China's Emerging Global Middle Class

Bjorn A. Gustafsson (University of Gothenburg, Sweden), Terry Sicular (University of Western Ontario, Canada), and Xiuna Yang (Beijng Normal University, China)

Björn Gustafsson
Professor
Department of Social Work
University of Gothenburg
P.O. Box 720
SE 405 30 Göteborg
Sweden
Phone (+46) 31 773 18 90
Fax (+46) 31 773 18 88
E-mail: Bjorn.Gustafsson@socwork.gu.se
And
Institute for the Study of Labor (IZA) Bonn, Germany

Terry Sicular
Professor
Department of Economics
Social Science Centre
University of Western Ontario
London, ON N6A 5C2
Canada
Phone (+1) 519-661-211 ext 85292
Fax: (+1) 519-661-3666
E-mail: sicular@uwo.ca

Xiuna Yang
Program Officer
China Development Research Foundation
Floor 15, Tower A, Imperial International Center,
No .136, Andingmen Wai Avenue, Dongcheng District,
Beijing, 100011
P.R. China
Phone: (86) 13811851524
Fax: 86-10-64255855-8100
E-mail: yangxiuna2005@163.com
20160726

China's Emerging Global Middle Class

Abstract

This paper aims to throw new light on the emergence of the Chinese economic middle class using data from the China Household Income Project from 2002, 2007 and 2013. The approach is to define "middle class" as having an income high enough to not be regarded as poor if living in a high income country but also low enough for being regarded as not rich living in such a country. We find that between 2002 and 2013 China's population structure was transformed from a pyramid shape with a majority having rather low income and declining numbers at higher incomes to a more olive shape as the middle class emerged. In 2013 according to our definitions a third of China's urban households were middle class in contrast to only a small minority of the rural households and rural migrants living in urban areas. A simulation shows that if household incomes grow by 6.5% per annum to 2020 uniformly for all households in China, the middle class would almost double and a majority of urban residents would be classified as middle class in 2020; however, only 13 percent of rural inhabitants would in 2020 be classified as middle class. In the paper we also examine the characteristics of middle class versus lower income persons, for example, location of residence, education, Communist party membership, and savings rate.

Keywords: China, Middle class, Income

1. Introduction

One of the largest global changes in this millennium is the substantial increase in the number of households and persons in China with lives quite similar in economic terms to those in the developed world. Most Chinese households no longer have to worry about how to meet daily expenditures and most have savings for a rainy day. Most own their home, and a growing number own a car and can afford to take regular holidays away from home. This change shows up clearly in studies of the worldwide income distribution. Milanovic (2016), for example, reports that the largest relative gains in real per capita income by global income levels between 1988 and 2008 took place at the middle and at the very top of the world income distribution. The gains in the middle are to a large extent the result of recent changes in China. In contrast, income growth was much lower in the segments between the middle and top, reflecting the slow income growth of middle class households in rich countries.

This paper aims to throw new light on the emergence of the Chinese economic middle class. The approach is to define "middle class" based on the level of a household's disposable income. We define "middle class" as having an income high enough to be regarded as not poor if living in a high income country, but also low enough to be regarded as not rich in a high income country. This approach allows us to consider the Chinese middle class with an external lens, relative to notions of middle class in the developed world, which we believe is ultimately the long-term objective of China's development process. As a first task we study the growth of the Chinese middle class from 2002 to 2007 and then to 2013. This we do for China as a whole, and separately for urban residents, rural-to-urban migrants, and rural residents. As a second task we simulate how the size of the middle class will develop to 2020 under the assumption of uniform income growth of 6.5 per cent per annum. The results of this second task allow us to evaluate the extent to which China's population will attain the ranks of the developed middle class in the medium term. The third task for this paper is to investigate to what extent middle class households differ from those with lesser means. This we investigate using detailed information in the survey for 2013.

Needless to say, the emerging middle class in China has been the subject of writings by Chinese researchers, most of whom lean towards the long tradition of class analysis in the field of sociology In contrast, attempts in China to map the middle class based on data on analysis of household disposable income or consumption are few. In our literature research we have come across only three: Yuan et al. (2012) who, using CHIP data for 1988, 1995, 2002 and 2007, classified a *rural* household as belonging to the middle class if its per capita daily expenditures were in the interval from 4 to 20 PPP US$. Using this definition the authors found that the middle class in rural China grew from 3 percent in 1988 to 53 percent in 2007. Bonnefond et al. (2015) used data from the China Health and Nutrition Survey (CHNS) for years 1989 to 2009 to study the urban middle class using four different definitions, giving some priority to the alternative of setting the lower line at 10,000 yuan per year and the upper line at the 95th income percentile. A cluster analysis for 2009 using household variables indicates that the urban middle

class is composed of a significant higher proportion of households whose head belong to the professional and technical worker category, the administrative and executive category and the office staff category. Somewhat more than two fifths of the households were pensioners.[1]

The third study is the one most similar to ours. Different from the two previous mentioned, Chen and Qin (2014) studied China as a whole. Those authors used CHIP data for 1995 and 2002 and data from China Family Panel Studies (CFPS) for 2010 and 2012. Households with consumption expenditures in the range USD PPP 10 to 20 per person per day were classified as upper or global middle class. According to this definition the Chinese middle class increased from 1 percent in 1995 to 13 percent in 2012. Not surprisingly, the authors find that the proportion households classified as middle class was highest among urban residents having urban hukou, followed by migrants living in urban areas and finally rural residents.

Turning to results we find that in 2002 middle class households in China constituted a very small minority, only 12 million persons. Since then, however, the growth in the size of the middle class has been rapid and according to our definitions 254 million persons in China belonged to the middle class in 2013. In the same year a third of urban persons were middle class, in contrast to only a small minority of rural and rural-to-urban migrant households. The middle class household differs from households with lesser means by having a higher savings rate. We show that due to economic growth, by 2013 most members of China's Communist party had become middle class. Assuming that household income will growth with 6.5 percent per annum we project that the Chinese middle class will number as many as 509 million in 2020.

In the next section we discuss how the term "middle class" has been used by policymakers in China and academic research on China. Different from most of the other literature on China's middle class, our definition of "middle class" takes a global perspective. Here we follow in the footsteps of some literature on the international distribution of income, which we review in Section 3. Section 4 discusses the data and our operational assumptions. Section 5 reports our findings on the emergence of China's global middle class from 2002 to 2013; section 6 presents an analysis of the growth of China's middle class over time, with projections to 2020. In Section 7 we examine the characteristics of China's middle class households and individuals in comparison to those living on lesser means. Section 8 sums up the study and draws conclusions.

