How rural-urban identification influences consumption patterns? Evidence from Chinese migrant workers

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Abstract

Purpose – The purpose of this paper is to examine spending pattern of Chinese migrant workers from rural regions to urban cities from a social identity perspective, which stems from Chinese Hukou system (household registry system). This study proposes a theoretical model for consumer utility function (a combination of economic utility and social utility) which takes into account the choice of social identification.

Design/methodology/approach – This study focusses on the influence of rural and urban identification on consumption patterns of Chinese migrant workers. These assumptions were verified based on a survey with 650 samples in Shanghai, one of the most developed cities in China.

Findings – Results indicate that affirmative social identification has a significantly positive effect on the level of consumption for migrant workers. High level of rural identification has a more significant impact than urban identification on survival consumption including food, medicine and family support. On the other hand, high level of urban identification has a more significant impact than rural identification on development consumption including education for children, training and recreation. Besides, there are significant interaction effects between income and identity on consumption, which confirms the identity effect on classical economic model and is in line with identity economics' arguments.

Originality/value – This study outlines the importance of social identity in both economics and marketing domains and proposes a theoretical model which advances understanding of a model on similar lines proposed by Akerlof and Kranton's (2000) and Benjamin *et al.* (2010). Empirical tests with Chinese migrant workers' data present that their consumption patterns are influenced by their level of social identifications.

Keywords Social marketing, Consumer behaviour

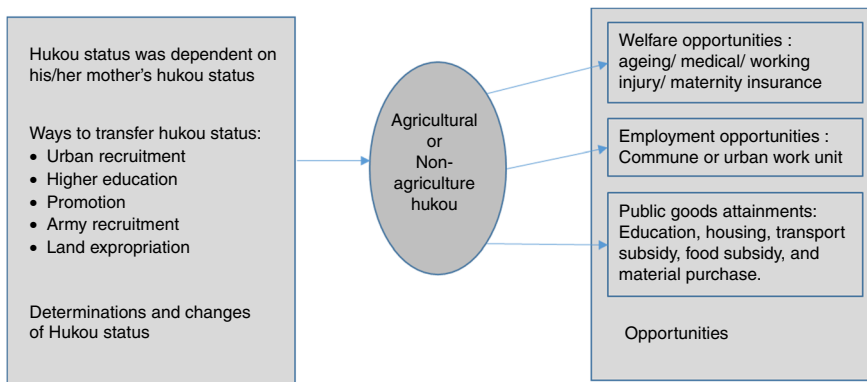**Paper type** Research paper

1. Introduction

1.1 Background

Chinese migrant workers are defined as those who hold peasant *Hukuo* (Chinese household registration system)[1] but have migrated from rural agricultural areas to urban areas where they now work and live (Chu *et al*, 2013). *Hukou* system has segregated the rural and urban populations, initially in geographical terms, but more fundamentally in social, economic, and political terms. To an individual, *Hukou* status is an important ascribed attribute in determining one's social and economic circumstances (Chan, 2010).

Migrant workers are the main force for urbanization as well as the main thrust behind making China as one of the world's leading manufacturer of a multitude of products which is evident by the "Made in China" tagline affixed on several products across the globe during the past 30 years. There are over 250 million migrant workers in China (National Bureau of Statistics of China, 2013), resulting in an estimated annual spending power of US $312 billion (Chu *et al.*, 2013). These numbers are expected to reach 400 million by 2,025 and spending power of consumers would be much higher when compared to the current scenario. Most migrant workers originate from underdeveloped Chinese regions, like Sichuan, Hunan, Henan, Anhui and Xinjiang Provinces. The major destinations of these migrant workers are coastal developed cities like Beijing, Shanghai and Shenzhen (National Bureau of Statistics of China, 2013). Another important destination for migrant workers are interior parts of China wherein the labor market competition is less fierce and more job opportunities exist. The high rate of migration is a result of high demand of cheap labor by factories in the city and the high labor surplus in rural regions of China due to the modernization of agricultural technology (Figure 1).

Migrant workers, who often leave behind the poverty stricken conditions of rural countryside areas often work either in the construction industry or in low-end service jobs in cities, where China's restrictive household registration system limits their access to education and healthcare services. Lacking legal resources or bargaining power, China's migrants often struggle just to get a basic measure of respect and stability. Migrant workers can range from teenagers to people in their old age. The majority of Chinese migrant workers are employed in many underpaid professions as factory workers, construction workers, food stand vendors, truck drivers, or attendants in service industries (Branigan, 2014; National Bureau of Statistics of China, 2013). As a result, these consumers are limited in what they can consume because of necessary remittance that they need to support their families living in remote rural areas. Those consumers who earn a high salary and live as urban citizens are recognized as city insiders. It is worth mentioning at this point that some migrants would like to be recognized as urban citizens so as to integrate into the urban life style despite their income and backgrounds (Ren and Pun, 2009). To achieve this goal, one way suggested by sociologists is to construct a consuming subject and to produce modernity during the process of individualization (Bauman, 2000). Material goods and consumption are purchased and interpreted by these migrants in order to develop new identities

Hukou status was dependent on his/her mother's hukou status

Ways to transfer hukou status:
• Urban recruitment
• Higher education
• Promotion
• Army recruitment
• Land expropriation

Determinations and changes of Hukou status

Agricultural or Non-agriculture hukou

Welfare opportunities : ageing/ medical/ working injury/ maternity insurance

Employment opportunities : Commune or urban work unit

Public goods attainments: Education, housing, transport subsidy, food subsidy, and material purchase.

Opportunities

Source: Huangg *et al.* (2010)

Figure 1.
Hukou status and opportunities structure

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(Lamont and Molnar, 2001), this is especially common among Chinese migrant workers (Pun, 2003). Previous research has proposed that acculturation and consumption practices are adopted by international migrants to integrate into the host society (Peñaloza, 1994; Oswald, 1999; Askegaard *et al.*, 2005; Chu *et al.*, 2014). However, many Chinese migrant workers still prefer to maintain their identity as rural citizens and plan to return to their hometown once they have saved enough money to sustain their livelihood (Ren and Pun, 2009). Therefore, they usually give lots of remittance to their parents or spouses in their hometown and only purchase goods with savings in mind.

