Revised

Why Do Migrant Households Consume So Little?

Xiaofen Chen[1]

Abstract

Exploring data from the migrant and urban household surveys of the Chinese Household Income Project, this paper dissects the underlying causes of the depressing effect of the *hukou* system on migrant household consumption to two channels. On one hand, migrants' disentitlement to local urban *hukou* creates financial insecurity through barriers to employment, social welfare, medical insurance, etc., thereby encouraging precautionary saving. On the other hand, it promotes temporary migration, allows divergence in tastes and values from local urban residents to persist, and incentivizes migrant households to save their transitory income. Factors reflecting these two channels, such as medical and pension insurances, the duration of migration, and local homeownership, are specifically modeled, and they are found to contribute to the discrepancies in consumption between migrant and local urban households, among other factors. In addition, the marginal propensity to consume exhibits heterogeneity across households; it is higher with a longer duration of migration, local homeownership, and self-employment. The lack of these attributes further reinforces the reluctance of migrant households to consume.

Keywords: consumption, migrant household, marginal propensity to consume

1. Introduction

In recent decades, urban areas in China received large flows of migration from rural areas. In the meantime, persistent low domestic consumption has raised concerns over insufficiency of demand to cope with external shocks and slowdown in growth. Since migrant workers account for an increasing portion of the urban labor force, the importance of their consumption expenditure also rises to the local economy as well as to the national economy.

This paper contributes to the scant literature on explaining migrant consumption in China in the following aspects. First, it attempts to dissect the effects of the *hukou* system (i.e., the residence registration system) on consumption, rather than considering the *hukou* system as a whole as in the existing literature. It argues that the *hukou* system affects consumption and saving through two distinctive channels. On one hand, migrants' disentitlement to local urban *hukou* creates financial insecurity through barriers to employment and social benefits such as medical and pension insurances, thus increasing the need for precautionary saving. On the other hand, the non-local *hukou* and the resulting effects, such as lack of access to affordable local housing, lead to the temporary nature of rural-to-urban migration, and hence the treatment of urban income as transitory income. As argued by Dustmann (2003) and Dustmann and Görlach (2015), temporary migration results in increased saving, consistent with the permanent income theory. These

[1] Truman State University, Department of Economics, Kirksville, MO 63501, USA. Phone: (660)785-4644. Fax: (660)785-4337. Email: xiaofen@truman.edu

motives for saving should be clearly modeled to disentangle the underlying causes of the depressing effect of the *hukou* system on migrant consumption. By doing so, this paper contributes to the understanding of how the lack of various privileges associated with local urban *hukou* curbs migrant household consumption, thereby providing implications for possible paths of reform to accommodate the ongoing rapid urbanization and economic transformation.

Migrant households' short duration of urban residence also allows their divergence in tastes and values from local urban residents to persist as a factor contributing to the consumption gap. There have been a few papers relevant to the role of cultural values in migrant household consumption. For example, Acharya and Leon-Gonzalez (2015) find that consumption of migrant households in Nepal gradually increases and converges to the level of local residents; Danzer et al. (2014) discover that recent migrant workers may resort to conspicuous consumption in an effort to gain higher social-economic status in spite of similar income levels.

With the above considerations, this paper examines new household characteristics that have not been specifically studied by the existing literature on migrant consumption in China; for example, medical insurance coverage (relevant to the precautionary saving motive), local homeownership (an indicator for permanent migration), duration of migration (to represent the transience of migration and convergence in tastes and values), and employer provided room and board subsidies (as an unreported source of income and a substitution for consumption to some extent).

The literature on migrant consumption in China has been sparse, and the connection of consumption to institutional conditions and household characteristic is far from being adequately explained. Recent studies, including Chen et al. (2015), Wang and Fang (2015), Dreger et al. (2015), and Fang and Sakellariou (2016), stressed the role of the *hukou* system. However, the models in these studies tend to treat the *hukou* system as a whole and specific disadvantages of non-local *hukou* are rarely examined, with the exception of Wang and Fang (2015), where household pension coverage rate is investigated as a specific variable.

In addition, the use of sample weights is neglected or not explained in the above studies, likely resulting in estimation biases. In contrast, the sample weights adopted in this study are carefully constructed in line with the design of the surveys as described in Song et al. (2013). Other advantages of this paper include the consideration of a nonlinear regression model, extensive interactions between the explanatory variables, and the employment of a larger database. Most of the aforementioned papers mainly use data from the 2007 Chinese Household Income Project (CHIP); one is based on a different but smaller survey. This paper employs data from both CHIP 2007 and 2008, thus has the benefit of a substantially larger sample.

The paper finds that consumption and the marginal propensity to consume exhibit heterogeneity across households, unlike in Chen et al. (2015) and Wang and Fang (2015). Social welfare programs (especially medical and pension insurances), self-employment, a local urban *hukou,* longer durations of migration, and living in self-owned homes all have sizable positive effects on consumption. In addition, the marginal propensity to consume is higher with a longer duration of migration, local homeownership, and self-employment. The lack of these attributes further reinforces the reluctance of migrant households to consume. To increase migrant households'

consumption, policies improving these conditions for migrant households may be designed, among which providing adequate medical and pension insurances may be the easiest to adopt.

2. Financial insecurity, temporary migration, and consumption

Consumption and saving are essentially two perspectives of the same issue in that a lower consumption rate represents a higher saving rate. Thus, theories on household saving behavior also explain household consumption. Typical theories on household saving examined in the empirical literature include the permanent income theory, the life cycle theory, the precautionary saving motive, and the intergenerational transfer motive. Based on these theories, factors such as per-capita income growth, income uncertainty, the age dependency ratios, inflation, and real interest rate are commonly tested in the literature. Other determinants specific to China may include housing price (Wang and Wen 2012), health insurance (Cheung and Padieu 2015), bequest (Yin 2012), the pension reform (Ang 2009), family structure (Zhou 2014), the pre-marital sex ratio (Wei and Zhang 2011), and so on. Studies specifically on migrant household consumption in China are rather scant, as reviewed in section 1.

Data used in this paper is from the urban and migrant household surveys in CHIP 2007 and 2008, obtained from China Institute for Income Distribution.[2] The urban household survey in CHIP 2008 does not include expenditure data, thus, the analyses are mainly based on the 2007 urban and migrant household surveys and the 2008 migrant household survey. Each survey contains about 5,000 randomly selected households in 15 large and medium sized cities from 9 provinces and provincial level metropolises.[3] A household consists of members living in the same residence who share resources, and does not include family members living apart. The migrant surveys are in essence surveys of rural-to-urban migrant households, with the vast majority (81%) of household heads holding non-local rural *hukou,* an additional 18% local rural *hukou*, and the remaining 1% non-local or local urban *hukou.* Likewise, the urban household surveys are essentially surveys of local urban households.