2. The meaning of "middle class" in policymaking and studies of China

For many years the party leadership, policymakers and researchers in China discussed class in the Marxist-Leninist terms of workers, peasants and intellectuals. The party-state did not acknowledge any social, economic or political role of the middle class, and the ultimate goal was

---

[1] Bonnefond and Clément (2014) use the same definition and data to study body weight among Chinese urban middle class members. The authors conclude that only one subcategory ("the new middle class" – the highest earners and the best educated) is relatively well protected from obesity.

to create "a classless society." During the reform era, however, views began to evolve, and at the 16th Congress of Chinese Communist Party (CCP) in 2002 Jiang Zemin announced the goal to "control the growth of the upper stratum of society, expand the middle, and reduce the bottom." Thereafter the CCP developed a state-sponsored discourse of the harmonious middle class. The new objective was to achieve an "olive-shaped" middle-class society, in which the bulk of the population would be economically comfortable (xiaokang) and society would be harmonious. Goodman writes that this notion of a middle class society is an aspiration rather than a carefully thought-out idea, but that the identification of the middle class as a potential driver of change is clear. "Individuals are being encouraged to pursue new 'social norms of middle class identity often defined around consumer practices'. The new model citizen is someone with high cultural capital, as well as with the economic capacity to consume." (Goodman 2014, p. 27.)

The growth of the Chinese middle class can have significant consequences internationally as well as domestically. A growing middle class means a growing market for consumer goods and services, as well as having potential implications for the geopolitical situation. The history of western countries is sometimes used to demonstrate that the growth of the middle class has been related to the introduction and deepening of political democracy. For example, new research using panel data from a large number of developed and developing countries has found evidence in support of the hypothesis that the growth in the size of the middle class promotes institutional reform and democratic diffusion (Loayza et al., 2012 and Chun et al., 2016).

Whether and how the growth of the Chinese middle class will affect China's political system, however, is far from clear. For example, Tang (2011) finds that members of the Chinese middle class (defined by occupation and self-identification) pay greater attention to politics and engage more than those with lesser means in informal/personal activity in response to conflicts with government policies or officials. Other studies, however, have concluded that in China the behavior of the middle class as an aggregate is not significantly different from that of other classes when it comes to political activities that require greater civic engagement or confrontation with the political system.[2] If the CCP is able to successfully capture the interests of the middle class, then growth of the Chinese middle class will not necessarily challenge China's political system in a fundamental way. Indeed, our data reveal that CCP membership belongs disproportionately to China's middle class (see section 6). Nevertheless, even if the growth of the middle class in China leaves the political system intact, a larger proportion of middle class persons in society could change political priorities.

---

[2] Tang and Unger (2013) write: "The Chinese educated middle class has, as a whole, become a bulwark of the current regime. As a consequence, regime change or democratization should not be expected any time soon. The rise of China's educated middle class blocks the way." Natan (2016) writes: "What middle-class persons dread is an economic or military crisis or an internal power struggle that triggers a breakdown of order. It is the fear of such a crisis that explains why a middle class that increasingly embraces liberal values still supports an authoritarian regime."

Since the beginning of the new millennium many sociologists have written about the middle class in China. Li Cheng (2010) lists eleven prominent Chinese researchers who have studied the middle class and their representative work. Work published in 2002 by Lu Xueyi, then director of the Institute of Sociology at CASS, is considered a landmark study for two reasons. First, Lu for the first time categorized the large majority of the working class as belonging to the lower or lower-middle strata. Such categorization was politically and ideologically new. Second, Lu identified a middle stratum comprised of cadres, managers, private entrepreneurs, technical clerks and private small-business owners. Using data from 1978, 1988 and 1991 he estimated the growth in this group of people. Li Cheng (2010) also writes that in later work Lu reported that the proportion of middle class persons in the Chinese population increased from 15 percent in 2001 to 23 percent in 2009.

Sociologists prefer to define the middle class based on occupation and employment and often base the classification on more than one criterion. Different researchers have proposed many different definitions of middle class, which of course yields different pictures of the middle class and has led to debate. An issue in the sociological debate over the middle class is whether the middle class is merely a statistical category or a class in the sociological sense. In order to be a class in the sociological sense, members of the middle class would have had to develop a coherent identity, class culture and sociopolitical attitudes and values, and perhaps may have taken some class-based political actions. Several authors have stressed the heterogeneity of the Chinese middle class, rather talking about the middle classes than a single middle class (Li Cheng 2010). Less attention has been given to the ethnic diversity of the Chinese middle class, with the exception of Mackerras (2005).

Economists and business researchers tend to focus on the relationship between the middle class and consumption. The growth of the middle class in China is considered the driver of changing consumption patterns and rising demand for consumer goods. Regular visitors to China have seen stunning changes in the kinds of goods that are now offered to those who have means. China has turned into the largest market in the world for personal cars, and the market for wine has increased rapidly. Similarly, China has seen a very rapid increase in independent tourism (Chio 2014, Oaks 2016).

Middle class status is also associated with housing and home ownership. During the planning époque almost all urban households lived in rental apartments provide by their work units. Rents were very low, and so was quality. This description no longer holds. Policies initiated by the government in the 1990s gradually brought about urban housing privatization as tenants in urban China were given opportunities to buy their apartments at prices typically lower than in the emerging market. Today the rate of home-ownership in China is very high (Sato, Sicular and Yue 2013). Moreover, with a boom in the construction industry and the development of residential real estate markets, more and more China's households now live in housing that is fairly similar in terms of space and quality to that of the middle class in rich countries. Some of

the upper segment lives in gated communities, visibly separated from people with lesser means (for example, see Li Zhang 2010)

In the literature on the middle class in developed countries, studies have defined "middle class" based on household disposable income, usually in relation to other households within the same country. The various chapters of Gornick and Jäntti (2013) contain a wide variety of definitions along these lines.[3] For example, a middle class household can be defined as having income in the interval from 75% to 125% of the median. The only example in this tradition that we are aware of for China is Anderson et al. (2016). This study used data for six urban provinces and an econometric approach to define the poor, lower-middle class, upper-middle class and the rich. One feature of such an approach is that its definition of middle class is local, without reference to any universal standards or criteria. Such is not the case for the literature we will discuss in the next section, and to which our study belongs.

