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New light on China's rural elites

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# UNU-WIDER

World Institute for Development Economics Research

Working Paper No. 2010/108

# **New Light on China's Rural Elites**

# Bjorn Gustafsson<sup>1</sup> and Ding Sai<sup>2</sup>

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#### Abstract

This paper analyses political elites, economic elites, hybrid elite households and non-elite households in rural China using household data for 1995 and 2002. We seek to understand the determinants of belonging to each of the three elite categories. We find that education and military experience positively affect the probability of being a political elite. The probability of becoming an economic elite is linked to the age of the head of household and to the income level of the county, indicating that opportunities to become an economic elite have increased over time, but in a spatially uneven way.

We also investigate disparities in household per capita income as well as in household per capita wealth. Asia Market Transition Theory, we find that the relationship between education and the household's economic status became stronger from 1995 to 2002. This theory also predicts that payoffs from belonging to the political elite decrease during transition towards market economy. Our results show that in the richest counties in 2002, the economic gain from being a political elite household was higher than elsewhere and higher than in high-income counties observed in 1995. We also found that although elite households on average have a better economic situation than non-elite households, income inequality and household wealth inequality in rural China would decrease only marginally if such disparities were to vanish. In contrast the spatial dimension is much more important for income inequality and for wealth inequality in rural China.

Keywords: China, elites, cadre, entrepreneur

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<sup>&</sup>lt;sup>1</sup> University of Göteborg, Sweden, Institute for the Study of Labor (IZA), Bonn, Germany, e-mail: bjorn.gustafsson@socwork.gu.se; <sup>2</sup> Chinese Academy of Social Sciences, China, e-mail: dingsai@cass.org.cn, S-ding@sohi.com

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Figures and Tables appear at the end of the paper.

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UNU World Institute for Development Economics Research (UNU-WIDER) Katajanokanlaituri 6 B, 00160 Helsinki, Finland

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#### 1 Introduction

This paper analyses political elites (cadres), economic elites (entrepreneurs), hybrid elite households and non-elite households in rural China. We seek to understand the determinants of belonging to each of the three elites categories. Are they similar or different? We also investigate disparities in household per capita income as well as in household per capita wealth between various elite households and non-elite households. Are the elites in an economically privileged position? If yes, what are the implications for household income in rural China as a whole and is there a payoff for joining the elite? Has the payoff from being a cadre household decreased? To what extent can we find support for the following three predictions that derive from Market Transition Theory: (1) Returns to political capital in terms of income and wealth decrease during the transition; (2) Returns to human capital in terms of income and wealth increase during the transition process; (3) Entrepreneurship increases income and wealth during the transition. For the study we use samples for 1995 and 2002 covering large parts of rural China.

The issue of how elites are faring in countries in the transition from a planned economy to a market economy has attracted much interest among social scientists. Of central importance to the literature is a paper by Victor Nee published in 1989 combining the formulation of the Market Transition Theory (MTT) with an empirical illustration from rural China. According to this theory, '...in reforming socialist economies the transition from redistributive to market coordination shifts resources of power and privilege to favour direct producers relative to redistributors (that is cadres). The shift improves incentives for direct producers, stimulates the growth of private markets, and provides to entrepreneurs an alternative path for socioeconomic mobility', Nee (1989). The theory can be summarized by Verhoeven et al. (2005: 202):

This (MTT) theory is considered to be a general theory for societies in transition, and its predictions should be applicable to all countries undergoing transition processes. The introduction and expansion of market institutions give rise to multiple bases of power and privilege and changes in the structure of opportunity and incentive. The former political elites no longer have absolute control over resources of power and privilege. Labour markets are arranged and there are changes in the structure of property rights, resulting in a decline in political power in the competition over resources, with power becoming market-based. Human capital provides more income benefits, while the influence of political capital wanes... In terms of winners and losers, the theory claims that members of the former political elite are among the losers in the transition process. They have to give ground to the direct producers of economic goods, as well as to the new elite, which consists of highly educated professionals, managers, and entrepreneurs, who can be seen as winners.

While MTT emphasizes the emergence of a new elite, some authors have stressed the conversion of the old elite into the new (the Power Conversion Thesis, PCT). The number of empirical studies analysing income among elites in societies in transition from a planned economy to a market economy is now large. In a meta-study, Verhoeven

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<sup>1</sup> See for example Róna-Tas (1994) who studies Hungary in 1989 and 1991.

et al. (2005) draw conclusions from not less than 90 publications. As China and central east europe have experienced different transition processes, and it is not surprising that the results reported in the literature differ between urban China (studied in the meta-analysis) and central and east european countries. We conclude that the MTT needs to be revised and elaborated if it is to be used as a general theory of transformation, as already suggested in the literature.<sup>2</sup>

Nee's paper (1989) has also inspired several later studies of the economic situation of elites and non-elites in rural China. The empirical analysis in Nee (1989) was based on data from about 600 households in 1984 collected in two counties near Xiamen, in eastern China. Upon considering previous income level and some household characteristics in an income function analysis, no statistical effect of the variable 'cadre' was found (see Table 3 in Nee 1989). However, the coefficient of being a peasant entrepreneur was positive and significant and that of being a cadre as well as entrepreneur – 'hybrid elite' – was still larger (and also statistically significant). Further analysis on income change from the same data (Nee 1991) resulted in similar conclusions. Entrepreneurs and former team cadres had positive income development, but this was not the case for current cadres.

While Nee's two empirical studies were restricted to households in one province, later analyses of rural China have used larger datasets obtained from many provinces. This makes it possible to investigate if, and, how an elite position pays off due to characteristics of the location. As such breakdowns can be made in various ways, this issue has attracted attention in the literature.<sup>3</sup> Overall, the results supporting MTT – as it was originally formulated – are mixed. One study just barely supporting MTT is Nee (1996), which analyses income changes from 1983 to 1989 for a sample of around 8,000 rural households collected from most provinces in China. In contrast to the results from the 1984 data, cadres were found to have had a significant positive income development. Furthermore, the study could not establish that education positively affected household income. Parish and Michelson (1996) report contradicting results from another sample for 1988 covering many provinces, the China Household Income Project (CHIP).<sup>4</sup>

Walder (2002a) is an addition to the literature on economic position of elites in rural China. Focus for the analysis is household income observed in 1995 obtained from

See for example Szelényi and Kostello (1996). In another contribution, Walder (2003) introduces a classification with four types of transition economies defined by regime change and policy and regulatory environment, and proposes different trajectories of change for the different types. In this framework, where elites are supposed to have different opportunities, China is seen as an example of a country with relatively high constraints on asset appropriation and low regime constraints. Such countries are characterized by little elite turnover. Cadres retain posts and use them to enhance

incomes for themselves, but limits on privatization delay and restrict movement for a new propertied or corporate elite.

<sup>&</sup>lt;sup>3</sup> The division into four categories in Nee (1996) is made at the provincial level contrasting regions by how far marketization had proceeded. Parish and Michelson (1996) use information at the county level and classify counties where non-farm workers were not more than one-fifth pre-market (inland) while others were further subdivided into three categories.

<sup>4</sup> This data was re-analysed by Nee and Cao (1999) who made the subdivision of the sample at the province level. They report that in the most developed regions, cadre connections improve the odds of entering all four types of non-farm activities. Thus this analysis supports the power conversion thesis.

around 3,000 households living in 100 villages all over China. In a multivariate analysis, household income was related to household characteristics, variables indicating elite status as well as village level variables. It was found that cadre status had a significant positive payoff which did not vary by village characteristics. This was in contrast to income effects of entrepreneur status which were found to decline with the importance of wage employment in the local economy. More recently, Walder and Zhao (2006), based on the same data, add to the income function analysis by, for example, redefining and increasing the number of categories studied by considering the fact that some non-elite households have kin that are cadres.<sup>5</sup>

Our study continues in this tradition by defining three categories of rural elites. We estimate cross section income functions as others have before us. The cross section relations between elite status and income uncovered in such analyses should not necessarily be interpreted to be causal. A positive coefficient could be due to cadre status raising people's incomes; however, it could also be true that people with characteristics not observed in the data, such as ambition, ability and larger networks earn more and are more likely to become elite households. We aim to add to the existing literature on elites in rural China in several ways. First, a more recent period is covered than in earlier studies as we analyse data collected from the China Household Income Project (CHIP) of around 8,000 households spread throughout China for 2002. As we will show, studying a more recent period has important consequences for the results. A relatively new phenomenon that has not been well covered in the sociological literature on elites in rural China is the recent growth of the local government in better-off counties.

Second, we contribute to the literature by using similar data from the same project collected for 1995. While previous studies have relied on single cross sections, our use of repeated cross sections puts us in a better position for studying changes over time. Previous studies have analysed the payoff from being an elite household in a regression framework. We go further by also computing income inequality indices making it possible to report on how large a fraction of total income inequality in rural China is due to differences in mean income across elites and the non-elite – the third contribution. Like previous studies of the elite economic situation in rural China, we analyse household per capita income as target variable. However, we broaden the view by also studying household wealth per capita, i.e., a fourth addition to the literature.

