Growing Privatization and Entrepreneurship in China:
Opportunities for the Disadvantaged

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Abstract:

Significant returns to health have previously been found in China's labor market during economic transition in the 1990s. This paper assesses the role of health and health insurance in driving privatization and entrepreneurship from 1991 to 2004 using data from the China Health and Nutrition Survey. Results indicate that health insurance may severely deter labor mobility into the private sector and entrepreneurship. Relatively healthy rural workers (no co-morbidities, better self-reported health status), but relatively unhealthy urban workers (disabled) are more likely to participate in the private sector and in entrepreneurship. Moreover, workers from less-advantaged socio-economic groups—women, less-educated, less wealthy, elderly—disproportionately supply labor to the private sector in non-wage jobs. Not surprisingly, men and middle-aged workers are more likely to be self-employed owners of a business, but the less-educated are more likely to work in a household business in rural areas. Thus, China's new entrepreneurs are not as select class of workers as some would imagine.

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I. Introduction

Because entrepreneurship has important implications for economic growth, instruments to promote it are actively sought by policymakers. Indeed, a U-shaped relationship between self-employment rates and stages of development has been previously found, suggesting that expanding self-employment opportunities for countries undergoing economic transition may have substantial effects on growth.[1] Yet, few empirical studies have investigated entrepreneurship in countries at this stage of development. Equally few studies have addressed the potential role that health and health insurance can have on being an entrepreneur. In particular, economic theories predict that health capital can be an important facilitator of entrepreneurship. However, this effect may be offset by the lack of health insurance for the self-employed. This paper investigates these health determinants during China's economic transition period where significant returns to health in the labor market have previously been found (Yi and Dow, 2006), but where health insurance coverage is increasingly a problem (Akin et al., 2004). Results of logistic regressions indicate that health insurance may severely deter individuals from starting household businesses or becoming self-employed owners/managers while different aspects of health may differentially facilitate and hinder entrepreneurship.

Why might worker health and health insurance be related to entrepreneurship?

The evidence for a significant effect of health on labor market outcomes continues to grow. For example, various studies by Schultz (2005) find large effects of height, body mass index (BMI), and health status on wages in Brazil, Cote D'Ivoire, Peru, Mexico, and Colombia (for a review, see Mwabu et al., 2007). Health may thus be an important driver of labor supply to entrepreneurship.

Although early theoretical work on entrepreneurship—usually defined as self-employment—has postulated a role for health, few empirical works have treated health as a primary determinant or have even accounted for it. Rees and Shah (1986) conceptualize the decision to be self-employed as a cost-benefit calculation based on expected utilities in self-employment and paid employment. Into this

[1] For example, see Blau, David M., 1987. A Time-Series Analysis of Self-Employment in the United States. Journal of Political Economy, 95(3), 445.

calculation, they include a hedonic index for work characteristics, which includes a dimension for health. They posit that "longer hours and greater responsibility associated with self-employment mean that the less healthy are likely to find it a more demanding status," and consequently should be less likely to pursue entrepreneurial activities. Therefore, health capital acts as an asset for entrepreneurship.

However, empirical works on entrepreneurship have seldom included as an explanatory variable, and of the ones that do, health is narrowly defined as having some condition that impairs work. Past research on individual entrepreneurship behavior has generally followed two streams. The first seeks to identify which workers participate in self-employment (with subsequent estimates of earnings), while the second analyzes the dynamics of entry, exit, and duration. Cross-sectional evidence has found an association with health, but the direction of the effect varies for different populations. Having a work limitation significantly increased the likelihood of self-employment participation for Black and Mexican men (Borjas, 1986) and women (Fairlie and Meyer, 1996) in the U.S., but decreased the likelihood for household heads in the U.K. (Rees and Shah, 1986). Evans and Leighton (1989) do not find any effect of being handicapped on participation, but do find a negative effect on earnings for White men in the U.S. In longitudinal studies of dynamic selection, only Zissimopolous and Karoly (2007) have found a significant effect of a work-limiting condition on transitions to self-employment.[2] While these findings intimate an important association between health and entrepreneurship, they do not provide conclusive evidence of a causal effect. In particular, estimates may suffer from a variety of omitted variables bias that could inflate or nullify the effect of health. For example, individual perceptions and tolerance of risk can affect both the choice of investments in health or "healthy" behaviors and the choice of pursuing entrepreneurial endeavors that may involve greater risk-taking. Moreover, even though work-limiting conditions can be viewed as exogenous predetermined characteristics depending on the definitional scope, this is a limited conception of health, which includes a variety of other objective, subjective, and latent factors.

[2] Fuchs' (1982) analysis of elderly men and Evans and colleagues' (1989a; 1989b) analysis of adult men in the U.S. did not find any effects of health on entry into self-employment.

With respect to health insurance, there have only been a handful of studies that have examined a potential link to the supply of entrepreneurs. These studies are basically couched within the framework of "job lock" which may arise within employer-based health insurance systems when workers do not switch jobs because of the undesirable health insurance coverage in alternative job offerings. Studies examining job-to-job mobility usually rely on a variety of difference-in-difference (DD) estimators to arrive at a causal claim and have found fairly convincing evidence of job lock (for a review, see Gruber et al., 2000). Perhaps the most convincing evidence along this line of work comes from Gruber and Madrian (1994) who use mandated continuation coverage (i.e. COBRA), a source of exogenous variation in health insurance coverage, to identify the effect of health insurance. Their results imply that continuation of coverage mandates increase turnover by about 10%. Holtz-Eakin et al. (1996) conducted the first study of this kind as applied to self-employment and find a null effect of health insurance on transitions to self-employment using spousal health insurance coverage, COBRA mandates, health status, and family size. On the other hand, Wellington (2001) and Madrian and Lefgren (1998) find significant increases in mobility when a worker has health insurance through a spouse. Two other papers focus on transitions to self-employment for the elderly since health and access to care may become more salient as health declines. Bruce et al. (2000) do not find any effects when including variables for the portability of insurance and an indicator for any employee contribution for health insurance coverage. On the other hand, Zissimopolous and Karoly (2007) find that health insurance for both the individual and the spouse are significantly related to transitions to self-employment, but estimates are strictly associational and no DD-like estimation is attempted. In sum, the evidence for job lock for self-employment is somewhat equivocal, even though strong evidence may exit for general mobility. However, because all of these studies use data from the U.S., it is unknown if job lock is a phenomenon specific to the U.S. labor market and health insurance system or if the general principals may apply elsewhere in other contexts. Moreover, all of these studies, including studies of health and entrepreneurship, use self-employment as the dependent measure, which may not necessarily capture the idea of entrepreneurship.

Why study China?

Prior to 1979, the private sector did not exist; entrepreneurship opportunities were created virtually overnight as state-owned enterprises were first dismantled in rural areas followed by reforms in urban areas. Subsequent economic growth has been tremendous, averaging 9.8% per year since 1990 (World Bank, 2007b). At the same time, employment in agriculture has declined from 69% in 1980 to 44.1% in 2002, while employment in the service sector has grown from 10.7% in 1990 to 16.1% in 2002.

Although all were eager to take advantage of new economic opportunities, China's earliest entrepreneurs differed between urban and rural areas. Nee's (1989) ethnographic study identified early rural entrepreneurs to be cadres, formerly "sent down" urban youth, and soldiers who generally had more human and/or political capital than the rural population. Cross-sectional analyses by Wu (2006) and Mohapatra et al. (2007) corroborate these observations. On the other hand, early business owners in urban centers came mainly from marginal social groups, such as migrants, unemployed youth, and dismissed employees (Gold, 1991). Wu (2006) found that early on, cadres, Communist party members, more educated workers, and women were less likely to enter self-employment in urban areas. After 1992, however, general fervor for entrepreneurship heightened and many more individuals from the general urban population took the "plunge" into self-employment in what became known as *xia hai*. Some evidence from Wu (2006) show larger returns to income in self-employment during the late 1980s and early 1990s compared to wage employees.

In terms of health in China, major strides had been made decades before economic reform as the results of improved nutrition, sanitation, and food distribution. Life expectancy at birth increased from 36.3 years in 1960 to 66.8 years in 1980, and infant mortality rates declined from 84 per 1,000 live births in 1970 to 36.6 per 1,000 in 1990 (World Bank, 2007a). Thus, a relatively healthy labor force was readily available when economic reforms began. Not surprisingly, significant positive effects of health have been found on labor supply, hours worked, and income during the 1990s in China, even when controlling for unobserved heterogeneity (Benjamin et al., 2003; Liu et al., 2008; Yi and Dow, 2006).

These early gains in health may also be partially attributed to China's health insurance system which was historically employer-based prior to the economic transition period. Under the old socialist system, much of the social welfare responsibilities of the state were organized and delivered through work units, forming a comprehensive package of benefits (e.g. housing, retirement, childcare). The medical costs of a worker, and often of their dependents as well, were covered by either the government employee insurance scheme (GIS), funded through general revenues, or the labor insurance scheme (LIS), a work unit-based self-insurance system. However, as privatization was introduced in the 1980s, health insurance coverage has become increasingly tied to employment in the state and collective sector as private sector employees do not often offer health insurance benefits and commercial insurance schemes are not yet widely available (Akin et al., 2004; Henderson et al., 1995; Hu et al., 1999). As a result, rates of coverage plunged in the 1990s. From 1989 to 1997, Akin et al. (2004) report that the proportion of sampled city residents with any type of health insurance decreased from 70% to 51%, for suburban villages the proportion decreased from 30% to 25%, and for towns from 40% to 25%.

Recognizing these problems within the health insurance system, the Chinese government has taken steps to institute widespread reforms. For urban residents, the Urban Employee Basic Health Insurance Scheme (BHIS) was implemented nationwide in late 1998 to replace the GIS and LIS with a city-wide risk pool to cover all workers, but not their dependents, financed by premium contributions from both employees (2% of wages) and employers (6% of employees' wages). Although all enterprises are required to participate in the BHIS, it was not made mandatory and many private enterprises have chosen to stay away from the new scheme, particularly those with younger and healthier workers (Xu et al., 2007). Self-employed and rural industry workers can also voluntarily enroll. In rural areas beginning in 2002, the government has attempted to revive the Rural Cooperative Medical System (RCSM) under the old commune system by offering enrollment subsidies (20 yuan annually, or $2.50). However, enrollment is voluntary, benefits packages are left to the decisions of individual communities (Zhang et al., 2006), and the prevailing form of new RCMS schemes entail low premiums and high copayments, resulting in only the wealthiest taking up health insurance and utilizing health services (Wang et al, 2005).

Despite these reforms, it appears that health insurance coverage for both rural and urban residents has continued to slide (Xu et al., 2007; Zhang et al., 2006). In addition, although the market for commercial insurance is growing in China, these insurance packages are designed to provide supplemental coverage (e.g. specific diseases, drugs) for already existing basic insurance plans (Liu, 2002; Xu et al., 2007), leaving few options for health insurance coverage beyond the state and collective sectors. Thus, the lack of health insurance beyond the state and collective sectors no only has implications for widespread access to health and insurance against catastrophic medical expenditures, it may also create significant distortion in the labor market.

II. Conceptual framework

This research posits a causal relationship of health and health insurance on entrepreneurship. Assuming workers are rational utility maximizers, the decision to switch from wage/salary employment to self-employment in one's own business is the result of a cost-benefit calculation. For worker *i*, a transition into entrepreneurship (*E*) from wage employment (*W*) will occur when

$$Pr(Transition_i = 1) = Pr(Gains_i > 0)$$

where $Gains_i = \int_0^T e^{(g-r)t}\left(U(R_i^W) - U(R_i^E)\right)dt - c_i$.

Thus, a worker will decide to switch when the gains from the differential utility attained from the returns (R_i) between sectors, discounted over *T* periods with growth rate *g* and interest rate *r*, less some amount of fixed costs (c_i) associated with making the change (e.g. capital equipment startup costs), are positive. Although health may generally yield positive returns in the labor market, there may be differential returns to health in each sector. If we assume that the earnings profile as a function of health is steeper in self-employment, then healthier individuals will be more likely to become an entrepreneur *ceterus paribus*. This may indeed be the case if, in self-employment, workers do not have to share returns with an employer, reaping the full amount of returns to health.

H1: *Healthier individuals will be more likely to become entrepreneurs.*

This basic model also implies several predictions for other variables. Since expected gains are discounted over time, younger individuals will have potentially larger incentives to make the switch. In addition, the return differential between sectors will increase over time if both sectors grow at the same rate, even without considering faster growth in the new sector as is likely in the context of China's privatization. Finally, greater startup costs associated with the new sector will decrease the potential net gains. These costs can be such factors as access to additional labor and capital. These variables will be included as additional controls in the empirical model.

On the other hand, health insurance may act as a liability for entrepreneurship when coverage is tied to an employer. Through a compensating wage differentials setup, one can see that if wages do not perfectly offset differences in the valuation of health insurance across different jobs, then workers may be less inclined to change jobs.

Assume individuals *i* have preferences over health insurance (H = [0,1]) and wages (W) at firm *j*:

$$U_{ij} = U(W_{is}, H_{ij}).$$

Workers will desire health insurance if there exists a compensating wage differential (ΔW_{ij}) such that

$$U(W_{ij} - \Delta W_{ij}, H_{ij}=1) - U(W_{ij}, H_{ij}=0) \geq 0$$

If the labor market is perfectively competitive, firms that must pay the cost of health insurance for each worker (C_j) will provide insurance only if $\Delta W_{ij} \geq C_j$. This suggests that, in equilibrium, firms will bid wage differentials down to C_j such that all workers covered by insurance in any sector they work in will earn exactly

$$W_{ij} - \Delta W_{ij} = W_{ij} - C_j$$

In this case, each worker will be able to shop around to different employers and find a wage offer that compensates for the exact value that she places on having health insurance. Furthermore, firms pass off the full cost of health insurance to workers resulting in a fully efficient outcome.

