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Source: *Organization Science*, Vol. 15, No. 2 (Mar. - Apr., 2004), pp. 186-199

Published by: **INFORMS**

Stable URL: <http://www.jstor.org/stable/30034723>

Accessed: 21/09/2010 20:29

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Chinese Organizations in Transition: Changing Promotion Patterns in the Reform Era

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Since the 1980s, the People's Republic of China has embarked on a path of economic transformation that has led to profound changes in organizations. Based on work histories of a sample of urban residents drawn from 14 Chinese cities in six provinces, we assess the extent and direction of organizational transformation by analyzing changes in promotion patterns between the prereform era (1949–1979) and the reform era (1980–1994). We begin with Walder's dual-path model and examine distinctive mechanisms for promotion along two institutionalized—administrative and professional—career lines. We enrich Walder's model by considering the impact of macropolitical processes on career dynamics and the effect of emerging market mechanisms on different organizational sectors. Our findings show that there have been both continuity and significant changes in the criteria and opportunities of promotion in Chinese organizations across the two periods. In the reform era, more educated managers who were recently recruited into the organizations had the highest probability of being promoted. There were also significant variations in promotion patterns across career lines and organizational sectors, reflecting the impacts of both institutional persistence and emerging market forces.

Key words: promotion; career; Chinese management; Chinese organization; economic reform

Promotions in organizations are major events of career opportunities and an active area of organization research. Most studies in this area are confined to industrialized-market societies. Researchers found that promotions are often path dependent and regulated by organizational processes. For example, Rosenbaum (1979) showed that the tournament form of organizational promotion structures makes “early success” an important factor in one's career development. White's (1970) vacancy-chain model shifts our attention from supplyside characteristics to broader organizational contexts (see also Stewman 1986). Organization scholars have emphasized the importance of organizational attributes, internal labor markets (e.g., job ladders and job barriers), and intraorganizational processes in employees' mobility chances (Baron 1984, Baron and Bielby 1980, Bamberger et al. 1995, Wholey 1985, Lawrence 1988, Stumpf and London 1981, Spilerman and Petersen 1999).

In this study, we examine promotion patterns in organizations in the People's Republic of China. The distinctive institutional context raises important research issues for comparative management research. Until recently, all Chinese organizations in different sectors were either under the direct supervision of the state bureaucracy, or indirectly affected by state policies. Macropolitical processes exerted salient, often decisive, influences on Chinese organizations. Therefore, research on Chinese

organizations provides an important case for comparative studies of organizational processes.

Another important characteristic of our research context is the large-scale institutional changes in China's organizational field since the 1980s. Along with the transformation of state socialist economy, firms that used to be controlled by the command economy now engage in market transactions and a variety of new organizational forms and interfirm relationships have emerged (Boisot and Child 1996; Guthrie 1997; Keister 2001; Nee 1989, 1992, 1996; Walder 1995a, b; Walder et al. 2000; Zhou 1995, 2001; Zhou et al. 2003). These significant changes are also reflected in promotion patterns. According to an official report (Office of Organization Reform 1993), between 1985 and 1990 college-educated managers increased from 22% to 32% in Chinese organizations; managers aged below 35 increased from 39% to 43%. In the same period, the number of professionals grew 16% annually, and administrative personnel grew 9% annually. Consequently, significant changes have taken place in the composition of managers in Chinese organizations in the reform era. These changes result from several major processes of institutional change. First, state-policy shifts have had direct impacts on promotion patterns. In 1981, the post-Mao leadership adopted a series of new policies that changed the recruitment and promotion criteria in organizations.

In 1982, the government established the retirement system, which forced older managers to retire from their positions and greatly increased the vacancy-chain effect for promotion. Another source of institutional changes is the emergence of market economies that have introduced competing mechanisms in human-resource allocation and generated a variety of organizational forms, such as private firms and hybrid firms (Boisot and Child 1996, Nee 1992).

Our goal in this study is to understand and assess changes in promotion patterns in Chinese organizations in the context of large-scale institutional transformation. By *promotion patterns*, we refer to the rates of promotions along hierarchically ordered managerial positions within work organizations. A focus on promotion patterns in organizations is especially useful to understand the extent of institutional changes in Chinese organizations because, historically, personnel management was tightly controlled by the central government to ensure the effective implementation of state policies. If these organizations have undergone major transformations in recent years, they should be reflected in changes in promotion patterns. Specifically, we compare changes in the determinants of promotion rates along two distinctive—administrative and professional—career lines, between the prereform era (1949–1979) and the reform era (1980–1994), and variations in promotion rates across different organizational sectors. Our empirical study is based on the work histories of a stratified sample of urban residents drawn from 14 Chinese cities in six provinces.

Explaining Promotion Patterns in Chinese Organizations: Theory and Hypotheses

In the management literature, studies of promotion have emphasized internal processes, focusing on factors at the organizational level (organizational attributes) as well as at the individual level (individual characteristics) (e.g., see Lawrence 1990, Stumpf and London 1981, Bamberger et al. 1995, Wholey 1985). There is also a distinctive body of literature that calls attention to the importance of external environments on internal promotion patterns. Organization researchers have long recognized that dramatic environmental changes often trigger corresponding changes in the internal structures and in career opportunities in organizations. For instance, DiPrete and Soule (1986) examined the consequences of changing federal policies on the promotion patterns for female and minority employees in the civil service sector in the early 1970s.

Considerations of our research context lead us to highlight the impact of the institutional environment on promotion patterns in Chinese organizations. In China the central and local governments not only are the critical political environments for all kinds of organizations, but

also have direct or indirect administrative authority over them (Walder 1995b). Although Chinese organizations have undergone major changes in the reform era, state's interventions into their internal affairs (especially those in the state sector) are still extensive and often decisive. For example, the appointment of top managers in public organizations and large state firms is still under the control of governmental agencies. Accordingly, a major characteristic of promotion patterns in Chinese organizations is that they are to a large extent "externalized." Because of the state's tight control of personnel management, the impacts of policy shifts on promotion opportunities across organizations are often immediate and substantive. Not surprisingly, studies of career patterns in Chinese organizations have emphasized the importance of macroinstitutional environments. For example, Walder (1995a, Walder et al. 2000) emphasized the political logic underlying the construction of distinctive career lines in Chinese organizations. Similarly, Zhou (1995, 2001) showed the impacts of shifting state policies on varying opportunities and allocative mechanisms for managers and professionals over time.

How are career lines structured in Chinese organizations? To what extent have promotion patterns changed in the reform era? If significant changes have indeed occurred, what are the mechanisms and processes that generated these changes? Below we develop theoretical arguments to explain promotion patterns in Chinese organizations. We begin with Walder's dual-path model, which depicts the basic characteristics of two institutionalized career lines in Chinese organizations and their distinctive mechanisms in promotions under the political logic of state socialism. We then extend and enrich Walder's model by introducing two additional, distinctive processes underlying promotion patterns: (1) the role of macropolitical processes and their implications for career dynamics, and (2) emerging market mechanisms in the reform era. On this basis, we derive a set of hypotheses to guide our empirical study.

Mechanisms of Career Lines Under State Socialism: Walder's Dual-Path Model

Researchers have shown that advancement in organizations is highly structured by career lines. Research shows a variety of arrangements among jobs and positions, their hierarchical relations to one another, and boundaries and barriers between career lines. As a result, the structure of career lines is critical in promotion patterns (DiPrete and Soule 1986, 1988; Spilerman and Petersen 1999) and in employment stability (Scholl 1983). A central characteristic of work organizations in state socialist China is that they were an integral part of the command economy. Workplaces served as vehicles to accomplish top-leaders' policy priorities in economic development, and provided the organizational basis on which the state

exercised political control (Walder 1986). Not surprisingly, then, promotions in organizations were characterized by political processes in the selection of managerial talents to implement state policies and in providing incentives to induce political loyalty.

