thus, all else being equal, one should observe more appointment decisions in provincial bureaucracies than in ministerial bureaucracies. In addition, appointment decisions should become more frequent over time as the preference divergence between the control and the controlled level grows. These two hypotheses are examined in Table 2.

Table 2.

In Table 2, the frequency of appointment decisions is measured by a stability index. A stability index is given by the years a ministry or a province is in existence (or the ministry/province years) divided by the number of changes in ministers, secretaries, or governors during the same period.[21] To compare the stability index across ministerial and provincial agencies, a stability ratio is calculated by dividing the stability index of ministers by that of secretaries and governors respectively. Values larger than unity indicate ministerial tenure stability relative to that of the provincial officials. The Cultural Revolution period (1967-1976) is excluded in this calculation because of the large political shocks at that time, which contributed to rapid personnel turnovers independent of control considerations. Two periods are given for the post-Cultural Revolution period, from 1977 to 1981 and from 1982 to 1995. Between 1977 and 1982, there were large-scale changes in personnel in both ministries and provinces as the post-Mao leadership first purged Gang of Four followers and subsequently instituted younger leaders in 1982 and 1983. Thus, there was more bureaucratic stability in the post-1982 period.[22]

Table 2 confirms the expectation that there should be more frequent appointment changes in provincial agencies than in ministerial agencies: All the stability ratios are larger than unity, which means that the stability index for ministers is larger than that for secretaries and governors. However, the evidence is weak for the pre-Cultural Revolution period (1949-1967) when the stability ratios are quite small--1.05 for party secretaries and about 1.02 for governors. This weak result is in part due to the frequent configurations and reconfigurations of Chinese ministries in the 1950s and 1960s when often entire ministries were either abolished or merged with other ministries.[23] Thus the stability index of 6.56 years incorporates some of the large institutional changes as opposed to specific personnel changes, which introduces a bias because the number of

provinces has always stayed the same. When the institutional changes are controlled for by only counting those ministries that existed for at least ten years, the stability index becomes 7.66 years, which increases the stability ratios to 1.23 for secretaries and 1.19 for governors.

For the 1977-1995 period as a whole, the stability ratio for secretaries is small (1.01) but it is quite large for governors (1.18). The stability ratios for the post-1982 period are sizable for both secretaries and governors (1.10 and 1.16). The figures for the 1982-1995 period ought to be more appropriate because the personnel changes during this period were less motivated by purges of political enemies and were a result of normal bureaucratic considerations.

There is unambiguous evidence confirming that the stability index has declined over time across all categories. On average, changes of ministerial and provincial officials were more frequent during the post-Cultural Revolution. The differentials are large. For ministers, the stability index for the 1982-1995 period is only 68 percent of that for the 1949-1967 period. For secretaries and governors, they are 65 and 60 percent respectively. Our interpretation that this is a result of growing preference divergence between the control and controlled levels is consistent with the well-established fact that during the reform era there have been intense policy conflicts over economic interests as compared with during the Maoist period. In addition, ideological control and the Party discipline in the 1980s and 1990s have become weaker even at the top levels of the Chinese hierarchy, thus making personnel changes--as a control device--more necessary than before.

Rotation. Rotation is a practice whereby officials are regularly rotated among bureaucratically equivalent positions. For example, the governor of Jiangsu may be appointed as the governor of Zhejiang, or the minister of electronics industry may be reassigned to head the People's Bank of China.[24] The official explanation for the rotation practice (known as *ganbu jiaoliu zhidu*) sets forth an explicit *control* rationale: Rotation curbs factionalism by requiring the rotated officials to work with new officials.[25] The industrial organization reasoning here provides a specific mechanism whereby rotation curbs factionalism. Rotation can converge preferences and supply new information. If officials expect, *ex ante*, to be rotated to different positions, their incentives to abide by the policies of the control level are strengthened because they gain little by over-aggressively pursuing the interests associated with their current positions that they will leave shortly.[26]

