1. Introduction

Ever since residential housing in urban China became commercialized in the late 1980s, the price of houses has increased rapidly from 408.18 yuan per square meter in 1987 to 3119.25 in 2006, or at an annual growth rate of 11.3 percent. (See data in Table 1 of this paper.) Such price increase has been a great concern to the Chinese government and the Chinese people. At times the government attempted to regulate the housing market because it believed that the rise in price was due to speculation. For example, purchasers of new houses were not allowed to resell them within two years without paying a penalty of 5% in the form of a business tax on the total transaction price; 40% down-payment is required for second mortgages. A main purpose of this paper is to show that the price of urban housing in China is determined mainly by the basic economic forces of demand and supply. If the price increase is partly due to the upward shift in demand resulting from the rapid increase in disposable income, and partly due to the upward shift in the supply curve resulting from the rapid increase in construction cost, any government interference of the market price will lead to inefficient allocation of resources in the housing market. (Although construction cost as measured by the Building Materials Industry Price Index did not increase after 1992, average land purchasing price as a major component of construction cost has increased at an annual rate of 11.8% from 1997 to 2007.) Furthermore government regulation is unlikely to be effective in controlling the price of housing because the basic forces of demand and supply, namely changes in
disposable income and construction prices, are more powerful than government action.

We start with the basic premise that the standard theory of demand for and supply of consumer durable goods is applicable to urban housing in China after the market for housing was established in the late 1980s and provide estimates of income and price elasticities of demand for urban residential housing. Although previous studies, e.g. Hu, Su, Jin and Jiang (2006) and Zhang, Weng and Zhou (2007), have examined the determination of housing prices in China, none has estimated the demand and supply equations for urban housing in a simultaneous equations framework and provided estimates of price and income elasticities of demand and price elasticity of supply.

Beginning with the study of Chow (1957) economists have accepted the proposition that the demand for total stock of a consumer durable good such as automobiles and housing can be treated in the same way as the demand for non-durables and services. To explain the change in the stock of a durable good Chow (1957) introduced and found evidence to support the partial adjustment hypothesis, namely, that the actual change in the stock in one year is a fraction $b$ of the difference between the “desired stock” and the stock of the preceding period, where the “desired stock” is determined by a demand equation for the services generated from the stock with income and price as the most important explanatory variables.

In Section 2 we set out the theoretical framework. Section 3 gives the data and their sources. Section 4 presents estimates of demand and supply equations for total housing space in urban China and explains how well such a theory can explain the rapid increase in the price of urban housing in China.

2. Theoretical Framework

We assume that the major variables determining the demand for the total stock of housing as measured by housing space are real income and relative price (price of housing divided by a general price index). The income effect is positive and the price effect is negative. The same income and price variables are assumed to affect the demand for residential housing by government units and commercial enterprises that provide subsidized housing.
to their employees. The quantity of housing is measured in per capita terms to avoid the scale effect of an increase of population. Without any theory to explain the demand for housing, one would expect that doubling the size of population would double the quantity of housing demanded. Demand theory applies to the behavior of a representative consumer. It explains mean demand of consumers by mean income and relative price.

The supply equation explains the same quantity variable by the same price variable and cost of construction. The price effect is positive and the effect of construction cost is negative. Although in China land is collectively owned and the use of land for construction is controlled by local government officials we assume that the same factors affecting the supply of housing in a market economy apply to China; resources required in the construction of housing are acquired in the same way as in a market economy. Since the quantity variable includes both new construction and the amount of existing housing made available for sale, the price elasticity of supply under our theoretical framework is smaller than the elasticity of supply of new housing alone.

Both demand and supply equations will be approximated by linear functions or equations linear in the logarithms of the variables.

If the standard theory of consumer demand is applied to explain the consumption of a durable good as measured by the quantity of service it generates, and if the latter is assumed to be proportional to the stock of the durable good in existence, strictly speaking we have to consider two components of the stock, namely, the stock owned by the consumer and the stock rented by the consumer. In the latter case the price of housing should be measured by the rent per unit of housing stock. Without introducing rent as a separate variable, our study assumes that rent is approximately proportional to the price index we use. Also concerning the appropriate price variable affecting demand, if many consumers purchase their housing units by a mortgage loan, the rate of interest will affect the price of consumption of housing service. We have not introduced the interest rate as a component of the price variable. This assumption is justified if historical changes in the interest rate are small and less frequent as compared with the changes in the price index for housing which we use. According to the China Statistical Abstract 2002-2008, the
mortgage rate data are available only back to June 1999; till 2006, there were four adjustments in the rates of the Individual House Accumulation Fund (个人住房公积金) among which the rate for 5 years and above varies between 4.05% and 4.59%, and three changes in the commercial bank mortgage rates with the rate for 5 years and above varies between 5.04% and 6.12%. To the extent that the above two simplifying assumptions concerning the price of consuming services of housing are invalid, errors would be introduced in the measurement of our price variable and a downward bias would result in our estimation of price elasticity.

