

# China's Transformation to Digital Economy:

## *Managing the Transition amidst Change*

**Andrew Sheng**

Distinguished Fellow, Asia Global Institute, University of Hong Kong

IIMA International Financial Symposium, Tokyo

22 February 2018

# Key Points

- 20 Years after Asian Global Financial Crisis, China has emerged as 2nd largest economy
- Huge global major transformation from Trumpian Geo-politics, QE, Technology, Climate Change, Demographics, Social Inequalities, regulation and intense competition
- China adapting with 19th Party Congress roadmap towards Quality and People-centred Growth
- Major correction of imbalances in Debt model through system-wide regulation and transformation through technology and innovation, at all levels
- Internet+ and Made in China 2025 will be game-changer for all

# Transformative Mega-trends that Change Finance

- Global Rebalancing – Multipolar Cold War 2.0 = Growing geo-political risks – Trump + Terrorism = Geopolitics
- Demography – Dividends or Age burden?
- Financialization and Debt Overhang – Who pays?
- Disruptive Technology – Jobs and Creative Destruction
- Climate Change – Water, Food & Energy Stress
- Governance – Democracy, Market or State?

*Every emerging market is facing huge challenges to policy and business models, as America First means no more level playing field. Everyone for themselves.*

# Global Supply Chain under Disruption – Rules, Technology, Disengagement



## Section 1 **Stimulus Program (2008-2010)**

*RMB 4 trillion Stimulus Package stopped Crisis shock, but created over-investment fuelled by debt*

# 2007/8 GFC Shock + Wenchuan Earthquake Provoked Stimulus Package Focused on 7 Priority Areas

Sectoral Composition of Stimulus Investment (March 2009 plan, as percent of total)

Transport & power infrastructure (railroad, road, airport, electricity grid)	37.5%
Rural village infrastructure	9.3%
Environmental investment	5.3%
Affordable housing	10.0%
Technological innovation and structural adjustment	9.3%
Health & education	3.8%
Post-earthquake reconstruction	25.0%

- Central government funding RMB 1.2 trillion from budget, with remaining RMB 2.8 trillion from local governments, enterprises, and banks - led to outburst of credit growth

# 2009 Stimulus Created Massive Profit Opportunities, Financed by Debt + Shadow Banking and Later Corruption, Excess Capacity Issues

## Estimated Size and Composition of Stimulus

<b>Stimulus (RMB billion)</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Fiscal deficit	111	950	650
Net new bank loans	252	5070	1936
Net new bond finance	251	467	-232
<b>Total</b>	<b>614</b>	<b>6487</b>	<b>2354</b>
<b>Stimulus (% GDP)</b>			
Fiscal deficit	0.4%	2.8%	1.6%
Net new bank loans	0.8%	15.1%	4.9%
Net new bond finance	0.8%	1.4%	-0.6%
<b>Total</b>	<b>2.0%</b>	<b>19.3%</b>	<b>5.9%</b>

# Positive and Unexpected Consequences

- Rapid acceleration of upgrading of city and high-speed rail infrastructure
- Growth spillover from coastal to inland areas, as export sectors hurt by GFC
- Emergence of new Tech Platforms and FinTech
- Beginnings of Outward FDI and RMB internationalisation
- Local government financing overshoot
- Shadow banking credit accelerated
- Corruption emerges as major social issue



## Section 2 **Overview of Chinese Economy**

*Strong Growth and Strengthening External Demand Amid Tightening Financial Conditions, Accumulation of Public and Private Debt*

# China's New Normal – IMF (2017) Article IV

## China: Selected Economic Indicators

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	Projections										
<b>NATIONAL ACCOUNTS</b>											
Real GDP (base=2015)	7.9	7.8	7.3	6.9	6.7	6.7	6.4	6.4	6.3	6.0	5.8
Total domestic demand	7.9	8.1	7.2	7.2	7.4	7.0	6.9	6.8	6.6	6.2	5.9
Consumption	8.7	7.2	7.2	8.3	8.4	8.6	8.0	7.4	7.1	6.6	6.2
Investment	7.1	9.1	7.1	6.1	6.3	5.2	5.5	6.0	6.0	5.8	5.6
Fixed	9.0	9.3	6.8	6.7	6.7	5.2	5.6	6.1	6.2	6.0	5.8
Inventories (contribution)	-0.6	0.1	0.2	-0.2	-0.1	0.1	0.0	0.0	0.0	0.0	0.0
Net exports (contribution)	0.3	0.1	0.4	-0.1	-0.5	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1
Total capital formation (percent of GDP)	47.2	47.3	46.8	44.7	44.2	43.7	42.9	42.4	42.0	41.7	41.4
Gross national saving (percent of GDP) 1/	49.7	48.8	49.0	47.5	45.9	45.1	44.3	43.6	42.9	42.3	41.8
<b>MACRO-FINANCIAL</b>											
Total social financing 3/	19.1	17.5	14.3	12.4	12.9	13.1	11.0	12.2	11.4	10.8	9.9
In percent of GDP	169.0	180.0	189.8	197.6	209.0	216.9	221.6	229.1	235.3	240.9	245.5
Total domestic nonfinancial sector debt	18.4	17.5	14.3	16.1	17.0	15.7	13.4	12.6	12.2	11.4	10.5
In percent of GDP	178.7	190.3	200.7	215.8	236.4	251.0	262.1	272.0	281.3	289.6	296.7
Domestic credit to the private sector	19.8	16.6	13.1	14.7	16.7	16.0	12.1	11.5	10.8	10.2	9.6
In percent of GDP	134.6	142.3	148.5	157.6	172.3	183.3	189.2	194.3	198.4	202.1	205.3
House price 4/	8.7	7.7	1.4	9.1	11.3	10.4	8.6	8.3	7.9	7.2	6.8
Household disposable income (percent of GDP)	59.4	60.0	60.7	61.0	61.4	61.7	62.0	62.0	62.1	62.2	62.5
Household savings (percent of disposable income)	40.8	38.5	38.0	37.6	35.9	35.3	34.1	33.0	32.0	31.3	31.0
Household debt (percent of GDP)	29.6	33.0	35.4	38.2	44.2	46.3	48.7	51.3	54.0	57.1	60.5
Non-financial corporate domestic debt (percent of GDP)	105.0	109.3	113.0	119.4	128.1	134.9	138.5	141.1	142.7	143.5	143.3
<b>GENERAL GOVERNMENT (Percent of GDP)</b>											
Net lending/borrowing 5/	-0.3	-0.8	-0.9	-2.8	-3.7	-3.7	-3.7	-3.9	-4.0	-4.1	-4.2
Revenue	27.8	27.7	28.1	28.5	28.2	27.4	27.3	27.2	26.9	26.8	26.7
Expenditure	28.1	28.5	29.0	31.3	31.9	31.1	31.1	31.1	30.9	30.9	30.8
Debt 6/	15.5	16.0	38.6	36.4	36.6	37.5	38.4	39.3	40.2	41.2	42.2
Structural balance	-0.1	-0.5	-0.5	-2.5	-3.6	-3.7	-3.7	-3.9	-4.0	-4.1	-4.2
<b>BALANCE OF PAYMENTS (Percent of GDP)</b>											
Current account balance	2.5	1.5	2.2	2.7	1.7	1.4	1.3	1.2	0.9	0.7	0.4
Trade balance	3.6	3.7	4.1	5.1	4.4	4.1	3.9	3.7	3.4	3.2	3.0
Services balance	-0.9	-1.3	-2.0	-1.9	-2.2	-2.3	-2.3	-2.3	-2.4	-2.4	-2.5
Net international investment position	21.8	20.7	15.2	14.9	16.0	16.7	16.7	16.6	16.2	15.6	14.9
Gross official reserves (bn US\$)	3,388	3,880	3,899	3,406	3,098	2,934	2,902	2,881	2,848	2,792	2,714

# China's Economic Outlook – *IMF (2017) Article IV*

- China needs to focus on priority areas to sustain growth over medium term:
  - **Further boosting consumption** - increase social spending with progressive taxation
  - **Increasing market forces** by reducing implicit subsidies to SOEs and opening more key sectors to private investment
  - **Deleveraging private sector** with greater recognition of bad assets and more market-based credit allocation
  - **Ensuring macro sustainability** by gradual fiscal consolidation and less monetary accommodation. Focus on quality and sustainability of growth and less on quantitative targets
  - **Improving policy frameworks** for center-local fiscal relations, financial stability, and data to manage better modern Chinese economy