3. The meaning of global middle class

For several decades researchers at the World Bank have defined poverty based on a global poverty line measured in terms of purchasing power parity (PPP). Since October 2015 this global poverty line has been set at 1.9 USD PPP per person per day, based on the latest round of PPP estimates from the International Comparison Program 2011.[4] The choice of the cutoff for this global poverty line is it is based on an approximation of poverty lines used in poorer countries in the developing world.

Several studies now also propose global cutoffs for middle and upper levels of the income distribution. However, there is no consensus on where exactly to set these cutoffs, that is, on how much income a household should have in order to be considered a member of the middle class, let alone the upper class.[5]

One approach is to define the "middle class" as starting at the income level where poverty ends. By this definition, people living in households with income just above world poverty line are classified as middle class. Among the more influential papers using this approach is Banerjee and Duflo (2008), which defines the middle class as those living between 2 USD and 10 USD per day at 1993 PPP. Using microdata from thirteen low and middle income countries, these authors investigate a number of aspects of the middle class and conclude that "Nothing seems more middle class than the fact of having a stable, well paid job…The middle class … spend more on health and education of their children as well as on their own health" (p 26). A similar,

---

[3] The book contains contributed chapters from 17 authors, and in it one can find 21 different definitions of "middle class."

[4] http://www.worldbank.org/en/topic/poverty/brief/global-poverty-line-faq Se also Ferreirqa et al (2016)

[5] In the relatively large literature on top income earners, top income earners are typically defined as those who belong to the upper tenth or upper hundredth of the income distribution. See for example Atkinson et al. (2011) .

but not identical, approach is taken by Ravallion (2010), who defines the developing world's middle class as those who are not poor according to the world poverty line, but would have been considered poor if living in a high income country. The latter is operationalized using the US poverty line, which was about $13 a day in 2005.

A view espoused by other researchers, and shared by this study, is that a global poverty line based on poverty lines in the world's poorest countries is too low to be the starting point of the global middle class. Milanovic and Yitzhaki (2002), for example, define the middle class as people having income between the mean of Brazil and Italy. Bhalla (2007) postulates that "middle class is where the poor end in the rich world" and puts the line at 10 USD PPP per person per day. Following this, Kharas (2010) defines the global middle class as those with daily expenditures in the interval from 10 to 100 USD PPP per person. His lower bound is set equal to the average poverty line in Portugal and Italy, which is similar to the poverty line for the US. His upper line is chosen as twice the median income of Luxembourg, the richest country in EU.

/Table 1 about here/

Different from Bhalla (2007), Kharas (2010) uses data from 145 countries covering 99 percent of the world's population to estimate the size and regional composition of the world middle class and, like Bhalla, he projects future change. Kharas concludes that in 2009 1.8 billion persons belonged to the world middle class. A majority (54 percent) lived in Europe or North America, 28 percent in Asia Pacific, 7 percent in Central and South America, and 6 percent in Middle East and North Africa, while only 2 percent lived in Sub-Saharan Africa. Results from simulations indicate that the size of this middle class could increase to 3.2 billion by 2020 and 4.9 billion by 2030. Almost all of this growth comes from Asia, while the size of the middle class in North America is projected to remain roughly constant as the inflow to the middle class from households with lesser means would be offset by the outflow of middle class households to the rich class.

As explained more fully in the next section, for our analysis we define four classes: "poor", "lower class", "middle class" and "upper class." "Poor" refers to standards of living that are poor by developing country standards, as defined in relation to poverty in the poorest countries as measured by the global poverty line. "Lower class" refers to a standard of living above this global poverty line, but still considered poor by developed countries. "Middle class" refers to a standard of living that is considered not poor, but also not rich, in developed countries. Table 1 summarizes our classification system and relates it to the terminology found in the literature, which we see as differing between the literatures that use developing versus developed countries as the frame of reference.

4. **Data and operational assumptions**

We use data from the rural, rural-to-urban migrant, and urban samples from the China Household Income Project (CHIP) surveys for the income years 2002, 2007 and 2013.[6] The samples were drawn from larger household survey samples of the National Bureau of Statics (NBS) that are used for producing official statistics on household income and consumption for China. Our 2002 sample contains 63,911 individuals of which 20,624 are from the urban sample, 37,969 from the rural sample, and 5,318 from the migrant sample. The 2007 sample contains 89,804 observations of which 29,553 are from the urban sample, 51,847 from the rural sample and 8,404 from the migrant sample. The 2013 sample has 57,821 observations, of which 18,668 are from the urban sample, 37,090 from the rural sample and 2,063 from the migrant sample. The CHIP samples' provincial coverage to some extent changes across years of the survey, as do sampling probabilities across provinces and years. To control for this, in much of the analysis we apply two-level (region x urban/rural/migrant) population-based sampling weights developed by the CHIP team.[7]

Following much previous work by the CHIP project, we use a definition of household income that is based on the NBS disposable or net household income data, adjusted to include imputed rents from owner-occupied housing and implicit subsidies on subsidized rental housing. This definition of household income is in line with international practice. The NBS definition of income changed in 2013. For 2007 we carried out our calculations using the original and new income definitions, and we found very little difference in our results. Therefore, for simplicity, here we report our estimates based on the pre-2013 income definition for 2002 and 2007 and based on the 2013 income definition for 2013. Income is the sum of various income components including wage earnings, net business income, property income, imputed rental income on owner occupied housing, and transfers net of income taxes. We divide household income by the number of household members to obtain income per capita, and we assume that income is shared equally among members of each household. Using the urban consumer price index for the urban and the migrant sample and the rural consumer price index for the rural sample we express income in constant prices over time. In our preferred results we do not adjust for spatial price differences within China, but we present the results adjusted using spatial price deflators as a robustness check.

/Table 2 about here/

In our analysis we use four classes, which we define by applying three cutoffs to the data (Table 2). The lowest cutoff, set at 2 USD PPP per person per day, defines the poor and relatively closely follows the recent practice of the World Bank when defining global poverty. To convert to RMB, we use the PPP conversion factors provided by the OECD based on estimates from the International Comparison Project (2011): 3.76 for 2013. From this we obtain the cutoff in RMB per day of 7.52 (2013).

---

[6] For an introduction to household income surveys in China including CHIP, see Gustafsson et al. (2014).
[7] We use CHIP sampling weights that assume a middle estimate of the size of the rural-to-urban migrant population.