A comparison of data from the 2007 migrant and urban household surveys reveals that migrant households consume much less than their local urban counterparts, consistent with the findings in the literature. As shown in Table 1, the mean consumption rate for all migrant households is two percentage points lower than that for all local urban households, even though migrants' income per capita is less than half of the local urban level.[4]

Three types of households are further compared: unmarried individuals without children, married or cohabiting couples without children, and married or cohabiting couples with one child.[5] To

[2] CHIP 2007 and CHIP 2008 were actually conducted in 2008 and 2009, respectively. The urban household surveys were conducted by the China National Bureau of Statistics; the migrant household surveys were part of the Rural-Urban Migrants in China survey project.

[3] For detailed descriptions of the survey design, see Luo et al. (2013), Kong (2010) and Akgüç et al. (2013).

[4] Summary data presented in this section are not adjusted by sample weights.

[5] Composition of household structure differs widely between the 2007 and 2008 Migrant Household Survey, with a much higher portion of unmarried persons living alone in the 2008 survey. The mean consumption rates are higher in 2008 than in 2007 for all three subgroups in the table (although still lower than the local urban level in 2007), especially for unmarried persons living alone. This is likely caused by macroeconomic reasons, since the survey

limit the differences in income and household structure between migrant and local urban households, those with spouses or children living apart or with additional family members living in the same household are excluded, and local urban households' income level is limited to no more than ¥50,000. With these constraints, the difference in the consumption rates between migrant and local urban households is further enlarged to 8 percentage points. For those residing in metropolises and coastal cities, it is an even wider gulf of 15 percentage points.[6] Even if migrants' remittances (about 8% of household income on average) are all consumed, which may well not be the case for these households since all family members live in the same household, the average consumption rate is still substantially lower than the local urban level.

Table 1. Annual Household Income and Consumption

	Per capita income (¥)	Per capita consumption (¥)	Consumption rate (%)
Migrant households:			
All households in CHIP 2007	27,358	10,774	62.7
Common household structure with 1-3 people in size[1]	32,646	8,993	66.4
Unmarried living alone	16,847	9,850	58.7
Couple without children	32,142	9,632	65.5
Couple with one child	39,877	8,319	70.3
Metropolises and coastal cities[2]	34,657	9,616	63.9
All households in CHIP 2008	27,468	11,223	65.8
Urban households:			
All households in CHIP 2007	57,779	12,181	68.3
Common household structure with 1-3 people in size[1,2]	31,267	9,004	74.5
Unmarried living alone	22,108	14,173	69.4
Couple without children	30,609	10,224	69.3
Couple with one child	32,513	7,914	77.4
Metropolises and coastal cities	32,749	10,103	79.3

[1] For households with all family members living in the same household.

[2] For households with income no more than ¥50,000.

Of course, even after controlling for household structure and income, consumption may still not be perfectly comparable between migrant and local urban households. One such reason is price discrimination. As an example, because of the constraint of their non-local *hukou*, migrant households often cannot send their children to public schools and have to pay considerably higher tuition in private schools. For this reason, consumption level can be overstated for migrant households who have young dependents living with them, which account for nearly one fifth of the sample. The overstatement can be substantial given that the mean education expenses are 12%

time is towards the end of a global recession. For these reasons, the 2008 survey data is not included in the comparison of the subgroups.

[6] Including Shanghai, Chongqing, Chengdu, and cities in Jiangsu, Zhejiang, and Guangdong.

and 9% of the total expenditure in the 2007 and 2008 surveys, respectively. However, it is not possible to correct for price discriminations since the expenditure data is far less detailed for urban households, which only includes five broad subcategories.

As widely pointed out, the *hukou* system imposes constraints on migrant households in employment, affordable housing, and access to local public education and welfare programs. Examining the survey data, it is clear that the inferior non-local, rural *hukou,* to which the vast majority of migrant households are assigned, creates two main problems to migrants: financial insecurity and transience in migration.

Without local urban *hukou,* migrants have limited employment opportunities and often have to undertake inferior, low paid jobs, a situation exacerbated by their poorer education. The survey data reveals that the median years of schooling is 9 years for migrants aged 16 years or older, which is 3 years less than their local urban counterparts. However, mean income levels for migrant workers are lower than local urban residents at all education levels, and the education premium is progressively lower for migrants, as pointed out by Chen (2017). Per worker migrant income levels are 89%, 73%, and 57% of the local urban levels for those with schooling of 9 years or less, 10 to 12 years, and more than 12 years, respectively. The practice of wage discrimination against migrant workers has been documented in existing research, for example, Frijters, Meng, and Resosudarmo (2011).

Table 2 presents combined data derived from the surveys in both 2007 and 2008.[7] Most local urban workers (80%) are employed under permanent or long-term contracts; only 11% of them are without contracts, and 9% are self-employed. In contrast, more than half of the migrant workers either hold temporary jobs or are self-employed. Not only is their income more uncertain as a result, they are also far less likely to participate in various social welfare programs, which are more likely to accompany jobs with contracts, especially permanent and long-term contracts. For example, among those with contracts, 23% of migrant workers and 87% of local urban workers are covered by pension plans. Among those without contracts or self-employed, only 6% of migrants and 51% of local urban workers participate in pension plans. This data also shows a stark contrast of social welfare coverage rates between migrant and local urban workers with or without contracts.

Although two-thirds of the migrants reported medical insurance coverages, their medical insurance is acutely inadequate. On average, as high as 95% of the medical expenses are out of their own pockets for migrants with insurance, as opposed to only 53% for local urban residents. As a result, migrants are far less likely to seek medical help when needed, evidenced by their much lower average medical expenses. For adults between 16 and 45 years old, the average amount of medical expenses of migrants is less than 40% of the amount of their local urban counterparts. The gap is even higher for all age groups (Table 2).

In addition, it is much less common for employers to pay the entire amount, or the majority portion, of insurance premiums for workers without contracts than for workers with contracts. For example, among those without contracts who participate in pension plans, over one-third of migrant workers and over one-half of local urban workers have to shoulder the entire cost

[7] The table also includes data from the 2008 Urban Households Survey.

themselves. In contrast, for those with contracts, the figure is less than 8% for both types of workers. As of those with unemployment and worker compensation insurances, 18-25% of migrant workers and 31-38% of local urban workers without contracts are paying the premiums fully by themselves, as opposed to only 2-4% of both cohorts with contracts.

Table 2. Comparison of Employment Types and Social Welfare Coverage
(For adults aged 16 years and older)

	Migrant	Local urban
Employment Type:		
Permanent, long-term, and short-term contracts	47%	80%
Without contracts	24%	11%
Self-employment	29%	9%
Covered by unemployment insurance	11%	47%
Covered by pension plans	19%	67%
Covered by worker compensation insurance	16%	41%
Housing fund provision	7%	39%
Covered by medical insurance	67%	76%
Individuals with medical insurance and medical expenses during the last 3 months:		
Medical expenses due to illnesses or injuries (including expenses paid by insurance)	¥605	¥2,084
Medical expenses due to illnesses or injuries if between 16 and 45 years old	¥546	¥1,373
Out-of-pocket payment as a percent of medical expenses	95%	53%

In summary, employment with contracts provides more security in addition to monetary benefits. These benefits are enjoyed by most local urban households, but not most migrant households. The lack of access to social welfare programs not only directly suppresses consumption of healthcare services, it also creates a greater need for migrant households to save for precautionary purposes.