Second, rotation conveys information to the control level that is otherwise unavailable. While each appointment decision supplies information about the political and technical credentials of the candidates under consideration, the information function of rotation is more indirect and is

performed by successors. Kaufman (1960, 155-56), in his study of the management of the American forest service, argues that no matter how successfully a ranger can hide his practices from his superiors, he cannot hide them from his successor.[27]

Rotation, as modeled here, is an implicit control device and as such its incidence should be distributed unevenly between provincial and ministerial bureaucrats. The measurement costs for provincial bureaucrats are higher on account of their status as MTBs and thus rotation as an implicit control device is applied to them more frequently to curb factionalism. In contrast, the greater observability of the output of ministerial bureaucrats attenuates a similar need.

The evidence bears out this reasoning.[28] Of the seventy new party secretaries appointed between 1985 and 1995, eleven of them--15.7 percent--had served as party secretaries or governors in other provinces immediately prior to assuming their current posts. For governors, the percentage was lower; of the seventy-seven new appointments, five had come from other provinces (6.5 percent). However, for ministerial officials, rotation is seldom applied. Of the sixty-five new appointments between 1984 and 1995, only one minister, the governor of the People's Bank of China (PBC) in 1985, had clearly come immediately before from another ministry.

The above results may also suggest that provincial bureaucrats may be more prone to factionalism and therefore rotation needs to be applied to them more frequently. This is not a substitute explanation because it fails to provide an underlying reason why provincial bureaucrats should be more prone to factionalism. Again, institutional economics reasoning is helpful here. Because the output of the ministerial bureaucrats is more observable, factionalism is also more observable. Greater observability of factional behavior increases the costs of engaging in such behavior for ministerial bureaucrats.

A more plausible alternative explanation points to the differences in the knowledge structures which create differences in the utilization of the rotation method. According to this explanation, managing different provinces requires similar sets of skills whereas managing different ministries requires different sets of skills. This arises because ministries are specialized agencies and the knowledge acquired from governing one ministry is not readily transferable to governing another ministry. This would naturally deter an aggressive application of the rotation method vis-a-vis ministerial bureaucrats.

There is evidence that expertise specialization is an important consideration in appointment decisions. Between 1984 and 1995, not counting the one instance of rotation, of the sixty-four instances of ministerial changes, forty-eight of them--75 percent--came from the same ministries or

from ministries in closely related sectors. However, what is striking is the fact that promotion across ministries is very common. Of the sixty-four ministerial changes, nearly half, twenty-nine--45 percent--of the replacement officials were promoted from other ministries; of these twenty-nine, thirteen came from ministries in related sectors.

These numbers cast doubt on the idea that ministerial rotations are deterred on account of expertise specialization. First, expertise specialization has not deterred a high rate of cross-ministerial promotions. Second, ministerial rotations can be compatible with expertise considerations if these rotations take place across ministries in related sectors, as in the thirteen cases of cross-ministerial promotions. The absence of such rotations is evidence of other forces at work.

Furthermore, rotated provinces do differ significantly in their profile and it is doubtful that the management skills required to govern these provinces are sufficiently similar. Table 3 lists the sixteen instances of rotations of secretaries and governors from 1985 to 1995; Table 4 gives some details about the geographic and economic characteristics of the five pairs of provinces rotated in 1990. These two tables show very different profiles across the rotated provinces. For example, in 1986, the secretaries of Gansu, Hebei, and Liaoning were rotated to, respectively, Fujian, Inner Mongolia, and Anhui. These three pairs differ vastly. Gansu is a poor, interior province, while Fujian is coastal and prosperous; Hebei is dominated by Han people, while Inner Mongolia is a minority region; and Liaoning has a vast heavy industrial complex, but Anhui focuses on agriculture. In 1990, officials were also rotated across provinces with very different geographic, economic, and demographic characteristics.