The second cutoff separates the lower class from the middle class. Here we use the cutoff as the level of income per capita that separates the poor from the non-poor in the EU in 2013. Following the practice of the EU, we put the poverty line at 60 percent of median income. Information on median income for 15 member countries (Austria, Belgium, Cyprus, Finland, France, Germany, Ireland, Italy, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia and Spain) is reported by Eurostat 2013 at 18,219 € per person per year.[8] We then apply the PPP conversion factors 0.83 (2013). This yields a cutoff of 36 USD PPP per person per day (Table 2), or RMB 135.36 per person per day.

Definition of the middle class requires a cutoff between the middle class and the upper class. For this we follow some other studies in the literature and use 200 percent of median household income per capita as observed in 15 EU countries in 2013, which corresponds to 120 USD PPP per person per day, and RMB 451.2 per person per day. We carried out our analysis using alternative cutoffs such as 150 percent and 175 percent of the EU median income. The results were not sensitive to the choice of this upper cutoff, because the proportion of Chinese households with incomes above these levels is very small.

While our procedure for setting the cutoffs for the middle class relative to median income in the EU is conceptually clear, some details of the calculation can influence our estimates of the size of the middle class in China. First, Eurostat data on median incomes is expressed in terms of an equivalence scale that assumes the value of 1.0 for the first adult individual, 0.5 for other adults, and 0.3 for each person aged less than 14 years in the household. Such a procedure is typically not applied in low and middle income countries such as China, and it is not applied by the World Bank in setting the global poverty line. The justification for not using equivalence scale for low and middle income countries is that the scope for economies of scale in low and middle income countries is limited because, for example, food consumption makes up a much larger proportion of consumption than in rich countries.

In view of the fact that our cutoffs for the middle class are based on estimates of median income that use an equivalence scale, we apply the same equivalence scale to the Chinese income data when estimating the share of China's population that is middle class versus upper class. In view of the fact that the global poverty line is based on estimates of income per person, not per equivalent person according to an equivalence scale, we simply use income per capita when estimating the share of China's population that is poor versus lower class.

Second, comparisons over time require a decision on whether or not to keep the cutoffs constant or let them change over time, that is, whether to use fixed or moving goalposts. We have chosen to fix the cutoff goalposts at 2013 levels. In other words, we define middle class with reference

---

[8] We use the median for 15 EU countries because it is covers those countries that have been longer-term, stable members of the EU and because this is the only multiple-country median that Eurostat reports for years prior to 2005, which allows us to conduct some sensitivity analyses using data from earlier years. The median for the EU-15 is fairly close to that for the EU-18 as well as for Germany, EU's largest member state. In 2013 median income of the EU-15 was 5% higher than median income of the EU-18 and 7% lower than median income in Germany.

to the recent (2013) standard of being neither poor nor rich in the EU, and our analysis investigates change over time in China's middle class according to this recent standard. Of course, this is not the only possible approach. An alternative would have been to allow the goalposts to change and base the cutoffs for 2002 and 2007 on the situation in the EU countries in 2002 and 2007, respectively. The results, however, are similar, because income growth in the 15 EU countries from 2002 to 2013 was relatively modest.

5. The growth of the Chinese middle class from 2002 to 2013

/Figure 1 about here/

Figure 1 shows a picture of how China's income distribution has changed over time in relation to our cutoffs between the poor, lower, middle and upper classes. For ease of comparison across time, income for all years is expressed in constant 2013 prices. In 2002 the income distribution is concentrated at the left side of the graph and resembles a "pyramid" shape. Most of the income distribution is to the left of the cutoff for middle class, and much of it is below the poverty line. Moving to 2007 and 2013, the income distribution shifts to the right. Over time as more and more of the income distribution shifts to the right, the relative size of poor class declines and of the middle class grows.

These findings are in line with what the objectives of China's policy-makers as discussed in Section 2: A transformation from a society with an income distribution shaped like a pyramid to an olive shaped form with few at the bottom, many in the middle, and few at the top. China's income distribution has indeed evolved towards an "olive" shape, but the pyramid's peak remains distinct.

/Figure 1 and Figure 2 about here/

/Table 3 about here/

The growth of the middle class is visualised in a slightly different way in Figure 2, which give the cumulative distribution of income. The cumulative distribution of income shows the share of the population with income below the level of income at that point in the graph. For example, at the lower income cutoff for middle class, the graph shows the proportion of the population that is in the poor and lower classes. Figure 2 has four panels, one for China as a whole, and one each for urban residents, rural residents and migrants. Tables 3 provide the corresponding estimates of the share of the population in each class by year. Based on our definitions, the Chinese middle class grew from only 1 percent in 2002 to 8 percent in 2007 and further to 19 percent in 2013. This means that in 2002 not more than 12 million Chinese inhabitants were classified as middle

class. The number in the middle class increased to 64 million in 2007, and to no fewer than 254 million person in 2013.

Parallel to this growth in the middle class, China's poverty rate decreased from 27 percent in 2002 to 11 percent in 2007 and further to 4 percent in 2013. Despite the growing importance of China's middle class, in all years it is smaller than the lower class, which constituted the large majority of China's population. The lower class contained 72 percent of the population in 2002, moving up to 84 percent in 2007 and falling back slightly to 77 percent in 2013.

The upper class was virtually non-existent in 2002 and was still small at 0.5 percent of China's population in 2013. In view of the small proportion of the population above the highest cutoff, in the following sections we focus our attention on the poor, lower and middle classes.

As one would expect, the growth of China's middle class is seen most clearly in urban areas. Among urban residents the share of the population in the middle class increased from 3 percent in 2002 to 34 percent in 2013. Among migrants the expansion was from 1 percent in 2002 to 19 percent in 2013. Some middle class persons can be found in rural China, but in 2013 the middle class rate was still low at 5 percent. Rural China is instead characterised by the rapid reduction of poverty, from 40 percent in 2002 to 7 percent in 2013, and expansion of the lower class from 60 percent to 89 percent of the population.