The demand and supply equations can be written as

Demand:  \[ q_t = b_0 + b_1 y_t + b_2 p_t + u_{1t} \]  (1)
Supply:  \[ q_t = c_0 + c_1 p_t + c_2 c_t + u_{2t} \]  (2)

where \( q_t \) denotes housing space per capita, \( y_t \) denotes real disposable income per capita, \( p_t \) denotes relative price of housing and \( c_t \) denotes real construction cost. These are two structural equations.

The reduced form equations are derived by solving the structural equations for the endogenous variables \( q_t \) and \( p_t \). They can be expressed algebraically as

\[ p_t = d_0 + d_1 y_t + d_2 c_t + v_{1t} \]  (3)
\[ q_t = r_0 + r_1 y_t + r_2 c_t + v_{2t} \]  (4)

The first reduced form equation (3) will be used to explain the rapid rise in the price of urban housing in China by the forces of demand and supply. The predicted value of \( p_t \) by equation (3), denoted by \( p_t^* \), will also be used to estimate the demand equation (1) for \( q_t \) by the method of two-stage least squares. Because \( p_t \) and \( q_t \) are determined by the reduced form equations with \( v_{1t} \) and \( v_{2t} \) as residuals and because the residuals \( u_{1t} \) and \( u_{2t} \) of the structural equations are algebraically related to \( v_{1t} \) and \( v_{2t} \), \( p_t \) in the demand equation (1) for housing stock is correlated with its residual \( u_{1t} \). Hence we cannot obtain consistent estimates of the coefficient \( b_2 \). On the other hand, \( p_t^* \) is a function of the exogenous variables \( y_t \) and \( c_t \) which are assumed to be uncorrelated with the residuals of both the structural and reduced form equations. We apply the method of two-stage least
squares to estimate the demand equation (1) by first estimating $p_t^*$ from (3) as stated above and then, in the second stage, estimating the demand equation (1) by least squares after substituting $p_t^*$ for $p_t$.

The above theory of demand and supply and of housing price determination assumes that the market for housing is in equilibrium all the time. If we allow for a partial adjustment process by which the actual price $p_t$ adjusts towards its equilibrium level $p_t^*$ as determined by equation (3) by only a fraction $d$ of the difference $p_t^* - p_{t-1}$ we obtain the following equation to explain the change in $p_t$.

$$p_t - p_{t-1} = d (p_t^* - p_{t-1}) = d (d_0 + d_1 y_t + d_2 c_t) - d p_{t-1}$$

(5)

Similarly we can assume a partial adjustment process for the actual stock of housing $q_t$ to adjust within a year by only a fraction $b$ to its equilibrium level $q_t^*$ as determined by its demand equation (1), namely

$$q_t - q_{t-1} = b (q_t^* - q_{t-1}) = b (b_0 + b_1 y_t + b_2 p_t) - b q_{t-1}$$

(6)

We can obtain estimates of the coefficients of equations (3) and (1) respectively by estimating equations (5) and (6), as we will do in section 4.

In this study, the Chinese urban housing market is treated as one market although prices in different cities vary substantially. For example, as reported in Table 6-38 of the *China Statistical Abstract 2007*, in 2006, average prices of commercialized residential housing sold in different provinces and municipalities ranged from 1,584 to 7,375 yuan per square meter. The average price in China stood at 3,119 yuan per square meter. Beijing topped the country with 7,375 yuan per square meter, while southwest China's Guizhou Province had the cheapest housing with an average cost of 1,584 yuan per square meter. When we use a time series of housing price to estimate the demand and supply of housing, our series is an average across different cities. This treatment of housing price and the corresponding treatment of the quantity of housing as floor space per capita are valid as we are estimating a demand equation for an average Chinese urban consumer across different cities.
3. Data

Our time series analysis is based on annual data from 1987 to 2006. Before 1987 the housing for urban residents was provided to a large extent by their employing units at rents well below the market price. We assume that the market forces of demand for and supply of housing began to operate after 1987.

