Title

Bringing Categories Back In: Institutional Factors of Income Inequality in Urban China

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In less than two decades since the early 1980s, China, by most measures of income inequality, had transformed from one of the most egalitarian societies in the world to one of the least equal by the mid 1990s. [1] As recent as in the early 1980s, China, together with Eastern European socialist societies, belonged to the most equal societies in the world in terms of economic inequality.[2] By the mid 1990s, after nearly two decades of reforms in its economic and political systems, China had joined Bangladesh, Indonesia, the Philippines, and the United States as a country among the highest levels of inequality in the world (for various Gini indices see the World Bank 1997; Ryscavage 1999; Khan and Riskin 1998; Li 1998).[3] Moreover, China has gained its membership in the club of high inequality countries with the fastest rate of increase in inequality.

Such a spectacular rise in income inequality in a short time period is no doubt one

[2] China's Gini index of income inequality was less than 0.3 in the mid 1980s, lower than developing countries in other parts of the world, and lower than that in developed capitalist countries combined (The World Bank 1997).

[3] The World Bank, for instance, reported a Gini index of 0.347 for China in the mid 1990s, ranking it the third among major regions in the world, only after Latin America/the Caribbean and Sub-Saharan Africa regions, in income inequality (The World Bank 1997). Other sources have reported a much higher figure for China's income inequality, often around 0.45. A national survey conducted in 1995 by a team of American and Chinese economists, for example, reported a Gini index of per capita income for China of 0.452, which is "higher than those for India, Pakistan and Indonesia and perhaps about the same as that for the Philippines" (Khan and Riskin. 1998, p.247). The Macroeconomics Institute of China's State Planning Commission provided an estimate of Gini index of 0.434 for the country as a whole, and 0.411 and 0.377 for rural and urban areas respectively (Khan and Riskin 1998, p.247, note 46). Another large-scale survey covering 100 cities and countries of China conducted in 1996-97 produced a Gini index of 0.458 (Li 1998, p.100). The Gini index for the United States was reported at 0.447 in 1996 (Ryscavage 1999, p.71).

of the most, if not *the* most, salient social outcomes of a society transitioning away from socialism. While studies of China and formerly socialist societies elsewhere have produced a large body of literature on the nature of a new social stratification order, works that directly address the overall inequality structure are few. Much existing research on income inequality in China and other formerly socialist countries has been subsumed under a debate of winners versus losers in the processes of social reconfiguration and restratification (Nee 1989, 1991, 1996; Peng 1992; Bian and Logan 1996; Xie and Hannum 1996; Parish and Michelson 1996; Walder 1996; Zhou 2000; Cao and Nee 2000; Wu 2002; Rona-Tas 1994; Gerber and Hout 1998). More than often, research within this body of literature revolves around the central question of "what types of *individual* characteristics get rewarded more during the transition period than under the socialist redistributive regime." Debates as such, however, are unable to address satisfactorily questions such as why income inequality in places like China has increased sharply, and what are the sources of the increased inequality.

This study re-directs our attention from *individual characteristics* to *institutional sources* in explaining the overall rise in inequality and in understanding the structure underlying such a rise in a transitional socialist society. We do so by bringing the concepts of category and boundary back into the study of social inequality, and by directly examining the roles of institutional sources underlying the rise of income inequality. We show that in the case of urban China, inequality-generating categories created during the heydays of socialism have gained a new life and have exerted a profound impact upon individuals' economic outcomes in the new social context. It is these *old* categories and their *new* extensions that define and create the structure of inequalities in post-socialist urban China. Within different categories, members rely on a number of mechanisms to maintain group boundaries and to protect and to sustain equality to some extent among them, while allowing rising inequality between groups. Moreover, the behaviors of these urban Chinese in creating and maintaining boundaries in post-socialist China are by no means unique, as one finds similarities between them and those of the Italian-Americans in Mamaroneck, New York in their practice of specialized trades (Tilly 1998), as well as those of doctors in the U.S in their efforts to professionalize (e.g., Abbott 1988). In addition to an individual-based mobility process, these examples suggest that there is another dimension of the stratification process, namely collective mobility based on group memberships that are maintained by exclusion and closure (Parkin 1974).

Bringing Categories Back In: Groups and Boundaries in Structuring Inequality

Growing out of their dissatisfaction with research on individual status attainment that paid an insufficient attention to the constraining effects of positional structures, students of social stratification in the 1970s introduced *economic sectors* into stratification research, which ushered in an era of "new structuralism" (e.g., Piore 1975; Beck et al 1978; Stolzenberg 1975, 1978; Kalleberg and Griffin 1978, 1980). Joining the voices of institutional economists on labor market segmentation, sociologists have since shown that the roles of individual traits in social mobility are not uniform across different sectors of the economy. Starting with their seminal article that called for conceptualizing structural organization of work at the firm level, Baron and Bielby (1980) pioneered a research line

that has bridged organization and stratification (e.g., Baron and Bielby 1984; Bielby and Baron 1986; Rosenbaum 1979; Hedstrom 1991; Spilerman and Lunde 1991; DiPrete 1993; also see Baron 1984 and Kalleberg 1988 for reviews).[4] By explicitly examining the organization of work positions within *firms*, firm-centered stratification research has shown how individual attainment is constrained by structural arrangements within organizations. While differing in the level of analysis, these two lines of research – incorporating sectors and firms into social stratification research – share one common orientation. They both introduced structural factors into stratification research, and directed research focus from individual status attainment to institutional analysis. According to these researchers, structure and institutions are both more important than and logically prior to individual resources in determining individual attainment (Baron and Bielby 1980). By the 1990s, this sustained if not dominant voice in analyzing institution-based inequalities had become the most distinctive feature of a "Fourth Generation" of comparative stratification research (Treiman and Ganzeboom 2000). Institutional analyses along the lines delineated above have by and large been carried out within the confines of economic domains, such as industry, sector, and firms. While these sector/firm-centered research are fruitful in exploring individual differentiation across organizational arrangements, they are also limited in the sense that they fail to link these institutional and organizational factors to a higher level of social organization, the society (*cf.* Baron and Bielby 1980). One important recent development is Tilly's attempt in providing a more generalized framework in analyzing social inequality (Tilly 1998). By returning to the macro-structural tradition and by emphasizing the centrality of categories in generating and maintaining inequality, Tilly elevates the unit of analysis above the confines of the economy and to the whole society. We are thus reminded that social inequalities are structured around categories or groups, not among individuals. These social categories are different social groups with "unequal access to and unequal distribution of resources and social opportunities" (Lamont and Molnár 2002). Various forms of inequality manifest as observable individual outcomes, but structural explanations of inequality lie in the social categories that encompass the individuals. Relying on measures of closure and exclusion, groups in advantageous positions often block others' access to resources (Parkin 1974; Tilly 1998). It is through categorical construction and boundary maintenance that inequality becomes durable.

Institutional analysis of inequality in transitional socialist societies, while receiving an increasing recognition for its importance, has so far met with only little success. Part of the reason lies in the lack of suitable data, but more importantly, it is due to a lack of theorizing effort that thinks beyond the individual as the unit of analysis. Though sometimes presented as institutional analysis, empirical analyses of social restratification and inequality in formerly socialist societies mostly rely on variables such as education and party membership or cadre status as surrogates for an emerging market or for the fading redistributive system. When institutional factors such as locales and work organizations are used, they are often treated as organizational *affiliation* of individuals, rather than *separate* units of analysis. In essence, such studies do not

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[4] In a different formulation, Granovetter conceptualized structure as relations between individuals (and later between institutions) that connect individuals with jobs (Granovetter 1973, 1981, 1985). Subsequent studies have shown the significant role of the matching process in determining individual attainment (e.g., Lin et al 1981; Rosenbaum and Kariya 1989).

examine opportunity structures for individuals directly. Rather, structures are either assumed or inferred from their consequences for individuals (*cf.* Baron and Bielby 1980).[5] Such a minimal elaboration of institutional analysis is therefore misleading and only focuses on one small aspect of the multi-faceted restratification process. As much of our attention has been trained on how individuals are rewarded according to their individual resources, we miss the overall picture of institutional sources of inequality, and consequently, leave the overall inequality structure and the general stratification process unexplained. A further understanding of the patterns of inequality in post-socialist societies, therefore, requires a form of institutional analysis that treats categories as separate units of analysis, and that places categories at the center of the analysis. We need, in other words, a shift from contemporaneous analyses of changing individual characteristics to examinations of the underlying institutional arrangements that are characterized by their path-dependent nature (Stark 1994, 1996; Rona-Tas 1998; Walder 1996; Zhou 2000; Cao and Nee 2000; Wu 2002).

Categories and Inequality under State Socialism

Categorical inequality was a defining feature of social inequality under state socialist systems. Such a feature is an outcome of the socialist regimes of the twentieth century, which were constantly plagued by a fundamental dilemma embedded within their systems. On the one hand, the economic goal of rapid industrialization in these countries required unequal allocation of resources. On the other hand, the ideological promise of egalitarianism central to the political legitimacy of this system demanded equal treatment of the population. Driven by such dual goals, a central characteristic of the socialist states was that they redistributed resources *unequally* to different groups according to their importance to the goal of industrialization, while maintaining distribution as *equally* as possible within each category to fulfill the ideological promise.

In addition to social and political categories such as gender and communist party affiliation, new and employment-based categories were created as the basis of economic organization and social control. In the case of China, a broad and deep division between urban and rural sectors was drawn, with peasants as a group sacrificed as the victims of the socialist industrialization (Walder 1989; Whyte 1986, 1996; Knight and Song 1999). In the urban sector of China, state-initiated industrialization deliberately favored heavy industry over light industry and other sectors. State-sponsored investment was also directed to specific regions at different times, either for the purpose of regional balance or for national defense.[6] Enterprises created during the planned economy period were

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[5] For example, the market transition theory argues that the increasing return to human capital indicates an emerging rewarding system (Nee 1989, 1991, 1996). However, the causal association between higher return to education and the emergence of a market rewarding system is not exclusive. At most, it is assumed in this theory based on the fact that market rewards education to a larger degree. In fact, others have long argued that the socialist state in its later stage has shifted to reward human capital more (Szelényi 1979; Walder 1995a; Walder et al 2000) and a "new class" of intelligentsia was emerging (Konrád and Szelényi 1979).

[6] These differences are well documented in Walder (1986, 1992), Bian (1994), Naughton (1997) and by others. One consequence of the segregation is the differential treatment of employees by industry. For example, in 1985, on a per capita basis, employees in heavy industry work units (*danwei*) enjoyed 80 percent more housing, more than twice health care resources, four times within-danwei schooling for

differentiated not only by their relations to the redistributive regime in the form of ownership type (state versus collective), but also by their level of affiliation within the bureaucratic planned system.[7] Employees in state-owned units with a higher affiliation (ministry versus provincial or city level, e.g.) enjoyed better working conditions, more pay, and more generous benefits than those employed in collectively owned ones with lower affiliations.[8]

Students of state socialist regimes have long recognized this organizational feature of the socialist system and its implications for income and welfare distribution. In his study of the Chinese industry prior to the recent reforms, Walder (1986) described a Chinese urban labor force under socialism made up not by equally-treated workers, but composed of workers who belonged to different status groups, such as state versus collective owned institutions, or with permanent versus temporary contracts. Under a façade of egalitarian goals and slogans, even during the heydays of the socialist era, a wide range of differentials in wages and benefits existed within the urban Chinese labor force. A later work by Bian offers a systematic and focused examination of the impact of ownership types and in particular work organizations on social stratification of urban workers in socialist China (Bian 1994; also Lin and Bian 1991). In contrast to a market economy where resource allocation is driven by profit margins, in a socialist planned economy, as observed by Bian, "…the allocation of labor and incentives is associated primarily with workplaces and secondarily with occupations, [therefore] work-unit status is a more important status criterion for social mobility than is one's occupation" (1994, p. 210). Such a reward system in turn resulted in a segmented socialist planned economy.[9]

The socialist state not only created new categories by economic sector, ownership type, locales, and work organizations, it also erected a number of institutional arrangements to maintain the boundaries among the categories. These arrangements included differential government investment and taxation policies, control over migration, and a labor system that dictated job mobility. The socialist planned economic

children, and almost twice the recreational space than those worked for non-heavy industries (calculated from Naughton 1997, Table 7.2, p.180).

