8. WORK UNITS AND INCOME INEQUALITY:
THE EFFECT OF MARKET TRANSITION IN URBAN CHINA

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Abstract

Nee's market transition theory claims that redistributive power will decline and returns to human capital will increase as state socialist economies are transformed into market economies. However, many other scholars have discovered that either the influence of redistributive power persists or returns to human capital decline. In this paper, I analyze the effect of marketization on individuals= income inequality in urban China as mediated by work units, which are classified into three types: Low Profit State Firms (LPFs), High Profit State Firms (HPFs), and Market Firm (MFs). LPFs are farthest from the market, HPFs are closer to the market and MFs have to be completely exposed to market conditions. Results based on two urban survey data sets show that while the influence of redistributive power declines, returns to human capital do not monotonically increase, as market transition theory predicts. Although returns to human capital are higher in the market sector than in the state sector, the effects of education on earnings are weaker in HPFs than LPFs within the state sector. The inconsistency is attributed to the effects of bonuses that are equally distributed among employees in HPFs.

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Introduction: The Market Transition Debate

The transition from state socialist economy to market-oriented economy in Eastern Europe and China has caused much debate among sociologists on how the institutions shape the order of social stratification and what the change has brought about in term of social inequality. The debate has been focusing on whether the returns to human capital increase and the effects of redistributive power decline in the course of marketization.

Market transition theory, proposed by Nee (1989 1991) based on an income survey in rural China, suggests that market-oriented reforms in state socialist countries have been increasing returns to human capital and causing the decline of the influence of redistributive power. During this transition period, direct producers (ordinary workers and peasants) gained more and human capital was rewarded more, whereas political loyalty mattered less. Meanwhile, in urban China, there were higher returns to education and work experience in the market sector than in the state sector, while advantages enjoyed by administrators were only found in the state sector. In the market sector, communist party membership had even become a disadvantage (Nee and Cao 1996).

Findings based on other urban China data, however, were inconsistent with market transition theory (Bian and Logan 1996; Griffin and Zhao 1993; Xie and Hannum 1996). On the one hand, greater increases in income for party members, workers in the state sector, and workers holding jobs with a redistributive nature suggest that redistributive influence was actually strengthened during the market-oriented reform (Bian and Logan 1996). On the other hand, returns to education were found to be negatively associated with the level of marketization (Xie and Hannum 1996:997).

Some of the variations in findings among these studies can be explained by specifying the institutional settings within which marketization is embedded. While the market is viewed as a generic institutional force that reshapes the social stratification order (Szelenyi and Kostello 1996), the work unit is a specific institution through which the market exerts its influence on urban social inequality. To explore the social consequences of the market-oriented economic reform, the effect of marketization on the work unit, i.e., how marketization has changed the work unit=s influence on stratification, needs to be first taken into account (Oberschall 1996:1028; Guthrie 1997:1265-66).

In this paper, I discuss economic inequality among employees in various work units (firms) during the market transition period in urban China. First, I describe the work unit=s key role in social stratification in state socialist China as well as the impact of marketization on the work unit. Then, I show how the work unit affects an individual=s income and specifically how the work unit modifies returns to human capital in different institutional settings. Finally, after sketching out different scenarios of income determination among work units, I assess the implications for the market transition debate.

The Work Unit and Income Distribution During the Reforming Stage

Prior to economic reform, almost every urban resident in China was assigned to a workplace, called a work unit (*danwei*). Each work unit was an extension of the state organization. The work unit not only worked towards their specific organizational goals but also carried out institutional responsibilities of the state in respect of its citizens. For instance, insurance and social security provisions were administrated through the work unit; the work unit also directly supplied a range of state goods and services that, in market economies, would be supplied through markets or a variety of institutions and government agencies.

The resources that a work unit could offer to its employees were contingent upon its structural position (sector, ownership and bureaucratic rank) in the socialist hierarchy. In a typical redistribution process, the state first appropriated and monopolized resources and opportunities and then allocated them to work units according to their positions in the redistributive hierarchy. In turn, work units distributed rewards on the basis of a worker=s individual attributes. This mechanism enabled the work unit to act as a medium of earnings and status attainment in social stratification (Bian 1994; Lin and Bian 1991).

