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Accelerating Into Affluence

The locus of growth in China's consumer spending will shift to more affluent households

The Year of the Snake does not look auspicious for conspicuous consumption in China. The country's newly-installed top leader, Xi Jinping, is urging officials to curb their appetite for lavish banquets. A broader anti-corruption campaign has also hit the market for the expensive luxury goods used for gift-giving. But these are political ripples on the surface of a huge wave of rising Chinese consumer spending. Even if China's economic growth slows significantly, over the next decade hundreds of millions of people will join the modern consumer economy. And our model of China's income distribution indicates that the fastest growth in demand will no longer be for basic consumer goods, but for the products and services favored by the newly affluent, such as international air travel and high-end beauty products. Catering to the Chinese nouveau riche is a growth market for which the best days are yet to come.

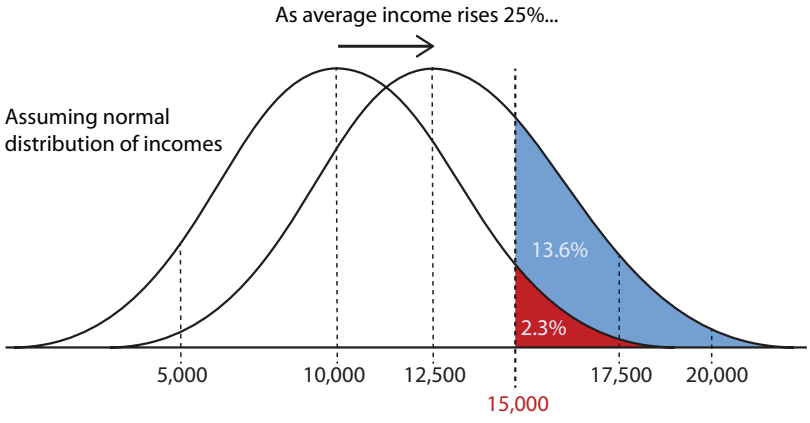
The acceleration phenomenon is key to understanding consumption in a developing country like China

Our framework for analyzing consumer spending starts with the simple observation that the propensity to spend on certain goods does not rise smoothly with income, but moves in steps: households just above a certain income threshold are much more likely to buy say, a car, than households just below it. This gives rise to what we have in our research called the "acceleration phenomenon": potential markets for consumer goods can grow many times faster than average income when many households are crossing one of those income thresholds. The acceleration phenomenon has clearly had powerful effects in China: passenger car sales grew more than 20% a year over the past decade, while real urban incomes grew just 9%. How this works in theory is shown in the figure below, using a stylized income distribution and a hypothetical threshold of US$15,000.

Steady growth in incomes can create explosive growth in potential markets as large numbers of people cross key income thresholds

Illustrating the acceleration phenomenon

Why growth in markets can be exponentially faster than income growth



...the share of the population with incomes above US$15,000 jumps nearly 7 times, from 2.3% to 15.9%

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Deriving actual income distribution curves for China is tricky due to limits in the official data

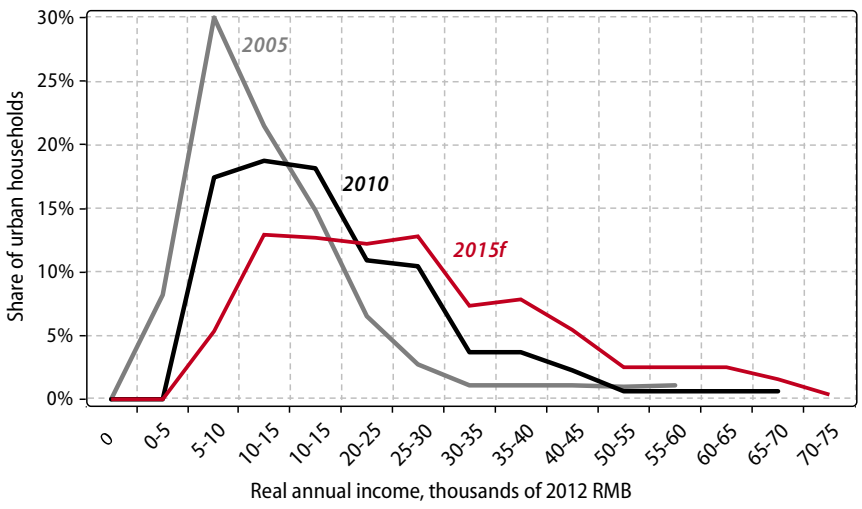
Income inequality means the acceleration phenomenon is weaker in practice than in theory, though still substantial

Consumer goods purchases start to take off at relatively low levels of income

But this theory does not tell us much about the actual dynamics of the acceleration phenomenon in China, since it occurs for different product categories at different income levels. And the biggest opportunities tend to come in the early stages of acceleration (see Europe And The Chinese Consumer for an example). To put this theory to work, we need to know two things: the shape of China's income distribution curve and the relevant thresholds for consumer spending. Using income data from the National Bureau of Statistics and the World Bank, along with some of our own adjustments, we have estimated income distribution curves for China (see the appendix for the technical details). The main difference between theory and reality is immediately obvious from the chart below: rather than being a smooth, normally-distributed hump, China's income distribution has a long tail to the right, a reflection of income inequality. One consequence of this is that the actual acceleration phenomenon will not be quite as dramatic as in our first, stylized diagram—although it is still substantial—because the slope of the curve is not as steep.