However, there is an apparent paradox in career opportunities in state socialist societies. On the one hand, the state had to rely on the bureaucratic apparatus at various levels to exercise its political control and implement its policies. Under the political logic of state socialism, political loyalty is rewarded to ensure effectiveness in carrying out state policies, and entries into and promotions within the organizations are tightly controlled by political processes, often at the expense of competence and efficiency. On the other hand, the “new class” theory that originated in the East European context (Konrad and Szelényi 1979) argued that the state socialist governments actively recruited intellectuals into the governance structures; as a result, educational credentials played a prominent role in upward mobility. Casual observations of the Chinese practice show a similar picture. Despite deep suspicions toward intellectuals and frequent political campaigns targeting them, the Chinese state has also actively recruited party members from colleges, and professionals with educational credentials (Zhou 2001). In this light, what are the mechanisms and characteristics of career lines in Chinese organizations?

Walder and his colleagues (Walder 1995a, Walder et al. 2000, Li and Walder 2001) developed a dual-path model to reconcile these paradoxical aspects in managerial practice in Chinese organizations. Walder argued that political selection processes under state socialism involved both political loyalties and educational qualifications. In this model, one path “emphasized expertise and education (but not politics) and led to professional occupations (with little decision-making authority),” and the other “emphasized political loyalty (but not higher education) and led to influential leadership positions” (Walder et al. 2000, p. 194). The dual-path model highlights distinctive mechanisms underlying the two institutionalized career lines in Chinese organizations and the corresponding promotion patterns.

Indeed, in the institutional practice of China’s “cadre” system, there have been two distinctive career lines, one is “political/administrative,” and the other is “professional/technical,” with separate job ladders. In the national bureaucratic system, there is a series of ascending administrative titles associated with the former track (from “section,” “department,” “bureau,” to “ministry” levels); for professionals, there is a separate promotion ladder from technician, assistant engineer, and engineer, to senior engineer. Within organizations, there are parallel, segmented career lines associated with distinctive opportunities. Organizational positions are often

differentiated between political/administrative and professional/technical responsibilities. Administrative positions are in charge of the production process and personnel management, while professional positions are in charge of the technical task of production design and engineering implementation. The former is closely related to political authorities, whereas the latter is more related to the technical aspects of the production process. In the prereform era, the head of a factory was typically in the political track and held the overall authority; a vice president was typically from the professional track and in charge of technical responsibilities in production.

Following Walder’s arguments, we expect to find that political screening is especially enforced in the recruitment into, and promotion along, the administrative career line (e.g., administrators), whereas educational credentials play a larger role in the professional career line. Based on this logic, we can develop parallel arguments for mechanisms of promotions in organizations. That is, we expect to find similar differences in promotion patterns between these two career lines with respect to promotion criteria and institutional processes. Following the conventions in the literature, we use “communist party membership” as an indicator of political screening. Although party membership has been an important criterion for administrative promotion, it was not a mandatory requirement. Hence, changes in the effect of party membership provide information on the importance of political screening. We extend Walder’s dual-path model to the context of promotions in organizations:

HYPOTHESIS 1. *Political criteria (e.g., party membership) play a more important role in promotion along the administrative career line, whereas educational credentials are more important along the professional line in both prereform and reform eras.*

As Walder et al. (2000, p. 199) pointed out, the dual-path model is based on the premise that the two career lines are “mutually separate with little mobility between them and that there is no significant change over time.” Only distinctive and institutionalized career lines can provide stable processes and incentives that sort people into different tracks, form different expectations, and induce their appropriate behaviors. In their study of historical changes in managerial-status attainments, Walder and his colleagues found evidence of separate career lines that persisted over time. As they concluded: “Mao-era patterns survive today, despite the rising impact of higher education in both career paths and the declining impacts of party membership in the cadre path” (Walder et al. 2000, p. 202). Therefore, an empirical implication of the dual-path model is that:

HYPOTHESIS 2. *There is low permeability between the two career lines before and during the reform era. That is, mobility and promotion across career lines are low relative to those within own career lines.*

Political Processes and Changes in Promotion Patterns

Walder's model focuses on stable, institutionalized career lines in Chinese organizations. In China's transitional economy, the state has been, and is still, playing a leading role in the transformation of state socialist economy; at the same time, it has also made efforts to maintain its control over organizations, especially over those in the state sector. Therefore, we have good reasons to expect that the political logic is still in operation and that the dual-path model still provides a good explanation of the promotion patterns in Chinese organizations in the reform era.

Moreover, the same political logic points to the importance of macropolitical processes that generate varying opportunities and career dynamics for the managers in the reform era. Zhou and his colleagues (1995, 2001; Zhou et al. 1996; see also Bian et al. 2001) called attention to the importance of macropolitical processes and shifting state policies that have generated significant changes in opportunities and allocative mechanisms in organizations over time. State-policy shifts implied changes in policy priorities in economic development, leading to dramatic shifts in the distribution of opportunities across economic sectors, localities, and organizations. This is especially true in the reform era. The new policies adopted in the early 1980s have greatly altered the promotion patterns in organizations through changes in selection and promotion criteria such as age restriction and an emphasis on educational qualification. Other new institutional practices, such as mandatory retirement policies, accelerated the vacancy-chain effects for promotion rates in organizations.

A key idea in this line of arguments is that despite the continuing dominance of the political authorities and stable, institutionalized career lines in Chinese organizations in the last two decades, there have been significant changes in selection criteria over time, thus generating considerable variations in career opportunities for managerial promotions. Take the notion of political loyalty as an example. Although political loyalty has been a major criterion for promotion in Chinese organizations, its meaning has evolved over time, along with shifts in state policies. In the prereform era, political loyalty was indicated by "following the party line"—especially following those radical policies advocated by Maoist leaders. In the reform era, on the other hand, the post-Mao leadership advocated new policies that promote those managers who identify with the new, reform policies. Four explicit criteria—youthfulness, education, expertise, and political loyalty—are now used to recruit and promote new generations of managers. These criteria signal the new leadership's effort to rationalize Chinese organizations by emphasizing competence and expertise. The youthfulness criterion especially targets a younger generation of managers to replace earlier generations.

Political loyalty is still emphasized, but now it means the adherence to the cause of reform promoted by the post-Mao leadership.

Empirically, then, we expect to find noticeable impacts of macropolitical processes on promotion patterns for different *cohorts*. Here, cohorts are defined by the designated time periods in which an individual entered the administrative/professional track in his/her career. The effects of cohort groups on identity construction and on the formation of common experience are obvious: Members of the cohort group share similar life events and opportunity structures, and are likely to develop similar identities. Moreover, in the Chinese context, cohort group is an important political marker. Different cohorts of managers were recruited into organizations under different selection criteria and they tended to have divided loyalties toward state policies adopted in different periods. For example, those who were recruited during the Cultural Revolution period (1966–1979) were based on their identification with the radical policies of the Maoist leaders, which were directly opposite to the new policies in the reform era. Therefore, they were seen as a threat to the reform policies and were discriminated against beginning in the early 1980s. In contrast, the recent cohorts of managers and professionals recruited under the new policies were strongly favored for promotion. Interestingly, these policies also favored the earlier cohort (those who entered the cadre/professional lines before the Cultural Revolution) because of their political allegiance with Deng Xiaoping's leadership. Therefore, we expect to find significant variations in the effects of managerial/professional cohorts, especially when political screening processes are effective. These considerations lead us to the following hypothesis:

HYPOTHESIS 3. There are significant cohort differences in the probability of promotion in Chinese organizations. In particular, in the reform era the cohort recruited during the Cultural Revolution (1966–1979) has the lowest promotion rate, whereas the most recent cohort—since the 1980s—has the highest rate.

