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**Housing Expenditure And Chinese Rural Development**  
**— Preliminary Results from a Survey in Jiangsu Province**

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**Abstract**

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The high propensity of rural households to invest in housing following economic reforms in China is a consequence of increasing rural household income, the changing environment for investment in farm and non-farm production in rural areas, and inflation experienced in China in recent years. The housing boom has important implications for rural investment and output, and for the development of rural construction and related industries.

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## Introduction

○ The pattern of consumption and investment of rural households in China has undergone significant changes with increasing income of rural households since the late 1970s. Farmers spent more of their income on better quality food and clothing, on consumer durables and on housing once subsistence needs for food and clothing were satisfied adequately. It has been argued by Chinese economists in recent years, as well as the Chinese Government, that increased expenditure on consumption and housing by households would reduce investment in both farm and non-farm production and bid up the prices of consumption goods in China's rural and urban markets (Zhao Ziyang 1986; He Daofen et al. 1987).

A detailed survey of rural household consumption, investment and borrowing was undertaken in 1987 of 56 households in two counties of Jiangsu Province. Data were collected from thirty households in Changshu County in the south of Jiangsu Province and twenty six households in Jianhu County in the north of Jiangsu Province. Changshu County has rural household incomes which are much higher than the general level for China due in part to rapidly developing off-farm enterprises providing employment for rural people. Jianhu County is still basically an agricultural county with incomes of rural households close to the national average.

Broadly, focus of the study is on the evolution of the financial system in rural China and its relationship to economic development in China following recent economic reforms. This paper concerns some results of the survey with respect to housing: first, some factual and descriptive material is presented; next, reasons for the high propensity of households to invest in housing are explored; and finally, some conclusions are drawn.

## Income of Rural Households and Housing Investment

In traditional analyses of markets for housing, there are a number of factors that are regarded as responsible for the change of household demand for housing. These factors include household income, prices and rents of

houses, and demographic and financial variables (Heung 1976). In rural China, houses are almost invariably owner-occupied and households build or renovate their houses themselves when they can afford to do so. Consequently, there is no formal market for houses in rural China. Expenditure of rural households on housing is mainly affected by changes in their real income, prices of building materials, wages paid to builders, other claims on the land space for house building, and access of households to finance.

Since the late 1970s, incomes of rural households in China have increased greatly due to the implementation of the individual responsibility system and changes in government policies on agricultural marketing and prices (Johnson 1988). With increasing rural income and changes in income distribution, rural households, and, in particular, Chinese rural households either in rich areas or who are relatively richer, appear to have allocated a higher proportion of their income to housing. This was confirmed in the survey currently under discussion. Data on net household income, consumption and investment on housing are presented in Table 1 for sample households in Changshu and Jianhu counties in 1986.

For Table 1, the average level of net household income in Changshu was almost a third higher than that of Jianhu, and average expenditure on housing for rural households in Changshu was more than three times higher than that of Jianhu. Households in Changshu spent more than a third of their net income on housing, which was about double the proportion spent in Jianhu. Linear and logarithmic regressions of the relationship between net household income and expenditure on housing were calculated for sample households in Changshu and Jianhu counties. Results of the regressions are presented in Table 2.

The results presented in Table 2 suggest that expenditure of sample households on housing was related to annual household income in both Changshu and Jianhu counties in 1986, and the relationship between household income and housing expenditure was stronger in Changshu County than in Jianhu County which has less variability in income. The apparently weak relationship between household expenditure on housing and income in these two counties for 1986 has to be interpreted with a number of qualifications.

Table 1. Household Income, Consumption And Housing In 1986 (1)

Unit: Chinese Yuan (2)

	Changshu		Jianhu	
	Mean	Stdev.	Mean	Stdev.
<b>1. INCOME ( Y )</b>				
Income Per Head	990.5	327.4	691.1	113.7
Total Income Yt	4253.9	1462	3129.4	943.6
Farm Income Y1	1889.9	1107.1	2214.2	936.1
Off-farm Income Y2	2072.8	1298.6	915.3	598.7
Y2 / Yt %	48.7	22.2	29.2	17.2
<b>2. CONSUMPTION ( C )</b>				
Total Consumption Ct	2700	1269	2068.6	797.4
Ct / Yt %	63.6	14.7	66.8	17.1
Food (3)	1655.9	1012.4	1019	335
Food / Yt %	38.3	12.3	33	5.9
Clothing	251.8	143.5	218.5	107.8
Consumer Durables	178.1	217.1	193.1	315.2
<b>3. INVESTMENT ( I )</b>				
Total Investment It	1553.9	949.1	1060.7	699.8
It / Yt %	36.4	14.7	33.2	17.4
Housing	1631.8	2605.5	488.6	705
Housing / Yt %	32	52	14.6	21.9
Production (4)	0	0	152	347.5