Since the early 1980s, urban economic reform has resulted in the emergence of a new market-oriented economy. Self-employment and private economic activity had been legitimized as integral parts of socialism since early 1980's. Meanwhile, an open-door policy was attracting a large amount of foreign investment. These firms constituted an expanding market sector outside the redistributive economy. While the market sector was becoming a new provider of resources and life chances other than those offered by the state sector, bureaucratic coordination became less important than before. Moreover, as marketization proceeded, new firms had gained economic advantage and pushed many state firms into marginal positions in market competition. The privileges that state enterprises used to enjoy in a homogeneously redistributive economy were fading away.

Meanwhile, work units in the state sector had also obtained somewhat autonomous power from the government. The incremental decentralization policy enabled enterprises to evolve into entities with relative autonomy. Although some work units continued to take advantage of redistributive mechanisms, they had to encounter market competition as well. The performance of a state firm was not only contingent upon its organizational status in the hierarchy, but also on its success in adjusting to the market. In this context, two trends had been observed with respect to the income distribution in reforming China (Li 1989). On the one hand, income disparities across work units were growing; on the other hand, inequalities within work units remained small or may even have become smaller.

This irony may be understood in terms of the effect of marketization on the work unit. Market-oriented economic reforms widened the income gap among employees in different work units. Inter-organizational inequality may be first attributed to the emergence of a market sector. Firms in the market sector tended to be more efficient and profitable than their state counterparts. Second, inter-organizational inequality can also be accounted for by the increasing autonomy of work units within the state sector. Among decision-making powers that work units had gained, the most important one was to retain a portion of profits and to distribute the profits at their discretion. The retained profits partly went to the welfare fund, and partly went directly to bonuses. The welfare fund increased the capacity of work units to provide non-cash items and services to their employees, whereas bonuses directly increased employees= monetary incomes.

Within work units, bonuses are also key to understanding the process of income distribution. Bonuses, which were initially generated as individual incentives, were found to be allocated equally within work units, regardless of individual attributes (Walder 1990). With bonuses becoming major part of employees= earnings (Bian and Logan 1996), the egalitarian trend of income within work unit was also observed (Li 1989). In sum, because of various capabilities of generating bonuses, income inequality among work units had become greater during the reform period than before. Within work units, on the other hand, bonuses tended to equalize income distribution. As a result, the amount of benefits that employees received was largely contingent upon work units with which they were affiliated rather than who they were or how well they were performing in their work.

Hypotheses

The effect of marketization on income inequality, therefore, must be first measured at the level of work organization. Based on the extent of exposure to the market, firms can be institutionally classified into three types: market firm, semi-redistributive firm and redistributive firm. Institutional differences, in the first place, exist between state and market firms. However, state firms are no longer homogeneous. Some of them have gained more autonomy from the government and have been deeply engaged in market activities, whereas others are still under rigid control by government. Therefore, conceptually, firms within the state sector can be divided into two types: redistributive firms and semi-redistributive firms.

Since semi-redistributive firms have more autonomy in engaging in market activities while still enjoying their redistributive advantages, they generally show higher profits than do redistributive firms. The highly retained profits, in return, consolidate firms= autonomy since financially they may have to rely on government less than they used to. Therefore, firm profit is an appropriate indicator to distinguish between semi-distributive firms and redistributive firms for the specific purpose of addressing the institutional impact of state firms on income inequality. Thus, empirically I categorize state firms into Low-Profit State Firms (LPFs) and High-Profit State Firms (HPFs).

Given the lack of longitudinal data, cross-sectional data based on three types of firms can be used to address the social consequence of marketization as long as they can be arranged in a temporal order. Since marketization increases firms= reliance on the market, and LPFs, HPFs and MFs constitute a continuum of the proximity to the market, I would formulate the following hypotheses about the effect of marketization on income inequality:

Hypothesis 1: If a firm is closer to the market, then education will have a greater effect on employees= earnings (base salary and bonuses).

Hypothesis 2: If a firm is closer to the market, then work experience will have a greater effect on employees= earnings.

Hypotheses 1 and 2 predict that human capital (education and work experience) affects employees= earnings more strongly in MFs than in state firms. Within the state sector, education and work experience have stronger effects in HPFs than in LPFs.