[7] In 1980, for instance, investment of fixed assets averaged 2,469 *yuan* per employee in the state owned sector, compared with only 190 in the collective owned sector, a ratio of 13 to 1. This investment advantage enjoyed by the state owned sector lasted until 1990. These numbers are calculated from *China's Statistical Yearbook 1997*, pp. 96 and 150. After 1990, more capital has been invested per employee in the collective own units than in state owned units.

[8] Clear differences also existed in benefits provision among different types of ownership. In 1996, for instance, in addition to their wage advantage, employees in state-owned units received on average 1,462 *yuan* subsidies and allowances, as revealed in the official statistics (*China's Statistical Yearbook 1997*, p. 122). The amount received by those in state-owned units is equivalent to an over 20 percent boost to their already higher wage income. This amount is more than twice the average amount received by employees in collective-owned units (664 *yuan*), and close to 1.5 times of those in units of other types of ownership (982 *yuan*). Such a number moreover is a severe undercount of the real level of benefits, as housing, medical care and pension are not accounted for. This difference in benefits is by no means a recent phenomenon. In 1985, employees in state owned units received on average 224 *yuan*, equivalent to about 20 percent more of their wage. In the same year, those in collective-owned units received only 129 *yuan*.

[9] As Bian concludes, "the organizational structures created and maintained by the socialist government are a generic source of political, economic, and residential inequalities" (1994, p.210-211).

system gave industry preference over agriculture, heavy industry over light industry, state owned enterprises over collectively owned, and production of producer goods over consumer goods. Continued preferential treatment perpetuated the initial urban-rural divide (Oi 1993, Knight and Song 1999). For over two decades between the late 1950s and the early 1980s, the household registration (*hukou*) system, backed up by an employment assignment and a food rationing system, effectively erected an invisible wall between China's urban and rural sectors. Such a strict control was deemed necessary to protect urban welfare privileges (Cheng and Selden 1994; Chan 1994; Solinger 1999). In urban China, the government-controlled labor system assigned jobs and discouraged labor movement (Walder 1986; Davis 1990, 1992; Bian 1994; Zhou, Tuma, and Moen 1997).[10] Job mobility was consequently extremely low. Chinese urban job mobility was not only lower than capitalist market economies but also much lower than other planned economies of the former Soviet Union and East European countries (Naughton 1997).[11] Even after the rise of the private economy and the government's lifting of migration control, urban job mobility was still quite low as late as in the end of the 1980s (Davis 1992).[12]

Categories as New Institutional Basis of Inequality

The division created under socialism paved the way for the emergence of a new stratification and inequality pattern after the 1980s. In urban China, not only the overall degree of inequality increased following the reforms, the importance of categories formed under socialism has also risen to a new height. The endowment received by different categories in capital, technology, and the product market positioned them at different starting points in the race toward economic security and prosperity. Within such an institutional context, an apparent contradiction emerged with a measured high overall inequality on one hand, and a perceived persistent local equality on the other.[13] For the

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[10] As Davis pointed out, "Inter-firm job turnover was deliberately restricted and moves were more often the result of transfers requested by superiors than individual strategies of advancement" (1992, 1063).

[11] As revealed by Naughton, "Voluntary job turnover was about a hundred times more common in the Soviet Union than in China under the *danwei* system. Moreover, in the Soviet Union two-thirds of all hiring was done directly by the enterprise (at the factory gate, in the case of industrial enterprises) and another 10 percent considered of voluntary matches arranged by municipal labor bureaus" (1997, p.173).

[12] "If one looked closely at the process by which established urbanities (as opposed to new entrants from rural areas) found or changed jobs, the continuities with the recent past were striking. State employment remained the primary destination among new entrants as well as among the already employed, subsidies and wages tied to time and rank provided 70 percent of annual income and inter-city job changes accounted for only a small fraction of inter-firm transfers." "Barriers to job changed even when they only involved moves between firms in the same city also remained high." (1992, p.1064-65) Annual job change rate within the state sector was only less than 2 percent, with half of the moves resulting from retirements not inter-firm transfers. Even with the goal of increasing this rate to 5 percent, or less than three different employers for the entire working life, the number still falls far short of that in West Germany (5.9), or the Soviet Union (8). It will be close to Japan (2.6)" (Davis 1992, p.1066).

[13] This contradiction of increasing inequality and persisting equality has caught the attention of many Chinese scholars (e.g., Li 1998; Zhao and Li 1997).

majority of urban Chinese who still affiliate with work organizations, their geographic location, employment sector, and work units have all become so much more important in determining their livelihood and status in the society.   Studying this new pattern of inequality not only reveals the underlying dynamics of inequality in urban China, but also requires a new approach in the studies of social stratification in general.

Locales   A salient feature of China's economic system following the reforms is the strengthening of local government's power as well as responsibilities to manage the local economy. At the same time when the relationship between the central government and individual enterprises has weakened substantially over time, the ties between enterprises and local governments have strengthened in an unprecedented way.[14]

 Two institutional arrangements are critical for understanding the rise of the local governments' power: the nature of China's property rights regime, and the fiscal reforms carried out by the central Chinese government in the mid 1980s (Granick 1990; Wong 1992; Walder 1992, 1994; 1995b; Wang 1995; and Oi and Walder 1999). Unlike the former USSR or countries of the East European Bloc, China has not had a wholesale privatization of public assets.   Rather, what happened is mostly either decentralization of control or limited experiment of workers' ownership. Over the past two decades, the number of enterprises directly under the central government or its ministries has declined drastically. The control is turned over to the enterprises, which are now under the jurisdiction of various levels of local governments.[15]

Up to the mid 1990s, Chinese reforms in the state finance and taxation systems also clearly tilted the balance of economic power from the central state to local governments. Prior to the reform, profits from state and collectively owned firms were turned over to the state. In turn, firms received allocations for labor and capital for production. The central government also made most revenue and expenditure decisions. After the mid 1980s, two important changes took place, first, between the government and the enterprise, and second, between central and local governments. For enterprises, instead of submitting all their income to the state, they were now under a taxation system

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[14] A former senior economist at the World Bank summarized the ascendance of local government's power in urban China in the late 1980s as the follows: 'Perhaps the most surprising hypothesis emerging from recent World Bank work on China is that an unusual degree of local autonomy exists in urban areas. The central and provincial governments appear to have yielded to local governments the bulk of real authority in such diverse areas as the ownership and control of economic enterprises, the administration of the national tax system, and financing of urban and social infrastructure, and the policy and regulatory reforms necessary to improve cost recovery and the efficient management of public assets. To the extent unknown outside the developed world, China's cities are becoming their own masters except where very large investments are concerned (and particularly if an increasingly rare equity infusion from a higher-level government is required" (Hammer 1990, p.240).

[15] As Granick (1990) observed, decentralization of industrial control in China actually dated back to the late 1950s. The number of industrial enterprises under the central government's guidance rose from 2,800 in 1953 to 9,300 in 1957, a rise during China's first Five-Year Plan under the heavy influence of the Soviet style planning and management. Following the Great Leap Forward in 1958, however, the number was cut drastically, to only 1,300 (1990, p.40). Further decentralization in the early 1970s turned 95 percent of centrally-supervised enterprises to local supervision. Supervision entitled local government to control revenues as well. "During the 1980s, it was said, the right to the revenue generated by a given enterprise was more related to supervisory tasks over the enterprise than to original investment" (p.43).

by which they only needed to pay the state taxes and certain portion of their profits.[16] For local governments, they were not only allowed to keep taxes under their jurisdiction, but also a portion of other local revenue.[17] Local investment rose accordingly, with its share in total investment rising from 46 percent in 1990 to over 60 percent by 1994.[18] The rise of local government's importance is not just limited to capital investment. Starting in the mid 1980s, local government's share of total government expenditure rose to an unprecedented high level and stayed that way. By the early 1990s, local governments' expenditure accounted for over 70 percent of all government expenditure.[19] To augment revenue, local governments, against repeated warnings from the central government, levied many different kinds of local fees and taxes against enterprises under their jurisdiction. One estimate put local revenue from such sources at 500 billion *yuan* for

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[16] The first major reforms took place in 1983 and 1984. During the planned economy era, enterprises were charged a single tax known as production and commerce tax to the state, but no income or revenue taxes. Enterprises were also required to submit all their profits. With these reforms around the mid 1980s, enterprises were required to pay a fixed rate of taxes on their income, and were allowed to keep a portion of their profits after paying taxes (Xiang 1999, p.331-336).

[17] This reform, implemented in 1985, was characterized by "classifying types of taxations, verifying income and expenditure, and clarifying rights with each level." With such a reform, taxes were classified under three types: those belong to central government, to local government, and to both central and local government (to be shared). Along with this classification of taxes, expenditure was also classified into those born by the central government versus by local government. The policy, with the exceptions of few provinces, notably Guangdong and Fujian and a few minority areas, was set for a period of five years. Such a reform was designed to give local governments more incentive and power to run their economies, while lifting off from the state unlimited responsibilities under the previous reforms. With the state facing increasing pressure from deficit spending after the mid 1980s, in 1988 certain adjustments were made for the central government to squeeze more income from fast-developing provinces and to subsidize poor provinces more. Among major local government taxes including income taxes of state owned enterprises at local levels, and among major local expenditures are local economic development and local education and public health (Xiang 1999, pp.333-336). Also, see Oi (1992) for a detailed account of the fiscal arrangement and types of local government incomes after the reforms.

[18] The amount of local government capital investment for China as a whole reached 441.4 billion (*yuan*) in 1995 (NBS 1996 p. 33). Part of this increase could be due to housing investment, which is mostly local. In 1995, total housing investment was 71.4 billion *yuan*, rising from 17.3 billion out of 170.38 billion of total basic investment in 1990. The share of housing investment as total basic investment, however, did not increase during this time period. Source on same page.

[19] The rising economic role of the local government is also seen in another kind of finance arrangement, "extra-budgetary" revenue and expenditure. These revenues and expenditures are outside of the regular budget and have been traditionally more in the hands of local governments. Local governments' share in this type of resources rose from around 60 percent in the early 1990s to over 80 percent in the mid 1990s (NBS, 2000, p.271). A major swing back to giving more power to the central government took place in 1994. This most recent major reform was partly due to the reforms in the late 1980s that left the state with too little income and insufficient power. Under the new taxation system, there is no longer the separation of taxation domains between central and local state-owned enterprises. They all need to pay taxes to the state. The new taxation system allows the central government to have more revenue for macro economic control and for inter-regional reallocation. It also contains an element that the central government rebates local government for certain state taxes collected. In the late 1990s, the central government's tax revenue witnessed an impressive increase: 20.3 percent over the previous year in 1994, 17.8 in 1995, 14.4 in 1996, 19.2 in 1997, and 7.1 in 1998. With the exception of 1998, increase in state tax revenue outstripped the growth in GDP (Xiang 1999, p.355-366).

1996, amounting to about 7 percent of China's GNP in that year. Most of such income went for income and welfare of local residents (Yang 1997, p.9).

As active agents engineering growth and regulating distribution, local officials also have at least three motivations to be deeply involved in the economy. First, economic growth and improved standard of living are the primary sources of political legitimacy. This is the case at every level of the Chinese communist bureaucracy. Higher levels of the bureaucratic establishment use economic growth as a central criterion to determine the appointment and promotion or demotion of lower level officials. Second, as pointed out by Oi (1995), the Chinese government is a bureaucracy that has a long tradition of engineering economic growth. Managing the economy is not something new to the local Chinese governments. What has changed is the institutional arrangement from a more centrally controlled planned economy to a market-oriented economy. If anything, local officials now have a greater power to exercise their control over local economies than during the planned economy years. Last but not the least, local officials' personal welfare, from salary and bonuses, housing, to sedans, banquets, cellular phone bills, and overseas trips, also depend on the local fiscal coffer, which is increasingly intimately linked to the local economy (Walder 1995b).