The unfavorable environment for migrant households to live and work in urban areas is also the direct cause for the temporary nature of rural-to-urban migration, further encouraging migrant households to save. In the 2008 migrant survey, a quarter of the household heads migrated from their rural homes within the previous two years. The median duration of migration (the length of time since migrants first left their rural homes) is 70 months in the 2008 survey, and 64 months in the 2007 survey.[8] In both surveys, 15% of all adult migrants returned to their rural homes for more than three months at least once. For the most recent such incidence, over one-third of the causes were unsatisfactory jobs, earnings, or living conditions in urban areas, and more than one-

[8] Since the precise months of the surveys are unknown, universal survey months, June 2008 and June 2009 are assigned to the two surveys, respectively, to calculate the durations of migration.

half were issues arising from family ties with their rural homes; for instance, looking after family members. Maintaining close ties with rural domiciles reflects the temporary nature of their migration, which is largely caused by hurdles discouraging them from settling in cities. In both surveys, when asked whether they would continue to stay in cities if policy allowed, only 8% indicated that they would stay for more than 3 years, and another 5% 1-3 years. The rest, or 87% of all adult individuals, were unsure. In other words, a dominating portion of migrant households are prepared to return to their rural homes in the near future. This is not because of improved income in rural areas. According to the surveys, one-half of the migrant workers indicated that their current income at least doubled what they would have earned in their rural homes, and an additional one-fourth earned at least 50% more. Clearly, migrants view themselves as temporary workers and believe that their income would fall sharply on returning to their rural homes. The combination of the two thus incentivizes migrant households to save more while earning higher income in urban areas.

The temporary nature of migration is also reflected by the relatively younger age of migrants in comparison to local urban residents. In the 2008 survey, the median age of migrants is only 28; for local urban residents, it is 42. About 17% of the local urban residents are at least 60 years old, but only 1% of migrants belong to this group.

The lack of migrant homeownership in host cities both reflects and enhances the temporary nature of migration. In the 2008 survey, only 4% of migrant households live in self-owned homes. As documented by Quercia and Song (2007), there are many barriers for migrant households to own homes at affordable prices in their host cities. For example, subsidized homes often require local *hukou.* Unsurprisingly, the homeownership rate is entirely different for those with local urban *hukou.* Among the 42 households with local urban *hukou* in the 2008 migrant household survey*,* more than half (22 households) live in self-owned homes. Homeownership data is not available in the urban household survey, but according to Chamon and Prasad (2010), the urban homeownership rate reached 86% in 2005.

Divergence in tastes and values between rural and urban residents may also contribute to the lower consumption of rural households and reinforce transience in rural-to-urban migration. As demonstrated by researchers (for example, Kim et al. 2002), cultural values play an important role in consumer behavior. Given the large gaps in development and income levels between rural and urban areas, disparities in values may exist between rural and urban households. In recent decades, China has undergone enormous changes culturally and socially. The country's transformation from a nearly closed society to a remarkably open economy is as extraordinary as its economic miracle. Measured by the KOF globalization index (Dreher 2006 and Dreher et al. 2008), China's degree of globalization in the social and cultural dimensions has exceeded the world average since the 1990s. New ideas and values are generated and exchanged, reshaping lifestyles and consumption patterns. The urban areas are at the forefront of such transformations, whereas the rural areas lag behind in this aspect. When rural households move to urban areas, their traditional values are bound to influence how much they consume and what they spend their income on. For most migrants, the short durations of their urban residence accentuate such differences from their local urban counterparts. But as their duration of urban residence increases, they are likely to be influenced by the local urban culture, and their lifestyles and consumption patterns may then converge to those of local urban residents. In turn, the assimilation of lifestyles

may enhance their willingness and likelihood to remain in cities. However, with transitory migration, divergence in tastes and values persists, contributing to the consumption gap between migrant and local urban households.

3. The model

The CHIP surveys are designed to represent populations in four regions: the coastal, central, and western regions, and the provincial level metropolises. Random samples are selected from one to three provinces in each region with 9 provincial strata in total for each of the migrant and local urban surveys. However, within each region, the sample may not necessarily reflect the relative population size in each province, as detailed in Song et al. (2013). Adopting their suggestions, the sample weights in the following analyses adjust for respective regional and provincial populations for each survey. In order to include short-term migrants in the estimations, the calculation of weights also uses their estimations of local urban and long-term migrant populations in 2005, assuming that the total migrant population consists of the same proportion of long term migrants as in the 2007 and 2008 migrant surveys. For the pooled sample of both urban and migrant households, the population is also pooled to derive total urban population size for each province, and the sizes for long-term migrants are multiplied using the ratio of long-term migrants in Song et al. (2013) to include short-term migrants.

As demonstrated in the previous section, migrant households suffer from the implications of financial insecurity and temporary migration. Table 3 further summarizes their income and consumption levels arranged by household head characteristics related to these two issues. To reduce data errors and the influence of outliers, observations with remittances (available for migrant households only) or consumption greater than income are excluded. The remaining sample includes 7,641 migrant households and 4,570 urban households whose consumption and income data are available.

Households with rural *hukou,* local or non-local, have noticeably lower per capita income and consumption as well as consumption rate, and those with non-local rural *hukou* have the lowest consumption rate. Among other attributes, grouping by duration of migration or medical and pension insurances does not afford clear evidence for their roles in consumption, which are possibly obscured by large income discrepancies, and formal analyses are needed. However, consumption rates are distinctly different depending on local homeownership and employment types.

Those living in self-owned homes consume a much higher portion of their income, in total 8 percentage points more than non-homeowners. Local homeownership stimulates spending on home furnishing, equipment, and other durables, evidenced by almost twice as much per capita spending on durable goods for homeowners (¥1,347, as compared with ¥686 for non-homeowners). It is also possible that homeownership creates a sense of belonging and strengthens migrants' commitment to the local city, thereby reducing the excessive saving resulting from transitory migration.

About 20% of the migrant household heads are self-employed. For both migrant and local urban households, the mean consumption rate for the self-employed is much higher than for wage

earners, in spite of their higher income. Some causes for the choice of self-employment over wage employment have been identified in the literature; for example, credit constraint (Frijters, Kong, and Meng 2011), unobservable characteristics of individuals (Giulietti et al. 2012), and social-family network (Zhang and Zhao 2011). In the two migrant household surveys, only 12% of the self-employed suggest they are forced into this choice because of lacking job opportunities. Almost one-half of them indicate that the main reasons are freedom, flexibility, and the opportunities associated with self-employment. Another 38% are driven by higher income. Indeed, per worker earnings for the self-employed are nearly 40% more than for wage earners.