/Table 4 about here/

How do our estimates on the size and development of the middle class relate to what others have reported? Table 4 summarises some previous estimates. As Yuan et al. (2012) used the lowest cutoffs, it is no surprise that they report higher proportions of middle class persons in rural China than do Chen and Qin (2014) and we. Our estimates on the size of the middle class in China as a whole are similar to those reported by Chen and Qin (2014). Two of the previous estimates of the middle class in China as a whole are similar to ours for 2013. Kharas writes that less than 12 percent of the Chinese population were middle class in 2009 and 12 percent is our estimate of the middle class in 2013. Chen and Qin (2014) report a middle class share of 13 percent in 2012. Different from those, the preferred estimate of Bonnefond et al. (2013) for 2009 is four times as large. For the most recent year we report a larger gap in middle class rate between rural and urban areas than Chen and Qin (2014).[9]

---

[9] We note that our estimates are based on income while the ones of Chen and Qin (2014) are based on consumption. As middle class households in China have a relatively high savings rate, this difference should result in our estimates being higher. Another difference is that the estimates of Chen and Qin (2014) are for households, while ours are for individuals.

6. Analysing the growth of the Chinese middle class

To what extent does growth in China's middle class reflect growth in average incomes versus redistribution towards the middle of the income distribution? Both growth and redistribution have taken place during this time frame. As shown in other analyses of the CHIP data, from 2007 to 2013 household income growth in China was broad-based. We also know, however, that between 2007 and 2013 income growth was more rapid in the poorer rural than in the richer urban areas. Consequently, income at the lower part of the distribution for China as a whole grew more rapidly than higher up in the distribution.

In order to explore the role of average income growth versus redistribution, we carry out a simulation exercise that assumes the same annual growth rate of 10.4 percent for all persons and households in the 2007 sample and so obtain a hypothetical distribution among the four classes in 2013. We then compare the size of the middle class in this hypothetical distribution to that in the observed income distribution for 2013.

/Table 5 about here/

Interestingly, we find that for China as a whole the size of the middle class in the hypothetical distribution is the same size as that in the observed in 2013. We also find, however, that the results for China as a whole mask differences in the sizes of the hypothetical versus observed middle classes in urban versus rural areas. Using the assumption of uniform growth yields a middle class in urban China that is substantially larger (40 percent, not 34 percent), and a middle class in rural China that is somewhat smaller (3 percent not 4 percent), than was in fact observed in 2013. We conclude that although redistribution did not affect growth in the size of China's overall middle class from 2007 to 2013, it increased the proportion of the middle-class that was rural versus urban. A similar analysis for the period 2002 to 2007 shows that a uniform growth of income between the years would have led to a similar size of the middle class in 2007 as the observed one. In contrast a uniform growth-rate would have reduced the poverty rate in rural China to 9 percent to be compared to the realised poverty rate of 21 percent.

/Figure 3 about here/

Variation across China's provinces in economic development and in urbanisation is large. We expect that the proportion of the population that is middle class is related to these interrelated variables. In order to investigate this relationship, we calculate the share of the middle class for each of the 14 provinces CHIP covered in 2013 and plot it against provincial GDP, provincial average household disposable income, and the level of urbanization (Figure 3). The plots show

the expected relations: the size of the middle class increases with provincial GDP per capita, provincial average household disposable income, and the level of urbanization.

Note, however, that Beijing is an outlier in the northeast corner of all the graphs. This reflects the fact that not only does Beijing have higher GDP per capita, income per capita and urbanization than the other 12 provinces, but it also has a markedly larger middle class. The share of the middle class in Beijing exceeds 50%, as compared to a much lower 30% for second-place Jiangsu. The gaps between Beijing and the other provinces reveal that impressions based on China's capital can give a misleading picture of the importance of China's middle class.

/Table 6 about here/

How large will China's the middle class grow in the future? We answer this question by projecting forward from 2013 to 2020 under an assumption of uniform 6.5 percent income growth per year for all households. We use 6.5 percent income growth for the projection because China's 13th Five Year Plan (2016-2020) sets out a 6.5 percent target growth rate, and because this growth rate is in line with standard forecasts, e.g., the IMF predicts China's GDP growth will slow from 6.5% in 2016 to 6.0% in 2020.[10]

The results from this exercise are reported in Table 6. Comparisons with the information in Table 3 show that in the seven years from 2013 to 2020 the share of the middle class in China will almost double, from 19 to 36 percent of the population and about 509 million persons (assuming a population growth of one half percent per cent per annum) By 2020 as much as 60 percent of urban residents would be classified as middle class. Reflecting the large gap in income between urban and rural areas of China in 2013, by 2020 still a minority of only 13 percent of rural inhabitants would be classified as middle class.[11]

7. What is special about the Chinese middle class as compared to the lower and poor classes?

---

[10] See the IMF World Economic Outlook, April 2016, http://www.imf.org/external/pubs/ft/weo/2016/01/.

[11] When digesting those results it should be remembered that they were obtained when assuming that the income cutoffs defining the middle class stayed unchanged based on median income levels observed in the EU countries in 2013. To the extent households in EU experience income growth between 2013 and 2020, one could argue that the criteria for being classified as middle class in China should be revised upwards, which would reduce the projected share of the middle class in China in 2020.

/Table 7 about here/

In this section we use the 2013 survey data to characterize what is special about the Chinese middle class by comparing its members to those with lesser means (Table 7). China's large urban-rural income gap shows up in the composition of the middle class: Three fourths of persons in the middle class are urban residents, while as many as 85 percent of the poor are rural residents. The share of the middle class that is migrant is similar to the share that is rural. Three fifths of Chinas middle class live in the eastern region as compared with not more than one fifth of the poor in the same region.

Compared to the spatial variation, variation among the classes across some demographic variables is smaller. Children, adults and elderly make up similar proportions of the middle class as of the population overall. The middle class has higher levels of education than the poor and lower classes, but the difference is not overly large. Median length of education for middle class adults is 12 years, as compared to 9 years for the lower class and 8 years for the poor. In other words, completion of high school is typical for the middle class adults, as compared to junior middle school is typical for the lower and poor classes.

Economic growth has made China's Communist Party into a middle class party. We find that not less than one in five middle class persons are party members, compared with 7 percent in the lower class and 4 percent among the poor. This means that according to our estimates, as many as 88 percent of the party members belong to the middle class. China's middle class are large savers. Table 8 show that middle class households save somewhat more than one third of their income, a proportion higher than among the lower class while the poor on average have larger consumption than savings.

/Table 8 about here/

8. Conclusions

In this study we have applied three cutoffs that are based on global circumstances and define four categories of households and persons in China. The poor are defined to as whose living in a household with a disposable income lower than 2 USD PPP per day. The lower class constitutes

15

of people who have a higher income than the poor but incomes that are not high enough to be classified as middle class. Middle class means in this paper a person living in a household with income high enough to not being classified as poor if living in 15 EU countries in 2013 and also not belonging to the upper class. The cutoff for belonging to the upper class was put at 200 percent of median income in 15 EU countries as observed in 2013.