# China's Economic Outlook – *IMF (2017) Article IV*

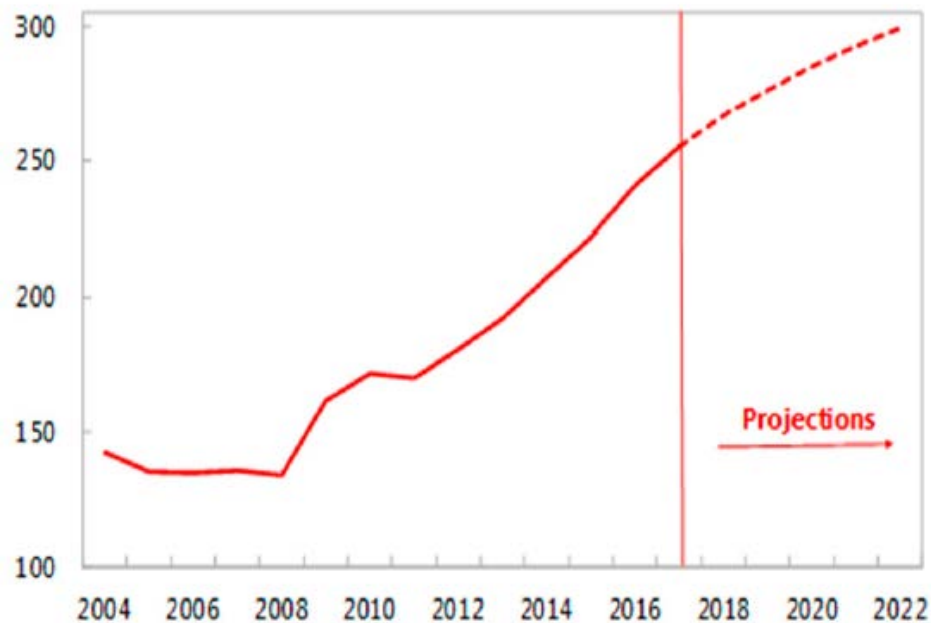
- China needs to focus on priority areas to sustain growth over medium term:
  - **Further boosting consumption.** Increase social spending with progressive taxation
  - **Increasing market forces** by reducing implicit subsidies to SOEs and opening more key sectors to private investment
  - **Deleveraging private sector** with greater recognition of bad assets and more market-based credit allocation
  - **Ensuring macro sustainability** by gradual fiscal consolidation and less monetary accommodation. Focus on quality and sustainability of growth and less on quantitative targets
  - **Improving policy frameworks** for center-local fiscal relations, financial stability, and data to manage better modern Chinese economy

# Progress Made in Structural Reforms

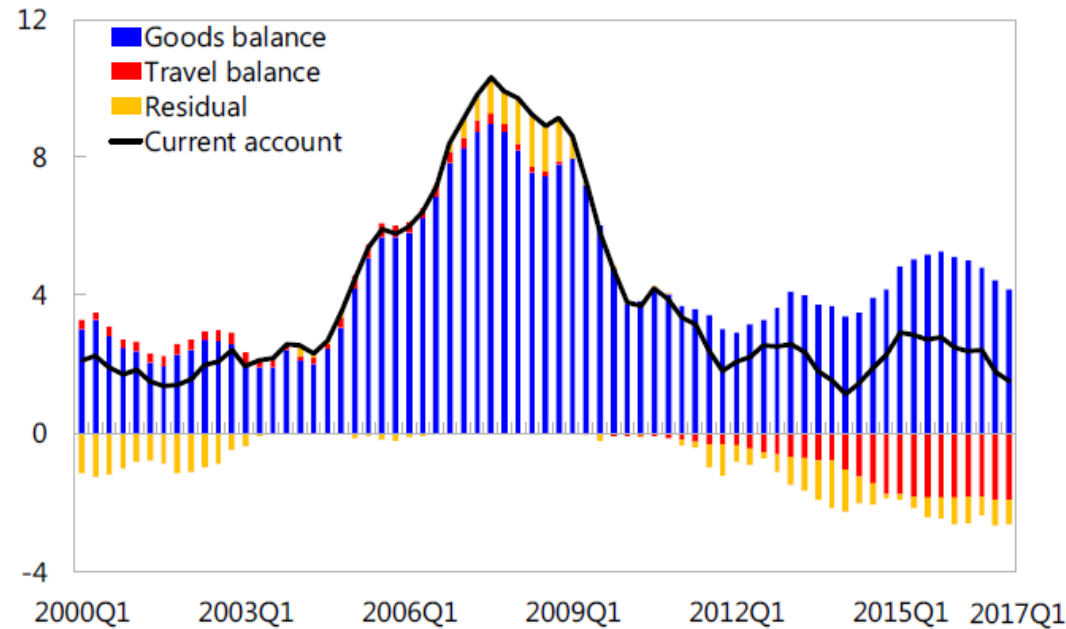
- “三去一降一補” (5 targets – 3 “outs”, one reduction and one repair) in supply-side reform
  - **Debt Leveraging.** Ratio of assets and liabilities of industrial enterprises dropped from 56.3% to 55.8%
  - **Capacity Reduction in** Steel and coal successfully completed with national capacity utilization rate of 77.0%, record 5-year high
  - **De-stocking.** Commercial buildings space for sale decreased by 106.16 million sq. m.
  - **Reduce costs.** Industrial enterprises costs cuts through controls
  - **Short-term repairs.** Short-term investments in environmental protection, water conservancy, agriculture increased by 23.9%, 16.4% and 16.4% respectively
- Industrial profit increased by 21.9%, 12.5 percentage points higher than in 2016
- Tertiary sector now 58.8% of GDP, 1.3 percentage points higher than in 2016
- New Economy helped Value added growth by 11.0%, 4.4 percentage points faster than whole industrial sector

# Stronger Domestic Demand Helped Further Reduce China's External Imbalance

**Non-Financial Sector Debt: High and Rising**  
(In percent of GDP)



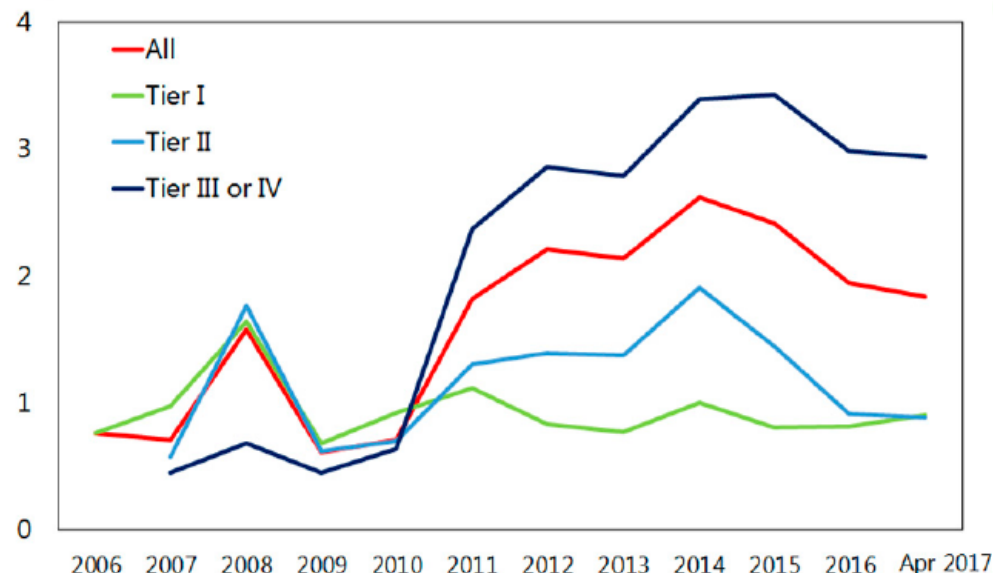
**Current Account Surplus Near 15 Year Lows**  
(In percent of GDP, four quarter rolling sum)



# Better Demand and Supply Measures in Real Estate Sector Contained Bubble risks

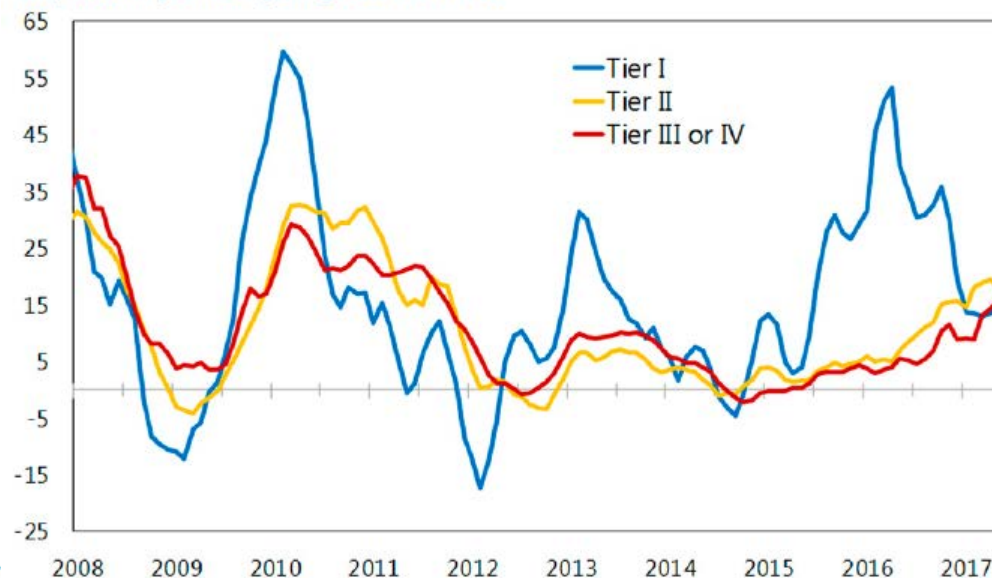
## Residential Real Estate Inventory Ratio Falls

(In years)