Local governments are not only major players in promoting economic growth within their boundaries, they also serve as agents to reinforce boundaries and to exclude non-members. A good example is how cities designed their own regulations to exclude migrants from certain jobs (Solinger 1999). While migrants, mostly from rural areas, have been welcomed to cities to provide needed services, cities, even including the capital city of Beijing and the largest metropolis, Shanghai, issued formal regulations to exclude migrants from certain jobs that appeared more attractive to urban unemployed people. These regulations not only specify job categories reserved for urban residents, but also make explicit suggestions that urban residents not be underpaid compared with "outsiders." Employers violating these restrictions may face stiff fines.[20] In some cases, urban employers using migrant laborers have been required to contribute to an unemployment fund for each migrant laborer they hire. This fund, however, is created only to help unemployed *urban* laborers.[21]

Industrial Sector and Ownership Type Economic reforms in the past decades have also injected new meanings to the roles of industrial sectors and ownership types in income distribution. The changes are both political and economic. Politically, an ideological shift has allowed the rapid growth of an economic sector that is outside of the state ownership. The non-public sector includes not only individuals working for private employers or those who are self-employed, but also those working in foreign owned or joint-venture firms. Income distribution in this sector does not subject to the same stipulations as that in the state-owned sector. Unable or unwilling to match the welfare benefits provided with employment in the publicly owned sectors, firms in the private

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[20] The Labor Bureau of one of its Beijing's districts, for example, stipulated that at least 35 types of jobs should not be open to migrants. The Beijing Municipal Labor Bureau also made recommendations to local employers suggesting that the wages for laid-off urban employees not be below those of the labor cost of migrant laborers. *People's Daily*, Overseas edition, May 25, 1998, page 2.

[21] In Shanghai, for instance, a 50 *yuan* per-person contribution is required. Half of the revenue from this source is centralized at the city level to be used for reemployment of Shanghai local resident laborers, and the other half stays with district labor bureaus (Wang, Zuo, and Ruan, 2002).

sector also used higher pay to compensate for the lack of benefits, especially housing. Within the state owned sector, while some firms have further prospered with the backing of the state, others have sank due to their total dependence on the state.

Economically, rapid economic growth inevitably meant re-ordering of the ranking of industrial sectors. Industries deemed essential under the planned economy system, such as mining, geological survey, construction, and heavy industry, start to lose their old glory, as new sectors such as electricity, telecommunication, banking, and real estate rise to become new stars. The shift in the hierarchy of industrial sectors is more than an outcome of technological change. It reflects both the socialist history and the policy priorities set by the leadership during the reforms. Employees in industries that have monopoly power enjoyed collectively an income level and welfare provisions far exceeded those in other sectors. In 1995, for example, the average wage of employees in real estate industry was 22 percent, in banking 35 percent, and in electricity industry 37 percent higher than the national average wage (Wang 2002).

Work Organizations   A greater source of stratification in income in urban China originates from an organizational level lower than the city and industries. This is the urban Chinese work organization, or *danwei*. Whereas under socialism better work organizations meant better welfare provisions and higher prestige, in the era of reforms the role of *danwei* has become more crucial to many urban residents, often serving as a lifeboat. Workers and their whole families become urban poor when their enterprises go broke. At the same time, those working in profitable work organizations can enjoy all kinds of benefits, from better pay, jobs for children, to virtually free apartments. It is widely known that all organizations have their own "little coffers" (*xiao jiinku*), or secret/semi-secret accounts, evading auditing from the government. Funds deposited in these accounts are not only used for entertainment by officials but also used to accumulate and to distribute bonuses to employees. Urban Chinese work units in other words have been using the resources they possess to protect first the welfare of their employees and their families.[22]

A key to understanding the increased role of work organizations is the nature of property rights regime.[23] Chinese urban work organizations were central to the social and political organization under the planned economy system because they were the controlling arms of the state. They now have an increased role in economic organization and welfare provision because they have been liberated from the hands of the state. The public ownership under socialism was effectively a collective ownership, segmented into different regions, sectors, and work organizations. Differently endowed work

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[22] The earlier signs of the rising importance of *danwei* can be traced back to the early 1980s when the *ding-ti* (replacement) practice emerged. Faced with a general shortage of employment opportunities in the wake of the Cultural Revolution, children were allowed to replace their parents to be employed in the same work unit. Many work organizations also created their own subsidiary enterprises to employ children of their employees.

[23] Property right, as generally defined, is a bundle of rights that includes the right to transfer, to dispose and to derive income from. Walder 1994 and Walder and Oi 1999 review the literature on property rights and discuss the relevance of property rights to the reforming Chinese society. Drawing from previous literature on property rights, they identify three types of rights: use, appropriation of returns, and transfer. Most important changes in China have been a downward reassignment of use and appropriation rights (to lower level of government hierarchy, to firms, and to households), while the state retained its control over transfer right.

organizations did not have the rights to transfer and to dispose the collectively owned property during the era of central planning, but they possessed the right to derive income. Even before recent reforms, unequal status of the *danwei* in the Chinese economic and political hierarchies formed a basis of inter-group inequality.[24] Walder argues similarly that it is this segmented property right regime under socialist planned economy that served as the key institutional basis for the redistributive economy (Walder 1992). The Chinese urban work units are therefore "minor public" structures, as compared with the state, the "major public."

Devolution of public ownership from the state to work organizations has resulted in a rapid increase in the economic resources of the minor publics. An example to illustrate this point is the changing composition of revenues reported to the government. The area that has witnessed the greatest increase in "extra budgetary" revenue is the revenue from "administrative and institutional units." Though designated as non-profit and non-productive, these units have become the most impressive moneymakers. In 1985, the combined revenue from such units was 23.32 billion *yuan*, by 1990 it doubled to 57.7 billion, and by 1995, it literally quadrupled again, to 223.5 billion, with a pace doubles that of the overall government revenue increase (NBS 2000, p.267).[25] What has emerged in urban China so far is therefore not an economy dominated by private ownership, but a mixed economy with both public and private ownership, and most commonly, with what Stark labeled as a "recombinant" property rights regime (Stark 1994, 1996). At the same time that the central state is no longer fully and directly responsible for employment and welfare of urban residents, it has also relinquished its nominal control of public property in most cases. Enterprises are now not only let to go bankrupt, but are also allowed to transfer and to dispose their assets. Together with locales, ownership type, and industries, work organizations have become a central category in structuring income inequality in urban China.

Research Design, Methods, and Data sources

Guided by a theoretical formulation that treats categories as important sources of social inequality, we examine the roles of institutional categories, especially locales, ownership types, industrial sectors, and work organizations in the overall rise in income inequality in urban China. We do so by modeling the effects of the groups versus those of individuals in income determination via both descriptive and multivariate approaches.

Modeling Group Effects

To examine the separate roles of categorical and individual characteristics in the rise of income inequality in urban China, we employ two sets of methods. First, we construct

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[24] Naughton put it this way: "Even though the *danwei* was required to turn over virtually all its surplus to the government, the reality was that the *danwei* had at least initial control of a large revenue stream, and the diversion of even a small proportion of that revenue could have a significant impact on the workers' standard of living. … 'Collective' benefits were seen as being ideologically preferable to individual wage increases" (1997, p.175).

[25] The overall government revenue increase was only 46.6 percent between 1985 and 1990, and 2.13 times between 1990 and 1995 (NBS 2000).

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descriptive measures of income inequality that decompose the overall income inequality into those between-categories and within-categories. Second, we use multivariate and multi-level analytical tools that allow explicit modeling of group and individual effects separately. Among the common measures of income inequality, Gini index is the most commonly seen and best known. This measure, however, does not allow the separation of different sources of income inequality. A measure that allows such decomposition is the Theil index, developed by Henri Theil in 1967 (Allison 1978).[26]

In examining determinants of income, we employ two statistical tools to differentiate the effects of categories from that of individuals. Our first set of analyses rely on analysis of variance, which allows us to attribute the variance in income to individual characteristics, as well as to categorical variables such as city, ownership types, and industries.

Our second set of analysis uses multilevel modeling, in which we treat income as being affected by factors at two levels: individuals and work organizations. We use hierarchical linear model (HLM) to estimate simultaneously equations at both levels (Bryk and Raudenbush 1992; Raudenbush and Bryk 2002). At the micro or the individual level, we model income as an outcome of individual characteristics as the following:

$$INCOME_{ij} = \hat{a}_{0j} + \sum_{q=1}^{Q} \hat{a}_{qj} X_{qij} + \mathring{a}_{ij}$$

Where $\hat{a}_{qj}$ ($q = 0, 1, \ldots, Q$) are level-1, or individual level, coefficients, and X_{qij} are level-1 predictors for case i in unit j, and $\mathring{a}_{ij}$ is the level-1 random effect of each individual and is assumed to be independent and normally distributed with a variance of $\boldsymbol{s}^2$. At this level, we use group-centered independent variables. Thus, $\hat{a}_{0j}$ becomes the group mean income for individuals in the *jth* organization.

At level- 2, or the level of work organizations, we treat level-1 coefficients as outcomes of level-2 variables. Specifically in this paper we only treat the intercept of the level 1 equation, $\hat{A}_{0j}$, as an outcome of level- 2 variables. In other words, we assume that the slopes in the level-1 equation do not vary across unit organizations. Such a simplification is based on two considerations. First, finding out what organizational characteristics account for differences in the mean income of a work organization is in itself a first step to identify categorical effects. Second, results of exploratory data analyses did not reveal major effects of level-2 variables on the coefficients of level-1

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[26] It calculates inequality by the following formula:

$$T = \frac{1}{n} \sum_{i=1}^{n} \left(\frac{x_i}{\boldsymbol{m}} \right) \ln \left(\frac{x_i}{\boldsymbol{m}} \right)$$

Where x_i represents an individual's income and $\grave{\imath}$ is the mean income of all individuals.

Moreover, this index can also be decomposed into two parts, as expressed below:

$$T = \sum_{j=1}^{J} \left(\frac{p_j \overline{X}_j}{\overline{X}} \right) \ln \left(\frac{\overline{X}_j}{\overline{X}} \right) + \sum_{j=1}^{J} \left(\frac{p_j \overline{X}_j}{\overline{X}} \right) T_j$$

Where $\overline{X}$ is the grand mean of income and $\overline{X}_j$ is the mean income for individuals in group j, and p_j is the proportion of individuals belong to group j. The first item on the right hand of the equation measures between-group component of the inequality. Instead of using individuals, groups are used as the units. This item is therefore the value of inequality if everyone within each group, j, received the same income for that group. The second item on the right hand side of the equation is the weighted average of the within-group inequality measure for each group, Tj (Allison 1978).

variables. This simplification leads us to postulate that the group mean of individual income (the intercept at the level-1) is influenced by attributes of work organizations. In other words, we hypothesize that organizational variables have a significant effect on individual income by affecting the group mean income in each of the organizations. The level-1 intercept therefore becomes:

$$\hat{a}_{0j} = \tilde{a}_{00} + \sum_{s=1}^{S} \tilde{a}_{qs}G_{sj} + \grave{\imath}_{qj}$$

Where $\tilde{a}_{qs}$ ($q = 1,\ldots, S_q$) are level-2 coefficients, G_{sj} are level-2 predictors or group-level variables (such as the rank or size of the work organization) and $\grave{\imath}_{qj}$ is the level-2 random effect which is assumed to be normally distributed across unit organizations with a variance of t.

