Consumer Spending in China: The Past and the Future

By Jun Nie and Andrew Palmer

After steadily declining for nearly half a century, the share of consumer spending in China's GDP has recently increased. Economists and policymakers widely agree that the share of consumer spending must increase for China to continue its economic development; sustaining growth primarily on exports and investment will become more difficult in the longer run. Moreover, if China successfully rebalances economic growth toward a greater share of consumption, the global economy may benefit. Stronger Chinese demand boosts exports from the rest of the world.

Although the recent rise in the consumption share has allayed some concerns about slowing growth in China, it has also spurred discussion over whether this trend is sustainable and whether China will truly become a consumption-driven economy. Judging the future of consumer spending in China requires understanding not only what drove the recent rise in the consumption share but also what drove its past multidecade decline. In this article, we analyze the effects of several long-term trends—most notably, changes in demographics and urbanization—as well as recent developments—mainly the housing boom after 2000. The analysis shows the decline in the consumption share from 1970 to 2000 is largely explained by China's rapidly aging population (which reflects both increased longevity and a large decline in birth rates due

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to the one-child policy) and fast urbanization. After 2000, however, the consumption share declined by more than would be expected from the country's demographic and urbanization trends alone. This discrepancy is likely due to rapidly rising housing prices since the early 2000s, which increased households' saving rate and slowed consumption growth.

Based on the analysis of the key determinants of Chinese consumption growth, we forecast consumption growth and its share in GDP for the next five years. In a benchmark scenario of relatively stable income growth and a further modest decline in the household saving rate, consumption growth in China remains at around 9 percent per year over the next five years, causing the share of Chinese consumption in GDP to increase by about 5 percentage points to 44 percent by 2020. This scenario has two implications. First, it suggests that strong consumption growth is sustainable in the near future, allowing China to continue transitioning toward a consumption-driven economy. Second, it suggests that strength in near-term Chinese consumption growth will partly rely on a further decline in the household saving rate. As the household saving rate cannot decline indefinitely, consumption growth may need to rely more heavily on household income to be sustainable in the long run.

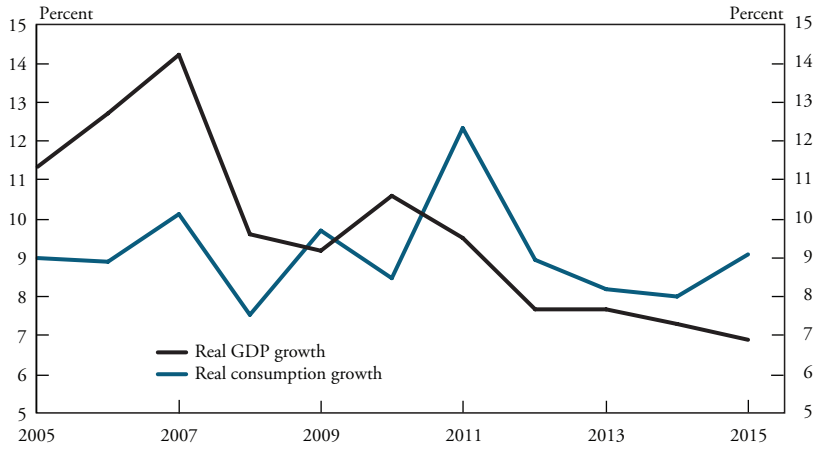
Section I documents trends in Chinese consumption. Section II analyzes the determinants of Chinese consumption. Section III provides forecasts of future Chinese consumption growth as well as its share in GDP.

I. Trends in Consumer Spending

For the past decade, the trend of Chinese consumption growth is nearly flat despite a significant slowing of GDP growth in recent years. Chart 1 shows that real consumption growth fluctuated around an average of 9 percent annually, while real GDP growth slowed from more than 10 percent annually in 2005–07 to less than 7 percent in 2015. As consumer spending has outpaced GDP, the share of consumption in GDP has increased since 2010, reversing a nearly four decade decline (Chart 2).[1] Although slowing in other GDP components such as exports and investment may have mechanically increased the share of consumption in GDP, there is significant evidence that Chinese consumption is strong in its own right.

Chart 1

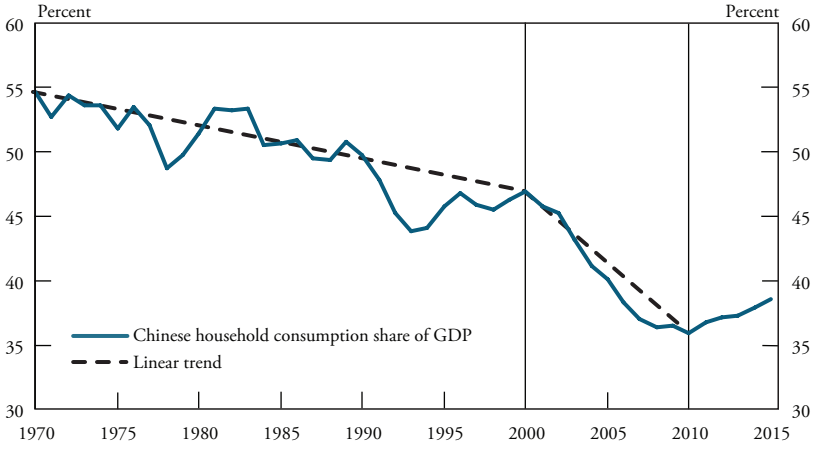
Chinese Real Consumption and Real GDP Growth



Sources: China National Bureau of Statistics and Haver Analytics.

Chart 2

Consumption Share of Chinese GDP



Sources: China National Bureau of Statistics and Haver Analytics.

