Does It Pay to Be a Cadre?
The Returns to Being a Local Official in Rural China[*]

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Abstract

During a transition from plan to market, it has often been argued that the returns to political status and connections will diminish. In this paper, using a large rural household panel data set that covers 10 provinces of China and most of the reform era, we estimate the returns to being a local cadre in rural China. We find that holding other things constant, cadre households on a per capita basis on average earn about nine percent more than non-cadre households. The income advantages of cadre households appear to *increase* over time and decrease when moving from rich to poor provinces in both absolute and relative terms. We further find that overall, local off-farm wage employment is the only source for the income advantages. The cadre status tends to increase both the probability of access to local off-farm wage employment and the wage earnings from local off-farm wage employment. Finally, we show that the income advantages of cadre households are mostly gone after cadre households become non-cadre ones and that the income advantages contribute little to income inequality. Our results indicate that in rural China cadre households have taken advantage of the cadre status to secure local high paying off-farm wage jobs. This is the very source of the income advantages or political rents associated with cadre status in rural China. Our results do not support the view of diminishing returns to political status and connections during a transition from plan to market in the context of rural China.

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I. Introduction

There is a growing body of literature estimating the value of political status and connections. While taking different approaches, a number of studies find evidence of the value of political status and connections in raising personal income and/or the value of firms. Roberts (1990) took advantage of the unexpected death of Senator Henry Jackson and identified the value of the political connections of others to him. The paper shows that share prices of companies with ties to the senator declined in reaction to his death; in contrast, share prices of companies with connections to his successor rose. Similarly, Fisman (2001) identified the timing of the emergence of a string of rumors about the health of former Indonesian President Suharto and demonstrated that the firms that had strong political connections with the Suharto saw their share prices fall more than firms with weaker or no connections. Beyond stock market effects, the value of political status and connections also may exist in agrarian economies. For example, Goldstein and Udry (2008) show that in Ghana individuals holding powerful positions in local political hierarchies have more secure tenure rights to cultivated land. As a result, the political elite invest more and enjoy substantially higher output.

In the context of rural China during the reform period (which began in the early 1980s), social scientists have been particularly interested in estimating the value of being an official in rural communities. In some sense this work is motivated by a desire to understand the implications of the transition from plan to market for the returns to political status and connections. For example, in his work on market transition, Nee

(1989) states that "in reforming socialist economies, the transition from redistributive to market coordination shifts sources of power and privilege to favor direct producers relative to redistributors" (Nee 1989, p. 663). As a result, "not only are the direct controllers of the redistributive mechanism likely to experience a relative loss, but the value of their political capital accumulated through prior experience as cadre is likely to diminish as well" (Nee 1989, p. 671). On the other hand, Walder (2002) argues that there is no generic market effect and the shift from plan to market has no inherent implication for returns to political status and connections.

In seeking to analyze this issue, most empirical studies have ended up concluding that officials in rural China have benefited from their political status and connections (e.g., Nee, 1996; Cook, 1998; Walder, 2002; Morduch and Sicular, 2000; Parish, Zhe and Li, 1995; Parish and Michelson, 1996).[1] Using a nationwide survey in rural China in 1989, Nee (1996) provides evidence that the levels of income for cadre households on average were 49.5 percent higher than non-cadre households after holding observable human capital and household characteristics constant. Similarly, drawing on another national survey in 1996, Walder (2002) found that cadre households, on average, earned about 44 percent more than non-cadre households—also holding other (observable) things equal. Morduch and Sicular (2000) use a longitudinal data set (1990 to 1993)—albeit collected in only one county in Shandong province—to show that village cadre households in the county enjoy relatively large political rents. Holding human capital, observable household characteristics, as well as unobservable time invariant factors

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[1] There are a limited number of papers that have found that village cadres have not benefited from their position as a rural official. Using a rural household sample collected from two peri-urban counties in Xiamen in 1985, Nee (1989) found that individuals in the households of village cadres did not enjoy any advantage in net income.

constant, on average income per capita of village cadre households was approximately 20 percent higher than that of non-cadre households.

Despite the preponderance of evidence favoring the conclusion that there is a positive premium for becoming a local leader, it is possible that the causality between becoming a local leader in rural China and the access of local leaders to higher earnings may not be so clear. First, some of the studies draw their conclusions based on small samples, which were collected in specific locations (for example, the study by Morduch and Sicular, 2000). In these cases, while the empirical work may be perfectly valid, the results may not be representative and could lead to incorrect conclusions for all of China.

In addition, although national-level studies (e.g., Walder, 2002, and Nee, 1996) avoid the criticisms of being based on results from a sample drawn from a particular region of China, there is also reason to be concerned about findings based on these data sets since the analyses are produced using a single cross section of data. The survey instruments that were used in the national surveys (unavoidably) failed to collect information on key (often unobservable and, hence unmeasurable) variables that could be used to identify the effects of being a local official on household welfare. In short, beyond the effects of observable human capital characteristics, such as education and age, the nation-wide studies failed to control for a number of unobserved variables. It is easy to imagine that there are many elements which are difficult or impossible to observe and/or measure that could be important in *both* pushing an individual to becoming a local official and determining their income advantage. For example, if villagers with higher abilities, better leadership qualities and/or family backgrounds that encourage individuals to take on leadership roles have a greater propensity to become village leaders, it is

possible that the higher levels of income that are associated with their households are not due to being a cadre, but are a result of these difficult-to-observe abilities and other personality characteristics.

The importance of such time invariant unobservable heterogeneity in China should not be underestimated. For example, it has been demonstrated by Li et al. (2007) in a study of the economic returns to Communist party membership that unobserved heterogeneity can produce correlations which create invalid perceptions. Using a set of data on 870 pairs of identical twins, it is shown that after controlling for the effects of unobservable ability and family background, the income advantages that are often thought to be associated with Communist party membership (which have been found in ordinary least squares estimates that look at the coefficient of a party variable in an income equation) are literally gone.

In this paper, we use a large rural household panel data set that covers 10 provinces of China (Shanxi, Jilin, Jiangsu, Zhejiang, Anhui, Henan, Hunan, Guangdong, Sichuan and Gansu) across 16 years (1986 to 2003) to measure whether cadre households in a village enjoy any income advantages over non-cadre households. The large geographic coverage and the lengthy span of the survey enable us to examine both the income advantages of being a rural cadre household and the variation of such advantages across regions and the evolution during a time of transition from plan to market in rural China. Taking advantage of the feature of the panel data set, we use household fixed effects models to eliminate all influences of the time invariant unobserved characteristics of cadres (such as his/her ability, leadership and family background). Having controlled for other factors such as education, physical capital and household demographic

characteristics, one can obtain consistent estimates of the effect of cadre status on household income. Even if the time invariant unobserved characteristics of a household, such as ability and leadership, do vary over time, the household fixed effect model will greatly reduce the bias found in cross-sectional studies as long as the variation of the unobserved characteristics in a given household over time is small relative to the differences across households.

We find that holding other things constant, cadre households on a per capita basis on average earn about 90 yuan (measured in 1986 yuan) or 9.3 percent more than non-cadre households. This is much smaller than what have been found in the previous studies, especially in the cross-sectional studies. When looking at the income advantages of cadre households over time, our results show that the income advantages appear to increase over time in both absolute and relative terms. The increase of the income advantages in fact occurred mainly after 1998. If China's market environment is improving over time, as most scholars demonstrate, our results do not support that the cadre household income advantages should fall as the market improves as it has often been argued (by Nee, 1989, for example). When examining the heterogeneity of the income advantages across provinces, we find that th

are more likely to get access to local off-farm emp

Section VI examines the sources of the income advantages of cadre households. Section VII discusses the depreciation of political capital while section VIII examines the impact on income inequality of the income advantages of cadre households. Section IX concludes.

II. Rural Cadres, Power and its Evolution

In this section, we provide a brief discussion of the grass-roots cadres in rural China. Specifically, we focus on the power and advantages that cadres have during the reform era. This discussion will motivate why it might be expected that cadres and their family members may have the power and access to economic opportunities, which could give cadre households leverage to raise their incomes.

The most important political status in villages of China is a cadre position. A cadre position refers to an official position of political or administrative leadership. Typically, since the commune system was abolished in the late 1970s and early 1980s in rural China, there have been two types of cadres in villages of China: township cadres and village cadres. Township cadres are the cadres who hold a position at the township administration but still reside in the village with their family and commute to the township to work and return daily or on weekends.

Village cadres include people in a village that serve in either village committee (*cunmin weiyuanhui*) or village party committee (*cun dangzhibu*). Since the beginning of the 1980s inside most of China's villages the two governance bodies have been in charge

village security (heads of the security office), army recruiting (heads of the militia), mediating civil disputes, distributing comfort fund to families of revolutionary martyrs, or organizing youths in the village (heads of the Communist Youth League). It is often that these people serve in neither the village committee nor the village party committee. It is on township and village cadres (*xiangcun ganbu*) as described above that we focus our analysis in this paper.

Township and village cadres in villages, like other ordinary households, are largely left on their own to enhance their own economic benefits and welfare. While this greatly reduces the liability of the state, it also opens up the possibility that cadres in a village may take advantage of their positions as a way to increase their own household's welf3597(a)3.are. In the 1980s during the early stagesofms, there were several main channels through which cadres might have used their position to enrich themselves. First, since cadres managed the process of contracting out collective resources—such as land, equipment and its factories, they may have been able to allocate the most fertile land, best equipment and relatively profitable enterprises to their own families at a favorable price. They also may have been able to wield their power to receive benefits indirectly. Fr instance, cadres may have exacted bribes and/or other gifts from villagers who were willing to pay for preferential access to the resources of the collective.

Second, given the underdeveloped state of markets in the early stages of the refrms, cadres continued to be responsible for rat ioning a subset of inputs. In the 1980s inputs, such as fertilizer and fuel, were often sold through state stores at below market prices if farmers were able to get access to rationing coupons from their village leaders. Access to these rationed goods was often a key to determining the profitability of

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agricultural production. As a result, cadres may have benefited income- or consumption-wise from having preferential access to these scarce and cheap goods.

Third, in rural areas that were in more robust local economies, cadres often managed township and village enterprises (or at least acted as managing consultants). Thus, they may have earned additional income and/or may have been able to help their family members get a job in one of the township and village enterprises. These jobs were usually well paid—at least relative to farming—and in high demand by villagers. Township and village factories sometimes acted at satellite factories (or input suppliers of raw materials) for other enterprises and this relationship also may have been able to be used to get a family member a job in other enterprises.

Finally, being in the bureaucratic system may have given cadre households more of an advantage (at least over ordinary households) in becoming part of personal networks and in being able to develop personal relationships (*guanxi*) with upper level cadres (Oi, 1999). Through these networks, it is possible that cadre households gained private access to market information and technical expertise (Oi, 1999). Cadres then could have employed these advantages to enhance their own family's income. For example, having a good relationship with upper level cadres may have helped cadres to obtain credit from local banks to start up an own family business. Information or new technologies also could have helped the business of cadres thrive.[6]

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[6] For a detailed description on the organization and administration of local governments (county, township and village) and their power and behavior in the post-Mao era, see Oi (1989 and 1999).

Late Reforms and Benefits of Cadres: Waxing or Waning?