As China gets richer, the tail gets fatter

Estimated income distribution for urban households



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The income thresholds for different products will obviously vary quite a bit. For the purposes of this initial overview, we will focus on broad categories of consumption that change in recognizable ways. We borrow from useful work by Boston Consulting Group (summarized in the book *The $10 Trillion Prize*) on the sort of products and services that people start to consume once their income passes certain key thresholds. The BCG authors suggest that a household earning more than US$7,500 in 2010 qualifies as middle class in the Chinese context, as it is when families start to buy mass-produced clothing and better housing. Different consumption dynamics emerge after a threshold of US$12,500, when households start to buy their first car, experiment with international brands, and spend more on non-essential goods like fruit juice, vitamins and alcoholic drinks. After crossing the threshold of US$19,000, households start to spend more on travel, recreation, fancier household goods and small luxuries such as coffee and wine. Our own, less detailed work indicates that BCG's

thresholds are plausible, so we are comfortable using them, after adjusting for 2012 prices and exchange rates. We will adapt these thresholds to divide China's consumer population into three major categories: what we will call Emerging Consumers (with household income above US$8,100 but less than US$13,500), Established Consumers (US$13,500-$20,550) and Affluent Consumers (over US$20,550).

China's consumer population is currently dominated by lower-income households

With these thresholds and our income distribution in hand, we can start to pinpoint just how the acceleration phenomenon has played out in China, and where it is headed next. On our estimates, in 2012 China was home to 75m Emerging Consumer households, 51m Established Consumer households, and 57m Affluent Consumer households—leaving 265m households below the Emerging Consumer threshold. In forecasting the growth of these groups, we assume conservative rates of real income growth (falling to 5% by 2020 from over 10% in recent years), RMB appreciation of 2% per year (down from 3.3% during 2005-2012) and urbanization in line with UN projections. Given these assumptions, by 2020 the number of Emerging Consumer households is modeled to rise 9% to 82m, Established Consumer households to rise 43% to 72m, and Affluent Consumers to rise 223% to 184m, while the number of non-consuming households will shrink to 120m. By far the fastest future growth, then, should come in the Affluent category.

The high-growth phase for low- and mid-range consumer goods is nearing its end, but the high end is taking off

The rise of the affluent

Projected growth in number of Chinese households in main consumer categories

	Emerging		Established		Affluent	
	Net rise per year, m	Average growth	Net rise per year, m	Average growth	Net rise per year, m	Average growth
2000-05	2	15%	0	0%	3	78%
2005-10	11	30%	5	34%	4	18%
2010-12	0	1%	8	23%	10	24%
2012-15	1	2%	6	11%	13	19%
2015-20	1	1%	1	1%	18	14%

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Continued urbanization is key to moving more households into the consumer economy

The key variable in these projections, interestingly, turns out not to be assumptions on income growth or RMB appreciation, but the urbanization rate. This reflects the simple fact that moving to urban income standards from rural ones gives a household a significant boost: the lowest 10% of urban households in 2012 earned the same as the average rural household, and the next rung up earned 50% more. So the future growth of Chinese consumer spending clearly depends on the government's ability to continue effective urbanization; it is no surprise that the new leadership has made encouraging urbanization a central plank in their policy platform.

For our entry-level Emerging Consumer households, the acceleration phenomenon was strongest during 2005-10, with about 20m households crossing the threshold each year and their *total* number growing at 30% a

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Huge numbers of households will continue to cross lower income thresholds, but percentage growth will slow

The acceleration phenomenon is still strong for middle-income consumers, but will soon start to fade

Nonetheless income growth alone can support car sales growing by 8% annually, unless policy intervenes