Examining the components of Chinese household consumption can help explain its overall strength. Consumption of services and high-end products—not basic necessities—have mainly driven consumption growth. Chart 3 shows that real spending on transportation and communication increased sevenfold over the last two decades compared with a threefold increase in overall household spending. Transportation and communication is a broad category that encompasses many high-end goods and services that have recently become available to middle-class Chinese households, such as smartphones, laptops, and air travel. Travel services in particular appear to be growing quickly: the number of Chinese outbound travelers has been growing at a double-digit pace for many years, and 2015 marked the fourth consecutive year of China as the world's top tourism source market (Jing, Feiyue, and Yiyi).

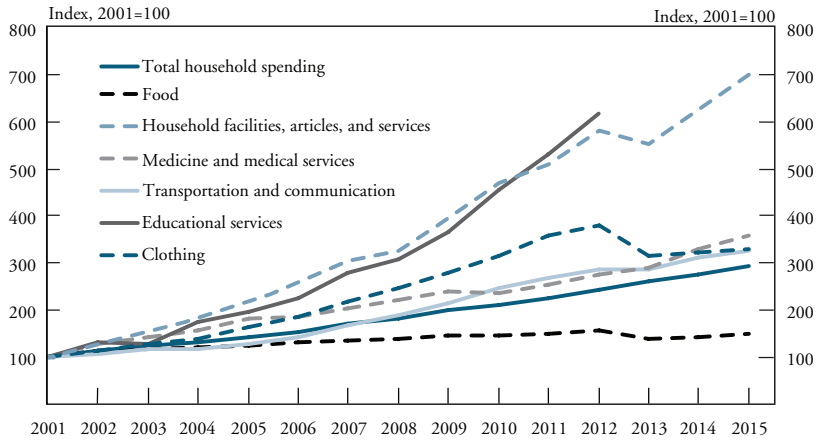
The black line in Chart 3 shows that another component of consumption, educational services, is also growing rapidly. Chinese families now are spending more resources on their child's education both inside and outside the classroom. In addition to paying tuition both domestically and at foreign colleges and universities, Chinese families are increasingly paying for tutoring and other educational supplements for their children.[2] These trends are consistent with the rising number of Chinese students studying abroad since 2000. The share of Chinese students among foreign students in the United States has risen from about 11 percent during the 2005–06 school year to about 31 percent during the 2014–15 school year.[3]

Demographic factors could influence Chinese consumer spending, as young people account for a particularly large share of consumer spending in fast-growing services such as travel and education. Chart 4 shows that in the 40 years from 1970 to 2010, the ratio of young to working-age people (the "young dependency ratio") was declining in China, while the ratio of old to working-age people (the "old dependency ratio") was gradually rising. The declining share of young people suggests lower growth in consumer spending, as the strongest consumption categories—educational services and transportation and communication—are largely supported by young people. But the aging population may support consumption by spending more on health care.

The mass migration of Chinese households from rural to urban areas may also have influenced Chinese aggregate consumption growth.

Chart 3

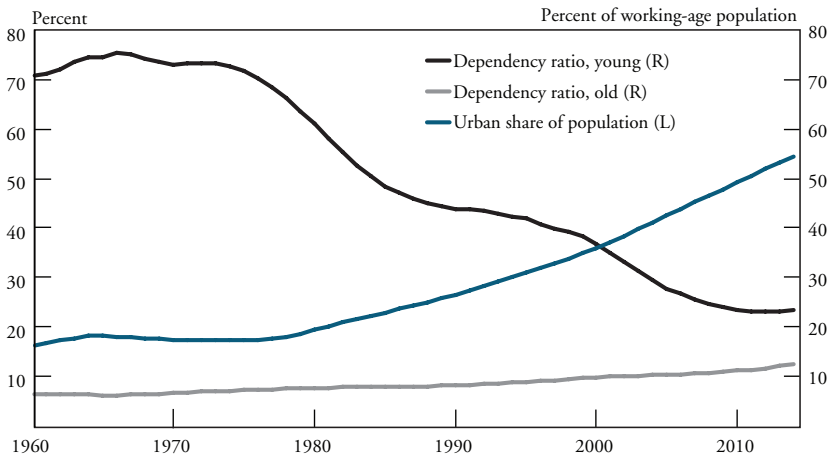
Real Average Household Expenditures in China



Note: All series are delfated by Chinese CPI.
Sources: China National Bureau of Statistics and Haver Analytics.

Chart 4

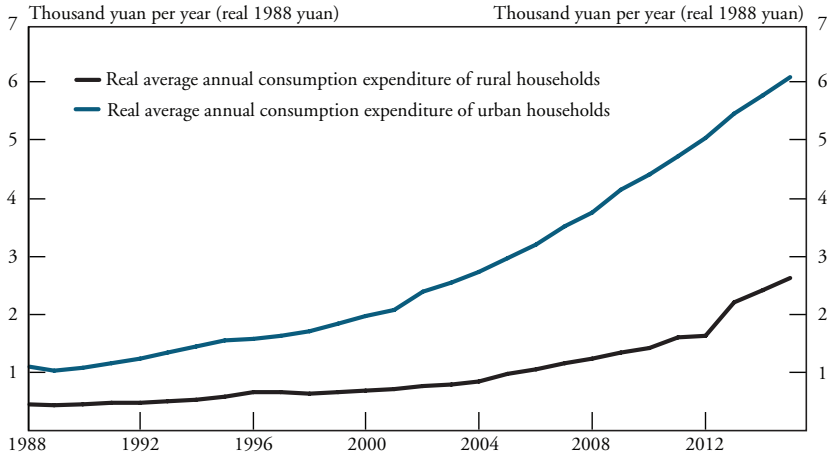
Chinese Urbanization Rate and Dependency Ratios



Sources: World Bank and Haver Analytics.

Chart 5

Real Consumption Expenditure of Urban and Rural Chinese Households



Source: Wind Information.