The economy of rural China has not been static. Even though there were many ways that cadres could have benefited in the early stages of the reform, there are several ways in which the evolution of institutions and maturation of markets could have changed the benefits during the 1990s and beyond. First, state distribution channels for many inputs to farming have withered. Whereas in the 1980s a large share of many inputs flowed through the state procurement and sales system, by the late 1990s it was officially abolished and all inputs were flowing through markets. Therefore, the advantage of cadre households of being able to gain access to below market priced and rationed goods eventually disappeared by the mid- to late 1990s.

Second, after the mid-1990s, under mounting competitive pressures, many local government officials, including village cadres, began to privatize their enterprises (Li and Rozelle, 2003). Once privatized, the ability of cadres to influence the employment decisions of the new owner likely declined and the ability to help family members obtain non-farm jobs would have also fallen. At the same time employment outside of the village/town—especially in China's cities—have risen greatly, which substantially increased the opportunity of finding a job for those without connections since the influence of cadres rarely would be expected to extend far beyond the boundaries of the town.

Despite these changes, there are other reasons to believe that the power of cadres in rural China may not have weakened. Some sources of power may not have completely disappeared and new sources of power may have emerged. For example, cadres may have shifted the attention to managing, rather than directly operating, township /village

resources to enhance their own income. Due to the rapid rate of urbanization in the late 1990s the value of land in some villages has risen. Since cadres are often managing both leasing and sales transactions, this may be a way that they could raise their income. The rising income could come either legally (such as a management or agency fee) or illegally (through kickbacks). In fact there are anecdotes in some villages saying that village cadres earned income through corruption in the process of land expropriations and other transaction (e.g., Cai, 2003; Guo, 2001).

In fact, the power and advantages held by cadres in rural China are likely to be quite heterogeneous across villages and mainly depend on the nature of the village economy (Oi and Rozelle, 2000). For example, in relatively poor and remote villages in which agriculture is the dominant source of income for households or in villages in which migration is pervasive, cadres may not have much power stemming from their official position which they can take advantage of to increase their own income. On the other hand, in the villages that are in suburban areas or in which there are many enterprises, cadres may have significant power which could be used to raise their own income or provide opportunities to family members. Finally, in villages in which there are many private firms, although cadres may not have power as strong as those in villages dominated by village enterprises, they may have been able to create mutually beneficial relationship with private enterprises since they might have some regulatory power over the firms. They also might use their personal relationship with upper-level cadres to help private entrepreneurs in the village obtain loans or otherwise facilitate their business start-up and/or day-to-day operations. In return, private entrepreneurs may provide quid pro quo benefits to cadres or their family members.

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Given the possible power and advantages held by cadres in rural China, and the rise of markets and other institutions that may have undermined these privileges, it is an empirical question about whether or not cadres in rural China may in fact have turned any advantages that they have retained into income. In the subsequent sections, we use our household data set to examine these issues.

III. Data

To examine the possible income advantages associated with cadre status in rural China, we use a large rural household panel data set that comes from annual household surveys conducted by the Survey Department of the Research Center on the Rural Economy (RCRE) at the Ministry of Agriculture in Beijing. To sample households, RCRE first selected counties in the upper, middle and lower income terciles in each one of the 31 provinces and administrative regions in China. Then a village in each county was randomly selected. Depending on the size of the village, between 40 and 120 households were randomly chosen and surveyed in each village. RCRE started the household survey in 1986 and intended a longitudinal survey, following the same households over time.   As a result, there is a significant panel dimension to the household sample.[7]

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[7] Despite the significant panel dimension, nearly one third of originally selected households were lost to attrition during the period 1986-1999. This is mainly due to village attrition that occurred during two two-year gaps when RCRE was unable to conduct the survey in 1992 and 1994 because of funding difficulties. To supplement the sample, RCRE replaced lost villages by comparable villages in the same counties. Households lost through attrition were replaced (at least in principle) on the basis of random sampling. For a detailed discussion of the RCRE panel data set, including discussions of survey protocol, sampling, attrition, and comparisons with other data sources from rural China, see Benjamin, Brandt and Giles (2005).

The scope of the survey is quite broad. Households are asked a range of questions regarding political status (e.g., households' cadre status), education, sources of income, labor supply, land use, asset ownership, occupational choice and other household characteristics. Respondent households keep daily diaries of income earnings and expenditures. A resident survey administer living in the county seat visits with households once a month to collect information from the diaries.

The data set used in our analysis comes from part of the complete RCRE survey.[8] Specifically, it covers ten provinces (Shanxi, Jilin, Jiangsu, Zhejiang, Anhui, Henan, Hunan, Guangdong, Sichuan and Gansu) and spans the period 1986-2003 except 1992 and 1994 as RCRE was unable to conduct the survey in these years because of funding difficulties. As a result, the data set includes 14,417 households and has a total of 123,867 household-year observations. The large geographic coverage and the lengthy span of the survey enable us to examine both the income advantages of being a rural cadre household and the variation of such advantages across regions and the evolution during a time of transition from plan to market in rural China.

Finally, RCRE's sampling is not proportional to provincial rural population. For example, the number of households surveyed in Sichuan is nearly the same as that surveyed in Gansu, despite the fact that Sichuan has a rural population that is nearly five times larger. Thus, we use provincial rural population (by year) to weight all calculations.[9]

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[8] The complete RCRE survey covers over 22,000 households in 300 villages in 31 provinces and administrative regions. We have obtained access to data from 10 provinces, or roughly one third of the RCRE survey.
[9] Specifically, weight = Provincial Rural Population / Number of Households Sampled in Province.

IV. Empirical Framework

In this section, we discuss the empirical specification for examining the relationship between rural cadre status and household income. Specifically, we first present our empirical specification. We then define and briefly describe the variables included in our regressions.

To examine the relationship between rural cadre status and household income, the analysis is centered on a series of income functions, where the dependent variable is household income *per capita* for household i in province j in year t:

$$(1) \quad Y_{ijt} = \mu_i + \lambda_t + \delta_{jt} + \beta X_{ijt} + \sum_{k=1}^{K} Z_{ijtk} \gamma_k + \varepsilon_{ijt}$$

In this specification, variable X_{ijt} is the rural cadre status variable for household i in province j in year t, which equals 1 if the household had a family member that was a rural cadre in year t, and zero otherwise. The coefficient on this variable, β, will be the focus of our estimation efforts. It measures the income advantages of a cadre household, holding other things constant. Variables, Z, are a set of control variables controlling for observable household characteristics. The unobservable household characteristics such as ability and family background are captured in μ_i. In the specification we also include year fixed effects, λ_t, and province by year fixed effects, δ_{jt}. λ_t controls for any

household income shocks in year t common to all the households in the sample while δ_{jt} controls for any household income shocks in year t that are specific to province j.[10]

The error term (ε_{ijt}) in the specification also requires attention. It is likely that the error terms are correlated across time. That is, $corr(\varepsilon_{ijt}, \varepsilon_{ijs}) \neq 0$, for $t \neq s$. For example, income shocks may have persistent effects. If so, this would mean that income shocks happening in the current year might also affect incomes in the following years. While this autocorrelation will not bias the coefficient estimation, serial correlation in Differences-in-Differences models may severely bias the standard error estimation downward (Bertrand, Duflo, and Mullainathan, 2004)[11]. Because of this, we use Huber-White Standard errors clustered at the household level throughout. These standard errors are robust to arbitrary forms of error correlation within a household.

The possible source of endogeneity associated with the cadre status variable (X_{ijt}), the coefficient of which is the focus of our analysis, is from the household level unobservables (μ_i). Specifically, the household level unobservables, that is, time invariant heterogeneities such as ability, family background and other intangibles, may be correlated with the cadre status variable (X_{ijt}). It is easy to imagine that there are many elements, which are difficult or impossible to observe and/or measure, that could be

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[10] Ideally, we would like to control for any household income shocks in year t that are specific to each individual *village* by adding in the specification village by year fixed effects. However, doing so requires a substantially large amount of computer random-access memory (i.e., more than 3.5 gigabytes) to be allocated to Stata in order to run the regressions. This resulted in an extremely slow running process. In addition, many quintile regressions with the village by year fixed effects specification in our later analysis failed to converge. As such, we have used the province by year fixed effects specification. Nevertheless, we ran a number of regressions with village by year fixed effects despite the slow running process. It turns out that the results are similar to those from the province by year fixed effects regressions.
[11] Equation (1) is essentially a regression version of Differences-in-Differences estimation.

important in both pushing an individual to becoming a village cadre and determining

their income advantage. For example, if villagers with higher abilities, better leadership

qualities and/or family backgrounds tend to become village cadres, it is possible that the

higher levels of income that are associated with their households are not due to being a

cadre, but are a result of these unobservable abilities and other characteristics.[12] To

control for the endogeneity, we take advantage of the panel feature of our data set and

employ household level fixed effects models.

Below we define and briefly describe the variables included in our regressions.

Measurement of Household Income

Household income is calculated as the sum of net income (gross revenue less

current expenditures) from agriculture, farming sidelines (e.g., animal husbandry and

livestock), family-run business, plus wage income, and transfers.[13] Specifically,

household incomes can be classified into two groups: earned and unearned incomes.

Household earned income is the sum of income from all household-managed activities

(i.e., agriculture, farming sidelines, and family-run business), plus off-farm income from

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[12] Some unobservable household behaviors may be correlated with the cadre status. For instance, if a
family member in a household becomes a cadre, labor supply and investment behavior of the household

local wage employment, temporary migrant wage employment, and government employment.[14] Household unearned income is the sum of formal transfers from the village and higher levels of governments, informal transfers and remittance from friends or family, and other income. Household income is gross of taxes and fees.

A couple of things deserve mention with regard to the calculation of household income. First, the value of farm output that is not sold, and thus largely consumed (or stored) by the household is calculated at market prices and included as part of household income. Second, household incomes are deflated into 1986 prices using the National Bureau of Statistics rural consumer price index for each province.

Rural Cadre Status Variable

Our measure of the political status of households in rural China is the cadre status. In the RCRE annual household survey, there is one question designed to measure the cadre status. Households in the sample were asked every year whether they were township and village cadre households (*xiangcun ganbu*). Despite the simplicity of the survey question, the question has identified the most powerful households in a village after all.

Control Variables

In addition to the cadre status variable, we also include a number of control variables in our empirical specification. These are households' weighted average years of education, share of laborers with special skills, productive assets per capita, arable land

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[14] In addition to the income from temporary migrant wage employment, households may also have income from permanent migrants. We define this income as remittance and classify it as unearned income.

per capita, share of laborers and share of male laborers.[15] Weighted average years of education and share of laborers with special skills help crudely to control for human capital while productive assets per capita and arable land per capita control for physical capital. Share of laborers and share of male laborers are included in the regressions to control for household demographic characteristics that could affect household income. Finally, households' Communist Party membership is also included in our regressions to control for another measure of political status in rural China that could affect household income.

V. Cadre Status and Household Income Advantages

In this section, we use our data set to examine the relationship between cadre status and the advantages that the cadre household has in income generation. To do so, we begin by providing a brief descriptive analysis of the relationship. Specifically, we examine the nature of cadre households in rural China, focusing on the differences in income and other household characteristics between cadre and non-cadre households. Second, we turn to our multivariate analysis in order to try to isolate the relationship

In rural China it is possible to identify a group of households that can be called *cadre households* (Appendix Table 1). Our data show that, on average, 4.61 percent of rural households can be classified as cadre households (bottom row). These households have family members who are either township or village cadres.