The main results are as follows. Although experience of previously working in enterprises increases the probability of being a cadre as well as an entrepreneur household, the routes to the three elite categories in rural China vary. Education and military experience are strong predictors for being a cadre household. The probability of

The same survey also includes life history information making it possible to study recruitment into entrepreneurship, see for example Walder (2002b) and Wu (2006). As the rural survey was accompanied by a similar urban survey there are a number of studies that have addressed similar issues for urban China, see for example Walder et al. (2000) and Zhou (2004). Early studies of urban elites in China include Walder (1995) and Bian and Logan (1996) both studying Tianjin in 1988 (the later paper also 1993). When using data for rural Vietnam in 2002 and estimating models as in Walder (2002a), Walder and Nguyen (2008) do not find significant coefficients for cadre. According to the authors the difference can be interpreted to be caused by cross-country differences in the industrialization process. Rural enterprises in Vietnam 2002 were much smaller than their counterparts in China in 1996.

being an entrepreneur household is very much related to the household's location as well as to the age of the household head, indicating that opportunities for entering entrepreneurship have increased over time, but in a spatially uneven way. Young adults in more affluent counties have a high likelihood of being entrepreneurs.

During the period studied here, political elites (village cadres or leaders), economic elites (entrepreneurs) and particularly hybrid elite households had higher average incomes and higher per capita wealth than other households and such gaps did not change greatly between 1995 and 2002. However, we also find that income inequality in rural China would only decrease marginally if elites were to have the same average income as non-elite households, while income inequality within the categories cadre households, entrepreneur households, hybrid households and non-elite households would remain unchanged. Thus the spatial dimension is much more important for income inequality and for wealth inequality in rural China.

Several findings support hypotheses derived from the Market Transition Theory. The relation between education and household income/household wealth became stronger between 1995 and 2002. Furthermore, keeping a number of characteristics constant, elite status and economic status are positively related. However, while MTT predicts that a payoff for being a cadre household decreases during transition, we find the highest payoffs to be in the best-off counties of rural China in 2002. One mechanism contributing to this is that the cadres in the well-off counties received wages much higher than their counterparts in low-income counties. These findings are more in line with the Power Conversion Thesis that old elites transform into new than with the Market Transition Theory.

The rest of the paper is laid out as follows. In the next section we discuss the context based on the literature. The data used for the study is described in Section 3 where we also define categories of elites and report descriptive statistics. The analysis of elite recruitment is presented in Section 4. We report on levels and inequality in income and wealth for the whole of rural China, of elite households and other households in Section 5. Factors determining income, wealth and subjective well-being are analysed in Section 6. The paper ends with a concluding section.

## 2 Context<sup>6</sup>

Almost all Chinese farmers live in villages which are, the predominant form of rural organization. After coming into power in 1949, the government of the People's Republic of China gradually superimposed a new organizational structure onto the village – the commune. The basic characteristics of this unit were that the land was pooled and worked in common, the commune served as the basic accounting unit, and net income was distributed to households on the basis of work points (Naughton 2007: 234f). At the end of the 1970s the communes were broken up and replaced by the household responsibility system as a form of economic organization however, the administrative and political functions of the village still remain today. The administrative village (Xing Zheng Cun), a unit typically consisting of several natural

The discussion in this section refers to the situation when our data was collected (1995 and 2002). Since then rural taxes have been abolished. This has led to a reduction in tasks as well as a reduction of the financial basis for cadre remuneration, and probably to a reduction in the number of cadres.

villages and ranging in size from a few hundred to more than a thousand members, is the lowest level of the hierarchical administrative and political structure of rural China. The level above it is the township (Xiang Zhen).<sup>7</sup>

The term 'cadre' is used to refer to leaders and officials at different levels of the Chinese administrative and political system. While cadres at the township level and higher are government employees, typically live in urban areas and earn wages funded by the budget of the relevant unit, this is not the case with rural cadres. Rural cadres live in a village, are traditionally involved in farm activities, and more recently also in other income generating activities. A village typically has half a dozen cadres or more. There is a head (Cun Zhang), an accountant (Cun Kuai Ji), and a leader of the women's association (Cun Fu Nv Zhu Ren) responsible for family planning. A village also has a local branch of the Communist Party of China (CPC) chaired by the Party Secretary (Cun Zhi Shu) which also has a deputy secretary and other general Party members. The village administrative organization and the party organization are closely interlinked at the village level as they consist of largely the same people, with Party Secretary being the most powerful. Often the two organizations meet and make decisions about village affairs together.

The number of cadres in a village is influenced by the population size of the village as well as its capacity for funding cadres. For our research questions it is important to understand that obligations as well as possibilities for funding cadres vary across space and time. Rich villages typically can afford a larger number of village administrators and also have more tasks for them to perform as the local government is deeply involved in the local economy. Furthermore, local governments that are better off can pay their cadres higher wages. We know from many other countries that during episodes of economic growth, the local government sector grows even faster. Thus it comes as no surprise that something similar seems to have happened in the better-off counties of rural China during the period under study 1995-2002.

Village cadres perform numerous functions which require various skills, some of which can be obtained through formal education. The cadres serve but also discipline the villagers. The former function includes spreading information and mediating among villagers, taking development initiatives and providing the village public goods (for example schools and rural roads). Development initiatives can include administration of labour migration, industrial development projects, and start-up projects facilitated by funds from higher administrative and political levels that are allocated if the village is located in an officially designated poor area. Fulfilling tasks, deemed important by the villagers, suggests support for cadres being elected officials. China has experimented with local elections for some decades, with villagers providing input in the nomination process and also voting for village cadres among approved candidates.

However, cadres also have to implement policies that are formulated and shaped at various higher levels of the Chinese political and administrative system. For example, they have to implement the far-from-popular family planning policy. Furthermore, they

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The level above the township is the county (Xian) which in turn is under the prefecture (Di Ji Qu), the first level under the province (Sheng). For historical reasons, in a few cases a natural village is administered as two entities. Due to administrative changes, villages might not necessarily remain unique over time.

have to collect fees and, before it was fully abolished in 2006, the agriculture tax. From this background it is not surprising that the township, the closest upper level, influences the appointment of village cadres to a varying degree. Such influence can occur at different stages of the process. For example, from the candidates suggested by villagers, the township can weed out those who are not preferred for certain reasons. As they have the power to appoint cadres, they do not necessarily always approve the candidate who has received the highest number of votes.<sup>8</sup>

During the commune system, the cadres (as other villagers) were remunerated by a point system. When the present system had been in place for some time, cadres became entitled to salaries to supplement their private income-earning activities.<sup>9</sup> The cadre wage system is composed of a fixed component and a performance-based component. Various criteria affect the performance-based component, among which collecting taxes/fees from the villagers as well as fulfilment of family policy goals have been rather important (see for example Chen 2007). While a rural cadre can be described as a farmer performing administrative and political tasks as a sideline, one should understand that such a sideline can be lucrative (Tsai 2007: 55). Since the exercise influence over the redistribution of land and activities of village-owned enterprises and politics, cadres and party members are clearly in a better economic position than is true for the average farming household. In addition, for many years – though not currently – becoming a village cadre was often the first step in a career as government cadre. 10 While the possibility for earning a higher income is one motive for accepting an appointment as cadre, causality might also run the other way. Some persons who have earned high incomes actively seek a cadre appointment to gain more influence that in turn can pay off in economic or other terms in the future.

Since the introduction of reforms, many opportunities have appeared for villagers to improve their economic situations. One alternative open to an ever larger proportion of the adult population is working for wages, or off-farm work. Labour markets have developed slowly in rural China (Knight and Song 2005; Cai et al. 2008). Demand for labour first came from increased exports of goods, while later labour demand was to a larger extent, driven by the substantial income increase experienced by the Chinese population. Income increases, together with the establishment of markets for agricultural products, have enabled larger proportions of Chinese farmers to shift their agricultural activities from subsistence to meeting the demands from the market for agricultural products, thereby earning money. The commercialization of agricultural production has been followed by a more recent process of creating markets for land (see for example Kung 2002).

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<sup>8</sup> For more information on village elections in rural China see for example O'Brien and Li (2000), Guo and Bernstein (2004) and Wang and Yao (2007).

Table A2 in the Appendix shows that in 1995 the money wages paid on average made up 28 per cent of household income among cadre households, and the corresponding proportion in 2002 was slightly lower or 25 per cent.

<sup>10</sup> Nowadays, to become a state cadre one has to take a central examination, an opportunity typically limited to persons less than 35 year of age.

<sup>11</sup> Many studies have investigated to what extent farmers are involved in non-farm activities, see for example Cook (1998), de Brauw et al. (2002), Bowlus and Sicular (2003) and Lei and Lu (2005).

From the planned economy, reformed China inherited the household registration system (the hukou system) which severely restricted geographic migration, particularly rural to urban migration. In pre-reform China, it was almost impossible for a rural inhabitant without a hukou to survive in an urban area. However, the situation has changed, and migration from rural to urban areas increased tremendously from the 1990s onwards. Although exact numbers are not available on this flow of labour to the cities, figures considerably higher than 100 million persons are often cited. The migration streams typically consist of young adults, are often temporary, and can benefit households by adding money income to the households.