Over the past five decades, the share of China's population living in urban areas has more than tripled, rising from 18 percent in 1960 to 56 percent in 2015 (Chart 4). Urban workers typically earn more and therefore spend more than rural households. Chart 5 shows that Chinese household spending by both urban and rural households increased sixfold from 1988 to 2015. However, urban households spent more than twice as much as rural households over that period, measured at constant prices. Rural households increased their real per capita consumer spending from about ¥476 ($130) in 1988 to about ¥2,630 ($710) in 2015 (measured by the price level in 1988), while urban households increased theirs from about ¥1,100 ($300) to about ¥6,100 ($1,650) during the same period. Thus, the increase in the urban share of the population has also boosted overall consumption growth.

II. Key Forces Driving Consumption Trends

To account for both the long decline in the consumption share of GDP and its recent rise, we explore the effects of two sets of factors on consumption trends in China. The first set of factors are demographic and urbanization trends. Changes in the demographic and urban composition of Chinese households may be important in explaining the

long-term decline in China's consumption share in GDP. However, these trends alone cannot fully capture the changes in the consumption share in recent years, including the accelerated decline after 2000 and the subsequent increase after 2010. A second set of factors—specifically, the housing boom after 2000 and new family structures due to the one-child policy—may better explain the developments in this later period.

Demographic and urbanization trends

To gauge the effects of demographic and urbanization trends on the share of consumption in GDP, we analyze a broad set of countries that are close to China economically or geographically. Since demographic and urbanization trends are typically persistent and slow moving, the lack of variation makes it difficult to capture their effects on consumption based on observations in a single country.

Our analysis is based on a panel regression using a sample of 24 countries including most Asian countries and large developing countries. The data are from the World Bank's World Development Indicators and cover the period from 1960 to 2014. Table 1 outlines the countries we use along with the selection criteria and sample periods for each. The dependent variable in our regression is the consumption share in GDP. To capture the average effect of demographic variables on emerging and Asian countries' consumption shares, we use the young and old dependency ratios as independent variables. Separating the young dependency ratio from the old dependency ratio is important, since the two ratios have shown completely different trends in China. In addition, we include the share of the population living in urban areas as an independent variable to measure the level of urbanization. To eliminate differences across countries that our analysis does not control for, we include country-fixed effects in the estimation.[4]

We derive two main findings from this regression analysis. First, we find an increase in either dependency ratio is associated with an increase in the consumption share in GDP. This finding reflects that old and young people may not earn income but do consume goods and services. In particular, we find a 1 percentage point increase in the old dependency ratio is associated with a rise in the consumption share of 0.31 percentage point, while an equivalent increase in the young dependency ratio is associated with an increase of 0.12 percentage point

Table 1

Summary Information for the Cross-Country Regression Analysis

Country	Region/category	Dates of sample
Afghanistan	South Asia	2002–14
Bangladesh	South Asia/EAGLE	1960–70, 1973–2014
Brazil	EAGLE	1960–2014
Cambodia	Southeast Asia	1960–70, 1993–2014
China	East Asia/EAGLE	1960–2014
Egypt	EAGLE	1965–2014
India	South Asia/EAGLE	1960–2014
Indonesia	Southeast Asia/EAGLE	1960–2014
Iran	South Asia/EAGLE	1960–2014
Japan	East Asia	1970–2014
Korea	East Asia	1960–2014
Laos	Southeast Asia	1984–88, 2000–14
Malaysia	Southeast Asia/EAGLE	1960–2014
Mexico	EAGLE	1960–2014
Mongolia	East Asia	1981–2014
Nepal	South Asia	1975–2014
Nigeria	EAGLE	1981–2014
Pakistan	South Asia/EAGLE	1967–2014
Philippines	Southeast Asia/EAGLE	1960–2014
Russia	EAGLE	1989–2014
Sri Lanka	South Asia	1965–2010
Thailand	Southeast Asia	1960–2014
Turkey	EAGLE	1960–2014
Vietnam	Southeast Asia/EAGLE	1990–2014

Notes: We include countries geographically close to China based on the UN standard as well as large developing economies. Emerging and growth-leading economies (EAGLEs) are a grouping of key emerging markets developed by the Banco Bilbao Vizcaya Argentaria (BBVA). More precisely, they are emerging economies expected to contribute to world growth more than the average of the G-6 countries (G-7 excluding the United States) over the next 10 years. We use the UN geo-scheme of regions of Asia and include all countries in regions in or adjacent to China; specifically, East Asia, Central Asia, South Asia, and Southeast Asia. We exclude countries in Central Asia since all are former Soviet satellite states which experienced large and atypical economic shocks following liberalization after the fall of the USSR. We also exclude countries with a population under 2 million. In addition, we include data on large emerging economies categorized as EAGLEs by BBVA Research in 2016.
Sources: BBVA Research and World Bank.

(Table 2). The results are robust to an alternative specification in which we use one-year lags to avoid the possibility of the consumption share and demographic and urbanization variables in the same year moving together due to uncontrolled factors.

Table 2
Cross-Country Regression on Consumption Share of GDP

Variables	Benchmark	One-year lag
Dependency ratio, old$_t$	0.305*** (0.0899)	
Dependency ratio, young$_t$	0.119*** (0.0235)	
Urban share of population$_t$	–0.257*** (0.0368)	
Dependency ratio, old$_{t-1}$		0.298*** (0.0940)
Dependency ratio, young$_{t-1}$		0.123*** (0.0237)
Urban share of population$_{t-1}$		–0.244*** (0.0370)
Constant	67.72*** (2.919)	66.72*** (2.959)
Observations	1,073	1,046
R^2	0.289	0.282
Number of countries	24	24

*** Significant at the 1 percent level
** Significant at the 5 percent level
* Significant at the 10 percent level
Notes: Standard errors are in parentheses. We estimate the model using a panel regression with country-fixed effects. All data come from the World Development Indicators from the World Bank.
Sources: BBVA Research, United Nations, World Bank, Haver Analytics, and authors' calculations.