When looking at the income of cadre households compared to non-cadre households, it is clear to see significant income a-89 670.2 T9-89 670.9r17(i)-2.5365(n)-0.956417(t)-2.53658

of the income gap between cadre and non-cadre households occurred mainly after 1991.

Specifically, between 1986 and 1991the income advantages of cadre households were

roughly at the same magnitude, on average about 100 yuan and 16 percent of the non-

cadre household average income. After 1991, the income advantages increased to a

much higher level, on average 282 yuan and 31 percent of the non-cadre household

average income. Finally, an interesting observation is that during the period 1995 to

1999 when a sharp decline in farm prices and cropping incomes occurred (Benjamin,

Brandt and Giles, 2005), per capita income for non-cadre households actually fell while

cadre households still managed to grow their incomes at an average growth rate of 2.4

percent per year, from 1,068 yuan in 1995 to 1,173 yuan in 1999.

       However, it is also important to realize that cadre and non-cadre households also

differ in other ways, some of which may be able to account for part of the observed

income gap. In fact, our data show that it is possible that part of the income gap may be

due to the higher levels of human and physical capital that cadre households possess

(Table 2). Importantly weighted average years of education for cadre households are

higher than non-cadre households. The share of laborers for cadre households that have

received special training is also higher than that for non-cadre households. Cadre

households own more productive assets; the per capita level of productive assets for

cadre households on average is 550 yuan, a level which is 14 percent higher than that for

non-cadre households (row 4). Certainly, then, it should be expected that the human and

physical capital advantages of cadre households can account for at least some of the

observed differences in income. Hence, in any analysis of the income advantage of being

a cadre household, it is important to control for these (and other) differences when performing multivariate analysis.

Multivariate analysis

After holding the effect of observable household characteristics constant, the results of the baseline analysis (i.e., the OLS regressions) demonstrate that cadre households still appear to have an income advantage over non-cadre households (Table 3). In all of the three specifications, the coefficient for the cadre status variable is positive and statistically significant at the one percent level of significance (row 1 and columns 1, 2 and 3). After controlling for all of the observable household characteristics, and year, province and province by year fixed effects, on a per capita basis, cadre households on average earn 116.0 yuan of income more than non-cadre households (row 1 and column 3). Given the average per capita income of non-cadre households (807.4 yuan—Table 1, row 17 and column 2), this means that the *net income gap* (that is the income advantage net of the effect of observed characteristics, such as the educational attainment, and year, province and province by year fixed effects) is 14 percent in favor of cadre households over non-cadre households.

Interestingly (and importantly for our modeling) the observable household characteristics do explain a part of the income advantage of cadre households. Specifically, without controlling for any household characteristics, cadre households have 196.4 yuan of income more than non-cadre households, about 24 percent higher (Table 3, row 1 and column 2, net of year, province and province by year fixed effects). After controlling for the observable household characteristics, however, the income difference between cadre and non-cadre households decreases to 116.0 yuan, about 14 percent

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higher than non-cadre households (Table 3, row 1 and column 3). The observable

household characteristics, in fact, can be shown to explain about more than one third of

the observed income differences between cadre and non-cadre households (that is (196.4-

116.0)/225.3*100=36 percent).

As discussed above, the OLS regression results likely do not account for the

unobserved household characteristics such as ability that could be making the coefficients

subject to endogeneity bias. To account for these unobserved factors, we include

household level fixed effects in the regression (Table 3, column 4). Although the primary

concern of the analysis is the effect of household cadre status, it is useful to note that all

of the coefficients on the control variables have expected signs after the household level

fixed effects are included. Interestingly, different from the finding of no economic

returns to Communist Party membership in urban China by Li et al. (2007), our results

show that Communist Party membership in rural China tend to increase household

income (Table 3, row 2 and column 4).[16]

After controlling for the unobservable household characteristics, cadre households

still appear to have an income advantage, although it is narrower (Table 3, row 1 and

column 4). The coefficient on the household cadre variable is still positive and

statistically significant at the one percent level of significance. The measured income

advantage of cadre households falls from 116.0 yuan (the coefficient estimate in Table 3

row 1 and column 3) to 90.38 yuan (row 1 and column 4), which is about 11 percent of

the average per capita income for non-cadre households. This means that the

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[16] Based on a data set collected in a relatively rich county in Shandong province, the study by Morduch and Sicular (2000) finds no economic returns to Communist Party membership in villages of the county.

unobservable household characteristics can explain about 11 percent ((116.0-90.38)/225.3*100=11.4 percent) of the observed income difference between cadre and non-cadre households and about 22 percent ((116.0-90.38)/116.0*100=22.1 percent) of the income difference that appears in the OLS regression (row 1 and column 3).

When using log income instead of linear income as the dependant variable in our regressions, the results still show that cadre households appear to have an income advantage over non-cadre households (Table 4).[17] The coefficient on the cadre status variable is positive and statistically significant at the one percent level. On average, cadre households on a per capita basis appear to earn 9.3 percent more than non-cadre households, after controlling for both the observable and unobservable household characteristics (row 1 and column 4).[18]

Do political rents increase or decline over time?

When looking at the income differences between cadre and non-cadre households over time, similar to the previous descriptive analyses, our results show that holding constant both the observable and unobservable household characteristics, the income advantages of cadre households appear to increase over time in both absolute and relative

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[17] Some households in the sample actually have negative incomes. These are typically households that have high gross incomes, but also high business-related expenses. As a result, when using log income as the dependant variable in the regressions, such households were dropped.

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terms (Table 5). For example, the income differences had increased by almost fifteen times, from 24 yuan in 1986 to 352 yuan in 2002 (rows 1 and 15 and column 1). In relative terms, per capita income for cadre households in 1986 on average was 7 percent higher than that for non-cadre households while in 2002 it became 19 percent higher (rows 1 and 15 and column 2).[19] The increasing income gains for cadre households over time are exactly what Morduch and Sicular (2000) find.[20] If China's market environment is improving over time, as most scholars demonstrate, our results do not support that the cadre household income advantage should fall as the market improves as it has often been argued (by Nee, 1989, for example).

The increase of the income gap between cadre and non-cadre households occurred mainly after 1998 (Figure 2). Specifically, during the period between 1986 and 1998, the income advantages of cadre households in terms of percentage of the average per capita income for non-cadre households were roughly at the same magnitude and did not display a clear trend either downward or upward. Only after 1998 did the income advantages for cadre households start to increase rapidly. By 2002, the income advantages had increased to 19 percent of the non-cadre household income, which was more than twice as large as that in 1998.

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[19] In 2003the income advantagese.850956417(l)4358( )-3.5.493(o)-36(w)0.622527(i)-2.535n2dvd.47843417(v)-.7(.)-0h7.001608(d

Do political rents tend to be higher in relatively rich provinces?

When looking at the income differences between cadre and non-cadre households across provinces, our results show that the income advantages of cadre households in relatively rich regions appear to be higher in both absolute and relative terms than those in poor regions (Table 6).[21] Specifically, in Zhejiang, Guangdong and Jiangsu, which are the most developed provinces in China, the income advantages of cadre households are 383 yuan, 209 yuan, and 89 yuan, respectively; all the three coefficients are statistically significant (rows 1, 2 and 3 and column 1). In contrast, in the other provinces the income advantages are less than 50 yuan (rows 4-10 and column 1). The income advantages in relative terms also appear to decrease when moving from rich to poor provinces (Figure 3). In Zhejiang, Guangdong and Jiangsu, the income advantages in terms of percentage of the non-cadre household income are 19 percent, 13 percent, and 10 percent, respectively, which are higher than those in the other provinces (Table 6, column 2).

Robustness Checks

Given the fact that total income includes both earned and un-earned income, the measured relationship between household cadre status and income may be different for earned income and total income (because it is possible that some household unearned incomes such as remittance and family transfers, may not depend on household cadre status). Because of this, we also examine the relationship between earned income and household cadre status. Our results show that despite these concerns, the measured

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[21]

income advantage of cadre households is about the same regardless of our definition of income (Appendix Tables 2 and 3).

Another check on the robustness of our results is to see whether household specific time trends may have driven our results. The reason for doing so is that given the fact that equation (1) is essentially a regression version of Differences-in-Differences estimation, the key identifying assumption under Differences-in-Differences estimation is that conditional on the explanatory variables, income trends would be the same for both non-cadre and cadre households in the absence of cadre status. Therefore, without controlling for differences in income trends, Differences-in-Differences estimation of the coefficient of the cadre status variable may lead to biased results.

To check if household specific time trends may have driven our results, we run a household fixed effects regression for each province with household specific time trends included. The results show that it is unlikely that our results have been driven by household specific time trends (Appendix Table 4, columns 5 and 6). Specifically, when including household specific time trends, consistent with the previous results, the income advantages of cadre households in Zhejiang, Guangdong and Jiangsu still appear to be positive and statistically significant although the coefficient on the cadre status

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[22]

variable is about half of that without household specific time trends (rows 1-3 and columns 5 and 6).[24]

VI. Sources of Income Advantages of Cadre Households

In this section, we examine the sources of the income advantages of cadre households that are found in the previous section. To do so, we first examine the income advantages by income source. As we find that off-farm wage employment appears to be the only source for the income advantages of cadre households, we then focus on off-farm wage employment and look at how cadre status affects wage incomes. Specifically, we try to understand how cadre status affects participation in of

when we take the numbers literally, the coefficient for off-farm wage employment is about 70 yuan, which accounts for more than three fourths of the income advantages of cadre households (i.e., 69.89/90.38 * 100 = 77.3 percent, row 1 and column 5). In contrast, the contributions by agriculture, agricultural sidelines, family-run non-farm businesses and unearned income only account for about two, four, 13 and three percent, respectively, and they are not statistically different from zero.[26]

When we further disaggregate off-farm wage employment into local, temporary migrant and government employment, it turns out that local employment is the only income advantage source for cadre households (Table 8).[27] Specifically, holding other things constant, on a per capita basis, cadre households on average earn about 108 yuan more than non-cadre households for local off-farm employment (row 1 and column 2). In contrast, interestingly, we find an income disadvantage associated with the cadre status for temporary migrant employment. Cadre households in fact earn about 37 yuan less than non-cadre households for temporary migrant employment (row 1 and column 3). This is perhaps because cadre households have had to take time and effort to fulfill administrative duties and mandated tasks in the village, which may have reduced the

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[26] Here we use the linear income regressions instead of the log income regressions. This is because the log income regressions are subject to severe selection bias as they discard a substantial number of observations for each income source that have zero or negative incomes.

[27] Local employment refers to off-farm wage employment within the village while temporary migrant employment includes household members still resident in the village but who commute outside the village to work and return on weekends, as well as locally registered household members who work outside the village for a substantial portion of the year. Temporary migrant employment in most cases involves employment outside the township. Note that wage incomes for township cadres are under the category of government employment as townships form a government level. In contrast, compensation for village cadres is under the category of transfers from the village, which are then lumped all together in the unearned incomes. This is because in rural China villages do not form a government level and therefore village cadres are not on the government payroll. In addition, compensation for village cadres is mainly from village coffers and is to subsidize village cadres who take extra time to manage village affairs in addition to their own family economic activities.

availability of family labor for temporary migrant employment. In the case of

government employment, there do not appear to be any income differences between

cadre and non-cadre households (row 1 and column 4).[28] As such, in the subsequent

analyses, we will focus on local and temporary migrant employment.