Table 3.

Table 4.

Promotion. At least in the 1980s, the number of provincial bureaucrats who filled key central control-level positions outweighed that of ministerial bureaucrats. Two out of three party secretaries in the 1980s had extensive work experience in the provinces. To present more systematic evidence, we divide those officials promoted to the positions of premier or vice-premiers of the State Council since 1980 into three types: those with strong, prior experience in the provinces, those with some prior provincial experience, and those with weak or no prior provincial experience. Strong provincial experience means that the official spent almost his entire career in the provinces and/or attained the highest provincial position before the promotion. Zhao Ziyang, the former premier, typifies this kind of official. Some provincial experience indicates that the

individual has had a long career in the provinces but that his bureaucratic rank in the provinces was not high. Weak provincial experience indicates an exclusively central career track.

There have been thirteen officials newly appointed as premier or vice premier since 1980, one of whom is excluded because of classification difficulties. Of the remaining twelve, six have had strong provincial experience, while two have had some provincial experience. Only four officials have had an exclusively central career track and of these four, two had served as foreign minister. The Foreign Ministry traditionally enjoys a high political presence in the Chinese political system and draws its ministers exclusively from its own rank.

Table 5 about here.

This result ought to be puzzling. At first blush, ministerial bureaucrats should have a better chance because they live and work close to those who make appointment decisions and should be able to cultivate better *guanxi* with them (connections). If the widely shared idea that the Chinese political system is driven by informal forces, then a different promotion pattern ought to emerge.[29] The informational framework, however, is entirely consistent with this finding. First, governing a country is more akin to governing a province than to governing a ministry because both involve multi-dimensional tasks. Thus the performance of a bureaucrat in a provincial post reveals more information about his suitability as a national leader than the similar performance of a ministerial bureaucrat. Second, to induce a similar level of effort, promotion is a more important incentive device for provincial bureaucrats than for ministerial bureaucrats because the output of the latter is more easily measured.

Some Tentative Implications

Governing a country is, first and foremost, a managerial task. In China, there are around forty ministries, thirty provincial governments, 2,400 county governments, and some 30,000 township governments; the entire political system employs over ten million people. The top "managers" of the country--some thirty national leaders--not only make policies but also manage a large number of bureaucratic personnel. As of the early 1990s, the central Party agencies directly appointed 4,100 officials and supervised the appointment of some tens of thousands of officials (Burns, 1994, 459).

Control problems occur frequently in such a large organization. How to motivate people to perform and how to promote the "right" people from a vast pool of officials requires well-hued practices and fairly efficient mechanisms. But studies of the Chinese bureaucracy are dominated by such issues as power struggles, policy changes, and conflicts. A comment on studies of the American bureaucracy by [Hammond, 1986 #1090: 379-380] applies equally well here:

> Bureaucratic policymaking is portrayed as a "horizontal" process of bargaining, coalition formation, and compromise among actors who are roughly equal in power.... In general, "vertical" relationships--involving the downward transmission of orders and the upward transmission of information and advice--are seen as less important than the horizontal ones.

This article attempts to fill this gap. It posits that preference divergence and information distribution pose fundamental governing problems in China. A number of appointment and promotion patterns are explained as performing the functions of aligning incentives with and generating information about lower-level officials in this large organization. The chief advantage of this approach is its explanatory power: It is able to explain a wide range of seemingly unrelated phenomena while the competing and historically-oriented explanations can at most only explain one phenomenon at a time.

There is also a substantive implication. In journalistic writings, the Chinese political system is often portrayed as corrupt, nepotistic, and ineffectual.[30] If it is true that the Chinese system consistently selects incompetent and ineffective leaders to be its leaders, then it is a major puzzle how China has been able to achieve impressive economic growth and maintain a relatively high degree of social and political stability under enormous constraints such as its large population and poor resource endowment. Other regimes have crumbled under lesser pressures. Our framework here helps reconcile this puzzle by showing a mechanism in the Chinese system that enables the people with the "right" characteristics for governing the country to emerge at the top.