Second, we find an increase in urbanization tends to reduce the consumption share in GDP. This result requires more explanation, since one might expect urbanization to be associated with an increase in total consumption and thus an increase in the consumption share in GDP. Urban households in the countries in our sample (including China) spend more and have higher incomes on average than their rural counterparts. However, they also contribute more to total output, or GDP. Therefore, the negative coefficient from our sample suggests that when people in developing countries move from rural areas to urban areas—usually for better employment prospects—they contribute more to production than to consumption. To put this in a statistical perspective, based on our analysis, a 1 percentage point increase in the urban share of a country's population tends to reduce its consumption share in GDP by 0.26 percentage point on average.[5]

The regression results in Table 2, together with the observed demographic and urbanization trends in China, can explain the decline in the consumption share from 1970 to 2000 well. Using the relationships estimated from the regression, the changes in young and old dependency ratios, and the share of the urban population in China over this period, the model predicts an 8.1 percentage point decline in the consumption share, explaining nearly the entire 8.3 percentage point decline observed in the data. The increase in urbanization contributes 4.7 percentage points to the decline in the consumption share. Likewise, the large decline in the young dependency ratio contributes 4.3 percentage points to the decline, though this contribution is partially offset by a positive contribution of 0.9 percentage point from an increase in the old dependency ratio.

However, the regression model fails to capture the large decline in the consumption share in GDP from 2001 to 2010. Indeed, the model can explain only 4.1 percentage points of the decline in the consumption share, less than half of the observed decline of 9.8 percentage points. This remaining decline in the consumption share can be largely attributed to the increase in the household savings rate after 2000, likely driven by the Chinese housing boom.

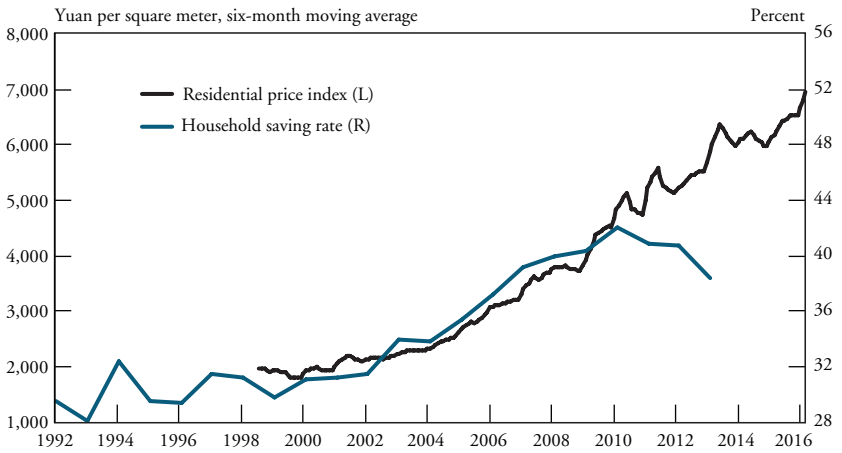
Changes in the household saving rate

The larger-than-expected decline in the Chinese consumption share from 2001 to 2010 corresponds to a rapid increase in the household saving rate over the same period. Before 2000, the Chinese household saving rate was high but relatively stable at around 30 percent (Chart 6). This high saving rate was a product of both underdeveloped financial markets and the lack of a social safety net (Hung and Qian; Prasad). However, since 2000, the saving rate has increased dramatically, reaching a peak of 42 percent in 2010. As Chamon and Prasad show, the increase in the saving rate from 2001 to 2010 is broad-based across age groups. Moreover, a large increase in the household saving rate may imply slower growth in consumption and thus contributed to the rapid decline in the consumption share that began in 2000.

The large jump in the household saving rate from 2000 to 2010 is largely related to development in China's housing market during this period. Before 1998, most Chinese families lived in government-provided houses; after economic reforms in 1998 removed this benefit,

Chart 6

Chinese Household Saving Rate and Home Price Index

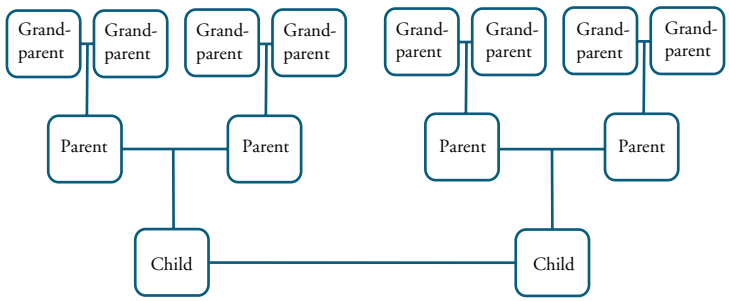


Sources: Economy Research Institute, China National Bureau of Statistics, and Haver Analytics.

however, most Chinese families needed to buy their own homes. This change triggered rapid growth in the Chinese real estate sector, causing home prices to rise tremendously. Furthermore, as house prices started to increase quickly, housing became a popular investment for wealthy Chinese households, raising demand even further and exacerbating house price increases. Indeed, from 2000 to 2010, house prices in China increased by about 161 percent (Chart 6). In addition to rapidly increasing prices, Chinese homebuyers faced large required down payments—typically 30–40 percent, but in some major cities as high as 50 percent. As a result, middle-class Chinese households were forced to save a disproportionately large share of their earnings to purchase a home (Fang and others). The saving didn't end with the purchase of a home—the subsequent mortgage payments constituted additional saving as they increased the homeowners' housing equity. As Rosenzweig and Zhang argue, this housing market dynamic helps explain the rising saving rate associated with rising housing prices from 1998 to 2010.[6]

As the scramble to buy homes after the 1998 reform faded, so, too, did the desire to save for homes. Moreover, young people currently do not need to save as aggressively as the previous generation for home purchases because their parents and grandparents often help them buy

Figure 1
Chinese Family Structure under the One-Child Policy



Note: With the one-child policy, four parents and eight grandparents help young couples pay for a home.