Participation and distribution effects of cadre status

Given the effect of the cadre status on wage incomes, it is interesting to further

know how the cadre status affects participation in off-farm wage employment and

conditional on participation, how the cadre status affects wage earnings. To examine the

participation effect, we use a linear probability model. The linear probability model

gives a straightforward interpretation of the causal effect of the cadre status on

participation in off-farm wage employment.

To examine how the cadre status affects wage earnings conditional on

participation, one may be tempted to apply a linear or log-linear model to the

observations that have non-zero wage earnings. While this is intuitive, the linear or log-

linear model conditional on participation is invalid and subject to selection bias (Angrist,

1999). As a result, it does not appear to have a clear-cut interpretation of the causal

effect of the cadre status on wage earnings conditional on participation even if the cadre

status is randomly assigned.

To understand the effect of the cadre status on wage incomes beyond the

participation effect, we examine how the cadre status affects wage earnings at different

quantiles of the wage income distribution. To do so, we employ fixed effects quantile

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[28] Non-cadre households also could have family members who are employed by government. For example, some family members may be employed as janitors, office cleaners, security guards, and cooks at the township government. In most cases, they are hired on an as-needed basis. It is important to note that they are not part of the cadre system.

regression. Specifically, we first use the within transformation to eliminate the household unobservable characteristics such as ability.[29] We then apply the conventional quantile regression to the transformed data.[30]

Our linear probability regression results show an interesting pattern of access to off-farm wage employment by cadre status (Table 9). First, overall, cadre households are more likely to get access to off-farm wage employment than non-cadre households.   On average cadre households are 14.3 percent more likely than non-cadre households to have family members with off-farm wage employment (row 1 and column 1).   Second, interestingly, when looking at the local and temporary migrant employment separately, it appears that compared to non-cadre households, cadre households are more likely to get access to local employment but *less* likely to get access to temporary migrant employment. Specifically, on average cadre households are 28.5 percent more likely than non-cadre households to have family members with local wage employment. However, they are actually 5.7 percent less likely to have family members with temporary migrant employment (row 1 and columns 2 and 3).

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[29] In doing so, we implicitly assume the same household fixed effects for all quantiles. To control for the household unobservable characteristics, ideally, we would like to include household dummies in our quantile regressions instead of using the within transformation. By doing so, the household fixed effects are allowed to be different for different quantiles. However, after inclusion of household dummies, the resulted total number of variables in our regressions will exceed the maximum number allowed by Stata (i.e., 11,000).

[30] The standard errors of the quantile regressions are in fact biased downward. This is because it does not account for the fact that the means we removed from the data using the within transformation are estimates. As a result, the quantile regressions underestimate the standard errors. To our best knowledge, however, we are not aware of a procedure that corrects for the downward bias. Despite this, it is reasonable to believe that the bias does not affect our results materially. First, given the long time span of the households in our data set, it is possible that the means have been estimated quite precisely and therefore the bias in our case is likely small. Second, the estimated coefficients for the cadre status variable are much larger than the standard errors (Table 10). As such, it is likely that an upward adjustment will not affect the significance of the coefficients.

When examining the effect of the cadre status on wage earnings at different quantiles of the wage income distribution, our quantile regression results yield a number of important findings. First, the cadre status appears to affect the *entire* distribution of wage incomes. Specifically, the cadre status coefficients are statistically significant for both the upper and lower quantiles of the distributions and in fact for almost all of the quantiles throughout the wage income distributions (Table 10). Second, when looking at the local and temporary migrant employment separately, the cadre status tends to increase wage earnings of local employment throughout the entire distribution while decreasing wage earnings of temporary migrant employment throughout the entire distribution (rows 2 and 3).

Third, the cadre status appears to have larger effects on wage earnings at the extreme upper quantiles than at the extreme lower quantiles of the distributions.[31] For example, holding other things constant, the cadre status increases wage incomes of local

spread of the wage income distribution for local employment while reducing the spread of the distribution for temporary migrant employment.[32]

Wage Income Advantages of Cadre Households over Time

Our results show that holding constant both the observable and unobservable household characteristics, the wage income advantages by cadre households appear to increase over time (Table 11). For example, the wage income differences had almost doubled from 62 yuan in 1986 to 122 yuan in 2002 (rows 1 and 15 and column 2). In 2003 the wage income advantages by cadre households actually fell from 122 yuan in 2002 to 97 yuan (rows 15 and 16 and column 2). [33] Despite this, they are still about 50 percent larger than those in 1986.

The increase of the wage income gap between cadre and non-cadre households occurred mainly after 1998 (Figure 4). During the period between 1986 and 1998, the wage income advantages did not display a clear trend either downward or upward, on average about 42 yuan. Only after 1998 did the wage income advantages increase to a much higher level, on average about 123 yuan.

Our results further show that the increase of the total income advantages of cadre households over years, which is found in the previous section, in fact has been mainly driven by the increase of the wage income advantages over years and the increase of the wage income advantages over years then has been solely driven by the increase of the income advantages from local employment (Figure 4). Specifically, the total income advantages, the wage income advantages, and the income advantages from local wage

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[32] In the next section, we will examine the impact on income inequality of the income advantages of cadre households.

[33] The coefficient for year 2003 (i.e., 96.84 – Table 11, row 16 and column 2) is statistically significant at 10.4 percent.

employment track each other closely and have similar trends over years except 2001 and

2002.[34] In contrast, the wage income advantages from temporary migrant employment

were in fact negative for all the years between 1986 and 2003 and did not display a clear

trend.

Wage Income Advantages of Cadre Households aross

Our results further show that the differences in the *total* income advantages of

cadre households across provinces, which are found in the previous section, in fact have

resulted from the differences across provinces in the wage income advantages from *local*

employment (Figure 5). Specifically, the total income advantages, the wage income

advantages, and the income advantages from local wage employment track each other

closely and have similar patterns across provinces.[35] In contrast, the wage income

advantages from temporary migrant employment did not display a clear pattern across

provinces.

To sum up, in this section we find that overall, off-farm wage employment

appears to be the only source from which the income advantages of cadre households

come. When further disaggregating off-farm wage employment into local and temporary

migrant employment, it turns out that overall, the local employment is the only source for

the income advantages. In addition, we find that cadre households are more likely to get

access to local employment but *less* likely to get access to temporary migrant

employment; the cadre status tends to increase wage earnings of local employment

throughout the entire wage earning distribution while decreasing wage earnings of

temporary migrant employment throughout the entire distribution. Finally, we find that

the time trend of and the provincial differences in the total income advantages of cadre

households have been mainly driven by the wage income advantages from local

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[35] In Zhejiang province, in addition to wage incomes, incomes from family-run non-farm businesses also appear to be a major source for the total income advantages. Our regression results show that in Zhejiang, holding other things constant, cadre households on average earn about 210 yuan more than non-cadre households from family-run non-farm businesses while earning about 185 yuan more from off-farm wage employment. Note that the coefficient for the cadre status for family-run non-farm businesses (i.e., 210 yuan) is statistically significant at 12.5 percent while the coefficient for off-farm wage employment (i.e., 185 yuan) is statistically significant at 8.2 percent.

employment. Thus, despite the several possible channels suggested in Section II through which rural cadres may take advantage of their positions to increase their own households' welfare, and the possible shift of income advantage sources during the transition from plan to market in rural China, local off-farm wage employment has constantly been the major source for the total income advantages over time and across provinces. Altogether, our results indicate that in rural China cadre households have been taking advantage of their cadre status to secure local high paying off-farm wage jobs. This is the very source of the income advantages or political rents associated with cadre status in rural China.

VII.   Income Advantages of Cadre Households and Depreciation of Political Capital

Given the income advantages associated with the cadre status in rural China, an interesting question is what happens to the income advantages if the cadre steps down from the position and thus the cadre household becomes a non-cadre household. Specifically, will the political capital accumulated through prior experience as cadre (e.g., connections) depreciate quickly such that the income advantages of the cadre household diminish significantly or do not even exist anymore? Or, alternatively, will the political capital still stay and play a role in the income generation of the cadre household such that the income advantages continue even after the cadre steps down?

To answer the question, we conduct our analysis in two ways. First, we examine how the income for the same cadre household had changed after the household became a non-cadre household.   To do so, we narrow down our sample to a subsample including

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the years when the household appeared to be a first-time cadre household during the

period 1986 to 2003 covered by the data and the sub

Our results show that the political capital depreciates quickly that the income advantages of cadre households are mostly gone after they become non-cadre households. First, our regression results show that the incomes of cadre households decrease significantly after they step down from their cadre positions (Appendix Table 5). Holding other things constant, on average, the incomes of cadre households on a per capita basis decrease by about 50 yuan or about 6.8 percent in relative terms when they become non-cadre households for the first time (row 1 and columns 1 and 3). The overall average income differences between the time when they were cadre households and when they were not cadre households are about 72 yuan or about 8.4 percent in relative terms, holding other things constant (row 1 and columns 2 and 4). These numbers are in fact comparable to, but somewhat smaller than, the overall income advantages of cadre households we estimated in section III (i.e., 90 yuan – Table 3, row 1 and column 4, and 9.3 percent – Table 4, row 1 and column 4). Second, when comparing the incomes between never-cadre and once-cadre households, our results show that the income of those households who were once cadre households does not appear to be higher than that for the households who had never been cadre households (Appendix Table 6). Specifically, on average the once-cadre households earn only 7 yuan more than the never-cadre households or about 2.8 percent more in relative terms (row 1 and columns 1 and 2).

Our results indicate that most of the income advantages of cadre households are due to the position power bestowed by the cadre status and the connections and social network established through prior experience as cadre do not seem to play a significant role in bringing about the income advantages. Specifically, if the cadre household steps down and therefore loses the power and influences associated with the cadre status, it

loses most of the income advantages. Interestingly, our findings are consistent with a Chinese saying, which, especially popular among the Chinese bureaucrats, says "when you leave your position, the cup of tea on your table soon becomes cold" as no one cares to keep pouring in hot water for you (*Ren Zou Cha Liang*).

VIII. Income Advantages of Cadre Households and Income Inequality

In this section, we examine the impact of the income advantages of cadre households on income inequality. To do so, we follow the strategy by Benjamin, Brandt and Giles (2005), decomposing the variance of log income inequality index. This entails estimating the following regression:

$$(2) \quad \ln Y_{ijt} = \varphi X_{ijt} + v_{ijt}$$

where X_{ijt} is the cadre status dummy variable and $\ln Y_{ijt}$ is the log real per capita income.[38] The R-squared from this regression indicates the proportion of the variation (or variance) of $\ln Y_{ijt}$ that can be explained by the cadre status dummy variable.