1.2 Research gap
Limited research exists on the issue of how the identity of Chinese migrant workers influences their social or consumption decisions. Chen *et al.* (2012) recently investigated how migrant workers deal with their income, but the main focus of their research is on the *Hukou* policy of migrant workers. Their results indicate that migrant workers with urban *Hukou* identity are more willing to consume than the ones with rural identity. In addition, Afridi *et al.* (2012) conduct an experimental study that investigated the causal impact of *Hukou* salience as one kind of social identity on individual's response to economic incentive using rural migrant children. Chu *et al.* (2013) offer empirical evidence to identify factors influencing Chinese migrant workers adoption of urban consumer habits without discussing social identity. Previous research has demonstrated that social identity can shape consumers' preference structure with respect to both social activities and consumer behaviors (e.g. Reed *et al.*, 2012; White *et al.*, 2012; Baltes *et al.*, 2014). The current study focusses on the effects of social identity on the consumption decisions of individual Chinese migrant workers. Chinese rural and urban citizenship are considered to be forms of social identity which can be considered similar to ethnicity. The government faces many challenges to influence the physical identity of migrant workers resulting from the *Hukou* system in order to stimulate migrant worker consumption[2]. However, it is less difficult to enact policies which would make migrant workers feel as they belong to a certain city (insider) as opposed to having a feeling of non-belongingness (outsider) (Chu *et al.*, 2014). The findings of the current research can have governmental implications since if we are able to put forth that an "insider" identity can positively influence consumption decision of migrant workers, this can help Chinese government to stimulate migrant workers' consumption patterns without changing institutional policies. Accordingly, researching the influence of the psychological identity may have significant and realistic applications with regards to Chinese migrant workers.

1.3 Expected contribution
This paper focusses on the migrant workers' psychological identity. We assume that the rural and urban identification of migrant workers are mutually exclusive and negatively related to each other. This assumption results because we argue that it is not possible for an individual to have two identities at the same time considering the absolute disadvantages of rural *Hukou*. This study uses an innovative approach to evaluate social identity. Without adhering to conventional approaches (compare consumption differences between Chinese migrants with Urban *Hukou* and those without it), the result can demonstrate a different way and inspire future studies which could be undertaken from consumers' subjective perspective. There are different classifications on identities according to different research contexts but these can be

classified into two categories: psychological and physical identity, similar to attained and ascribed identity. The former focusses on the ways individuals prefer to be recognized by others and by themselves. We call these identities as rural and urban identities of Chinese migrant workers. Physical identity includes identities other than the psychological ones, they are immutable or not easily variable, extrinsic, and independent of the person's willingness or preference of recognition. For instance, physical identity may include gender, ethnicity and Chinese *Hukou*.

Besides, this paper outlines the importance of social identity in both economics and marketing domains and proposes a theoretical model based on Akerlof and Kranton's (2000) and Benjamin *et al.* (2010) findings. Relative hypotheses are proposed based on our theoretical model. Empirical tests from Chinese migrant workers in Shanghai are presented with respect to their consumption patterns influenced by their level of social identifications. Finally, some research limitations and managerial implications are also put forth.

2. Identity in economics and marketing
2.1 Identity in utility
Identity or a person's self-image, is multidimensional and is represented in terms of a different categories such as ethnicity, gender, religion, etc. which can be ascribed to an individual (Davis, 2007). Identity was incorporated into the utility function that describes how identity influences individual goal achievement by Sen (1999). Another study by Folbre (1994) discusses the gender identity which causes male privilege in the collective action. Kevane (1997) finds that a team member's behavior is affected by their identity when group sanctions are possible. Other studies focus on the influence of the identities like ethnicity or religion on people (e.g. Akerlof and Kranton, 2000, 2005; Landa, 1994; Sen, 1999).

Akerlof and Kranton (2000) propose that identity actually accounts for various phenomena in our society and gives a systematical explanation for it. They first point out that identity associates with what categories people intend to classify themselves into. Individuals consider themselves the same as people in some categories and differentiate themselves from those in others. It should be noted that their view of identity can range from what social categories the individuals claim they are really in (physical identity) to what status in a group they think they are at (psychological identity).

Each category is always associated with some norms which regulate how people should behave if they claim that they are in that category or they want others to think that they are in it. When the norms are violated, it generates a sense of anxiety or angst which would reduce the utility of people. Thus, this makes it necessary to have a remedial action to restore their unity, hence to increase their utility. The utility function proposed by Akerlof and Kranton (2000) incorporating the individual identity can be expressed as:

$$U_j = U_j\big(a_j,\ a_{-j},\ I_j\big) \tag{1}$$

According to their opinion, the utility of people should depend on their identity I_j, their action a_j and others' behavior a_{-j}. Hence, the individual identity is defined as:

$$I_j = I_j\big(a_j,\ a_{-j};\ C_j,\ \epsilon_j,\ P\big) \tag{2}$$

The identity I_j depends on its assigned categories c_j by others, the extent to which j's own given characteristics ε_j match the ideal of j's own assigned category, P, and the extent to which j's own and others' behavior actions correspond to prescribed behavior, also indicated by P. Moreover, given the individual identity I_j and others' actions a_{-j}, an individual would choose a certain action a_j to maximize its utility. Despite of choosing actions, an individual can also choose the category c_j which he/she would like to be classified into. The assigned category c_j would affect the individual identity I_j, hence affect the action a_j. This demonstrates how choice of identity influences the behavior of people.

From an identity economics perspective (Akerlof and Kranton, 2000), incorporating the concept of identity into the economic analysis would generate at least four behavior-related conclusions. First, identity can explain behavior that appears detrimental. Second, identity underlies a new type of externality. Third, identity reveals a new way that preferences can be changed. Fourth, since identity is fundamental to behavior, choice of identity may be the most important "economic" decision people make.