Selecting the right people for management positions is an extremely important requirement for successful governance. Toward this end, the communist government in China set up elaborate recruitment, promotion, and evaluation procedures and institutions--collectively known as the "nomenclature" system. However, in a nondemocratic system, the selection of top leaders poses special problems. The leaders at the top have a lot of power and their beneficial or harmful effects are multiplied by the centralization of their power.[31] The nomenclature system performs hierarchical monitoring and supervision, thus leaving those officials in the very top positions unmonitored and unsupervised. The histories of the Soviet and the Chinese Communist parties show the disastrous consequences of having the wrong people at the top. A nondemocratic solution to this problem is to place people with exceptional qualities in the top positions, thus reducing demands for institutional constraints and supervision.[32] The ability to promote people with exceptional qualities among a large pool of subordinates is probably the key factor separating successful nondemocratic systems from unsuccessful ones.

Two mechanisms induce desirable performance from subordinates. One consists of voluntary "norms," i.e., *ex ante* characteristics such as loyalty, motivation, or capabilities.[33] Alternatively, aggressive monitoring of a subordinate's *ex post* performance--or *ex post* monitoring--can also produce desirable results. A centralized system needs to promote to the top

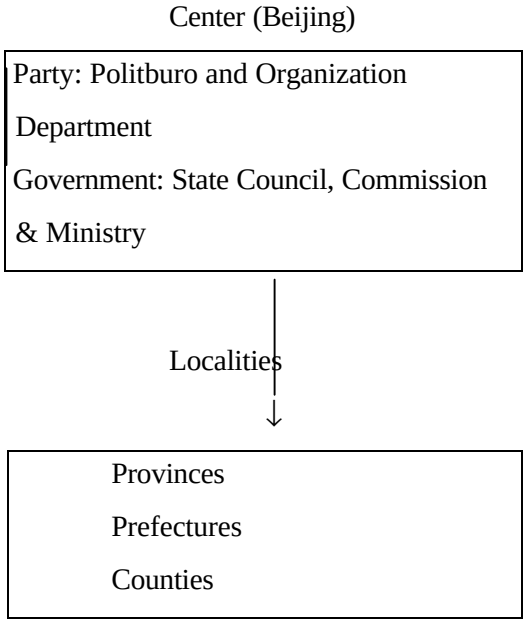
positions people who have performed well due to their *ex ante* characteristics because *ex post* monitoring, by the definition of a centralized system, is absent at the top of the hierarchy.

The promotion of provincial rather than ministerial bureaucrats is one way the Chinese system selects the "right" types of people. First, provincial bureaucrats are potentially more suited, in terms of their capabilities, to become national leaders because their job portfolio resembles that of national leaders. This similarity in job portfolio means that provincial bureaucrats are more "tested" than ministerial bureaucrats. For example, one of the reasons why Jiang Zemin was favored to succeed Zhao Ziyang in 1989 was that he had handled student protests in Shanghai effectively. This aspect of his job profile would have been absent for, say, a Minister of Finance, even if the minister in question would have handled the situation equally well in a similar situation.

The second reason is that the “attribution problem” is less severe in promoting provincial bureaucrats. Provincial bureaucrats operate with greater autonomy and independence as compared with ministers. Thus their good performance can be unambiguously attributed to their *ex ante* characteristics. Evaluation of ministerial performance involves an attribution problem. Because ministerial bureaucrats work in close proximity with control-level agencies, their good performance can be attributed to either *ex ante* characteristics or to *ex post* monitoring. The ambiguity is inherent.[34]