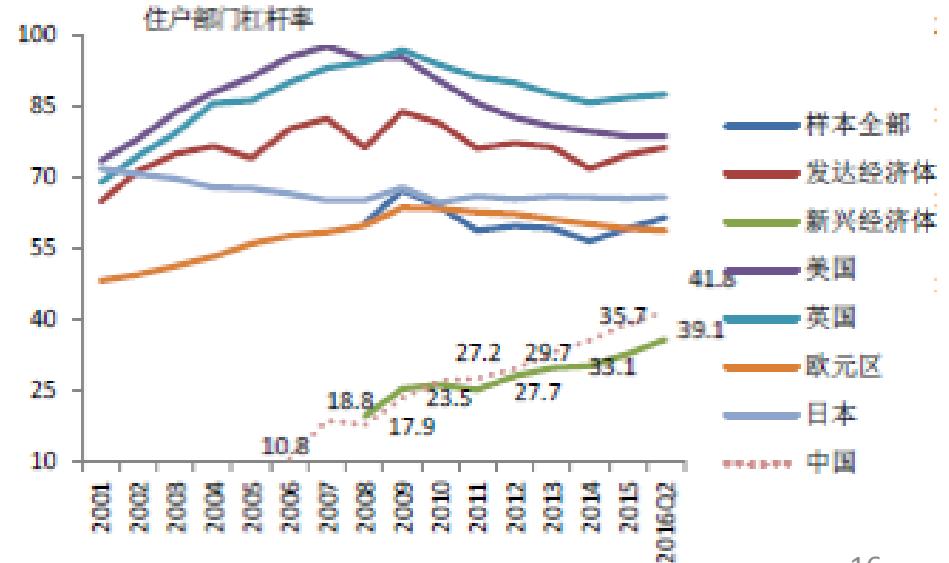
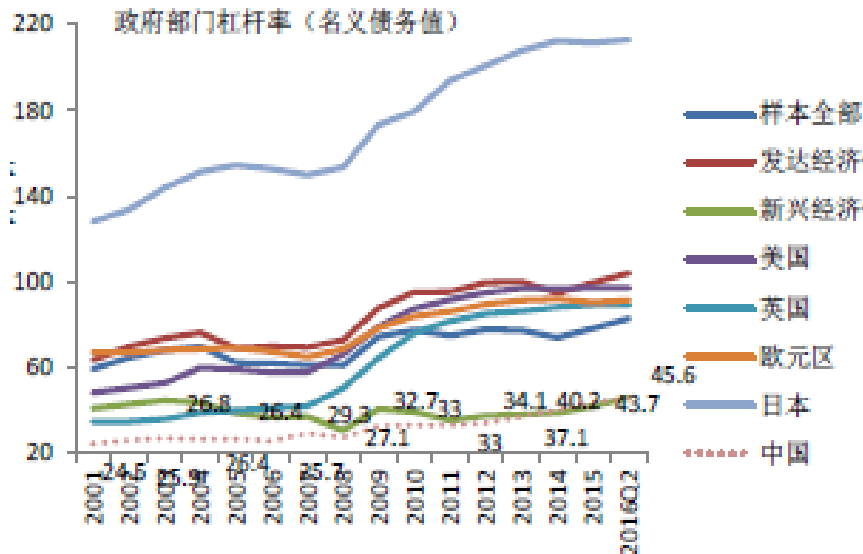
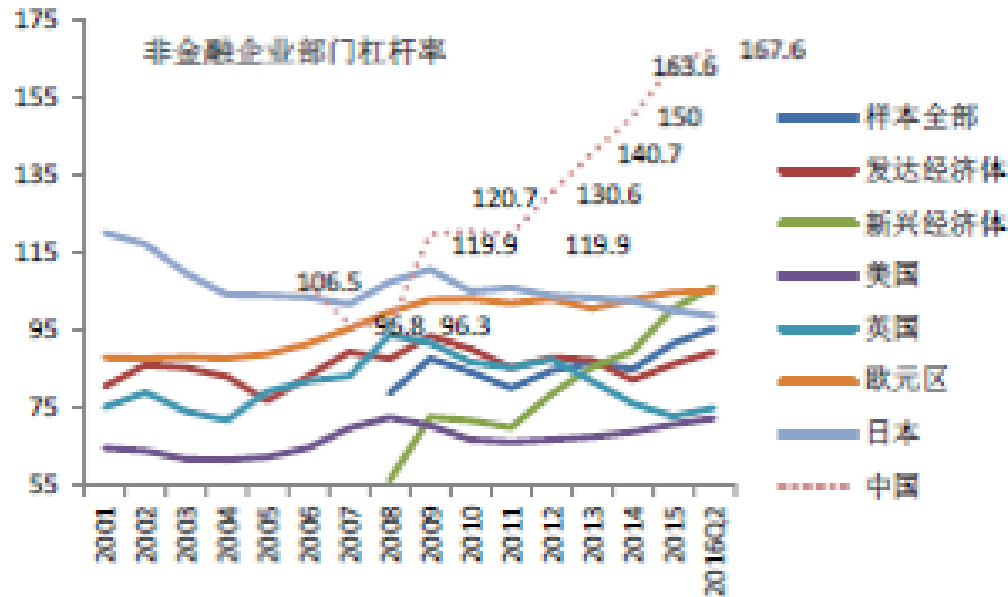


## Tier I Cities' Real Estate Price Growth Moderates

(In percent, year-on-year growth, 3mma)



# In China it is Mainly Corporate Debt that is High

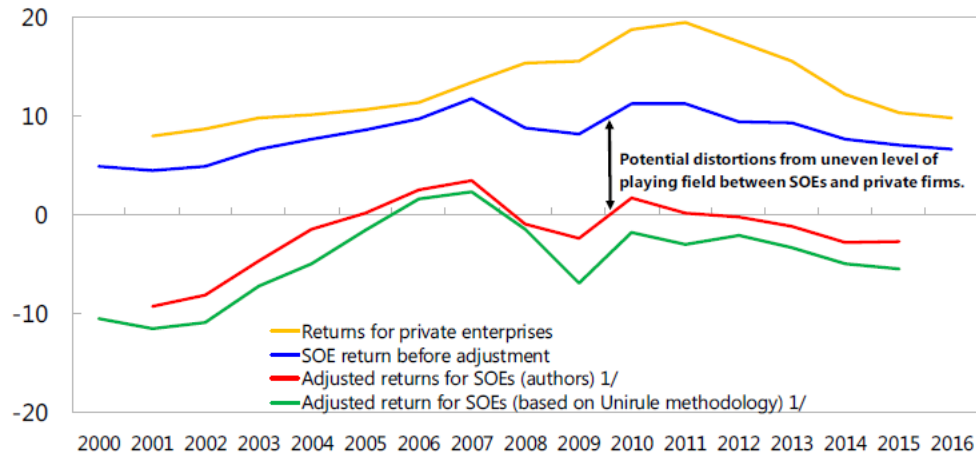




# SOEs Structurally Less Efficient than Private Sector, Reducing Economy-wide Productivity

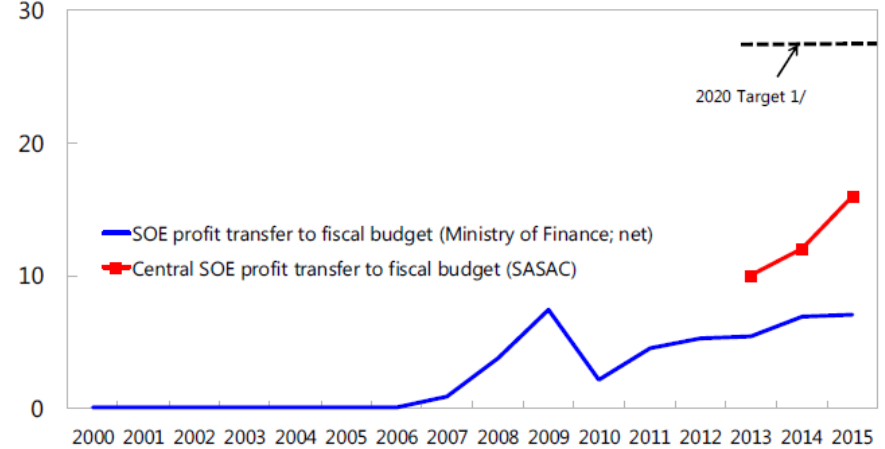
## Weak SOE Return on Equity

(Net return on total owners' equity; in percent)



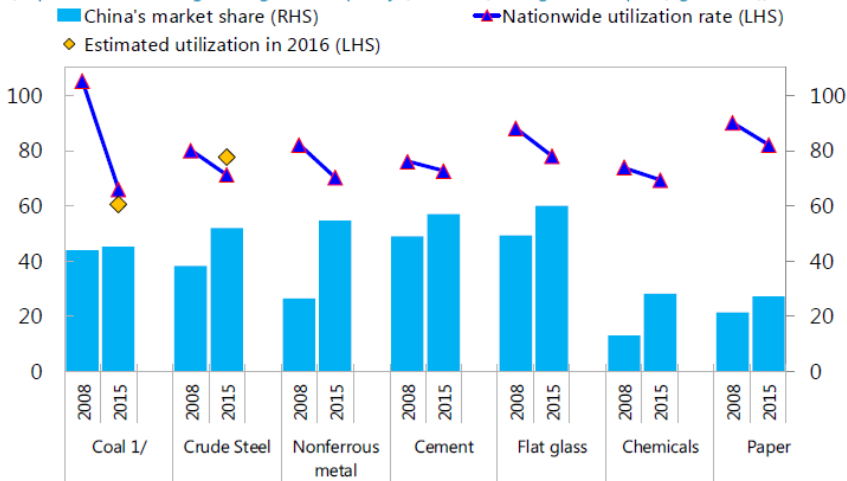
## Low Transfer of SOE Dividend to Fiscal Budget