Applying the above theory to the realm of consumption, we would assume that people with similar assigned categories have similar identity, and hence similar consumption pattern (e.g. Deshpande *et al.*, 1986; Donthu and Cherian, 1994). Only by consuming in this optional pattern a_{jmax}, can the people with identity I_j have their utility maximized:

$$\max U_j = U_j\big(a_{jmax}, \ a_{-j}, i_j\big) \tag{3}$$

Similar to Akerlof and Kranton's (2000) assumption model, if an individual with identity I_j does not choose the consumption pattern a_{jmax}, the individual would have negative emotions like anxiety or angst and his utility would decrease. Thus, he would be forced to go back to his optimal consumption choice a_{jmax}. For example, the optimal consumption pattern of a noblewoman with high dignity and considerable wealth would be purchasing luxurious garments and high-quality foods with prohibitive price. If she does not choose her a_{jmax} and buy some cheap goods instead, yet her female friends might insist on buying expensive stuff, the noblewoman will feel ashamed of her action and have some negative sentiments such as embarrassment. Therefore, she will seek her optimal consumption choice a_{jmax}.

However, Akerlof and Kranton's theory does not provide a perfect explanation as to why people with similar identity would share a similar consumption pattern, as they employ an over-simplistic view of people's utility. Akerlof and Kranton explain that people's utility drops as the "unity sense of self" is damaged or when the norms of their identity are violated by some actions. But the utility of a person is far more complex than a simple unity sense of oneself, so a more complete theory concentrating on consumption should be employed to illustrate this problem.

2.2 Identity in consumer value
Akerlof and Kranton's theory focusses on the economic utility of an individual's decisions. This indicates that value is economic in nature based on the tangibility of products in the neoclassic economics framework. The neoclassic economics framework differs from the social utility of consumption and as a result, it can also generate the functional utility for the consumers based on the practical value of the products or services. For example, most people buy goods like combs or earphones used to comb

hair and listen to music, respectively. However, other social scholars will not agree with this wholeheartedly. In marketing, consumer value is defined as an interactive relativistic preferential experience. Frenzen and Davis (1990) propose similar classification with regards to consumer utility, which includes acquisition and exchange utility.

Holbrook (1999) takes a pioneering work on this topic and figured out three dimensions on consumer value: extrinsic vs intrinsic, self-oriented vs other-oriented and active vs reactive. According to the classification, consumption can generate an extrinsic, other-oriented and active consumer value which involves displaying the image matching their ideal identity in public. This phenomenon can be referred to as an identity signaling value of consumption. This generates social utility for the consumers, as people manage their impression on others to match their identity by consuming certain goods in certain ways.

Consumers purchase not only because the goods can provide them with certain kinds of functional value, but also because the experience of purchasing can be seen as a symbol which can display or construct their identities. Sociologist and consumer researchers on consumer culture have demonstrated this affirmatively (Dong and Kelly, 2009; Üstüner and Holt, 2010; Chu *et al.*, 2014). This value of consumption mentioned above should be assigned as a social utility for consumers instead of its functional utility (Ariely and Norton, 2009; Charles *et al.*, 2008). Berger and Heath (2007) find that the influence of identity on the consumption decision of consumers is just imposed by the social value of the goods. Different social identities would lead to different consumption decisions as a way of passing different identity signals. Taking into the account the earlier put forth scenario of the noblewoman, she purchases luxurious garments and high-quality foods in order to display her aristocratic identity.

There are many eminent scholars who have conducted experiments to test the influence of identity on the consumption decision and the significance of social utility. Ariely and Levav (2000), Ratner and Khan (2002) and Kim and Drolet (2003) find that consumers would take both social utility and practical utility of the products into consideration when they decide which ones to purchase. The previous literature also concludes that people who pay more attention to their social identity would be more likely to prefer the products with high social value. In addition, it was found that people would purchase goods with higher social value when they make consumption decision in a group than when they do it alone. Empirical evidence of the significance of identity can be found in other literatures (e.g. Amiot *et al.*, 2007; Fortune and Newby-Clark, 2008; Lamont and Molnar, 2001).

3. Theoretical framework and hypotheses
In order to integrate findings from both economics and consumer value domains, we assume that the utility of consumption for people can be mainly decomposed into basic utility (as an economic subject) and sustainable utility (as a social subject). The former is alienable and only dependent on its own consumption decision and the attributes of goods. In contrast, the latter is inalienable and dependent on the individual identity, its consumption decision and the consumption decision of the surrounding people. This following part concentrates on building a comprehensive model, which takes into account both the social and individual economic utility of consumption and is inspired by Akerlof and Kranton's (2000) and Benjamin *et al.* (2010). This model has been put forth to simulate the impact of identity on the individual consumption decision which

includes weights between the social and individual economic utility. Thus, the utility of the consumption can be expressed:

$$U_j = U_j\big(C_j, \ C_{-j}, \ I_j, \ G\big) \tag{4}$$

$$U_j = \alpha^U\left(I_j^{\,U}\right) \cdot U_{js}\big(C_j, \ C_{-j}\big) + \alpha^R\left(I_j^{\,R}\right) U_{ji}\big(C_j, \ C_{-j}\big) \tag{5}$$

In Equations (4) and (5), C_j and C_{-j} are the consumption decisions of the individual j and surrounding people, respectively. G is the property or function of the goods purchased. $U_{JS}(\cdot)$ and $U_{ji}(\cdot)$ are the function of social and individual economic utility, respectively. We assume social utility refers to urban city norms and individual economic utility refers to rural norms. The α^U and α^R are the weights placed on the social category urban and rural *Hukou,* respectively. In a person's decision we assume $\alpha^U + \alpha^R = 1$ and $\alpha'(\cdot) > 0$.