However, the labor market is far from perfectly competitive in China and resulting inefficiencies can lead to job lock. First, workers' valuations of health insurance will vary widely according to age, gender, and health status and setting worker-specific compensation packages is unlikely. Second, if coverage is tied to employment in a specific job or sector and alternative jobs do not offer health insurance for whatever reason (e.g. prohibitive costs, lack of availability), employer-specific rents are created. For example, suppose firms in one sector (*s*) offer health insurance and firms in another sector (*p*) do not, but the worker could be more productive in sector *p* than in sector *s* where she currently works. The worker may not switch jobs into the more productive sector even if she would earn a higher wage because

$$U(W_{is} - \Delta W, H_{is}=1) - U(W_{ip}, H_{ip}=0) > 0.$$

In this case, wage offerings in the alternative sector—even if the full distribution of offerings is assumed to be known—are not high enough to offset the valuation of health insurance, leading to job lock. Thus, the lack of health insurance options for the self-employed may deter would-be entrepreneurs from leaving their current job.

H2: *Health insurance coverage will negatively affect the likelihood of becoming an entrepreneur.*

III. Data

To test these hypotheses, information from seven waves of the China Health and Nutrition Survey (1989 to 2006) are used. This survey contains a rich set of health variables, including both objective and subjective health measures, as well as information on employment and business ownership. Households located in communities in nine provinces were selected through a multistage, stratified random cluster sampling process. Information for all individuals within each household was gathered and repeat visits to the same household in subsequent waves allow for the construction of a panel dataset. However, attrition and migration contribute to missing data, and new households were added in certain waves to address this

issue.[3] Figure 1 displays the number of individuals included in each wave, along with the number of subsequent panel observations yielded. Although information on employment and business ownership from the 1989 and 2006 waves are used in compiling the dataset, they are excluded in the analysis as key health and income measures are not available. The dataset is restricted to individuals aged 18 or over who are currently working.

Dependent variables: private sector workers, self-employment, household businesses

Five different labor force activity dichotomous dependent variables are analyzed. First, based on an individual's primary occupation, a dummy variable is constructed to differentiate workers employed in the private sector rather than the state or collective sectors. Second, self-reported self-employed workers are further divided into those who operate their own business and those who operate independently or who work for another person or enterprise. This distinction represents a methodological refinement over previous studies of entrepreneurship that fail to distinguish self-employed workers that operate their own business (more closely represents the definition of entrepreneurship) from workers in the informal sector and/or migrant workers. Indeed, this distinction is particularly important in developing countries such as China where production and consumption activities in rural areas may still be linked in household-based activities (e.g. farming, fishing, livestock cultivation) while more sophisticated labor markets with firm-based wage employment have developed in urban areas. Moreover, mass migration of working-age individuals from rural to urban areas contributes to a sizable portion of migrant workers and day laborers. A separate dummy indicator is constructed for each type of self-employed worker. Finally, indicators are constructed for workers who are members of households who run their own business and for workers who participate in the running of the household business. Arguably, household-based business most closely represents the concept of entrepreneurship, but such activities may involve the labor contributions of one or more household members. For sizable health shocks to any one member of a household, the

[3] In 1997, new households and communities were added to replace those no longer participating and Heilongjiang province replaced Liaoning province. In 2000, newly-formed households, replacement households, and replacement communities were again added, and Liaoning province was added back to the study.

continuation of the business may be threatened. Alternatively, for smaller changes in health, intra-household insurance mechanisms may allow other members to adjust labor supply to the running of the business, in which case the latter indicator may better reflect the impact of individual health shocks to labor supply to entrepreneurial activities.

Independent variables: health and health insurance measures

Six measures of health are used:

(1) Self-reported general health status (GHS) is a subjective measure that reflects individuals' perceptions of their own health: excellent, good, fair, or poor. Dummy indicators are constructed for each category.[4]

(2) Co-morbid conditions can be considered a measure of health stock. A dummy variable is created for having any one of the following conditions: having experienced a heart attack, having goiter, being diagnosed with diabetes, or having a history of bone fractures.

(3) Disabilities are defined as physical conditions that impair work-related activities. Conditions that fall under this category include blindness, lost use of an arm or leg, or complete loss of a limb.

(4) Height can be viewed as a measure of health stock, representing the accumulated effects of nutrition and health during childhood. It is operationalized as tertile dummy indicators.

(5) Body mass index can be viewed as a more transitory measure of health since weight for a given height can vary according to dietary intake and physical exertion.[5]

(6) Hypertension has been associated with a variety of poor health outcomes even though few physical symptoms may manifest. Individuals were classified as being either previously diagnosed with hypertension and taking anti-hypertensive medication, being diagnosed but not

[4] Previous studies using self-reported health with CHNS data using these same measures have found significant and robust relationships with labor market outcomes (Liu, Dow et al. 2008; Yi and Dow, 2008).

[5] BMI is constructed from height and weight measurements taken in each wave and then classified as underweight (BMI<18.5), normal (BMI=18.5-24.9), overweight (BMI=25-29.9), or obese (BMI ≥30). BMI in kg/m^2 = weight in kilograms/(height in meters)^2.

taking medication, or having undiagnosed hypertension as determined by blood pressure readings taken at the time of survey.[6]

Each wave of the CHNS also asks about the health insurance status of each household member, coded as a dummy variable.

Controls

A variety of confounding factors are controlled for. Basic demographics include age, marital status, and gender as these measures have all been found to be significant determinants of individual self-employment choice (for a review, see Le, 1999). Marital status and gender are each represented by a single dummy indicator. Age is separated into seven categories (18-24, 25-29, 30-34, 35-39, 40-49, 50-59, 60+) according to proportionality and conventional cut points. Logged household size is included to reflect household consumption requirements and productive capabilities. Education is represented by the highest level attained: no schooling, primary school, lower-middle school, upper-middle school, technical/vocational/professional degree, and some college or higher. Wealth is operationalized as two indicators for household assets—the number of bicycles owned and a dummy for having a car. Note that unlike previous studies (Fuchs, 1982; Zissimopoulos and Karoly, 2007), occupation is not included because such job classifications are likely endogenous to sector choice and what occupation represents as an entrepreneur is unclear.

IV. Methods

Three types of analyses—participation, entry, and exit—are performed for each of the five dependent variables (i.e. private sector worker, self-employed individual worker, self-employed owner, household has own business, and works in household business). All regressions are separately run for urban and rural communities since significant differences in historical development, institutions, and labor markets across locations exist in China.

[6] Hypertension is defined as having systolic/diastolic readings greater than 140/90.

1. Participation: The probability of supplying labor to a particular sector or activity can be estimated with the following likelihood function:

(1) $P(Y_{ict} = 1) = L(health_{ict}, HI_{ict}, educ_i, married_{ict}, age_i, male_i, hhsize_{ict}, assets_{ict}, wave_t, \delta_c, \gamma_i)$

Y_{ict} is the dummy indicator for each type of labor market activity at time t in community c. $Health_{ict}$ is a vector of all health measures and HI_{ict} represents the dummy for health insurance coverage. Other explanatory variables include dummy variables for educational attainment ($educ_i$), martial status ($married_{ict}$), gender ($male_i$), and age categories (age_i), and a continuous measure of logged household size ($hhsize_{ict}$). $Assets_{ict}$ are represented by a dummy for having a car and a continuous indicator for the number of bicycles owned by the household. $Wave_t$ is operationalized as year dummies to control for time trends and δ_c denotes unobserved community effects.[7] In additional specifications, individual fixed effects (γ_i) are included to account for unobserved individual characteristics (e.g. risk preferences, innate healthiness and ability) that may influence both decisions about health and labor market behavior.

2. Entry: The longitudinal nature of the CHNS enables us to follow labor decisions over time and predict the likelihood of transitioning into each type of labor market activity. Controlling for individual characteristics in the current period (time t), the probability that an individual will enter the private sector (self-employment) by the next time period (time $t+1$) can be estimated with the following likelihood function:

(2) $P(\Delta Y_{ict} = 1 | Y_{ict} = 0) =$

$L(health_{ict}, HI_{ict}, educ_i, married_{ict}, age_i, male_i, hhsize_{ict}, assets_{ict}, income_{ict}, wave_t, \delta_c)$

where $\Delta Y_{ict} = Y_{ict+1} - Y_{ict}$.

The analysis of entry transitions restricts the sample to individuals who appear in at least two consecutive waves and further conditions on the baseline labor activity status of the individual. For example, entry into the private sector by the next period ($\Delta Y_{ict} = 1$) is conditional on not being in the private sector in the current period ($Y_{ict} = 0$). In addition to the independent variables in Equation 1, per capita income

[7] Community-level fixed effects estimation are employed to further control for the influence of unobserved community characteristics (e.g. infrastructure, access to credit, and local business climate) which may also affect entrepreneurship rates.

($income_{ict}$) is included since baseline income levels will likely enter into the decision to make a transition and can be considered chronologically predetermined.

3. Exit: Using the longitudinal sample again, we can also examine exits from the private sector or self-employment with the following equation:

(3) $P(\Delta Y_{ict} = -1 | Y_{ict} = 1) =$

$L(health_{ict}, HI_{ict}, educ_i, married_{ict}, age_i, male_i, hhsize_{ict}, assets_{ict}, income_{ict}, wave_t, \delta_c)$

where $\Delta Y_{ict} = Y_{ict+1} - Y_{ict}$.

This time, the sample is restricted to those who are work in the private sector (self-employment) entrepreneurs at baseline ($Y_{ict} = 1$) to predict the likelihood of working in the public sector (wage and salary employment) by the next period ($\Delta Y_{ict} = -1$).

All equations are estimated using a linear probability model (LPM) with standard errors are corrected for heteroskedasticity and clustered at the community level to account for all sub-community level arbitrary correlation across observations. Although standard econometric techniques for discrete dependent variables employ a conditional logit model, maximum likelihood estimation becomes computationally untenable with large numbers of fixed effects. In noting the possibility that LPMs may produce probabilities outside [0,1], interpretation of regression results is focused on estimated marginal effects.

V. Results

Sample descriptives

The sample of working adults aged 18+ in the CHNS in waves 1991 to 2004 is comprised of 20,152 rural observations and 8,506 urban observations. Tables 1 and 2 display basic descriptive statistics for the rural and urban analytic samples, respectively. The average age increases in both samples, reflecting population aging as well as the longitudinal nature of the survey. The urban sample is generally more educated: only 21% of urban workers did not have any schooling in 1991 compared to 35% for rural

workers. However, educational attainment generally improves over time and the proportion without any schooling decreases to 18% and 8% in rural and urban communities, respectively, by 2004. The vast majority of workers in both samples are married (upwards of 80%). Assets appear to diminish over time: both bicycle and car ownership decrease. Per capita household income levels are higher in urban areas.

The health of sampled individuals shows some interesting trends, characterized by increasing obesity and chronic conditions. Average BMI increases for all individuals, placing greater proportions of people in the overweight and obese categories. General health status measures show worsening perceived health with lower proportions reporting good health and higher proportions reporting fair and poor health. The prevalence of hypertension increases over time. By 2004, 3.5% and 2.6% of the rural and urban samples have latent undiagnosed hypertension while 2.7% and 4.1% are diagnosed medicating, respectively. The prevalence of co-morbid conditions increases from 1.0% to 4.1% in rural communities and from 1.6% to 6.6% in urban communities. In contrast, physical disabilities are far less common, nearly zero in all years.[8] Health insurance coverage rates somewhat increase in rural communities from 18% in 1993 to 21% in 2004, but substantially decrease in urban communities from 60% to 46%.

In terms of employment, private sector and entrepreneurship rates have increased over time, as has household business ownership. Labor force participation in the private sector and household business ownership are much higher in rural areas, likely reflecting the devolution of commune-based agriculture to private household-based farming. However, private sector participation also increases from 34% to 50% in urban areas during the sample timeframe. Entrepreneurship rates, or the proportion of self-employed owners/managers, also increases over time, reaching 3.6% in rural areas and 4.2% in urban areas by 2004. Conversely, the proportion of self-employed individual workers has decreased to 69.4% in rural communities and 27.1% in urban communities by 2004.

When health measures are examined for each type of worker, some distinct cross-sectional relationships appear (Figures 3 and 4). For rural workers (Figure 3), workers reporting worse health statuses, who were shorter, and who have lower BMIs were more likely to work in the private sector and

[8] Because of such low prevalence, disabilities are excluded from some regression analyses.

as self-employed individuals, but were less likely to be self-employed owners or work in a household business. All workers with a co-morbid condition or a disability were more likely to participate in all labor activities. Workers with diagnosed but untreated hypertension showed higher participation rates for all activities except for self-employed ownership where workers with treated hypertension exhibited the highest participation rates. For urban workers (Figure 4), poorer health statuses and shorter height were again associated with higher proportions working in the private sector and self-employed individuals and lower proportions of self-employed owners, but were also associated with higher proportions participating in a household business. In addition, a U-shaped relationship between participation for all types of labor activities and BMI result. Unlike the patter for rural workers, workers with diagnosed and untreated hypertension exhibited lower rates of participation in self-employed ownership and household businesses. For all types of labor activities explored in this study, increased participations rates are observed for workers without a co-morbid condition and without health insurance coverage for all workers.

Socio-demographic determinants

Regressions predicting labor sector activities with only socio-demographic controls are presented in Tables 3 and 4. For rural workers (Table 3), private sector participation (column 1) is positively and significantly related to younger age (although some higher age categories are marginally significant with $p<0.10$), lower educational attainment, being female, and having fewer assets. Time dummies show increasing rates of participation over time. Transition regressions (columns 2-3) indicate that middle-aged workers in their 30s are more likely to enter the private sector and least likely to exit along with older workers; the more-educated are less likely to enter and more likely exit, indicating overall higher between-sector mobility for these workers. In addition, men are more likely than women to exit the sector. Secular trends indicate greater entry rates and lower exit rates over time. Socio-demographic predictors for being a self-employed individual worker (columns 4-6) exhibit similar patterns for private sector activities, although age gradients with respect to participation and exit are steeper. The patterns for entrepreneurship are strikingly different, however. Rural workers in their 30s are more likely to be a self-

employed owner, as are men and married individuals (column 7). Moreover, women are more likely to enter entrepreneurial activities (column 8) while individuals with a middle-school education and who are married are less likely to exit this state (column 9). Increased likelihood of a worker's household owning a business (column 10) was related to larger family size and increased likelihood of one working in the household business (column 13) is significantly and negatively related to age and education. In addition, men are more likely to work in the household business as are married workers.