Using those definitions we show how the size of the four economic classes 2002, 2007 and 2013 and thus how they changed over a period when China experienced rapid economic growth. We found that although some middle class households and persons existed in China in 2002 they constituted a very small minority, only 1 percent or 12 million persons. However, the growth was rapid thereafter and in 2013 using our definitions were not less than one in five Chinese classified as belonging to the middle class, and the middle class made up 254 million persons. During the same period did the poor decrease to become a small proportion of China's population.

From 2002 to 2013 did China's population structure transformed from a pyramid shape with a majority having rather low income and at increasing incomes fewer and fewer persons to become more olive shaped: Few at the bottom as at the top. The results from a simulation exercise according to which we assumed that household income will grow uniformly with 6.5 percent per annum from 2013 to 2020 illustrated that such a process will result in the proportion Chinese households being classified as middle class would almost double and become somewhat higher than one third and amount to not less than 509 million persons. This means that the Chinese will without comparison become the single largest nationality among the global middle class. It is not unreasonable to assume that this quantitative expansion will have consequences for how tastes and habits of middle class consumers in other countries will develop.

China's middle class is very much an urban middle class. Most middle class people are urban residents, some rural to urban migrants, only a small proportion are rural residents living in rural regions. In contrast rural residents make up a vast majority of Chinas poor. Results from our simulation exercise shows that if income will grow with a uniform rate of 6.5 percent from 2013 to 2020 a majority of urban households will then be middle class, but only 13 percent of the rural population. The middle class rate is much higher in Beijing than in the other province level units represented in our data. We also showed that in 2013 did three fifths of China middle class live in the east region of the country.

We have investigated how different members in middle class households are compared to members in the lower classes using data for 2013. Compared to the spatial variation, variation among the classes across some demographic variables is smaller. Children, adults and elderly make up similar proportions of the middle class as of the population overall. Not surprisingly we have reported that adult middle class persons are longer educated that those with lesser means. We have found that the middle class is politically well integrated in the sense that as many as one in five middle class adults is a members of the Communist Party, a proportion considerably

higher than among those with lesser means. China's middle class are large savers as we found that on average they save somewhat more than one third of their income. From this follows that the middle class is not necessarily an engine of consumption growth in China, and so does not bode well for the shift to a consumption-led growth model of the country.

References

Anderson, G., Farcomeni, A., Pittau, M.G. and Zelli, R. (2016) "A New Approach to Measuring and Studying the Characteristics of Class Membership: Examining Poverty, Inequality and Polarization in Urban China, Journal of Econometrics, 191, 348 – 359.

Atkinson, A., Pikety, T. and Saez, E. (2011) "Top Incomes in the Long Run of History", Journal of Economic Literature, 49, 3 – 71.

Banerjee, A.V. and Duflo, E. (2008) "What is Middle Class about the Middle Class around the Word?", Journal of Economic Perspectives, 22, (2) 3 – 28.

Bhalla, S. (2007). *"Second among Equals: The Middle Class Kingdoms of India and China."* Unpublished manuscript, Peterson Institute for International Economics, Washington, DC.

Available at:

https://www.researchgate.net/profile/Surjit_Bhalla/publication/228386466_Second_among_Equals_The_Middle_Class_Kingdoms_of_India_and_China/links/555b53aa08aec5ac223225ea.pdf

Bonnefond, C., Clément, M., Combarnous, F. (2013) "In Search of the Elsive Chinese Urban Middle Class: An Exploratory Analysis", Post-Communist Economics, 27, 41 – 59. et al (2015)

Bonnefond, C. and Clément, M. (2014) "Social Class and Body Weight among Chinese Urban Adults: The Role of the Middle Class in the Nutrition Transition", Social Science & Medicine, 112, 22 – 29.

Chen, C and Qin, B. (2014) "The Emergence of China's Middle Class: Social Mobility in a Rapidly Urbanizing Economy", Habitat International, 44, 528-535.

Chio, J. (2014) A Landscape of Travel. The Work of Tourism in Rural Ethnic China, Seattle and London: University of Washington Press.

Chun, N., Hasan, R., Rahman, M.H., Ulubasoglu, M. (2016) "The Role of Middle Class in Democratic Diffusion", International Review of Economics and Finance, 42, 536 – 548.

Ferreira, F.H C., Chen, S., Dabalen, A., Dikhanoy, Y., Hamadeh, N., Jolliffe, D., Narayan, A., Pryda, E., B., Revenga, A., Sangraula, P., Serajuddin, U. and Yoshida, N. (2016) "A Global Count of Extreme Poor in 2012: Data Issues, Methodology and Initial Results", Journal of Economic Inequality, 14, 141 – 172.

Goodman. D. (2014) Class in Contemporary China, Cambridge: Polity.

Gornick, J. and Jäntti, M. (2013) Income Inequality. Economic Disparities and the Middle Class in Affluent Countries, Stanford, California: Stanford University Press.

Gustafsson, B., Li, S. and Sato, H. (2014) "Data for studying earnings, the distribution of household income and poverty in China", China Economic Review, 30, 419 – 431.

Kharas, H (2010) "The Emerging Middle Class in Developing Countries", Paris, OECD Development Centre Working Paper No 285 accessible at:

 http://www.oecd-ilibrary.org/docserver/download/5kmmp8lncrns.pdf?expires=1457359363&id=id&accname=guest&checksum=A97EAD32ECEC2A90B975468E6CC53CE8

Li Cheng (2010) "Chinese Scholarships on the Middle Class: From Social Stratification to Political Potential", in Cheng, L (Ed) China's Emerging Middle Class. Beyond Economic Transformation, Washington D.C. Brookings Institution Press.

Li Chuning (Ed) (2012) The Rising Middle Classes in China, Milton Keynes: Paths International.

Li Zhang (2010) In Search of Paradise. Middle-Class Living in a Chinese Metropolis, Ithaca and London: Cornell University Press.

Loayza, N., Rigolini, J. and Kkirebte, G. (2012) "Do Middle Class Bring about Institutional Reform?", Economic Letters, 116, 440-444.

Mackerras, C. (2005) "China's Ethnic Minorities and the Middle Classes: An Overview", International Journal of Social Economics, 32, 814 – 826.

Milanovic. B. and Yitzhaki, S. (2002) "Decomposing World Income Inequality: Does the World Have a Middle Class?", Review of Income and Wealth, 48, 155-178.