(In percent of aggregate SOEs' profit)



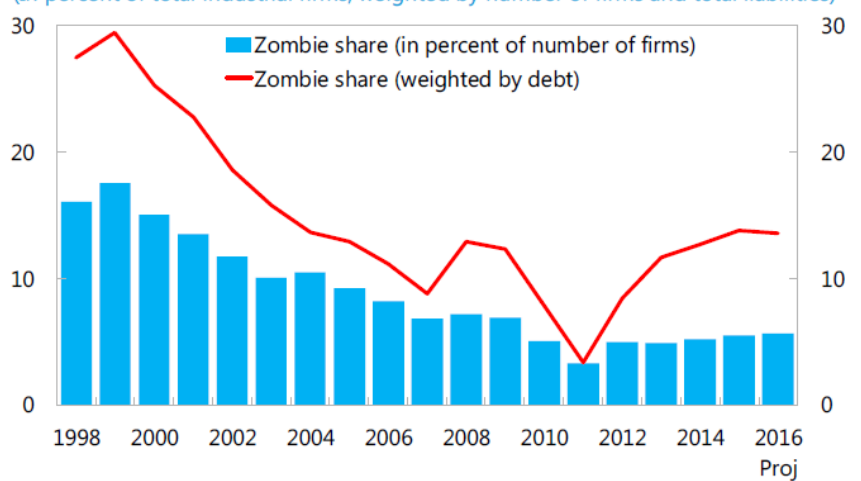
## Overcapacity: Deteriorating Utilization and Large Global Share

(In percent of total legal designated capacity (left-scale) and global output (right-scale))



## Nonviable Zombie Firms are Rising Again 1/

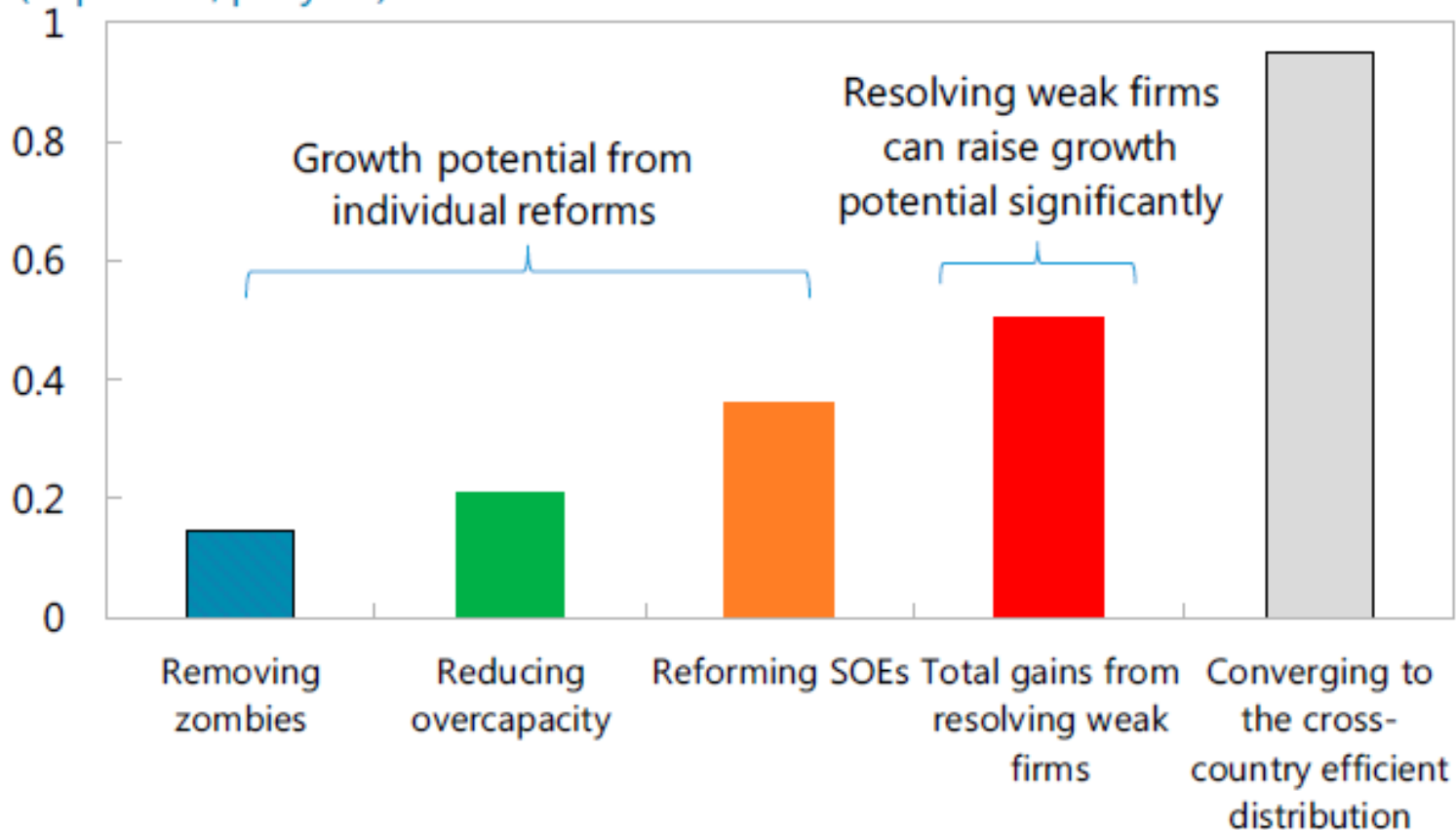
(In percent of total industrial firms, weighted by number of firms and total liabilities)



# Resolving Weak Firms Can Increase Growth by 1 Percentage Point – *IMF staff estimates*

## Better Resource Allocation from Resolving Weak Firms Can Raise Growth Potential

(In percent, per year)



## Section 3 **China's Digital Transformation**

*New growth areas will be Strong Consumer Base,  
Internet+ and Made in China 2025 digital  
transformation*

# Progress on 2016 Reform Recommendations

## A. Tackling corporate debt

- Proactive loss recognition and sharing of losses
- Harden budget constraints
- Overcapacity cut
- Mitigating social costs of layoffs



## B. Accepting the slowdown

- Lower and sustainable growth targets
- Reining in local government borrowing
- Structural fiscal reforms



## C. Guarding against financial risks

- Stronger supervision on shadow finance
- Address real estate sector risks



## D. Progressing to effective floating exchange rate

- Achieving an effective float over the medium term.
- Adopt a more market-based monetary framework.
- Careful sequencing of reforms on capital account