Although effect sizes are generally larger for urban workers, the socio-demographic patterns are relatively the same (Table 4): more educated workers, women, and individuals with fewer assets are less likely to be in the private sector or be individually self-employed whereas middle-aged and male workers are more likely to be self-employed owners. There are, however, a few notable exceptions. An additional household member increases the likelihood of participating in the private sector by 1.2 percentage points (column 1). Significantly lower rates of participation in the private sector for older workers are driven by lower rates of entry (column 2). In addition, even though older workers are again more likely to be individually self-employed (column 4), they are also significantly less likely to enter and exit this state, suggesting lower mobility to and from wage employment. Household business ownership and actively working in the household business exhibited few patters with socio-demographic predictors: men are found to be more likely to work in the household business (column 13).

Private sector participation and transitions

Models predicting private sector labor activity as a result of health determinants and health insurance status are reported in Table 5. The first column of each set of regressions for rural and urban communities simply adds all health variables to the base regression specification controlling for socio-demographic characteristics and community-level fixed effects whereas the second column includes individual-level fixed effects. For rural workers (column 1), higher participation in the private sector is significantly related to shorter height, having a disability, and having been diagnosed with hypertension but not being treated ($p<0.10$); lower participation was significantly related to having undiagnosed

hypertension ($p<0.10$) and not having health insurance. Workers reporting worse health status are more likely to work in the private sector, but these point estimates were not statistically significant. Workers with health insurance are 5.7 percentage points less likely to enter the private sector (column 3) and shorter workers, those with a co-morbid condition, and who are not overweight ($p<0.10$) are less likely to exit the private sector (column 4). However, when individual fixed effects are added (column 2), becoming obese increases the likelihood of participation by 5.3 percentage points ($p<0.10$), whereas developing latent hypertension decreases participation by 3.7 percentage points, and having diagnosed and treated hypertension decreases participation by 5.1 percentage points ($p<0.10$). In addition, attaining health insurance coverage lowers participation by 10.8 percentage points.

For urban workers, health insurance had the largest effect on private sector participation and transitions. In the cross-sectional analyses, health insurance coverage lowered the likelihood of participation by 33.2 percentage points (column 6), the likelihood of entry by 7.8 percentage points (column 8), and the likelihood of exit by 4.8 percentage points (column 9; $p<0.10$). However, even when looking within a given worker over time, the effect remains strong: attaining health insurance reduces the likelihood of private sector participation by 12.9 percentage points (column 7). For other health indicators, increased likelihood of participation is predicted by developing a disability (16.9 percentage points) or a co-morbid condition (3.6 percentage points; $p<0.10$), having a disability decreases the likelihood of entry by 6.9 percentage points (column 8), and being overweight increases the likelihood of exit by 2.6 percentage points ($p<0.10$; column 9).

Self-employed individual workers

Table 6 presents LPM results assessing the health determinants of labor supply to individual self-employment. For rural workers, worse perceived health status significantly increases the likelihood of individual self-employment, even after controlling for individual fixed effects (column 2). Height is negatively associated (column 1; $p<0.10$, although this estimate is marginally significant, and both bo-morbidities and health insurance statuses decreases the likelihood of being individually self-employed

(column 2). In addition, disabled workers are 26.4 percentage points more likely to enter individual self-employment (column 3).

For urban workers, health insurance again emerged as the strongest predictor of individual self-employment. Having health insurance reduces the likelihood by 7.7 percentage points (column 7). In addition, disabled workers were 4.4 percentage points less likely to enter individual self-employed (column 8, $p<0.10$).

Self-employed owners

When examining entrepreneurship defined as a self-employed owner of a business, health determinants were different for rural and urban workers. Table 7 shows results of LPMs for rural workers. In contrast to individual self-employment results, worse perceived health status lowered the likelihood of being a self-employed owner—a result that remains negative and significant with individual fixed effects (columns 1-2). Height and higher BMI (overweight and obese categories) are positively and significantly related to self-employed ownership, although the effects of the latter become marginally significant when individual fixed effects are added. Similarly, the significant and negative effect of health insurance across individuals becomes insignificant with a point estimate near zero when looking within individuals. However, individuals with health insurance coverage are 1.6 percentage points less likely to enter into self-employed ownership (column 3). The exit regression (column 5) shows that poor health and having a co-morbid condition reduces the likelihood of exit from self-employed ownership by 20-34 percentage points. However, these last regression estimates must be taken with caution as the sample size is considerably smaller when conditioning on baseline self-employment status.

Among health indicators for urban workers, only disability status was significantly related to being a self-employment owner. However, even though disabilities are negatively related to self-employment ownership across the entire urban sample (column 6), when individual fixed effects are added, developing a disability actually increases the likelihood of self-employment ownership (column 7). Moreover, diagnosed but untreated hypertension and having a co-morbidity or disability all significantly

lowered entry probabilities (column 8). Again, health insurance was associated with lower likelihoods of being a self-employed owner.

Household businesses

Individual health determinants of household business ownership are displayed in Table 8 while Table 9 displays results predicting the likelihood of working in the household business. Some health measures—obesity, health insurance—significantly predict the likelihood of the household having a business across rural workers (Table 8, column 1), none of the measures are significant when controlling for individual fixed effects (column 2) or when predicting entry (column 3). However, when examining actual labor supplied to the household business, BMI is positively and significantly related. Even when controlling for individual fixed effects, becoming overweight or obese increases the likelihood of working in the household business by 2.9 and 8.8 percentage points, respectively (Table 9, column 2). Moreover, untreated but diagnosed hypertension lowers the likelihood that a rural worker will work in a household business by the next period while having a co-morbid condition increases the likelihood that an individual will cease to work in the business by the next period (columns 3-4).

For urban workers, BMI is also a significant determinant of having a household business (Table 8). Workers who become underweight are 2.9 percentage points less likely to be in a household that runs its own business (column 7). A similar negative and significant effect is found for health insurance coverage. The entry regression shows that having a disability also lowers the likelihood of the household having a business (column 8). When looking at individual labor supply to the household business (Table 9), height is negatively related to working in the business while having a disability lowers the likelihood that an urban worker will work in a household business by the next period (column 8) and having diagnosed but untreated hypertension increases the likelihood that the worker remains working in the business (column 9).

VI. Discussion

As China continues to transition toward a market economy, privatization is increasingly paving the way for entrepreneurship. Regression results confirm the rising trends of both of these developments. Throughout the survey years, privatization has steadily increased in rural areas, but has grown at a faster rate in urban areas, particularly after 1997. In addition, rates of household business ownership have continued to increase in rural areas, and to a lesser extent, in urban areas. And as the likelihood of individuals entering self-employment ownership has increased, the likelihood of individual self-employment has decreased over time, suggesting that more workers may be entering more formal wage employment in privately owned firms.

While these trends suggest that growing new sectors of the economy are opening up more labor opportunities in China, we do find evidence that such opportunities may not be equally distributed across all workers. In particular, in both urban and rural communities, the less-educated, women, and workers from households with fewer assets are more likely to participate in the private sector and, along with older workers, be individually self-employed. In other words, individuals from what can be considered less-advantaged socio-economic groups disproportionately supply labor to the private sector in non-wage jobs. On the other hand, even though men and middle-aged workers in their 30s are not as likely to participate in the private sector, they are more likely to be self-employed owners of a business in both urban and rural areas. Interestingly, education does not have an effect on being self-employed owner nor do other factors, such as assets, for which large effects have previously been found in studies conducted for developed countries (Blanchflower and Oswald, 1998; Dunn and Holtz-Eakin, 2000). However, education is negatively associated with working in a household business in rural areas while household size is positively associated, suggesting that larger households have access to a larger labor supply from intra-household members. And, in particular, the less-educated may be left at home to work in the business while more-educated workers may find better job opportunities outside the home. This same education gradient is found for urban workers supplying labor to a household business. Therefore, even though the private and public sectors may have different profiles of workers, China's new entrepreneurs may not be

as select class of workers as some would imagine and may even afford some opportunities to the less-educated that may otherwise be pushed out of the formal wage sector.

In an extension of previous studies of entrepreneurship behavior and of the labor supply in China, this study has sought to identify the characteristics of individuals who are participating in China's new labor market sectors with a particular focus on health and health insurance determinants. A strong and consistent negative relationship on labor supply to the private sector and to individual self-employment in all areas and to self-employment ownership and household business operations in urban areas is found with health insurance. Health insurance lowers the likelihood of working in these activities by 2-13 percentage points in individual fixed effects specifications. This suggests that coverage that is directly tied to employment in the state and collective sector may reduce sector mobility for workers, preventing individuals who value the insurance from pursuing alternative employment options in the private sector or entrepreneurial activities. In fact, health insurance is also found to significantly increase the probability of transitioning out of individual self-employment, further suggesting that having independent coverage when not directly employed in the public sector improves mobility. These workers may have obtained coverage through their spouses (likely if their spouse works for the state sector), or may have purchased individual coverage. More research into spousal coverage, possibly along the lines of Holtz-Eakin et al. (1996), Wellington (2001), and Madrian and Lefgren (1998), is required to identify the source.

This study also included a broad range of health indicators, representing an extension of previous studies that only included work-limiting disabilities. Results show that more transitive measures of health, such as BMI and subjective perceptions of health, may also have important effects on entrepreneurship. Health effects are generally more salient within the rural sample, which should not be surprising given the continued (albeit lower) predominance of agriculture in rural areas. For rural workers, better self-reported health status increases the likelihood of self-employed ownership and decreases the likelihood of individual self-employment, suggesting that subjective perceptions of health are independently important of other objective health measures. Indeed, we also find that individuals without co-morbidities are more likely to be individually self-employed, but as are individuals reporting worse health statuses. These

apparently contradictory results may follow from the nature of jobs in this category, which may involve more manual labor that would require a minimum level of physical functionality even though perceived health is bad. Alternatively, workers in these kinds of jobs may justify their work in terms of health, which would introduce upward bias into the estimated coefficients. Additionally for rural workers, measures of health stock—height and co-morbidities—produced somewhat conflicting results. Taller workers, presumably with better stocks of health from childhood, are less likely to work in the private sector, but so are workers with co-morbidities. Although the mechanism driving this selection behavior is unknown, it could be speculated that returns to physically observable health, such as height, may be higher in the state and collective sectors, but that health and disability benefits may also better with these employers, causing workers with less-observable conditions, such as heart conditions and diabetes, to remain in the public sector.

For our entrepreneurship outcomes for rural workers, even though better self-reported health increases the likelihood of becoming a self-employed owner, becoming obese also increases this likelihood as well as the likelihood of working in the household business. Again, these results appear contradictory to the hypothesis that health capital unambiguously facilitates entrepreneurship. However, BMI may function less as health facilitator and more as a positive social signal of well-being, which could create more opportunities for access to credit, social networks, and resources. Alternatively, less physically able household members may be allocated to household-based jobs while more physically able members seek jobs in the labor market. Interestingly, changes in individual health are not related to the likelihood of the household running a business, suggesting that health shocks to any individual member do not threaten the viability of the business and that other household members may adjust their labor supply to the business accordingly. Future work will seek to investigate these cross-effects by incorporating the health status of other household members into regression analyses.

In contrast to the patterns observed for rural workers, labor sector participation for urban workers is linked only to more physical objective health measures. Workers becoming disabled or gain a co-morbid condition are more likely to work in the private sector, even though health benefits in private

firms may be less generous or non-existent. It will be interesting to see what the income impacts from health shocks are in the different sectors in future analyses. It may be the case private sector wages are high enough to offset the value of health benefits gained in the public sector. Alternatively, workers with disabilities may be pushed out of public sector jobs, possibly in efforts to increase productivity in a the more competitive market economy. In fact, disability is also a significant predictor of becoming a self-employed owner in urban areas. However, becoming underweight lowered the likelihood that the worker's household has a business with no corresponding negative effect for obesity. More investigation is required to explain this result, but in this case, BMI may act as a work facilitator in normal ranges but also act as a social signal at for the likelihood of success in entrepreneurship at higher levels.

Overall, these results indicate that relatively healthier rural workers, but relatively unhealthier urban workers are more likely to participate in the private sector and in entrepreneurship. Relatively healthier rural workers, particularly those with better subjective health are also more likely to become self-employed owners of a business, a result that corresponds to findings by Rees and Shah (1986). Moreover, household business ownership in rural areas is not affected by health shocks of any single household member. The effects of health shocks on entrepreneurship in urban areas showed that workers with disabilities are more likely to be self-employed owners, which accords with findings from Borjas (1986) and Fairlie and Meyer (1996). However, more investigation is required to interpret BMI results as this indicator may embody signals other than potential worker productivity.

Although none of these five labor sector measures may be perfect in capturing the privatization and entrepreneurship dynamics in China's transitional economy, the findings in this analysis suggest that selection into these new sectors may have important implications for continued economic growth. The participation of women and less-educated, less wealthy workers in the private sector indicates that job offerings there may provide better opportunities and possibly greater returns. In addition, the strong association of health insurance suggests that employer-provided coverage is likely inhibiting growth of the private sector and entrepreneurship and the magnitude of the welfare loss may be economically significant. Moreover, while health appears to facilitate rural worker participation in these new sectors,

urban worker participation is higher for the relatively unhealthy. Because of the descriptive nature of this exploratory work, it is difficult to determine if such patterns support disadvantaged theories of sector participation (Light, 1979; Moore, 1983). While it could be the case that less-advantaged groups may be "pushed" out of one sector and into another, it could also be the case that such workers may be "pulled" in by labor demand. Future work will seek to determine the differential returns between groups and to health in each sector, which may shed light on sector participation decisions.