Milanovic, B. (2016) Global Inequality: A New Approach for the Age of Globalization, Cambridge Massachusetts: Harvard University Press.

Natan, A.J. (2016) "The Puzzle of the Chinese Middle Class", Journal of Democracy, 27, 5 – 19.

Oaks, T. (2016) "Ethnic Toruism in China", to appear in Zang, X. (Ed) Handbook of Ethnic Minorities in China, Cheltenham: Edward Elgar.

Ravallion, M. (2010) "The Developing World's Bulging (but Vulnerable) Middle Class", World Development, 38, 445-454.

Sato, H., Sicular, T. and Yue, X. (2013) "Housing Ownership, Incomes, and Inequaity in China, 2002-2007," p. 85-141 (chapter 3) in Li, S., Sato, H. and Sicular, T. (Eds) Rising Inequality in China: Challenges to a Harmonious Society, New York: Cambridge University Press.

Tang, M. (2011) "The Political Behavior of the Chinese Middle Class", Journal of Chinese Political Science, 16, 373-387.

Tang, B. and Unger, J. (2013) "The Socioeconomic Status, Co-operation and Political Conservatism of the Educated Middle Class: A Case Study of University Teachers" p 90 – 109 in Chen, M. and Goodman, D. (Eds) Middle Class China. Identity and Behaviour, Cheltenham: Edward Elgar.

Yuan, Z., Wan, G. and Khor, N. (2012) "The Rise of Middle Class in Rural China", China Agricultural Economic Review, 4, 36 – 51.

Table 1: Classification of Classes, with Comparisons to the Literature

Classes Used in his Paper	Classes in the Literature, Developing World Frame of Reference	Classes in the Literature, Developed World Frame of Reference
Poor	Poor	Ultra-poor
Lower	Vulnerable + middle	Poor + vulnerable
Middle	Upper middle + upper	Middle
Upper	Ultra-rich	Upper/rich

Table 2: Cutoffs used in this study (per person per day)

	First	Second	Third
	Separating poor from non- poor	Separating middle class from lower classes	Separating upper class from middle class
2013 RMB (curren prices)	7.52	135.36	451.2
2013 USD (current prices)	2	36	120

Note: The first cutoff is set close to the World Bank's global poverty line. The second cutoff is set at 60 percent of median income per equivalised person for 15 EU countries in 2013. The third cutoff is set at 200 percent of median income per equivalised person from 15 EU countries in 2013. Median income for 15 EU countries is from Eurostat.

Table 3　The size of the four classes in China as a whole and among urban, rural and migrants 2002

A: 2002				
	Total	urban	rural	migrants
the poor(PPP$2/day)	26.88	1.92	40.34	6.95
the lower	72.15	95.65	59.44	92.32
the middle	0.97	2.43	0.22	0.73
the upper	0	0	0	0
Total	100	100	100	100
B:2007				
	Total	urban	rural	migrants
the poor(PPP$2/day)	11.30%	0.07%	20.58%	1.05%
the lower	83.79%	88.03%	78.97%	93.96%
the middle	4.84%	11.79%	0.44%	4.74%
the upper	0.07%	0.11%	0.01%	0.24%
Total	100	100	100	100
C:2013				
	Total	urban	rural	migrants
the poor(PPP$2/day)	3.58%	0.94%	6.65%	1.18%
the lower	77.29%	63.71%	88.93%	79.02%
the middle	18.66%	34.44%	4.31%	19.49%
the upper	0.47%	0.91%	0.11%	0.32%
Total	100%	100%	100%	100%

Note:

1) We have used sample weight ;

2) We don't use the spatial price deflator to convert incomes in rural and urban areas of different provinces into national average prices.

3) When compare with the cutoff between the poor and the lower class (PPP$2/day), we use the income per capita (=household income/the number of persons in each household);

When compare with other cutoffs, we use the equivalised income per capita (=household income/the number of equivalent individuals in each household)

Table 4: Different estimates of the Chinese middle class (% of population)

Author(s)	Definition of middle class	Year of measurement	Data	Rural China	Urban China	Rural-to-urban migrants	China as a whole
Kharas (2010)	10-100 USD per person per day	2009	Deciles from household income data; Means of expenditure from national accounts	NE	NE	NE	Less than 12%
Bonnefond et al. (2013)	Four different ways, with a preference for 10 000 Yuan per person per year to the 95th percentile	1989 – 2009	CHNS				In 2009 a range from 16 to 80% Priority to 50 percent
Yuan et al (2012)	4-10 USD per person per day	1988 1995 2002 2007	CHIP	3% 5% 15% 53%	NE	NE	NE
Chen and Qin (2014) /" Upper middle class" /	10-20 USD PPP per person per day	1995 2002 2010 2012	CHIP CHIP CEPS CEPS	<0.5% <1% 5% 9%	2% 3% 14% 20%	NE 2% 10% 14%	1% 2% 8% 13%
This study	36 – 120 USD per person and dayX	2002 2007 2013	CHIP	< 0.5% <0.5% 4%	3% 12% 34%	1% 6% 20%	1% 5% 19%

Note: NE = Not Estimated

Estimates of Chen and Qin (2014) refer to consumption, not income; households, not individuals.

Table 5a-1: The estimated size of four classes in 2013 if all observations' income increased by the same growth rate

	total	urban	rural	migrants
the poor	4.01%	0.01%	7.25%	0.68%
the lower	76.93%	58.09%	90.03%	71.57%
the middle	18.32%	40.21%	2.63%	26.75%
the upper	0.74%	1.69%	8.70E-04	1.00%
Total	100%	100%	100%	100%

Table 5a-2: The real size of four classes in 2013

	total	urban	rural	migrants
the poor	3.58%	0.94%	6.65%	1.18%
the world median income class	77.29%	63.71%	88.93%	79.02%
the world middle class	18.66%	34.44%	4.31%	19.49%
the world upper class	0.47%	0.91%	0.11%	0.32%
Total	100%	100%	100%	100%

Table 5b-1: The estimated size of four classes in 2007 if all observations' income increased by the same average growth

	total	urban	rural	Migrants
the poor	6.16%	0.13%	9.38%	2.54%
the lower	89.06%	87.38%	89.84%	92.89%
the middle	4.76%	12.43%	0.78%	4.47%
the upper	0.02%	0.06%	0%	0.11%
Total	100%	100%	100%	100%