For the sake of simplicity, in our context C is the consumption action choice. Migrant workers are assumed to seek belonging to a social category I_j which represents the urban *Hukou*, with strength $i \geqslant 0$. On the other hand, C_R denotes the individual's preferred consumption in the presence of rural identity consideration, and C_U denotes the action prescribed for members of urban members. The individual chooses C to maximize the following:

$$U = -\alpha^U\left(i^U\right)(C - C_U)^2 - \alpha^R\left(i^R\right)(C - C_R)^2 \tag{6}$$

Deviating from the norm prescribed for one's category causes disutility or an increase in i, which is the strength of one's affiliation with urban *Hukou* and rural *Hukou*. With respect to Chinese migrant workers, we assume $i^U + i^R = I_0$, where I_0 is assumed to be fixed and can be related to resource endowment. Migrant workers are assumed to make a decision about identity investment under strict constraints such as policy regulation and income level.

The first-order condition of Equation (6) gives the optimal action, $C^*(i^U, i^R) = \alpha^U C_u + \alpha^R C_R$, which is a weighted average of the preferred action with both identity consideration and the category norm. According to the previous assumption, the optimal consumption can be: $C^*(i) = \alpha^U(i)C_U + (1 - \alpha^U(i))C_R$. This condition yields several implications that guide our analysis.

First, the optimal consumption level is dependent on both rural and urban norms. Despite whether people will choose to identify with rural or urban identities, they will increase their consumptions. Second, social category priming ε also causes C to move close to C_U or C_R. Thus, the behavioral effect of priming social category reveals the marginal behavioral effect of increasing the steady-state strength i. This is why priming manipulations are a useful experimental procedure for studying how identity affects steady-state preference. Third, the sign of the priming treatment effect $C^*(i + \varepsilon) - C^*(i) \approx (dC^*/di)\varepsilon = \alpha'(i)(C_U - C_R)\varepsilon$, depends on the sign of $C_U - C_R$. Priming sensitivity varying with identification strength corresponds to the condition of d^2C^*/di^2, which varies in a neighborhood of i with $\alpha''(i)$.

Government restrictions on population movement, known as the household registration system, are to limit interaction between rural and urban areas in China. The resulting lack of interaction between rural and urban areas has fostered large

differences in cultural habits between residents of the two areas. Previous research has found substantial differences among urban and rural consumption decision-making styles and social consumption norms in China (Sun and Wu, 2004; Chan and McNeal, 2006). In addition, the utility functions are different among rural and urban consumers. Rural migrant workers are living marginalized lives (Wong *et al.*, 2007). Migrants who first enter into urban cities have to spend more money on food, housing and other necessary expenditures. These migrant workers follow the need hierarchy theory (Maslow, 1943) as they will improve their quality of life by satisfying their basic needs such as economic safety. Consumption behavior is another kind of labor reproduction and social decision for meeting different levels of needs. There are generally two living goals for migrant workers: survival and development. Regarding the former goal, migrant workers will make decision referring to rural standards. While the later goal will be met comparing with urban norms, in this paper, we classify migrant workers' consumption into some categories, where the difference between C_U and C_R has a different magnitude and sign. Accordingly, the optimal consumption level is affected to different extents keeping into account difference between C_U and C_R. We can assume that there are different urban and rural norms regarding consumption choice within different consumption categories.

Based on the above discussion, we established the following hypotheses which are related with the influence of rural and urban identification on the consumption decision of migrant workers:

H1. Migrant workers' spending will increase as their identity is more significant regardless of latter being rural or urban.

H2. Migrant workers with significantly high urban identity will spend more on goods and services related to urban development.

H3. Migrant workers with significantly high rural identity will consume more goods and services related to urban survival.

Income has been confirmed as a decisive factor in consumption power. *H4* is proposed based on our previous findings that the "income effect" still exists instead of "identity effect" (Chu and Zhang, 2011). The migrant workers with higher urban identification choose to simulate the life of urban citizens. Urban lifestyles are mostly related to brand commodities and symbolic consumption (Zukin, 1998). Therefore, migrant workers prefer social utility after meeting their needs of economic utility. In this way C_U is greater than $C_R(C_U > C_R)$, migrant workers prefer to spend more to increase their utility. However, migrant workers with significantly high rural identifications will hold the "peasant" view, as a result they are more likely to purchase products that are more practical and also give large quantities of remittance to their parents in their hometown $(C_U < C_R)$. Given the income level, those who admit their rural identity will allocate more of the marginal increase in income into consumption for urban survival. In contrast, those who confirm their urban identity will put more of the income marginal increase into urban developmental consumption. In conclusion, both identities would lead the migrant workers to consume more, though they spend in different manners:

H4. Income has a significantly positive effect on consumption for Chinese migrant workers.

H5. There is a significant interaction effect between income and identity salience influencing the consumption of goods and services related to both urban survival and development (Figure 2).

4. Method
4.1 Data collection
A survey questionnaire was developed by Fudan University and administered by The Shanghai Survey Corps of The National Bureau of Statistics from late 2012 to early 2013. Shanghai was chosen as the location for data collection, since it is China's leading commercial and financial hub. Shanghai has one of the largest in-flows of migrant workers in China. There are an estimated nine million Chinese migrant workers and their children living in Shanghai (Chu *et al.*, 2013). A stratified sampling method was used to select firms wherein migrant workers were known to be employed. Stratified sampling, to include immigrants from various provinces in China was employed in different professions to collect responses from 650 migrants. After the firms were selected, a total of 800 migrant workers in those firms were recruited to participate in our survey using the method of equal intervals with a randomly determined initial selection. The workers all have official rural *Hukou* in Shanghai. Since most of the migrant workers are illiterate because of their low education level, trained survey assistants were employed who helped to read and explain the survey questions to the respondents to ensure that the migrant workers understood the survey questions during their break time while working. Each interview was conducted, either in a conference room or workers' dormitory (where the migrant workers generally stay) with the aid of two assistants. While one assistant read, explained, and helped to fill questionnaire, the second assistant monitored and cross-checked all responses so as to ensure the process was completed accurately and objectively. Overall, a total of 650 migrant worker participants completed our survey (an effective response rate of 81.25 percent).