- (1). The relationship between household income, consumption and investment is defined as:  
 $Yt = Ct + It$   
 Household income Yt was net household income in 1986; Household investment includes the investment in housing, farm and non-farm production, and in financial assets.
- (2). In 1986, 1 Australian Dollar was approximately 2.6 Chinese Yuans
- (3). Food in Changshu County includes food served for builders in addition to their wages. Households in Changshu County also spent more cash on better quality food for ceremonies.
- (4). Both farm and non-farm production are included. It should be noted that a large amount of rural non-farm investment in Changshu County was undertaken by rural town and village enterprises rather than by rural households.

**Table 2. The Results For Regressions  
On Housing And Income**

		Changshu	Jianhu
<b>Number of Observations</b>		30	26
<b>1. Linear regression</b>			
<b>Coefficient</b>	<b>B<sub>0</sub></b>	-2409	-151.8
	<b>B<sub>1</sub></b>	0.95	0.2046
<b>T-ratio</b>	<b>B<sub>0</sub></b>	-1.88	-0.32
	<b>B<sub>1</sub></b>	3.33	1.4
<b>R-squared</b>		28.4%	7.5%
<b>2. Logarithmic regression</b>			
<b>Coefficient</b>	<b>B<sub>0</sub></b>	-53.97	-32.97
	<b>B<sub>1</sub></b>	7.041	4.527
<b>T-ratio</b>	<b>B<sub>0</sub></b>	-3.93	-2.02
	<b>B<sub>1</sub></b>	4.26	2.22
<b>R-squared</b>		39.4%	17.1%



Only cross section data are available from the survey. Because investment in housing is lumpy many years of saving or repayment of loans are required before a new house can be built by a rural household. It was found in the survey that total expenditure for building a new house was about 10 times the annual income of sample households in Changshu County, and about 4 to 5 times the annual household income in Jianhu County.

The measured annual expenditure on housing by the household was affected by the timing of household expenditure. Sample households usually had saved in the form of both financial assets and accumulation of building materials for years. The household tended to purchase more building materials for housing as the time for it to build the house drew closer. This can be related to food items in Table 1. The expenditure on housing for the household reached a maximum in the year when the household actually built its house. In this year, the household also had to pay wages to builders as well as feeding builders, relatives and friends. Expenditure on housing for the household would fall suddenly after the household had built its house. The lumpiness of investment in housing is illustrated by the frequency distribution in Figure 1.

Based on the data in Tables 1 and 2 it can be concluded that households in Changshu County spent a higher proportion of their income on housing than households in Jianhu County where household incomes were relatively low. Furthermore, the higher the level of household income, the higher the housing expenditure for rural households in Changshu County. The weaker relationship between household net income and housing expenditure in Jianhu County indicates that the majority of households in Jianhu County were living close to subsistence levels with a much smaller surplus of income in relationship to their basic needs.

Data on previous investment in housing and on plans to build houses were also collected in the survey. These data showed that the time period for replacement of houses was, on average, about 10 to 15 years in both counties since the rural economic reform. In Changshu, about one third of total expenditure on housing by rural households came from borrowing from informal financial sources. These various pieces of evidence, and direct observation,