This exploratory analysis of the determinants of entrepreneurship in China has several notable limitations. First, the descriptive nature of the exercise limits inferences about causality. Even with individual fixed effects, participation regressions may suffer from endogeneity between some health measures and labor market outcomes. For example, entrepreneurs may work longer hours and endure more stress, causing perceived or transitory health to deteriorate. Alternatively, labor market outcomes may be rationalized in terms of self-reported measures. Although transition regressions that take advantage of the longitudinal setup of the CHNS may help to overcome reverse causality, it may also be the case that health may decline leading up to the actual start of a business precisely because of efforts to launch a business. Additional work will be needed to identify sources of exogenous variation for health and health insurance. Finally, changes in health may have longer-term effects and past changes in health may affect labor market behavior well into the future. While current health measures can be though of as encompassing all past health events, it may be the case that past events could have an independent effect on future outcomes. Future analyses will seek to explore such lagged effects of health shocks.

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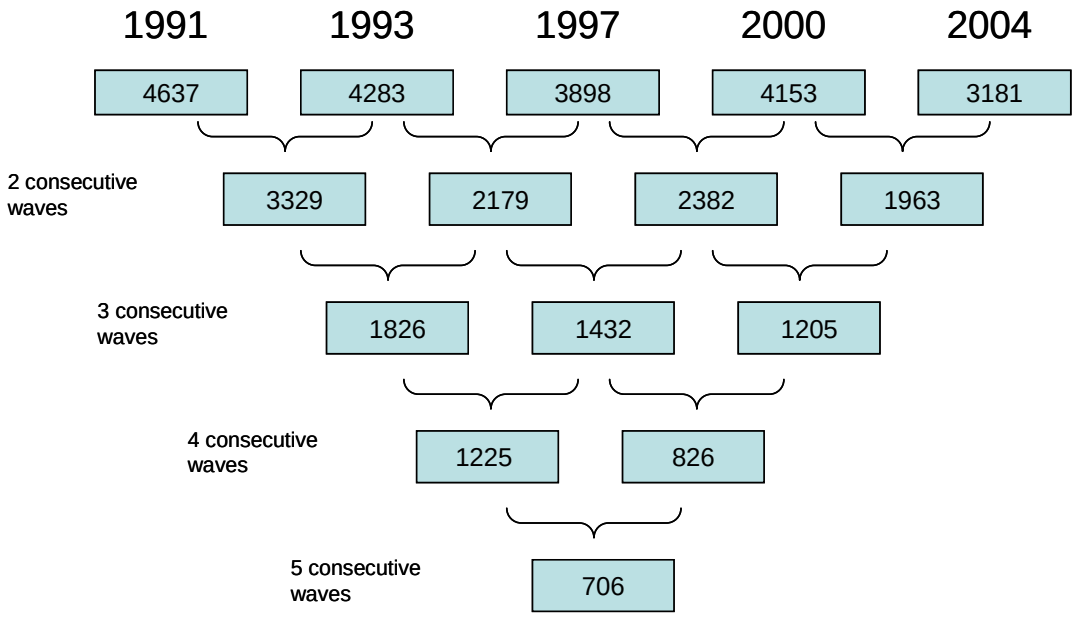
Figures

Figure 1. CHNS Panel Observations

A. Rural sample N = 20,152



B. Urban sample N = 8,506

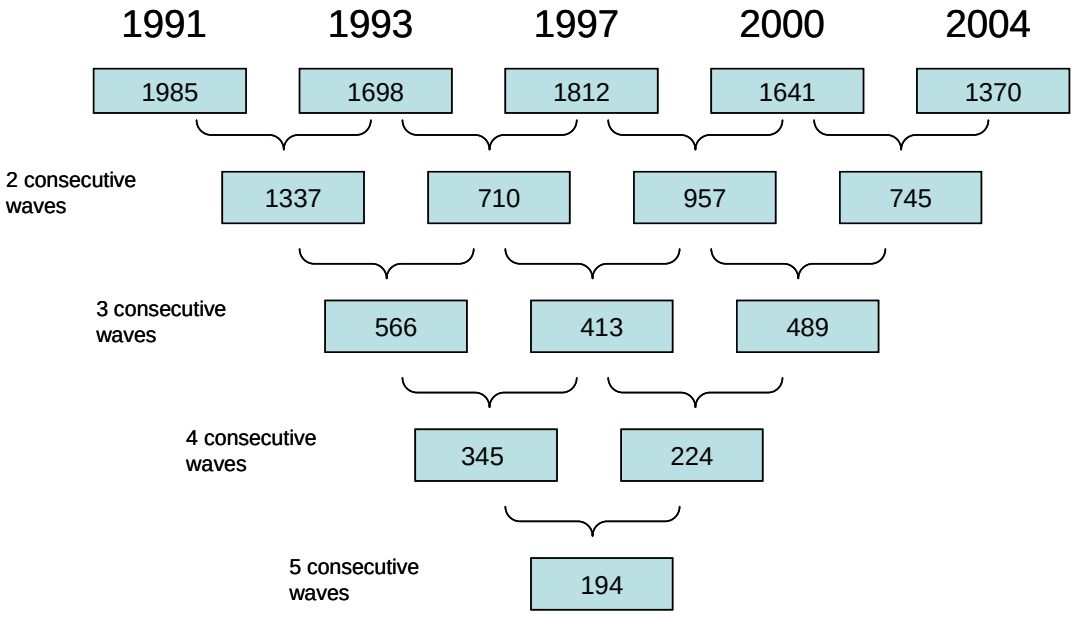
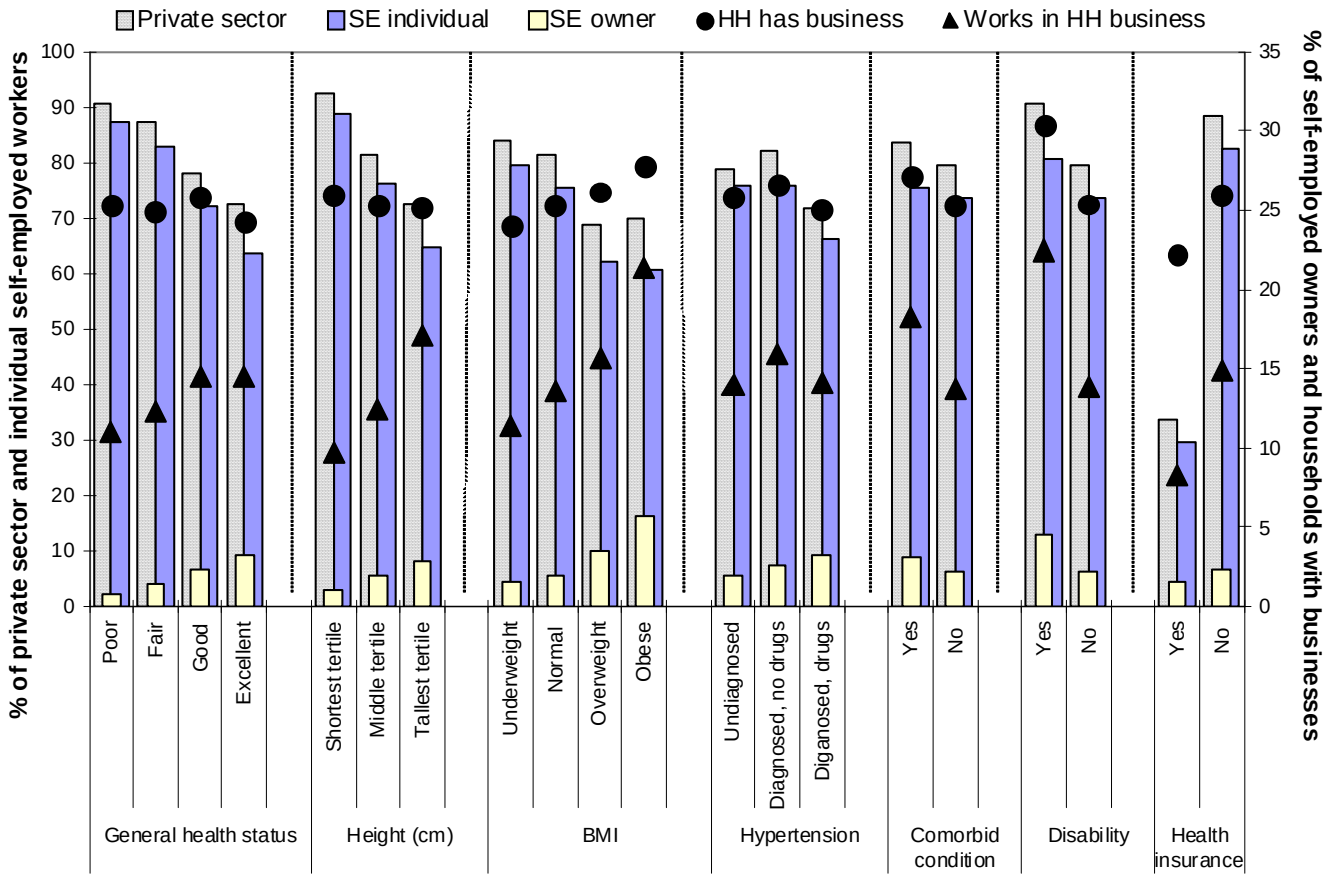
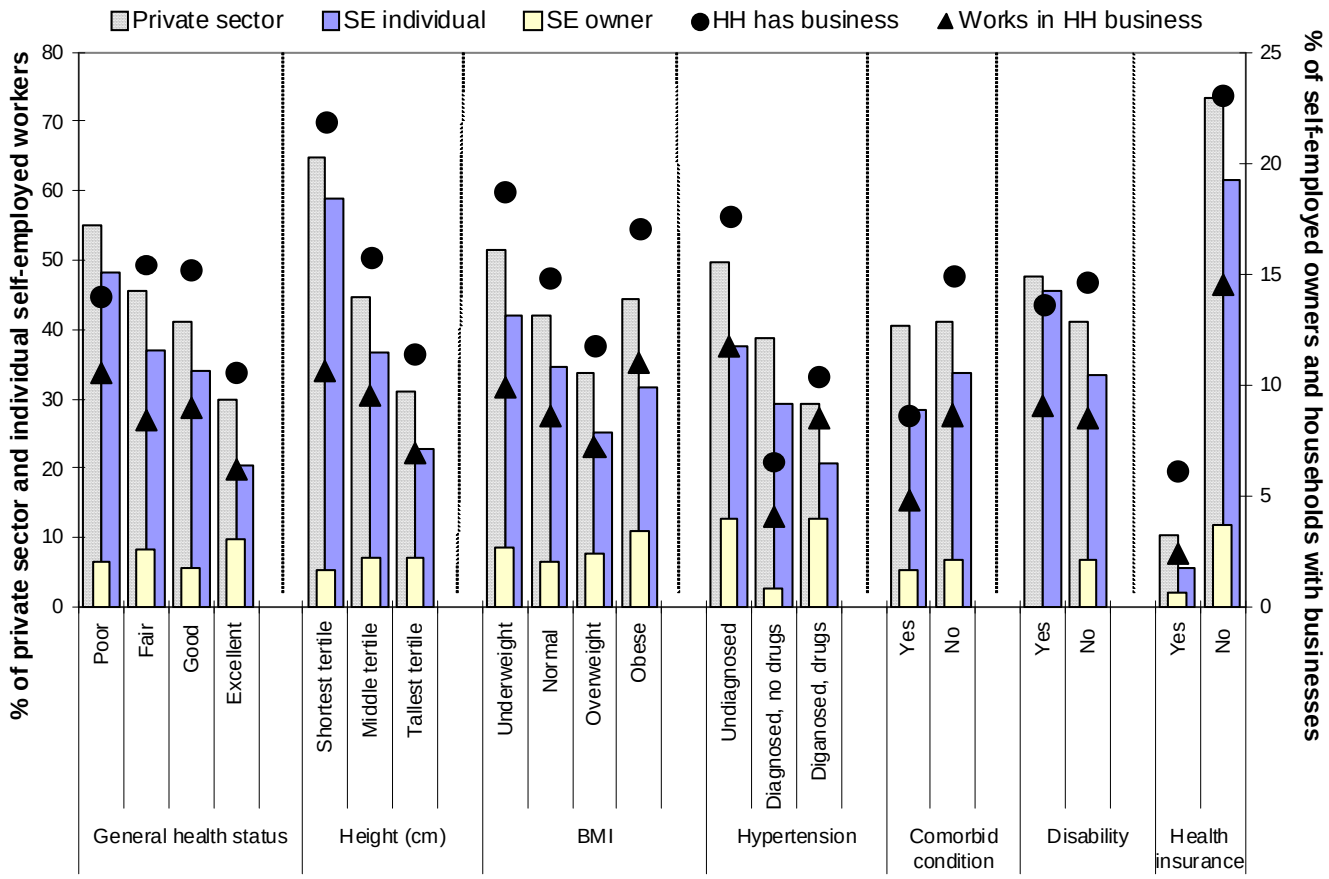


Figure 3. Health status of workers by sector participation in rural communities, 1993-2004.



Source: China Health and Nutrition Survey, UNC Carolina Population Center

Figure 4. Health status of workers by sector participation in urban communities, 1993-2004.