Table 3. Mean Annual Per Capita Income and Consumption in Urban Areas
(By characteristics of household heads)

	Per capita income (¥)	Per capita consumption (¥)	Consumption rate
By Hukou (all)			
Local urban	24,691	13,934	61.6%
Non-local urban	28,587	16,755	63.7%
Local rural	16,009	9,445	60.6%
Non-local rural	19,951	11,534	59.2%
By employment type (all)			
With contracts	22,504	12,806	59.5%
Without contracts	17,675	10,084	57.9%
Self employed	23,584	13,704	62.9%
By medical insurance coverage (all)			
No coverage	19,024	11,183	60.9%
With coverage	22,387	12,729	60.0%
By pension insurance coverage (all)			
No coverage	19,213	11,170	60.1%
With coverage	24,930	13,990	60.2%
By duration of migration (migrants)			
70 months or less	24,214	11,789	59.3%
more than 70 months	33,663	12,161	58.6%
By local homeownership (migrants)			
Non-homeowners	20,859	12,049	59.0%
Homeowners	21,389	14,512	67.1%

It is possible that self-employed households can more easily see the connection between their work and the fruit of their work, and therefore have a better sense of control over income and employment. Self-employed migrant households are also more likely to own homes. The homeownership rate for the self-employed is 9% in the migrant surveys, much higher than for

wage earners (2%). Their spending on durable goods is particularly high. Annual per capita spending on durable goods for self-employed migrant households is nearly 55% higher than for the non-self-employed, and the per capita value of durable assets owned by the self-employed (¥3,173) is 66% higher than owned by wage earners (¥1,912).

Next, variables representing the factors implied by the permanent income theory, the precautionary saving motive, divergence in cultural values, and the life cycle theory are tested in the following model to derive their influences on migrant household consumption, controlling for other household characteristics that may also affect consumption.

$$C_i = \alpha + \beta Y_i + \delta P_i + \varphi T_i + \theta L_i + \lambda O_i + \varepsilon_{i,}$$

In the equation, C_i is annual per capita consumption level for household i; α, β, δ, φ, θ, and λ are sets of parameters; ε is the error term. Y is a vector of variables that have implications for household disposable income, including annual per capita income, perceived monetary values of employer provided room and board subsidies to all workers in the same household, and net remittances to rural homes for migrant households. These measures are not log transformed for convenient interpretation and comparison of results of different variables. Note that employer provided room and board subsidies are both an unreported source of income and a substitution for observed consumption. However, it is unclear to what extent it substitutes consumption as migrants may choose to spend less on housing and food without these subsidies. Thus, it should not be simply added to consumption.

The treatment of net remittances of migrant households deserves special attention. Some of the remittances may be used for consumption by family members remaining in their rural homes, thereby boosting consumption in the rural areas. However, it is unclear how much of the remittances are spent. Further, since household size and consumption data are based on members who live in the same household in urban areas, treating a hypothetical portion of remittances as consumption, as considered by Chen et al. (2015), would severely overstate per capita consumption and marginal propensity to consume, and also make it problematic in interpreting the results of other explanatory variables. Another choice is to treat remittances as a net deduction of disposable income. However, again, it is unclear whether migrants retain some of the remittances as saving, and how much they retain. For these reasons, the variable net remittances is not treated as consumption or deduction of income, and is allowed to have a different slope from income per capita, which is indeed the case, as the results later show.

In the above equation, P is a vector of variables representing factors contributing to households' precautionary saving behavior, including dummies for household heads' employment types (as in Tables 2 and 3; employment with contracts is the base group) and dummies representing whether they are covered by medical insurance, pension plans, unemployment insurance, and worker compensation (equal to 1 if they are, and 0 if not).

The variable set T includes the household characteristics that reflect or affect the extent to which migrant households view their income as temporary income, including household heads' duration of migration, homeownership in the host city (i.e., living in self-owned homes), migrants' homeownership rate in the local city, and dummies representing household heads'

hukou (the base group is local urban *hukou*). Being a homeowner in the local city signals the establishment of a permanent residence, while the duration of migration is a close proxy for the duration of urban residence. The longer that duration is, the less likely are migrants to view themselves as temporary migrants, and the closer their tastes and values converge to those of the local urban residents. *Hukou* represents the location of permanent residence, and also directly links to access to employment and social benefits; thus, the *hukou* dummies are best interpreted as the remaining effects of financial insecurity and transience in migration that are not captured by other specific variables.

The rate of migrant local homeownership is the ratio of migrant households living in self-owned homes over total migrant households in the local city, calculated for each individual city from the survey data. It differs greatly across cities, ranging between 0.4% (Shenzhen in Guangdong province) and 10% (Bengbu in Anhui province) in the 2008 survey. A higher homeownership rate may indicate cheaper home prices, which is most likely associated with lower rents and other cost of living, and thus a lower consumption level. On the other hand, it may also reflect the likelihood of owning homes due to institutional factors, such as local policies toward migrants in home purchases. In this case, a higher homeownership rate may incentivize migrants to save for home purchases. In either case, the variable should have a negative effect on consumption.

One possible candidate to measure the transience of migration is migrants' responses to the question of whether they intend to stay if policy allows, and for how long. But it is a hypothetical question, and the responses may not reflect what truly governs their consumption behavior. The dummies for these responses are highly insignificant when included, therefore are removed in the subsequent regressions.

The variable set *L* denotes the household attributes related to the life cycle theory, including household head age and the age dependency ratios at the household level. Young dependents are defined as household members aged 0 – 15 and those who are in school if older; old dependents are those aged 60 and older.[9] The life cycle theory suggests that the middle-aged group saves the most, implying that the relationship between age and consumption is not linear; thus, the square of age is also included. Also, because parents may save more for unmarried sons than for daughters (Wei and Zhang 2011) to help their sons compete for wives with wealth, the young dependency ratio is replaced by the young male and female dependency ratios in some regressions. If the gender of young dependents who do not live in the same household is undisclosed, the number of male dependents in the same household is used to calculate the male dependency ratio, from which the female dependency ratio is derived.

The variable set *O* includes control variables. They are household heads' years of schooling, a dummy indicating whether they are married, and household size. A dummy representing the 2008 survey is included to account for time varying macroeconomic factors, whereas the dummies for provinces capture location differences in cost of living, lifestyles, local economic conditions, etc. The role of education in the choice of lifestyles and consumption patterns has been discussed in previous research (see, for example, Michael 1975). In terms of household structure, living with other family members can have the benefit of economies of scale, and

[9] The common retirement age is 60 for men, and 50-55 for women.

therefore they can save on food, housing, and household operation costs. In the 2008 migrant survey, monthly consumption averages ¥1,106 yuan for those who live alone, whereas per capita monthly consumption is only ¥844 for those who do not. However, married couples living together may have a better sense of home in the host city, and spend more on home furnishing.