Data on housing space per capita for urban residents are found in Table 10-35 of *China Statistical Yearbook 2007* and its earlier editions and reported in the second column of Table 1 of this paper. (In *China Statistical Yearbook 2008* as released recently, per capita housing space for urban residents in 2007 is still missing. Hence we are constrained to rely on *China Statistical Yearbook 2007* and earlier editions for data up to 2006.) Urban residents do not include migrant workers in the definition of housing space per capita, nor in the definition of disposable income per capita mentioned below.

Data on sales price of commercialized residential housing are calculated by dividing total sales revenue of commercialized residential housing by total floor space sold. Both series are found in Table 6-36 of *China Statistical Yearbook 2007* for the period of 1991-2006. For the period of 1987-1990, no data on commercialized residential housing are available and we use data for the total commercialized buildings sold in Table 5-35 of *China Statistical Yearbook 1996* as an approximation. This is valid as total commercialized buildings sold contain commercialized residential housing sold as the major component; the two price series are very close for the period 1991-1993 with a difference of up to merely 1% (Table 6-36 of *China Statistical Yearbook 2007*). Therefore we assume that the two price series are also almost identical in 1987-1990 and use the commercialized buildings price as the commercialized residential housing price for 1987-1990. The sales price of commercialized residential housing so obtained is reported in column 3 of Table 1. Our price variable $p$ is the ratio of the above price series divided by the urban CPI ($1978 = 1$) presented in column 4 of Table 1 which can be found in Table 9-2 of *China Statistical Yearbook 2007* and its earlier editions.

The income data are per capita disposable income of urban residents given in column 5 of Table 1, found in the online database of National Bureau of Statistics of China.
income variable $y_t$ is the ratio of the above income series divided by the same urban CPI.

For construction cost, we use Building Materials Industry Price Index found in Table 9-12 of *China Statistical Yearbook 2007* and its previous editions. Since this price index takes the previous year as the base year, we calculate accordingly a price index taking its value in 1986 as 1. The series is shown in the last column of Table 1. Our cost variable $c_t$ is the ratio of this price index divided by the same urban CPI. It should be pointed out that some other important components of construction cost are omitted due to data availability. These include labor cost, operational cost, land purchasing price and related expenditures. Land cost in particular accounts for a sizable proportion of the total cost in major cities, but annual data on average land purchasing cost can be obtained only after 1997 from the *China Statistical Yearbook*. We will show in section 3 that the omission of land cost does not affect significantly our estimates of elasticities of housing demand with respect to income and price.

For the estimation of income elasticity by cross-section data, we use Table 10-7 of *China Statistical Yearbook 2007* which provides for each of the seven income groups the mean total consumption expenditures per capita and the mean expenditure for housing per capita for the year 2006, as reported in our Table 2.

4. Statistical results

Using annual data from 1987 to 2006 as presented in section 3, we first estimate the linear reduced form equation (3) to explain the price of housing space by the predetermined variables to yield

$$ p_t = -86.065 (91.562) + 0.215 (0.017) y_t + 352.842 (120.185) c_t $$

$$ R^2/s.e = 0.930/26.992 $$

(7)

The numbers in parentheses are standard errors of the corresponding coefficients. (The Newey-West standard errors of the two coefficients of explanatory variables that allow for second order autocorrelation in the regression residuals are respectively 0.012 and 70.989, smaller than the OLS standard errors reported above. OLS standard errors will continue to be reported in the remaining equations.) This equation shows that the price of
urban residential houses can be well explained by the forces of demand (per capita real income $y_t$) and supply (real cost of construction $c_t$). The coefficients of these variables have the correct sign and are statistically significant.

Although some important components of cost, such as land cost, are missing due to availability, our chosen explanatory variables already count for 93% of the total variance of price. According to Table 6-30 of China Statistical Yearbook 2007, we can divide total value of land purchased by land space developed by real estate enterprises to obtain the average land purchasing cost for 1997-2006, which is highly correlated with per capita disposable income of urban residents during the same period. Omitting this variable will lead to an upward bias for the coefficient of income in equation (7). However, it has little effect for predicting price $p_t^*$ and for using $p_t^*$ in the second stage to estimate the demand equation.