All migrant workers, came from various districts of China, were born on or after 1980. This age range was selected for the following reasons: First, young migrant workers occupy 50 percent of the total population of migrant workers and their proportion is expected to continue growing moderately in the following years. Second, the young age range means that the workers can be cultivated for a long period; their consumption patterns will continue and sustain for a prolonged period of time. Third, young workers are the most eager ones to be considered as urban citizens and have significant urban identity compared with their out-of-rural parents (Table I).
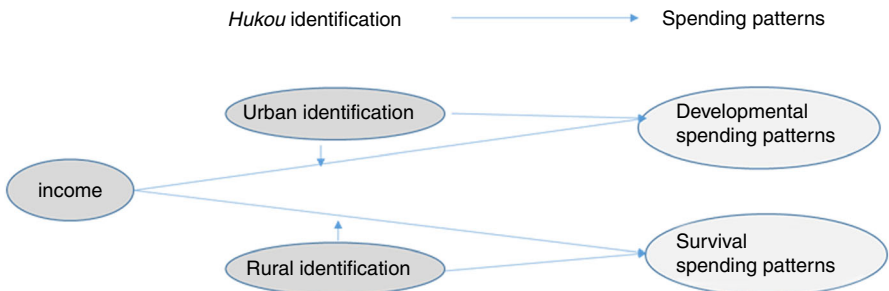
Figure 2.
Conceptual framework

Identity Observation		Urban 78	Rural 79	Ambiguous 493	All 650
Age (years old)	Mean	25	24.7	24.3	24.4
	SD	3.4	3.2	3.4	3.4
Male (%)		55.2	74.7	55.8	58
Years of education received (education)	Mean	10.6	10.8	11.3	11.1
	SD	2.3	2.7	2.5	2.5
Years stayed in Shanghai (YS)	Mean	4.91	3.95	4.14	4.21
	SD	3.9	2.7	3.2	3.2
No. of family members in Shanghai	Mean	2.1	1.8	1.9	1.9
	S.D.	1.1	1.1	1.1	1.1

Table I.
Descriptive data
of samples

4.2 Measurement of identity

We followed a self-labeling method proposed by Phinney *et al.*'s (1997) and developed a simple five-point Likert scale measurement which was adapted from the work on social identification carried out by Chu *et al.* (2014) . Two items were used to represent migrant workers' rural identity: R1, "I like to be recognized as an outlander (*Waidiren*)" and R2, "I like to be recognized as a rural resident (*Nongcunren*)." Two different items were used to represent migrant workers' urban identity: U1, "I like to be recognized as a Shanghainese (Shanghai ren)" and U2, "I like to be recognized as an urban resident (Chengliren)." The measurement is legible for these respondents with low education (Viswanathan *et al.*, 2008).

Previous research does not explain similarities or differences between the concepts of rural resident and outlander or between urban resident and Shanghainese in Shanghai (Chu *et al.*, 2014). On a more realistic note, classifying this term is beyond this study's scope. However, we rule out significant differences among different measurements after data analysis. Therefore in our proposed models, we adopt four identity measurements and use them as dummy variables in our regressions. According to their identification, we classify migrant workers into three groups: urban (Shanghainese) group; rural (outlander) group and the ambiguous group. With respect to every measurement, we will add two dummy variables representing two groups according to their score level.

4.3 Variables in empirical model
Dependent variable
- Consumption: measured by the numerical size of total monthly spending by referring to previous studies (e.g. Zheng *et al.*, 2009; Sun and Wu, 2004).

- Categorical consumption: eight categories including food, medicine, public utility, housing, transportation and communication (T&C), education for children, remittance and recreation are measured. We group food, medicine, public utility, housing and remittance into the survival consumption and the remaining are categorized into the urban development group (Chu *et al.*, 2014).

Independent variables
- Rural identity: those respondents with low score on R1 (who are identified as low rural identification group) are added as the first dummy variable, those respondents with high score on R1 (and are identified as high rural identification groups) are regarded as the second dummy variables (Chu *et al.*, 2014).

- Outlander identity: those respondents with low score on R2 (and are identified as low rural identification group) are added as the first dummy variable, those respondents with high score on R3 (and are identified as high rural identification group) are regarded as the second dummy variable (Chu *et al.*, 2014).

- Urban identity and Shanghainese: they are similar to what mentioned earlier.

Control variables. Keeping in line with previous research concerning consumption functions (e.g. (Deaton, 1992; Carroll, 1994; Attanasio and Weber, 1995), we use the control variables of *Income, Education, Gender, Age, number of Years of stay in Shanghai* in our models We include one interaction term between income and identity within our equation to test *H5*.

Regression equation. The regression function is as follows:

$$Consumption = \beta_1 Age + \beta_2 Education + \beta_3 Income + \beta_4 Gender + \beta_5 YS$$
$$+ \beta_6 Identity + \beta_6 Income \times Identity + Constant + \varepsilon \quad (8)$$

5. Results

The descriptive results of consumption are shown in Table II. Regressions were performed, as put forth in Equation (8), with identity assessed in different questions. The result is shown in Table III. The result shows acceptable explanation effects of tested regressions, where R^2 is equal to or > 0.4. In modeling the identity, we set two dummy variables with highest score and lowest score on the item concerning identity perception with the ambiguous group as a reference group.