A focus on the role of macropolitical processes also allows us to make more refined predictions on promotion patterns across the two career lines in Walder's model. Macropolitical processes have different implications for changes in promotion patterns along these two career lines. The administrative career line is "political" in nature, with the primary responsibility that of implementing state policies and administrative directives; in contrast, the professional career line is confined to the management of technical/production processes in an organization. Because the selection of administrators emphasizes political loyalty, which is perceived and defined differently over time, the administrative career line is likely to be more sensitive to changes in the state policies and macropolitical processes. This is especially

the case in the reform era, when major changes took place in leadership succession and in prevailing policies. In contrast, as Walder's dual-path model suggests, the emphasis on expertise and competence for the professional line was maintained in the prereform era, and similar criteria have continued in the reform era. In addition, the increasing market demands for managerial talents are likely to lead to a higher replacement rate for the administrative line than in the professional line, because the former based on previous political selection is ill-fitted in the face of market competition.

These considerations point to the empirical implication that shifting state policies in the reform era and increasing market demands for efficiency are likely to generate significant replacement of administrators in the reform era, but their effects on the professional line are less salient because the latter has historically been governed by technical competence. We test this proposition in two ways. First, we expect that the administrative line will have a higher promotion rate, indicating a higher replacement rate, than the professional line. Second, the same logic can be extended to predict variations in cohorts across these two career lines. That is, the cohort effects should be more salient for the administrative line in the reform era due to changes in macropolitical processes. We summarize these considerations in the following hypothesis:

HYPOTHESIS 4. *The administrative career line is more likely to be influenced by macropolitical processes over time than the professional line is. Specifically, we expect to find that (1) there is a higher promotion rate in the administrative career line than in the professional line in the reform era; (2) the cohort effects are more pronounced (e.g., having larger, positive coefficients) in the administrative career line than in the professional line.*

Emerging Market Economies and Sectoral Variations in the Reform Era

Major institutional changes have taken place in China's transitional economy since the 1980s. We now turn to consider another important source of institutional changes in the reform era—the emergence of market mechanisms in human-resource allocation. Market mechanisms affect promotion patterns in organizations in many and often subtle ways. We primarily consider two aspects: first, changing mechanisms in allocating human resources; second, variations in organizational forms and organizational sectors.

An important consequence of the emergence of market economies in China is the introduction of market mechanisms in allocating human resources. As Nee (1989) argued, the rise of market mechanisms erodes the political logic of redistribution; as a result, returns to political capital decline and returns to human capital increase in the reform era, compared with the prereform era. In

terms of promotion patterns, then, we should observe significant changes in promotion criteria over time. In this light, changes in the two career lines discussed before may also have been influenced by market competition for human resources. For example, in the face of competition for managerial talents from the private sector, the state sector may have to retain managerial talents by promotion incentives and by adopting criteria that are more based on competence than merely on political loyalty. Therefore, we expect that the emphasis on competence has increased for both administrative and professional career lines in the reform era. On this basis, we hypothesize that:

HYPOTHESIS 5. *Educational credentials become more important in promotion in the reform era than in the prereform era, and the role of party membership declines in the reform era. This pattern is especially salient for the professional career line.*

Institutional changes in China's transitional economy are especially reflected by the emergence of a variety of organizational forms. In this study, we conceptualize three organizational sectors: the public sector (government agencies and public organization), state firms (both central government-owned and local government-owned firms), and nonstate firms (collective and hybrid firms). The public sector was under direct administrative control of the state and subject to the strongest policy regulation. The state firm sector, although also under state administrative control, was mainly involved in economic activities. Finally, the nonstate sector was most distant from state intervention and was not under direct administrative control by the state. In the prereform era, the public sector and the state firms enjoyed more advantages and had higher status in the redistributive economy than did the nonstate sector. In the last two decades, as economic transactions in China gradually shifted from central planning to market competition, state-owned firms have gained autonomy in their everyday operations. Even government agencies have been transformed, to various extents, from the managing agencies of state firms to the role of regulators. Nonstate firms have become an active and dynamic force in the marketplace. As organizations are increasingly involved in market transactions, competition for efficiency induces important changes in internal organizational structures and personnel management.

On the other hand, organizations in different sectors hold different relationships to the state and vary in the extent of their involvement in market activities. In the reform era, different organization sectors experienced different degrees of transformations, partly due to variations in their exposure to market competition and the retreat of state control (Nee 1992). Moreover, those organizations distant from direct state control were more likely to break away from the traditional model of state socialist bureaucracy and experience more dramatic

changes in promotion patterns. Accordingly, one speculation is that promotion patterns across organization sectors vary with their exposures to market processes. That is,

HYPOTHESIS 6. *Changes in promotion patterns across periods are more significant among organizations in the nonstate sector and the state firm sector because they are closer to market transactions. Specifically, the promotion rate is higher and the role of education is more pronounced in the nonstate sector and the state firm sector than in the public sector.*

Method

Data

Our empirical study is based on a representative sample of urban residents drawn from a multistage scheme in 20 Chinese cities in 1993 and 1994. The data were collected from six provinces (Hebei, Heilongjiang, Gansu, Guangdong, Jiangsu, and Sichuan), each representing a conventional geographical region in China. Within each province, the capital city of the province was selected to represent large cities (population above one million) in that province. In addition, a medium-sized city (population between 200,000 and one million) and a small city (population below 200,000) were randomly selected based on the *Statistics Yearbook of the Chinese Cities, 1990* (State Statistics Bureau 1990). In addition, the data also included samples drawn from Beijing, the political center, and Shanghai, the largest industrial city in China. The sample size in each city was proportional to the population in that size of city in the province. Within each targeted city, residential blocks and households were selected based on a systematic sampling procedure. In each household, a respondent aged 25–65 was chosen based on a random-number table. The data were collected by trained interviewers through face-to-face interviews, using a pretested questionnaire. We compared the sample information with national statistics on key characteristics of the labor force and found the data quality to be reasonably good (see appendices in Zhou and Suhomlinova 2000). Because the party membership information is missing from six cities in the data, we use only 14 cities (about 3,500 respondents) in this study.

The data contain detailed information about respondents' work histories, including levels of education, characteristics of the workplace, promotion events in career lines, and the timing of these events. In our analysis, we included all respondents who worked in formal organizations in urban areas, but excluded those who worked in rural areas or were self-employed. For our statistical analyses, the data are arranged into a person-year chronic structure that updates changes in the covariates and promotion events over time.

Measures

Dependent Variable.

Events of promotion. Promotion events are coded as a (1/0) binary variable, with the occurrence of a promotion event being coded as 1. In this study, promotion is defined as the upward job change along the job ladder ("ordinary worker," "low-level manager," "midlevel manager," and "high-level manager") within work organizations.¹ An individual may experience multiple promotion events in his or her career. The respondent was asked to identify all such position changes over his or her work history, and the timing of each change event. For each managerial position, we further inquired whether the main task of that position involved administrative or professional responsibilities.