Still another possibility for villagers to earn a living apart from subsistence farming is to become private entrepreneurs. This could mean producing goods, working in the building industry or selling products or services. China's rural entrepreneurs, as defined here, include men who work in construction, men who drive lorries they own, and women who produce handicrafts or sell consumer products. In the early 1980s individual household businesses were granted legal status. At that time a cap of eight was set on the number of employees an entrepreneur could hire, a cap which has since been lifted. Now more and more people (typically men) have become self-employed (Mohapatra et al. 2007). Wu (2006) shows that the pattern of recruitment into self-employment has differed between urban and rural China. While a long education and cadre status deterred people from turning to self-employment in urban China, the opposite was the case in rural China. Some rural cadres who went into business kept their cadre status and in other cadre households one of the household members became an entrepreneur; these two cases constitute hybrid elite households.

A rather important aspect of China's transition towards a market economy is that the process has moved at different speeds in different parts of the country (see Chan et al. 2008). The eastern part of the country was opened up according to the sixth 5-year plan for 1986-1990. The east also experienced the most rapid economic growth and institutional change. At that time the policy deliberately increased spatial differences and institutional change, while the launching of the development of the twelve western province units in 1999 marked a change in central government policy. However, while the broad division of China into the eastern, the central and the western regions shows large variation in economic development, there are also substantial spatial differences within each region, motivating analysts to work with spatial units at a lower level. <sup>13</sup> In this paper we will move down to the county level in the statistical analysis and show examples that the payoffs for elites vary across rural China.

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<sup>12</sup> See Zhao (2005) for a review of studies of rural to urban migration and Chan (2009) for the hukou system.

<sup>13</sup> See for example Chan and Wang (2008) who survey a number of studies that have investigated how inequality in provincial mean income has changed since the 1990s, and report new results. See also Gustafsson et al. (2008) who investigate household level data for studying spatial differences at various levels and income inequality in China 1988, 1995, and 2002.

## 3 Data and defining elites

The data for this study comes from the two rural household surveys by the China Income Distribution Project (CHIP) for the reference years 1995 and 2002. The surveys involved a group of researchers at the Institute of Economics, Chinese Academy of Social Sciences, Beijing and scholars from other countries. The project was assisted by the General Team of Rural Surveys at the National Bureau of Statistics (NBS) that conducted the fieldwork. 14

Our sample was drawn from the large sample used by NBS in its annual household survey covering around 67,000 households. The sample is selected in a multi-stage procedure to be representative at the province level and each province statistical bureau is responsible for samples at the village level. At the village level a probability sample of typically ten households is selected. Rural households are asked to keep detailed records of their expenditures as well as to provide information on their income. A very large number of assistant enumerators are involved in helping the households keep good accounts and in checking the information.

For the research project, samples from the larger sample used by NBS were drawn. The income analysis reported in Sections 5 and 6 comes from the province level units that were sampled both years: Beijing, Hebei, Shanxi, Liaoning, Jilin, Jiangsu, Zhejiang, Anhui, Jiangxi, Shandong, Henan, Hubei, Hunan, Guangdong, Chongqing, Sichuan, Guizhou, Yunnan, Shaanxi and Gansu. 15 This leaves us with a sample size of 7,998 households residing in 102 counties for 1995 and 8,200 households residing in 120 counties for 2002. For the analysis of elite households in Section 4 which we base on the richer 2002 data, we add data from the two autonomous regions of Guangxi and Xinjiang that were not included in the 1995 survey. The questionnaires were designed to derive total (disposable) income according to international standards, and the sampled households were questioned regarding income in kind, for example. Our variable disposable income is obtained by adding income sources including imputed rent from owner-occupied housing. Similarly, household wealth is defined as the sum of a number of wealth components. 16

While the income information is similar in the two surveys, the 2002 survey asked more questions about the background of the household and its members. Hence we concentrate the analysis of households' elite/non-elite positions to data from 2002. An interesting aspect of the data is that the sample procedure used by NBS involves the sampled household being followed in the survey for several years before being rotated out. This is why we are able to use income for a previous year in the income function

15 Chongqing was a part of the Sichuan province in 1995. In the analyses presented in latter parts of the paper we have therefore treated households sample from the two units as coming from one province level unit in 2002 as well, whereby the samples are considered to be obtained from 19 province level

<sup>14</sup> For more details on the two surveys see Li et al. (2008).

<sup>16</sup> While our definition of disposable income is more in line with what is used in international studies, it differs from that applied by the National Bureau of Statistics as the latter does not include imputed rents from owner-occupied housing. The definitions of household wealth components are found in Zhao and Ding (2008).

analysis. In Section 6 we use 6,330 households with income information for 1993 and 1995 and 7,481 households in the same 18 provinces with income information for 2000 and 2002.<sup>17</sup>

Inspired by previous writings, we work with three categories of elite households and the remaining category of non-elite households in the analysis. A household is classified as a cadre household if it has at least one member reported to be a (village and above) cadre, and if no member is classified as an entrepreneur. Seven per cent of the households in the 1995 sample as well as in the 2002 sample were classified as cadre households, see Table 1.18 Entrepreneur households are households with at least one member who is an entrepreneur, and no members who are cadres. Of all households, 7 per cent were entrepreneur households in the 1995 survey, and the proportion had increased to 10 per cent in 2002.19 Only 1 per cent of the households in both surveys had cadre as well as entrepreneur members, therefore the hybrid elite households number 56 in the 1995 survey and 87 in the 2002 survey. The small number of hybrid households is a fact to be considered when interpreting the statistical results. Table 1 shows further that elite categories are somewhat more frequent in the eastern region than in other regions of China.

#### Table 1

In Table A1 in the Appendix we present descriptive statistics for the various categories and the two years under study, and note only slight variation in average household size or age of adult members across categories or years. The average education level of household members has increased across the surveys and we note that elite categories are slightly more educated than non-elite households. There is a dramatic change in out of farm work across years. While non-elite households were much less involved in offfarm work than elite households in 1995, by 2002 they had caught up with the elites. Elite households, particularly the hybrid category, are somewhat more concentrated to high-income counties. Ethnic minorities make up 9 per cent of households in the 19 province-level sample in 1995 and 10 per cent in 2002 and are not frequent among entrepreneur households.<sup>20</sup> The 2002 data also shows that elites more often have experience in being a manager or worker in an economic unit than non-elites. Adults in

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<sup>17</sup> In our opinion this will result in more accurate measures than asking respondents retrospective questions on income, which was the strategy in the data used, for example, in Nee (1989, 1991 and 1996). The 1995 survey does not contain information on 1993 income from Beijing and Jilin. In order to make comparisons across surveys, we also restrict the sample for 2002 to cover provinces from which information was derived for both years. A sensitivity analysis showed that including Beijing and Jilin in the sample for 2002 affected the estimates only marginally.

<sup>18</sup> Other authors have used different operational definitions of cadre and report higher or lower proportions of cadre from their surveys. For example, according to the procedure applied by Walder (2002a), 3.8 per cent of households surveyed in 1996, were classified as cadres by the author in his data.

<sup>19</sup> Wu (2006) reports 7.5 per cent of the labour force to be self-employed in his data for 1996 and Walder (2002a) from the same data reports 8.1 per cent of the sample to be entrepreneurs, narrowly defined (while as many as 21 per cent reported some entrepreneurial activity).

When we add the autonomous regions Guangxi and Xinjiang with a large proportion of ethnic minorities to the analysis in Section 4, the proportion of ethnic minorities increases to 13 per cent (7 per cent southwestern minorities, 4 per cent northwestern minorities and 2 per cent living in other parts of rural China).

cadre households, more often than in non-elite households, have experience in the People's Liberation Army and at least one parent who was a CPC member.

## 4 Being an elite household

In this section we study factors affecting households possessing elite status. We specify and estimate a multinominal logit model with non-elite households as the omitted category. Explanatory variables include the household head's education, age and ethnic status. Other explanatory variables include whether the household head has been a soldier or has worked in an economic unit, as we expect both to positively affect the household's probability of having elite status. In order to capture possible intergenerational influences we include measures of parental education, parental party member status and parental entrepreneurial activity as separate variables. To consider possible kinship effects there is a dummy indicating whether the household having the most frequent surname of the village. Furthermore, to capture variations across rural China, we include in the specification the per capita income of the county in which the household lives as well as three dummies indicating the period in which the particular household's village received electricity (with electrification 1990 or later as well as no electricity being the omitted category). The year of electrification is an indicator of when the village was opened up to outside influences.