Data Sources

There are two main data sources used in this study. First, we use a sample from China's Urban Household Income and Expenditure survey data for the decade of 1986 to 1995. Our sample survey data cover three provinces, close to 30 cities of various sizes and over 2,000 households annually over the one-decade time under study.[27] The annualized individual level data from these surveys provide the basic source for constructing indices of inequality trend as well as for conducting statistical analyses of income determination patterns in urban China. The second data source comes from the Survey of Chinese Work Organizations.[28] The most noticeable advantage of this data set is that its research design generated a sample of individuals that are nested within work organizations. This survey simultaneously collected data on characteristics of both individual employees and work organizations. The multi-level structure of this data set enables us to separate

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[27] Conducted by the Urban Social and Economic Survey Organization of China's National Bureau of Statistics, the questions asked in the survey changed over the decade, but they all included detailed information on income, personal background, and consumption expenditure. From the individual background data, group membership information (employment sector, geographic location, and industry) can be extracted. These data were collected by household book keeping, supervised by professional interviewers from the government statistical agencies and checked and aggregated on a monthly basis. These three provinces, while cannot be said to represent all China, are nevertheless appropriate cases representing different parts of China that have undergone different changes during economic reforms. Guangdong province was the first province to enjoy a policy relaxation from the central government with more freedom to carry out economic reforms from the early 1980s. Liaoning province, having served as an important industrial basis under the socialist planned economy, has suffered the most from this legacy. Its heavy concentration of large state owned enterprises has made the economic transition much harder. Sichuan, the largest Chinese province until the mid 1990s, locates economically somewhere in between the two provinces above.

[28] Conducted in 1993 by the National Research Center for Science and Technology Development of the Ministry of Science and Technology, the survey initially planned for a selection of 10 work organizations in each of the 10 cities selected, with 40 employees in each of the chosen work organizations. The sampling procedure included three stages. First, ten cities are randomly selected from 516 cities nationwide. These cities included in the survey are Beijing, Shenyang, Wuhan, Guangzhou, Lanzhou, Chengdu, Shijiazhuang (above all national capital and provincial capital cities), and Baoding, Suzhou, and Luoyang (medium sized cities). Then, within each of these cities, simple random sampling was used to choose 10 work units. Finally, 40 employees were selected through, again, simple random sampling method in each work units.

different sources of inequality generated by attributes both within and between work organizations. At the same time, it also allows us to discern the different effects of individual traits on income in different work organizations.[29]

Our data sources contain several limitations that bear implications for our analyses. First, neither of our samples includes rural immigrants who resided in cities at the time of surveys.[30] Second, similar to most household income surveys, our samples are likely to exclude high-income individuals due to their unwillingness to be interviewed. These two data limitations may well result in an underestimate of income variation and also income inequality. At the same time, moreover, for both samples, the income variable does not include most in-kind income from work organizations. Since in-kind income is more likely to be equally distributed within work organizations, omission of in-kind incomes may result in a bias in the other direction, namely to overestimate income variation. Third, although our samples cover more than 40 cities with various characteristics, they are not nationally representative surveys. The relatively large number of cases included in these two surveys, however, makes our results at least suggestive of the overall income distribution dynamics in urban China.
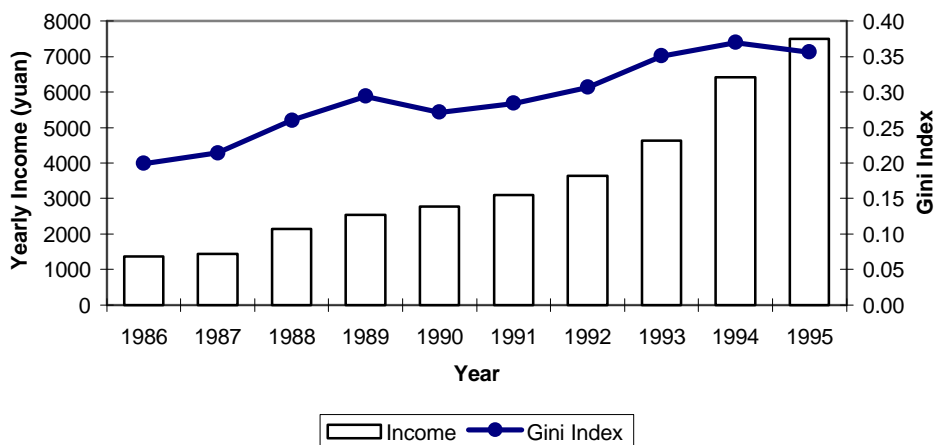
Decomposing Income Inequality

Rising Income and Rising Inequality

Between 1986 and 1995, urban Chinese experienced both an unprecedented income increase and an escalation in income inequality. Using China's Urban Household Income and Expenditure Survey data, we calculate both income increase and income inequality measures for the decade of 1986 to 1995. As shown in Figure 1, for urban employees included in our sample, their nominal mean yearly income increased by more than five folds in a decade time, from 1,329 in 1986 to 7,491 *yuan* in 1995. Adjusting for the rampant inflation during most of the decade, real income over this time period rose by about 70 percent, still a truly impressive record for China's recent history. Income inequality rose by a magnitude almost similar to that in real income increase, about 70 percent. In the mid 1980, urban income inequality was at an extremely low level, only 0.2 measured by the Gini index. By the mid 1990s, it rose to over 0.35. It is during this decade that urban China changed from an egalitarian to an unequal place.

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[29] At the end of the interviewing process, 3293 valid questionnaires were obtained, among which only 3130 are identifiable to belong to 94 unit organizations in a later process of data cleaning. Starting from these 3130 cases, we further cleaned the data by deleting those with missing income or other covariate variables. At the same time, we limit our analyses to individuals with a formal job and between ages 19-60 since we are interested only in work organization stratification in this analysis. Cases with suspicious income (e.g., yearly income below 600 *yuan*) are also excluded from our analyses. Finally, we only keep work organizations that have at least 15 valid cases since we need a reasonable sample size at the first level (individual level) for our multi-level analysis. At the end, the actual number of individual cases used in our analysis is 2404. These individuals are distributed among 81 work organizations, and the number of individuals in each work organization varies from 15 to 38.

**Figure 1 Growth with Inequality: Income and Inequality
among Urban Chinese Employees, 1986-1995**

    The contour of inequality increase, as shown in Figure 1, also followed closely
the different phases of urban economic reforms. The decade-long increase in income
inequality is characterized by two periods of rapid increase, separated by a noticeable
reversal in between. The first period of rising inequality occurred in the late 1980s, when
the Chinese price reforms took place and when inflation swept urban China at double
digits. Rampant inflation, widely perceived corruption, and drastically increasing
inequality as shown here, no doubt all contributed to the urban unrest and massive
demonstrations seen in Chinese cities in the spring of 1989. The crackdown in 1989 not
only put a hold on economic reforms and inflation, but also on the rising inequality trend.
There was in fact a reversal in the rising trend between 1989 and 1990. Rising inequality
picked up its speed again in the early 1990s, following a call for deepening reforms made
by Deng Xiaoping during his tour of the Special Economic Zone of Shenzhen, who
feared that the 1989 crackdown might derail the Chinese economic reforms.

*Decomposing the Rise: Categories versus Individuals*

Locales   A major contributing factor to the rapid increase in income inequality is due to
enlarging gaps between categories, first among different locales. Among the three
provinces included in the sample of Urban Household Income and Expenditure Survey
data, the share of inter-provincial urban income inequality as overall urban income
inequality (measured by the Theil index) rose from less than 2 percent in 1986 and 1987,
to close to 25 percent in 1989, and to over 40 percent in the early 1990s. One main
reason for this rapid increase is the inclusion of the province of Guangdong in our
sample.[31]

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[30] The Urban Household Income and Expenditure Survey drew its sample from the list of urban households
with permanent urban household registration, and the Survey of Chinese Work Organizations only sampled
those with a formal job in large organizations.

[31] Over the decade after the mid 1980s, Guangdong has stood out as a province with an average urban
employee income well above most other provinces in China. The inter-provincial disparity based on these

At the city level, a level of locale that makes more direct political economic sense, a similar, if not more pronounced trend also emerged. As shown in Figure 2, at the same time when the overall inequality (the Theil index) increased by three-fold, from less than 0.07 to over 0.21, the share of the inequality that is inter-city rose by five-fold, from 10 percent in 1986 to 50 percent in 1993 and 1994.[32] By the mid the 1990s, in other words, half of all urban income inequality can be accounted for by the city level geographic location alone.

Figure 2 Rising Inter-City Inequality, Urban China, 1986-95
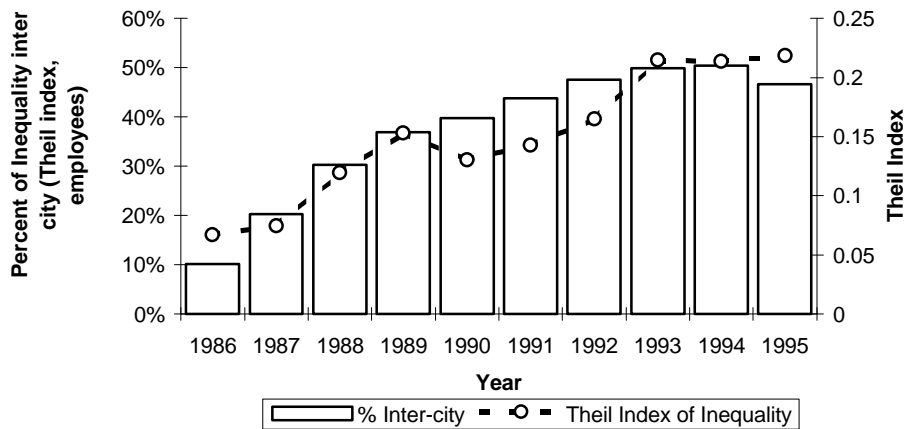
Can this sharply increased inter-city inequality be due to something that has been labeled as uneven regional development? In other words, does the rising inter-city inequality simply reflect divergent economic development and different costs of living across cities? Not necessarily so. In the Unites States, for example, where cost of living varies vastly from places like the New York City to Wichita Falls, Texas, the share of income inequality that can be accounted for by inter-city inequality was only 4 percent among employees in 1989.[33] Different average wage levels and different costs of living do not necessarily lead to a high level of inter-city inequality as in the urban Chinese case.

Inter-ownership type and Inter-industry Inequality   Two other categories in urban China, ownership type and industrial sector, also play important roles in shaping the

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three provinces, nevertheless, may not be an exaggeration for all China, because while Guangdong is included, many poor provinces such as those in the northwest of China are also excluded.

[32] Note that inequality increase measured by the Theil index is more than that measured by the Gini index. This is due to the quality of the Theil index, which is more subject to income transfers between the extremes in the income distribution than the Gini index (Allison 1978).

[33] This analysis is based on the 5 percent public use micro sample data of the 1990 US census, which include employment and income information for 1989. We draw a random sample of 32 from a total of 262 Metropolitan Statistical Areas (MSA). Only current employees are included in the sample. The number of individuals in the chosen sample is 53,634. We are deeply indebted to Professor Philip Cohen for his kind help in providing the US census data and in selecting the sample for our analysis.

pattern of urban income inequality. Table 1 presents the share of income inequality (Theil index) by these two categories.