Independent Variables.

Education. We measure education at three levels: junior high school or below (the reference category), senior high school, and college.

Party membership. We use a dummy variable (party membership = 1) to measure one's political status.

Administrative and professional cohorts. To examine the cohort effects, we differentiate administrators and professional personnel to examine their respective promotion patterns. We distinguish three cohorts of administrators and of professionals, respectively, based on the historical periods when they were recruited into administrative or professional occupations. Specifically, the first cohort, the second cohort, and the third cohort, respectively, consist of those administrators/professionals who were recruited into their occupations between 1949 and 1965, between 1966 and 1979 (during the Cultural Revolution), and in the reform era (after 1980). It is possible for a person who entered an administrative cohort to be promoted into the other career line. Besides administrators and professional personnel, "ordinary workers" may also be promoted into managerial positions in a work organization. "Ordinary workers" (a residual category of all other occupations in a workplace) is the reference category for the administrative/professional cohorts.

Organizational sectors. For our purpose of examining promotion patterns across organizational sectors, we distinguish three sectors: (1) the public sector (government agencies and public organizations), (2) the state-owned firm sector, and (3) the nonstate sector (collective firms and hybrid firms).

Control Variables.

Organizational attributes. We use the number of employees in an organization to measure organizational size.² To measure the effects of internal organizational promotion practice, we use two dummy variables to indicate the current positional rank (low-rank, middle-rank), with job positions without rank as the reference category. We also include a variable that measures the duration (in years) in the current positional rank.

We use age (centered at 25) and age squared to measure the first- and second-order effects of work experience. We use a dummy variable (female = 1) to measure gender effect. To measure vacancy-chain effect, we use the annual percentage of promotion among all employees in a sector to indicate promotion opportunities available in that sector. To control for other environmental factors, we also include type of city (large, medium, and small) in model estimation.

The descriptive statistics of the covariates are reported in Table 1. Note that most covariates may vary over time. Table 1 reports the distribution of the values of these variables only in three selected years (1965, 1978, and 1993).

Models

To model promotion patterns, one needs to consider the fact that the composition of the sample evolves over time. For instance, new administrators, professionals, or ordinary workers may enter the labor force each year.

Table 1 Descriptive Statistics of the Covariates in Selected Years

Covariate	1965	1978	1993
Age (mean)*	27.7	33.4	39.6
Female (%)	42.7	45.0	40.8
Education (%)			
Elementary or below	41.0	28.1	11.9
Junior high	26.5	35.2	31.8
Senior high	20.1	27.8	36.7
College	12.4	8.9	19.7
Party membership (%)	19.4	21.7	24.8
Occupation (%)			
Administrative	14.0	14.2	17.4
Professional	21.5	18.7	22.7
Ordinary workers	64.5	67.1	60.9
Administrative cohort (%)			
1949–1965	14.0	7.5	3.8
1966–1979	—	6.7	5.7
1980–1994	—	—	7.8
Professional cohort (%)			
1949–1965	21.5	9.6	4.7
1966–1979	—	9.1	7.1
1980–1994	—	—	10.9
Organization size mean*	22,60.0	1,976.0	1,635.0
Organization sector (%)			
Public (government and public organizations)	28.8	21.3	23.7
State firm	46.3	50.4	47.0
Nonstate (collective and hybrid)	22.8	26.4	25.5
Percent vacancy (%)	1.4	1.7	1.3
City location (%)			
Large city	63.2	63.8	63.0
Medium city	22.6	22.3	21.8
Small city	14.2	13.9	15.2
Total <i>N</i>	1,299	2,681	3,414

Note. Except for age, organizational size (number of employees), and total *N*, all other entries are percentages in that category. Some categories may not add up to unity because of rounding errors.

*Statistics in this category are the mean of the variable.

Moreover, the values of the covariates may also change over time. For instance, one's occupational status in the labor force may change over time, thus affecting the probability of experiencing promotion events. Since an employee may experience more than one promotion in his or her career, these repeated events are likely to be correlated. Considerations of these issues call for a dynamic model for the discrete-event process that allows the incorporation of time-varying covariates and evolving risk sets.

We adopted the generalized estimation equation (GEE) approach to model repeated events. The GEE approach models the marginal expectations instead of the conditional means as in the conventional parametric models. It has the advantage of not requiring parametric assumptions about the form of the covariance structures among multiple promotion events (Diggle et al. 1994). The data for our analyses are structured in person-year chronic order to form the "risk set" for promotion events. In this manner, the GEE approach is analogous to discrete-event history methods; but the estimated variance is robust for repeated measures. The quasi-likelihood estimator is used in model estimation.

Results

Determinants of Promotion: The Dual-Path Career Lines

We first examine and contrast the determinants of promotion rates in the administrative and professional career lines across the prereform and reform eras. We estimated the models for the two career lines separately. Table 2 reports the parameter estimates of these models. The entries in the table give the effects of the corresponding covariates on the log-odds (or "log-rate") of promotion in organizations.

Our first hypothesis is drawn from Walder's dual-path model that predicts different selection mechanisms underlying the two career lines. The empirical evidence is consistent with this argument. First, in both periods party membership played a more important role (as indicated by the larger, positive coefficients associated with the "party membership" variable) for promotions in the administrative line than for those in the professional line.³ In the reform era, for instance, the promotion rate for a manager with party membership is 2.4 times that of a manager without party membership in the administrative line ($\beta = 0.886$, $\exp[0.886] = 2.4$), but only 1.5 times that of those in the professional line ($\beta = 0.383$). In contrast, education plays a more important role for promotions in the professional line than for those in the administrative line. For those in the administrative line in both periods, there was no statistically discernible contribution by college education, or senior

Table 2 GEE Estimates of the Determinants of Administrative and Professional Promotion Patterns, by Periods

Covariate	Administrative		Professional	
	1949–1979	1980–1994	1949–1979	1980–1994
Intercept	–2.278* (0.964)	1.916* (0.934)	–0.489 (0.673)	0.737 (0.731)
Education				
Senior high	0.261 (0.196)	0.209 (0.200)	0.404* (0.194)	0.423** (0.164)
College	0.239 (0.232)	0.366 (0.228)	1.119** (0.201)	0.786** (0.182)
Party membership	0.706** (0.185)	0.886** (0.171)	0.475** (0.175)	0.383** (0.138)
Administrative cohort				
1949–1965 cohort	2.909** (0.249)	2.429** (0.301)	1.496** (0.207)	1.060** (0.272)
1966–1979 cohort	3.643** (0.269)	2.202** (0.234)	2.311** (0.216)	0.828** (0.200)
1980–1994 cohort	—	3.256** (0.218)	—	2.076** (0.172)
Professional cohort				
1949–1965 cohort	0.214 (0.317)	0.717* (0.351)	1.073** (0.210)	1.430** (0.222)
1966–1979 cohort	0.020 (0.532)	0.552 (0.345)	1.613** (0.271)	1.175** (0.194)
1980–1994 cohort	—	1.067** (0.297)	—	1.671** (0.196)
Organizational attributes				
Public sector	0.086 (0.251)	–0.008 (0.215)	–0.479** (0.171)	–0.121 (0.139)
State firm	0.462 (0.244)	–0.095 (0.211)	—	—
Log(size)	–0.077 (0.044)	–0.115** (0.043)	0.057 (0.043)	0.024 (0.033)
Duration in position	–0.029 (0.021)	0.009 (0.015)	0.027 (0.021)	–0.011 (0.012)
Low-rank position	–0.781** (0.218)	0.098 (0.220)	–0.023 (0.220)	0.187 (0.179)
Midrank position	–1.791** (0.394)	–0.854** (0.316)	–0.537 (0.368)	–0.188 (0.250)
Percent vacancy	0.840** (0.116)	1.163** (0.203)	0.703** (0.123)	1.005** (0.184)
Female	–0.472* (0.202)	–0.557** (0.177)	–0.533** (0.174)	–0.573** (0.126)
Age	0.053* (0.024)	0.066** (0.025)	–0.003 (0.024)	0.068** (0.019)
Age ² /100	–0.182 (0.105)	–0.376** (0.086)	–0.103 (0.095)	–0.252** (0.067)
City location				
Medium city	–0.203 (0.214)	–0.501* (0.203)	0.337 (0.192)	–0.546** (0.197)
Small city	–0.235 (0.258)	–0.180 (0.231)	–0.328 (0.267)	–0.559* (0.229)
Number of events	199	212	214	339
Number of cases	2,510	3,351	2,509	3,356
Log-likelihood	–960.6	–1,039.5	–1,139.3	–1,694.9