The estimates are presented in Table 2 in the form of marginal effects. Education of household head is found to positively affect the probability of being a cadre and a hybrid elite household and to negatively affect the probability of being a non-elite household. This could indicate that skills learned through formal education are of value for entrepreneur households, and even more so for cadre and hybrid households. An alternative to this interpretation (while not ruling it out entirely), is that people with longer formal educations have better access to networks useful for becoming an elite household. Age of household head negatively affects the probability of being an entrepreneur and also of belonging to the hybrid category. This most likely is because possibilities for becoming involved in entrepreneurial activities have increased during China's transition towards a market economy. Ethnic minority status has negative coefficients for cadre as well as entrepreneur status. This could signal barriers to entry into an elite category, or alternatively a lesser preference for entering one. In the specification we have distinguished between northwestern and southwestern ethnic minorities, and the coefficients for the former are much larger than for the latter.

#### Table 2

The experience of having been a soldier increases the probability of being an elite household and strongly increases the probability of being a cadre household. If the household head has worked in an enterprise it increases the probability of being an elite household of all types. In contrast, coefficients for our measure of kinship are estimated with low z-statistics. Many coefficients for parental variables are estimated with high z-statistics. There is support for the existence of direct intergenerational influences in entrepreneurial activity. The probability of cadre status is positively affected by not only parental education but also by parental party membership; while the latter variable positively affects the probability of hybrid elite status, it negatively affects the probability of entrepreneurial status. Finally, we find that per capita income of the county positively affects probabilities for each of the three elite states, particularly the

probability of entrepreneur status. There are also indications of an early or relatively early 'opening-up' of the village positively affecting the probability of a household achieving entrepreneur status. In contrast there is one example of a relatively early opening-up negatively affecting the probability of cadre status.

Based on the coefficient estimates we predict probabilities of belonging to each of the four categories for a selection of households and report them in Table 3. We see that a household with a head of at least age 50 without education, situated in a low-income county (household A), has an extremely high probability (98 per cent) of being a nonelite household. However, increasing education of the head to 9 years makes the probability of being a cadre jump from 1 to 6 per cent while making the household at least 15 years younger (household C) has no visible effect on the probability of being a cadre. However, the latter change increases the probability of being an entrepreneur by more than ten times (to 11 per cent). Moving the household to a high-income county makes the probability of being an entrepreneur still higher (17 per cent). Adding the experience of being a soldier and having worked in enterprise (household E) the probability of being an entrepreneur is now up to 25 per cent, and the probability of being a cadre 17 per cent while the probability of being a non-elite household is down to 54 per cent. These jumps in the probabilities for attaining elite household status are large when compared to having parents with business experience (household F) and the village being opened up early (household G). The predictions indicate that the estimated model is successful in capturing factors leading to a low probability of being an elite, while it is less successful in predicting a high probability of elite status. One possible reason for the latter is lack of relevant variables (measuring for example willingness to take risks) in the survey. However, the process leading to elite status might also have a strong random element not possible to cover in variables obtained in a survey.

Table 3

#### 5 Income and wealth – levels and distribution

In this section we turn to look at income and wealth among both elite and non-elite households in 1995 and 2002. Figure 1 shows how the four categories of households are distributed among deciles arranged by all household income per capita. There is one panel for 1995 and another for 2002. Figure 2 provides the same information for household wealth per capita. A household's wealth situation reflects its propensity for saving from present and past incomes as well as changed asset prices. Clearly in both figures the elites are better off than the non-elite as all three elite categories are underrepresented in the first deciles and overrepresented at the top of the distribution. Particularly hybrid elite households are highly represented in the top decile.

Table 4 provides mean values for per capita household income for the four categories, and we also break the sample into three regions: West (Chongqing, Sichuan, Guizhou, Yunnan, Shaanxi and Gansu), Central (Shanxi, Jilin, Anhui, Jiangxi, Henan, Hubei, Hunan), and East (Beijing, Hebei, Liaoning, Jiangsu, Shandong, Zhejiang, Guangdong).

## Figures 1 and 2

#### Table 4

Average per capita income for all households in China was as much as 60 per cent higher in 2002 than in 1995, which indicates rapid growth. We find that cadre households in all of rural China have mean incomes that are around 25 per cent higher than for all households, which is the case for both years under study. Actually such a gap is slightly lower in each of the three regions. We can thus conclude that in rural China, cadre households generally have a living standard relatively similar to non-elite households. The mean income for entrepreneur households is somewhat higher than for cadre households. The hybrid elite household is not surprisingly the category with the highest average per capita income.

An income component analysis is reported in the Appendix, Table A2. We work with the three components: agriculture income, non-agriculture income and cadre wage, the latter by definition received only by cadre and hybrid households. Observed over all regions and households, agriculture income increased modestly by 7 per cent, while non-agriculture income increased by as much as 71 per cent and the cadre wage by a slightly more rapid 77 per cent. For entrepreneur households the proportion of total income made up of non-agriculture income increased from 51 per cent to 64 per cent. Inspecting the three regions yields additional insights. In the wealthiest eastern region, agriculture income remained the same from 1995 to 2002 and the increase in total income originated solely from rapid increases in non-agriculture income and cadre wages. More remarkably, while in 2002 the gap in agriculture income between those living in the western region and those living in the eastern region was small, the proportion of the cadre wage between the two was as high as 1 to 4. We will return to the privileged position of cadre in better-off counties in 2002 in Section 6 where we report the magnitude of the economic advantage when controlling for household characteristics and in Section 7 for discussing possible causes.

The information on per capita wealth in Table 5 provides a similar, but not identical picture. The increase in the average (19 per cent from 1995 to 2002) is considerably slower than the increase in per capita income. In 1995 the gaps in average per capita wealth across the four categories of households were actually smaller than the gaps in income. However, the across-category wealth gaps widened to become more similar to the income gap in 2002. When household categories are ranked by wealth per capita, it is the same ranking as that of income per capita. The richest are hybrid households followed in descending order by entrepreneur households, cadre households and non-elite households.

### Table 5

Examining wealth components (also reported in Table 5), we find that an important reason for the small differences across the four categories in 1995 is that elite status does not provide an advantage regarding the value of land. We report that almost all rural households have access to land and that the value of land decreased by almost one-third from 1995 to 2002. There are several possible reasons for this development. One is that due to construction activities, the area available for farming has decreased across

the years studied. Second, returns to farming activities have slightly decreased thereby decreasing the value of land. Third, there might be larger undervaluation in the 2002 survey than in the 1995 survey as questions were less precise. In contrast to the declining value of land, rural households in 2002 had accumulated other components of wealth. Financial assets were valued on average not less than 40 per cent higher than in 1995, and the increase in average housing wealth was as much as 54 per cent; the increase in average productive capital 65 per cent. A surprising exception from the growth trend is that in 2002 non-elite households did not own more expensive durables than in 1995 while the opposite was true for elites and particularly hybrid elite households.

How important is the gap between elites and non-elites for total inequality in rural China? To answer this question we compute a 'polarization' index following Zhang and Kanbur (2001). This index is based on computing the index Mean Logarithmic Deviation (MLD) for household per capita income and household per capita total wealth for 1995 and 2002 for each category of household and for all of rural China. The MLD is an additively decomposable inequality index, a property not shared by the more familiar Gini-coefficient. Being additively decomposable means that 'total inequality' in rural China is equal to the sum of 'inequality within each category' weighted by its population share and a term expressing 'between category inequality'. The latter indicates how much inequality would disappear if mean income of each category were the same, but 'within category inequality' remained unchanged. Polarization is defined as the ratio of 'between category inequality' to 'total inequality' and can by definition take values from zero to one. If the index takes the value of 1 it means that all inequality is due to differences in mean inequality across categories while if it takes the value of zero it means that all inequality is within categories.

Table A3 shows that polarization conditional on elite/non-elite category is rather small for both years under study and applies to income as well as wealth. This is expected from the results presented above; although we have earlier seen that means differ across categories and there is also considerable inequality within each category as illustrated in Figure 1 and Figure 2. Table A3 also shows that, with the exception of income inequality in the western region, the 'between' category component increased from 1995 to 2002. The increase is particularly visible in the eastern region of rural China as polarization in income across categories of households went from 2 to 8 per cent, and the corresponding increase for wealth went from 1 to 5 per cent.<sup>21</sup> While not trivial, these proportions are much smaller than what have been reported from the same data when disaggregating income inequality in rural China by province.<sup>22</sup>

<sup>21</sup> Table A3 also shows that while income inequality in rural China as a whole decreased across the two years, the opposite took place for inequality in household wealth which is consistent with what has earlier been reported from the same data (see Gustafsson et al. 2008 and Zhao and Ding 2008).

Gustafsson et al. (2008) report that 39 per cent of income inequality in 1995 as well as in 2002 can be attributed to differences in mean income across provinces. As there are spatial differences in mean income within provinces, the proportion of all income inequality in rural China that is spatial should be even larger.