Our results show that the income advantages of cadre households contribute little to income inequality. Specifically, the cadre status variable explains only 4.89 percent of the income inequality as measured by the variance of log income (Appendix Table 7, row 1). When looking at the provinces separately, our results also show that the cadre status variable explains little of the variance of log income for all the provinces, ranging from 3.93 to 5.89 percent (rows 2 to 11). It is important to note that the proportion of the

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[38] When using log income as the dependant variable in the regression, household-year observations with zero or negative incomes are dropped. A total of only 294 such observations were dropped out of 123,867, which is 0.24 percent of the total sample size. Thus, decomposing the variance of the log real per capita income will not mislead our examination of the impact of the cadre status on income inequality.

income inequality explained by the cadre status variable includes the income advantages associated with the cadre status as well as the income advantages brought about by the favorable observable and unobservable characteristics of cadre households, such as higher education and ability. As such, the proportion of the income inequality explained by the cadre status *only* is in fact even smaller than what the decomposition of log income shows.

IX. Conclusions

In this paper, we estimate the returns to being a cadre in rural China. We find that holding other things constant, cadre households on a per capita basis on average earn about 90 yuan (measured in 1986 yuan) or 9.3 percent more than non-cadre households. The income advantages of cadre households appear to *increase* over time and when moving from poor to rich provinces in both absolute and relative terms. We further find that overall, local off-farm wage employment is the only source for the income advantages. The cadre status tends to increase both the probability of access to local off-farm wage employment and the wage earnings from local off-farm wage employment. Finally, we show that the political capital associated with the cadre status appears to depreciate quickly that the income advantages of cadre households are mostly gone after they become non-cadre households and that the income advantages of cadre households contribute little to income inequality. Our results indicate that in rural China cadre households have taken advantage of their cadre status to secure local high paying off-farm wage jobs. This is the very source of the income advantages or political rents associated with the cadre status in rural China.

Our results shed light on the implication of the transition from plan to market for the returns to political status and connections. For example, Nee (1989) argues that the transition from plan to market would imply diminishing returns to cadres. However, Walder (2002) argues that the transition from plan to market would not necessarily imply that returns to cadres diminish. Our results show that at least in the very case of rural cadres, there exist returns to rural cadre status in rural China and the returns appear to increase during the transition period between 1998 and 2003. Our results are consistent with what Morduch and Sicular (2002) have argued; that is, for economic transition to succeed, rank-and-file officials may have to be given positive incentives. We believe that the income advantages of cadre households have been one of the incentives that have motivated rural cadres to implement policy and institutional changes or at least kept them from undermining the transition process.

One interesting question is what about the returns to officials in higher levels of the Chinese bureaucratic hierarchy. For example, unlike rural cadres, officials in higher levels of the Chinese bureaucratic hierarchy, such as county and provincial officials, have more administrative power to wield and more resources to control. It is possible that there may have been even larger returns to being such officials in China. However, whether this is true is subject to future empirical analysis and the availability of an effective identification strategy.

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Table 1 Per Capita Income Comparison between Cadre and Non-Cadre Households over Time

Year	Overall	Non-cadre Households	Cadre Households	Income Difference	Percentage Higher than Non-cadre Households
A. Total income					
1986	617.1	614.1	691.8	77.7***	12.6
1987	664.4	659.5	767.0	107.5***	16.3
1988	682.2	678.1	770.2	92.2***	13.6
1989	622.7	617.6	739.8	122.2***	19.8
1990	637.0	632.8	732.7	99.9***	15.8
1991	631.4	627.0	725.2	98.2***	15.7
1993	731.8	719.4	984.1	264.7***	36.8
1995	922.4	915.3	1,067.6	152.3***	16.6
1996	880.4	873.0	1,015.3	142.3***	16.3
1997	883.6	872.8	1,100.9	228.2***	26.1
1998	863.1	850.2	1,117.7	267.5***	31.5
1999	880.0	865.2	1,172.9	307.6***	35.6
2000	948.7	931.0	1,295.3	364.3***	39.1
2001	953.3	937.2	1,262.0	324.8***	34.7
2002	1,057.4	1,036.1	1,524.4	488.3***	47.1
2003	1,081.3	1,067.7	1,342.9	275.2***	25.8
Overall	817.8	807.4	1032.8	225.3***	27.9
B. Earned Income					
1986	581.0	578.3	647.9	69.6***	12.0
1987	620.5	616.4	706.8	90.3***	14.7
1988	634.2	630.8	707.3	76.5***	12.1
1989	577.9	574.0	667.8	93.8***	16.3
1990	587.8	583.9	677.3	93.4***	16.0
1991	578.9	575.2	656.6	81.4***	14.1
1993	682.8	671.2	918.8	247.5***	36.9
1995	866.5	861.0	978.0	117.0***	13.6
1996	820.0	814.0	930.1	116.1***	14.3
1997	825.6	817.0	998.5	181.5***	22.2
1998	799.6	787.9	1,030.2	242.3***	30.8
1999	817.0	804.5	1,065.8	261.3***	32.5
2000	873.4	857.6	1,183.8	326.2***	38.0
2001	884.0	869.5	1,161.2	291.7***	33.5
2002	943.5	929.4	1,253.3	323.9***	34.8
2003	985.5	975.5	1,178.6	203.2***	20.8
Overall	756.6	747.9	935.0	187.1***	25.0

Note: ***, ** and * refer to 1%, 5% and 10% statistical significance level, respectively.

Table 2 Household Characteristics Comparison between Cadre and Non-cadre Households

	Overall	Non-Cadre	Cadre	Diff.
Weighted average years of education	6.39	6.33	7.56	1.23***
Share of Laborers with Special skills	0.07	0.07	0.09	0.02***
Arable land per capita(*mu*)	1.20	1.21	1.19	-0.01*
Productive assets per capita ('000 Yuan)	0.48	0.48	0.55	0.07***

Table 3 Regression of Total Income

Variable	Robust OLS			Fixed Effect
	(1)	(2)	(3)	
Cadre	225.3***	196.4***	116.0***	90.38***
	(32.12)	(24.76)	(23.82)	(19.63)
Communist Party Membership			66.57***	79.99***
			(14.15)	(12.57)
Weighted averages years of education			28.42***	14.97***
			(1.371)	(1.323)
Share of Laborers with Special Skills			207.2***	115.2***
			(22.34)	(19.83)
Arable Land per capita (*mu*)			-13.24***	31.32***
			(4.191)	(5.091)
Productive Assets per capita ('000 Yuan)			126.8***	89.32***
			(11.12)	(12.27)
Share of laborers			568.0***	470.4***
			(19.54)	(19.08)
Share of male laborers			-53.51***	70.33***
			(15.57)	(15.32)
Cons.	807.4***	433.5***	-74.85***	123.5***
	(6.308)	(10.12)	(20.86)	(17.54)
Year Effects	No	Yes	Yes	Yes
Province by Year Effects	No	Yes	Yes	Yes
Household Effects	No	No	No	Yes
Adjusted R-Squared	0.003	0.267	0.354	0.622
Observation	685,510	685,510	685,510	685,510

Note: Robust standard errors in parentheses. ***, ** and * refer to 1%, 5% and 10% statistical significance level, respectively. The data set includes 14,417 households and has a total of 123,867 household-year observations. Since frequency weights were applied in the regressions, household-year observations were duplicated and the total number of observations becomes 685,510.

Table 4 Regression of Log Total Income

Variable	Robust OLS			Fixed Effect
	(1)	(2)	(3)	
Cadre	0.240***	0.221***	0.116***	0.0928***
	(0.0210)	(0.0157)	(0.0149)	(0.0134)
Communist Party Membership			0.0852***	0.0765***
			(0.00989)	(0.00958)
Weighted averages years of education			0.0382***	0.0168***
			(0.00128)	(0.00125)
Share of Laborers with Special Skills			0.299***	0.160***
			(0.0155)	(0.0144)
Arable Land per capita (*mu*)			0.0303***	0.0956***
			(0.00308)	(0.00441)
Productive Assets per capita ('000 Yuan)			0.0639***	0.0393***
			(0.00498)	(0.00380)
Share of laborers			0.655***	0.521***
			(0.0147)	(0.0140)
Share of male laborers			-0.106***	0.0583***
			(0.0143)	(0.0128)
Cons.	6.430***	5.906***	5.211***	5.610***
	(0.00572)	(0.0202)	(0.0249)	(0.0138)
Year Effects	No	Yes	Yes	Yes
Province by Year Effects	No	Yes	Yes	Yes
Household Effects	No	No	No	Yes
Adjusted R-Squared	0.005	0.306	0.387	0.630
Observation	683,993	683,993	683,993	683,993

Note: Robust standard errors in parentheses. ***, ** and * refer to 1%, 5% and 10% statistical significance level, respectively. The log income regressions dropped those observations with zero or negative incomes, and the resulted data set has a total of 123,573 household-year observations. Since frequency weights were applied in the regressions, household-year observations were duplicated and the total number of observations becomes 683,993.

Table 5 Income Advantages for Cadre Household over Time

Variable	Linear Income	Log Income
Cadre*1986	23.72	0.0748***
	(29.31)	(0.0285)
Cadre*1987	27.10	0.0724***
	(28.43)	(0.0270)
Cadre*1988	25.58	0.0695***
	(28.19)	(0.0238)
Cadre*1989	26.60	0.0674***
	(28.16)	(0.0248)
Cadre*1990	42.37*	0.102***
	(25.53)	(0.0222)
Cadre*1991	29.95	0.0971***
	(22.33)	(0.0223)
Cadre*1993	100.9**	0.0994***
	(43.85)	(0.0266)
Cadre*1995	39.95	0.0504*
	(41.87)	(0.0267)
Cadre*1996	-4.362	0.0423*
	(32.12)	(0.0242)
Cadre*1997	54.02	0.0562*
	(36.68)	(0.0331)
Cadre*1998	84.76**	0.0874***
	(34.64)	(0.0267)
Cadre*1999	169.9***	0.131***
	(46.66)	(0.0332)
Cadre*2000	211.0***	0.142***
	(48.96)	(0.0340)
Cadre*2001	215.5***	0.154***
	(52.60)	(0.0291)
Cadre*2002	351.6***	0.192***
	(84.59)	(0.0369)
Cadre*2003	138.8**	0.0798*
	(69.82)	(0.0439)
Adjusted R-Squared	0.622	0.630
Observations	685,510	683,993

Note: Robust standard errors in parentheses. ***, ** and * refer to 1%, 5% and 10% statistical significance level, respectively. The controlled variables include household Communist Party membership, weighted average years of education, share of laborers with special skills, productive assets per capita, arable land per capita, share of laborers, share of male laborers and year, province by year and household fixed effects. Due to the space constraint, we do not present the results on them. Since frequency weights were applied in the regressions, the total numbers of observations become 685,510 and 683,933 for the linear income and log income regressions, respectively.

Table 6 Income Advantages for Cadre Household across Province

Variable	Linear Income	Log Income
Cadre*Zhejiang	383.2***	0.191***
	(133.1)	(0.0418)
Cadre*Guangdong	209.1**	0.127***
	(82.20)	(0.0360)
Cadre*Jiangsu	89.44***	0.102***
	(26.71)	(0.0234)
Cadre*Jilin	12.89	0.0621
	(50.59)	(0.0492)
Cadre*Anhui	43.81*	0.0759**
	(24.47)	(0.0320)
Cadre*Hunan	42.92	0.0734*
	(33.47)	(0.0393)
Cadre*Henan	21.48	0.0954***
	(28.03)	(0.0316)
Cadre*Shanxi	49.41	0.0795**
	(32.44)	(0.0377)
Cadre*Sichuan	14.67	0.0538
	(49.83)	(0.0554)
Cadre*Gansu	-12.88	-0.0354
	(28.82)	(0.0538)
Adjusted R-Squared	0.622	0.630
Observations	685,510	683,993

Note: Robust standard errors in parentheses. ***, ** and * refer to 1%, 5% and 10% statistical significance level, respectively. The controlled variables include household Communist Party membership, weighted average years of education, share of laborers with special skills, productive assets per capita, arable land per capita, share of laborers, share of male laborers and year, province by year and household fixed effects. Due to the space constraint, we do not present the results on them. Since frequency weights were applied in the regressions, the total number of observations becomes 685,510 and 683,933 for the linear income and log income regressions, respectively. Provinces are listed in descending order of per capita income.