Source: China Health and Nutrition Survey, UNC Carolina Population Center

Tables

Table 1. Descriptive statistics for CHNS rural sample: Mean (SD)

	1991	1993	1997	2000	2004
N	4,683	4,326	3,919	4,186	3,531
Dependent variables					
Works in private sector					
Participation	0.764 (0.425)	0.76 (0.427)	0.804 (0.397)	0.835 (0.372)	0.834 (0.372)
Entry	0.026 (0.158)	0.047 (0.213)	0.036 (0.187)	0.019 (0.138)	0.018 (0.134)
Exit	0.038 (0.19)	0.019 (0.137)	0.017 (0.129)	0.011 (0.105)	0.014 (0.119)
Self-employed owner/manager					
Participation	0.009 (0.095)	0.017 (0.13)	0.021 (0.143)	0.03 (0.17)	0.036 (0.186)
Entry	0.014 (0.116)	0.015 (0.122)	0.018 (0.131)	0.012 (0.109)	0.012 (0.11)
Exit	0.006 (0.08)	0.01 (0.098)	0.012 (0.11)	0.013 (0.112)	0.014 (0.116)
Self-employed individual					
Participation	0.742 (0.437)	0.742 (0.438)	0.749 (0.433)	0.752 (0.432)	0.694 (0.461)
Entry	0.037 (0.189)	0.042 (0.2)	0.05 (0.217)	0.03 (0.171)	0.031 (0.173)
Exit	0.056 (0.23)	0.051 (0.22)	0.065 (0.247)	0.045 (0.208)	0.045 (0.207)
Household owns business					
Participation	0.231 (0.421)	0.237 (0.425)	0.26 (0.439)	0.273 (0.446)	0.286 (0.452)
Entry	0.109 (0.312)	0.128 (0.334)	0.099 (0.299)	0.114 (0.318)	0.09 (0.286)
Exit	0.113 (0.316)	0.102 (0.303)	0.117 (0.322)	0.13 (0.337)	0.121 (0.326)
Works in household business					
Participation	0.111 (0.315)	0.117 (0.322)	0.144 (0.352)	0.16 (0.367)	0.174 (0.379)
Entry	0.056 (0.231)	0.073 (0.259)	0.057 (0.232)	0.055 (0.227)	0.055 (0.228)
Exit	0.061 (0.239)	0.057 (0.231)	0.073 (0.261)	0.088 (0.283)	0.082 (0.275)
Independent variables					
General health status					
Poor	0.029 (0.169)	0.031 (0.174)	0.032 (0.177)	0.041 (0.198)	0.046 (0.209)
Fair	0.21 (0.407)	0.195 (0.396)	0.187 (0.39)	0.256 (0.437)	0.291 (0.454)
Good	0.616 (0.487)	0.654 (0.476)	0.619 (0.486)	0.535 (0.499)	0.507 (0.5)
Excellent	0.145 (0.352)	0.119 (0.324)	0.161 (0.368)	0.167 (0.373)	0.156 (0.363)
Height (cm)	159.70 (8.04)	159.79 (7.98)	160.40 (8.15)	160.80 (8.09)	160.62 (11.72)
Shortest tertile	0.193 (0.395)	0.192 (0.394)	0.174 (0.379)	0.16 (0.366)	0.163 (0.369)
Middle tertile	0.424 (0.494)	0.424 (0.494)	0.414 (0.493)	0.416 (0.493)	0.386 (0.487)
Tallest tertile	0.383 (0.486)	0.385 (0.487)	0.412 (0.492)	0.424 (0.494)	0.452 (0.498)
Body mass index	21.50 (2.69)	21.67 (2.77)	22.02 (2.88)	22.54 (3.13)	27.38 (100.26)
Underweight (<18.5)	0.1 (0.301)	0.086 (0.281)	0.079 (0.269)	0.067 (0.249)	0.067 (0.249)
Normal (18.5-24)	0.801 (0.4)	0.805 (0.396)	0.775 (0.418)	0.74 (0.438)	0.701 (0.458)
Overweight (25-29)	0.088 (0.284)	0.099 (0.299)	0.135 (0.342)	0.171 (0.376)	0.189 (0.392)
Obese (30+)	0.011 (0.102)	0.01 (0.097)	0.012 (0.107)	0.022 (0.147)	0.043 (0.202)
Hypertension					
Undiagnosed	0.011 (0.105)	0.013 (0.115)	0.022 (0.145)	0.024 (0.154)	0.035 (0.184)
Diagnosed, no drugs	0.01 (0.1)	0.012 (0.108)	0.008 (0.091)	0.016 (0.125)	0.02 (0.14)
Diagnosed, drugs	0.009 (0.092)	0.007 (0.086)	0.009 (0.094)	0.02 (0.139)	0.027 (0.163)
Co-morbid condition	0.01 (0.101)	0.003 (0.059)	0.027 (0.163)	0.034 (0.182)	0.041 (0.199)
Disability	0.007 (0.081)	0.005 (0.073)	0.003 (0.055)	0.004 (0.06)	0.002 (0.043)
Health insurance	0.183 (0.387)	0.134 (0.34)	0.171 (0.376)	0.123 (0.328)	0.214 (0.41)
Age	38.13 (12.89)	39.4 (13.18)	40.89 (13.18)	41.98 (12.60)	44.23 (12.34)
18-24	0.173 (0.378)	0.151 (0.358)	0.122 (0.327)	0.089 (0.285)	0.059 (0.236)
25-29	0.148 (0.355)	0.127 (0.333)	0.123 (0.329)	0.097 (0.295)	0.077 (0.267)
30-34	0.117 (0.322)	0.123 (0.328)	0.138 (0.345)	0.128 (0.334)	0.111 (0.315)
35-39	0.161 (0.367)	0.145 (0.352)	0.106 (0.308)	0.148 (0.355)	0.139 (0.346)
40-49	0.22 (0.414)	0.245 (0.43)	0.263 (0.44)	0.28 (0.449)	0.277 (0.448)
50-59	0.118 (0.323)	0.129 (0.335)	0.161 (0.368)	0.173 (0.378)	0.227 (0.419)
60+	0.063 (0.244)	0.08 (0.272)	0.087 (0.282)	0.086 (0.28)	0.109 (0.312)
Education					
No schooling	0.351 (0.477)	0.316 (0.465)	0.285 (0.451)	0.22 (0.414)	0.181 (0.385)
Primary school	0.252 (0.434)	0.255 (0.436)	0.265 (0.442)	0.271 (0.444)	0.263 (0.44)
Low-middle	0.285 (0.451)	0.308 (0.462)	0.309 (0.462)	0.347 (0.476)	0.349 (0.477)
Upper-middle	0.094 (0.292)	0.099 (0.298)	0.104 (0.305)	0.108 (0.31)	0.13 (0.337)
Technical	0.013 (0.112)	0.017 (0.127)	0.026 (0.158)	0.034 (0.182)	0.051 (0.221)
Some college	0.006 (0.079)	0.007 (0.08)	0.012 (0.107)	0.02 (0.139)	0.025 (0.156)
Household size	3.323 (1.395)	4.617 (1.55)	4.211 (1.419)	4.084 (1.416)	3.964 (1.444)
Male	0.495 (0.5)	0.497 (0.5)	0.516 (0.5)	0.514 (0.5)	0.539 (0.499)
Married	0.813 (0.39)	0.819 (0.385)	0.828 (0.377)	0.853 (0.354)	0.877 (0.329)
No. bicycles	1.458 (1.141)	1.607 (1.22)	1.502 (1.198)	1.367 (1.115)	1.136 (1.104)
Has car	0.051 (0.22)	0.05 (0.218)	0.044 (0.206)	0.015 (0.12)	0.009 (0.097)
Per cap household income	1481.34 (1001.05)	1136.41 (856.77)	1324.47 (1033.97)	1229.21 (984.31)	2627.88 (2758.85)

Source: China Health and Nutrition Survey, UNC Carolina Population Center

Table 2. Descriptive statistics for CHNS urban sample: Mean (SD)

	1991	1993	1997	2000	2004
N	1,990	1,711	1,825	1,652	1,437
Dependent variables					
Works in private sector					
Participation	0.343 (0.475)	0.364 (0.481)	0.446 (0.497)	0.433 (0.496)	0.504 (0.5)
Entry	0.027 (0.163)	0.046 (0.209)	0.039 (0.194)	0.067 (0.25)	0.036 (0.186)
Exit	0.03 (0.17)	0.022 (0.146)	0.022 (0.147)	0.02 (0.14)	0.03 (0.171)
Self-employed owner/manager					
Participation	0.014 (0.118)	0.012 (0.108)	0.017 (0.13)	0.024 (0.154)	0.042 (0.201)
Entry	0.008 (0.089)	0.014 (0.116)	0.013 (0.112)	0.013 (0.112)	0.023 (0.15)
Exit	0.009 (0.092)	0.004 (0.059)	0.007 (0.081)	0.007 (0.082)	0.018 (0.133)
Self-employed individual					
Participation	0.325 (0.468)	0.328 (0.469)	0.393 (0.489)	0.339 (0.474)	0.271 (0.445)
Entry	0.022 (0.147)	0.031 (0.172)	0.032 (0.176)	0.017 (0.129)	0.031 (0.173)
Exit	0.041 (0.198)	0.036 (0.186)	0.036 (0.187)	0.027 (0.163)	0.043 (0.203)
Household owns business					
Participation	0.126 (0.332)	0.126 (0.332)	0.2 (0.4)	0.126 (0.332)	0.156 (0.363)
Entry	0.041 (0.198)	0.101 (0.301)	0.051 (0.221)	0.078 (0.269)	0.054 (0.225)
Exit	0.052 (0.223)	0.05 (0.218)	0.111 (0.314)	0.072 (0.259)	0.062 (0.242)
Works in household business					
Participation	0.069 (0.254)	0.075 (0.263)	0.113 (0.317)	0.074 (0.262)	0.095 (0.293)
Entry	0.023 (0.149)	0.054 (0.227)	0.032 (0.177)	0.043 (0.202)	0.042 (0.201)
Exit	0.028 (0.164)	0.032 (0.176)	0.062 (0.242)	0.042 (0.201)	0.046 (0.211)
Independent variables					
General health status					
Poor	0.023 (0.15)	0.024 (0.152)	0.032 (0.176)	0.036 (0.186)	0.03 (0.171)
Fair	0.216 (0.411)	0.215 (0.411)	0.249 (0.433)	0.301 (0.459)	0.321 (0.467)
Good	0.653 (0.476)	0.621 (0.485)	0.599 (0.49)	0.524 (0.5)	0.511 (0.5)
Excellent	0.108 (0.311)	0.141 (0.348)	0.12 (0.325)	0.139 (0.346)	0.138 (0.345)
Height (cm)	160.97 (8.58)	161.12 (8.43)	161.73 (8.42)	162.18 (8.69)	162.11 (12.79)
Shortest tertile	0.334 (0.472)	0.319 (0.466)	0.309 (0.462)	0.286 (0.452)	0.267 (0.442)
Middle tertile	0.336 (0.473)	0.355 (0.479)	0.337 (0.473)	0.323 (0.468)	0.294 (0.456)
Tallest tertile	0.329 (0.47)	0.326 (0.469)	0.355 (0.479)	0.391 (0.488)	0.439 (0.496)
Body mass index	21.91 (2.85)	22.09 (2.81)	22.63 (3.09)	22.94 (3.23)	29.21 (116.84)
Underweight (<18.5)	0.086 (0.28)	0.074 (0.262)	0.068 (0.251)	0.063 (0.242)	0.055 (0.228)
Normal (18.5-24)	0.782 (0.413)	0.78 (0.415)	0.724 (0.447)	0.681 (0.466)	0.656 (0.475)
Overweight (25-29)	0.124 (0.329)	0.138 (0.346)	0.191 (0.393)	0.233 (0.423)	0.235 (0.424)
Obese (30+)	0.009 (0.092)	0.008 (0.087)	0.018 (0.132)	0.023 (0.15)	0.054 (0.225)
Hypertension					
Undiagnosed	0.014 (0.116)	0.008 (0.09)	0.024 (0.152)	0.018 (0.134)	0.026 (0.161)
Diagnosed, no drugs	0.014 (0.116)	0.014 (0.116)	0.013 (0.112)	0.015 (0.12)	0.016 (0.124)
Diagnosed, drugs	0.014 (0.118)	0.022 (0.146)	0.019 (0.138)	0.027 (0.161)	0.041 (0.198)
Co-morbid condition	0.016 (0.124)	0.002 (0.042)	0.056 (0.23)	0.083 (0.276)	0.066 (0.249)
Disability	0.004 (0.063)	0.004 (0.064)	0.002 (0.041)	0.001 (0.035)	0.001 (0.027)
Health insurance	0.598 (0.49)	0.556 (0.497)	0.441 (0.497)	0.443 (0.497)	0.46 (0.499)
Age	37.38 (12.08)	38.35 (11.95)	38.84 (11.51)	40.47 (11.17)	41.49 (10.92)
18-24	0.149 (0.356)	0.142 (0.349)	0.122 (0.327)	0.089 (0.285)	0.066 (0.248)
25-29	0.183 (0.387)	0.133 (0.339)	0.125 (0.331)	0.11 (0.313)	0.109 (0.311)
30-34	0.134 (0.34)	0.141 (0.349)	0.164 (0.37)	0.122 (0.327)	0.121 (0.326)
35-39	0.17 (0.376)	0.177 (0.382)	0.137 (0.344)	0.17 (0.375)	0.146 (0.353)
40-49	0.206 (0.405)	0.239 (0.427)	0.298 (0.457)	0.317 (0.466)	0.323 (0.468)
50-59	0.111 (0.314)	0.117 (0.321)	0.107 (0.31)	0.152 (0.359)	0.202 (0.402)
60+	0.047 (0.211)	0.051 (0.221)	0.047 (0.213)	0.04 (0.196)	0.034 (0.18)
Education					
No schooling	0.212 (0.409)	0.188 (0.391)	0.161 (0.368)	0.129 (0.335)	0.081 (0.273)
Primary school	0.15 (0.357)	0.156 (0.363)	0.159 (0.366)	0.136 (0.343)	0.119 (0.324)
Low-middle	0.328 (0.47)	0.335 (0.472)	0.327 (0.469)	0.303 (0.46)	0.31 (0.462)
Upper-middle	0.168 (0.374)	0.19 (0.393)	0.196 (0.397)	0.196 (0.397)	0.194 (0.396)
Technical	0.064 (0.245)	0.067 (0.249)	0.076 (0.265)	0.102 (0.302)	0.136 (0.343)
Some college	0.076 (0.266)	0.065 (0.246)	0.081 (0.273)	0.135 (0.342)	0.16 (0.367)
Household size	3.313 (1.402)	4.167 (1.341)	4.029 (1.32)	3.793 (1.243)	3.566 (1.213)
Male	0.497 (0.5)	0.502 (0.5)	0.52 (0.5)	0.52 (0.5)	0.546 (0.498)
Married	0.817 (0.386)	0.815 (0.388)	0.832 (0.374)	0.833 (0.373)	0.847 (0.36)
No. bicycles	1.921 (1.353)	1.886 (1.316)	1.577 (1.272)	1.424 (1.166)	1.014 (1.069)
Has car	0.157 (0.364)	0.121 (0.327)	0.058 (0.235)	0.026 (0.158)	0.028 (0.165)
Per cap household income	2143.25 (1104.87)	2015.08 (1232.37)	2140.14 (1307.20)	2005.41 (1350.81)	3942.96 (3647.62)