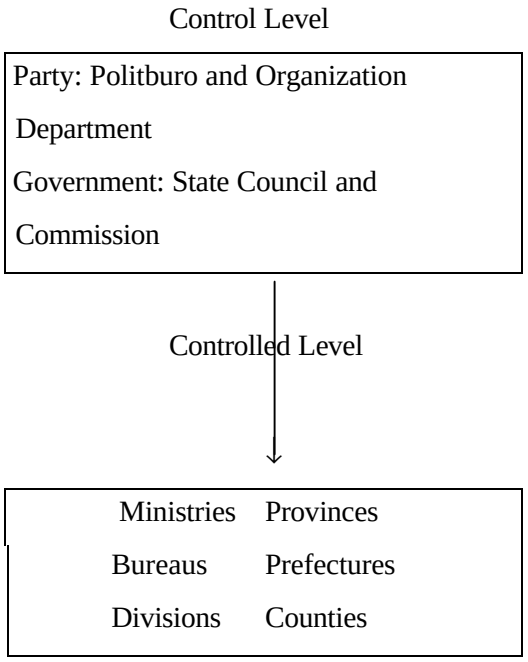
So far, the Chinese political system has averted the catastrophic control problems that have beset governments in many other developing countries. The argument of this article is that this has not been the result of random luck. This success, in part, can be traced to the strength of the political system. In the absence of strong leaders such as Mao Zedong and Deng Xiaoping, at least in the short run, the much maligned system seems to be able to accomplish the most difficult task in a hierarchical system--selecting those with the "right" characteristics to the very top of the government.

Figure 1 Official organizational chart: Geographic divisions



Note: The arrow represents the direction of the hierarchy.

Figure 2 Alternative organizational chart: Divisions by control functions



Note: The arrow represents the direction of the hierarchy.

Table 1 Cross-postings: Number of Politburo Members Concurrently Serving Ministerial and Provincial Posts

	13th Central Committee (1987-92)	14th Central Committee (1992-present)
Number of Ministers	2.0	1.0
Share of all ministers	5.7%	3.4%
Share of all Politburo members	11.8%	5.0%
Number of Secretaries	4.0	5.0
Share of all secretaries	13.8%	16.7%
Share of all Politburo members	23.0%	23.1%

Source: See the appendix.

Table 2 Stability Index in ministerial and provincial agencies (Years)

	1949-1967	1977-1995	1982-1995	Period Ratios 1982-95/1949-67
Stability Index (Years)				
Ministerial Agencies:				
Ministers	6.56	3.88	4.44	0.68
Provincial Agencies:				
Secretaries	6.23	3.86	4.05	0.65
Governors	6.43	3.28	3.84	0.60
Stability Ratios				
Minister/Secretary	1.05	1.01	1.10	
Minister/Governor	1.02	1.18	1.16	

Note: The stability index in years is given by the ministry/province years divided by the number of changes in the ministries and in the provinces during that period of time. The stability ratio is given by the stability index for ministers divided by the stability index for secretaries or governors.
Source: See the appendix.

Table 3 Rotated Provinces in the 1980s and 1990s

	Secretary	Governor
1985	Sichuan → Henan	
1986	Gansu → Fujian	
	Hebei → Inner Mongolia	
	Liaoning → Anhui	
1987		Henan → Jilin
1989	Guizhou → Tibet	
1990	Ningxia → Jiangsu	Henan → Hebei
	Shaanxi → Henan	Hebei → Liaoning
		Liaoning → Henan
1993		Gansu → Hubei
1994	Gansu → Liaoning	
	Liaoning → Heilongjiang	
	Shanxi → Hunan	
1995	Jilin → Yunnan	
Cases of rotation	11	5

Source: See the appendix.