Hypothesis 3: If a firm is closer to the market, individual administrative position will have less influence on employees= earnings.

Hypothesis 4: If a firm is closer to the market, firm bureaucratic rank will have less effect on employees= earnings.

Hypothesis 5. If a firm is more profitable, then its employees will have higher earnings.

Hypotheses 1, 2 and 3 predict effects of individual characteristics, whereas Hypotheses 4 and 5 predict effects of organizational characteristics on employees= earnings. The main purpose of this paper is to investigate how the effects of individual variables on total earnings vary across different work units.

Data, Variables, Methodology, and Models:

Data

My research is based on two data sets both collected in 1993. One is from a multi-stage representative survey about Chinese workers and their work units; the other is from a survey of housing and social Stratification in Tianjin. As part of the first project, more than 3000 employees at 107 Chinese work units in ten cities were interviewed. Half of them were employed in 50 economic work units. The weakness of this data set is that bonuses were not measured separately from base salary. Since bonuses are fairly important in understanding the effects of marketization on the work unit, to account for the their roles in income distribution within state firms, I use a second data set collected in Tianjin in 1993. This is an individual household survey, containing separate measurement of bonus and base salary, as well as other variables comparable to those in the first data set.

Variables

Both data sets include measurements of individuals= annual income earned from work units in the previous year (1 US $ =8.3 *yuan*). I use the logarithm of annual income as the dependent variable in the OLS regression analysis.

The independent variables include both individual characteristics and organizational characteristics. On the individual level, variables include education, work experience and individual administrative position. On the organizational level, ownership, firm bureaucratic rank and firm profit are key variables that shape income inequality within the organization.

Results (tables omitted).

Using the OLS regressions with Huber correction of standard errors, I have tested the hypotheses that in a firm more proximate to the market, the influence of redistributive power (administrative position and work unit rank) declines and returns to human capital (education and work experience) increase. I first compare income determination in between state firms and market firms, then compare HPFs and LPFs within the state sector.

With respect to redistributive power, my results show that administrative position has no net effect on income in all types of firms; the work unit rank affects employees= income only in state firms and has no net effect in general. These findings confirm Hypotheses 3 and 4 and are generally consistent with Nee's claim that the influence of redistribution declines as marketization proceeds. However, two hypotheses regarding returns to human capital and especially to education are not fully supported by the evidence. While education (Hypothesis 1) has stronger effect on income in market firms than in state firms, within the state sector it is less influential in HPFs than in LPFs. The effect of education does not monotonically increase with a firm=s proximity to the market. Therefore, Hypothesis 1 is only partially confirmed. Meanwhile, the effect of work experience on income remains constant regardless of organizational variables, thus Hypothesis 2 is unsupported.

Although Hypothesis 5 is not directly linked to the effects of market transition, it provides a key to understanding this process and explaining findings about the effects of redistributive power and human capital. Results show that individual income is positively associated with firm profit, which is the source of employees' bonuses. In the analysis of Tianjin data, I further decompose the effects of specific variables on total income, and determine how much is due to their effects on base salaries and how much is due to their effects on bonuses. I confirm that bonuses, derived from firm profit and allocated more equally than base salary, may account for the lower returns to education in HPFs than in LPFs. The main results of hypotheses testing are presented in Table 1.

Table 1: Different Scenarios of Income Determination in Three Types of Firms

	LPFs	HPFs	MFs
Institutional	redistributive	half-redistributive	market
Characteristics		half-market	
Income Inequality	higher	lower	highest
Education (H1)	higher (positive effect)	lower (positive effect)	highest (positive effect)
Work Experience(H2)	positive effect	positive effect	positive effect
Position (H3)	no effect	no effect	no effect
Firm Rank (H4)	positive effect	positive effect	no effect

Discussion and Conclusion

Market transition theory predicts that the influence of redistribution decreases and returns to human capital increase as China moves to a market economy, and that overall income inequality would decline in the initial stage of transition and increase later. My findings suggest that while redistributive power has declined, returns to human capital have not increased monotonically. The fact that education has a greater effect on income in market firms than in state firms favors market transition theory (Nee and Cao 1996). However, within state firms, in contradiction to market transition theory, the effect of education on total income declines with the proximity of a firm to the market. This is exactly what Xie and Hannum (1996) found, even though they might have used an inappropriate indicator (growth rate of GDP) to measure the level of marketization (Nee 1996; Nee and Cao 1996).