4. Results

Regressions are run for the migrant and local urban samples separately as well as for the pooled data, and the Taylor series linearization method is used for the standard errors. The variables specific to migrant households are not in the regressions for the pooled or local urban samples, including net remittances, migration duration, the local homeownership dummy, and the local migrant homeownership rate. Since local homeownership and the local homeownership rate may also affect urban households' consumption, but are excluded because data is unavailable, the regressions for urban households and the pooled sample may suffer from omitted variable bias, and estimations for the remaining variables may not be entirely comparable with those for migrant households only.

The results without considering interactions between variables are in Table 4. In the second regression for each sample (columns 2, 4, and 6), the ratio of out-of-pocket medical payment replaces the dummy for medical insurance, and the young male and female dependency ratios replace the young dependency ratio. Because the out-of-pocket medical payment rate data is not available for many households, the sample sizes for these regressions are much smaller. With the medical insurance dummy, the numbers of observations are 5,765 and 2,616 for the migrant and local urban samples, respectively; with the out-of-pocket medical payment rate, they are reduced to 3,678 and 1,983, respectively.

Diagnostic tests generally suggest that the model is sound. The link test confirms the validity of the model specification for the urban household sample (regressions 3 and 4), but not for the migrant and pooled samples (regressions 1 – 2 and 5 – 6). However, Ramsey's RESET test of functional form with the squared and cubed predicted values does not indicate problems for all 6 regressions. To check for collinearity, the variance inflation factor (VIF) for each explanatory variable in the first regression is calculated, and the results range from 1.1 to 2.6, except for the local and non-local rural *hukou* dummies (over 20). The relatively high values of the VIFs for these two dummies are the result of their high correlation (with a coefficient -0.96) in the migrant household survey, which is caused by the fact that most households belong to these two types of *hukou*. This is no longer a problem when the *hukou* types are more variable in the pooled sample, and the VIFs for both fall to less than 4.

Among the variables with implications to disposable income, there is evidence that employer provided room and board subsidies reduce consumption for migrant households, but the magnitude is far from unity. This is likely due to unaffordability of housing, which results in skimping on housing by unsubsidized migrant households.[10] The coefficient for net remittances is only marginally significant in one regression, and the magnitude is much smaller than that for income per capita. Such would be the case if households retain part of the remittances as saving.

[10] See, for example, Song et al. (2007), for a discussion of urbanizing villages for rural-to-urban migrants.

This conjecture is confirmed when regressions 1 and 2 are re-run with income per capita replaced by the remaining unremitted income, where the coefficient for net remittances now turns positive (0.177 and 0.130) and significant at the 1% and 5% level, respectively. And as expected, the magnitude of the coefficient is smaller than that for the unremitted income (which is 0.350 and 0.301, respectively, same as for income per capita in the previous regressions). The results are not listed in the table since estimations for the rest of the variables are identical.

Table 4. Regression Results without Interaction Terms
(Dependent variable: annual per capita consumption; *p*-values in parentheses)

	Migrant		Local urban		Pooled	
	(1)	(2)	(3)	(4)	(5)	(6)
Income per capita	0.350***	0.301**	0.297***	0.313***	0.336***	0.320***
	(0.006)	(0.039)	(0.000)	(0.000)	(0.000)	(0.000)
Room and board subsidies	-0.057***	-0.065**	0.159	0.167	-0.099***	-0.094***
	(0.007)	(0.036)	(0.332)	(0.343)	(0.000)	(0.001)
Net remittances	-0.172*	-0.171	-	-	-	-
	(0.081)	(0.130)				
Without contract	189.2	180.0	-557.0	-884.9	-122.8	-228.4
	(0.319)	(0.492)	(0.280)	(0.130)	(0.439)	(0.269)
Self-employment	2735.3**	3097.5**	0.421	-971.7	1535.3***	1225.1*
	(0.015)	(0.030)	(1.000)	(0.225)	(0.002)	(0.061)
Medical insurance	-455.4**	-	1371.4***	-	-74.47	-
	(0.036)		(0.003)		(0.604)	
Out-of-pocket medical pay rate	-	-10.09*	-	5.811	-	1.329
		(0.078)		(0.241)		(0.721)
Pension insurance	576.5*	453.6	-251.3	618.7	455.7*	618.3*
	(0.082)	(0.298)	(0.589)	(0.246)	(0.089)	(0.070)
Worker compensation	-227.1	-523.9	-372.6	-134.2	-246.4	-412.9
	(0.506)	(0.246)	(0.363)	(0.782)	(0.311)	(0.179)
Unemployment insurance	261.0	130.9	-252.5	-540.4	-43.80	-156.8
	(0.541)	(0.815)	(0.543)	(0.259)	(0.880)	(0.673)
Years of migration	62.79**	104.1***	-	-	-	-
	(0.015)	(0.005)				
Live in self-owned homes	3247.7**	2946.7	-	-	-	-
	(0.034)	(0.184)				
Rate of migrant homeownership	-539.4***	-680.8***	-	-	-	-
	(0.003)	(0.008)				

Table 4. Regression Results without Interaction Terms *(continued)*
(Dependent variable: annual per capita consumption; *p*-values in parentheses)

	Migrant		Local urban		Pooled	
	(1)	(2)	(3)	(4)	(5)	(6)
Non-local urban *hukou*	-661.3	-859.4	-1337.1*	-1965.0**	-783.8	-1385.1*
	(0.748)	(0.715)	(0.084)	(0.046)	(0.249)	(0.100)
Local rural *hukou*	673.3	1501.7	-137.6	-548.8	-1694.6***	-1993.7***
	(0.751)	(0.658)	(0.843)	(0.521)	(0.002)	(0.004)
Non-local rural *hukou*	-476.0	538.2	-2967.2***	-3581.9***	-2369.5***	-2539.1***
	(0.770)	(0.803)	(0.000)	(0.001)	(0.000)	(0.001)
Age	294.0**	326.6*	127.1	-4.109	228.3***	177.2***
	(0.025)	(0.064)	(0.400)	(0.979)	(0.000)	(0.006)
Square of age	-4.228**	-4.993**	-1.849	-0.293	-3.118***	-2.471***
	(0.022)	(0.045)	(0.276)	(0.867)	(0.000)	(0.004)
Young dependency ratio	-586.6**	-	-539.1	-	-848.6***	-
	(0.027)		(0.599)		(0.000)	
Young male dependency ratio	-	-654.7	-	294.6	-	-620.1*
		(0.147)		(0.832)		(0.086)
Young female dependency ratio	-	-385.1	-	-3468.7***	-	-1139.3***
		(0.431)		(0.007)		(0.001)
Old dependency ratio	258.8	1875.6	1242.2	-249.1	340.5	-444.6
	(0.815)	(0.286)	(0.243)	(0.843)	(0.615)	(0.600)
Years of schooling	261.8***	315.5***	97.11	12.62	185.4***	165.9**
	(0.003)	(0.002)	(0.204)	(0.883)	(0.001)	(0.027)
Married head	-923.2**	-951.8*	-114.9	41.04	-485.4	-309.2
	(0.011)	(0.076)	(0.872)	(0.958)	(0.124)	(0.455)
Household size	-803.9*	-969.2*	-1388.8***	-1147.5***	-600.6***	-628.8***
	(0.078)	(0.090)	(0.000)	(0.000)	(0.003)	(0.010)
2008 survey	2010.3***	2045.2***	-	-	1723.1***	1790.5***
	(0.000)	(0.000)			(0.000)	(0.000)
Constant	-1404.4	-985.0	4076.9	6839.5*	-150.6	1189.1
	(0.486)	(0.709)	(0.222)	(0.060)	(0.887)	(0.423)
Adjusted R-squared	*0.506*	*0.458*	*0.561*	*0.587*	*0.537*	*0.531*