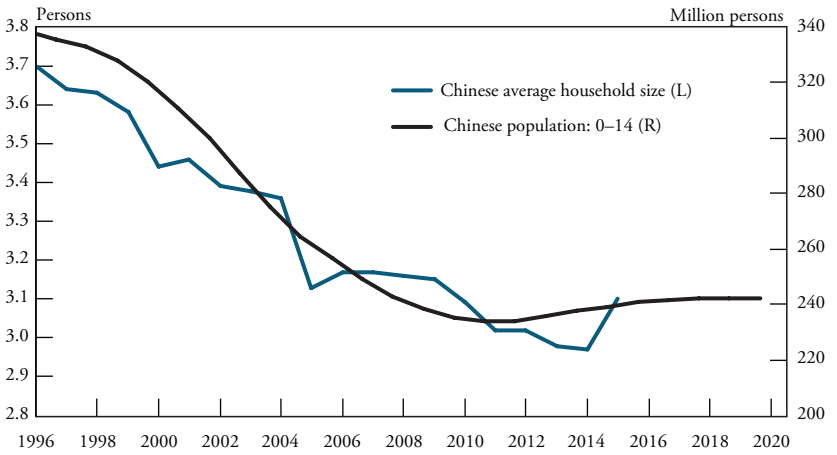
a home. Due to the one-child policy, which was introduced in 1979, a typical young couple in China are the sole descendants of four parents and eight grandparents (Figure 1). In China, it is common for parents and grandparents to help their children by paying the high down payment or even paying for the entire house (Luo). Small family sizes under the one-child policy allow families to focus their resources rather than spreading them among multiple children or extended family members.

Large financial contributions from older generations are feasible for two additional reasons. First, after aggressively saving for several decades, many parents and grandparents are wealthy enough to afford this gift to the younger generation. Second, many households own multiple homes. Based on the 2014 China Household Finance Survey, one out of five urban households owns a second home, meaning that on average, a young couple's parents and grandparents have one extra home between them in addition to their primary residences. Overall, less pressure for young Chinese couples to save helps explain why the Chinese saving rate has started to decline since 2010.

Implications for the future of consumption

Going forward, China's older dependency ratio is expected to continue to rise; China's young dependency ratio, however, is expected to reverse its previous trend. The young dependency ratio appears to have bottomed out and may in fact increase due to the removal of the one-child policy. In 2013, the Chinese government began to relax the one-child policy, and in 2015, the government began allowing all families

Chart 7
Chinese Young Population and Household Size



Sources: China National Bureau of Statistics, United Nations, and Haver Analytics.

to have two children. Just as the introduction of the one-child policy slowed Chinese population growth, the removal of this policy is expected to significantly increase population growth. The black line in Chart 7 shows the number of children age 14 or younger has increased gradually since 2010, reversing a sharp decline, and is expected to continue to increase in the near future, according to the United Nations' forecasts. The blue line in Chart 7 shows an early indicator of this expected trend, as the average size of Chinese households has already started to increase. Overall, the rising trend in the number of young people, combined with our finding that a higher young dependency ratio boosts the consumption share in GDP, supports a further increase in China's consumption share.

However, our regression results also suggest the ongoing urbanization of the Chinese population may reduce the consumption share in GDP. Although the growing urban population supports consumption growth, it contributes more to production than to consumption. The share of the Chinese population living in urban areas has nearly tripled since 1980 and surpassed 50 percent for the first time in history around 2010. As the ongoing urbanization process is unlikely to stop in the near term, it may continue to restrain the share of consumption in GDP.

In addition, we expect the recent decline in the household saving rate to continue due to both lower saving among young people and an expected baby boom. According to Choukhmane, Coeurdacier, and Jin, the average saving rate for one-child households in China is about 9 percentage points higher than that of households with twins in the period of 2002–09.[7] The difference seems to largely reflect the difference in educational expenditures for one child compared with two. The 2009 Chinese Urban Household Survey shows a one-child household in China spends an average of 10.6 percent of its total income on education, whereas a household with twins spends 17.3 percent.[8] Thus, the expected increase in the population share of young people will likely lead to lower savings and more consumption in China in the near future.

III. Chinese Consumption Outlook and Macro Implications

Identifying the determinants of Chinese consumption allows us to better forecast its outlook and understand its implications for China's transition toward a consumption-driven economy. We predict consumption growth will remain strong and may increase further over the next few years. However, whether China can truly become a consumption-driven economy depends on whether businesses can adjust production accordingly to meet the rising demand, thus triggering a demand-driven cycle supporting economic growth.

Our forecast for consumption growth is based on projections of two factors—household disposable income and household savings. We make direct assumptions about these two factors based on their historical relationships with changes in GDP growth and their recent trends. Based on the projected paths of household income and the saving rate we then calculate the implied growth path for consumption. One limitation of this approach, however, is the availability of data on the saving rate. Our measure of the household saving rate only extends to 1992, so we are unable to establish an explicit and statistically significant relationship between the saving rate and our demographic and urbanization variables. To address this limitation, we use the cross-country regression results in the previous section to estimate how much expected future demographic and urbanization trends are likely to contribute to future changes in the consumption share in GDP.