Table 5b-2: The real size of four classes in 2007

	total	urban	rural	Migrants
the poor	11.30%	0.07%	20.58%	1.05%
the world median income class	83.79%	88.03%	78.97%	93.96%
the world middle class	4.84%	11.79%	0.44%	4.74%
the world upper class	0.07%	0.11%	0.01%	0.24%
Total	100%	100%	100%	100%

Table 6:The size of the four classes in China as a whole and among urban, rural and migrants 2020

	total	urban	rural	Migrants
the poor	1.70%	0.65%	2.86%	0.95%
the lower	59.81%	34.36%	84.20%	54.21%
the middle	36.18%	60.31%	12.50%	43.43%
the upper	2.31%	4.69%	0.43%	1.41%
Total	100%	100%	100%	100%

Note: The results are based on assuming that household income grows with a uniform rate of 6.5 percent per annum

Table 7: Contrasting middle class persons and persons with lesser means in 2013

Table 7-1: urban/rural/migrants (%)

	the poor	the lower	the middle	Total
urban sample	10.71	33.74	75.54	40.75
rural sample	84.93	52.66	10.57	45.93
Migrants	4.37	13.59	13.89	13.32
Total	100	100	100	100

Table 7-2: The location of China's middle class--region (%)

	the poor	the lower	the middle	total
Number of observations				
Eastern China	20.93	37.6	60.4	41.27
Central China	34.59	34.01	20.99	31.59
Western China	44.48	28.39	18.61	27.14
Total	100	100	100	100

Table 7-3: Children/Adults/Elders (%)

	the poor	the lower	the middle	total
Number of observations				
Children	17.3	15.37	13.43	15.07
Adults	72.56	75.61	77.71	75.9
Elders	10.14	9.02	8.86	9.03
Total	100	100	100	100

Note: There are 5 observations whose age information is missing.

Table 7-4: Education degree

	the poor	the lower	the middle	total
Number of observations				

1Never schooled	31.66	25.6	12.51	23.36
2Elementary school	13.13	8.08	3.38	7.38
3Junior middle school	37.96	38.96	22.42	35.82
4Senior middle school	9.41	12.07	17.06	12.91
5Technical secondary school	0.75	2.36	2.93	2.41
6Professional middle school	1.82	3.38	5.92	3.8
7Junior college	3.17	5.57	15.8	7.4
8College/university	2.04	3.74	17.62	6.29
Graduate	0.06	0.24	2.36	0.63
Total	100	100	100	100

Note:
the observations studied here:1)age>=16; 2)whose education degree information is not missing.

Table 7-5: Average of education years (year)

	the poor	the lower	the middle	total
Number of observations				
median	8	9	12	9
Mean	7.621061	8.68036	11.71229	9.251436

Note:
the observations studied here:1)age>=16; 2)whose education year information is not missing.

Table 7-6: The membership of which party

The name of the variable is "C03_4"	the poor	the lower	the middle	total
Number of observations				
The Communist Party	4.18	6.74	19.47	9.02
Democratic Parties	0.19	0.29	0.54	0.34
Others	95.63	92.97	79.99	90.64
Total	100	100	100	100

Table 8: Saving amount and saving rate

| | saving amount | | disposable income | | saving rate 1 | saving rate 2 |
	n1	n2	n3	n4	n5=n1/n3	n6=n2/n4
	median	mean	median	mean		
the poor	−1602	−4116	1803	2096	−88.88%	−196.39%
the world median income class	2639	3306	11660	13190	22.63%	25.07%
the middle class	14840	15316	38884	43354	38.17%	35.33%

27

Figure 1: How China's income distribution has changed over time in relation to our cutoffs
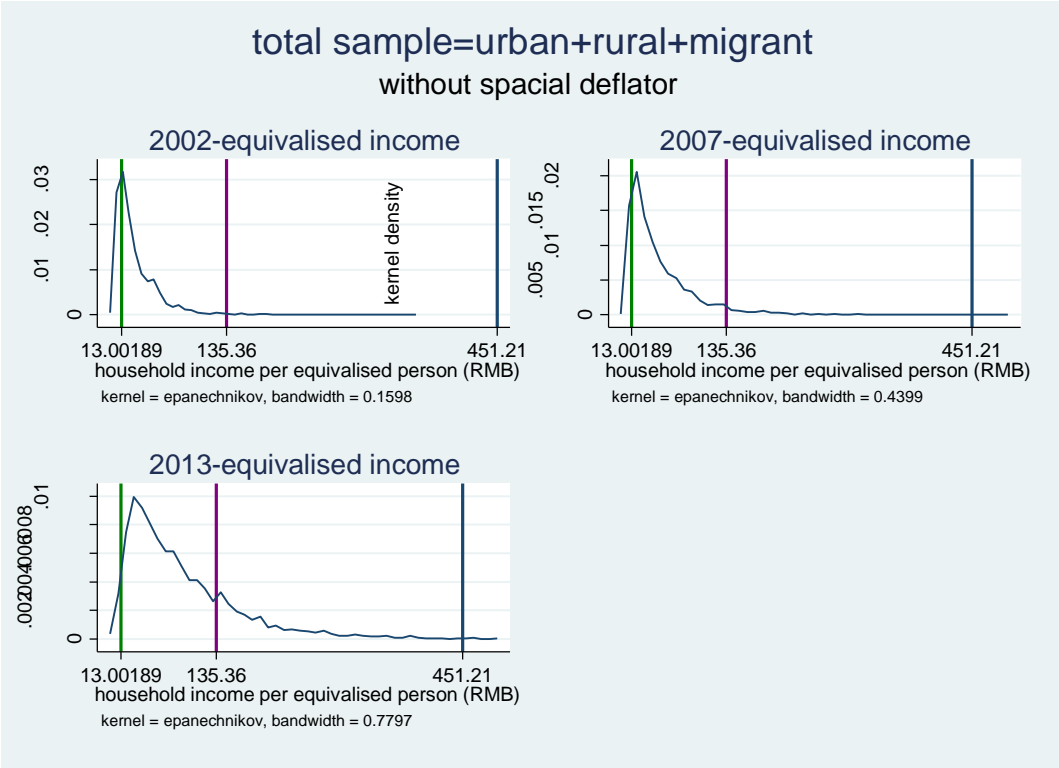
Figure 2: Cumulative distribution of income for China as whole, urban China, rural China and Rural to Urban migrants

Figure 3: The relation in provinces between on one hand the proportion middle class people and on the other hand GDP per capita, disposable income in the province and the rate of urban people in the province.