Consistent with the summary data in Table 3, self-employed migrant households consume substantially more. However, the dummy for employment without contracts is not significant. Among other variables associated with precautionary saving, there is evidence that adequate medical and pension insurances encourage spending. Regressions for migrants and the pooled data both suggest higher consumption for those with pension plans, although the medical insurance dummy has conflicting signs for migrant and urban households. As discussed previously, migrants' medical insurance is generally too inadequate to soothe the need for precautionary saving; the dummy in the regressions for migrants may capture risk aversion instead. A better alternative, the out-of-pocket medical payment ratio, indicates that better medical insurance indeed boosts consumption. If the out-of-pocket payment ratio is reduced from the average level of 95% for migrants to the local urban level, 53%, their annual consumption can increase by ¥424 per person. Similarly, inadequacy of worker compensation and unemployment insurances may be the cause for the insignificant estimations for these two variables.

Estimations are significant for migration duration in both regressions for migrant households, which supports the hypothesis that longer urban residence mitigates rural migrants' cultural differences with local urban residents and narrows the consumption gap. The average of the estimations suggests that every 5 years of urban residence of the household head increases annual per capita consumption by ¥415. Although significant in only one of the regressions, the magnitude of the local homeownership parameter is immense, similar to that for self-employment.

The migrant local homeownership rate is consistently negative and highly significant, as expected. However, it is unclear whether it mainly captures the cost of living effect or the likelihood for migrants to own homes and thus the incentive to save for home purchases. If it mainly reflects the likelihood for migrants to own homes, the variable should have a lesser or no effect on those who already own homes, since the incentive to save to buy another home should be much weaker (hence the U-shaped saving pattern for urban households in Chamon and Prasad 2010). To shed some light on this issue, a regression is run with migrant homeowners only. The coefficient for the homeownership rate is highly insignificant, even after the model is reduced to only 5 explanatory variables using the Schwarz Bayesian model selection criterion to accommodate the smaller sample (145 observations). Thus, it is likely that this variable mainly reflects the likelihood for migrants to own homes.

One may argue that those who spend more are less likely to be homeowners; therefore, the homeownership dummy is endogenous. Unfortunately, no candidate from the survey can serve as a good instrument that is correlated to homeownership while exogenous to consumption, including the provision of housing funds. A housing fund serves as a saving scheme for home purchases with joint contributions from employers, but is unavailable to most migrant households. An overwhelming portion of the migrant homeowners (93%) are not funded by a housing fund.

However, if higher consumption reduces the likelihood of owning homes while homeownership stimulates consumption, the coefficient for homeownership may be biased downward. That is, the true effect of homeownership can be even higher. In addition, any such bias is likely limited

because of migrant households' lack of intention to acquire homes in local cities for reasons such as reluctance to stay permanently and prohibitively high home prices. Cross-province comparison does not detect severe simultaneity bias either. The downward bias should be more severe in locations where migrant households are more likely to own homes, or where the homeownership rate is higher, which ranges from 1.9% to 7.9% in the 2008 survey, with Guangdong at the bottom, and Anhui at the top. However, when interaction terms between the homeownership rate and the province dummies are included, they are highly insignificant for all provinces except for one at the 10% level, Hubei province, which has a medium level of homeownership rate (4.7% in 2008).

As a result of the collinearity between the local and non-local rural *hukou* dummies, it is not a surprise that the estimations of their effects are not significant for the migrant household sample. However, with the collinearity issue resolved in the pooled sample, they become highly significant. Households with rural *hukou,* particularly those with non-local rural *hukou,* consume significantly less than those with local urban *hukou.* The average of the estimations from regressions 5 – 6 indicates that all else equal, each local rural migrant consumes about ¥1,844 less than local urban residents, and each non-local rural migrant consumes ¥2,454 less. These estimations reflect the consumption gap caused by migrants' precautionary saving and temporary migration that are unaccounted for by other explanatory variables. As noted previously, given that the average per-capita net remittances is ¥2,228, even if all remittances are consumed in their rural homes, which is unlikely to be the case, total consumption generated by non-local rural migrants' income would still be lower than those by local urban residents.

Both age and the square of age are significant in the regressions except for the urban household data. However, the signs of the coefficients indicate that consumption exhibits a pattern opposite to what is suggested by the life cycle theory. Judged by the average of the regressions for the migrant sample, consumption seems to first increase with age, peak at age 34,[11] then decline. With the pooled sample, consumption peaks at age 36. This result coincides with the findings by Chamon and Prasad (2010), who conclude that the saving pattern is U-shaped against age for urban households in China, which can be explained by the high housing and education cost that affects the middle aged more. The desire to leave a bequest can also motivate saving for older people, as in Yin (2012). Consistent to this result, the old dependency ratio is insignificant in all regressions.

However, the young dependency ratio in the regressions for the migrant and pooled samples supports the life cycle theory. On average, migrant households have a higher young dependency ratio, with 0.3 for all households and 0.8 for those with young dependents, as opposed to 0.2 and 0.3 for local urban households. Interestingly, when the young dependency ratio is replaced by the young male and female dependency ratios, the results suggest that urban households save more for daughters, contrary to Wei and Zhang (2011).

[11] The function $-4.61 * (\text{age} - 33.6)^2$ corresponds to the averages of the parameters for age (310.3) and age^2 (–4.61).