My findings confirm Nee=s description of distinctive patterns of social stratification between the state and market sectors (Nee 1996; Nee and Cao 1996). While confidently claiming that market transition theory is strongly supported in the market sector, Nee was ambiguous on whether it was confirmed in the state sector. Not all evidence unfavorable to market transition theory can be attributed to residuals of the redistributive system. The effect of education on income is a good example. Higher returns to education are not limited to market economies. Socialist societies are credential societies, in which more highly educated people were also favored, at least in terms of base salary. In the pre-reform period, education was also an important source of income inequality, and a major track of social mobility. Since firm profits had little impact on individual income and a national wage table governed all firms, the effect of education on income was considerable, and could be clearly seen within each work unit. In contrast, as the economic reform took effect, differences among work units in terms of the profits they could make and retain have increased. However, the income gap among individuals working in different work units is largely due to bonuses, which are distributed relatively equally. Within work units, therefore, the degree of inequality declined. Thus, the declining effect of education on income is due to the economic reform, rather than the persisting influence of the old system.

My analysis of state firms also confirms an egalitarian trend of income distribution in China speculated by Xie and Hannum (1996). It explains how income inequality declined in the initial stage of market transition (Bian and Logan 1996; Grinfin and Zhao 1993; Nee 1989 1991). Indeed, as Szelenyi and Kostello (1996) pointed out, it is implausible to argue that inequality declines on the one hand, and returns to education increase on the other. If highly educated people earn much more than people with lower education, the overall inequality in a society should increase rather than decline. According to Szelenyi and Kostello=s institutional explanation, the effect of education should logically have declined in the initial stage of the reform and increased later. My findings about the different effects of education on income in concrete institutions substantiate their theoretical conjecture about returns to human capital. While redistributive influence declines, returns to education decrease at first but increase as marketization proceeds further. This is consistent with the trajectory of overall income inequality China has witnessed. In conclusion, studying the effects of marketization in specific institutional settings helps to explain the divergent findings from various sources and to resolve some issues currently in debate.

References

Bian, Yanjie and John Logan. 1996. "Market Transition and Persistence of Power: The Changing Stratification System in Urban China" *American Sociological Review* 61:739-58

Griffin, Keith and Renwei Zhao. 1993. *The Distribution of Income in China*. London: Macmillan.

Guthrie, Douglas. 1997. "Between Market and Politics: Organizational Responses to Reform in China" *American Journal of Sociology* 102:1258-1304.

Li, Qiang. 1989. *Zhonguo Dalu de Pingfu Chabie* (Poverty and Wealth in Mainland China). Beijing: Chinese Women & Children Press.

Lin, Nan and Yanjie Bian. 1991. "Getting Ahead in Urban China" *American Journal of Sociology* 97:657-88.

Nee, Victor. 1989. "Theory of Market Transition: From Redistribution to Markets in State Socialism" *American Sociological Review* 54: 663-81.

____ . 1991. "Social Inequalities in Reforming State Socialism: Between Redistribution to Markets in China" *American Sociological Review* 56:267-82.

Nee, Victor and Yang Cao. 1996. Path Dependence in Social Stratification. Unpublished paper presented in Comparative Social Analysis Workshop. UCLA.

Oberschall, Anthony. 1996. "The Great Transition: China, Hungary, and Sociology Exit Socialism into the Market" *American Journal of Sociology* 101:1028-41.

Szelenyi, Ivan. 1978. "Social Inequalities in State Socialist Redistributive Economies" *International Journal of Comparative Sociology* 19:63-87.

Szelenyi, Ivan and Eric Kostello. 1996. "The Market Transition Debate: Toward a Synthesis" *American Journal of Sociology* 101:1082-96.

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

______. 1990. Economic Reform and Income Distribution in Tianjin, 1976-1986, pp.135-56 in *Chinese Society on the Eve of Tiananmen: the impact of reform.* Edited by Deborah Davis and Ezra F. Vogel. Cambridge MA: Harvard.

Xie, Yu and Emily Hannum. 1996. "Regional Variation in Earnings Inequality in Reform-Era Urban China" *American Journal of Sociology* 102: 950-9