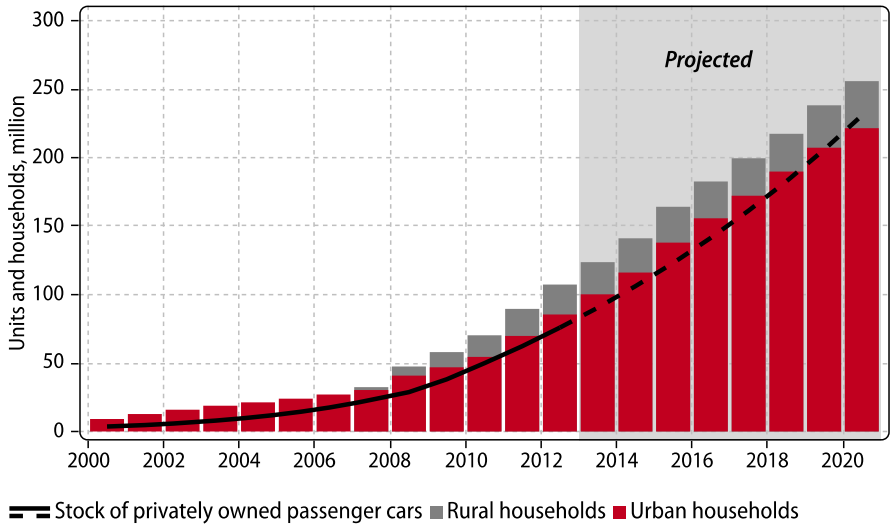
year. (As the table shows, the *net* annual increase in Emerging households was a smaller 11m, because 9m households each year moved up into the Established category.) These years saw a boom in modern retailing and sporting goods: in 2009 alone the number of supermarkets and hypermarkets leaped by 12,000 to 43,800 (see our piece Sportin' Life from 2010 for more detail). But the growth phase for this category of consumers is probably over: although 20m households will continue to cross the Emerging Consumer threshold each year, another 19m will move up to become Established Consumers. The character of the new Emerging Consumers will also change, as the majority of those crossing this threshold in coming years will originate from rural areas and smaller cities.

China's Established Consumers have come into their own more recently, with the acceleration phenomenon kicking in strongly in the latter years of the last decade. Those were the boom years for China's auto market, and this is no coincidence: for these consumers the totemic purchase is a car. An international comparison of car ownership and income levels suggests that vehicle ownership takes off somewhere around US$4,000 or US$5,000 per capita—around the US$13,500 household income of our Established Consumers. And the stock of passenger cars in private ownership indeed corresponds well with our estimates for the number of households above this threshold (see chart).

Still, the high-growth phase is probably close to over for Established Consumers: we project the 20%-plus annual growth in the net size of this group will slow to 11% in 2012-15 and to just 1% in 2015-20. Around 20m households will cross the threshold every year, but the net increase will slow from 8m to 6m in 2012-15, and then to 1m in 2015-20. Yet the number of Established and Affluent households that can afford a car will rise significantly—from 107m today, to 164m in 2015, and to 256m by 2020. This should support sales growth of at least 8% a year for the next decade. There is no guarantee that China will follow the patterns of car ownership seen in other countries, but the limiting factors will be government policy and urban planning, not incomes or affordability.

Income growth drives China's car purchases

Auto population compared to number of households above US$13,500 income threshold



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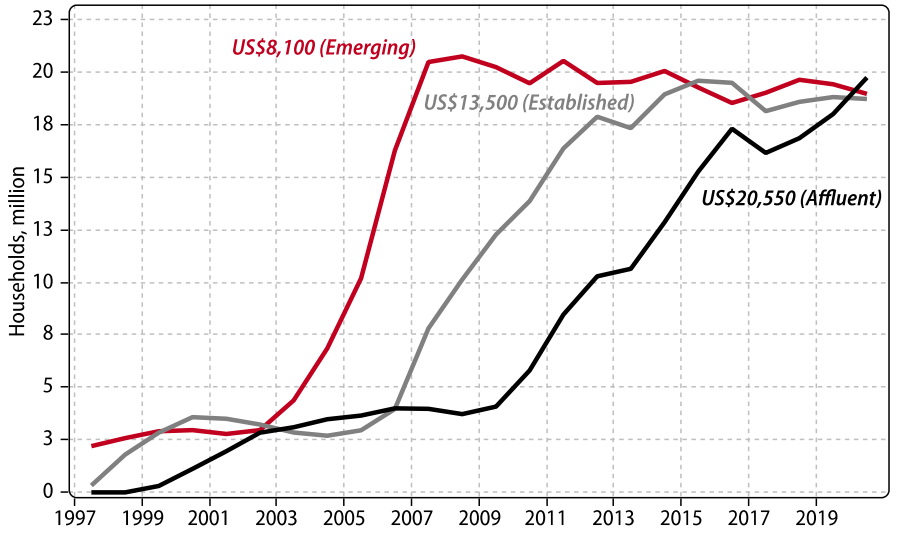
As affluent consumers come into their own, services will start to play a bigger role