Table 5. Regression Results with Interactions
(Dependent variable: annual per capita consumption; *p*-values in parentheses)

	Migrant		Local urban		Pooled	
	(1)	(2)	(3)	(4)	(5)	(6)
Income per capita	-0.178	-0.312*	0.524***	0.561***	0.686***	0.724***
	(0.373)	(0.060)	(0.000)	(0.000)	(0.000)	(0.000)
Room and board subsidies	-0.063***	-0.073**	0.112	0.107	-0.095***	-0.094***
	(0.002)	(0.011)	(0.504)	(0.551)	(0.000)	(0.000)
Net remittances	-0.214***	-0.249***	-	-	-	-
	(0.000)	(0.000)				
Without contract	-3608.6**	-4411.4***	-2583.2**	-2525.7**	-1836.4**	-2161.3***
	(0.011)	(0.002)	(0.020)	(0.037)	(0.012)	(0.007)
Income * without contract	0.193**	0.232***	0.114*	0.099	0.100**	0.115**
	(0.011)	(0.004)	(0.082)	(0.160)	(0.022)	(0.018)
Self-employment	-644.5	-1862.1	1925.8	1530.4	1531.8	968.6
	(0.705)	(0.209)	(0.123)	(0.269)	(0.146)	(0.380)
Income * self-employment	0.132	0.179**	-0.072	-0.0862	-0.004	0.006
	(0.132)	(0.026)	(0.191)	(0.131)	(0.941)	(0.922)
Medical insurance	-378.2**	-	1217.2***	-	-96.68	-
	(0.034)		(0.008)		(0.492)	
Out-of-pocket medical pay rate	-	-9.151*	-	5.054	-	1.381
		(0.060)		(0.290)		(0.697)
Pension insurance	461.6	131.1	-260.9	577.6	3178.7**	3486.6**
	(0.111)	(0.712)	(0.579)	(0.288)	(0.048)	(0.029)
Income*pension insurance	-	-	-	-	-0.133*	-0.138*
					(0.081)	(0.064)
Worker compensation	272.5	358.9	-277.7	-93.27	-129.3	-257.0
	(0.384)	(0.324)	(0.490)	(0.842)	(0.598)	(0.387)
Unemployment insurance	-7.361	-235.1	-224.9	-478.6	72.64	62.93
	(0.982)	(0.594)	(0.566)	(0.297)	(0.786)	(0.857)
Years of migration	-295.3***	-310.9***	-	-	-	-
	(0.003)	(0.004)				
Income * years of migration	0.018***	0.020***	-	-	-	-
	(0.001)	(0.001)				

Table 5. Regression Results with Interactions *(continued)*
(Dependent variable: annual per capita consumption; *p*-values in parentheses)

	Migrant		Local urban		Pooled	
	(1)	(2)	(3)	(4)	(5)	(6)
Live in self-owned homes	-1577.5 (0.432)	-2722.8 (0.213)	-	-	-	-
Income * live in self-owned homes	0.141 (0.183)	0.183* (0.098)	-	-	-	-
Rate of migrant homeownership	-462.6*** (0.000)	-506.5*** (0.000)	-	-	-	-
Non-local urban *hukou*	-1378.5 (0.409)	-1091.6 (0.542)	-1228.6 (0.126)	-1820.0* (0.076)	5608.0 (0.145)	5376.2 (0.249)
Local rural *hukou*	-865.5 (0.458)	-516.2 (0.697)	-184.2 (0.774)	-435.7 (0.565)	-6674.6 (0.180)	-8052.1 (0.141)
Non-local rural *hukou*	-1323.3 (0.220)	95.93 (0.933)	-2671.0*** (0.001)	-3257.6*** (0.003)	10087*** (0.008)	12176*** (0.001)
Age	280.9*** (0.001)	300.1*** (0.005)	120.4 (0.413)	1.565 (0.992)	194.7*** (0.000)	158.9** (0.013)
Square of age	-4.242*** (0.000)	-4.817*** (0.001)	-1.876 (0.259)	-0.512 (0.766)	-2.836*** (0.000)	-2.466*** (0.003)
Young dependency ratio	-680.6*** (0.003)	-	-539.1 (0.595)	-	-991.9*** (0.000)	
Young male dependency ratio	-	-725.4* (0.064)	-	-114.9 (0.938)	-	-868.7*** (0.007)
Young female dependency ratio	-	-329.5 (0.384)	-	-3620.5*** (0.004)	-	-1098.6*** (0.001)
Old dependency ratio	1257.4 (0.193)	3064.5** (0.013)	1400.8 (0.180)	-79.06 (0.949)	292.6 (0.663)	-67.21 (0.936)
Years of schooling	-463.0** (0.018)	-602.3*** (0.001)	527.1*** (0.006)	504.5*** (0.003)	602.4*** (0.004)	618.4*** (0.002)
Income * years of schooling	0.035*** (0.001)	0.044*** (0.000)	-0.017** (0.038)	-0.018** (0.018)	-0.019** (0.036)	-0.021** (0.017)

Table 5. Regression Results with Interactions *(continued)*

(Dependent variable: annual per capita consumption; *p*-values in parentheses)

	Migrant		Local urban		Pooled	
	(1)	(2)	(3)	(4)	(5)	(6)
Income * schooling * non-local urban *hukou*	-	-	-	-	0.028**	0.031**
					(0.024)	(0.027)
Income * schooling * local rural *hukou*	-	-	-	-	-0.044**	-0.055**
					(0.050)	(0.041)
Income * schooling * non-local rural *hukou*	-	-	-	-	0.049***	0.057***
					(0.000)	(0.000)
Schooling * non-local urban *hukou*	-	-	-	-	-245.2	-329.1
					(0.423)	(0.311)
Schooling * local rural *hukou*	-	-	-	-	423.2	609.1
					(0.218)	(0.143)
Schooling * non-local rural *hukou*	-	-	-	-	-981.6***	-1099.8***
					(0.000)	(0.000)
Income * non-local urban *hukou*	-	-	-	-	-0.480***	-0.493**
					(0.010)	(0.034)
Income * local rural *hukou*	-	-	-	-	0.530	0.612*
					(0.105)	(0.085)
Income * non-local rural *hukou*	-	-	-	-	-0.617***	-0.742***
					(0.002)	(0.000)
Married head	-965.9***	-1021.8**	63.27	182.7	-310.3	-168.0
	(0.003)	(0.013)	(0.922)	(0.789)	(0.267)	(0.623)
Household size	-443.5**	-372.2*	-1388.4***	-1098.6***	-539.0***	-510.9***
	(0.015)	(0.058)	(0.000)	(0.000)	(0.000)	(0.001)
2008 survey	1908.1***	1741.6***	-	-	1576.5***	1574.3***
	(0.000)	(0.000)			(0.000)	(0.000)
Constant	10321***	12380***	-1026.2	597.6	-6596.7**	-6604.1**
	(0.004)	(0.000)	(0.795)	(0.884)	(0.021)	(0.029)
Adjusted R-squared	*0.623*	*0.661*	*0.580*	*0.609*	*0.581*	*0.590*

To remove the constraint of uniform marginal propensity to consume, interactions between household head characteristics and income per capita are considered extensively. To avoid

unnecessary enlargement in the number of estimations, Table 5 presents the results with significant interactions only, which involves employment types, duration of migration, the homeownership dummy, and years of schooling for the separate samples, and additionally pension insurance for the pooled sample. Because years of schooling and its interaction with income have opposite signs for migrants and local urban households, three-way interactions between these two variables and the *hukou* dummies are also included in the pooled regressions, which are all significant. Both the link test and the RESET test confirmed the validity of functional forms for all regressions.