Table 1 Shares of Income Inequality (% of Theil Index), Ownership Type and Industrial Sector, Urban China, 1986-1995

Year	Ownership Type				Industry			
	Liaoning	Sichuan	Guangdong	Combined	Liaoning	Sichuan	Guangdong	Combined
1986	11.3%	5.4%	6.8%	6.3%	13.4%	7.6%	6.8%	6.4%
1987	5.3%	13.3%	4.1%	6.3%	3.0%	7.6%	6.6%	4.5%
1988	13.0%	11.0%	3.0%	5.6%	4.9%	2.9%	4.8%	1.8%
1989	8.6%	11.0%	2.8%	3.4%	2.2%	6.3%	4.4%	3.4%
1990	9.8%	14.6%	2.8%	3.6%	2.2%	7.1%	4.9%	3.4%
1991	7.5%	10.5%	1.5%	3.6%	2.8%	3.9%	3.5%	2.5%
1992	10.4%	16.7%	2.7%	5.2%	4.3%	5.0%	3.8%	4.6%
1993	12.2%	14.3%	3.5%	7.1%	3.1%	5.5%	4.5%	4.3%
1994	9.9%	14.0%	6.0%	7.1%	5.4%	12.1%	9.2%	6.7%
1995	8.7%	12.5%	5.1%	6.8%	3.4%	10.2%	7.4%	4.6%

Ownership type accounted for a significant share of urban income inequality, though considerably less compared with the role of locales. For the three provinces in our sample combined, the share of income inequality index accounted for by ownership type was about 6 percent in the mid 1980s. It dropped to below 4 percent by the end of the 1980s, and edged back to over 7 percent by the mid 1990s. The importance of this category variable varied in the three provinces. In both Liaoning and Sichuan, ownership type played a more important role than in Guangdong. In these two provinces, ownership type alone accounted for around 10 percent or more of income inequality.

Similar to the role of ownership types, inter-industry inequality also first declined and then increased in the decade after 1985. The share of inter-industry inequality as total income inequality dropped from around 8 percent in the mid 1980s, to around 4 percent throughout most of the decade, then rose to the 5 to 6 percent level around the mid 1990s. Similar to inter-ownership type inequality, urban Sichuan province again appears to be the most segregated across different industries.

Inter-ownership and inter-industry income inequalities, combined, accounted for over 10 percent of the overall income inequality in urban China by the mid 1990s. Their effects also varied from province to province, as they accounted for as much as over 20 percent of overall income inequality in the province of Sichuan. The effects of these and other categorical factors on income inequality, however, are not independent of each other, as the categories overlap in their effects (e.g., higher income industries tend to be state-owned and located in certain regions). To disentangle the independent effect of each main category and to distinguish the role of categories from those of individual characteristics, we resort to multivariate analysis.

Categories Versus Individual Characteristics in Income Determination

Income inequality among individuals is not only a result of categorical differences delineated above, but also of factors at the individual level, including a person's educational attainment and work experience or skills. The next task in our study is therefore to separate the inequalities associated with groups versus those associated with individual characteristics, and to examine whether the relative importance of the categories has declined *vis-à-vis* the characteristics of the individuals during the course of China's recent transitions.

Locale, Ownership Type, and Industrial Sector

To examine the relative importance of individual and group membership characteristics in income determination, we follow Xie and Hannum (1996) and use a relatively simple method, analysis of variance (ANOVA).[34] The dependent variables in this part of the multivariate analysis include total yearly income of currently employed individuals in the three urban provinces, as well as incomes separated by base salary or wages and other labor incomes (all transformed into their log form). Base salary or wages are more subject to state wage policies than other labor incomes. Other labor incomes include bonuses, job subsidies and allowances, overtime pay, and incomes from secondary employment. These other labor incomes made up between 40 and 60 percent of total labor income among these employees during the decade. Independent variables used in the analyses include the commonly used ones in studying income determination, such as gender, educational attainment, seniority (indicated by the length of employment), and occupation, as well as variables indicating broad categories. The latter include ownership type, industry, and in particular, the city an employee lives in. All independent variables are treated as categorical variables. The analyses are carried out both for 1988, the first year we have individual data by income sources, and for 1995, the end of the period under study.

The results are summarized in two tables, Table 2 and Table 3. Table 2 presents results comparing only models: models with only individualistic level variables versus models with category variables. Only total income of the employee is used in the comparisons. Table 3, by contrast, presents more detailed information on the relative importance of each and every variable in determining urban employees' incomes. Whereas results in Table 2 provide evidence to support a general point that category variables beyond the individual level significantly increases the explanatory power of the model, results in Table 3 allow comparisons of different variables concretely.

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[34] Such a method allows the breakdown of all the variance in the dependent variable, in our case, income, to different sources. For example, such an analysis can inform us what proportion of the income difference among individuals is due to their gender, or due to their educational attainment. It can also inform us what proportion, if any, is due to the individual's employment sector or the geographic location of employment and residence.

Table 2 Categories as Explanatory Variables: Urban Income Inequality, China, 1988 and 1995

Model	1988			1995		
	R^2	df	F	R^2	df	F
1) Base: 'Education, Gender, Employment Length, and Occupation'	0.3529	69	---	0.1908	66	---
2) Model 1 plus 'Ownership type' and 'Industry'	0.3722	87	1.34	0.2559	84	3.67
3) Model 2 plus 'Province'	0.475	89	17.43	0.447	86	29.72
4) Model 2 plus 'City'	0.5471	117	45.18	0.5091	107	55.19

In Table 2, the comparison of different models is carried out by a F-test. This test statistic is based on the difference in R-squares of the successive models. For instance, in 1988, the "base" model, that includes only an employee's educational attainment, gender, length of employment, and occupation, has a R-square of 0.35. In model 2, two group membership variables are added: "ownership type of the work organization" and "industry." Adding these variables increases the R-square from .35 to .37. The F-statistic resulting from the comparison of these two models, 1.34, suggests that there is no statistically significant difference between the explanatory power of the two models. In other words, in 1988, "ownership type" and "industry" did not make a significant difference in income, once the four variables at the individual level are controlled for. This is not the case, however, for the other two category variables, "province" or "city." Adding them (Models 3 and 4) increases the explanatory power of the model significantly.   The roles of category variables increased during the period under study. Unlike in 1988, adding "ownership type" and "industry" increases the explanatory power of income significantly in 1995. Moreover, both "province" and "city" have a greater impact on income determination in 1995 than in 1988, as shown by their larger F-statistics.

Table 3 Relative Importance of the Determinants of Income, Urban China, 1988 and 1995

1988

Source	Total Income			Base Salary			Other Labor Income		
	Partial SS	df	MS	Partial SS	df	MS	Partial SS	df	MS
Gender	6.67	1	6.67	2.16	1	2.16	15.67	1	15.67
Education	1.82	5	0.36	2.03	5	0.41	16.12	5	3.22
Length of employment	223.14	45	4.96	254.62	44	5.79	230.05	45	5.11
Occupation	16.13	18	0.9	10.51	18	0.58	24.72	18	1.37
Ownership type	15.62	5	3.12	9.63	4	2.41	92.03	4	23.01
Industry	1.6	13	0.12	2.298	13	0.18	8.066	13	0.62
City	221.76	30	7.39	68.27	30	2.28	680.38	30	22.68
Model	693.79	117		537.72	115		1371.41	116	
Residual	574.38	4217		400.2	4049		1901.73	4186	
Total	1268.18	4334		937.92	4164		3273.13	4302	
Adjusted R^2 (%)	53.45			56.12			40.29		

1995

Source	Total Income			Base Salary			Other Labor Income		
	Partial SS	df	MS	Partial SS	df	MS	Partial SS	df	MS
Gender	16.61	1	16.61	13.62	1	13.62	12.87	1	12.87
Education	15.09	6	2.52	14.70	6	2.45	22.98	6	3.83
Length of employment	178.69	47	3.80	140.88	47	3.00	160.55	47	3.42
Occupation	8.96	12	0.75	9.98	12	0.83	15.20	12	1.27
Ownership type	40.29	6	6.72	110.64	2	55.32	59.19	6	9.87
Industry	29.27	12	2.44	9.32	12	0.78	74.48	12	6.21
City	670.38	23	29.15	292.70	23	12.73	1357.62	23	59.03
Model	1348.12	107		874.39	103		2068.02	107	
Residual	1300.16	4886		1555.05	4693		3893.70	4724	
Total	2648.28	4993		2429.45	4796		5961.73	4831	
Adjusted R^2 (%)	49.83			34.59			33.21		

Note: with the exception of the effect of 'Industry' in 1988 for total and for other labor income, all MS are statistically significant at 0.05 or higher level.

Results in Table 3 allow for a more detailed examination of the changing relative importance of income determining factors, not only for total income, but also for income broken down into "base salary' and 'other labor incomes." Two sets of comparisons can be made, one within each year across different categories of income, and the other across time, between 1988 and 1995.[35] First, for each year, the variable "city" not only plays the most significant role in income determination, as the variable with the largest mean sum of squares (MS), its role is also found to be much more important in determining other labor income than base salary and wages. The difference in MS between the variable "city" and the next most important variable is much larger in the other labor income model than in base salary model.[36] In other words, local city plays a much larger role in determining the portion of the income subject to less control from the state. Second, the role of city became more important in 1995 than in 1988 in determining an urban employee's income. For total income, in 1988, the ratio between the most important variable, "city," and the second most important, "gender," was only 1.11 (7.39:6.67). Even for other labor income, the ratio was only 1.45. In 1995, the ratios are 1.75 and 4.59 respectively. Clearly, whereas the total variance in income that is accounted for by all these variables decreased somewhat, the role of geographic location increased substantially. These results are consistent with the earlier decomposition of the overall inequality change.

It is also worth noticing the role of the other two category variables, ownership type and industry. Ownership type is an important factor in determining income, but its role relative to other factors is much greater in the base salary and wage income than for other labor based incomes. The role of industrial sector in income determination has risen during the decade under study. In 1988, similar to what is revealed in Table 2, the variable "industry" was hardly an important factor at all when other factors affecting income are taken into consideration, as in our multivariate analysis here. In 1995, "industry" not only became significant, but also rose to be one of the most important factors. It ranks the fourth, after "city," "gender," and "ownership type," among the seven variables in affecting non-base salary income. It is more important than education, occupation, and seniority, all of them have been shown to be highly important factors determining income in most settings.

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[35] The first column gives the sum of squares (SS), or the variance in income that can be accounted for by a particular source/variable. The second column gives the number of degrees of freedom (df), an indicator of how many categories of a particular variable possesses. Our real interest lies in column 3, the mean sum of squares (MS), which equals to the sum of squares divided by the number of degrees of freedom. This measure can be viewed as the mean variance explained by each independent variable, and it is more suitable for comparison than simply the sum of squares, as a large number of categories tend to result in a large amount of variance, other things being equal. Another useful result is the Adjusted R^2, which gives the percentage of total variance in the dependent variable explained by all independent variables included in a particular analysis.

[36] Though based on a different sample, these results are fairly similar to Xie and Hannum's results for the same year (1996).

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Work Organization as a Source of Inequality

To examine the effects of work organization on income inequality, we turn to analyses of the data from the Survey of Work Organizations. The two main questions we address are: (1) what is the proportion of income inequality between organizations vis-à-vis that among individuals within organizations? (2) After controlling for the effect of conventional predictors at the individual level, what is the predictive power of the exogenous organizational characteristics in explaining individual income?

We use logged yearly income as our dependent variable. Our independent variables include both individual characteristics and organizational attributes. At the individual level, we include variables that have been mostly widely used in previous studies.[37] At the organizational level, we rely on a number of variables that characterize a Chinese urban work unit.[38] Moreover, we also include city as a control variable since as we have already shown, regional difference in income is not negligible in China (see Table 4 for detailed descriptive statistics).

We begin our analysis by partitioning the variance of individual incomes into within-organization and between-organization components. Before going further, we need an acceptable reliability index that shows the group means of income across organizations is reliably estimated.[39] In Table 5 we present results of variance partitioning and reliability estimation. Our reliability index of 0.96 suggests that the sample means of income tend to be quite reliable as estimates of the true group means of individual income across organizations. Also shown in Table 4 is that 53% of the total variance in income is at the individual level and 47% at the organizational level. Such a result not only confirms findings from previous studies suggesting work organization as one significant institutional source of income inequality in urban China (Peng 1992; Bian and Logan 1996; Zhou 2000; Wu 2002), it goes a step further by showing that the

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[37] They are gender (male = 1), age, square term of age, party membership, and education (junior high school or below, senior high school, college). We intentionally have only three dummy variables for education because all individuals in this survey have a formal job in a relatively large work organization and thus our sample has higher educational level than the general population.