## E. Enhance transparency and communication



## F. SOE reforms



### Legend

Substantial progress

Some progress

Limited progress



# 5 Areas that can Improve China's Growth

Five opportunities can generate productivity and GDP growth



Better **serve**  
the middle class  
as it triples



**Digitize**  
to enable  
new business  
processes



**Move up the  
value chain**  
and raise returns  
2-3 times



**Improve  
operating  
efficiency**  
to raise  
productivity  
15-30%



**Go global**  
and potentially  
raise  
productivity  
10-15%

Transforming institutions would enable the transition



**Open up  
to more  
competition**



**Develop  
capital  
markets**



**Enable  
corporate  
restructuring**



**Invest  
in talent**



**Boost  
aggregate  
demand**

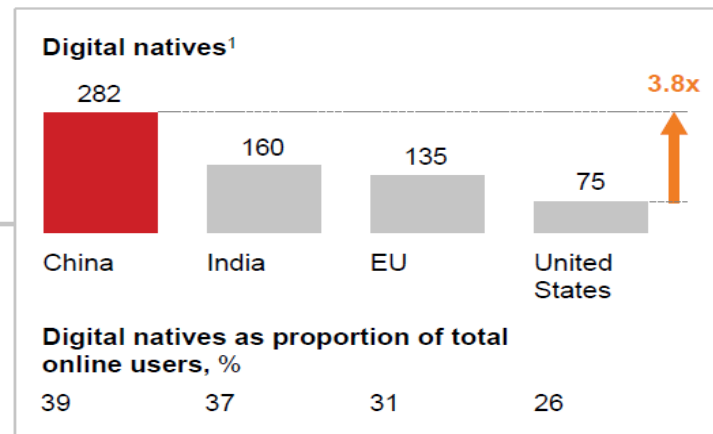
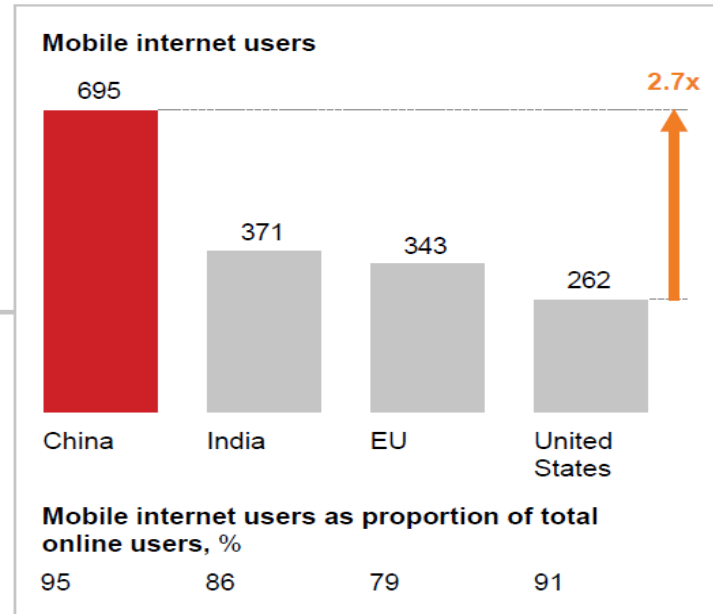
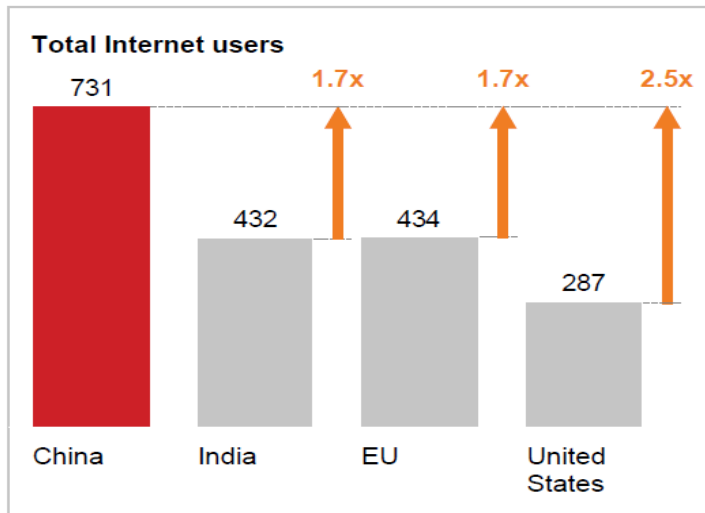


**Improve  
public-sector  
effectiveness**

# China Enjoys Scale Advantages, with Huge Base of 695 mn Mobile Users and 282 mn Digital Natives

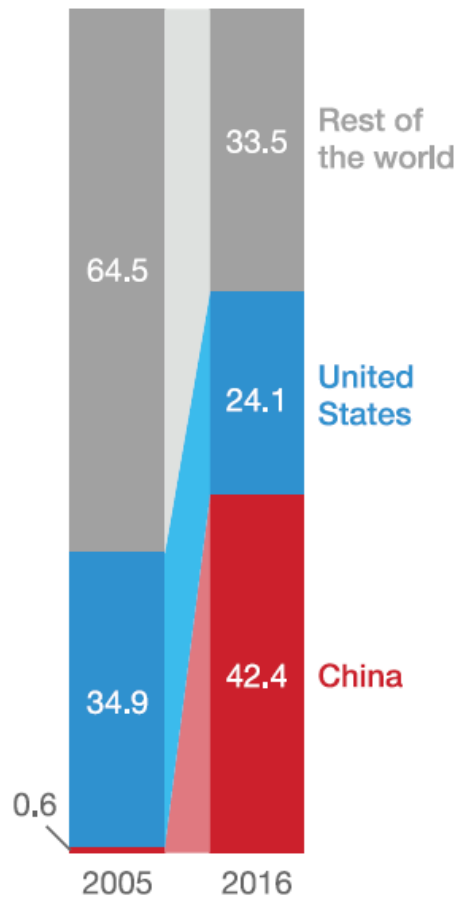
Million people, 2016

■ China ■ Other countries

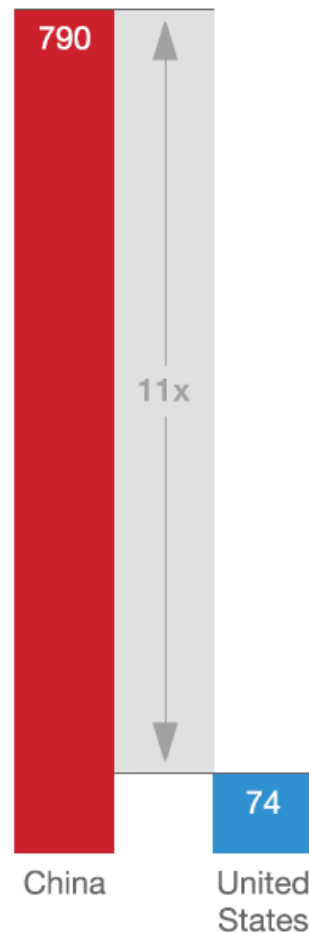


# China's Digital Economy: Story of Commercial Success and Investor Excitement – *McKinsey (2017)*

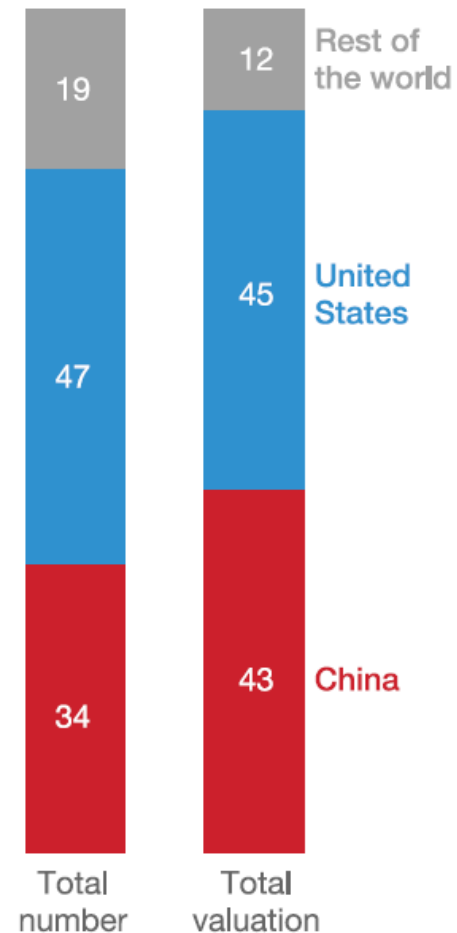
% of total retail e-commerce transaction value



Mobile payments,<sup>1</sup> 2016, \$ billion

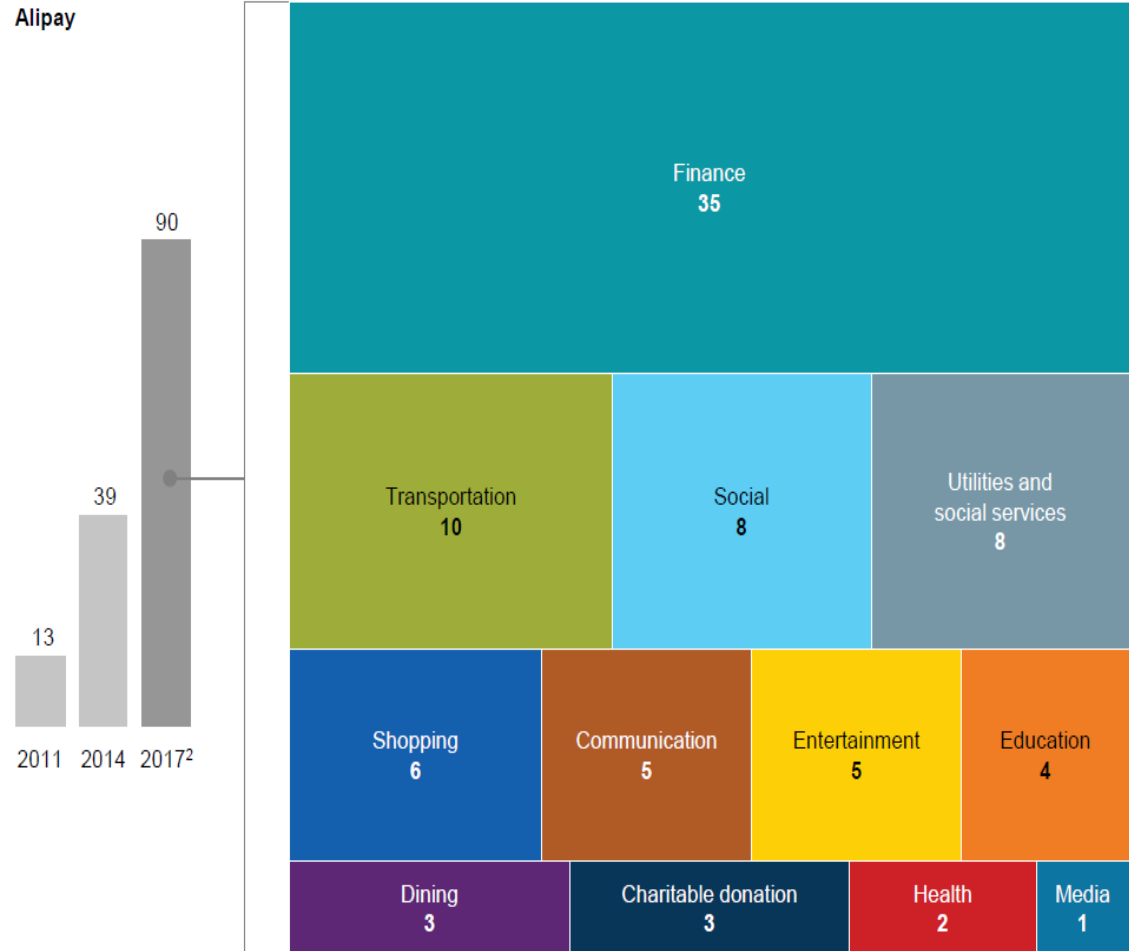
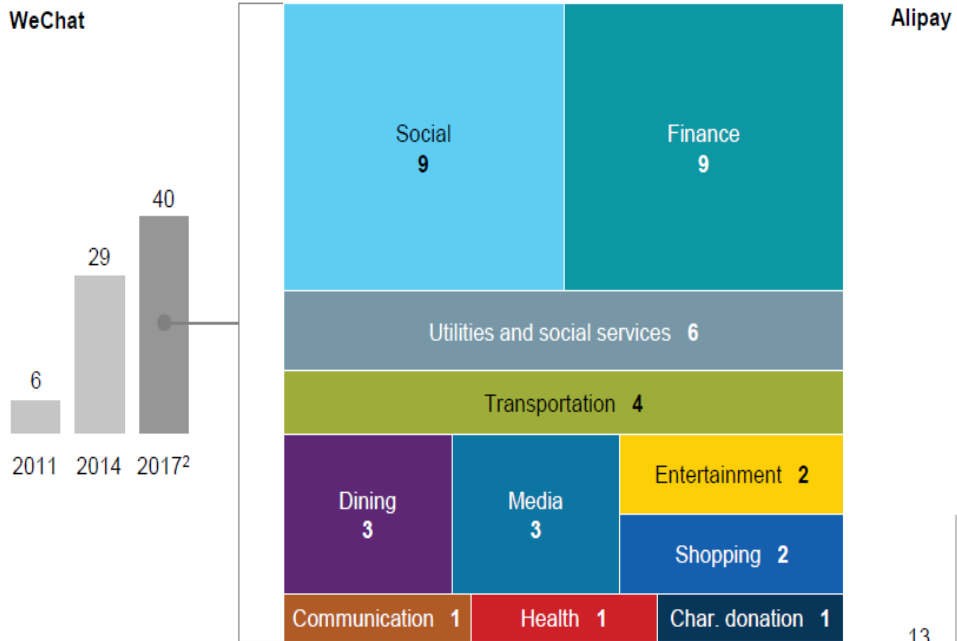