Estimation results are generally consistent with those without interaction terms. In most regressions, the main effect for employment without contracts and its interaction with income are now significant with opposite signs, suggesting most households headed by those without contracts consume less, given that 70% of these households' income per capita is ¥18,000 or less. However, the depressing effect on consumption dissipates for higher income households, causing an insignificant overall effect. Similarly, lower income households seem to value pensions more than higher income households do, indicated by the negative coefficient for its interaction with income.

The age related variables again do not support the life cycle theory, except for the young dependency ratios, in which case the evidence is stronger. The young male dependency ratio is now weakly significant for the migrant sample and strongly significant for the pooled sample. Again, for the local urban household sample, no evidence of competitive saving for sons is detected, but there is strong and consistent evidence for higher saving associated with daughters.

The opposite signs of the parameters for years of schooling and its interaction with income for the migrant and urban samples are confirmed in the pooled regressions by the three-way interaction terms with *hukou* as the third item. Regressions with both of the local urban and pooled samples indicate that household heads' education produces a positive effect on consumption for 80 − 85% of local urban households (those with income per capita ¥28,027 − ¥31,705 or lower). The effect is positive for all non-local urban migrants and about three-quarters of non-local rural migrant households (with income per capita ¥12,640 or higher, according to regression 5).

The average marginal effects for the variables involved in the interaction terms corresponding to the regressions in Table 5 are summarized in Table 6. As in the regressions without the interaction terms, self-employment, local homeownership, and years of migration continue to have sizable positive effects, although the magnitude of the effect of local homeownership is smaller.

Table 6. Average Marginal Effects of the Variables in the Interaction Terms
(*P*-values in parentheses)

	Migrant		Local Urban		Pooled	
	(1)	(2)	(3)	(4)	(5)	(6)
Income per capita	0.35***	0.33***	0.33***	0.35***	0.37***	0.37***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Without contract	372.1	438.7	359.0	142.7	322.1	267.5
	(0.153)	(0.224)	(0.638)	(0.876)	(0.218)	(0.440)
Self-employment	2067.3***	1885.6***	84.00	-788.4	1446.0***	1122.5***
	(0.000)	(0.000)	(0.882)	(0.244)	(0.000)	(0.002)
Pension insurance	461.6	131.1	-260.9	577.6	308.6	410.7
	(0.111)	(0.712)	(0.579)	(0.288)	(0.193)	(0.181)
Years of migration	73.25***	111.2***	-	-	-	-
	(0.002)	(0.000)				
Live in self-owned homes	1319.6**	1110.1*	-	-	-	-
	(0.046)	(0.096)				
Years of schooling	261.9***	316.5***	97.04***	19.20***	177.9***	164.5***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Non-local urban *hukou*	-1378.5	-1091.6	-1228.6	-1820.0*	-769.7	-1082.6
	(0.409)	(0.542)	(0.126)	(0.076)	(0.156)	(0.116)
Local rural *hukou*	-865.5	-516.2	-184.2	-435.7	-1081.2*	-729.9**
	(0.458)	(0.697)	(0.774)	(0.565)	(0.091)	(0.467)
Non-local rural *hukou*	-1323.3	95.93	-2671.0***	-3257.6***	-1916.5***	-924.1**
	(0.220)	(0.933)	(0.001)	(0.003)	(0.000)	(0.021)

There is evidence that marginal propensity to consume is higher for migrant households who have resided in the city longer, are self-employed, or live in self-owned homes, indicated by their significant interaction terms with income in at least one regression. This result is further illustrated in Table 7, derived from regression 2 in Table 5. The acceleration of consumption with income for migrant households with longer durations of migration implies that given time, migrant households' consumption may catch up with the local urban level. This result echoes the findings based on household data in Nepal by Acharya and Leon-Gonzalez (2015).

Table 7. Migrant Marginal Propensity to Consume by Characteristics of Household Heads

	All households	Homeowner	Non-homeowner	Self-employed	Non-self-employed
All households	**0.330**	**0.651**	**0.323**	**0.472**	**0.310**
Duration of urban residence					
29 months	0.230	0.456	0.225	0.306	0.219
70 months	0.301	0.528	0.296	0.377	0.291
135 months	0.401	0.627	0.396	0.477	0.391

5. Conclusion

This paper studies the consumption patterns of migrant households in China using data from the CHIP 2007 and 2008 migrant and urban household surveys, and seeks to explain what factors contribute to the consumption gap between local urban and migrant households. The lower consumption of migrant households is well explained by two main channels: the greater need for precautionary saving due to financial insecurity; and their tendency to view urban income as transitory income due to the temporary nature of migration. Both channels are rooted in their non-local *hukou* in the current system. For most migrant households, financial insecurity mainly arises from employment without contracts and no or inadequate medical and pension insurances. The transitory nature of migration is represented and reinforced by the absence of homeownership in host cities as well as their short durations of urban residence, which allows the divergence in tastes and value between migrant and local urban residents to persist. These factors are not isolated from each other; they are intertwined and reinforce each other's depressing effect on consumption. The remaining effects of the two channels not explained by these variables are captured by the non-local *hukou* migrants hold.

The paper finds that marginal propensity to consume exhibits heterogeneity across migrant households. Specifically, it increases with a longer duration of migration, homeownership, and self-employment. However, most migrant households' marginal propensity to consume is depressed for lacking these characteristics.

Removing the *hukou* system will have the largest impact on migrant households' consumption as well as in other aspects of their lives, but it can also have many implications to host cities, such as urban poverty and the capacity to provide education and public transportation. An alternative is to take a gradualist approach, and grant certain benefits associated with local urban *hukou*. For example, providing and improving pension and medical insurances to migrant workers can produce substantial effects on consumption, especially for lower income households.

Likewise, labor laws protecting migrant workers from discrimination and exploitation in wages and employment contracts will also help boost their consumption. In addition, given the difficulties for migrant households to find employment with adequate income, policies

promoting entrepreneurship for migrant workers will be particularly beneficial. With the large discrepancy in consumption between self-employed and non-self-employed households, a higher share of self-employed migrant workers will not only help raise their income and reduce local income inequality, it will also boost demand.

Host cities can also do more to foster migrant homeownership by providing them affordable housing and access to home loans, thereby directly lifting their spending on durable goods, and indirectly encouraging consumption by inducing long term urban residency. However, such policies may be ineffective if it motivates households to save excessively for home purchases. Policies to reduce the transience of migration may also include providing migrant children easy access to local public schools, an issue already widely covered by the media. Such policies will encourage migrants to form a better sense of belonging to the host city, and will also improve their general wellbeing.

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