Table 4 Economic characteristics of the five paired rotated provinces in 1990

	Geographic Location	Agricultural Share of NMP (%)	Per Capita NMP (yuan)	Population (million)
Ningxia	West	34.6	1007.2	4.7
Jiangsu	Coastal	30.4	1682.1	67.67
Shaanxi	Interior	34.8	913.6	33.16
Henan	Interior	42.4	871.5	86.49
Henan	Interior	42.4	871.5	86.49
Hebei	Interior	32.1	1126.4	61.59
Hebei	Interior	32.1	1126.4	61.59
Liaoning	Coastal	21.3	1975.8	39.67
Liaoning	Coastal	21.3	1975.8	39.67
Henan	Interior	42.4	871.5	86.49

Note: NMP is net material product. It is a measure of GNP minus the service sector.

Source: Economic data are from State Statistical Bureau (1994).

Table 5 Officials appointed to the position of vice premier or above in the State Council since 1980 as grouped by their provincial work experience

Strong provincial experience: Six Officials	Some provincial experience: Two Officials	Weak provincial experience: Four Officials
Zhao Ziyang (1980)	Li Peng (1983)	Yao Yilin (1982)
Wan Li (1980)	Li Lanqing (1993)	Zou Jiahua (1991)
Tian Jiyun (1983)		Qian Qichen (1993)
Zhu Rongji (1991)		Wu Xueqian (1988)
Wu Bangguo (1995)		
Jiang Chunyun (1995)		

Sources: See the appendix.

Appendix: Sources of data on the Chinese bureaucracy and coding.

The analysis in this paper requires three kinds of data. One is information on the establishment dates of ministries and provincial governments and the appointment dates of officials. The sources here are Ma and Chen (1989) and various issues of the annual publication, China Directory. The second type of information concerns the biographical backgrounds of Chinese officials. This information is used to construct Table 5 on the career of the officials appointed to the State Council in the 1980s. The sources here are (Bartke 1981), (Bartke 1987), and (Bartke 1990), Who's Who in China: Current Leaders (1989 and 1994), and (Liu Jintian and Shen Xuemin 1992). Third, information on cross-posting and rotation comes from Ma and Chen (1989) and various issues of China Directory.

For the pre-Cultural Revolution period, the starting year is 1949 and the ending year is 1967; for the post-Cultural Revolution period, the starting year is 1977 and the ending year is 1995. Not all ministries were in continuous existence during these two periods because a number of ministries were established later than others or were abolished/merged with other ministries. The maximum number of years is nineteen. Some provinces were established later than others, although none have been abolished.

The stability index for Chinese officials is given by the number of years a ministry or a province has been in existence divided by the number of changes of ministers or secretaries/governors during that period. For example, the stability index for the Ministry of Foreign Affairs for the pre-Cultural Revolution period is 9.50, which is given by the nineteen years of its existence divided by two changes of foreign minister during the period.

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Notes

[1] For more details about this accident, see Lieberthal and Oksenberg (1988: 253).

[2] See Manion (1985), Lee (1991), (Burns 1987) and (Burns 1994), (Zhou 1995), and (Walder 1995). An important exception is Manion (1993), which explores a similar issue as this article but her approach is quite different.

[3] These data are assembled by surveying the biographies of Chinese officials. Details are explained in the appendix to this article.

[4] An alternative view of the firm is that it consists of a "nexus of contracts" and of multiple markets within it. See Alchian and Demsetz (1972).

[5] See (Hart 1989).

[6] It was reported in one economic study that 94.5 percent of 4,788 employees in a company were rated "Good" or "Outstanding." See Baker, Jensen, and Murphy (1988).

[7] The use of stock options for executive compensation rose sharply in a number of industries between 1986 and 1995. For details, see (Dobrzynski 1996). The main reason offered here is that the use of stock options conveys information to Wall Street about the stake the management has in the company and thus helps initial public offerings.

[8] See Miller (1992: 67-69).

[9] For a model of this wage setting, see Calvo (1987).

[10] For this line of argument, see Carmichael (1988).

[11] For more discussion, see Lazear (1995).

[12] For an excellent discussion on the potential problems plaguing political control of bureaucrats in a democracy and on two competing views on the issue, see Moe (1984) and Weingast and Moran (1983).