% of global unicorns<sup>2</sup> June 2016



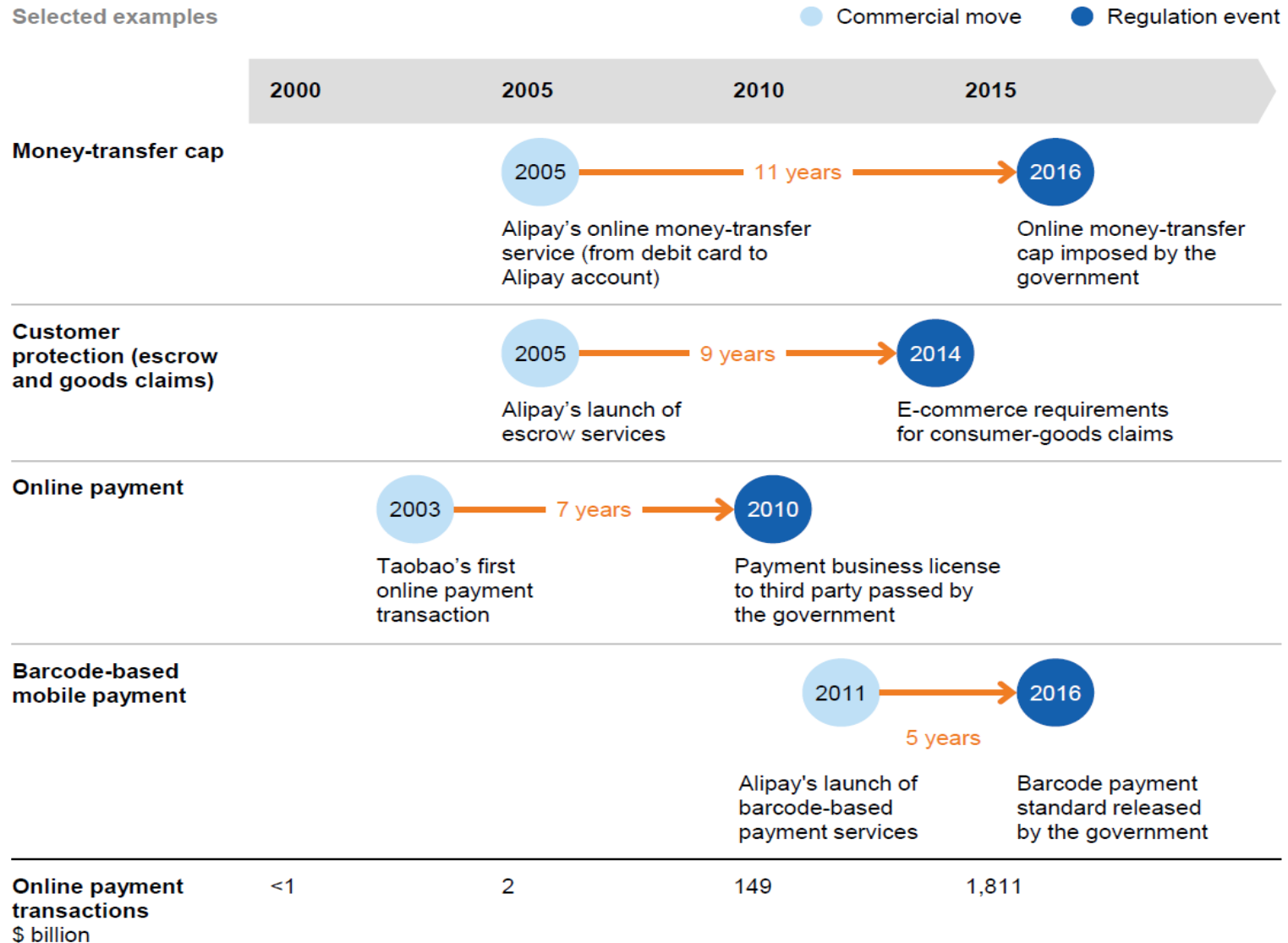
# Chinese Players use Super Apps Offering One-stop Solution to Consumers