Source: China Health and Nutrition Survey, UNC Carolina Population Center

Table 3. Socio-demographic determinants of labor supply to different sectors in rural communities, 1993-2004

	Private sector worker			Self-employed individual			Self-employed owner		
	Participation	Entry	Exit	Participation	Entry	Exit	Participation	Entry	Exit
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Age									
25-29	0.031	0.033	-0.019	0.024	0.013	-0.044	0.006	0.002	-0.139
	(0.011)***	(0.025)	(0.008)**	(0.012)**	(0.024)	(0.015)***	(0.005)	(0.005)	(0.181)
30-34	0.012	0.051	-0.016	0.019	0.003	-0.050	0.011	0.003	-0.241
	(0.011)	(0.029)*	(0.009)*	(0.013)	(0.026)	(0.015)***	(0.005)**	(0.006)	(0.183)
35-39	0.024	0.067	-0.034	0.047	0.037	-0.071	0.010	0.003	-0.143
	(0.013)*	(0.030)**	(0.009)***	(0.014)***	(0.025)	(0.015)***	(0.005)*	(0.006)	(0.181)
40-49	0.005	0.013	-0.025	0.046	-0.002	-0.078	0.006	0.001	-0.185
	(0.011)	(0.028)	(0.008)***	(0.013)***	(0.024)	(0.016)***	(0.005)	(0.006)	(0.192)
50-59	-0.005	-0.014	-0.023	0.049	0.014	-0.091	-0.004	-0.003	-0.121
	(0.012)	(0.037)	(0.008)***	(0.014)***	(0.031)	(0.016)***	(0.004)	(0.005)	(0.160)
60+	0.023	-0.062	-0.023	0.091	0.025	-0.112	-0.004	-0.004	-0.282
	(0.013)*	(0.056)	(0.008)***	(0.018)***	(0.054)	(0.018)***	(0.006)	(0.006)	(0.213)
Education									
Primary	-0.034	-0.022	0.009	-0.024	-0.068	0.008	-0.004	-0.000	-0.055
	(0.007)***	(0.032)	(0.004)**	(0.008)***	(0.032)**	(0.006)	(0.003)	(0.003)	(0.105)
Low-middle	-0.097	-0.046	0.020	-0.099	-0.118	0.023	0.002	0.006	-0.212
	(0.011)***	(0.034)	(0.005)***	(0.011)***	(0.032)***	(0.008)***	(0.004)	(0.003)*	(0.115)*
Upper-middle	-0.183	-0.106	0.048	-0.183	-0.149	0.064	0.004	0.004	-0.285
	(0.019)***	(0.036)***	(0.011)***	(0.018)***	(0.035)***	(0.014)***	(0.006)	(0.005)	(0.117)**
Technical	-0.410	-0.157	0.108	-0.371	-0.209	0.179	-0.006	-0.005	0.231
	(0.042)***	(0.043)***	(0.044)**	(0.039)***	(0.041)***	(0.077)**	(0.010)	(0.009)	(0.210)
Some college	-0.411	-0.160	0.055	-0.319	-0.175	0.152	-0.018	-0.010	-0.406
	(0.049)***	(0.045)***	(0.107)	(0.041)***	(0.038)***	(0.115)	(0.019)	(0.010)	(0.377)
Household size	0.002	-0.002	-0.002	0.003	-0.000	-0.004	0.001	-0.001	0.004
	(0.002)	(0.007)	(0.001)*	(0.002)	(0.005)	(0.002)*	(0.002)	(0.001)	(0.027)
Male	-0.032	-0.007	0.014	-0.054	-0.010	0.049	0.007	0.004	0.028
	(0.006)***	(0.015)	(0.003)***	(0.007)***	(0.009)	(0.006)***	(0.002)***	(0.002)**	(0.048)
Married	0.009	0.005	0.001	0.014	0.041	-0.013	0.008	0.004	0.314
	(0.008)	(0.022)	(0.004)	(0.008)*	(0.023)*	(0.008)	(0.003)***	(0.004)	(0.125)**
No. bikes	-0.028	-0.009	0.004	-0.027	-0.010	0.008	-0.000	0.001	0.041
	(0.004)***	(0.007)	(0.002)**	(0.005)***	(0.006)	(0.003)**	(0.002)	(0.002)	(0.030)
Has car	-0.028	-0.028	-0.011	-0.039	-0.039	0.015	0.013	-0.005	-0.152
	(0.016)*	(0.021)	(0.010)	(0.016)**	(0.019)**	(0.018)	(0.011)	(0.007)	(0.141)
Ln(per cap income)		-0.042	-0.004		0.005	-0.006		0.002	0.044
		(0.017)**	(0.002)**		(0.013)	(0.004)*		(0.002)	(0.041)
1993	-0.008	0.088	-0.020	-0.008	0.029	0.006	0.007	0.002	0.041
	(0.013)	(0.022)***	(0.011)*	(0.009)	(0.021)	(0.010)	(0.004)*	(0.004)	(0.148)
1997	0.040	0.133	-0.030	-0.000	0.079	0.033	0.012	0.006	-0.012
	(0.012)***	(0.030)***	(0.014)**	(0.013)	(0.029)***	(0.012)***	(0.005)**	(0.005)	(0.138)
2000	0.077	0.084	-0.038	0.011	-0.019	0.012	0.022	0.001	-0.185
	(0.014)***	(0.032)***	(0.012)***	(0.015)	(0.023)	(0.011)	(0.005)***	(0.004)	(0.123)
2004	0.087	0.079	-0.036	-0.044	-0.062	0.018	0.029	0.001	-0.135
	(0.015)***	(0.032)**	(0.014)**	(0.016)***	(0.026)**	(0.012)	(0.006)***	(0.004)	(0.131)
Constant	0.866	0.172	0.059	0.822	0.261	0.111	-0.008	0.007	0.574
	(0.015)***	(0.053)***	(0.014)***	(0.018)***	(0.042)***	(0.015)***	(0.007)	(0.006)	(0.175)***
Observations	19838	3411	13993	20388	4469	13461	20388	17547	383
R-squared	0.53	0.27	0.08	0.50	0.26	0.10	0.04	0.03	0.52

All regressions are estimated with a linear probability model and include community-level fixed effects.

Robust standard errors clustered at the community level are in parentheses

** significant at 10%; ** significant at 5%; *** significant at 1%*

Source: China Health and Nutrition Survey, UNC Carolina Population Center

Table 3 continued. Socio-demographic determinants of labor supply to different sectors in rural communities, 1993-2004

	Household has business			Works in household business		
	Participation	Entry	Exit	Participation	Entry	Exit
	(10)	(11)	(12)	(13)	(14)	(15)
Age						
25-29	0.009	-0.001	0.037	0.013	0.003	-0.015
	(0.017)	(0.015)	(0.029)	(0.012)	(0.010)	(0.052)
30-34	0.017	0.008	-0.002	0.026	0.015	-0.069
	(0.016)	(0.014)	(0.038)	(0.012)**	(0.011)	(0.053)
35-39	0.012	0.014	-0.034	0.031	0.012	-0.067
	(0.017)	(0.016)	(0.035)	(0.012)**	(0.010)	(0.052)
40-49	-0.008	-0.005	-0.041	0.013	-0.006	-0.056
	(0.015)	(0.014)	(0.033)	(0.012)	(0.010)	(0.049)
50-59	-0.024	-0.038	0.012	-0.028	-0.036	-0.004
	(0.016)	(0.014)***	(0.032)	(0.014)**	(0.010)***	(0.052)
60+	-0.026	-0.049	-0.009	-0.034	-0.043	0.019
	(0.021)	(0.017)***	(0.045)	(0.017)**	(0.012)***	(0.075)
Education						
Primary	0.003	0.015	-0.009	0.005	0.008	0.006
	(0.010)	(0.010)	(0.022)	(0.008)	(0.006)	(0.043)
Low-middle	0.024	0.019	-0.069	0.031	0.028	-0.033
	(0.013)*	(0.011)*	(0.024)***	(0.010)***	(0.008)***	(0.037)
Upper-middle	0.017	-0.006	-0.083	0.021	0.006	-0.034
	(0.018)	(0.015)	(0.033)**	(0.017)	(0.010)	(0.043)
Technical	-0.055	-0.041	-0.041	-0.086	-0.047	-0.050
	(0.034)	(0.028)	(0.066)	(0.031)***	(0.017)***	(0.121)
Some college	-0.057	-0.077	-0.201	-0.116	-0.060	-0.053
	(0.042)	(0.027)***	(0.076)***	(0.034)***	(0.019)***	(0.135)
Household size	0.022	0.012	-0.019	-0.001	0.001	-0.012
	(0.004)***	(0.004)***	(0.009)**	(0.003)	(0.002)	(0.009)
Male	0.006	0.009	0.018	0.070	0.046	0.005
	(0.005)	(0.005)*	(0.010)*	(0.009)***	(0.006)***	(0.026)
Married	0.018	0.016	-0.027	0.026	0.022	-0.093
	(0.012)	(0.012)	(0.025)	(0.008)***	(0.008)***	(0.040)**
No. bikes	0.004	-0.003	0.000	-0.005	-0.003	-0.000
	(0.006)	(0.005)	(0.012)	(0.004)	(0.003)	(0.010)
Has car	-0.061	0.034	0.084	-0.021	0.012	0.088
	(0.031)*	(0.026)	(0.062)	(0.019)	(0.015)	(0.067)
Ln(per cap income)		-0.000	0.009		-0.002	-0.010
		(0.007)	(0.017)		(0.004)	(0.019)
1993	-0.023	0.011	-0.014	0.007	0.019	-0.030
	(0.017)	(0.017)	(0.035)	(0.008)	(0.008)**	(0.035)
1997	0.033	0.011	-0.024	0.051	0.018	-0.022
	(0.019)*	(0.017)	(0.039)	(0.011)***	(0.008)**	(0.045)
2000	0.043	0.033	0.064	0.061	0.017	0.058
	(0.020)**	(0.019)*	(0.046)	(0.013)***	(0.009)*	(0.041)
2004	0.060	-0.003	-0.039	0.076	0.015	-0.015
	(0.021)***	(0.017)	(0.048)	(0.013)***	(0.010)	(0.051)
Constant	0.118	0.078	0.598	0.041	0.018	0.678
	(0.025)***	(0.024)***	(0.051)***	(0.017)**	(0.012)	(0.055)***
Observations	20895	13806	4596	20895	15885	2517
R-squared	0.16	0.09	0.16	0.13	0.06	0.16

All regressions are estimated with a linear probability model and include community-level fixed effects.
Robust standard errors clustered at the community level are in parentheses
** significant at 10%; ** significant at 5%; *** significant at 1%*
Source: China Health and Nutrition Survey, UNC Carolina Population Center

Table 4. Socio-demographic determinants of labor supply to different sectors in urban communities, 1993-2004