Household income

Our projection of total disposable income growth is based on a forecast for real GDP and the relationship between disposable income growth and GDP growth. In our benchmark case, we assume GDP growth follows the most recent IMF forecast and gradually declines from 6.5 percent in 2016 to 6.0 percent in 2020. In addition, we assume disposable income growth slows less than GDP growth as it has in recent years. The regression results in column 1 of Table 3 show that a 1 percentage point increase in real GDP growth was associated with a 0.28 percentage point increase in real household disposable income growth over the 1982–2014 sample period for which data are available. After controlling for long-term trends, the effect increases to 0.44 percentage point (Table 3, column 2).

The relatively stable disposable income growth in China largely reflects its stable employment growth. State-owned enterprises account for about 30 percent of total urban employment in China, and due to political pressure, they seldom lay off workers (Szamosszegi and Kyle). As a result, employment has risen at a stable pace: more than 10 million jobs have been added to the economy each year over the last 10 years, including the years of the financial crisis. Indeed, the Chinese government has included stable employment growth as a mandate in its economic plan. Such stable employment growth strongly supports stable disposable income growth. We therefore use the coefficient of 0.44 to project the path of disposable income growth given our forecast of real GDP growth.[9]

We also include an alternative scenario—a "hard landing" path reflecting China's potential failure to stabilize growth through reforms and policy stimulus. In the hard landing path, GDP growth slows 0.5 percentage point each year from 6.5 percent in 2016 to 4.5 percent in 2020. This scenario represents the view of a significant number of forecasters such as The Conference Board (Hoffman and Polk). Including this alternative scenario helps us understand how consumption might respond to a further slowing of the economy.

Saving rate

Our saving rate projection is based on its recent trend and the factors we highlighted in the previous section, all of which point to an

Table 3

Regression of China's Real Urban Disposable Income Growth on Real GDP Growth and Demographics

Variables	Real disposable income growth	Real disposable income growth
Real GDP growth	0.283 (0.269)	0.443* (0.237)
Dependency ratio, old		0.932 (2.089)
Dependency ratio, young		–0.801** (0.317)
Urban share of population		–0.644 (0.471)
Constant	7.887*** (2.763)	48.59** (20.82)
Observations	34	33
R^2	0.033	0.389

*** Significant at the 1 percent level
** Significant at the 5 percent level
* Significant at the 10 percent level
Note: Standard errors are in parentheses.
Sources: China National Bureau of Statistics, Haver Analytics, and authors' calculations.

expected decline. The household saving rate declined by 3.6 percentage points from 2010 to 2013 (2014 and 2015 data were not available at the time of our analysis). In addition, a more recent survey from the Chinese central bank suggests the percent of Chinese households preferring to increase their savings and investments peaked around 2010—consistent with the timing of the peak of the saving rate—and has since declined, though at a slower pace than the saving rate (Chart 8). Consistent with the recent declines in the saving rate and the survey measure, our benchmark scenario assumes a 1 percentage point decline in the household saving rate each year from 2016 to 2020.

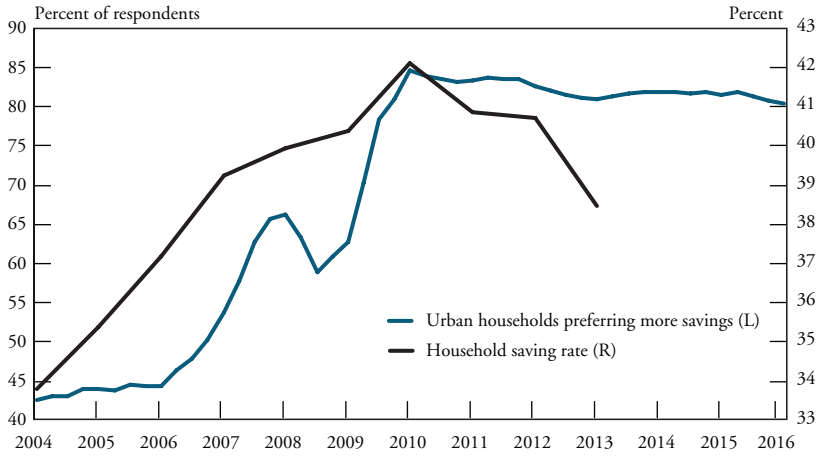
As with disposable income, we also include an alternative scenario for the saving rate. Our alternative scenario assumes savings will decline at an even faster pace: specifically, 2 percentage points each year. This faster-decline scenario represents an improved social safety net, which is on Chinese government's reform agenda and could help Chinese households reduce their precautionary savings.

Chinese consumption forecasts

We use these projections of the household saving rate and disposable income growth to forecast consumption growth and the consumption share of GDP from 2016 to 2020. Table 4 shows the forecasts for real

Chart 8

Household Saving Rate and Willingness to Save



Note: Households "preferring more savings" also includes those respondents preferring more investment.
Sources: China National Bureau of Statistics, People's Bank of China, and Haver Analytics.

household consumption growth and the consumption share of GDP for the two GDP growth scenarios using the benchmark saving rate forecast. Panel A shows that under the flat GDP growth assumption, real consumption growth remains stable at around 9 percent through 2020. The consumption share of GDP, however, increases 5.4 percentage points over this period from 38.6 percent in 2015 to 44 percent in 2020.[10] Panel B shows that under the alternative view of Chinese growth, real consumption growth is slightly slower than under the flat GDP growth assumption but is a higher consumption share of GDP, rising 6.5 percentage points from 38.6 percent in 2015 to 45.1 percent in 2020. The larger increase in the consumption share despite slower consumption growth suggests more dramatic deceleration in sectors such as exports and investment: as the shares of other sectors in GDP decrease, the relative share of consumption increases. The relatively small difference in consumption growth in these two scenarios highlights the relatively small effects of slowing GDP growth on Chinese consumption if income growth remains stable and the saving rate follows its declining trend.