Table 7 Income Regression by Source

Variable	Total Income	Agriculture	Farming Sidelines	Family-run Non-farm Businesses	Off-farm Wage Employment	Unearned
Cadre	90.38***	1.905	3.704	11.91	69.89***	2.973
	(19.63)	(3.625)	(5.084)	(16.90)	(15.58)	(6.149)
Communist Party Membership	79.99***	-1.384	8.173**	-11.48	69.24***	15.44***
	(12.57)	(2.703)	(4.135)	(8.806)	(10.44)	(4.000)
Weighted averages years of education	14.97***	-0.440	-0.606	4.293***	11.87***	-0.139
	(1.323)	(0.322)	(0.380)	(0.904)	(1.030)	(0.466)
Share of Laborers with Special Skills	115.2***	7.515*	-13.90**	83.71***	36.91**	0.957
	(19.83)	(4.253)	(6.076)	(15.17)	(17.04)	(6.398)
Arable Land per capita (*mu*)	31.32***	102.7***	12.90***	-28.03***	-53.19***	-3.036*
	(5.091)	(2.864)	(1.640)	(2.786)	(3.506)	(1.829)
Productive Assets per capita ('000 Yuan)	89.32***	-1.647***	2.186	91.98***	-17.95***	14.76**
	(12.27)	(0.632)	(5.114)	(10.72)	(6.636)	(6.134)
Share of laborers	470.4***	32.50***	20.96***	29.98**	337.3***	49.63***
	(19.08)	(3.853)	(5.301)	(12.54)	(14.17)	(7.727)
Share of male laborers	70.33***	12.61***	7.411*	25.23**	35.07***	-9.996
	(15.32)	(3.281)	(4.462)	(9.846)	(10.97)	(7.740)
Cons.	123.5***	99.20***	31.44***	48.37***	-66.48***	10.99*
	(17.54)	(4.847)	(5.393)	(11.68)	(13.41)	(6.626)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Province by Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Household Effects	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-Squared	0.622	0.627	0.463	0.533	0.557	0.228
Observation	685,510	685,510	685,510	685,510	685,510	685,510

Note: Robust standard errors in parentheses. ***, ** and * refer to 1%, 5% and 10% statistical significance level, respectively. Since frequency weights were applied in the regressions, household-year observations were duplicated and the total number of observations becomes 685,510.

Table 8 Wage Income Regression by Source

Variable	Total Wage Income	Local Employment	Temporary Migrant Employment	Government Employment
Cadre	69.89***	108.0***	-37.18***	-0.901
	(15.58)	(12.24)	(10.91)	(3.552)
Communist Party Membership	69.24***	54.11***	-5.012	20.15***
	(10.44)	(7.175)	(7.659)	(3.443)
Weighted averages years of education	11.87***	5.840***	6.496***	-0.470
	(1.030)	(0.776)	(0.704)	(0.335)
Share of Laborers with Special Skills	36.91**	16.58	6.022	14.31***
	(17.04)	(12.54)	(11.31)	(3.626)
Arable Land per capita (*mu*)	-53.19***	-15.07***	-35.16***	-2.961***
	(3.506)	(2.034)	(2.782)	(0.687)
Productive Assets per capita ('000 Yuan)	-17.95***	5.970	-24.13***	0.212
	(6.636)	(5.535)	(3.450)	(0.842)
Share of laborers	337.3***	77.71***	243.2***	16.38***
	(14.17)	(8.876)	(11.08)	(3.465)
Share of male laborers	35.07***	23.13***	60.22***	-48.28***
	(10.97)	(6.784)	(8.386)	(4.294)
Cons.	-66.48***	24.66***	-122.4***	31.24***
	(13.41)	(8.660)	(9.967)	(3.827)
Year Effects	Yes	Yes	Yes	Yes
Province by Year Effects	Yes	Yes	Yes	Yes
Household Effects	Yes	Yes	Yes	Yes
Adjusted R-Squared	0.557	0.503	0.449	0.488
Observation	685,510	685,510	685,510	685,510

Note: Robust standard errors in parentheses. ***, ** and * refer to 1%, 5% and 10% statistical significance level, respectively. Since frequency weights were applied in the regressions, household-year observations were duplicated and the total number of observations becomes 685,510.

Table 9 Linear Probability Regression of Participation in Off-farm Wage Employment

Variable	Off-farm Wage Employment	Local Employment	Temporary Migrant Employment
Cadre	0.143***	0.285***	-0.0572***
	(0.0100)	(0.0119)	(0.0115)
Communist Party Membership	0.0511***	0.0699***	-0.0249***
	(0.00808)	(0.00864)	(0.00907)
Weighted averages years of education	0.0145***	0.0102***	0.0110***
	(0.00103)	(0.000965)	(0.00109)
Share of Laborers with Special Skills	-0.0442***	0.0171	-0.0460***
	(0.0121)	(0.0114)	(0.0130)
Arable Land per capita (*mu*)	-0.0317***	-0.0126***	-0.0292***
	(0.00303)	(0.00269)	(0.00308)
Productive Assets per capita ('000 Yuan)	-0.0152***	-0.00560***	-0.0192***
	(0.00236)	(0.00192)	(0.00258)
Share of laborers	0.157***	0.0252**	0.275***
	(0.0112)	(0.0104)	(0.0121)
Share of male laborers	-0.0399***	-0.0244***	0.0426***
	(0.0105)	(0.00919)	(0.0115)
Cons.	0.574***	0.442***	0.126***
	(0.0119)	(0.0110)	(0.0127)
Year Effects	Yes	Yes	Yes
Province by Year Effects	Yes	Yes	Yes
Household Effects	Yes	Yes	Yes
Adjusted R-Squared	0.413	0.538	0.406
Observation	685,510	685,510	685,510

Note: Robust standard errors in parentheses. ***, ** and * refer to 1%, 5% and 10% statistical significance level, respectively. Since frequency weights were applied in the regressions, household-year observations were duplicated and the total number of observations becomes 685,510.

Table 10 Fixed Effect Quantile Regression Coefficients for Cadre Status

Wage Income	Quantile Regression Estimates						
	0.05	0.1	0.25	0.50	0.75	0.9	0.95
Total	71.92***	61.77***	46.88***	52.17***	48.27***	71.33***	78.82***
	(5.393)	(3.204)	(0.437)	(1.021)	(1.550)	(3.496)	(6.084)
Local Employment	69.53***	56.27***	44.46***	58.23***	62.23***	86.34*	

Table 11 Wage Income Advantages of Cadre Household by Source over Time

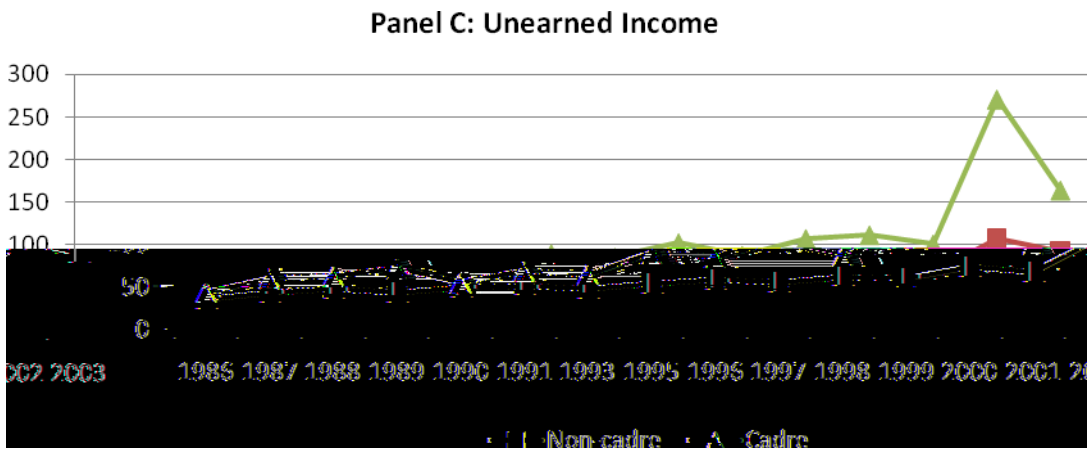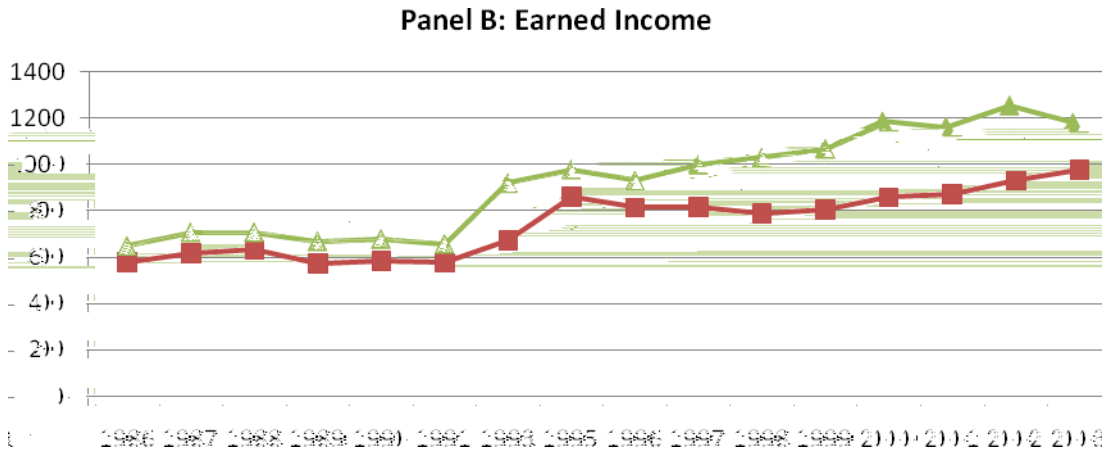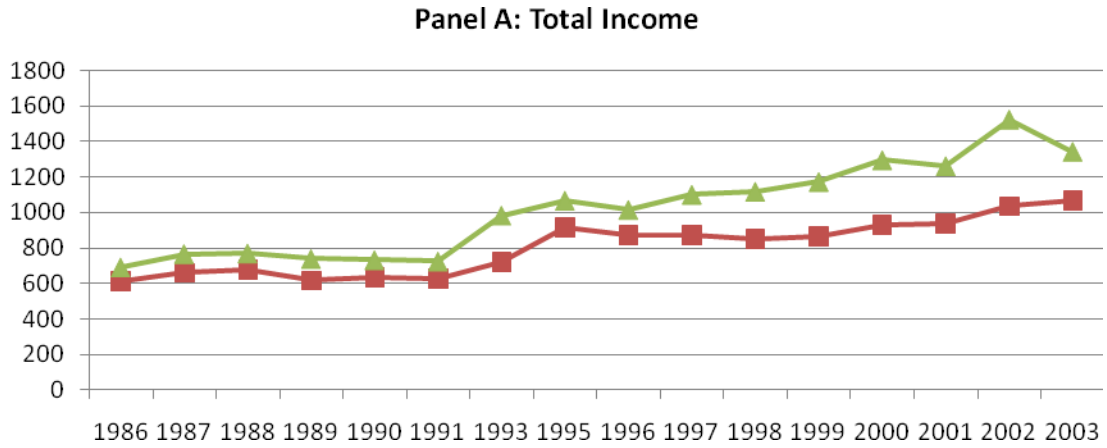| Variable	Total Income	Total Wage Income	Local Employment	Temporary Migrant Employment
Cadre*1986	23.72	61.71***	71.24***	-0.811
	(29.31)	(23.88)	(20.28)	(13.52)
Cadre*1987	27.10	29.89	55.03***	-13.92
	(28.43)	(22.42)	(15.75)	(16.22)
Cadre*1988	25.58	32.95	64.27***	-27.68
	(28.19)	(22.79)	(16.36)	(17.79)
Cadre*1989	26.60	30.99	60.06***	-26.91
	(28.16)	(20.94)	(12.74)	(18.14)
Cadre*1990	42.37*	33.20*	75.48***	-31.89*
	(25.53)	(20.02)	(11.61)	(17.77)
Cadre*1991	29.95	32.33*	83.78***	-42.18**
	(22.33)	(17.84)	(11.61)	(16.58)
Cadre*1993	100.9**	97.52***	121.3***	-15.27
	(43.85)	(36.60)	(37.73)	(20.67)
Cadre*1995	39.95	46.16	72.18***	-20.81
	(41.87)	(28.56)	(18.80)	(19.48)
Cadre*1996	-4.362	12.16	73.19***	-57.70***
	(32.12)	(23.96)	(18.63)	(15.05)
Cadre*1997	54.02	48.04**	106.5***	-56.45***
	(36.68)	(24.06)	(21.85)	(16.04)
Cadre*1998	84.76**	105.7***	145.6***	-51.91**
	(34.64)	(29.48)	(22.90)	(20.27)
Cadre*1999	169.9***	136.9***	184.5***	-60.86***
	(46.66)	(37.44)	(29.88)	(20.56)
Cadre*2000	211.0***	154.5***	201.4***	-53.00***
	(48.96)	(33.89)	(29.67)	(20.32)
Cadre*2001	215.5***	120.6***	151.0***	-38.42*
	(52.60)	(35.17)	(28.10)	(22.51)
Cadre*2002	351.6***	122.4***	142.1***	-23.78
	(84.59)	(44.33)	(31.76)	(33.33)
Cadre*2003	138.8**	96.84	163.7***	-82.79**
	(69.82)	(59.57)	(54.34)	(34.20)
Adjusted R-Squared	0.622	0.557	0.504	0.450
Observations	685,510	685,510	685,510	685,510