	Private sector worker			Self-employed individual			Self-employed owner		
	Participation	Entry	Exit	Participation	Entry	Exit	Participation	Entry	Exit
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Age									
25-29	-0.006	-0.037	-0.029	0.028	-0.014	0.002	0.003	0.000	-0.366
	(0.017)	(0.026)	(0.025)	(0.016)*	(0.015)	(0.028)	(0.006)	(0.007)	(0.378)
30-34	-0.008	-0.053	-0.062	0.027	-0.032	-0.041	0.010	0.004	-0.335
	(0.022)	(0.026)**	(0.031)**	(0.021)	(0.021)	(0.038)	(0.007)	(0.007)	(0.344)
35-39	-0.017	-0.064	-0.057	0.030	-0.034	-0.090	0.015	0.000	-0.248
	(0.020)	(0.030)**	(0.033)*	(0.019)	(0.021)*	(0.037)**	(0.007)**	(0.007)	(0.322)
40-49	-0.053	-0.091	-0.039	0.034	-0.048	-0.121	0.003	-0.000	-0.476
	(0.017)***	(0.030)***	(0.030)	(0.017)*	(0.021)**	(0.033)***	(0.006)	(0.007)	(0.364)
50-59	-0.050	-0.090	-0.052	0.045	-0.048	-0.132	-0.008	-0.010	-0.249
	(0.021)**	(0.034)***	(0.035)	(0.022)**	(0.023)**	(0.040)***	(0.007)	(0.007)	(0.368)
60+	0.029	-0.063	-0.069	0.102	-0.025	-0.156	-0.003	-0.011	-0.795
	(0.027)	(0.045)	(0.038)*	(0.032)***	(0.030)	(0.043)***	(0.008)	(0.008)	(0.565)
Education									
Primary	-0.096	-0.012	0.010	-0.077	0.004	0.005	-0.002	-0.001	0.114
	(0.024)***	(0.025)	(0.013)	(0.026)***	(0.019)	(0.018)	(0.007)	(0.006)	(0.186)
Low-middle	-0.147	-0.015	0.031	-0.143	-0.038	0.027	0.002	0.007	-0.078
	(0.023)***	(0.023)	(0.018)*	(0.023)***	(0.021)*	(0.016)*	(0.007)	(0.006)	(0.212)
Upper-middle	-0.192	-0.028	0.049	-0.181	-0.055	0.045	-0.001	-0.000	-0.120
	(0.031)***	(0.023)	(0.021)**	(0.029)***	(0.023)**	(0.021)**	(0.009)	(0.006)	(0.298)
Technical	-0.263	-0.046	0.183	-0.232	-0.069	0.454	-0.010	-0.002	-0.075
	(0.032)***	(0.028)	(0.063)***	(0.030)***	(0.023)***	(0.112)***	(0.011)	(0.008)	(0.333)
Some college	-0.254	-0.066	0.043	-0.209	-0.064	-0.140	-0.020	-0.011	0.446
	(0.036)***	(0.026)**	(0.065)	(0.029)***	(0.022)***	(0.073)*	(0.011)*	(0.008)	(0.344)
Household size	0.012	0.003	-0.003	0.005	0.006	-0.006	0.006	-0.000	-0.050
	(0.005)***	(0.005)	(0.003)	(0.004)	(0.004)	(0.005)	(0.002)**	(0.002)	(0.042)
Male	-0.033	0.004	0.016	-0.041	0.004	0.044	0.008	0.005	0.137
	(0.009)***	(0.007)	(0.009)*	(0.011)***	(0.006)	(0.014)***	(0.004)**	(0.003)*	(0.073)*
Married	0.008	0.015	0.019	0.007	0.033	0.011	0.006	0.003	0.330
	(0.017)	(0.019)	(0.023)	(0.014)	(0.012)***	(0.019)	(0.005)	(0.005)	(0.248)
No. bikes	-0.027	-0.005	0.014	-0.018	-0.004	0.002	-0.005	-0.003	0.130
	(0.008)***	(0.006)	(0.005)**	(0.005)***	(0.003)	(0.006)	(0.002)*	(0.002)**	(0.075)*
Has car	-0.038	0.001	0.077	-0.035	-0.004	-0.012	-0.010	-0.000	0.561
	(0.027)	(0.016)	(0.036)**	(0.024)	(0.012)	(0.051)	(0.008)	(0.007)	(0.407)
Ln(per cap income)		-0.014	-0.010		0.016	-0.011		0.003	-0.017
		(0.015)	(0.004)**		(0.008)**	(0.010)		(0.003)	(0.120)
1993	-0.022	0.031	-0.023	-0.034	0.006	0.012	-0.008	0.008	-0.071
	(0.015)	(0.012)**	(0.020)	(0.012)***	(0.011)	(0.023)	(0.005)*	(0.004)*	(0.211)
1997	0.026	0.042	-0.027	-0.022	0.014	0.015	0.003	0.008	-0.060
	(0.018)	(0.014)***	(0.018)	(0.019)	(0.012)	(0.023)	(0.007)	(0.005)*	(0.224)
2000	0.058	0.108	-0.043	-0.037	-0.013	0.019	0.011	0.009	-0.250
	(0.021)***	(0.024)***	(0.024)*	(0.020)*	(0.012)	(0.026)	(0.007)*	(0.005)*	(0.188)
2004	0.167	0.065	-0.054	-0.082	-0.004	0.110	0.028	0.022	-0.104
	(0.031)***	(0.023)***	(0.020)***	(0.024)***	(0.016)	(0.043)**	(0.009)***	(0.006)***	(0.183)
Constant	0.554	0.119	0.092	0.493	0.080	0.155	-0.008	0.007	0.598
	(0.031)***	(0.034)***	(0.034)***	(0.030)***	(0.025)***	(0.038)***	(0.013)	(0.008)	(0.518)
Observations	8316	3982	2861	8572	4612	2458	8572	6928	142
R-squared	0.56	0.13	0.14	0.62	0.20	0.18	0.04	0.02	0.61

All regressions are estimated with a linear probability model and include community-level fixed effects.

Robust standard errors clustered at the community level are in parentheses

** significant at 10%; ** significant at 5%; *** significant at 1%*

Source: China Health and Nutrition Survey, UNC Carolina Population Center

Table 4 continued. Socio-demographic determinants of labor supply to different sectors in urban communities, 1993-2004

	Household has business			Works in household business		
	Participation	Entry	Exit	Participation	Entry	Exit
	(10)	(11)	(12)	(13)	(14)	(15)
Age						
25-29	-0.000	-0.007	-0.009	0.010	-0.013	-0.017
	(0.019)	(0.027)	(0.065)	(0.014)	(0.013)	(0.112)
30-34	0.011	-0.008	-0.054	0.028	-0.016	-0.121
	(0.021)	(0.029)	(0.087)	(0.018)	(0.012)	(0.114)
35-39	0.006	-0.002	-0.050	0.022	-0.012	-0.103
	(0.021)	(0.027)	(0.073)	(0.016)	(0.012)	(0.111)
40-49	-0.001	-0.007	-0.034	0.010	-0.019	-0.103
	(0.021)	(0.026)	(0.064)	(0.018)	(0.013)	(0.114)
50-59	-0.021	-0.044	-0.067	-0.011	-0.049	-0.192
	(0.021)	(0.021)**	(0.067)	(0.017)	(0.015)***	(0.120)
60+	0.038	-0.058	-0.185	0.016	-0.062	-0.072
	(0.029)	(0.040)	(0.090)**	(0.031)	(0.025)**	(0.173)
Education						
Primary	0.021	-0.007	0.029	0.041	0.013	0.063
	(0.023)	(0.020)	(0.050)	(0.016)**	(0.012)	(0.079)
Low-middle	0.023	-0.005	0.008	0.031	0.017	0.017
	(0.022)	(0.018)	(0.044)	(0.022)	(0.011)	(0.062)
Upper-middle	-0.019	-0.014	0.087	-0.001	0.015	0.112
	(0.030)	(0.019)	(0.076)	(0.027)	(0.015)	(0.099)
Technical	-0.041	-0.013	-0.125	-0.031	0.014	0.137
	(0.038)	(0.021)	(0.104)	(0.034)	(0.015)	(0.177)
Some college	-0.071	-0.026	0.088	-0.046	-0.003	-1.130
	(0.041)*	(0.020)	(0.178)	(0.034)	(0.014)	(0.070)***
Household size	0.010	0.001	0.006	0.003	-0.002	0.018
	(0.008)	(0.005)	(0.019)	(0.005)	(0.003)	(0.023)
Male	-0.003	0.013	-0.005	0.019	0.028	0.030
	(0.005)	(0.005)***	(0.022)	(0.009)**	(0.007)***	(0.042)
Married	-0.002	0.016	0.020	0.001	0.027	-0.022
	(0.015)	(0.013)	(0.050)	(0.012)	(0.010)***	(0.073)
No. bikes	-0.012	0.005	0.004	-0.013	0.000	-0.000
	(0.009)	(0.009)	(0.025)	(0.005)**	(0.003)	(0.024)
Has car	-0.020	0.017	0.051	-0.024	-0.005	-0.074
	(0.029)	(0.016)	(0.085)	(0.024)	(0.010)	(0.110)
Ln(per cap income)		-0.012	0.049		-0.003	-0.002
		(0.012)	(0.034)		(0.006)	(0.039)
1993	-0.016	0.063	-0.027	-0.001	0.034	0.031
	(0.013)	(0.025)**	(0.067)	(0.008)	(0.012)***	(0.064)
1997	0.053	-0.004	0.129	0.038	0.006	0.147
	(0.024)**	(0.017)	(0.079)	(0.014)***	(0.011)	(0.078)*
2000	-0.003	0.029	0.138	0.008	0.022	0.188
	(0.021)	(0.018)	(0.079)*	(0.015)	(0.010)**	(0.071)**
2004	0.025	0.001	-0.025	0.026	0.020	0.074
	(0.025)	(0.025)	(0.094)	(0.016)	(0.015)	(0.087)
Constant	0.121	0.049	0.428	0.053	0.010	0.400
	(0.039)***	(0.030)	(0.105)***	(0.028)*	(0.017)	(0.101)***
Observations	8682	6128	1043	8682	6571	600
R-squared	0.15	0.12	0.21	0.12	0.07	0.24

All regressions are estimated with a linear probability model and include community-level fixed effects.
Robust standard errors clustered at the community level are in parentheses
** significant at 10%; ** significant at 5%; *** significant at 1%*
Source: China Health and Nutrition Survey, UNC Carolina Population Center

Table 5. Health determinants of labor supply to the private sector, 1993-2004

	Rural				Urban			
	(1) Participation	(2) Participation	(3) Entry	(5) Exit	(6) Participation	(7) Participation	(8) Entry	(9) Exit
General health status								
Poor	0.019	0.010	-0.022	-0.003	0.041	0.000	0.020	-0.036
	(0.013)	(0.015)	(0.054)	(0.007)	(0.025)	(0.018)	(0.032)	(0.025)
Fair	0.004	0.008	0.009	-0.000	0.019	0.021	-0.007	0.011
	(0.009)	(0.009)	(0.020)	(0.005)	(0.014)	(0.016)	(0.018)	(0.025)
Good	0.004	0.002	0.001	0.000	0.012	0.011	-0.019	-0.012
	(0.009)	(0.008)	(0.017)	(0.006)	(0.013)	(0.015)	(0.015)	(0.020)
Height (cm)								
Shortest tertile	0.012		0.046	-0.006	0.006		-0.003	0.020
	(0.006)**		(0.029)	(0.003)**	(0.012)		(0.018)	(0.016)
Tallest tertile	-0.010		-0.006	0.001	-0.009		-0.003	0.010
	(0.007)		(0.016)	(0.005)	(0.015)		(0.013)	(0.014)
Body mass index								
Underweight	0.000	-0.001	0.022	-0.000	0.024	-0.000	0.013	0.013
	(0.008)	(0.009)	(0.028)	(0.004)	(0.011)**	(0.024)	(0.020)	(0.014)
Overweight	-0.013	0.004	-0.005	0.009	0.001	0.011	-0.010	0.026
	(0.008)	(0.009)	(0.014)	(0.005)*	(0.010)	(0.016)	(0.012)	(0.015)*
Obese	0.022	0.053	-0.036	0.002	-0.009	0.006	-0.043	0.021
	(0.018)	(0.030)*	(0.028)	(0.010)	(0.031)	(0.041)	(0.029)	(0.034)
Hypertension								
Undiagnosed	-0.031	-0.037	-0.018	-0.010	0.014	0.010	0.016	-0.026
	(0.018)*	(0.013)***	(0.040)	(0.007)	(0.029)	(0.034)	(0.048)	(0.032)
Diagnosed, no drugs	0.030	0.004	-0.009	0.008	0.009	0.019	-0.008	-0.064
	(0.017)*	(0.017)	(0.047)	(0.011)	(0.030)	(0.028)	(0.035)	(0.040)
Diagnosed, drugs	-0.024	-0.051	0.012	0.013	0.015	-0.008	-0.011	0.052
	(0.020)	(0.026)*	(0.037)	(0.014)	(0.023)	(0.028)	(0.020)	(0.044)
Co-morbid condition	-0.009	-0.029	-0.023	-0.013	0.011	0.036	-0.013	-0.002
	(0.015)	(0.013)**	(0.048)	(0.004)***	(0.016)	(0.021)*	(0.020)	(0.032)
Disability	0.072	0.034	0.051	0.006	0.068	0.169	-0.069	0.123
	(0.024)***	(0.032)	(0.147)	(0.020)	(0.068)	(0.082)**	(0.031)**	(0.159)
Health insurance	-0.287	-0.108	-0.057	0.003	-0.332	-0.129	-0.078	0.048
	(0.026)***	(0.017)***	(0.023)**	(0.010)	(0.033)***	(0.024)***	(0.018)***	(0.024)*
Observations	19838	19838	3411	13993	8316	8316	3982	2861
R-squared	0.57	0.86	0.28	0.08	0.62	0.88	0.14	0.15
Community FE	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Individual FE	No	Yes	No	No	No	Yes	No	No

All regressions are estimated with a linear probability model, controlling for age, educational attainment, marital status, sex, household size, the number of bicycles owned, owning a car, and survey year. Entry and exit regressions additionally control for logged per capita household income.

Robust standard errors clustered at the community level are in parentheses

** significant at 10%; ** significant at 5%; *** significant at 1%*

Source: China Health and Nutrition Survey, UNC Carolina Population Center

Table 6. Health determinants of labor supply to individual self-employment, 1993-2004

	Rural				Urban			
	(1) Participation	(2) Participation	(3) Entry	(5) Exit	(6) Participation	(7) Participation	(8) Entry	(9) Exit
General health status								
Poor	0.054	0.048	0.023	-0.026	0.051	0.004	0.017	-0.036
	(0.015)***	(0.016)***	(0.044)	(0.014)*	(0.022)**	(0.020)	(0.024)	(0.038)
Fair	0.036	0.026	-0.001	-0.015	0.022	0.017	-0.004	-0.001
	(0.011)***	(0.011)**	(0.018)	(0.010)	(0.014)	(0.012)	(0.013)	(0.029)
Good	0.020	0.014	-0.000	-0.010	0.019	0.014	-0.014	-0.012
	(0.010)**	(0.010)	(0.014)	(0.008)	(0.011)*	(0.012)	(0.010)	(0.032)
Height (cm)								
Shortest tertile	0.009		0.031	-0.003	0.020		0.012	0.021
	(0.007)		(0.025)	(0.006)	(0.015)		(0.013)	(0.017)
Tallest tertile	-0.014		0.010	0.006	0.001		-0.008	0.002
	(0.008)*		(0.016)	(0.007)	(0.017)		(0.007)	(0.019)
Body mass index								
Underweight	-0.001	-0.001	0.032	-0.004	0.014	-0.029	0.011	0.022
	(0.009)	(0.011)	(0.027)	(0.008)	(0.016)	(0.020)	(0.011)	(0.018)
Overweight	-0.014	0.002	-0.018	0.014	0.008	-0.006	0.007	-0.001
	(0.010)	(0.012)	(0.013)	(0.008)*	(0.010)	(0.018)	(0.007)	(0.019)
Obese	0.008	0.011	-0.011	-0.022	-0.003	-0.047	-0.018	0.064
	(0.017)	(0.025)	(0.030)	(0.021)	(0.029)	(0.037)	(0.017)	(0.067)
Hypertension								
Undiagnosed	-0.006	-0.014	-0.030	-0.015	-0.020	-0.025	0.005	-0.011
	(0.018)	(0.016)	(0.038)	(0.013)	(0.029)	(0.031)	(0.022)	(0.044)
Diagnosed, no drugs	0.023	-0.009	0.030	0.014	-0.024	0.002	0.021	-0.023
	(0.018)	(0.020)	(0.041)	(0.020)	(0.026)	(0.030)	(0.026)	(0.063)
Diagnosed, drugs	-0.017	-0.027	0.050	-0.002	0.001	0.012	-0.003	-0.008
	(0.023)	(0.026)	(0.039)	(0.021)	(0.024)	(0.032)	(0.017)	(0.060)
Co-morbid condition	-0.010	-0.041	-0.055	-0.006	0.003	0.018	0.005	0.012
	(0.017)	(0.016)***	(0.042)	(0.014)	(0.014)	(0.017)	(0.012)	(0.038)
Disability	0.018	0.002	0.264	0.020	0.078	0.081	-0.044	0.089
	(0.025)	(0.040)	(0.113)**	(0.041)	(0.077)	(0.096)	(0.025)*	(0.167)
Health insurance	-0.206	-0.075	-0.062	0.016	-0.214	-0.077	-0.049	0.043
	(0.023)***	(0.015)***	(0.020)***	(0.018)	(0.032)***	(0.023)***	(0.011)***	(0.026)*
Observations	20388	20388	4469	13461	8572	8572	4612	2458
R-squared	0.52	0.83	0.26	0.10	0.65	0.89	0.21	0.18
Community FE	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Individual FE	No	Yes	No	No	No	Yes	No	No

All regressions are estimated with a linear probability model, controlling for age, educational attainment, marital status, sex, household size, the number of bicycles owned, owning a car, and survey year. Entry and exit regressions additionally control for logged per capita household income.