Figure 1 compares the actual price with the price $p_t^*$ predicted by the demand equation. The residuals are plotted at the bottom of the graph.

Figure 1. Relative housing price, its fitted values and residuals
To allow for the partial adjustment of price we have estimated equation (5) to explain the annual change of housing price:

\[ p_t - p_{t-1} = -79.254 (104.440) + 0.216 (0.069) y_t + 359.182 (191.015) c_t - 1.030 (0.338) p_{t-1} \]

\[ R^2/s.e = 0.450/27.623 \tag{8} \]

The reported \( R \)-square 0.450 shows that 45% of the variance of \( p_t - p_{t-1} \) is explained by demand and supply. The fact that the coefficient of \( p_{t-1} \) is close to 1 implies that by adding lagged price to equation (7) will give a coefficient of \( p_{t-1} \) close to zero and has no added value besides \( y_t \) and \( c_t \) in predicting \( p_t \). This shows that the price of urban housing adjusts instantaneously to its equilibrium value. It is an indication that the market functions well. Hence we retain the specification of equation (7) for the explanation of housing price. Figure 2 shows the observed values of \( p_t - p_{t-1} \) and the predicted values. We observe from the value of the \( R \)-square and Figure 2 that even the annual change in housing price is fairly well explained by the forces of demand and supply.

Figure 2. Price changes, fitted price changes and residuals
We proceed to estimate the demand equation (1) for housing using the method of two-stage least squares by regressing $q_t$ on $y_t$ and $p_t^*$ as estimated by equation (7). The result is

$$q_t = 10.343 (1.126) + 0.01153 (0.00111) y_t - 0.01450 (0.00610) p_t^*$$

$$\frac{R^2}{s.e} = 0.990/0.483$$

(9)

An estimate of income elasticity at the mean is the coefficient 0.01153 of $y_t$ multiplied by the mean 1191.539 of $y_t$ and divided by the mean 18.39 of the dependent variable $q_t$, yielding 0.747. Similarly an estimate of price elasticity at the mean is the coefficient –0.01450 times the mean 392.085 of $p_t$ and divided by 18.39, yielding –0.309.

By adding $q_{t-1}$ to both sides of equation (6) we obtain an equation to explain $q_t$ after allowing for partial adjustment in the change in $q_t$:

$$q_t = 2.299 (2.076) + 0.00286 (0.00215) y_t - 0.00536(0.00425) p_t^* + 0.838(0.196) q_{t-1}$$

$$\frac{R^2}{s.e} = 0.996/0.310$$

(10)
Comparing with equation (6) which is just a transform of equation (10), we can derive from equation (10) the partial adjustment coefficient $b = (1 - 0.838) = 0.162$. Dividing the coefficients of income and price in equation (10) by $b$ we obtain estimates of the coefficients of the demand equation (1) for the stock of housing, i.e. 0.01765 and $-0.03309$. These coefficients are converted to elasticities at the means as in the last paragraph. The results are: 1.144 and $-0.705$ for income and price elasticities respectively. The magnitudes of these elasticities are larger than the estimates from equation (9) because they allow for the effects of income and price to work out through time; they measure long-run elasticities whereas $0.747$ and $-0.309$ are short-run elasticities. The same phenomenon occurs for the demand equation linear in the logarithms of the variables as will be reported below.

To find out how sensitive our statistical results are to the functional form chosen we have also approximated the demand and supply equations by functions linear in the logs of the variables. The equation explaining $\log p_t$ is

$$\log p_t = 1.629 (0.379) + 0.657 (0.065) \log y_t + 0.602 (0.472) \log c_t$$

$R^2/s.e = 0.903/0.079$  

(11)

To compare how well this equation explains the price of housing as compared with equation (7) in linear form, we observe that the standard error of equation (11) is 7.9 percent for the explanation of price, whereas the standard error of equation (7) is 26.992. If we convert the latter to percentage terms by dividing it by the mean value of the price series 392.085 we obtain 6.9 percent. As in the linear case, adding $\log p_{t-1}$ to the right hand side of (11) yields a coefficient that is not significantly different from zero.