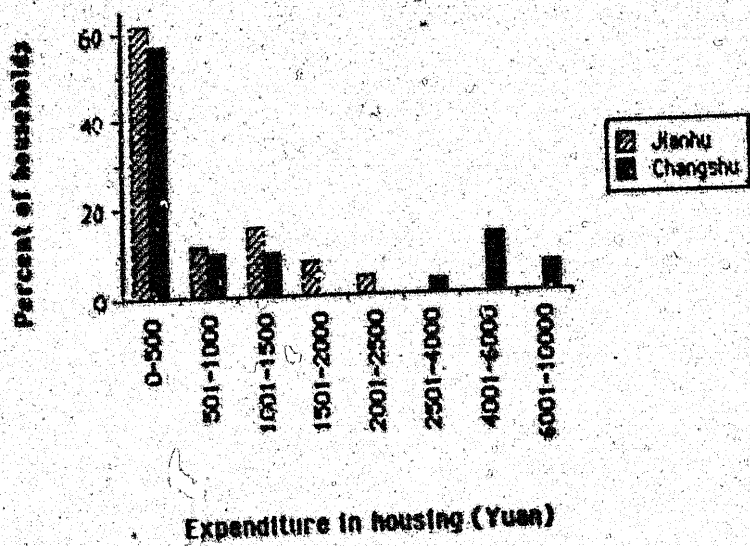


Figure 1. Distribution of housing expenditure



support the conclusion that in recent years there was a housing boom in both Changshu and Jianhu counties with the increase of household incomes.

### Some Explanations Of Expenditure On Housing By Rural Households

With the introduction of further economic reforms in urban areas and the rising rate of inflation experienced recently in China, the attention of economists has been focused on such issues as structural changes of the Chinese economy in the last decade; on monetary policies; and on issues related to the demand for consumption goods. A number of inquiries have been undertaken into the demand for food, consumer durables, and other consumption goods following the increase in household income of urban consumers. In these studies, some aspects of China's welfare system, in particular, subsidies for health and urban housing, pensions on retirement and state guaranteed employment, have been identified as contributing to the high demand for food and consumer durables in China (Zhang Xuejun et al. 1988; He Diaofen et al. 1987).

It should be noted that for the 80 per cent of China's households living in rural areas similar welfare measures do not exist. There has been very little investigation of the growth of demand in rural areas. Unlike urban households, rural households are both a consumption and production unit. With increasing rural incomes, there are many options for investment by rural households such as investing in productive assets which will increase farm returns in the future, investment in off-farm rural enterprises, deposits of savings in banks to protect against uncertainty of future income, and to provide for retirement. It appears that rural households in China have spent a significant proportion of their income on housing which, although it yields services, is an illiquid asset which cannot be sold later given that there is no market for real estate in China.

To understand this pattern of investment we need to consider further the nature of alternative opportunities for investment by rural households in China. With investment in farm production, especially crop production, comparative returns on farm production have decreased since the early 1980s.

This decline in returns is a result of increased prices of farm inputs, continued state control of the production, marketing and prices for some important agricultural products, such as grain and cotton, and the development of off-farm employment opportunities in rural areas which yield higher returns to labor (Zhu Xigang and Chapman 1988; Gau Hongbin et al. 1987). In the current survey it was found that the relatively low returns for farm production and extremely small scale of farming discouraged rural households from investing in agricultural production. Rural households frequently undertook investment projects on animal production and non-farm activities which are less affected by shortages of land. Large agricultural investment projects such as agricultural machinery, irrigation systems, and agricultural infrastructure were usually undertaken by collectives, using profits transferred from rural enterprises that were run by the collective. Nevertheless, investment in agricultural production by rural collectives was also affected by the relatively low returns from agricultural investment. Further, collectives in Jianhu County did not have profits from rural enterprises available to invest in agricultural production.

Increasing investment in animal production and off-farm activities by rural households was also affected by uncertainty of returns from these investments, as well as the opening up of markets for animal and non-farm products. It was found in the survey that investment projects with small outlays but immediate returns such as agricultural marketing and small scale chicken production were favoured by rural households even though returns on these projects were lower than other projects. Long-term investments which were perceived to have political or economic risks were commonly avoided by farmers. It has been argued that the preference of rural households in China for investment with low and stable returns is associated with the small size of the household as a production and consumption unit, and with the subsistence level of household income (Lu Mai and Dai Xianjing 1987). Moreover, the lack of market information, inefficient communications and slow adjustment of prices to supply and demand for household produced-goods have increased risks for household production and investment.