[13] This informational framework has been used to explain inflation controls in China. See Huang (1996).

[14] The best description of the structure of government and bureaucracy in China is Lieberthal and Oksenberg (1988).

[15] Both the heads of provinces and ministries are appointed by the Politburo. For more empirical details on this aspect of the Chinese government, see Manion (1985). One indication of the bureaucratic equivalence between ministries and provinces is the fact that ministers and governors sometimes exchange positions. Jiang Zemin, for example, formerly was the Minister of Electronics before he became the mayor of Shanghai.

[16] For an analysis of these issues, see Holmstrom and Milgrom (1991).

[17] In political science, this is an explicit application of Allison's axiom, "Where you stand depends on where you sit"; in corporate finance, this practice is akin to giving top managers seats on the board of directors so that they take the interests of shareholders seriously.

[18] Huang (1996) presents evidence that cross-posted officials in general curb local investment interests more thoroughly than the non-cross-posted officials.

[19] A province has two equally ranked top officials, a secretary of the Party and the governor of the government.

[20] It is plausible that the monitoring function built into the appointment process has contributed to the under-development of a third-party monitoring system in China. This is similar to the argument that internalized bureaucratic norms in part obviate the need for elaborate monitoring and external control. For good summaries and application of this argument, see Manion (1993).

[21] For details on the coding of this index, see the appendix.

[22] For a review of personnel changes during this period, see Lee (1991).

[23] The number of provinces has remained stable. There were twenty-nine provinces and directly-administered municipalities in China between 1949 and 1988. In 1988 Hainan became the thirtieth province.

[24] Here the positions of provincial party secretary and governor are treated as "bureaucratically equivalent" positions.

[25] In 1982, Chen Yun commented: "The rotation system is good. It is not good to have an official work in a locality for a long period of time because it gives rise to factionalism" (Chen Yun, 1986 <1982>, 396). More recently, Lu Feng (1991), the director of the Department of Organization, commented that cadre rotation should be made a standard administrative practice in order to break up the "networks of connections."

[26] Rotation is also used in business. The Sumitomo Corporation instituted a rotation rule in 1996 after one of its traders incurred a 1.8 billion dollar loss over a period of ten years. Under this rule each manager is to be rotated every four years to reduce his/her power in a particular section of the market. The huge trading loss was blamed on the fact that the guilty trader had been in the copper section for twenty years. ("Sumitomo to Rotate Traders to Reduce Their Influence," New York Times, June 25, 1996, C7).

[27] Here it is important to distinguish between rotation and promotion. The key word in the rotation practice are the "bureaucratically equivalent" positions. Promotion, however, means a move from a bureaucratically inferior position to a superior position; for example, a vice governor of Jiangsu may be promoted to be the governor of Zhejiang but he is otherwise rotated if he becomes a vice-governor of Zhejiang. Promotion often takes place across provinces or ministries as this is a common way for the officials in question to gain a wide range of experience.

[28] Information on the background of the Chinese officials is limited and thus the analysis here is confined to the 1985-1995 period.

[29] Representative works that argue that the Chinese political system is informal include Pye (1992) and Dittmer and Wu (1995).

[30] See (Kristof 1993) and (Shambaugh 1994).

[31] This is similar to the problem of selecting top managers in a centralized economy, as modeled by (Sah and Stiglitz 1991). The quality of managers in a centralized economy is more variable as compared to managers in a decentralized economy. Such variability is a cost.

[32] This is similar to selecting British civil servants designated for distant colonial rule based on meritocratic qualifications because once chosen they exercised enormous power independent of the Crown (Sah 1991).

[33] For a good discussion of bureaucratic compliance as a result of internalized norms, see Manion (1993).

[34] An analogy can be drawn to a potential criminal and a moral citizen both living close to a police station. Behaviorally, the two are indistinguishable although there are intrinsic differences between them.