Findings show that migrant worker's spending increases as their identity is more significant regardless of the latter being rural or urban. The regression analysis above shows that identity has a significant influence on the consumption of migrant workers

Identity Observation		Urban 78	Rural 79	Ambiguous 493	All 650
Food	Mean	402.7	407.1	374.9	382.2
	SD	208.2	298.8	292.6	284.5
Medicine	Mean	41.3	34.6	39.8	39.3
	SD	73.7	44.0	75.1	71.8
Utility	Mean	51.2	69.3	61.7	61.3
	SD	74.3	66.2	68.6	69.0
Housing	Mean	210.9	183.4	170.8	177.2
	SD	218.8	240.3	252.5	247.2
Transportation telecommunication	Mean	88.6	103.7	87.6	89.6
	SD	112.4	105.9	83.8	90.5
Education	Mean	16.4	23.7	23.7	22.8
	SD	65.3	75.8	85.0	81.7
Remittance	Mean	260.5	340.6	298.9	299.3
	SD	364.1	486.0	438.3	436.0
Recreation	Mean	102.2	107.1	116.1	113.4
	SD	160.3	167.0	212.1	201.3

Table II.
Consumption
on all categories

Notes: Currency unit: China Yuan*; 1 China Yuan (CNY, a.k.a. RMB) = 0.163 USD approximately (October, 2013)

Variables	R1 Rural 1	R2 Rural 2	U1 Urban 1	U2 Urban 2
Age	24.24***	24.92***	24.93***	23.48***
	(8.289)	(8.354)	(8.521)	(8.312)
Education	30.68***	30.42***	29.39**	29.91***
	(10.98)	(11.01)	(11.49)	(11.52)
Income	0.216***	0.208***	0.209***	0.194***
	(0.0426)	(0.0398)	(0.0431)	(0.0368)
Gender	122.7**	140.8**	120.4**	122.8**
	(49.52)	(49.98)	(49.13)	(49.19)
YS	−8.966	−8.985	−8.803	−8.694
	(7.951)	(7.990)	(7.918)	(7.984)
Urban 1-2	*96.62**	*86.16*		
	(54.0)	(51.9)		
Rural 1-2	*56.0**	−15.07		
	(27.9)	(17.4)		
Income × Urban 1-2	*0.0289**	*0.0281***		
	(0.014)	(0.0083)		
Income × Rural 1-2	*0.0118***	*0.0181**		
	(0.009)	(0.0094)		
Rural 3-4			*70.35*	*72.26*
			(39.7)	(46.8)
Urban 3-4			*122.1**	*92.99*
			(75.7)	(65.7)
Income × Rural 3-4			*0.0155*	*0.027**
			(0.0093)	(0.016)
Income × Urban 3-4			*0.100*	*0.0757*
			(0.0590)	(0.0501)
Constant	−341.4	−332.8	−337.9	−276.3
	(219.9)	(275.6)	(299.4)	(287.3)
Observation	650	650	650	650
R^2	0.591	0.492	0.394	0.395

Notes: Significant parameters are in italics (90 percent); *zero is not contained in the 90 percent HPD (highest posterior density) interval; **zero is not contained in the 95 percent HPD interval; ***zero is not contained in the 99 percent HPD interval

Table III.
Regression results
of consumption

and hence it is safe to assume that *H1* is supported. We followed with a regression in each category of consumption on the same independent variables as in Equation (8) (please see result in Appendix). We also found that except for one measuring item (*I like to be recognized as a rural resident* (*Nongcunren*)), the other three measures showed a similar effect on consumption. We can infer that outlander identity (*Waidiren*) is preferred when compared to *Nongcunren* identity once we want to test the effects from priming their social identifications. This is partly explained by the neutrality of outlander or *Waidiren* and existing discriminative bias of rural resident or *Nongcunren* in urban society. Additionally, there are significant positive interaction effects between income and identification. It means high income induces much higher consumption while they have affirmative identification, of either rural or urban. According to *H2* and *H3*, migrant workers with high urban identity will show a significantly higher consumption of products with social value and those who have high rural identity will show a similar pattern with products having practical value. We categorized

the consumption of these workers into eight categories: food, medicine, utilities (water, electricity, etc.), housing, T&C, education for children, recreation, and remittance. The first three categories (food, medicine, utilities) are considered to be basic products used for survival when migrant workers start their new life in a city. The remaining five categories except the remittance are used for personal or family development in the future. Once workers decide to stay in cities, they spend more on the categories within which the consumption patterns were controlled by urban style.

Based on Table IV, we conclude that migrant's consumption in the field of food, medicine, T&C, education, remittance and entertainment are affected by their identity. The food, medicine and remittance consumption are positively related to the degree of rural identity, while the T&C, education and recreation consumption are positively related to the degree of urban identity (details of regression can be

Dependent variable	Term	Identity	Parameter	SD	R^2
Remittance	Dummy	Rural	45.29^b	22.31	0.379
		Urban	−35.5	59.57	
	Interaction	Rural	0.00262^b	0.00013	
		Urban	0.0279	0.0257	
Food	Dummy	Rural	41.82^a	23.23	0.405
		Urban	$−74.06^a$	34.82	
	Interaction	Rural	0.0258^a	0.013	
		Urban	0.0247	0.016	
Medicine	Dummy	Rural	15.79^a	8.797	0.355
		Urban	−21.25	22.37	
	Interaction	Rural	$−0.00618^b$	0.00257	
		Urban	0.0128	0.0109	
Utilities	Dummy	Rural	2.018	16.4	0.395
		Urban	9.746	11.59	
	Interaction	Rural	−0.000576	0.00714	
		Urban	−0.00549	0.00517	
Housing	Dummy	Rural	22.56	50.78	0.534
		Urban	40.59	43.22	
	Interaction	Rural	−0.0113	0.023	
		Urban	−0.0291	0.019	
Transportation & Communication	Dummy	Rural	3.431	15.38	0.491
		Urban	13.8^c	5.48	
	Interaction	Rural	0.00238	0.00647	
		Urban	0.00422	0.00686	
Education	Dummy	Rural	−5.489	15.35	0.35
		Urban	77.5^c	10.45	
	Interaction	Rural	0.000644	0.00522	
		Urban	0.00475^b	0.00204	
Recreation	Dummy	Rural	31.63	39.8	0.389
		Urban	33.09^b	16.31	
	Interaction	Rural	−0.0133	0.0167	
		Urban	0.00869^c	0.00284	