## 6 Payoff from having elite status – estimating income functions

The existing literature on elite incomes in rural China, uses a variety of approaches to analyse the payoff from having elite status. While Nee (1989, 1991 and 1996) includes income received during a previous year as explanatory variable in the models estimated, this is not the case in the models estimated by Walder (2002a). This difference motivates us to specify and estimate regression models that capture both approaches. Following the method introduced by Nee (1996) we also disaggregate our samples in the spatial dimension. We choose to disaggregate the sample by mean household income in the county after having classified counties into quintiles. Table A4 in the Appendix shows an expected clear, though not perfect, relationship between county income quintile and region. Counties located in the western provinces of China are concentrated to the lower part of the distribution of county mean household income. With almost no exception, all counties in the richest quintile are located in the eastern regions.<sup>23</sup> However, we also report some eastern counties having average per capita income so low that they belong to the bottom quintile.<sup>24</sup> If the cross section pattern found by Walder (2002a) were applicable to the period studied here, one would expect that the payoff from cadre status would remain unchanged across years, while the payoff from entrepreneur status would decrease throughout rural China. However, the income source analysis presented in the previous section makes us doubt the latter.

When specifying the Walder (2002a) type of model, we use the following right hand side variables: years of education of household head, age of household head, age of household head squared, per cent of farm work in family, household per capita planting area, the number of household members and a dummy for minority status. In order to capture spatial differences there is a variable for average household income per capita in the county and a string of province dummies. One central concern of this study regards the coefficients for the dummies indicating elite category. We estimate one model using OLS for each year with household per capita income alternatively household per capita wealth as dependent variable.

We first estimate the models including one dummy variable for cadre status and one single variable for entrepreneur status and summarize these coefficients as well as the coefficients for education in Table 6. The effects of education have increased from 1995 to 2002. In the income function it is an increase of two-thirds, and in the wealth function the relation in 2002 is four times as steep as in 1995. We have thus found support for one of the three predictions of the Market Transition Theory (as interpreted in the introduction). This was expected as there are now several indications that rates of return to education on income have increased in China as well as in other countries of transition during recent years.<sup>25</sup> We also find that the payoffs of cadre status and entrepreneur status are similar and positive in the income functions as well as in the

<sup>23</sup> These counties are located in Beijing, Hebei, Jiangsu, Zhejiang, Shandong and Guangdong.

<sup>24</sup> These counties are located in Hebei, Liaoning, Shandong and (in 1995) Zhejiang.

<sup>25</sup> For a discussion on increased rates of return to education in China see also Heckman (2003). Recent evidence on increased rates of return to education can be found in Zhang et al. (2005) (urban China) and Sicular et al. (2007) (for all of China). Fleisher et al. (2005) surveys the literature for a wide range of countries in transition.

wealth functions. The payoff of hybrid status is not surprisingly even larger. We also find that the payoffs for each of the three elites are larger in 2002 than in 1995.

#### Table 6

Table 7 summarizes the results obtained when interacting cadre and entrepreneur status respectively with quintile of county per capita income. As our sample has relatively few hybrid elite households, we do not investigate possible differences in payoffs across counties with different household mean incomes. With few exceptions the coefficients for elite status are positive and estimated with high t-values. The main finding is that while the payoff of being a cadre household is not higher in the top income quintile of counties than in lower quintiles in 1995, the opposite is the case in 2002. This is true in the income function analysis and even more so in the wealth function analysis; the increase in the top quintile is propelling the increase in the elite payoffs compared over all counties as reported in Table 6.

#### Table 7

We finally turn to the estimates of the Nee type of model that include income observed two years earlier as explanatory variables (see Table 8). We report results for two specifications; one including three dummies for elite status, the other including five dummies for cadre status, five for entrepreneur status and one for hybrid elite status. We find that income in 1995 and 2002 is strongly affected by previous income and that many control variables have coefficients of the expected sign. Overall the results for variables in focus for this study are similar to those obtained from the Walder type of model. Thus, there are increases in the coefficient of education; from being not statistically significant in 1995 to being positive and estimated with a t-statistic larger than 2 in 2002. Coefficients for the elite variables are positive and with few exceptions measured with high t-statistics. When including dummies interacting cadre status and entrepreneur status respectively with quintile of county per capita income in the specification, we find the highest payoff of cadre status in high-income counties in 2002,26

#### Table 8

In this section we found results that support some of the predictions from the Market Transition Theory. The returns to human capital in terms of income and wealth have increased over time and entrepreneurship has increased income and wealth during the period. However, the prediction that returns to political capital in terms of income and wealth are decreasing has not been confirmed. We have found that during the period 1995 to 2002 the payoffs of cadre status remained relatively constant in large parts of rural China, and that in the most prosperous counties they actually increased. Analyses of household per capita incomes and household per capita wealth provide similar pictures. In the concluding section we discuss possible reasons for this. We have also found that by and large estimates of two different types of models used in previous research on return to elite status in rural China provide similar pictures in our data.

26 The 95 per cent coefficient intervals for the coefficient for the cadre and first quintile dummy (but not the other interaction variables) and the cadre and fifth quintile dummy do not overlap.

## 7 Concluding discussion

Most countries that previously experienced planned socialist economies have now moved towards a market economy, thereby prompting a large body of literature on how elites are faring during the transition. The Chinese transition has differed from the transitions of East Europe and the former Soviet Union by starting earlier, by being gradual, by taking place during many years of economic growth, and by adding many non-market elements in policy and practice. Empirical findings from rural China therefore do not necessarily apply to other countries in transition.

In the statistical analysis we followed the existing literature by designating households as elites (cadre households, entrepreneur households and hybrid elite households) and non-elite households. We specified a multinominal logit model to compare determinants of a household's cadre, entrepreneur and hybrid elite status. While earlier studies concentrated on household income, we also studied household wealth. Our study has also investigated the importance of differences in mean income between elites and non-elites on the extent of inequality in rural China by computing numerical values of income inequality indices. Furthermore, when investigating the payoff from being an elite we used different specifications and investigated if elite payoffs vary by average household income in the county.

One significant finding in this study is that the determinants of a household's cadre status and entrepreneur status differ from each other in important respects. It is true that previous experience of working in enterprise signifies an increased probability for achieving all types of elite status. However, a long education is much more a route to cadre status than to entrepreneur status. This could indicate that skills learned by formal education, although of value for being an entrepreneur, are even more valuable for being a cadre (and a hybrid household). Alternatively, people who have a longer formal education have better access to networks useful for becoming an elite household. The probability of being an entrepreneur household is strongly linked to the age of the household head and also to the income level of the county. China's entrepreneur households are headed by comparably younger persons and live in better-off counties than non-elite households. This illustrates the common knowledge that economic opportunities in rural China have increased over time, but unevenly across space.

We have found during the period studied here that elites, particularly hybrid elite households, on average had higher per capita income than other households. Yet, we have also shown that income inequality in rural China as a whole would decrease only marginally if elite households were to have the same average income as non-elite households. For 1995 a surprisingly small proportion of inequality in household wealth would vanish if mean wealth for elites were to be the same as for the non-elites. The background to this situation is the rather even distribution of land in rural China. However, in 2002 the value of land had decreased, households had been able to save part of their rapidly increasing income and as a consequence the wealth gap between elites and non-elites was larger. The elite/non-elite dimension is of lesser importance for income inequality or wealth inequality in rural China than the spatial dimension. A much larger part of income inequality would disappear if average income differences in rural parts of China's provinces were to vanish than if the elite/non-elite differences in average income were to be totally eroded. In this sense, the main explanation for income

inequality and wealth inequality in rural China stems from China's unequal spatial development.

While some of our findings support the Market Transition Theory, our results on the payoff from being a cadre are more in line with the Power Conversion Thesis and do not agree with predictions from the Market Transition Theory as they were not found to decrease during the period studied. In 2002 in the richest counties all located in the Eastern region of China, the payoff from being a cadre was higher than in other counties and higher than in high-income counties observed in 1995; another main finding from our study. When discussing this it should be remembered that cadres all over China receive income from various sources. Our study has shown that cadres who lived in rich counties in 2002 received much higher remuneration from their villages than cadres living in other parts of China observed in 1995. The question is why?

There are several possible answers. From a labour market perspective, markets have developed slowly in rural China. Cadres in the richest counties probably perform more demanding tasks than their counterparts in other counties. The local economy has become more complex and so has the local government. Furthermore, alternative income-generating possibilities should be most developed in the best-off counties. According to this manner of reasoning, the high cadre payoff in richer counties in the east is due to the need of local government to increase cadre wages to recruit persons willing to take on tasks often more demanding than in other parts of China. However, one might also approach the question of why the payoff from being a cadre is high in high-income counties in 2002 from a political/administrative perspective. Cadres in the best-off counties have decision power over a larger number of economic activities than in other counties. They are therefore in a better position to profit from political/administrative decisions. Such an explanation implies that forces from above (higher levels of the state) or from below (villagers) have not been successful in counteracting such tendencies. It should be an important task for future research to find empirical support for the possible explanations reported here for the high cadre payoffs in better-off counties of rural China. Is the income advantage of cadre status in high income counties mainly due to those cadres being more professional and skilful or is it because they are more corrupt?