Denoting the estimated $\log p_t$ resulting from the above equation by $(\log p_t)^*$, we estimate the demand equation for housing stock by two-stage least squares as given below:

$$\log q_t = -0.489 (0.224) + 0.764 (0.053) \log y_t - 0.333 (0.097) (\log p_t)^*$$

$R^2/s.e = 0.995/0.019$  

(12)

The income elasticity is estimated to be 0.764 with a standard error of 0.053. The price elasticity is estimated to be -0.333 with a standard error of 0.097. These estimates are
close in magnitudes to the estimates 0.747 and -0.309 obtained by using a linear demand equation (9) without allowing for partial adjustment.

To compare the goodness of fit of the equations in linear form and in log form, the standard error of regression (12) gives 1.9 percent as the standard deviation of the errors in estimating \( q_t \). Equation (9) in linear form has a standard error of 0.483. Converted to percentage term by division by the mean floor space \( q_t \), it becomes 0.483/18.39 = 0.026, i.e. 2.6 percent. These results show that both the linear demand equation and the log-linear demand equation explain the demand for urban housing well.

If we assume a partial adjustment process for the change in \( \log q_t \) as a fraction of the difference between the desired \( \log q_t \) as determined by demand theory and \( \log q_{t-1} \) we obtain a partial adjustment model as follows

\[
\log q_t = -0.147(0.176) + 0.333(0.133) \log y_t - 0.170(0.087)(\log p_t)^* + 0.600(0.176) \log q_{t-1}
\]

\( R^2/s.e = 0.997/0.013 \)  \hspace{1cm} (13)

Given an estimate of the adjustment coefficient \( b \) to be \( 1 - 0.600 = 0.400 \), we estimate the income and price elasticities of demand for housing stock by dividing the coefficients of the income and price variables in the above equation by 0.400, yielding 0.833 and -0.425 respectively. As in the case of linear equations, these estimates are larger in magnitudes than 0.764 and -0.333 obtained by estimating the demand equation directly, but only slightly larger. In conclusion, using the model of partial stock adjustment we have estimated an income elasticity of demand for urban residential housing to be approximately 1 (1.144 in the linear equation and 0.833 in the log linear equation) and a price elasticity of about - 0.57 (- 0.705 in the linear equation and - 0.425 in the log linear equation) allowing for estimation errors.

To provide further evidence on income elasticity, we have examined cross-section data. In Table 10–7 of *China Statistics Yearbook 2007* data for 2006 are provided on expenditure on housing per capita \( (p_t, q_t) \) and total expenditure per capita \( (y_t) \) for families of 7 income groups as given in Table 2. Taking logarithms of these variables, we find the seven points in the scatter diagram to fall very closely to a straight line. The estimated
regression is:

\[ \log(p, q_t) = -1.382 \pm 0.345 + 0.904 \pm 0.038 \log y_t \]

\[ R^2/s.e = 0.991/0.058 \]  

(14)

The coefficient 0.904 can be interpreted as total expenditure elasticity, which is close to income elasticity. Strictly speaking to obtain this total expenditure elasticity we should regress \( \log q_t \) on \( \log y_t \) and \( \log p_t \) or equivalently regress \( \log(p_t, q_t) = \log p_t + \log q_t \), on \( \log y_t \) and \( \log p_t \). The latter regression will yield the same coefficient of \( \log y_t \) as equation (14) if \( \log p_t \) is uncorrelated with \( \log y_t \) as we assume. This assumption is justified if consumers in different income groups pay the same price for housing of a given quality.

It is interesting to observe that our estimates of income elasticity of demand for housing are similar to the estimates of 0.940 (0.032) for Peking (in 1927) and 0.714 (0.046) for Shanghai (in 1929-1930) given in Houthakker (1957, Table 3). In concluding his paper to compare income elasticities of demand for four major categories of consumption goods, namely food, clothes, housing and fuel and all other items in 35 countries/cities, Houthakker (1957, p. 551) wrote: “if no data on the expenditure patterns of a country are available at all we would not be very far astray by putting the partial elasticity with respect to total expenditure at .6 for food, 1.2 for clothing, .8 for housing and 1.6 for all other items combined…” Hence, our estimates of 0.747, 0.764 from time series without partial adjustment effect and 0.904 from cross-section are reasonable.

We summarize our estimates of income and price elasticities of housing demand from various specifications in the following table.