Note. “Junior high or below” is the reference category for education, “collective and hybrid firm” for work organization, and “large city” for city location. “Ordinary workers” are the reference category for the administrative and professional cohort variables. “Ordinary job without rank” is the reference category for position.

* $p < 0.05$; ** $p < 0.01$ (two-tailed tests).

Standard errors are in the parentheses.

high school education, compared with the reference category of having a middle school or lower education. The finding that education levels play no role in administrative promotion in the reform era is surprising, and at odds with the proclaimed state policies that emphasized educational qualification in this period. This is partly due to the fact that the effect of college education is confounded with party membership in the reform era. When we omitted the “party membership” variable from the model in the reform era, the effect of “college education” becomes significant ($p < 0.05$). That is, the positive effects of college education for administrative promotion are mediated by obtaining party membership. This is important evidence that, in the reform era, both party membership and college education became important criteria for promotion in the administrative line. In contrast, in the professional line education plays a significant, positive role in the promotion rate, whereas the effect of party membership, though significant, is much

smaller. These empirical patterns suggest that mechanisms of promotion are indeed different between the two career lines, with political screening being the main selection criterion for promotion in the administrative line and educational qualification in the professional line. These findings are consistent with those reported in Walder et al. (2000).

To what extent has this dual-path model changed in the reform era? If the economic transformation has led to fundamental changes in promotion processes in the reform era, we expect to find significant changes in the effects of selection criteria in the two career lines (H5). The point estimates of the effects of education and party membership across the periods show that the role of party membership increased for promotions along the administrative line but decreased for the professional line. We observed a similar decline in the role of college education for promotions along the professional line. However, a formal test of the equality of coefficients associated with these key selection criteria across the

two periods indicates that, for both administrative and professional career lines, the effects of college degree and party membership *have not changed* across the two periods ($p > 0.05$). This result implies that the processes underlying these two career lines have not changed *substantially* in the reform era.

Walder's model also predicts low permeability between the two career lines (H2). To test this idea, we examined the effects of administrative/professional cohorts on the promotion rate in the other career line. For example, a significant effect of an administrative cohort on the promotion rate along a professional line would indicate the impact of transitions from that administrative cohort to professional positions. Table 2 shows that the administrative cohorts had significant and larger effects in the promotion rate in their own career line, but the effects of professional cohorts on the administrative line were less salient in both periods. Thus, the evidence shows low permeability in transitions from professional positions to administrative positions. In contrast, administrative cohorts had significant and large effects on promotion rates in professional lines. In the prereform era, administrative cohorts had higher promotion rates than their corresponding professional cohorts in the professional line, reflecting the importance of political status. Even in the reform era, the 1980–1994 *administrative* cohort had a larger effect than the corresponding professional cohort on the promotion rate in the professional line: The promotion rate for the 1980–1994 administrative cohort along the professional line is about eight times that of the reference category of ordinary workers ($\beta = 2.076$), while the rate for the corresponding 1980–1994 *professional* cohort is only 5.3 times ($\beta = 1.671$) greater. That is, there were no barriers in moving from the administrative line to the professional line. Overall, we observed statistically significant movements from the administrative line to the professional career line in both periods. However, movements in the opposite direction are mixed. There were virtually no significant movements from the professional line to the administrative positions in the prereform era. In the reform era, the boundaries became more blurred, but transition from the professional line to the administrative line was still less salient. These patterns suggest that the administrative career line is much more advantageous—those entering administrative career lines had more flexibility to move to the professional career line, but the shift from professional to administrative positions was much less permeable. Thus, the evidence on Hypothesis 2 is mixed.

Considerations of the impact of macropolitical processes on career dynamics led us to hypothesize (H3) that the second cohort had the lowest promotion rate and the third cohort has the highest rate among the three cohorts. Because the effects of both administrative and professional cohorts are estimated using the same reference group of ordinary workers, the coefficients associated with these cohorts can be compared directly. This

hypothesis is supported for both administrative and professional career lines. For example, for the promotion rate in the administrative line, the 1980–1994 cohort had the highest promotion rate ($\beta = 3.256$), whereas the 1966–1979 cohort had the lowest rate ($\beta = 2.202$), and the difference between the two is statistically significant ($p < 0.01$). For promotions along the professional line, the differences among the three professional cohorts were present but less salient, indicating that political selection was stronger in the administrative line than in the professional line. Variations in cohort effects within the same career lines captured the importance of macropolitical processes on varying opportunities and life chances. Changes in these cohort effects also show distinctive patterns for the two career lines. Test of equality of coefficients shows that the effects for the first administrative cohort have not significantly changed ($p > 0.10$), but the declining rate for the second administrative cohort is highly significant ($p < 0.01$) across the two periods. Furthermore, test of equality shows that the effects of both first and second professional cohorts have not changed significantly across the two periods. That is, political dynamics affect administrative cohorts more severely than professional cohorts. Note that although cohort effects may be correlated with age effects, our findings on cohorts captured the impacts of political processes beyond age effects for the following reasons. First, age effects are controlled for in our model; second, the effects of the three cohorts are nonlinear in that the 1949–1965 cohort actually has a higher promotion rate in the reform era than the 1966–1979 cohort, which is consistent with our hypothesis. However, this is at odds with the age effects related to status-attainment schedule, as discussed by Lawrence (1988).

We hypothesized that because of its sensitivity to macropolitical processes, the administrative career line has a higher promotion rate than that in the professional career line (H4). The empirical evidence is consistent with this hypothesis. First, the intercepts in Table 2 show that, other things being equal, the administrative line experienced a significantly higher promotion rate in the reform era. The negative intercept associated with the first period suggests that the reference group—a 25-year-old, male, ordinary worker in a nonstate firm in a large city with only below-high-school education—had a lower promotion rate relative to other groups (e.g., administrative and professional cohorts as indicated by the positive coefficients associated with these groups), but the positive and significant intercept in the reform era indicates a much higher overall promotion rate. In contrast, there were no statistically discernible differences for the professional line across the two periods. Second, the magnitudes of effects of administrative cohorts are much larger than those of their corresponding professional cohorts. These findings indicate that the administrative cohorts had significant and higher overall promotion rates than their counterparts in professional cohorts

in both periods. In fact, as we noted before, the favored administrative cohort (the 1980–1994 cohort in the second period) had a higher promotion rate *along the professional career line* ($\beta = 2.076$) than the corresponding professional cohort ($\beta = 1.671$).