[38] The first variable is organizational size. Size is divided into 3 groups, 300 employees or fewer, between 300 and 500, and 500 employees and more. The second is ownership type of the work organization, which has 3 categories: state, collective, and private. State-owned/public work units include government agencies and state owned firms; collective units include both large and small collective firms; private units include private firms and joint ventures. The third variable is rank within the bureaucratic hierarchy, which has the following five categories: ministry (*bu*), department (*ju*), division (*chu*), section (*ke*), and below section level or no rank. We choose to dichotomize work units into high rank and low rank with high rank including those at division level (*chu*) or above. Lastly, based on the yearly amount of tax and profit per capita handed up to the state, we divide organizations into three groups according to profitability: low performance enterprises (less than 5000 *yuan* per capita), high performance enterprises, and non-profit agencies (government and party agencies, research institutes, schools and universities, medical service centers, and other cultural services).

[39] The reliability of our estimate for $\boldsymbol{b}_{0j}$ is defined as the average of the reliabilities of organizations:

$$\sum \left[\boldsymbol{t}_{00} / (\boldsymbol{t}_{00} + \boldsymbol{s}^2 / N_j) \right] / J \,,$$

where N_j is the number of individuals in *jth* organization and *J* is the total number of organizations in our analysis. For more details on reliability, see Bryk and Raudenbush (1992, p.63).

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variation in individual incomes can be attributed almost equally to organizational and individual characteristics.

Table 4: Descriptive Statistics of Work Organization Data Set

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                  LEVEL-1 DESCRIPTIVE STATISTICS

VARIABLE NAME          N       MEAN       SD      MINIMUM     MAXIMUM
Logged income        2404      7.95      0.39      6.40        9.62
Gender               2404      0.53      0.50      0.00        1.00
Age                  2404     33.74      9.38     19.00       59.00
Party membership     2404      0.33      0.47      0.00        1.00
Junior high          2404      0.15      0.36      0.00        1.00
Senior high          2404      0.35      0.48      0.00        1.00
College              2404      0.49      0.50      0.00        1.00
Age^2/100            2404     12.26      7.04      3.61       34.81


                  LEVEL-2 DESCRIPTIVE STATISTICS

VARIABLE NAME          N       MEAN       SD      MINIMUM     MAXIMUM
Size
   300 or below       81       0.19      0.39      0.00        1.00
   300-500            81       0.44      0.42      0.00        1.00
   500 or above       81       0.37      0.49      0.00        1.00
Ownership
   private            81       0.05      0.22      0.00        1.00
   Public             81       0.75      0.26      0.00        1.00
   Collective         81       0.20      0.23      0.00        1.00
Rank
   Low rank           81       0.30      0.46      0.00        1.00
   High rank          81       0.58      0.50      0.00        1.00
Performance
   Low                81       0.41      0.49      0.00        1.00
   High               81       0.19      0.39      0.00        1.00
   Govn't agencies    81       0.41      0.49      0.00        1.00
City
   BEIJING            81       0.06      0.24      0.00        1.00
   SHENYANG           81       0.10      0.30      0.00        1.00
   SHIJIAZH           81       0.12      0.33      0.00        1.00
   BAODING            81       0.09      0.28      0.00        1.00
   LANZHOU            81       0.12      0.33      0.00        1.00
   WUHAN              81       0.11      0.32      0.00        1.00
   GUANGZHO           81       0.05      0.22      0.00        1.00
   CHENGDU            81       0.12      0.33      0.00        1.00
   SUZHOU             81       0.10      0.30      0.00        1.00
   LUOYANG            81       0.12      0.33      0.00        1.00
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Table 5 Decomposition of Variance and Organization Reliability of Income in Urban China in 1993

		% of total variance
Within-Unit Organization Variance s^2	0.081	53
Between-Unit Organization Variance t_{00}	0.071	47
Unit Organization Reliability	0.961	---

Table 6 presents results of multilevel models. Specifically, we present two types of models, with the first (Model I) including only predictors at the individual level, and the second (Models II to III) introducing some characteristics of work organizations by adding variables into the equation of the intercept (group mean income) at the organizational level. The first model shows that among employees associated with work organizations in urban China, an older male employee who is a Communist Party member and has a college education will be most highly rewarded in term of income. On average, a Party member earns 6 percent more than a non-party member, and a college graduate has a similar advantage compared with those ending their education after junior high school. Everything else being equal, a male employee earns 3.5 percent more than their female counterparts, and each additional year of seniority yields about 1 percent more income. Controlling for other individual resources, employees with senior high school education do not earn more income than those with only junior high school education.

We learn further that at the individual level, our variables explain more than one fourth of the variance in income at the individual level (13 percent of the total variance), not too dissimilar to what we learn elsewhere. This result also suggests a mixed picture in the transition period (*cf.* Nee 1996; Bian and Logan 1996; Parish and Michelson 1996; Zhou 2000; Wu 2002). While education, an indicator of human capital and usually rewarded in market economy, plays a significant role in determining individual income, other individual resources such as Party membership and seniority (here manifested by the variable of age) continue to remain important as well.

In the next model, we introduce organizational size, ownership type, rank, and profitability into the level-2 equation that predicts the intercept (group mean income). Adjusting for variables at the individual level, we find that medium-sized work units (vs. small size organizations), state as well as private ownership (vs. collective ownership) (*cf.* Peng 1992), higher rank in the bureaucratic hierarchy (*cf.* Walder 1992; Zhou 2000), and higher economic performance (*cf.* Wu 2002) all contribute significantly to individual income differences. Overall, these variables explain about 18% of the variance at level-2. Work organizations with different attributes bring different premiums to its individual members.

As it has been suggested in our previous analysis and elsewhere (Xie and Hannum 1996), regional difference has been an important source of income inequality. In Model III, we add the variable city to the list of variables used in Model II. The effects of work organization size and rank disappear, while ownership type and profitability remain as important organizational traits. The reason that the variables size and rank are sensitive to the city effect is due to the fact that large-sized and high-rank organizations tend to locate in large cities. Similarly, more private firms are located in the south coastal cities than in others. Comparing with those in Guangzhou, individuals in other cities earn one-fifth to three quarters less. Private firms and public work organizations add, respectively, 28% and 16% premiums for their employees. Individuals in low performance firms not only earn 21% less than those in high profitable firms, but also 18% less than those in non-profit agencies (government-funded). The fact that these non-profit public organizations (*shiye danwei*) do almost as well as the high-performance production work organizations highlights an important feature of the transitional Chinese society, namely that organizations close to the political power and possess unique resources benefit equally if not more than organizations that have market advantages.

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Table 6: HLM Coefficients of Income (logged) in Urban China in 1993

Independent Variables	Model I	Model II	Model III
Mean Income	7.962	7.456	8.232
	(0.030)***	(0.120)***	(0.113)***
Individual			
Male	0.035	0.035	0.036
	(0.011)**	(0.011)**	(0.011)**
Age	0.039	0.039	0.039
	(0.005)***	(0.005)***	(0.005)***
Age^2/100	-0.032	-0.033	-0.032
	(0.007)***	(0.007)***	(0.007)***
Party member	0.058	0.057	0.057
	(0.013)***	(0.013)***	(0.013)***
Education (vs. junior high or below)			
senior high school graduate	0.003	0.003	0.003
	(0.022)	(0.022)	(0.022)
college or above	0.052	0.052	0.052
	(0.022)*	(0.022)*	(0.022)*
Work Organization			
Size (vs. <300)			
300-500		0.192	-0.018
		(0.072)**	(0.059)
500+		0.083	0.019
		(0.066)	(0.045)
Ownership (vs. collective)			
public		0.287	0.163
		(0.109)**	(0.070)*
private		0.506	0.277
		(0.123)***	(0.081)***
High rank (vs. low rank)		0.121	0.071
		(0.073)+	(0.052)
Performance (tax handed up) (vs. low)			
non-profit agencies		0.105	0.178
		(0.078)	(0.055)**
high		0.189	0.208
		(0.079)*	(0.051)***
City (vs. Guangzhou)			
Beijing			-0.416
			(0.157)**
Shenyang			-0.647
			(0.095)***
Shijianzhuang			-0.775
			(0.090)***
Baoding			-0.724
			(0.093)***
Lanzhou			-0.715
			(0.093)***
Wuhan			-0.670
			(0.090)***
Chengdu			-0.606
			(0.098)***
Suzhou			-0.212
			(0.118)+
Luoyang			-0.701
			(0.095)***
% of Variance Explained by the Model			
Within unit organization	27	27	27
Between Unit organization	--	18	69

Note: standard errors in parentheses; N = 2404 for the individual-level variables; N = 81 for the unit organization-level variables.

$+ p < .10$; * $p < .05$; ** $p < 0.01$; *** $p < 0.001$.

Compared with Model II, the proportion of between-organization variance explained in Model III also increases from 18 percent to 69 percent, leaving 31% of the total variance at the organization level unexplained. Given that we have controlled for these conventionally used organizational characteristics, the residual portion of the variance is due to the unobserved factors that are unique to each of these work organizations. In other words, a substantial part of income difference can be attributed to the simple fact that individuals work in different organizations.[40]

What we learn from the analyses above is that in addition to different individual attributes, a large portion of income inequality in urban China is explained by work organizations and their locations. Results from the multilevel analyses by using work organization data are similar to those from ANOVA analyses using individual and city level data. Just as cities themselves differentiate individuals' income after controlling for the characteristics of the individuals, work organizations play a similar role. By bringing to their members either a premium or a penalty, groups or categories contribute in determining individual income in urban China at least as equally as individual characteristics. Given the magnitude of the portion of variance that is explained by the structural characteristics, our result also suggests that organizations also play an equalizer's role in maintaining a relatively less drastic inequality in individual income within their categories.

Discussion

The trajectory and the underlying pattern of rapidly increasing income inequality during urban China's transition away from socialism amply illustrate a fundamental source of social inequality. That is, inequalities are more of structural outcomes than individual wishes and efforts. In the case of urban China, a setting that has experienced a spectacular rise in inequality, categories have played a most prominent role. They not only account for a large share of income inequality, their importance in shaping inequality also increased during the decade under examination. Our analysis thus contributes to the emerging studies of social inequality, which bring macro-structure into institutional analysis of social stratification (Grusky and DiPrete 1990; DiPrete et al 1997). Our results demonstrate that segmentation not only exists within the economic domain, but transcends to the whole society. In urban China, categories created by the socialist practice prior to the reforms have functioned as the institutional settings to define the contour of social inequality in the post-reform era. As central government's control loosened in an emerging market economy, members in various categories began to adopt new strategies in maintaining group boundaries and in pursuing collective benefits. In short, categories and boundaries form durable inequality.

Our formulation also suggests, and in fact emphasizes, the equalizer's role of

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[40] Not shown here, we also tried to include organization-level predictors to model the slopes at the individual-level to see if returns to individual characteristics vary across organizations. Not surprisingly, this effort did not produce any significant effects that could alter the individual-level coefficients. Contrary to findings in the U.S. that indicate returns to individual resources, such as education, vary according to organizational traits (e.g., Stolzenberg 1975, 1978), our result shows the opposite. With no additive organizational effects on returns to individual characteristics, this result also suggests a less significant role of individual resources within different organizations and, thus, a pattern of equality of income distribution within organizations.

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category membership in maintaining group boundaries and in protecting intra-group equality. While individuals in different groups attain different economic outcomes, group membership brings similar group premium that is limited within the group boundaries. One important social implication of such a pattern of inequality increase is therefore that at the same time when the overall inequality level increased drastically, the degree of inequality within each category or group has not increased by the same magnitude, due to the rising share of inter-category inequality. There has been, in other words, a certain degree of equality maintenance within different groups while overall inequality shot up.