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Table 1: Number of categories in 1995 and 2002

	Village and above cadre house- holds	% of all house- holds	Entre- preneur house- holds	% of all house- holds	Hybrid elite house- holds	% of all house- holds	Non-elite house- holds	% of all house- holds	Total number of house- holds	%
1995										
Total China	593	7.4	539	6.7	56	0.7	6810	85.1	7998	100
West	114	5.7	89	4.5	5	0.3	1790	89.6	1998	100
Central	173	5.8	164	5.5	17	0.6	2648	88.2	3002	100
East	306	10.2	286	9.5	34	1.1	2372	79.1	2998	100
2002										
Total China	668	8.2	802	9.8	87	1.1	6643	81.0	8200	100
West	124	6.70	151	8.2	24	1.3	1551	83.8	1850	100
Central	217	6.7	304	9.4	24	0.7	2705	83.2	3250	100
East	327	10.5	347	11.2	39	1.3	2387	77.0	3100	100

## Note:

In the 1995 questionnaire the question is, 'Are you a township or village cadre'; the question in the 2002 questionnaire is 'Are you a cadre? A No; B Yes, village cadre; C Yes township cadre; D Yes, county department cadre'. We have also changed 'only village cadre household' in the 1995 survey to 'village and above level cadre' and combined 'high level cadre household' with 'village and above level cadre' in 2002.

Table 2: Marginal effects based on estimating multinominal logit model for elite status in 2002

	Cadre households			Entrepreneur households		elite olds	Non-elite households	
	Coefficient of variables	z-value	Coefficient of variables	z-value	Coefficient of variables	z-value	Coefficient of variables	z-value
Household head years of education	0.0117	24.6	0.0004	0.8	0.0008	4.29	-0.0128	-19.84
Household head, age	0.0003	2.4	-0.0059	-47.36	-0.0007	-13.87	0.0063	37.66
Dummy for northwest ethnic minority household	-0.0207	- 2.91	-0.0602	-3.37	-0.0109	-1.09	0.0918	6.14
Dummy for southwest ethnic minority household	-0.0110	- 2.03	-0.0146	-2.51	0.0020	0.72	0.0236	3.06
Education level of parents	0.0152	4.8	-0.0029	-0.93	0.0006	0.48	-0.0129	-3.07
Dummy for at least one parent having been party member	0.0118	2.73	-0.0167	-4.53	0.0056	3.15	-0.0007	-0.13
Dummy for at least one parent having experience of business	-0.0005	- 0.1	0.0435	6.63	0.0025	1.19	-0.0455	-5.66
Dummy for household head having been a soldier before	0.0488	9.32	0.0172	3.47	0.0050	2.52	-0.0710	-10.47
Dummy for household head having worked in enterprise	0.0426	4.39	0.0533	5.08	0.0125	2.84	-0.1085	-8.03
Dummy for household belonging to the biggest surname in the village	0.0040	1.42	0.0023	0.8	0.0009	0.8	-0.0072	-1.86
Per capita income of a county	0.000002	1.96	0.00002	13.75	0.000003	7.3	0.0000	-12.97
Dummy for village having electricity before 1969	-0.0083	-1.67	0.0630	6.97	0.0070	1.8	-0.0617	-6.37
Dummy for village having electricity 1970-1979	-0.0187	-4.19	0.0511	6.24	0.0034	1.05	-0.0358	-4.09
Dummy for village having electricity 1980-1989	0.0030	0.56	0.0034	0.49	0.0049	1.3	-0.0112	-1.34
Number of observations	729		843		97		7405	

Note: Data covers 22 provinces in 2002. Omitted category is non-elite households.

Table 3: Predicted probability of belonging to various household categories in rural China in 2002 (in per cent)

	Cadre households	Entrepreneur households	Hybrid elite households	Non-elite households
A No formal education of household head who is 50 year of age and lives in a village with per capita income belonging to the bottom decile (for other assumptions see the note)	0.94	1.08	0.01	97.97
B as A but education is 9 years	6.05	0.79	0.02	92.13
C as B but age is 35	5.52	11.01	0.84	82.63
D as C but living in village belonging to the highest income decile	6.11	16.82	1.99	75.08
E as D but having experience of being a soldier, working in enterprise and being a manager	16.52	24.76	4.23	54.49
F as E but parents have experience of business	16.53	29.91	4.57	49.00
G as F but having received electricity before 1969	17.63	31.19	4.95	46.23

Note: Category A has the following characteristics: low parental education, parents not party members, and no experience of business. The head has no experience of being a soldier, working in enterprise, or management. The education of head is 0 years and the age of head is 50. The household is a northwest minority household, located in a village that received electricity during the period 1970-1979 and village income is in the first decile.

Source: Estimates presented in Table 2.

Table 4: Average household per capita income among categories 1995 and 2002 (Yuan, in prices of 2002)

		Hybrid elite	Non-elite	Total
households	households	households	households	
2694	3151	4410	1990	2142
2642	2382	276	29439	34739
1662	2273	3057	1326	1394
532	402	32	7967	8933
1998	2314	2766	1646	1711
809	727	85	11560	13181
3548	3919	5561	2925	3121
1301	1253	159	9912	12625
4391	4715	7399	3127	3432
	_		-	33266
62.99	49.64	67.78	57.14	60.22
2365	2768	3774	1991	2101
545	636	100	6665	7946
42.30	21.78	23.45	50.15	50.72
3356	3589	4750	2701	2847
888	1301	102	11018	13309
67.97	55.10	71.73	64.09	66.39
6066	6689	11280	4449	4959
1207	1370	163	9271	12011
70.97	70.68	102.84	52.10	58.89
_	2642 1662 532 1998 809 3548 1301 4391 2640 62.99 2365 545 42.30 3356 888 67.97	2642       2382         1662       2273         532       402         1998       2314         809       727         3548       3919         1301       1253         4391       4715         2640       3307         62.99       49.64         2365       2768         545       636         42.30       21.78         3356       3589         888       1301         67.97       55.10         6066       6689         1207       1370	2642       2382       276         1662       2273       3057         532       402       32         1998       2314       2766         809       727       85         3548       3919       5561         1301       1253       159         4391       4715       7399         2640       3307       365         62.99       49.64       67.78         2365       2768       3774         545       636       100         42.30       21.78       23.45         3356       3589       4750         888       1301       102         67.97       55.10       71.73         6066       6689       11280         1207       1370       163	2642       2382       276       29439         1662       2273       3057       1326         532       402       32       7967         1998       2314       2766       1646         809       727       85       11560         3548       3919       5561       2925         1301       1253       159       9912         4391       4715       7399       3127         2640       3307       365       26954         62.99       49.64       67.78       57.14         2365       2768       3774       1991         545       636       100       6665         42.30       21.78       23.45       50.15         3356       3589       4750       2701         888       1301       102       11018         67.97       55.10       71.73       64.09         6066       6689       11280       4449         1207       1370       163       9271

Note: Sample from 20 identical provinces 1995 and 2002. Incomes are in constant 2002 prices. Source: Authors computation from CHIP 1995 and 2002.

Table 5: Average household wealth per capita and wealth components for categories 1995 and 2002 (Yuan, constant 2002 prices)

1995	Village and above cadre households	Entrepreneur households	Hybrid elite households	Non-elite households	Total
Average per capita wealth	13237	14650	14791	11732	12062
Average value of land per capita	22469	19113	18162	23648	23216
Percentage having no land (%)	3.04	3.15	7.14	0.51	0.93
Average financial wealth per capita	6208	9394	6627	4424	4907
Average net value of housing	19577	21984	32146	14633	15617
Average value of productive capital	2375	6464	7709	2603	2882
Average value of durable goods	4379	4425	5695	3043	3254
Average value of non- housing debt	162	1000	369	245	291
Number of observations	593	539	56	6810	7998
2002					
Average per capita wealth	17197	18573	26247	13388	14341
Changes from 1995 to 2002 (%)	29.92	26.78	77.45	14.12	18.89
Average value of land per capita	16682	12353	11413	16326	15914
Changes from 1995 to 2002 (%)	-25.76	-35.37	-37.16	-30.96	-31.45
Percentage having no land (%)	2.10	4.49	3.45	2.05	2.30
Average financial wealth per capita	8230	10587	26564	6053	6870
Changes from 1995 to 2002 (%)	32.57	12.70	300.85	36.82	40.00
Average net value of housing	28511	32669	53978	22174	24054
Changes from 1995 to 2002 (%)	45.64	48.60	67.92	51.53	54.02
Average value of productive capital	3871	4301	11534	11967	4742
Changes from 1995 to 2002 (%)	62.99	-33.46	49.62	359.74	64.54
Average value of durable goods	4739	5530	11601	3012	3490
Changes from 1995 to 2002 (%)	8.22	24.97	103.71	-1.02	7.25
Average value of non housing debt	861	1352	3783	621	746
Changes from 1995 to 2002 (%)	431.48	35.2	925.20	153.47	156.36
Number of observations	668	802	87	6643	8200

Note: Sample from identical 20 provinces 1995 and 2002.