Number of features by key application categories



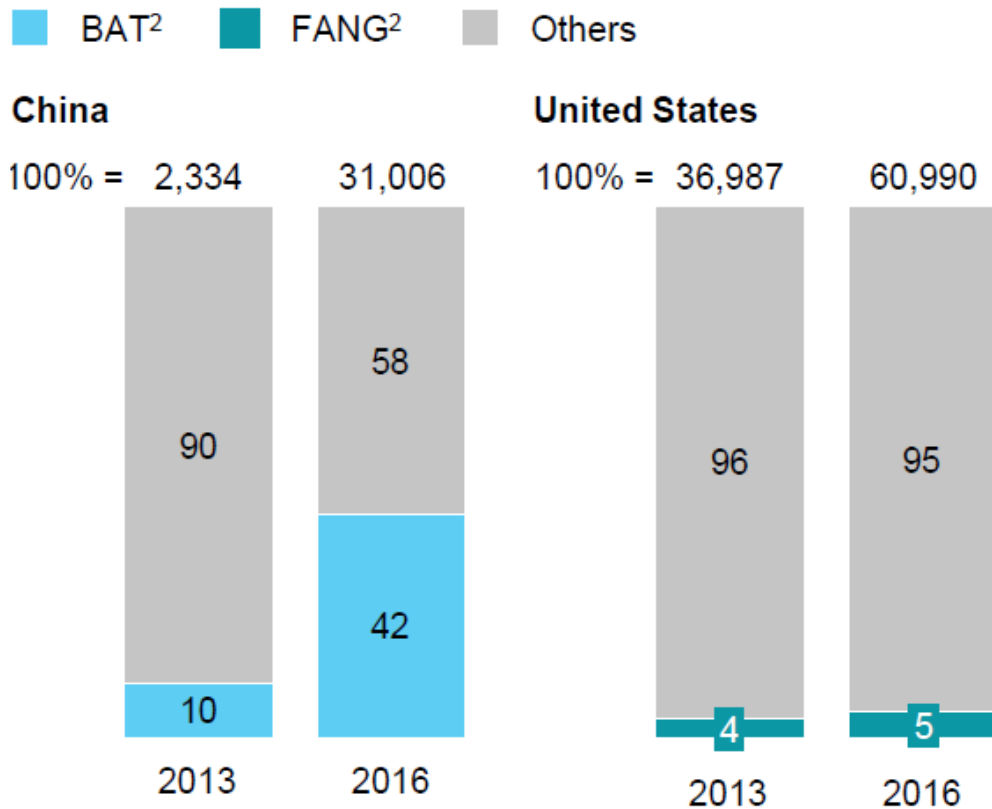


# In Mobile Payments, Government Policy Left Space For Innovators to Experiment

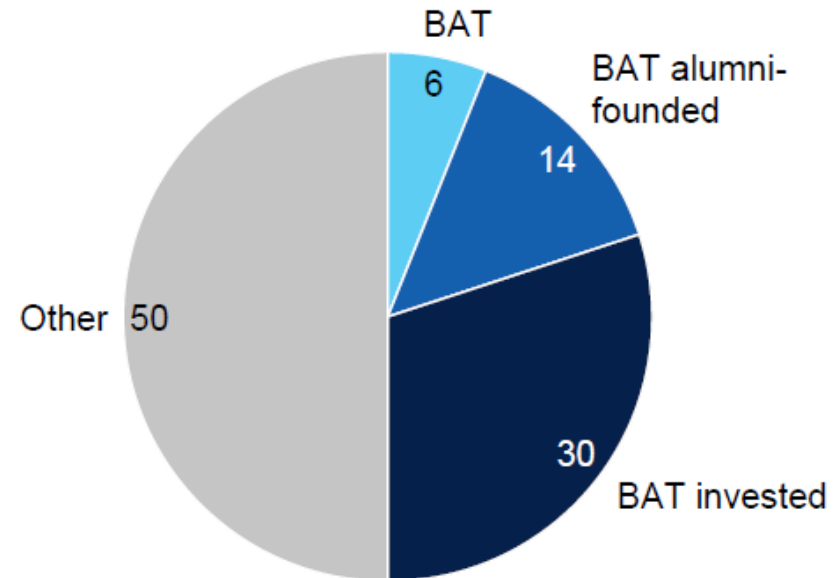


# China's Internet Giants Providing Funding and Talent to Broader Digital Economy

Venture capital investment from China vs. United States, 2016<sup>1</sup>  
%; \$ million



Top 50 startups in China<sup>3</sup>



<sup>1</sup> Includes completed domestic venture capital investment deals only.

<sup>2</sup> BAT = Baidu, Alibaba, and Tencent. FANG = Facebook, Amazon, Netflix, and Google.

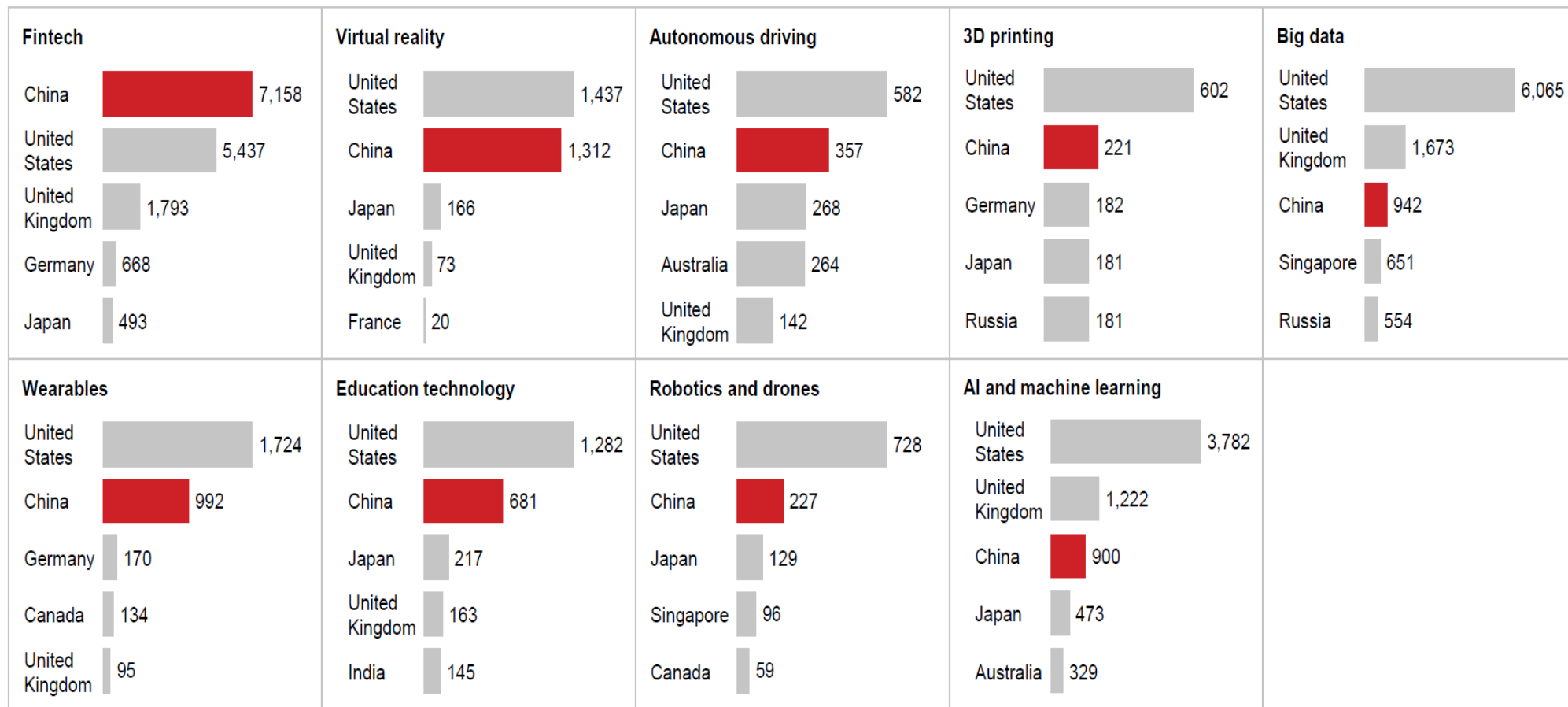
NOTE: Numbers may not sum due to rounding.

Source: Woetzel, Seong, Wang, Manyika, Manyika & Wong. 2017. "[China's Digital Economy: A Leading Global Force](#)." McKinsey Global Institute.

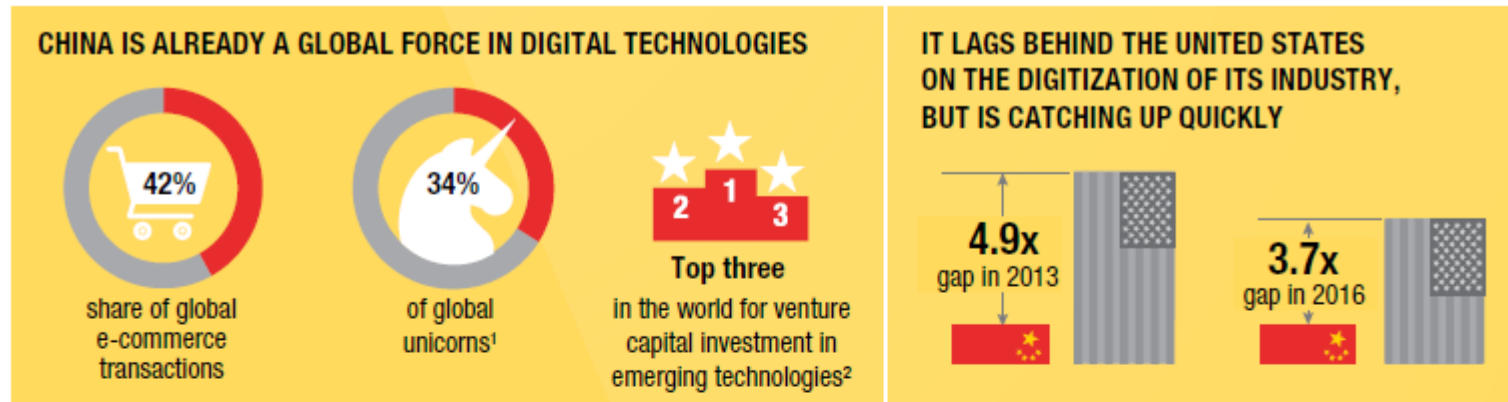
# China in Global Top Three for Venture Capital Investment in Key Technologies

Venture capital investment in leading technologies, 2016

US\$ million



# 3 Digital Forces Can Shift (or Create) 10%–45% of Industry Revenue Pools by 2030



## THREE DIGITAL FORCES CAN SHIFT (OR CREATE) 10–45% OF INDUSTRY REVENUE POOLS BY 2030



### DISINTERMEDIATION

Using digital to cut out the middle man



### DISAGGREGATION

Breaking up large items (cars, properties) and repackaging as services

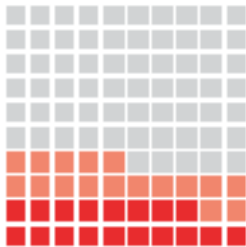


### DEMATERIALIZATION

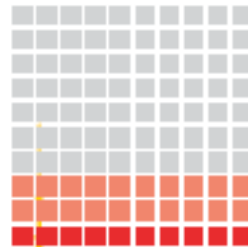
Turning the physical into the virtual (3-D printing, virtual reality)