Table IV.
Regression results of consumption on all categories

Notes: Significant parameters are in italics (90 percent); [a]zero is not contained in the 90 percent HPD (highest posterior density) interval; [b]zero is not contained in the 95 percent HPD interval; [c]zero is not contained in the 99 percent HPD interval

found in Appendix 1). On the other hand, the consumption of utilities and housing
did not show significant influence from social identification. The results can be
attributed to the following: First, utility industries are monopolistic and consumers
have no choice but to accept the prices; second, renting a house accounts for a large
proportion of consumption as a result of the increasing price of real estate in
Shanghai. Even if migrant workers cannot afford certain living expenses, they
would still like to increase their quality of living. All the mentioned regressions
show significant results of income influencing consumption among Chinese migrant
workers, thus *H4* is supported.

Another interesting finding can be observed from Table IV is pertaining to
the interaction effect of income and identity. Rural identity was shown to have
moderating effect on the relationship between income and survival consumption.
Migrant workers with high rural identification and an increase in income will
increase consumption on food and remittance and decrease spending on medicine.
Urban identity was found to have moderating effect on the relationship between
income and developmental consumption. Accordingly, migrant workers with high
urban identification and an increase in income will increase spending on education
for their children and recreation, and hence *H5* is also supported. Instead of using
dummy variables of social identity, we use ordinal continuous variables for the level
of social identification. Similar results which give more evidence about supporting
our hypotheses are shown in Appendix 1 and 2. The results show that the effect of
rural identification is contrary to the effect of urban identification within most
consumption categories, which partly proves the assumption about the negative
relations between rural and urban identity.

6. Discussions and conclusion
6.1 Theoretical contribution
The study provides empirical evidence that people do make consumption decisions
based on their social identity, especially psychological identity, when they transfer
from rural to urban regions. These findings are all consistent with international
immigration research about the impact of ethnic identification on consumption
behaviors (e.g. Wallendorf and Michael, 1983; Webster, 1994). More specifically,
migrant workers buy expensive garments/ornaments and spend large amount
of money on their children's education as an effort to construct consumer subjectivity
instead of only producer subjectivity. Based on data collected in China, this study
makes an important contribution by confirming the existence and difference of
rural-urban identification, demonstrating how identification influences consumption
patterns of Chinese migrant workers, and partially advancing the relationships
proposed by Akerlof and Kranton's model with updated empirical data.

The current study also finds evidence that migrant workers' perception of identity
will increase their total consumption despite their rural or urban identity. Consumers'
choice of their identities or even just their perceptions influences consumption. In
addition, rural identity has a significant impact on survival consumption; urban identity
has a significant impact on developmental consumption. Survival consumption is more
related to the functional value of products and services. Developmental consumption is
connected with social value or extrinsic value which is experienced more by urban
consumers because of their global consumer culture. Consequently, if we accept the
convention that people likely use consumption to construct their identities, we can

also explain our findings through the different patterns among the three groups. Interestingly, migrant workers with ambiguous identity reject consumption because of uncertainties on their identity investment situation.

6.2 Practical implication
There are important practical and policy implications arising from these results. The result indicates that psychological identification, besides income, will influence consumption pattern of migrant workers. The Chinese government still faces huge challenges in improving/modifying *Hukou* system, even though some changes were already made in July 2014[3]. Chinese Government can help migrant workers construct their identities to take advantage of the migrant workers' consumption potential. The study confirms the priming effect of raising the possibility – that an efficient policymaker could intentionally use identity primes as an instrument – for encouraging desirable behaviors (Benjamin *et al.*, 2010). Chinese internal migration flow has created the challenges for both the government and business institutions. If the government wants to accept these people in cities, it should provide more products and services that are meant for future, personal or family development. On the other hand, business firms can attract these migrant workers and take advantage of their consumption potential by engaging them in better corporate social responsibility efforts (Liu *et al.*, 2014) or employing creative advertising that primes their identity affiliation (Chu *et al.*, 2013) according to the product category. Besides, government and firms have to spend more time to educate the workers to learn local laws and traditions. It is not optional for new workers and should not be optional for all workers. Currently authorities do not emphasize much on this issue because they generally treat these workers as "short-term labor force in city" and think that these workers "will go back to rural area sooner or later." Such kind of ideology will not be helpful with regards to the identification issue and will also jeopardize the interpersonal relation between migrant workers and urban residents. By paying more attention to teach and educate migrant workers, they can learn and better recognize (immaterial of whether they want or not) by following the way people live in urban areas. It will increase, not only the subjective urban self-identification from migrant workers themselves but also external recognition from urban people/society. At the same time, promoting respect and being considerate to cultures of all local people is necessary. While we encourage and insist on the primacy of Chinese values for those who join workforce in urban area, we should also remember the full spectrum of values ourselves. The Chinese government holds the value of "equality of social stratification" and "building a society of harmony," people should be all equal, regardless of ethnicity, origin, or even state of wretchedness, more actions should be taken to make China a land of harmony and opportunity.

6.3 Limitation and future study
The study pioneers to empirically examine how rural-urban identification influences consumption patterns. For this reason, we limited our investigation to subjective psychological identification as a predictor of major basic consumption items with the hope of building a solid foundation for future research. Future studies can also try to establish a more sophisticated model for the specific group of migrant workers. Besides, this study only focusses on migrant workers in Shanghai, which is the first-tier city in China. There are still over 80 million workers

working in second or even third-tier cities. For the workers in cities with different economic development, their consumption pattern may differ accordingly. Investigating the difference among different migrant worker groups may also be a possible avenue for further research. In addition, *Hukou* system was improved recently in July 2014. Hence, comparing differences of workers' consumption pattern between the old and modified *Hukou* system is also a potential topic worth exploring. Moreover, for future research, developing a specific measurement scale of rural-urban identity from an acculturation perspective is a possible avenue that can be explored. Collecting samples in second or third-tier cities to test proposed models is also necessary. Furthermore, experiments can be conducted to understand the inner mechanisms that migrant workers use to solve their consumption problems.