Table 6: Estimates of income and wealth functions (Walder type) for 1995 and 2002 (selected coefficients and their standard errors)

	Coefficients	for education of hou	sehold head		
Year	Per car	oita income	Per capita wealth		
	Coefficient	Standard error	Coefficient	Standard error	
1995	0.0103	0.0013	0.0030	0.0009	
2002	0.0166	0.0010	0.0126	0.0012	
	Coefficients	for cadre status			
1995	0.1636	0.0159	0.1745	0.0143	
2002	0.2348	0.0295	0.3767	0.0306	
	Coefficients	for entrepreneur sta	tus		
1995	0.1544	0.0184	0.1856	0.0206	
2002	0.1962	0.0222	0.2423	0.0257	
	Coefficients	for hybrid elite statu	s		
1995	0.4261	0.0407	0.1631	0.0279	
2002	0.6023	0.0624	0.5472	0.0559	
	$R^2$				
1995	0.4126		0.4931		
2002	0.4851		0.3673		
	Number of o	bservations			
1995	7,924		7,924		
2002	8,197		8,197		

Note: Coefficients obtained when regressing log per capita income alternatively log household wealth per capita include the following variables on the right: education of household head, age of household head, (age of household head), 2 per cent of adult family members doing out of farm work, per capita planning area of household, number of household members, one dummy for minority ethnic status, dummies for cadre status, entrepreneur status and hybrid elite status, per capita income in county and 18 dummies for province.

Table 7: Estimates of income and wealth functions (Walder type) for 1995 and 2002 – specification when cadre status and entrepreneur status respectively are interacted with per capita county income.

Selected coefficients and their standard errors

	Income		Wealth	
	1995	2002	1995	2002
	Cadre payoff (stand		Cadre payoff (standa	
		· · · · · · · · · · · · · · · · · · ·	• • •	,
First	0.1569	0.1252	0.0977	-0.2356
	(0.0386)	(0.0221)	(0.0301)	(0.0259)
Second	0.1989	0.1541	0.1055	0.1369
	(0.0230)	(0.0235)	(0.0336)	(0.0276)
Third	0.3057	0.3322	0.1623	0.1454
	(0.0304)	(0.0302)	(0.0395)	(0.0261)
Fourth	0.3532	0.3186	0.1751	0.1502
	(0.0293)	(0.0314)	(0.0342)	(0.0253)
Fifth	0.2251	0.4883	0.0796	0.5274
	(0.0261)	(0.0291)	(0.0267)	(0.0342)
	Entrepreneur payoff		Entrepreneur payoff	
	(standard error)		(standard error)	
First	0.1985	0.1775	0.0999	0.0561
	(0.0851)	(0.0160)	(0.0282)	(0.0205)
Second	0.1712	0.2442	-0.0745	0.2908
	(0.0766)	(0.0236)	(0.0390)	(0.0248)
Third	0.0410	0.1907	-0.0730	0.1051
	(0.0469)	(0.0175)	(0.0386)	(0.0158)
Fourth	0.2508	0.3487	0.0713	0.3147
	(0.0953)	(0.0213)	(0.0350)	(0.0220)
Fifth	0.2438	0.2666	0.2169	0.3889
	(0.0584)	(0.0186)	(0.0460)	(0.0278)
2				
$R^2$	0.3352	0.3133	0.3567	0.2731
Number of				
observations				
1995	7 924		7 924	
2002	8 197		8 197	

Note: Coefficients obtained when regressing log per capita income alternatively log household wealth per capita include the following variables on the right: education of household head, age of household head)<sup>2</sup>, per cent of adult family members doing out of farm work, per capita planning area of household, number of household members, one dummy for minority ethnic status, five dummies for cadre \* quintile of average per capita county income, five dummies for entrepreneur \* quintile of average per capita income and 18 dummies for province.

Table 8: Estimates of income functions (Nee type of model) for 1995 and 2002 Independent variable is log per capita household income

	1995	1995	2002	2002
	Coefficient (standard error)	Coefficient (standard error)	Coefficient (standard error)	Coefficient (standard error)
Education years of household head	0.0013	0.00009	0.0045	0.0045
	(0.0021)	(0.0021)	(0.0019)	(0.0019)
Household head age	0.0032	0.0032	0.0167	0.0165
-	(0.0019)	(0.0019)	(0.0038)	(0.0038)
Household head age square	-0.00004	-0.00004	-0.00019	-0.00019
	(0.0002)	(0.0002)	(0.00004)	(0.00004)
Per cent of off-farm work in	0.0014	0.0014	0.0086	0.0143
household	(0.0003)	(0.0003)	(0.0743)	(0.0743)
Average county per capita income	.00018	0.00017	0.00013	0.00013
	(0.000001)	(0.000001)	(0.000001)	(0.000001)
Average per capita planting area	0.00025	0.00025	0.0157	0.0158
	(0.0000)	(0.0000)	(0.0026)	(0.0027)
Number of household members	-0.0424	-0.0430	-0.0690	-0.0691
	(0.0044)	(0.0044)	(0.0071)	(0.0071)
Ethnic minority dummy	-0.0139	-0.0169	0.0054	0.0055
	(0.0271)	(0.0271)	(0.0055)	(0.0055)
Cadre dummy	0.0946		0.1357	
	(0.0212)		(0.0202)	
Entrepreneur dummy	0.0313		0.1131	
	(0.0225)		(0.0177)	
Cadre dummy of first county per capita income quintile		0.0715		0.1141
'		(0.0420)		(0.0403)
Cadre dummy of second county per capita income quintile		0.0817 (0.0501)		0.1286 (0.0493)
Cadre dummy of third county per		0.1076		0.1441
capita income quintile		(0.0611)		(0.0405)
Cadre dummy of fourth county per		0.1337		0.1318
capita income quintile		(0.0440)		(0.0413)
Cadre dummy of fifth county per		0.1150		0.1865
capita income quintile		(0.0473)		(0.0433)
Entrepreneur dummy of first county		0.0486		0.0232
per capita income quintile		(0.3858)		(0.0323)
Entrepreneur dummy of second		0.053		0.1513
county per capita income quintile		(0.2973)		(0.0438)
Entrepreneur dummy of third		-0.1122		0.0978
county per capita income quintile		(0.3291)		(0.0356)
Entrepreneur dummy of forth		0.1453		0.1705
county per capita income quintile		(0.3369)		(0.0404)
Entrepreneur dummy of fifth county		0.0894		0.1969
per capita income quintile		(0.3024)		(0.0420)
Hybrid dummy	0.0286	0.0295	0.2839	0.2824
	(0.0741)	(0.0742)	(0.0494)	(0.0494)
Log per capita household income	0.5447	0.5417	0.5299	0.5293
two years before	(0.0102)	(0.0102)	(0.0103)	(0.0103)
	18 provinces dummies		18 provinces dummies	
Constant	3.2692	3.2959	3.2393	3.2363
	(0.0851)	(0.0855)	(0.1236)	(0.1236)
Adj R-square	0.6607	0.6621	0.5750	0.5755
Number of observations	6330	0.0021	7481	5.0100

Appendix

Table A1: Characteristics of different categories of households 1995 and 2002

1995	Cadre households	Entrepreneur households	Hybrid elite households	Non-elite households	All households
Average household size	4.5	4.4	4.9	4.3	4.3
Average education (years) of adults	6.5	6.4	7.3	5.9	6.0
Average age of adults, years	39.1	38.3	36.3	37.5	38.0
Average number of adult household members having off-farm income, per cent	21.9	37.4	46.0	12.6	15.3
Average county household per capita income Yuan (prices of 2002)	1918	2055	2538	1644	1699
Average per capita planting area (Mu)	1.4	2.0	0.9	2.3	2.2
Per cent minority households	6.4	4.0	1.5	9.3	8.6
Per cent adult members that are CPC members	18.36	5.08	15.38	3.89	5.16
Number of personal observations	2642	2382	276	29439	34739

2002	Village and above cadre households	Entrepreneur households	Hybrid elite households	Non-elite Households	Total households
Average household size	3.95	4.12	4.20	4.06	4.05
Average education years of adults	7.6	7.0	8.0	6.5	6.6
Average age of adults, years	40.37	39.26	38.76	39.42	39.48
Average number of adult household members having off-farm income, per cent	21.72	56.05	46.62	30.51	32.53
Average county household per capita income, Yuan	2783	3037	3296	2616	2679
Average per capita planting area (Mu)	2.3	1.6	1.6	2.1	2.1
Per cent minority households	7.6	5.8	6.9	10.5	9.79
Per cent of adult household members that have ever joined PLA	6.25	4.48	5.58	4.45	4.61
At least one of the parents or parents-in-law is or was a CPC member	16.9	12.8	26.0	11.6	12.3
At least one of the parents or parents-in-law has had business experience	7.5	10.9	10.4	5.8	6.5
The education level of the head's parents or parents- in- law is high (all >=5 years of education). Per cent	4.51	7.1	5.2	4.4	4.7
The education level of the head's parents or parents-in-law is low. Per cent.	65.0	61.2	68.0	54.9	56.5
Adult household members who are CPC members, per cent	24.08	6.16	22.42	5.55	7.27
Number of persons	2640	3307	365	26954	33266
Number of households	668	802	87	6643	8200

Table A2: Various income sources among elite and non-elite households in rural China 1995 and 2002