While a decline in the saving rate of 1 percentage point per year seems a reasonable path for China, Table 5 shows results from an alternative scenario in which the saving rate declines by 2 percentage points each year. This 2 percentage point decline is closer to what a simple statistical model

Table 4

Consumption Forecast: Benchmark Model

Panel A: Small decline in GDP growth

Forecast variables	Percent					
	2015	2016	2017	2018	2019	2020
Real GDP growth	6.9	6.5	6.2	6.0	6.0	6.0
Saving rate	37.0	36.0	35.0	34.0	33.0	32.0
Real household consumption growth	9.1	8.9	9.0	9.0	9.0	9.0
Consumption share of GDP	38.6	39.5	40.5	41.6	42.8	44.0

Panel B: Larger decline in GDP growth

Forecast variables	Percent					
	2015	2016	2017	2018	2019	2020
Real GDP growth	6.9	6.5	6.0	5.5	5.0	4.5
Saving rate	37.0	36.0	35.0	34.0	33.0	32.0
Real household consumption growth	9.1	8.9	8.9	8.9	8.8	8.8
Consumption share of GDP	38.6	39.5	40.5	41.8	43.3	45.1

Note: Table shows results from a benchmark model with a 1 percentage point annual saving rate decline.
Sources: China National Bureau of Statistics, IMF, Haver Analytics, and authors' calculations.

Table 5

Consumption Forecast: Alternate Model

Panel A: Small decline in GDP growth

Forecast variables	Percent					
	2015	2016	2017	2018	2019	2020
Real GDP growth	6.9	6.5	6.2	6.0	6.0	6.0
Saving rate	37.0	35.0	33.0	31.0	29.0	27.0
Real household consumption growth	9.1	10.6	10.6	10.5	10.5	10.4
Consumption share of GDP	38.6	40.1	41.7	43.5	45.4	47.3

Panel B: Larger decline in GDP growth

Forecast variables	Percent					
	2015	2016	2017	2018	2019	2020
Real GDP growth	6.9	6.5	6.0	5.5	5.0	4.5
Saving rate	37.0	35.0	33.0	31.0	29.0	27.0
Real household consumption growth	9.1	10.7	10.5	10.4	10.3	10.2
Consumption share of GDP	38.6	40.1	41.8	43.7	45.9	48.4

Note: Table shows results from an alternate model with a 2 percentage point annual saving rate decline.
Sources: China National Bureau of Statistics, IMF, Haver Analytics, and authors' calculations.

predicts.[11] In the alternative scenario, consumption growth rises to over 10 percent under both GDP growth assumptions and generates a consumption share in GDP of almost 50 percent under the pessimistic GDP growth assumption. To better compare the results across the four scenarios in Table 4 and Table 5, Chart 9 shows the consumption share of GDP in these scenarios and compares them with its history. Similarly, Chart 10 compares consumption growth in these four scenarios with its history. Overall, consumption growth remains strong and the share of household consumption in GDP continues to increase across all four scenarios. One cautionary note is that these scenarios assume relatively stable income growth as has occurred in the last few decades. However, given the ongoing reforms in China to restructure its supply side, it is possible that employment and income growth will be more volatile. If income growth is significantly weaker than we project here, both consumption growth and the consumption share could be significantly lower. This represents one downside risk to our forecast.

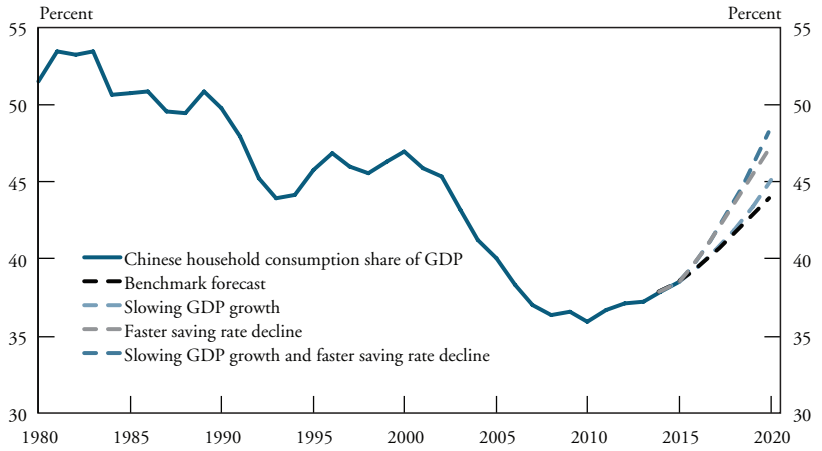
Four factors we highlighted—rising shares of the young and old population, urbanization, a large accumulation of household wealth, and less savings drain from purchasing homes—have already begun to influence Chinese consumption and saving. A factor that could reduce households' desire to save in the future is improvements in the social safety net. China currently has a weak social welfare infrastructure which has caused households to save more for themselves. As Baker and Orsmond point out, if the Chinese government stepped up its efforts to improve the economy's social security system and created more robust health care programs, households would face less pressure to save for out-of-pocket retirement and medical expenses. This could cause the Chinese household saving rate to fall at a faster pace from its current high level (around 35 percent), further lifting consumption growth in the near term. Enacting social welfare reform would make our alternative scenario (a 2 percentage point annual decline in the saving rate) more likely.