We also included several measures of organizational attributes in model estimation. Because these measures are coarse, we do not interpret these coefficients in detail. However, we note that none of the organizational attributes show systematic, significant effects on promotion. With the exception of the public sector in the pre-reform era, there were no significant differences across organizational sectors on promotion rates along these two career lines;⁴ nor does organizational size have any significant effect on promotion rates in either period. Duration in the present managerial position does not have a significant effect, indicating that there is no evidence of internal organizational structure with respect to position duration, other things being equal. The promotion rate decreases with ascending ranks in the administrative line, as indicated by the increasingly larger, negative coefficients associated with the two positional rank variables (ordinary worker with no rank as the reference category), reflecting shrinking vacancies as one moves

up along the structured job ladder, but there is no similar effect for the professional line.

Variations in Promotion Patterns Across Organizational Sectors

Given the variety of organizational ownership in the Chinese economy, to what extent do promotion patterns vary across different organizational sectors? To address this issue, we analyzed the determinants of promotion across three sectors: the public sector (government and public organization), state firms (both central government-owned and local government-owned firms), and nonstate firms (collective and hybrid firms).⁵ Table 3 reports the findings for this set of analyses. Our discussion focuses on contrasting these three sectors around the main processes of promotion.

If the impact of market processes is effective, we should observe significant variations in the underlying mechanisms for promotions across the organizational sectors (H5). There are indeed noticeable variations in the effects of the covariates across the three sectors, but the patterns are more complicated than we have anticipated. With regard to the effects of education and party

Table 3 GEE Estimates of the Determinants of Promotion Patterns Across Organizational Sectors, by Periods

Covariates	Public Sector		State Firm		Nonstate Firm	
	1949–1979	1980–1994	1949–1979	1980–1994	1949–1979	1980–1994
Intercept	–3.031** (1.024)	–2.678** (0.889)	0.949 (1.087)	6.138** (1.253)	–3.645 (1.970)	3.198* (1.341)
Education						
Senior high	0.207 (0.250)	0.499* (0.251)	0.296 (0.279)	0.468* (0.208)	0.167 (0.487)	0.835* (0.351)
College	0.617* (0.269)	0.915** (0.277)	1.274** (0.326)	0.955** (0.266)	1.496* (0.611)	1.637** (0.406)
Party membership	0.789** (0.236)	0.529** (0.186)	0.587* (0.234)	1.063** (0.178)	1.366** (0.446)	1.014** (0.330)
Administrative cohort						
1949–1965 cohort	2.165** (0.270)	1.259** (0.340)	3.401** (0.345)	2.641** (0.444)	1.841** (0.462)	2.465** (0.534)
1966–1979 cohort	2.376** (0.317)	1.000** (0.250)	4.417** (0.330)	2.467** (0.298)	3.056** (0.568)	2.273** (0.444)
1980–1994 cohort	—	1.789** (0.266)	—	4.052** (0.280)	—	2.773** (0.395)
Professional cohort						
1949–1965 cohort	0.231 (0.304)	0.472 (0.323)	1.316** (0.434)	1.906** (0.435)	0.580 (0.474)	0.492 (0.734)
1966–1979 cohort	0.694 (0.484)	0.014 (0.283)	1.891** (0.488)	2.145** (0.302)	1.133 (0.704)	0.193 (0.827)
1980–1994 cohort	—	0.817** (0.284)	—	2.624** (0.353)	—	2.039** (0.475)
Log(size)	–0.121* (0.059)	0.020 (0.050)	0.024 (0.069)	–0.071 (0.050)	0.003 (0.122)	0.023 (0.095)
Duration in position	0.005 (0.023)	–0.014 (0.016)	0.019 (0.029)	0.036 (0.021)	–0.029 (0.055)	0.005 (0.028)
Low-rank position	–1.049** (0.262)	–0.373 (0.236)	–1.541** (0.328)	–0.964** (0.277)	–1.472* (0.585)	–0.762 (0.453)
Midrank position	–2.371** (0.465)	–1.582** (0.358)	–1.810** (0.402)	–1.415** (0.379)	–3.972* (1.600)	–0.677 (0.547)
Percent vacancy	0.450** (0.056)	0.512** (0.081)	1.056** (0.136)	1.328** (0.185)	0.783** (0.141)	1.048** (0.253)
Female	–0.147 (0.261)	–0.381* (0.169)	–0.886** (0.262)	–0.929** (0.211)	–1.422** (0.396)	–0.759* (0.330)
Age	0.015 (0.030)	0.095** (0.027)	0.024 (0.032)	0.092** (0.032)	0.041 (0.049)	0.035 (0.041)
Age ² /100	0.056 (0.114)	–0.307** (0.088)	–0.265 (0.138)	–0.497** (0.115)	0.082 (0.192)	–0.174 (0.146)
City location						
Medium city	0.174 (0.259)	–0.671* (0.308)	–0.094 (0.314)	–0.757** (0.276)	–0.227 (0.527)	–0.796* (0.382)
Small city	–0.969* (0.430)	–0.645 (0.352)	–0.562 (0.402)	–0.475 (0.290)	–0.044 (0.422)	–0.343 (0.363)
Number of events	145	184	156	215	53	80
Number of cases	683	806	1,436	1,883	761	912
Log-likelihood	–616.3	–773.7	–629.4	–878.4	–241.6	–339.5

Note. “Junior high or below” is the reference category for education and “large city” for city location. “Ordinary workers” are the reference category for the administrative and professional cohort variables. “Ordinary job without rank” is the reference category for position.

* $p < 0.05$; ** $p < 0.01$ (two-tailed tests).

Standard errors are in the parentheses.

membership, the public sector and the nonstate sector showed similar patterns, whereas the state firm sector showed a different pattern: In both the public and nonstate sector, the role of party membership declined and the role of education increased in the reform era; in the state firm sector, however, we observed the opposite trend. There are also marked variations in education effects across sectors and periods. There was no difference in the promotion rate between senior-high-school and lower-level education in all three sectors in the prereform era, but senior-high-school education significantly increased the promotion rate in the reform era, indicating that returns to education became more salient in the reform era. As for college-level education, it had positive effects on the promotion rate in both the prereform and reform eras across all three sectors. The effect of a college education increased in the public sector and nonstate sector in the reform era, but its effect on promotion in the state firm sector was smaller in the reform era than before.

As measures of political selection processes, patterns of cohort effects show some contrasting patterns across the three sectors. Among the administrative cohorts, the patterns are similar to those reported in Table 2. That is, the second cohort had the lowest promotion rate, whereas the third cohort had the highest promotion rate. Promotion rates were higher in state firms than in other sectors. With regard to professional cohorts, we find very different patterns. For both the public and the nonstate sector, only the 1980–1994 professional cohort had a significant, higher rate than ordinary workers (the reference group). For those in the state sector, we find that all three cohorts had significant, positive effects on the promotion rate, and the effects of these cohorts were similar in magnitudes. Again, the state firm sector stands out in contrast to the other two sectors. Also note that although the low-rank and midrank positions had lower promotion rate relative to the reference category (ordinary workers), these effects are estimated net of the effects of other covariates in the model. Taking into consideration the effects of cohorts and other factors, administrators and professionals already in the bureaucratic ranks had a much higher promotion rate than ordinary workers.