Notes

1. The *Hukou* system, introduced in the 1950s, ties people's access to services to their residential status. An individual's *Hukou* is registered in the place where he was born or his parents' place of domicile is located in. When controls on movement were relaxed, tens of millions of migrant workers left the fields to work in factories, toil on building sites, serve in restaurants, or clean homes, contributing to China's spectacular economic growth. Currently the *Hukou* system was partially modified in July, 2014; some updates and explanations can be found in later part.

2. In China, it is still impossible to abolish the *Hukou* system, due to the high district economic imbalance. If it is broken, the inland Chinese would rush into the coastal cities to enjoy the high living quality life there, but create a mass.

3. China reforms *Hukou* system to improve migrant workers' rights recently in July, 2014. The reforms, removal of distinction between urban and rural residents should help migrant workers access services and social welfare, include exemptions for major cities; however key measures are not enforceable by the central government. Even if 100 million gain new rights, there are more than that already living in cities without official status.

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Appendix 1. Regression of consumption on all items (dummy variable)

Variables	(1) Food	(2) Medicine	(3) Utility	(4) Housing	(5) T&C	(6) Education	(7) Remittance	(8) Recreation
Age	1.342	−0.776	−0.113	6.995**	0.993	4.209***	11.36**	0.0781
	(3.493)	(0.784)	(0.783)	(2.788)	(0.974)	(1.034)	(5.246)	(2.586)
Education	15.51***	−1.098	3.259***	14.18***	5.788***	−0.565	−12.85**	5.136
	(5.024)	(1.177)	(1.110)	(3.960)	(1.288)	(1.217)	(6.356)	(3.164)
Income	0.0548***	0.00545***	0.0114***	0.0455***	0.0193***	0.000976	0.0485***	0.0295**
	(0.0136)	(0.00193)	(0.00376)	(0.0146)	(0.00314)	(0.00359)	(0.0127)	(0.0119)
Gender	32.78	−2.070	−1.821	−21.88	4.475	−20.30***	94.40***	32.12**
	(20.25)	(5.499)	(5.035)	(17.02)	(6.570)	(7.728)	(31.60)	(13.69)
YS	6.102**	0.0235	1.222	5.353**	0.882	0.305	−22.74***	9.101***
	(3.097)	(0.773)	(0.796)	(2.636)	(1.127)	(1.097)	(6.067)	(2.062)
Urban	−74.06*	−21.25	9.746	40.59	13.80***	77.5***	−35.50	33.09**
	(34.82)	(22.37)	(11.59)	(43.22)	(5.48)	(10.45)	(59.57)	(16.31)
Rural[a]	41.82*	15.79*	2.018	22.56	3.431	−5.489	45.29**	31.63
	(23.23)	(8.797)	(16.40)	(50.78)	(15.38)	(15.35)	(22.31)	(39.80)
Income × Urban	0.0247	0.0128	−0.00549	−0.0291	0.00422	0.00475**	0.0279	0.00869***
	(0.0160)	(0.0109)	(0.00517)	(0.0190)	(0.00686)	(0.00204)	(0.0257)	(0.00284)
Income × Rural	0.0258*	−0.00618**	−0.000756	−0.0113	0.00238	0.000644	0.00262**	−0.0133
	(0.0130)	(0.00257)	(0.00714)	(0.0230)	(0.00647)	(0.00522)	(0.00013)	(0.0167)
Constant	−9.464	55.70*	−4.441	−269.4***	−56.66*	−62.29**	69.14	−34.10
	(111.0)	(28.88)	(26.38)	(95.37)	(29.49)	(30.13)	(131.4)	(84.57)
Observation	650	650	650	650	650	650	650	650
R^2	0.405	0.355	0.395	0.534	0.491	0.350	0.379	0.389

Note: [a]We use R1 as measurement of rural identification because of its better explanation in Table III

Appendix 2. Regression of consumption (continuous variable)

Variables	(1) Food	(2) Medicine	(3) T&C	(4) Education	(5) Remittance	(6) Recreation
Age	0.989	−0.865	0.973	4.378***	11.50**	0.189
	(3.472)	(0.803)	(0.966)	(1.125)	(5.249)	(2.571)
Education	15.33***	−1.221	5.676***	−0.473	−13.82**	5.217*
	(5.002)	(1.161)	(1.274)	(1.216)	(6.403)	(3.145)
Income	0.0758***	0.0263*	0.0220**	0.00989**	0.0137***	0.0319***
	(0.0270)	(0.0147)	(0.00996)	(0.00450)	(0.0048)	(0.0105)
Gender	35.78*	−1.925	4.876	−19.77**	95.43***	30.95**
	(20.70)	(5.595)	(6.587)	(7.769)	(31.52)	(13.19)
YS	6.325**	0.0585	0.889	0.283	−22.78***	3.067*
	(3.125)	(0.784)	(1.151)	(1.108)	(6.032)	(1.550)
Rural[a]	17.90*	12.33	−2.539	−8.54	22.89	−24.556*
	(8.93)	(6.487)	(5.635)	(6.217)	(29.50)	(12.51)
Income × Rural	0.02463*	0.00867**	−0.00116**	−0.00375*	0.005***	−0.00526*
	(0.0127)	(0.00437)	(0.00053)	(0.00226)	(0.0017)	(0.0027)
Constant	−70.37	21.74	−53.37	−45.90*	167.4	−44.72
	(116.9)	(33.46)	(35.93)	(25.19)	(151.5)	(90.44)
Observation	650	650	650	650	650	650
R^2	0.402	0.357	0.489	0.348	0.376	0.387

Table AII.

Note: [a]We use R1 as measurement of rural identification because of its better explanation in Table III

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