Contribution of demographic and urbanization factors

In addition to providing a basis for forecasts, our cross-country regression results can help us quantify the contributions of projected demographic changes and urbanization to China's future consumption

Chart 9

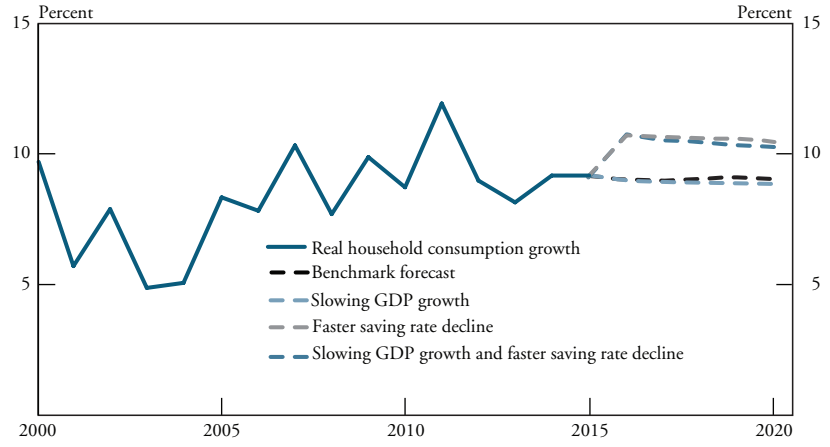
Consumption Share of GDP: Data and Forecasts



Sources: China National Bureau of Statistics, IMF, Haver Analytics, and author's calculations.

Chart 10

Consumption Growth: Data and Forecasts



Sources: China National Bureau of Statistics, IMF, Haver Analytics, and author's calculations.

share in GDP. Population projections from the United Nations suggest the young and old dependency ratios will increase by an average of 0.13 and 0.81 percentage point per year, respectively, over the next five years. The long-term trend in the urban share of the population in China, which has increased steadily by an average of 1 percent per year from 1980 to 2015, suggests the urban share will continue to increase by 1 percentage point per year for the next five years.

Based on these projections, the model predicts the consumption share in GDP will not change much in the next five years, as the positive contribution of demographic changes is mostly offset by the negative contribution of further urbanization. This represents a large break from historical trends: over the last 40 years, the negative contribution of urbanization and the declining young dependency ratio consistently outweighed the positive contribution of an aging population, leading to a yearly average decline in the consumption share of 0.3 percentage point per year. The minimal contribution of these factors in the future suggests our benchmark forecast—a 1 percentage point rise in the consumption share in GDP per year through 2020—relies more on an expected decline in the saving rate and relatively stable income growth than demographic and urbanization trends.

Implications for China's transition to a consumption-driven economy

Our forecast of continued strong growth in both China's consumption and consumption share in GDP does not necessarily imply that China's economy will become consumption-driven. A consumption-driven economy requires not only strong consumer demand but also increased production and higher incomes to support it. Our analysis suggests that consumption growth in the next five years will rely on the combination of a declining saving rate and relatively stable income growth. Maintaining consumption growth over the longer run, however, will require a further pick up in income growth, since the saving rate cannot fall indefinitely.

Generating higher income growth will require China to restructure its supply side so that production can meet rising household demand. A successful transition to a consumption-driven economy would allow industries to increase the domestic production of goods and services that consumers will increasingly demand; this increased production will, in

turn, generate additional jobs and support income growth. But if the increase in demand is met with an increase in foreign imports rather than domestic production, domestic employment and household income may not benefit, and consumption growth will eventually slow. Moving toward a true consumption-driven economy will require China to meet rising demand with domestic, not foreign, goods and services.

IV. Conclusions

After declining for nearly half a century, consumer spending as a share of GDP in China began to increase around 2010. We examine the key factors driving this change and predict their long-term trends. Based on this analysis, we find that Chinese consumption growth will likely remain strong over the next few years due to relatively stable income growth and an expected decline in the household saving rate. The declining saving rate in China reflects both a changing demographic structure—an expected increase in the young dependency ratio after multiple decades of decline—and a changing consumption pattern of young people, who face less pressure to save thanks to financial support from their parents and grandparents.

In the long run, transitioning to a consumption-driven economy may require some policy changes. Specifically, China may need to implement successful supply-side reforms—which are on the government's agenda but haven't yet been significantly pushed forward—to enable domestic production to meet rising domestic demand. Although the Chinese household saving rate is declining from a very high level, the downward trend cannot last forever. A truly consumption-driven economy must rely on strong household income growth, which is ultimately driven by improved technology and investment.

Endnotes

[1]In general, total Chinese consumer spending consists of spending by households and spending by the government. As we focus on the Chinese consumer sector, throughout the paper, "the share of consumption in GDP" refers to the share of household consumption in GDP.

[2]For more details on Chinese households' spending on extracurricular activities and educational supplements, see Nielsen.

[3]For more details about Chinese students studying at U.S. colleges and universities, see Institute of International Education.

[4]To mitigate concerns about non-stationary variables and spurious regressions, we conduct cointegration tests on each country. The results show all series are cointegrated and thus our regression results are valid.

[5]We also include a quadratic term of urbanization in the regression to capture possible non-linear effects of urbanization on the consumption share. But the overall effect of urbanization on the consumption share remains negative.

[6]Wang and Wen argue fast-rising house prices and living costs cannot explain the high level of the Chinese household saving rate. However, their definition of the household saving rate does not include housing investment. That is, an increase in housing investment does not influence the household saving rate in their calculation. So it is not surprising they find relatively small effects of rising housing prices on their constructed household saving rate.

[7]Using twins helps reduce heterogeneity caused by age differences.

[8]For more on the effects of two children in Chinese households, see Jin.

[9]Alternatively, we could include projections on dependency ratios and the urban share of the population in projecting disposable income growth. This approach delivers similar results because the positive influence of the old dependency ratio on disposable income growth is offset by negative influences from the young dependency ratio and the urban share of the population.

[10]Li and Xu argue that the Chinese consumption share in GDP is underestimate in the data. So we encourage readers to pay more attention to the predicted increase, 5.4 percentage points, than absolute levels.

[11]We model the saving rate as an autoregressive process with four lags, as indicated by the commonly used Akaike information criterion. The estimated model generates a projection of the saving rate within the range of our two scenarios.

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