This countervailing trend of maintaining within-group equality has been revealed and documented by both case studies and by analyses of survey data. As late as in the mid-1990s, in many urban Chinese work organizations, the "tactic alliance" between managers and workers observed by Walder (1987) a decade earlier remained, and an egalitarian distribution of income continued. Several recent studies have reported that the income ratio between the highest paid employees (top managers) and average workers is no more than three or four to one (Lin and Zhang 1999; Lu 2002). Such an egalitarian practice in income distribution is not only found in urban public work organizations, but also in non-public enterprises, where managers supposedly have greater powers to decide the pay scale. One example of such findings is Kung's (1999) study of 16 village enterprises in four townships. The mean ratio between the mean income for enterprise managers and workers was only 2.79 around 1994. In the publicly owned work organizations, there is also a sense of community, because the company used to be state owned and all workers have been employed in the same factory for a long time and have made contributions. Such a common identity contributed to the need of sustaining a "collusive collection action" (Lin and Zhang 1999).[41]

The pattern of within-group equalization is also one observation that can be made from Xie and Hannum's (1996) careful analysis a 1988 survey data set, and from our own analysis in this paper. Xie and Hannum's study reports that most of the positive regional economic growth effect on individual income is through the bonus share of the income, rather than regular salary or wages (1996, p. 969). Moreover, they also report that the distribution of bonuses is *not* strongly associated with individual characteristics such as years of schooling, experience, party membership, or gender (1996, p. 961-962; also see Wu 2002 for a similar argument).[42] In other words, while income level differed in different cities in China, distribution of income within these cities tend to be rather equal, as least according to the characteristics included in their study.[43] Our analyses in this

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[41] "The widespread practice of sharing a significant part of the proceeds from backyard profit centers among members of the same state agency suggests that, under certain circumstances, provision of public goods to group members may be necessary to sustain collusive collection action" (Lin and Zhang 1999, p. 224).

[42] Regression models with identical independent variables result in a R^2 of 44.60 for salary and wage as the dependent variable, compared with only 3.27 when bonus is used as the dependent variable (Xie and Hannum 1996, Table 2). Moreover, a further analysis by Xie and Hannum conclude, "[f]or the bonus share (B), city is by far the most important factor … the bonus share is mostly determined by geography: at least 77.0% of the small R^2 for the B model is attributable to intercity variation" (1996, p.983).

[43] Xie and Hannum conclude, "we find the correlation between economic growth and overall earnings inequality to be moderate, in part due to the equalizing influence of the negative relationship between the

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paper reveal similar results. Group membership variables such as "industry" and "city" play a larger role in affecting "other labor income" than "basic wages or salaries." Moreover, in places where overall income level is higher, the degree of inequality is actually slightly lower.[44]

A stratification process as shown here is by no means unique for China or other post-socialist societies. A similar example can be drawn from the medical professionalization process among medical professionals in the U.S. In the process of institutionalizing their specialized knowledge, doctors set up rules of credential qualification (Freidson 1970), competed for jurisdiction with others (Abbott 1988), created monopoly over market shares (Berlant 1975; Starr 1982), and maintained professional premium (Berlant 1975; Larson 1977). The pursuit for professionalism is not only about authority, as Starr puts it, it also concerns with "social mobility" (1982, p.17).   From the perspective of stratification, professionalization is clearly a collective process of categorization and opportunity hoarding (*cf.* Tilly 1998). In the case of urban China, categories were not created by group members but by government policies. While group members in urban China may not consciously pursue collective benefits, they maintain clear boundaries and enjoy a group premium, which is exclusive. In such sense, both the Chinese and the US cases illustrate a type of *group-based* mobility.

The categorical nature revealed in this study, as seen in the pattern of income inequality, bears political implications for class formation and social stability in contemporary China. While many observers have asserted that the sharp increase in inequality in China would lead to social unrest and formation of "new" working class, our results suggest a different scenario. Even with a large degree of overall (global) inequality, the degree of local inequality around individuals by comparison is relatively low. In a recent survey conducted in Beijing, more than 95% of the respondents believed that the degree of inequality for China as a whole was too large or somewhat too large and only less than 3% thought it was "about right."   Within their work organizations, however, whereas there were still 48% of the respondents believed that the income gap was too large, 42% actually felt it was "about right" (Wang 2002). These results mirror our results that the creation of categories and the maintenance of boundaries lead to large inter-group income inequality on the one hand, and relative intra-group equality on the other. Individuals in urban China, even by job title all belong to the occupation of workers, are also horizontally categorized into different groups with difference economic outcomes. Group boundaries, under such a scenario, cut through those of classes.

Conclusion

By bringing categories and boundaries back in, we re-direct the institutional stratification research in China and explicitly spell out the "specificity" of institutional settings (Walder 1996). These settings include ownership types, industrial sectors, geographical locations, and work organizations that were created during the high socialism period and

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returns to human capital factors and economic growth" (1996, 977). In other words, "bonuses and subsidies are distributed to workers mainly for their affiliations with profitable work units" (1996, p.983).

[44] The correlation coefficient between the city's relative income level and Gini index among our sample of close to 30 cities is –0.0794 in 1986. It rose to –0.1790 by 1990 and dropped to –0.1338 in 1995.

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that have continued to exert profound impacts upon individual economic attainment. By distinguishing between-group and within-group stratification processes, we also offer an institutional explanation of the sharply increased inequality in urban China and contribute to the understanding of the overall inequality structure.[45] As we have shown, the unprecedented increase in overall inequality in urban China lies in two juxtapositional dimensions: the sharply climbing inequality between groups and the relative equality maintained within groups. In China, perhaps more so than elsewhere, group membership plays an important role in determining income inequality. Whereas vast inequality exists between groups, equality is maintained to some extent within groups. Such a pattern of inequality structure is partly a legacy of the political economy basis created under state socialism, and can partly be attributable to the popular sentiment of equality, at least within one's small group.

How durable will these categories be in shaping future inequalities in China? On the one hand, one can argue that the current inequality may lessen if a more genuine labor market is established. Free movements of labor across regions, industries and work organizations will serve to remove much of the inequality we now see across categories. On the other hand, one can also argue that we cannot underestimate the durability of the categories and the rigidity of the boundaries. Labor markets, as we have seen everywhere, are segregated, not only in emerging market economies, but also in existing mature market economies. In recent years, there has been a rapid increase in migration across rural and urban boundaries in China. Such increased migration, however, has not brought about a corresponding desegregation between urban and rural Chinese. On the contrary, a large number of studies have shown how boundaries, in the form of invisible walls, have been erected to prevent rural migrants to settle in cities (Chan 1997; Solinger 1999; Wang, Zuo, and Ruan, 2002).

Boundaries, as we are reminded here, can be both visible and invisible. This is not only so in the transitional society of China, but also often documented in societies where markets have been long established. We only need to be reminded of, for example, the boundaries between Japanese and Koreans in Japan, between racial and ethnic groups, and between citizens and immigrants in the United States, not to mention that between genders everywhere in the world, to realize how durable categorical inequalities can be.

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[45] Our results also directly shed lights on the debate over the market transition debate. The continuing large impact of categories and boundaries on individual income reflects the mark of redistributive rewarding system in the emerging market. Not only do these "old" categorizations not die out in the new market, members in these groups adopt various measures to maintain boundaries and to exploit their advantageous positions in the pursuit of collective benefits. Clearly, old institutions created under state socialism have exhibited a vibrant new life in the new market. In this sense, we provide cautions to the overemphasis of "newness" in studying restratification process and echo the path dependence perspective (Stark 1994, 1996, Rona-Tas 1998).

References

Abbott, Andrew Delano. 1988. *The System of Professions: An Essay on the Division of Expert Labor*. Chicago: University of Chicago Press.

Allison, and Paul D. 1978. "Measures of Inequality." *American Sociological Review* 43:865-880.

Baron, James. 1984. "Organizational Perspectives on Stratification." *Annual Review of Sociology* 10:37-69.

Baron, James N., and William T. Bielby. 1980. "Bringing the Firms Back in: Stratification, Segmentation, and the Organization of Work." *American Sociological Review* 45:737-765.

—. 1984. "The Organization of Work in a Segmented Economy." *American Sociological Review* 49:454-473.

Beck, E. M., Patrick M. Horan, and Charles M. Tolbert. 1978. "Stratification in a Dual Economy: A Sectoral Model of Earnings Determination." *American Sociological Review* 43:704-720.

Berlant, Jeffrey Lionel. 1975. *Profession and Monopoly: A Study of Medicine in the United States and Great Britain*. Berkeley: University of California Press.

Bian, Yanjie. 1994. *Work and Inequality in Urban China*. Albany: State University of New York Press.

—. 2002. "Chinese Social Stratification and Social Mobility." *Annual Review of Sociology* 28:91-116.

Bian, Yanjie, and John Logan. 1996. "Market Transition and the Persistence of Power: The Changing Stratification System in Urban China." *American Sociological Review* 61:739-759.

Bielby, William T., and James N. Baron. 1986. "Men and Women at Work: Sex Segregation and Statistical Discrimination." *American Journal of Sociology* 91:759-799.

Bryk, Anthony S., and Stephen W. Raudenbush. 1992. *Hierarchical Linear Models: Applications and Data Analysis Methods*. Newbury Park: Sage Publications.

Cao, Yang, and Victor G. Nee. 2000. "Comment: Controversies and Evidence in the Market Transition Debate." *American Journal of Sociology* 105:1175-1189.

Chan, Anita. 1997. "Chinese Danwei Reforms: Convergence with the Japanese Model?" Pp. 91-113 in *Danwe: The Changing Chinese Workplace in Historical and Comparative Perspective*, edited by Xiaobo Lü and Elizabeth J. Perry. Armonk, NY: M. E. Sharpe.

Chan, Kam Wing. 1994. *Cities with Invisible Walls: Reinterpreting Urbanization in Post-1949 China*. Hong Kong; New York: Oxford University Press.

Cheng, Tiejun, and Mark Selden. 1994. "The Origins and Social Consequences of China's hukou System." *The China Quarterly* 139:644-668.

Davis, Deborah. 1990. "Urban Job Mobility." Pp. 85-108 in *Chinese Society on the Eve of Tiananmen: The Impact of Reform*, edited by Deborah Davis and Ezra Vogel. Cambridge: Harvard University Press.

—. 1992. "Job Mobility in Post-Mao Cities: Increases on the Margins." *The China Quarterly* 132:1062-1085.

DiPrete, Thomas A. 1993. "Industrial Restructuring and the Mobility Response of American Workers in the 1980s." *American Sociological Review* 58:74-96.

DiPrete, Thomas A., Paul M. De Graf, Ruud Luijkx, Michael Tahlin, and Hans-Peter Blossfeld. 1997. "Collectivist versus Individualist Mobility Regimes? Structural Change and Job Mobility in Four Countries." *American Journal of Sociology* 103:318-358.

DiPrete, Thomas A., and David B. Grusky. 1990. "The Multilevel Analysis of Trends with Repeated Cross-Sectional Data." *Sociological Methodology* 20:337-368.

DiPrete, Thomas A., and K. Lynn Nonnemaker. 1997. "Structural Change, Labor Market

Turbulence, and Labor Market Outcomes." *American Journal of Sociology* 62:386-404.

Francis, Corinna-Barbara. 1999. "Bargained Property Rights: the Case of China's High-Technology Sector." Pp. 226-247 in *Property Rights and Economic Reform in China*, edited by Jean Oi and Andrew Walder. Stanford: Stanford University Press.

Freidson, Eliot. 1970. *Profession of Medicine: A Study of the Sociology of Applied Knowledge*. New York: Dodd Mead.

Gerber, Theodore P., and Michael Hout. 1998. "More Shock than Therapy: Market Transition, Employment, and Income in Russia, 1991-1995." *American Journal of Sociology* 108:1-50.

Granick, David. 1990. *Chinese State Enterprises: A Regional Property Rights Analysis*. Chicago: The University of Chicago Press.

Granovetter, Mark. 1973. "The Strength of Weak Ties." *American Journal of Sociology* 78:1360-1380.

—. 1981. "Toward a Sociological Theory of Income Differences." in *Sociological Perspectives on Labor Markets*, edited by Ivar Berg. New York: Academic Press.