Robust standard errors clustered at the community level are in parentheses

** significant at 10%; ** significant at 5%; *** significant at 1%*

Source: China Health and Nutrition Survey, UNC Carolina Population Center

Table 7. Health determinants of labor supply to self-employed ownership, 1993-2004

	Rural				Urban			
	(1)	(2)	(3)	(5)	(6)	(7)	(8)	(9)
	Participation	Participation	Entry	Exit	Participation	Participation	Entry	Exit
General health status								
Poor	-0.018	-0.016	0.004	-0.344	-0.007	-0.002	0.015	-0.342
	(0.006)***	(0.007)**	(0.006)	(0.160)**	(0.010)	(0.014)	(0.012)	(0.583)
Fair	-0.015	-0.009	0.003	0.154	-0.001	0.006	0.007	-0.086
	(0.005)***	(0.006)	(0.004)	(0.144)	(0.007)	(0.008)	(0.007)	(0.161)
Good	-0.006	-0.004	0.003	0.019	-0.008	0.004	0.001	0.023
	(0.005)	(0.005)	(0.003)	(0.084)	(0.006)	(0.007)	(0.006)	(0.141)
Height (cm)								
Shortest tertile	-0.005		-0.002	0.025	-0.002		-0.004	0.028
	(0.003)*		(0.003)	(0.113)	(0.005)		(0.005)	(0.206)
Tallest tertile	0.007		0.003	-0.028	-0.004		-0.001	0.068
	(0.003)*		(0.003)	(0.074)	(0.005)		(0.004)	(0.174)
Body mass index								
Underweight	0.001	0.006	-0.003	0.158	0.007	0.007	0.012	0.484
	(0.004)	(0.005)	(0.003)	(0.119)	(0.008)	(0.011)	(0.007)	(0.277)*
Overweight	0.009	0.009	-0.001	0.087	0.000	0.002	-0.007	0.019
	(0.004)**	(0.006)	(0.003)	(0.076)	(0.004)	(0.008)	(0.004)*	(0.148)
Obese	0.033	0.027	-0.003	-0.037	0.002	0.016	0.007	0.248
	(0.013)**	(0.015)*	(0.007)	(0.123)	(0.016)	(0.026)	(0.015)	(0.194)
Hypertension								
Undiagnosed	-0.005	0.001	0.004	0.115	0.020	0.021	0.017	0.263
	(0.008)	(0.009)	(0.008)	(0.251)	(0.014)	(0.016)	(0.021)	(0.268)
Diagnosed, no drugs	0.003	0.005	-0.001	-0.159	-0.008	-0.021	-0.015	-0.527
	(0.010)	(0.011)	(0.008)	(0.273)	(0.009)	(0.019)	(0.003)***	(0.525)
Diagnosed, drugs	0.006	-0.021	0.007	0.180	0.024	-0.009	0.008	0.074
	(0.011)	(0.013)	(0.009)	(0.167)	(0.014)*	(0.022)	(0.012)	(0.165)
Co-morbid condition	0.006	0.009	-0.000	-0.195	-0.008	-0.011	-0.011	1.300
	(0.010)	(0.010)	(0.007)	(0.097)**	(0.007)	(0.007)	(0.005)**	(0.474)***
Disability	0.027	0.007	0.001	0.044	-0.013	0.019	-0.009	0.000
	(0.022)	(0.024)	(0.015)	(0.160)	(0.005)***	(0.007)***	(0.004)**	(0.000)
Health insurance	-0.030	-0.006	-0.016	0.109	-0.042	-0.023	-0.022	0.186
	(0.006)***	(0.005)	(0.005)***	(0.171)	(0.008)***	(0.006)***	(0.006)***	(0.227)
Observations	20388	20388	17547	383	8572	8572	6928	142
R-squared	0.05	0.56	0.03	0.55	0.05	0.63	0.03	0.69
Community FE	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Individual FE	No	Yes	No	No	No	Yes	No	No

All regressions are estimated with a linear probability model, controlling for age, educational attainment, marital status, sex, household size, the number of bicycles owned, owning a car, and survey year. Entry and exit regressions additionally control for logged per capita household income.

Robust standard errors clustered at the community level are in parentheses

** significant at 10%; ** significant at 5%; *** significant at 1%*

Source: China Health and Nutrition Survey, UNC Carolina Population Center

Table 8. Health determinants of household business ownership, 1993-2004

	Rural				Urban			
	(1)	(2)	(3)	(4)	(6)	(7)	(8)	(9)
	Participation	Participation	Entry	Exit	Participation	Participation	Entry	Exit
General health status								
Poor	-0.006	0.010	-0.006	0.040	0.007	-0.022	-0.006	-0.102
	(0.022)	(0.025)	(0.021)	(0.046)	(0.031)	(0.034)	(0.024)	(0.099)
Fair	-0.024	-0.004	0.015	-0.005	0.024	0.023	-0.014	0.094
	(0.013)*	(0.014)	(0.014)	(0.041)	(0.016)	(0.021)	(0.015)	(0.082)
Good	-0.011	-0.007	0.016	-0.002	0.013	0.014	-0.018	0.066
	(0.012)	(0.014)	(0.012)	(0.029)	(0.012)	(0.018)	(0.013)	(0.070)
Height (cm)								
Shortest tertile	-0.001		-0.006	-0.018	-0.001		0.010	0.027
	(0.010)		(0.010)	(0.022)	(0.015)		(0.015)	(0.043)
Tallest tertile	0.001		0.007	-0.006	-0.011		-0.019	0.057
	(0.009)		(0.008)	(0.020)	(0.012)		(0.010)*	(0.050)
Body mass index								
Underweight	-0.013	0.011	-0.009	0.016	0.009	-0.029	-0.013	0.025
	(0.012)	(0.018)	(0.011)	(0.031)	(0.018)	(0.014)**	(0.015)	(0.068)
Overweight	0.018	0.021	0.014	-0.047	-0.007	-0.002	-0.003	-0.017
	(0.010)*	(0.015)	(0.009)	(0.024)*	(0.009)	(0.017)	(0.009)	(0.057)
Obese	0.046	0.024	0.012	-0.157	0.020	-0.021	0.001	-0.051
	(0.023)**	(0.033)	(0.023)	(0.053)***	(0.029)	(0.044)	(0.020)	(0.075)
Hypertension								
Undiagnosed	0.017	0.009	0.014	0.007	0.029	0.050	-0.020	0.128
	(0.022)	(0.025)	(0.025)	(0.052)	(0.035)	(0.054)	(0.019)	(0.085)
Diagnosed, no drugs	0.031	0.022	-0.007	-0.054	-0.066	-0.011	-0.000	-0.016
	(0.024)	(0.034)	(0.022)	(0.061)	(0.024)***	(0.034)	(0.024)	(0.103)
Diagnosed, drugs	0.035	-0.028	0.015	-0.104	0.017	0.037	-0.008	-0.138
	(0.024)	(0.030)	(0.027)	(0.063)	(0.023)	(0.025)	(0.014)	(0.111)
Co-morbid condition	-0.029	-0.018	0.004	-0.018	-0.035	-0.026	0.007	0.087
	(0.017)*	(0.024)	(0.022)	(0.048)	(0.014)**	(0.021)	(0.015)	(0.071)
Disability	0.064	0.009	-0.056	0.003	0.006	0.064	-0.082	0.098
	(0.045)	(0.056)	(0.044)	(0.091)	(0.076)	(0.111)	(0.020)***	(0.315)
Health insurance	-0.084	-0.000	-0.003	0.009	-0.110	-0.031	-0.028	0.094
	(0.022)***	(0.022)	(0.015)	(0.040)	(0.024)***	(0.014)**	(0.011)**	(0.064)
Observations	20895	20895	13806	4596	8682	8682	6128	1043
R-squared	0.17	0.62	0.09	0.16	0.16	0.68	0.12	0.23
Community FE	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Individual FE	No	Yes	No	No	No	Yes	No	No

All regressions are estimated with a linear probability model, controlling for age, educational attainment, marital status, sex, household size, the number of bicycles owned, owning a car, and survey year. Entry and exit regressions additionally control for logged per capita household income.

Robust standard errors clustered at the community level are in parentheses

** significant at 10%; ** significant at 5%; *** significant at 1%*

Source: China Health and Nutrition Survey, UNC Carolina Population Center

Table 9. Health determinants of individual labor supply to a household business, 1993-2004

	Rural				Urban			
	(1) Participation	(2) Participation	(3) Entry	(4) Exit	(6) Participation	(7) Participation	(8) Entry	(9) Exit
General health status								
Poor	-0.030	-0.003	-0.017	0.002	0.039	0.003	0.008	-0.208
	(0.016)*	(0.017)	(0.011)	(0.070)	(0.023)*	(0.027)	(0.016)	(0.107)*
Fair	-0.028	-0.010	0.009	0.013	0.011	0.002	0.000	0.018
	(0.010)***	(0.010)	(0.008)	(0.043)	(0.011)	(0.017)	(0.010)	(0.117)
Good	-0.006	-0.005	0.010	-0.023	0.009	0.002	-0.005	0.031
	(0.008)	(0.009)	(0.007)	(0.031)	(0.008)	(0.013)	(0.009)	(0.100)
Height (cm)								
Shortest tertile	-0.009		-0.010	-0.041	-0.016		-0.011	0.061
	(0.008)		(0.006)	(0.036)	(0.010)		(0.009)	(0.054)
Tallest tertile	0.009		0.006	-0.016	-0.026		-0.030	-0.017
	(0.008)		(0.007)	(0.027)	(0.010)**		(0.009)***	(0.070)
Body mass index								
Underweight	-0.012	0.006	-0.005	-0.007	0.002	-0.033	-0.016	-0.032
	(0.010)	(0.012)	(0.006)	(0.043)	(0.013)	(0.018)*	(0.009)*	(0.072)
Overweight	0.023	0.029	0.005	-0.039	-0.005	-0.007	-0.002	-0.063
	(0.008)***	(0.012)**	(0.006)	(0.031)	(0.007)	(0.011)	(0.007)	(0.069)
Obese	0.092	0.088	0.028	-0.049	0.016	-0.028	0.004	-0.089
	(0.021)***	(0.025)***	(0.020)	(0.061)	(0.024)	(0.042)	(0.017)	(0.163)
Hypertension								
Undiagnosed	0.002	0.014	-0.013	-0.103	0.037	0.040	-0.023	0.140
	(0.018)	(0.019)	(0.013)	(0.070)	(0.036)	(0.050)	(0.015)	(0.083)*
Diagnosed, no drugs	0.035	0.040	-0.025	-0.116	-0.033	-0.025	0.014	-0.203
	(0.021)	(0.025)	(0.012)**	(0.085)	(0.016)**	(0.023)	(0.022)	(0.092)**
Diagnosed, drugs	0.019	0.018	-0.003	0.078	0.038	0.016	0.002	-0.070
	(0.021)	(0.022)	(0.013)	(0.089)	(0.021)*	(0.018)	(0.011)	(0.122)
Co-morbid condition	0.011	0.011	-0.001	0.119	-0.019	-0.020	-0.015	-0.116
	(0.015)	(0.020)	(0.015)	(0.051)**	(0.012)	(0.016)	(0.008)*	(0.126)
Disability	0.089	0.008	0.010	0.023	0.002	-0.053	-0.050	-0.259
	(0.045)**	(0.052)	(0.034)	(0.119)	(0.073)	(0.052)	(0.015)***	(0.148)*
Health insurance	-0.126	-0.021	-0.018	0.018	-0.118	-0.023	-0.037	0.020
	(0.022)***	(0.013)	(0.011)	(0.043)	(0.023)***	(0.012)*	(0.008)***	(0.078)
Observations	20895	20895	15885	2517	8682	8682	6571	600
R-squared	0.14	0.64	0.06	0.16	0.14	0.70	0.07	0.26
Community FE	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Individual FE	No	Yes	No	No	No	Yes	No	No

All regressions are estimated with a linear probability model, controlling for age, educational attainment, marital status, sex, household size, the number of bicycles owned, owning a car, and survey year. Entry and exit regressions additionally control for logged per capita household income.

Robust standard errors clustered at the community level are in parentheses

** significant at 10%; ** significant at 5%; *** significant at 1%*

Source: China Health and Nutrition Survey, UNC Carolina Population Center