# Potential Impact of 3 Forces in Key Sectors is Large

CONSUMER AND RETAIL  
13–34%



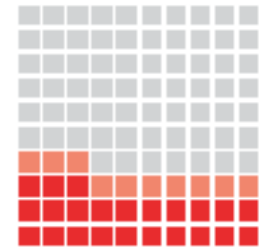
AUTOMOTIVE AND MOBILITY  
10–30%



HEALTH CARE  
12–45%



FREIGHT AND LOGISTICS  
23–33%



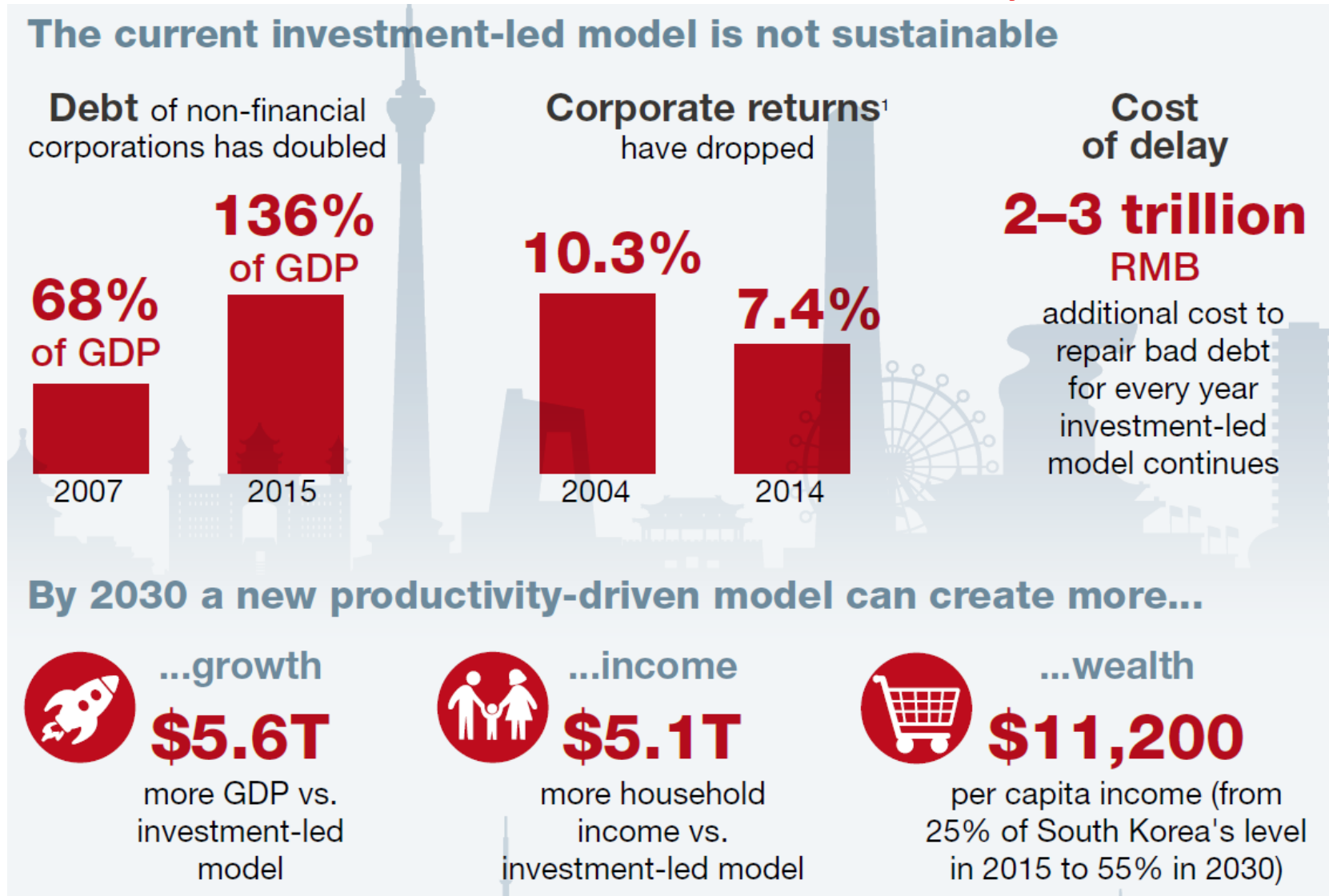
## GOVERNMENT CAN:

- Be a major investor in, and consumer of, digital technologies
- Promote healthy and dynamic competition
- Manage labor markets transition during digital disruption
- Reach global consensus on digital governance

## BUSINESS PRIORITIES INCLUDE:

- Adopt bold strategies
- Use China's digital ecosystem
- Maximize value from China's massive data pool
- Build an agile organization
- Digitize operations
- Engage with policy and regulation

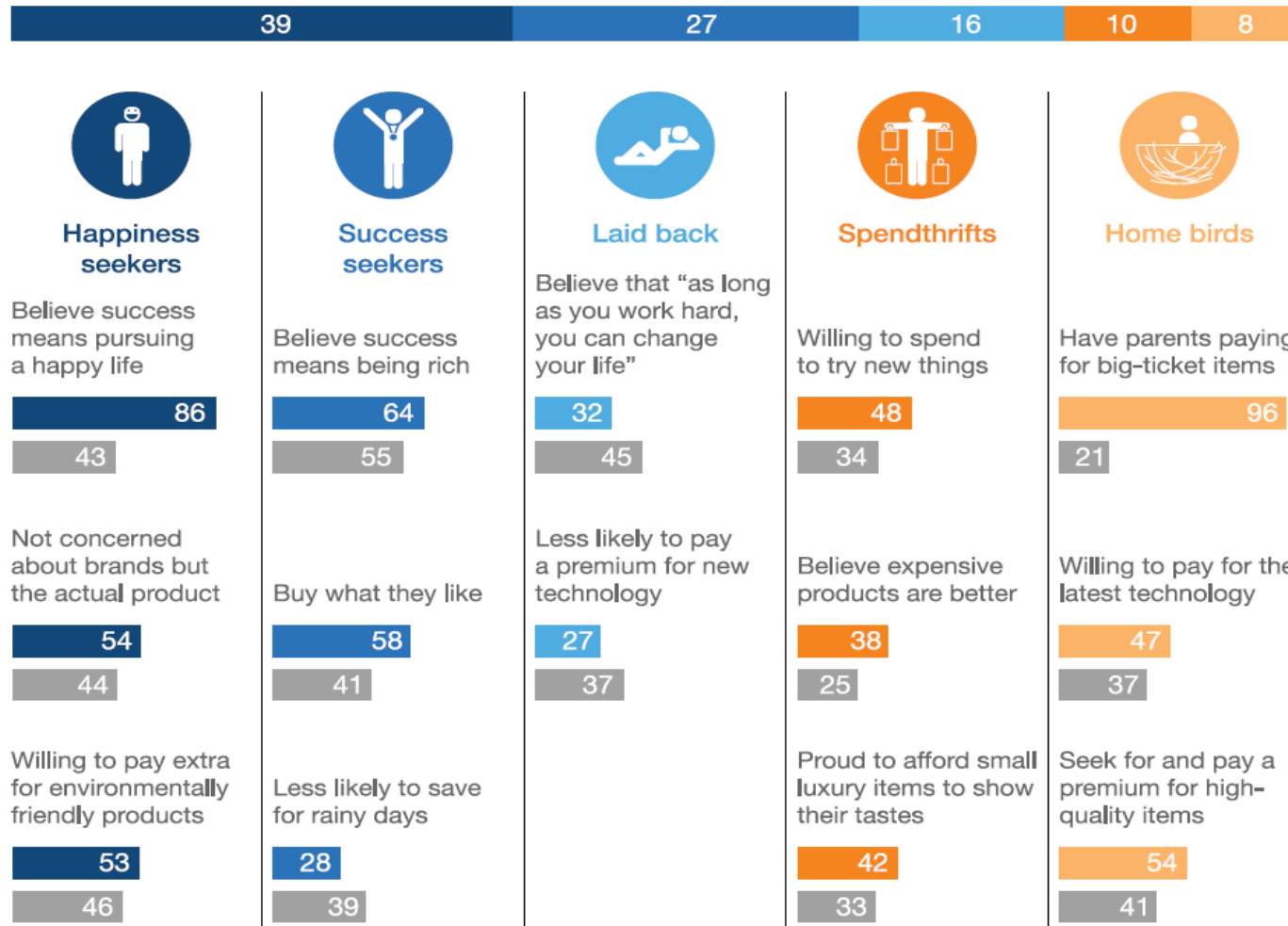
# Productivity-driven Approach Can Add \$5 trillion Each to GDP and Household Income by 2030



# Consumption Growth to Continue in 2018, but Ample Savings to Spend

Post-90s Generation Consumers have unique set of priorities

■ Statistics for the total survey populations



# Concluding Remarks

- China is recovering due to worldwide revival in growth and trade
- Xi's 19th Party Congress focused on comprehensive reforms in 14 areas
- Top priority is People-based and Quality Growth, underpinned by financial stability and address debt issues
- Growth areas will be strong consumer base, Internet+ and Made in China 2025 digital transformation
- If carefully managed, 2018 could be pro-cyclical China benefiting from global growth, plus contributing to global growth
- However, risks still remain from geopolitical accidents and policy mistakes



Thank you

Q&A to  
altsheng8@gmail.com  
and [www.andrewsheng.net](http://www.andrewsheng.net)