—. 1985. "Economic Action and Social Structure: The Problem of Embeddedness." *American Journal of Sociology* 91:481-510.

Hammer, Andrew. 1990. "Four Hypotheses Concerning Contemporary Chinese Urbanization." Pp. 233-242 in *Chinese Urban Reform, What Model Now?*, edited by R. Yin-Wang Kwok, William L. Parish, Anthony Gar-On Yeh, and Xu Xueqiang. Armonk, NY: M.E. Sharpe.

Hedstrom, Peter. 1991. "Organizational Differentiation and Earnings Dispersion." *American Journal of Sociology* 97:96-113.

Ikels, Charlotte. 1996. *The Return of the God of Wealth: The Transformation to a Market Economy in Urban China*. Stanford: Stanford University Press.

Kalleberg, Arne L. 1988. "Comparative Perspectives on Work Structures and Inequality." *Annual Review of Sociology* 14:203-225.

Kalleberg, Arne L., and Larry J Griffin. 1978. "Positional Sources of Inequality in Job Satisfaction." *Sociology of Work and Occupations* 5:371-401.

—. 1980. "Class, Operation, and Inequality in Job Rewards." *American Journal of Sociology* 85:731-768.

Khan, Azizur Rahman, and Carl Riskin. 1998. "Income and Inequality in China: Composition, Distribution and Growth of Household Income, 1988 to 1995." *The China Quarterly* 138:221-253.

Knight, John B., and Lina Song. 1999. *The Rural-Urban Divide: Economic Disparities and Interactions in China*. Oxford: Oxford University Press.

Konrád, György, and Iván Szelényi. 1979. *The Intellectuals on the Road to Class Power*. New York: Harcourt Brace Jovanovich.

Kung, James Kai-sing. 1999. "The Evolution of Property Rights in Village Enterprises: the Case of Wuxi County." Pp. 95-122 in *Property Rights and Economic Reform in China*, edited by Jean Oi and Andrew Walder. Stanford: Stanford University Press.

Lamont, Michèle, and Virág Molnár. 2002. "The Study of Boundaries in the Social Sciences." *Annual Review of Sociology* 28:167-195.

Larson, Magali Sarfatti. 1977. *The Rise of Professionalism: A Sociological Analysis*. Berkeley: University of California Press.

Li, Qiang. 1998. "Zhongguo jumin shouru chaju yanjiu yu zhanwang (Research and Prospect of Income Differential among Chinese Residents)." *Xingshiye* 4:40-43.

Lin, Nan. 1995. "Local Market Socialism: Local Corporatism in Action in Rural China." *Theory and Society* 24:302-354.

Lin, Nan, and Yanjie Bian. 1991. "Getting Ahead in Urban China." *American Journal of Sociology* 97:657-688.

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Lin, Nan, Walter M. Ensel, and John C. Vaughn. 1981. "Social Resources and Strength of Ties: Structural Factors in Occupational Status Attainment." *American Sociological Review* 46:393-405.

Lin, Yi-ming, and Zhanxin Zhang. 1999. "Backyard Profit Centers: The Private Assets of Public Agencies." Pp. 203-225 in *Property Rights and Economic Reform in China*, edited by Jean Oi and Andrew Walder. Stanford: Stanford University Press.

Lü, Hsiao-po, and Elizabeth J. Perry. 1997. *Danwei: The Changing Chinese Workplace in Historical and Comparative Perspective*. Armonk, N.Y.: M. E. Sharpe.

Naughton, Barry. 1997. "Danwei: The Economic Foundations of a Unique Institution." Pp. 169-194 in *Danwei: The Changing Chinese Workplace in Historical and Comparative Perspective*, edited by Xiaobo Lu and Elizabeth J. Perry. Armonk, NY: M. E. Sharpe.

NBS, (National Bureau of Statistics). 1996. *A Statistics Survey of China 1996*. Beijing: China Statistical Press.

—. 1997. *China's Statistical Yearbook 1997*. Beijing: China Statistical Press.

—. 2000. *China's Statistical Yearbook 2000*. Beijing: China Statistical Press.

Nee, Victor. 1989. "A Theory of Market Transition: From Redistribution to Markets in State Socialism." *American Sociological Review* 54:663-681.

__. 1991. "Social Inequalities in Reforming State Socialism: Between Redistribution and Markets in China." *American Sociological Review* 56:267-282.

—. 1996. "The Emergence of a Market Society: Changing Mechanisms of Stratification in China." *American Journal of Sociology* 101:908-949.

Oi, Jean. 1993. "Reform and Urban Bias in China." *Journal of Development Studies* 29:129-48.

—. 1995. "The Role of the Local State in China's Transitional Economy." *The China Quarterly* 114:1132-1149.

Oi, Jean C., and Andrew G. Walder. 1999. *Property Rights and Economic Reform in China*. Stanford, CA: Stanford University Press.

Parish, William L., and Ethan Michelson. 1996. "Politics and Market: Dual Transformations." *American Journal of Sociology* 101:1042-1059.

Parkin, Frank. 1974. *The Social Analysis of Class Structure*. London: Tavistock Publications.

Peng, Yusheng. 1992. "Wage Determination in Rural and Urban China: A Comparison of Public and Private Industrial Sectors." *American Sociological Review* 57:198-213.

Piore, Michael. 1975. "Notes for a Theory of Labor Market Stratification." Pp. 125-50 in *Labor Market Segmentation*, edited by Richard Edwards, Michael Reich, and David Gordon. Lexington, MA: D.C. Heath.

Raudenbush, Stephen, and Anthony Bryk. 2002. *Hierarchical Linear Models: Applications and Data Analysis Methods*. Second Edition. Thousand Oaks: Sage Publications.

Rona-Tas, Ákos. 1994. "The first shall be last? Entrepreneurship and Communist Cadres in the Transition from Socialism." *American Journal of Sociology* 100:40-69.

—. 1998. "Path-dependence and Capital Theory: Sociology of the post-Communist Economic Transformation." *East European Politics and Societies* 12:107-131.

Rosenbaum, James E. 1979. "Organizational Career Mobility: Promotion Chances in a Corporation during Periods of Growth and Contraction." *American Journal of Sociology* 85:21-48.

Rosenbaum, James E., and Takehiko Kariya. 1989. "From High School to Work: Market and Institutional Mechanisms in Japan." *American Journal of Sociology* 94:1334-1365.

Ryscavage, Paul. 1999. *Income Inequality in America: An Analysis of Trends*. Armonk, N.Y.: M.E. Sharpe.

Solinger, Dorothy J. 1999. *Contesting Citizenship in Urban China: Peasant Migrants, the State, and the Logic of the Market*. Berkeley: University of California Press.

Spilerman, Seymour, and Tormod Lunde. 1991. "Features of Educational Attainment and Job Promotion Prospects." *American Journal of Sociology* 97:689-720.

Stark, David. 1994. "Path Dependence and Privatization Strategies in East Central Europe." Pp. 115-146 in *Changing Political Economies: Privatization in Post Communist and Reforming Communist States*, edited by Vedat Milor. Boulder: Lynne Rienner.

—. 1996. "Recombinant property in East European capitalism." *American Journal of Sociology* 101:993-1027.

Starr, Paul. 1982. *The Social Transformation of American Medicine*. New York: Basic Books.

Stolzenberg, Ross M. 1975. "Occupations, Labor Markets and the Process of Wage Attainment." *American Sociological Review* 40:645-665.

—. 1978. "Bringing the Boss Back in: Employer Size, Employee Schooling, and Socioeconomic Achievement." *American Sociological Review* 43:813-288.

Tang, Wenfang, and William L. Parish. 2000. *Chinese Urban Life under Reform: The Changing Social Contract*. Cambridge; New York: Cambridge University Press.

Tilly, Charles. 1998. *Durable Inequality*. Berkeley, Calif.: University of California Press.

Treiman, Donald J., and Harry B. G. Ganzeboom. 2000. "The Fourth Generation of Comparative Stratification Research." Pp. 123-150 in *The International Handbook of Sociology*, edited by Stella R. Quah and Arnaud Sales. London: Sage.

Walder, Andrew, and Jean C. Oi. 1999. "Property Rights in the Chinese Economy: Contours of the Process of Change." Pp. 1-26 in *Property Rights and Economic Reform in China*, edited by Jean Oi and Andrew Walder. Stanford: Stanford University Press.

Walder, Andrew G. 1986. *Communist Neo-traditionalism: Work and Authority in Chinese Industry*. Berkeley: University of California Press.

—. 1989. "Social Change in Post-Revolution China." *Annual Review of Sociology* 15:405-24.

—. 1992. "Property Rights and Stratification in Socialist Redistributive Economies." *American Sociological Review* 57:524-539.

—. 1995a. "Career Mobility and the Communist Political Order." *American Sociological Review* 60:309-328.

—. 1995b. "Local Governments as Industrial Firms: An Organizational Analysis of China's Transitional Economy." *American Journal of Sociology* 101:263-301.

—. 1996. "Markets and Inequality in Transitional Economies: Toward Testable Theories." *American Journal of Sociology* 101:1060-1073.

Walder, Andrew G., Bobai Li, and Donald J. Treiman. 2000. "Politics and Life Chances in a State Socialist Regime: Dual Career Paths into the Urban Chinese Elite, 1949 to 1996." *American Sociological Review* 65:191-209.

Wang, Feng. 2002. *Categories and Boundries: Income Inequality in Urban China, 1986-1995*. Unpublished Manuscript.

Wang, Feng, Xuejin Zuo, and Danching Ruan. 2002. "Rural Migrants in Shanghai: Living under the Shadow of Socialism." *International Migration Review*: 467-491.

Wang, Shaoguang. 1995. "The Decline of Central State Fiscal Capacity in China." Pp. 87-113 in *The Waning of the Communist State: Economic Origins of Political Decline in China and Hungary*, edited by Andrew Walder. Berkeley: University of California Press.

Whyte, Martin King. 1986. "Social Trends in China: the Triumph of Inequality?" in *Modernizing China*, edited by A. Doak Barnett and Ralph Clough. Boulder, CO: Westview Press.

Whyte, Martin King. 1996. "City versus Countryside in China's Development." *Problems of Post-Communism*: 9-22.

Wong, Christine. 1992. "Fiscal Reform and Local Industrialization: The Problematic Sequencing of Reform in post-Mao China." *Modern China* 18:197-227.

The World Bank. 1997. *Sharing Rising Incomes: Disparities in China*. Washington D.C: World Bank.

Wu, Xiaogang. 2002. "Work Units and Income Inequality: The Effect of Market Transition in Urban China." *Social Forces* 80:1069-1099.

Xiang, Huaicheng. (ed.). 1999. *Zhongguo caizheng wushi nian (Fifty Years of China's Public*

Finance). Beijing: China Financial and Economic Press.

Xie, Yu, and Emily Hannum. 1996. "Regional Variation in Earnings Inequality in Reform-era Urban China." *American Journal of Sociology* 101:950-992.

Yang, Yiyong et al. 1997. *Gongping yu xiaolu, dangdai zhongguo de shouru fenpei wenti (Equality and Efficiency, Income Distribution in Contemporary China)*. Beijing: Today's China Press.

Zhao, Renwei, and Li Shi. 1997. "Zhongguo jumin shouru chaju de kuoda jiqi yuanyin (Increasing Income Gap among Chinese Residents and Its Causes)." *Jingji Yanjiu (Economic Research)* 9:19-28.

Zhou, Xueguang. 2000. "Economic Transformation and Income Inequality in Urban China: Evidence from Panel Data." *American Journal of Sociology* 105:1135-1174.

Zhou, Xueguang, Nancy Brandon Tuma, and Phyllis Moen. 1996. "Stratification Dynamics under State Socialism: The Case of Urban China, 1949-1993." *Social Forces* 74:759-796.

—. 1997. "Institutional Change and Job-Shift Patterns in Urban China, 1949 to 1994." *American Sociological Review* 62:339-365.