Note: Robust standard errors in parentheses. ***, ** and * refer to 1%, 5% and 10% statistical significance level, respectively. The controlled variables include household Communist Party membership, weighted average years of educa[(C)2.68538(a)-2.506570239( )]TJ -195.256 -11.4 Td [(a)-2.64432(v)5.06981(e)-2.64432(r)-5.00129(a)-2.64

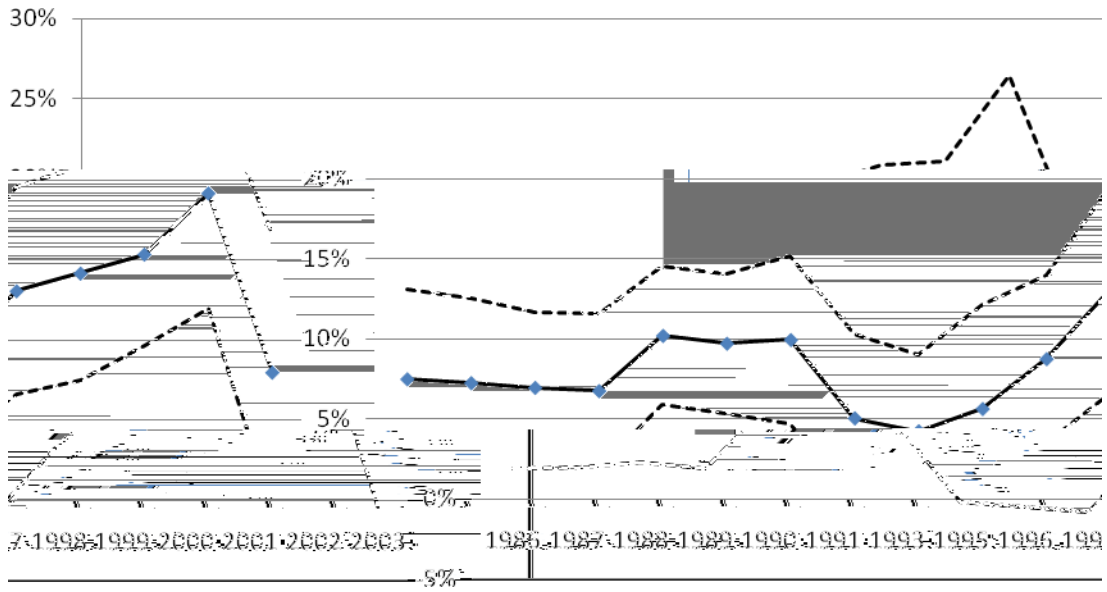**Table 12 Wage Income Advantages of Cadre Household by Source across Province**

Variable	Total Income	Total Wage Income	Local Employment	Temporary Migrant Employment
Cadre*Zhejiang	383.2***	184.8*	308.5***	-111.9**
	(133.1)	(106.1)	(95.37)	(51.21)
Cadre*Guangdong	209.1**	231.7***	212.6***	27.20
	(82.20)	(74.94)	(42.55)	(72.61)
Cadre*Jiangsu	89.44***	126.2***	177.0***	-59.31***
	(26.71)	(24.76)	(27.02)	(15.38)
Cadre*Jilin	12.89	-51.58	20.64	-78.14
	(50.59)	(58.12)	(41.46)	(50.56)
Cadre*Anhui	43.81*	52.29***	90.98***	-40.12**
	(24.47)	(19.82)	(14.10)	(16.32)
Cadre*Hunan	42.92	34.73*	70.58***	-21.76
	(33.47)	(20.64)	(17.86)	(14.03)
Cadre*Henan	21.48	9.562	30.62**	-20.63*
	(28.03)	(17.43)	(13.58)	(10.98)
Cadre*Shanxi	49.41	8.910	40.77***	-26.93
	(32.44)	(22.89)	(11.44)	(18.48)
Cadre*Sichuan	14.67	-5.408	20.77**	-38.40
	(49.83)	(30.52)	(10.53)	(27.23)
Cadre*Gansu	-12.88	14.13	38.81***	-17.58
	(28.82)	(23.92)	(9.497)	(24.14)
Adjusted R-Squared	0.622	0.557	0.505	0.450
Observations	685,510	685,510	685,510	685,510

Note: Robust standard errors in parentheses. ***, ** and * refer to 1%, 5% and 10% statistical significance

Panel A: Total Income

Panel B: Earned Income

Panel C: Unearned Income

**Figure 1 Per Capita Income Comparison between Cadre and Non-Cadre
Households over Time**

1998 1999 2000 2001 2002 2003   1925 1927 1928 1929 1990 1991 1993 1995 1996 199

-5%
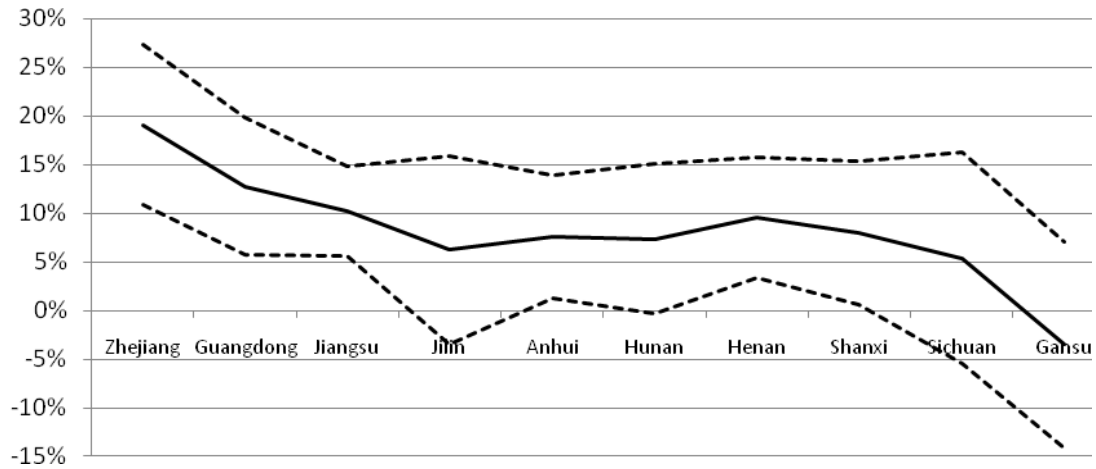
**Figure 3 Income Advantages by Cadre Households across Province
with 95% Confidence Intervals**

Note: The graph was drawn based on the esimates of the income advantages of cadre households across provinces from Table 6 column 2. Provinces are listed from left to right in descending order of per capita income.
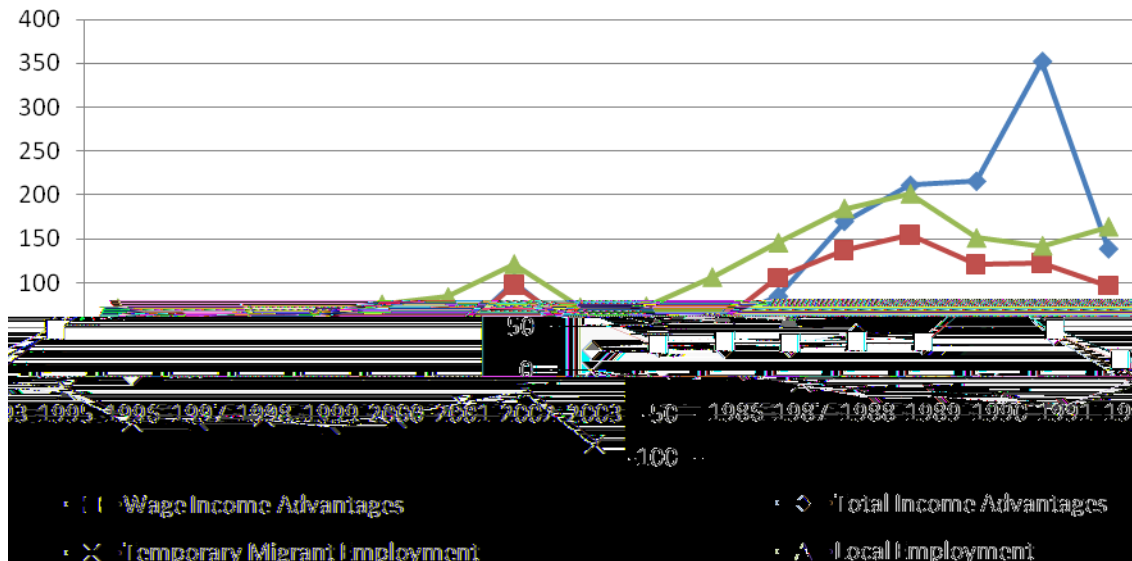
Figure 4 Wage Income Advantages of Cadre Households by Source over Time