Organizational attributes again do not show systematic and significant effects across the three sectors. If larger coefficients associated with cohorts indicate a higher rate of replacing administrators (through promotion), then the state firm sector and the nonstate firm sector have a much higher rate of replacement than the public sector for both administrative and professional cohorts. The higher promotion rates (as indicated by the intercepts) and the larger effects of “percent vacancy” in the state and nonstate firms demonstrate that the organizations in the economic arena are expanding and are more active in the emerging market economies. In contrast, the low promotion rate in the public sector, which is closest to

the political authority, indicates a relatively slower pace of replacement.

Discussion and Conclusion

Most studies of promotion have focused on work organizations in industrialized-market societies. In this study, we situated our study in the unique institutional context of China’s transitional economy. We began with Walder’s dual-path model to examine promotion patterns and underlying mechanisms along two career lines. We enriched Walder’s model by introducing the impacts of macropolitical processes on career dynamics and by considering the impacts of emerging market competition for human resources on variations in promotion patterns across organizational sectors. These considerations allowed us to develop further and more refined hypotheses about changes and continuity in promotion patterns, and about sources of changes in Chinese organizations.

The findings reported in this study are largely consistent with Walder’s dual-path model. The distinctive patterns of administrative and professional career lines and the differential effects of educational credentials and party membership on promotion rates in these two career lines are consistent with those basic characteristics depicted in Walder’s model. The evidence on segmentation between the two career lines is mixed. While there is evidence of low permeability of movement from professional line to administrative line, we do find considerable significant movements from administrative line to professional line, and they took place in both periods. In addition, we also find that career development is not only segmented by career lines, but also by the formidable barriers between ordinary workers and managers. In particular, the promotion rate for workers is much lower than those for administrators and professionals. A main contribution of our study is that we demonstrated the importance of career lines on promotion patterns in organizations in a different institutional context, which corroborates findings on the roles of career line in individual career advancement in the literature (e.g., Spilerman 1977, Scholl 1983).

A second contribution of this study is that we enriched Walder’s model by taking into consideration career dynamics resulting from macropolitical processes, which allowed us to identify specific sources of change and continuity in Chinese organizations. These considerations point to variations among administrative and professional cohorts even *within* the same career line and allow us to make more refined arguments about differential rates of promotion and replacement across the two career lines. First, there was a noticeably higher promotion rate in the administrative line over time than in the professional line in the reform era. That is, the administrative line was more sensitive to political dynamics than the professional line was. Second, the distinctive

cohort effects, especially the declining status of those who entered administrative and professional occupations in the Cultural Revolution (the 1966–1979 cohort), show shifting political selection criteria in the reform era and the fact that promotions in Chinese organizations are highly sensitive to changes in macropolitical environments. These patterns are consistent with our discussions about the impacts of shifting state policies in the reform era and their particular impacts on the administrative line. These findings shed light on the coexistence of stable institutionalized career lines on the one hand and significant changes associated with the composition of managerial personnel on the other. That is, despite stability of the career lines and the same selection labels (e.g., party membership), significant changes have taken place, as reflected in variations across cohorts and in underlying selection processes. These findings point to the continuing importance of macropolitical processes on the internal operation of Chinese organizations and, at the same time, highlight significant changes in the composition of managerial personnel in Chinese organizations in recent years.

Competitive pressures in the marketplace have also induced profound organizational transformation in both internal structures and interorganizational ties (Nee 1989, 1992). They also have left their marks on the promotion patterns. However, these changes are much more complicated than we had anticipated. On the one hand, the evidence shows that the state firm and non-state sectors had the highest promotion rates. This pattern may be indicative of the impacts of market competition for human resources because both sectors were more influenced by market competition than the public sector. On the other hand, changes in the selection criteria, such as the effects of education, party membership, and cohorts, show that the state firm sector experienced fewer changes than the public and the nonstate sector. Given the fact that the public sector is more sensitive to state policies and the nonstate sector to market competition, these patterns indicate that, in the reform era, both state policies and market mechanisms often operated in the same direction and affected organizational practice in similar ways. In contrast, state firms were left behind and experienced fewer changes over time compared with organizations in the other two sectors.

The main implication of our study for management science is to call attention to the critical role of macrosocial environment in shaping internal organizational dynamics. It is well recognized in the management literature that organizations tend to adopt appropriate managerial practice and forms in order to conform to the institutional environment. The Chinese case provides a vivid example of how external environment played a critical role in internal promotions in organizations. Because we do not have good measures of organizational operations, we did not interpret variables on

organizational attributes in our analyses. However, these variables (organizational size, job duration) do not show systematic effects on promotion patterns, as is consistent with our arguments. The Chinese experience enriches our understanding of the role of the institutional context on managerial practice and organizational processes.

Another implication of our study for management science is that we documented a trend of changing compositions in management personnel in Chinese organizations over time, which implies the prospect of future changes in these organizations. The evidence shows that, in the reform era, more educated employees are promoted at a faster rate into managerial positions in work organizations than before. These results point to the rise of more competent and autonomous managerial professionals whose roles are increasingly important in China's economic transformation. Although there is evidence of continuing political selection (e.g., party membership, cohort effects), we also found that promotion processes have become increasingly rationalized, as evidenced in the increasing role of education, noticeable age restrictions, and the active replacement of old bureaucrats with a new generation of managers. These prosaic but institutionalized practices have profound implications for Chinese organizations. Over time, they have forced millions of old managers to step down, and have had great impacts on the vacancy-chain effects on promotion patterns in Chinese organizations. These personnel changes provide opportunities for more systematic changes in the management practice in these organizations. As a result, behind the appearance of continuous political selections and state interventions, the managerial professionals in China have been changed steadily and profoundly in the reform era.

We want to point out several limitations of our study and suggest directions for future studies. First, like all retrospectively collected data, our data also have potential problems in that individuals who died earlier or left the selected cities in our sample were not included in our sampling frame. This is an intrinsic problem with any retrospective data collection. Because of the lack of longitudinal data on personnel changes in China, retrospective data collection is the only feasible strategy to collect information on the evolution of the Chinese organizations in the past five decades. We hope that our study will stimulate other scholars to pursue this line of research further, with an improved research design. Second, our study relied on the subjective measure of the respondent's organizational positions. The findings are largely consistent with our hypotheses, which are derived from our theoretical arguments based on the "objective patterns." Nevertheless, both the boundary of a work organization and the levels of administrative and professional positions may vary with individuals' subjective perceptions. Thus, our findings should be interpreted in this light, and we hope that future studies can

replicate our findings while using more objective measures. Moreover, because of the sampling scheme, there is no detailed organization-level information in our data to examine the effects of organization-level characteristics. To what extent our theoretical arguments should be modified remains to be examined based on more fine-grained organization-level data in the future.

To conclude, our study shows that Chinese organizations have experienced substantial changes in the composition of managerial successions in the last two decades. On the other hand, the macropolitical processes and institutions still exert strong influence on the path of change in these organizations. Moreover, with the weakening of the central authority, the emerging economic order in China is infused with existing institutions, cultural values, and social relationships (Bian and Qiu 2000, Boisot and Child 1996, Walder 1995b, Zhou et al. 2003). The evolution of the Chinese organizations is likely to result from the confluence of these multiple and competing processes. The data for our study ended in 1994; since then, the Chinese organizations have been experiencing more dramatic changes in recent years that, we believe, have accelerated these trends. We hope that our study takes a step to understand promotion patterns in Chinese organizations and to provide a baseline for assessing future changes in the Chinese organizations.