Markets for goods and services associated with more affluent consumers, on the other hand, are likely to experience the most intense part of the acceleration phenomenon later this decade. The number of households that pass the Affluent Consumer threshold each year will rise from 10m during 2010-2012 to around 15m by 2015 and hit 20m by 2020. The percentage growth of the total size of this consumer group will remain rapid, holding above 15% for most of the decade. This shift means that affluent households will become the fastest-growing part of China's consumer economy, with significant implications for the type of products that will experience rapid growth. For Affluent Consumers, experiences begin to trump products as a source of satisfaction and prestige—from foreign travel to ballet classes for their darling youngsters. The first stages of this shift are apparent in some statistics from Boeing: air travel between China and Europe/North America grew 17% in 2011 to 179m trips. As China's Affluent Consumer households grow in number, this shift towards greater consumption of services should also accelerate. Unfortunately this trend will be difficult to monitor, as there are few high-frequency gauges of activity in China's service sector.

Growth in affluent Chinese consumers is set to sharply accelerate

Total Chinese households crossing each income threshold in a year, 3ycma



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The acceleration phenomenon is about to really kick in for more affluent consumers

The acceleration phenomenon creates potential markets; turning those into actual sales can still be a challenge

In closing, it's important to emphasize that the size of the various consumer populations that we have identified is only an indicator of the potential market size. If distribution channels cannot keep pace with spending power, those potential sales remain inaccessible. This is a particularly important point now as hard-to-reach rural residents will start to become a major source of the new entrants into the consumer class. The companies that will do best in China's consumer market over the next decade, therefore, will certainly include those who can position themselves to take advantage of the acceleration phenomenon of affluent households. But it will also include those who are adept at breaking down barriers to reaching lower-income consumers and translating China's great potential into sales.

Technical appendix

China's annual household survey covers 133,000 rural and urban households, and generates average per-capita income data for both urban and rural areas. Multiplying those averages (adjusted for inflation) by the number of individuals in the urban and rural population gives the theoretical total real disposable income for urban and rural China for any given year. The National Bureau of Statistics also produces annual statistics on how this income is distributed among households, but these figures are not very detailed and have become increasingly inadequate for rural areas, due to a failure to update thresholds in a timely fashion (52% of rural China has an income above Rmb5,000, the top threshold).

For this project therefore we used data from the World Bank's PovCalNet database, which has used the bank's access to limited amounts of raw survey data to calculate a decile-by-decile income distribution for eight years (the earliest is 1995 and the latest is 2008). While using the PovCalNet data requires interpolating missing years, we still consider it more useful: it can tell us that, for instance, 12% of China's urban household income in 2005 accrued to households in the 8th decile of the distribution. We can then multiply each decile's share by the total urban or rural income to calculate the income accruing to that group, and divide by 10% of the total urban or rural population to find the per-capita income level for that decile. For the 8th urban decile in 2005, then, the theoretical average real disposable income per capita was Rmb14,491.

Many observers have doubts on the accuracy of any information drawn from the official household surveys. Wang Xiaolu of the National Economic Research Institute has famously argued that there are vast quantities of "gray" or "hidden" household income that simply do not show up in the official statistics. Using Wang's estimates would raise total disposable income for urban areas by some 90%, and triple the per-capita income of the top 10%. While we think Wang's estimates are implausibly high, it is nonetheless now widely accepted that the official household survey under-estimates income, particularly for the best-off (see Chinese Consumers: Dream Come True).

For this research project, therefore, we simply split the difference, adding 50% of Wang's missing income to each urban income bracket. For our 8th urban decile in 2005, then, the adjustment raises per-capita disposable income to Rmb16,853. We are the first to admit that this is an inelegant solution; fortunately it isn't critical to our analysis. Given that 60% of "gray income" by Wang's estimates accrues to the top 10% of households, and 80% to the top 20%, inflating for gray income has little effect on lower income thresholds. We are primarily interested in households crossing those lower income thresholds, and how much more money the very rich make does not greatly affect our analysis.

So after coming up with average income per capita by decile for each year from 1995 to 2011, the next challenge is to simulate a frequency distribution: to estimate, for instance, how many individuals would have an income of Rmb9-10,000 in a given year. If our 10 data points were well-behaved and fit a normal distribution, it would be possible to create a smooth bell curve like that in our theoretical diagram on page 1. Unfortunately, reality is far less tidy and no curve function fits adequately.

So we interpolated data points between each average, taking 75% of the 1st decile average for the bottom 1%, and assuming exponential growth for the top 5%. Given this frequency distribution we were able to estimate what percentage of households should be over a given threshold in a given year. We also use a simplifying assumption that each household contains three individuals. Given that the income levels in our deciles are not extraordinarily precise to begin with, due to the required interpolation and adjustments, it did not seem warranted to separately model household size for each year and decile of the income distribution.