Furthermore, the recent rising rate of inflation with its associated negative real rates of interest for deposits in banks has gradually shifted

investment of rural households away from financial assets to real assets. The effects of inflation on farmers' investment behaviour are even more pronounced because farmers compare inflation in recent years with the stable prices that existed over the 30 years before the economic reforms and fear even higher rates of inflation in the future. In addition, investment by rural households in consumer durable was limited by shortages of supply. Consequently, housing became the preferred channel for the surplus income of rural households.

Decisions on investment are also related to trade-offs between risk and returns. It was found in the survey that housing expenditure was regarded by rural households as an important investment even though it is conventionally regarded by Chinese economists and in government statistics as a consumption item. Besides the long-term services provided by a house, housing is also an investment that provides for future generations of the household, and is in effect a pension fund that provides for the retirement of the household head. The political and economic risks associated with housing assets were minor. Moreover, as houses are the most important assets for households in rural China, they are both a symbol and measure of household wealth. The wealth of a household is important to the social status of the household, and for the household head to find a wife for his son and to find a good husband for his daughter. Marriage of the offspring had been regarded as the responsibility of the parents in rural China just as it was the responsibility for sons to support and take care of their parents as they become old. Therefore, the investment in housing that has been taking place recently is consistent with what has been a traditional priority for rural households in China.

Rural households have not only spent a high proportion of their income on new housing as their incomes have increased, but replacement of existing housing has also been extremely rapid. More than 90 percent of sample households in both counties either had built or planned to build new houses between 1980 and 1991. The period for replacement of the housing for sample households was about 10 to 15 years. In 1986 each household borrowed, on average, about 1150 yuan in Changshu County, which was about 27 percent of annual household income. Of total borrowings, 90 percent was for housing. The increase of prices of building materials brought about by high demand in Changshu did not seem to curb the demand for housing, instead, it tended to

increase the demand for housing materials as farmers expect further rises in the prices of building materials in the future. The demand for rural households for housing was further strengthened by the fact that farmers were aware that because cultivated land areas in China were very scarce, government policies on land space for housing could be changed any time, and so it could be better to build a house today instead of tomorrow.

### Conclusions

The effects of the high proportion of rural household income spent on housing and other consumption items are often considered as detrimental to China's rural development as increased expenditure on consumption and housing by rural households has been accompanied by decreased outlays in rural investment by rural households (Lin Rongjiang 1987). Nevertheless, it has been recognized by some writers that it is the economic environment for investment and other government policies rather than the increase of consumption expenditure (including expenditure on housing) by rural households which has contributed to the recent reduction of productive investment by rural households (Gau Hongbin et al. 1987; Chen Xiwen 1987).

Until recently, very few studies have been undertaken on the relationship between expenditure on housing by rural households and China's rural development. Expenditure on housing by rural households has been regarded as consumption, and the increase of consumption expenditure was seen to reduce household investment in production. Nevertheless, the effects of a housing boom should not be regarded as totally nonproductive, just as it has been argued that the increase of food consumption in developing countries can have positive effects on production (Meier 1984). The improvement of housing conditions in rural China has other economic effects. It was found in the survey that a new and better house was a major objective for many rural households, which was a strong incentive for members of the household to work together to earn higher incomes. In this sense, there is a possibility for the housing boom to be accompanied by an increase of rural production and investment.

Evidence in the survey indicated that the high proportion of housing expenditure to household income in Changshu had already brought about rapid development of the construction industry in the area. Of 30 sample households in Changshu, there were seven household heads engaged in the construction industry compared with one household head in Jianhu. The development of rural construction brought about by the housing boom shifted a lot of rural labourers from farm to non-farm work, promoted the development of rural transport and other related industries, and importantly, increased the level of rural household income.

Housing has some characteristics which will influence the effects of the housing boom on Chinese rural development. One important feature of houses is durability (Heung 1976). There is no formal market for housing in rural China and housing, once constructed, stays within that family. Housing is a stock which requires large amount of investment from the household. One implication for this is that the funds devoted to housing cannot be used by the household for alternative uses in the future. The huge borrowing by rural households for housing will reduce the capacity of the household to invest in alternatives in the near future. Furthermore, because borrowing for housing by rural households was mainly from relatives and friends at very low rates of interest, this means that households which have already built houses were expected to lend to relatives and friends as they build their houses. This will reduce the capacity of households who have already built houses to invest in production or to save in formal financial institutions.

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