<table>
<thead>
<tr>
<th>Equation\Elasticity</th>
<th>Income Elasticity</th>
<th>Price Elasticity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear</td>
<td>0.747</td>
<td>-0.309</td>
</tr>
<tr>
<td>Linear partial adjustment</td>
<td>1.144</td>
<td>-0.705</td>
</tr>
<tr>
<td>Log</td>
<td>0.764</td>
<td>-0.333</td>
</tr>
<tr>
<td>Log partial adjustment</td>
<td>0.833</td>
<td>-0.425</td>
</tr>
<tr>
<td>Cross-section</td>
<td>0.904</td>
<td></td>
</tr>
</tbody>
</table>

To complete our study of demand and supply we have estimated a supply equation of
housing in log-linear form as follows.

\[
\log q_t = -2.385 (0.128) - 0.700 (0.049) \log c_t + 0.831 (0.024) (\log p_t)^* \\
R^2/s.e = 0.995/0.019
\] (15)

Both coefficients are of the correct signs and highly significant. The price elasticity of supply is estimated to be 0.831. As pointed in section 2, since the quantity variable includes both new construction and the amount of existing housing made available for sale, the price elasticity of supply under our theoretical framework is smaller than the elasticity of supply of new housing alone.

Before closing this section we note that our estimates of price elasticity may be biased downward. As pointed out in section 2, housing consists of two components: 1) owner occupied housing and 2) rental housing. For 1), the appropriate price variable is a function of our price of housing variable \( p_t \) and of the rate of interest for those requiring a mortgage to purchase the house. For 2), the price of consuming housing service is rent. In our statistical analysis, we use only the price of housing \( p_t \) as the price variable. Our price variable \( p_t \) is a good approximation of the true price if the rate of interest changes much more slowly than \( p_t \) (for which we have provided supporting evidence in section 2) and if rent is approximately proportional to \( p_t \). To the extent that these two assumptions are invalid, our price variable \( p_t \) equals the true price variable plus a measurement error. Estimating a regression equation with measurement errors in an independent variable yields a downward bias for its coefficient. Thus our estimates of price elasticity are likely to be biased downward unless the above two assumptions concerning the price variable are valid.

5. Conclusions

In this paper we have applied the standard theory of consumer demand supplemented by a partial adjustment mechanism to explain the demand for and supply of urban residential housing in China. The demand for housing is explained by real income and relative price. The supply of housing is explained by relative price and the cost of construction. The
interaction of demand and supply can explain the annual price of urban housing at the aggregate level in China very well. This result helps dispel the notion that urban housing prices in China are mainly the result of speculation. We have found the (long-run) income elasticity of demand for urban housing to be about 1, and the price elasticity of demand to be between -0.5 and -0.6. The price elasticity of supply of the total stock of housing is about 0.83.

In the introduction we pointed out that in applying the standard theory of consumer demand to the demand for durable goods we have adopted two simplifying assumptions. First the rent of housing is approximately proportional to the price variable for housing that we use. Second the movement of the rate of interest which affects monthly mortgage payment is small and infrequent relative to the movement of prices. While these two assumptions may introduce errors in the price variable in our model, the fact that the simple model of demand and supply employed in this paper has succeeded in providing elasticity estimates of correct signs and reasonable orders of magnitude is reassuring. Our estimates of income elasticity are similar to those found in other countries and in China in the early 1930s. This study is an example of the applicability of standard economic analysis to the Chinese economy. Numerous other examples can be found in Chow (2007).

If the past increase in the price of urban housing in China was the result mainly of increase in income and not of speculation we can conclude that a housing bubble did not occur during our sample period up to 2006. There would be no evidence of a bubble in housing price after 2006 unless the rate of increase in housing price after 2006 is outside the range predicted by our equations (7) and (8). This remark applies to urban China as a whole and does not rule out a housing bubble in particular cities.
Acknowledgement:

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References


### Table 1. Time series data

<table>
<thead>
<tr>
<th>Time (Year)</th>
<th>Urban Residential Floor Space per Capita (m²)</th>
<th>Commercial Residential Housing Sales Price</th>
<th>CPI Urban 1978=1</th>
<th>Urban per Capita Disposable Income</th>
<th>Building Materials Industry Price Index (1986=1)</th>
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</thead>
<tbody>
<tr>
<td>1987</td>
<td>12.7</td>
<td>408.18</td>
<td>1.562</td>
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Table 2. Cross-section data: per capita annual living expenditure of urban households (2006)

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