Incomes (Yuan) per capita in constant 2002 prices

	Ca	dre households	5	Entrep	Entrepreneur households			Hybrid elite households		
	Agriculture income	Non- agriculture income	Cadre income	Agriculture income	Non- agriculture income	Cadre income	Agriculture income	Non- agriculture income	Cadre income	
1995										
Total rural China	1119.9	178.2	613.3	983.2	1011.6		834.1	986.0	876.7	
Number of observations	2642			2382			276			
Western region	1037.9	95.8	241.6	764.9	426.9		918.1	89.4	118.7	
Number of observations	532			402			32			
Central region	1208.5	105.3	384.4	957.6	798.1		936.7	308.7	420.2	
Number of observations	809			727			85			
Eastern region	1098.3	257.3	907.6	1068.0	1323.0		762.3	1528.6	1273.3	
Number of observations	1301			1253			159			
2002										
Total rural China	1334.5	276.2	938.2	929.5	1652.0		830.6	1586.0	1196.9	
Number of observations	2640			3307				365		
Changes from 1995 to 2002 (%)	19.2	54.9	53.0	-5.5	63.3		-0.4	60.8	36.5	
Western region	1022.1	131.6	353.6	779.7	898.5		1166.3	1172.7	291.3	
Number of observations	545			636			100			
Changes from 1995 to 2002 (%)	-1.5	37.3	46.3	1.9	110.5		27.0	1212.2	145.4	
Central region	1513.5	118.6	571.8	1151.8	1077.4		1260.3	1284.2	601.9	
Number of observations	888			1301			102			
Changes from 1995 to 2002 (%)	25.2	12.6	48.8	20.3	35.0		34.5	316.0	43.2	
Eastern region	1343.7	457.3	1471.8	788.0	2547.6		355.8	2028.4	2124.9	
Number of observations	1207			1370			163			
Changes from 1995 to 2002 (%)	22.4	77.8	62.2	-26.2	92.6		-53.3	32.7	66.9	

Table A2 (continued):

	No	on-elite households		All households			
	Agriculture income	Non-agriculture income	Cadre income	Agriculture income	Non-agriculture income	Cadre income	
1995							
Total rural China Number of observations	1181.1 29439	179.6		1160.1	242.9	53.6 <i>347</i> 39	
Western region	882.2	145.9		886.3	155.3	14.8	
Number of observations	7967			8933		8938	
Central region	1192.1	115.1		1178.5	153.4	26.3	
Number of observations	11560			13181		13181	
Eastern region	1408.4	281.9		1334.5	398.4	109.6	
Number of observations	9912			12625			
2002							
Total rural China	1279.3	261.5		1244.0	415.4	94.9	
Number of observations	26954	26954		33266			
Changes from 1995 to 2002 (%)	8.3	45.6		7.2	71.0	77.0	
Western region	1057.7	118.6		1034.3	195.2	31.0	
Number of observations	6665			7946			
Changes from 1995 to 2002 (%)	19.9	-18.7		16.7	25.7	109.0	
Central region	1344.9	216.7		1336.6	302.4	46.6	
Number of observations	11018			13309			
Changes from 1995 to 2002 (%)	12.8	88.2		13.4	97.1	77.0	
Eastern region	1360.7	417.5		1280.0	686.3	190.7	
Number of observations	9271			12011			
Changes from 1995 to 2002 (%)	-3.4	48.1		-4.1	72.3	74.1	

Table A3: Income and wealth inequality in categories of households by region 1995 and 2002

Year 1995

Decomposition of total per capita income	China	West	Central	East
MLD index for total per capita income	0.3242	0.2446	0.2016	0.3454
Within all groups	0.3115	0.2347	0.1966	0.3378
MLD within cadre households	0.2494	0.1553	0.1406	0.2467
MLD within entrepreneur households	0.3031	0.3677	0.2204	0.2644
MLD within hybrid elite households	0.2312	0.3789	0.1501	0.1537
MLD within non-elite households	0.3132	0.2310	0.1952	0.3535
Between different categories inequality	0.0127	0.0099	0.0050	0.0076
Between different categories as per cent of total index	3.91	4.05	2.48	2.20
Gini coefficient	0.4360	0.3739	0.3364	0.4480
Year 2002				
Decomposition of total per capita income	China	West	Central	East
MLD for total per capita income	0.244	0.203	0.145	0.2422
Within all groups	0.228	0.1998	0.139	0.2237
MLD within village and above cadre households	0.2582	0.1165	0.1271	0.2649
MLD within entrepreneur households	0.2512	0.1415	0.1364	0.2536
MLD within hybrid elite households	0.3010	0.1337	0.1252	0.2452
MLD within non-elite households	0.2209	0.1627	0.1403	0.2132
Between different categories inequality	0.0159	0.0033	0.0061	0.0185
Between different categories as per cent of total index	6.97	1.63	4.19	7.64
Gini coefficient	0.3796	0.3156	0.2908	0.3760
Year 1995				
Decomposition of total per capita wealth				
MLD index of total per capita weelth	0.405	0.400	0.111	0.460

Year 1995						
Decomposition of total per capita wealth						
MLD index of total per capita wealth	0.185	0.128	0.114	0.160		
Within all groups	0.183	0.127	0.114	0.159		
MLD within village and above cadre households	0.1550	0.1300	0.0977	0.1299		
MLD within entrepreneur households	0.2019	0.1162	0.1127	0.1592		
MLD within hybrid elite households	0.1572	0.0429	0.0628	0.1131		
MLD within non-elite households	0.1847	0.1280	0.1151	0.1636		
Between different categories inequality	0.0019	0.0002	0.0001	0.0009		
Between different categories as per cent of total index	1.03	0.16	0.09	0.56		
Gini coefficient	0.3303	0.2752	0.2597	0.3113		
Number of observations	34739	8933	13181	12625		

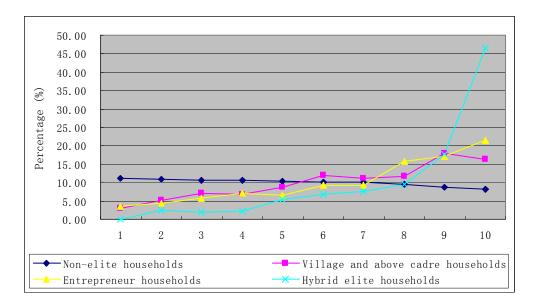
Year 2002				
Decomposition of total per capita wealth				
MLD index of total per capita wealth	0.278	0.203	0.173	0.300
Within all groups	0.268	0.200	0.1710	0.286
MLD within village and above cadre households	0.2788	0.1767	0.1503	0.2732
MLD within entrepreneur households	0.2924	0.2001	0.1535	0.3164
MLD within hybrid elite households	0.3627	0.1430	0.1147	0.3066
MLD within non-elite households	0.2554	0.1969	0.1698	0.2731
Between different categories	0.0097	0.0036	0.0020	0.0137
Between different categories as per cent of total index	3.49	1.77	1.16	4.79
Gini coefficient	0.4028	0.3429	0.3138	0.4213
Number of observations	33266	7946	13309	12011

Table A4: Distribution of counties according to quintiles per capita household income 1995 and 2002 (per cent and average quintile number)

Year and region	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Raw percentage	Average quintile number (1–5)
1995							
West	32.26	45.16	9.68	12.90	0	100	2.03
Central	17.07	9.76	43.90	26.83	2.44	100	2.88
East	17.95	10.26	2.56	17.95	51.28	100	3.74
Total	21.62	19.82	19.82	19.82	18.92	100	2.95
2002							
West	53.57	32.14	7.14	7.14	0	100	1.68
Central	14.63	24.39	41.46	19.51	0	100	2.66
East	7.89	5.26	5.26	28.95	52.63	100	4.13
Total	22.43	19.63	19.63	19.63	18.69	100	2.93

Figure 1: Distribution of different categories of households among income deciles defined for all households

## Year 1995



### Year 2002

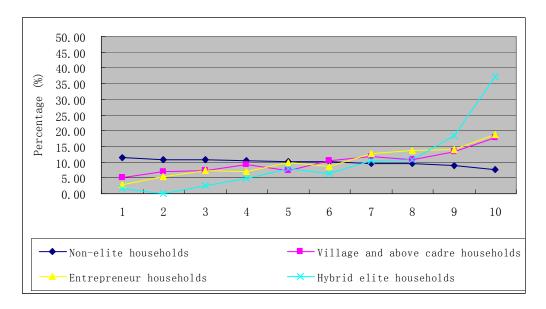
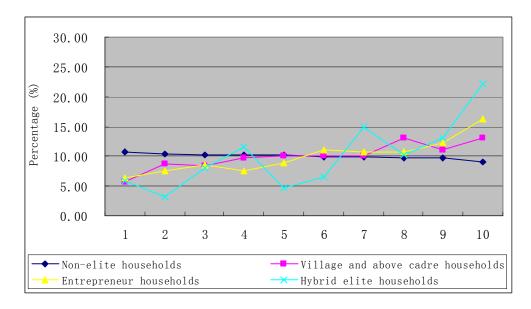


Figure 2: Distribution of different categories of households among wealth deciles defined for all households

### Year 1995



### Year 2002