Acknowledgments

The authors thank Yanjie Bian, Anne Tsui, *OS* reviewers, and participants in the conference for this special issue of *OS* in Beijing, July 4–5, 2002, for their helpful comments. They also thank the Department of Sociology at Fudan University and the People's University, the Institute of Sociology at Tianjin Academy of Social Sciences, and especially Weida Fan, Qiang Li, Yunkang Pan, and Xizhe Peng for their assistance in data collection. This research is supported by a grant from the National Science Foundation (SBR-9413540), an ASA/NSF fund for the advancement of the discipline, and a Spencer Fellowship from the Academy of Education.

Endnotes

¹In our analyses, promotion events are recorded as changes along hierarchically ordered managerial positions. Some of these promotions may result from job changes across organizations. We are unable to distinguish between promotions within organizations and those resulting from job changes across organizations. However, such job changes were infrequent in the time span of our study (see Zhou et al. 1997).

²A portion of our sample (about 10%) has missing information on organization size. We computed organization size for such cases by using the average size of the type of organizations they belong to in a specific year. For instance, if a respondent is in a collective firm in a specific year, we use the average size of collective firms in that year as the size of his or her organization.

³Differences in parameter estimates may result from genuine differences in the effects of the corresponding covariates, or from sampling variability across subsamples. A formal test of

the “equality of coefficients” is required to distinguish these two possibilities. However, because the administrative and professional lines are estimated separately in Table 2, we were unable to conduct this formal test here.

⁴Because of the small number of professionals in state firms, the parameters associated with state firms were not estimated. We combined state firms and nonstate firms in the reference category for the “professional promotion” model in Table 2.

⁵Due to the small number of cases across sectors, we do not distinguish the two career lines in this set of analyses.

References

- Bamberger, P., M. Admati-Dvir, G. Harel. 1995. Gender-based wage and promotion discrimination in Israeli high-technology firms: Do unions make a difference? *Acad. Management J.* **38** 1744–1761.
- Baron, J. N. 1984. Organizational perspectives on stratification. *Annual Rev. Sociology* **10** 37–69.
- Baron, J. N., W. T. Bielby. 1980. Bringing the firms back in: Stratification, segmentation, and the organization of work. *Amer. Sociological Rev.* **45** 737–765.
- Bian, Y., H. Qiu. 2000. Social capital of the firm and its significance. *Chinese Soc. Sci.* **2** 87–99.
- Bian, Y., X. Shu, J. R. Logan. 2001. Communist party membership and regime dynamics in China. *Soc. Forces* **79** 805–841.
- Boisot, M., J. Child. 1996. From fiefs to clans and network capitalism: Explaining China's emerging economic order. *Admin. Sci. Quart.* **41** 600–628.
- Diggle, P. J., K. Y. Liang, S. L. Zeger. 1994. *Analysis of Longitudinal Data*. Clarendon Press, Oxford, U.K.
- DiPrete, T. A., W. T. Soule. 1986. The organization of career lines. *Amer. Sociological Rev.* **51** 295–309.
- DiPrete, T. A., W. T. Soule. 1988. Gender and promotion in segmented job ladder systems. *Amer. Sociological Rev.* **53** 26–40.
- Guthrie, D. 1997. Between markets and politics: Organizational response to reform in China. *Amer. J. Sociology* **102** 1258–1304.
- Keister, L. A. 2001. Exchange structures in transition: Lending and trade relations in Chinese business groups. *Amer. Sociological Rev.* **66** 336–360.
- Konrad, G., I. Szelényi. 1979. *Intellectuals on the Road to Class Power*. Harcourt Brace Jovanovich, New York.
- Lawrence, B. 1988. New wrinkles in the theory of age: Demography, norms, and performance ratings. *Acad. Management J.* **31** 309–337.
- Lawrence, B. 1990. At the crossroads: A multiple-level explanation of individual attainment. *Organ. Sci.* **1** 65–85.
- Li, B., A. G. Walder. 2001. Career advancement as party patronage: Sponsored mobility into the Chinese administrative elite, 1949–1996. *Amer. J. Sociology* **106** 1371–1408.
- Nee, V. 1989. A theory of market transition: From redistribution to markets in state socialism. *Amer. Sociological Rev.* **54** 663–681.
- Nee, V. 1992. Organizational dynamics of market transition: Hybrid forms, property rights, and mixed economy in China. *Admin. Sci. Quart.* **37** 1–27.
- Nee, V. 1996. The emergence of a market society: Changing mechanisms of stratification in China. *Amer. J. Sociology* **101** 908–949.
- Office of Organization Reform, The Central Committee of the CCP.* 1993. *The Grand Trend of China's Administrative Reform* (in Chinese). Economic Science Press, Beijing, China.

- Rosenbaum, J. E. 1979. Tournament mobility: Career patterns in a corporation. *Admin. Sci. Quart.* **24** 220–241.
- Scholl, R. W. 1983. Career lines and employment stability. *Acad. Management J.* **26** 86–103.
- Spilerman, S. 1977. Careers, labor market structure, and socioeconomic achievement. *Amer. J. Sociology* **83** 551–593.
- Spilerman, S., T. Petersen. 1999. Organizational structure, determinants of promotion, and gender differences in attainment. *Soc. Sci. Res.* **28** 203–227.
- State Statistics Bureau, PRC. 1990. *Chinese Urban Statistics Yearbook, 1990*. China Statistical Publishing House, Beijing, China.
- Stewman, S. 1986. Demographic models of internal labor markets. *Admin. Sci. Quart.* **31** 212–247.
- Stumpf, S. A., M. London. 1981. Management promotions: Individual and organizational factors influencing the decision process. *Acad. Management Rev.* **6** 539–549.
- Walder, A. G. 1986. *Communist Neo-Traditionalism: Work and Authority in Chinese Industry*. University of California Press, Berkeley and Los Angeles, CA.
- Walder, A. G. 1995a. Career mobility and the communist political order. *Amer. Sociological Rev.* **60** 309–328.
- Walder, A. G. 1995b. Local governments as industrial firms. *Amer. J. Sociology* **101** 263–301.
- Walder, A. G., B. Li, D. J. Treiman. 2000. Politics and life chances in a state socialist regime. *Amer. Sociological Rev.* **65** 191–209.
- White, H. C. 1970. *Chains of Opportunity: System Models of Mobility in Organizations*. Harvard University Press, Cambridge, MA.
- Wholey, D. R. 1985. Determinants of firm internal labor markets in large law firms. *Admin. Sci. Quart.* **30** 318–335.
- Zhou, X. 1995. Partial reform and the Chinese bureaucracy in the post-Mao era. *Comparative Political Stud.* **28** 54–73.
- Zhou, X. 2001. Political dynamics and bureaucratic career patterns in the People's Republic of China, 1949–1994. *Comparative Political Stud.* **34** 1036–1062.
- Zhou, X., O. Suhomlinova. 2000. Redistribution under state socialism: A USSR and PRC comparison. *Res. Soc. Stratification Mobility* **18** 163–204.
- Zhou, X., N. B. Tuma, P. Moen. 1996. Stratification dynamics under state socialism: The case of urban China, 1949–1993. *Soc. Forces* **74** 759–796.
- Zhou, X., N. B. Tuma, P. Moen. 1997. Institutional change and patterns of job shifts in urban China, 1949–1994. *Amer. Sociological Rev.* **62** 339–365.
- Zhou, X., W. Zhao, Q. Li, C. He. 2003. Embeddedness and contractual relationships in China's transitional economy. *Amer. Sociological Rev.* **68** 75–102.