Note: The graph was drawn based on the esimates of the wage income advantages of cadre households by source over years presented in Table 11.
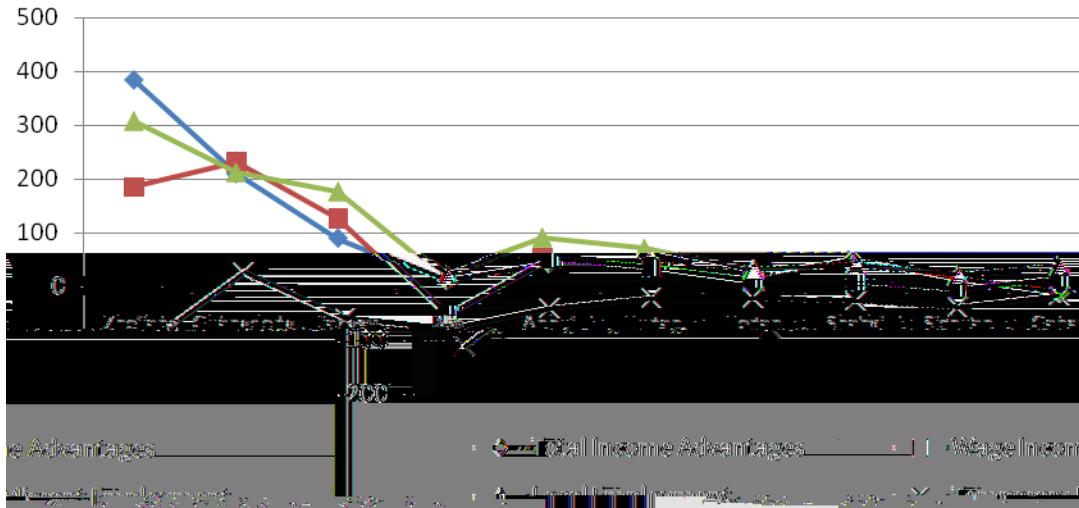
Figure 5 Wage Income Advantages of Cadre Households by Source across Province
Note: The graph was drawn based on the esimates of the wage income advantages of cadre households by source across provinces presented in Table 12. Provinces are listed from left to right in descending order of per capita income.

Appendix Table 1 Percentage of Cadre Households between 1986 and 2003 in Rural China

Year	% of cadre households
1986	3.80
1987	4.55
1988	4.43
1989	4.22
1990	4.21
1991	4.49
1993	4.69
1995	4.66
1996	5.20
1997	4.74
1998	4.83
1999	4.81
2000	4.86
2001	4.95
2002	4.36
2003	4.96
Overall	4.61

Appendix Table 2 Regression of Earned Income

Variable	Robust OLS			Fixed Effect
	(1)	(2)	(3)	
Cadre	187.1***	160.4***	92.39***	87.40***
	(29.53)	(22.65)	(22.01)	(18.51)
Communist Party Membership			47.71***	64.54***
			(13.55)	(12.24)
Weighted averages years of education			28.35***	15.11***
			(1.334)	(1.265)

Appendix Table 3 Regression of Log Earned Income

Variable	Robust OLS			Fixed Effect
	(1)	(2)	(3)	
Cadre	0.217***	0.199***	0.104***	0.0940***
	(0.0225)	(0.0171)	(0.0166)	(0.0161)
Communist Party Membership			0.0575***	0.0645***
			(0.0114)	(0.0110)
Weighted averages years of education			0.0439***	0.0229***
			(0.00164)	(0.00166)
Share of Laborers with Special Skills			0.320***	0.188***
			(0.0174)	(0.0195)
Arable Land per capita (*mu*)			0.0514***	0.114***
			(0.00450)	(0.00751)
Productive Assets per capita ('000 Yuan)			0.0654***	0.0389***
			(0.00520)	(0.00430)
Share of laborers			0.590***	0.481***
			(0.0176)	(0.0171)
Share of male laborers			-0.0907***	0.0765***
			(0.0211)	(0.0192)
Cons.	6.338***	5.813***	5.063***	5.499***
	(0.00605)	(0.0221)	(0.0294)	(0.0173)
Year Effects	No	Yes	Yes	Yes
Province by Year Effects	No	Yes	Yes	Yes
Household Effects	No	No	No	Yes
Adjusted R-Squared	0.003	0.229	0.291	0.530
Observation 9hsted				

Appendix Table 4 Provincial Income Regression

Province	N	Linear Income		N	Log Income	
		Without Household Specific Time Trends	With Household Specific Time Trends		Without Household Specific Time Trends	With Household Specific Time Trends
Zhejiang	10,933	259.9**	95.27	10,897	0.148***	0.0875**
		(122.7)	(89.56)		(0.0444)	(0.0423)
Guangdong	14,222	162.7*	100.7	14,191	0.115***	0.0696
		(85.21)	(85.03)		(0.0363)	(0.0427)
Jiangsu	13,331	89.42***	66.48**	13,326	0.0969***	0.0575**
		(27.26)	(32.95)		(0.0245)	(0.0289)
Jilin	9,299	22.44	79.22	9,223	0.0672	0.0486
		(59.63)	(74.42)		(0.0556)	(0.0630)
Anhui	20,494	50.73**	14.44	20,454	0.0800**	0.0446
		(25.31)	(23.27)		(0.0337)	(0.0281)
Hunan	11,067	35.61	56.11	11,054	0.0581	0.0824*
		(33.16)	(38.98)		(0.0394)	(0.0426)
Henan	16,392	28.41	6.090	16,373	0.0967***	0.0598*
		(26.30)	(31.96)		(0.0328)	(0.0363)
Shanxi	13,249	55.69*	-20.11	13,230	0.0914**	-0.0191
		(29.77)	(39.66)		(0.0377)	(0.0407)
Sichuan	11,391	34.10	50.69	11,374	0.0644	0.105*
		(51.61)	(55.21)		(0.0568)	(0.0612)
Gansu	3,489	-8.118	18.21	3,469	-0.0294	0.0128
		(32.28)	(30.70)		(0.0652)	(0.0695)

Note: Robust standard errors in parentheses. ***, ** and * refer to 1%, 5% and 10% statistical significance level, respectively. The controlled variables include household Communist Party membership, weighted average years of education, share of laborers with special skills, productive assets per capita, arable land per capita, share of laborers, share of male laborers and year, province by year and household fixed effects. Due to the space constraint, we do not present the results on them. The frequency weights used in our other regressions are not applicable in the provincial income regressions. Provinces are listed in descending order of per capita income.

Appendix Table 5 Regression of Total Income for Cadre Households

Variable	Linear Income		Log Income	
	(1)	(2)	(3)	(4)
Cadre	50.01*	72.02***	0.0683***	0.0836***
	(26.67)	(24.47)	(0.0209)	(0.0168)
Communist Party Membership	89.91***	101.8***	0.0918***	0.105***
	(27.44)	(23.32)	(0.0257)	(0.0207)
Weighted averages years of education	24.46***	21.97***	0.0221***	0.0171***
	(5.793)	(4.861)	(0.00419)	(0.00369)
Share of Laborers with Special Skills	80.62	107.9*	0.0948*	0.110**
	(61.52)	(58.59)	(0.0484)	(0.0450)
Arable Land per capita (*mu*)	39.78**	19.20	0.0866***	0.0739***
	(17.84)	(14.43)	(0.0155)	(0.0127)
Productive Assets per capita ('000 Yuan)	68.82***	98.65***	0.0363***	0.0360***
	(26.44)	(33.74)	(0.00843)	(0.00649)
Share of laborers	568.0***	632.9***	0.556***	0.565***
	(85.09)	(73.13)	(0.0507)	(0.0422)
Share of male laborers	36.05	65.86	-0.00819	0.0251
	(53.57)	(47.27)	(0.0505)	(0.0416)
Cons.	-10.30	-49.77	5.653***	5.658***
	(97.71)	(84.70)	(0.0673)	(0.0531)
Year Effects	Yes	Yes	Yes	Yes
Province by Year Effects	Yes	Yes	Yes	Yes
Household Effects	Yes	Yes	Yes	Yes
Adjusted R-Squared	0.643	0.674	0.678	0.680
Subsample	(1)	(2)	(1)	(2)
Observation	54,554	76,278	54,422	76,078

Note: Robust standard errors in parentheses. ***, ** and * refer to 1%, 5% and 10% statistical significance level, respectively. Subsample (1) includes the years when the household appeared to be a first-time cadre household during the period 1986 to 2003 covered by the data and the subsequent years when it was a non-cadre household. Subsample (2) further includes the following subsequent years when the household alternates between a cadre and non-cadre household. Since frequency weights were applied in the regressions, household-year observations were duplicated and the total numbers of observations for subsamples (1) and (2) become 54,554 and 76,278, respectively. The log income regressions dropped the observations with zero or negative incomes. As such, the total numbers of observations for subsamples (1) and (2) for the log income regressions become 54,422 and 76,078, respectively.

Appendix Table 6 Regression of Total Income for Never-Cadre and Once-Cadre Households

Variable	Linear Income	Log Income
Once-cadre	6.601	0.0282*
	(20.77)	(0.0152)
Communist Party Membership	61.45***	0.0769***
	(15.54)	(0.0111)
Weighted averages years of education	29.02***	0.0387***
	(1.418)	(0.00134)
Share of Laborers with Special Skills	203.2***	0.307***
	(22.96)	(0.0164)
Arable Land per capita (*mu*)	-11.00**	0.0319***
	(4.357)	(0.00319)
Productive Assets per capita ('000 Yuan)	125.2***	0.0635***
	(11.47)	(0.00520)
Share of laborers	551.5***	0.651***
	(19.95)	(0.0154)
Share of male laborers	-54.56***	-0.102***
	(15.89)	(0.0149)
Cons.	-61.07***	5.213***
	(21.42)	(0.0264)
Year Effects	Yes	Yes
Province by Year Effects	Yes	Yes
Household Effects	N.A.	N.A.
Adjusted R-Squared	0.350	0.382
Observation	627,993	626,585

Note: Robust standard errors in parentheses. ***, ** and * refer to 1%, 5% and 10% statistical significance level, respectively. The subsample includes (1) the households who had never been cadre households between 1986 and 2003 and (2) the years for cadre households when they were non-cadre households. Since frequency weights were applied in the regressions, household-year observations were duplicated and the total numbers of observations become 627,993 and 626,585 for the linear income and log income regressions, respectively.

Appendix Table 7 Contribution of Income Advantages of Cadre Households to Income Inequality

Regression	R-Squared
Overall	0.0489
Zhejiang	0.0589
Guangdong	0.0449
Jiangsu	0.0460
Jilin	0.0393
Anhui	0.0555
Hunan	0.0487
Henan	0.0477
Shanxi	0.0584
Sichuan	0.0426
Gansu	0.0585

Note: this table shows the fraction of variation of log real per capita income attributed to the cadre status. This is simply the R-squared from a regression of log real per capita income on the cadre status dummy variable. Frequency weights were applied in the regressions