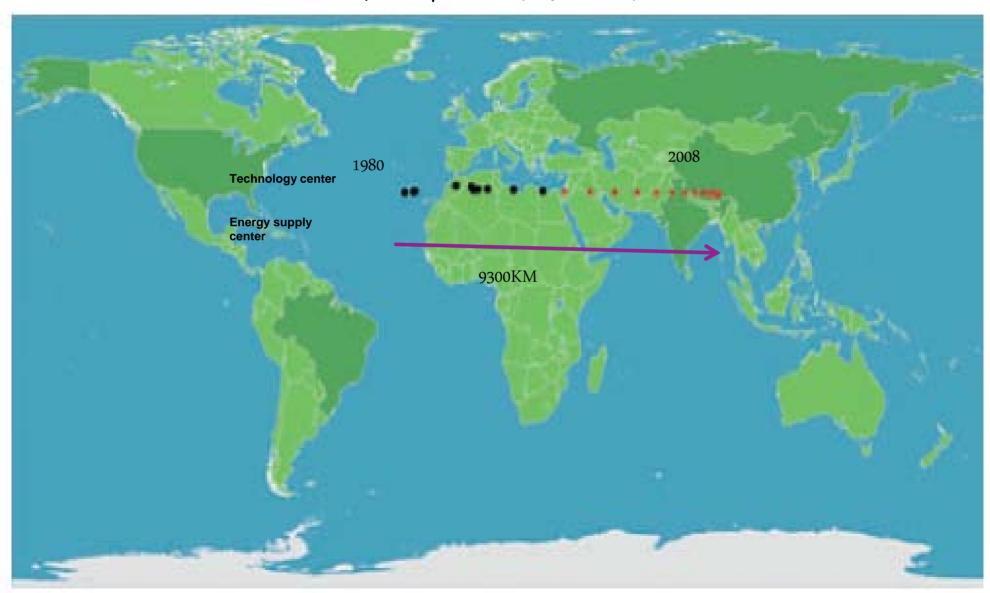


DRC

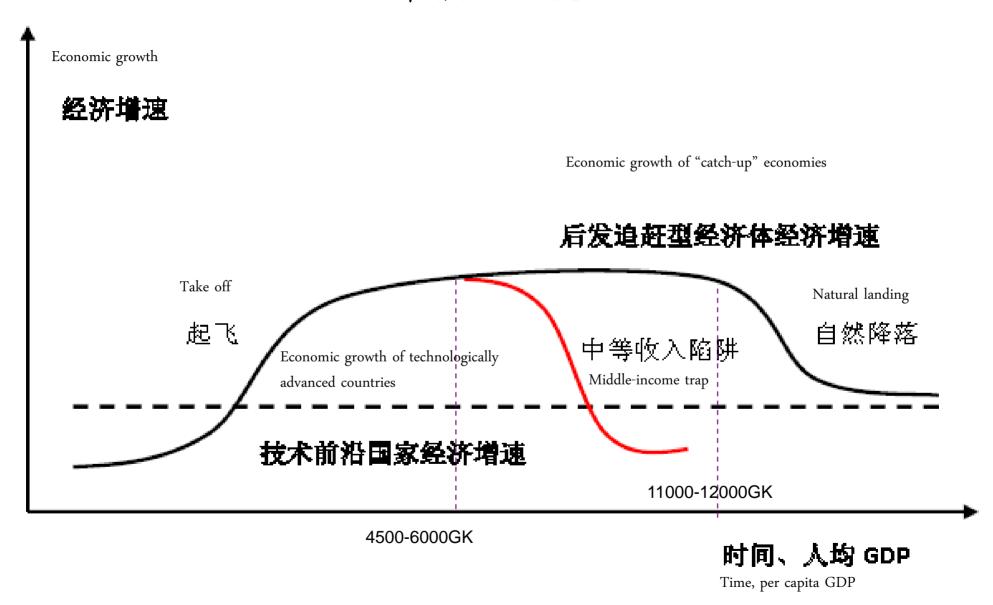
How will the Chinese economy land? -China's long-term economic growth outlook

Development Research Center of the State Council
Chen Changsheng PhD
(Nov.2013, Brazil)

Will the global economy's eastward shift slow down? 世界经济重心东移会减速?

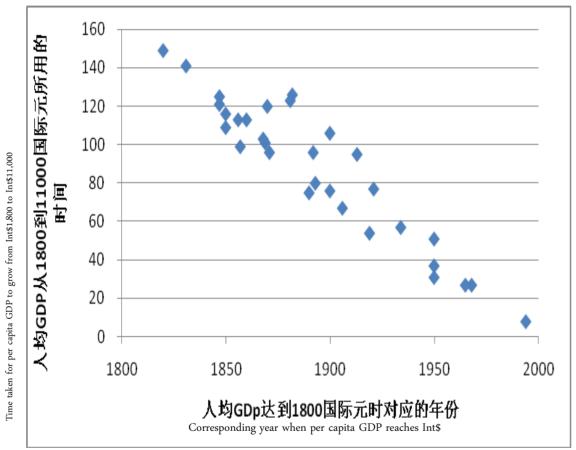


Three phases of economic growth 经济增长的三类路径



Characteristic 1: Latecomers take less time

特点一:起点越晚,用时越短



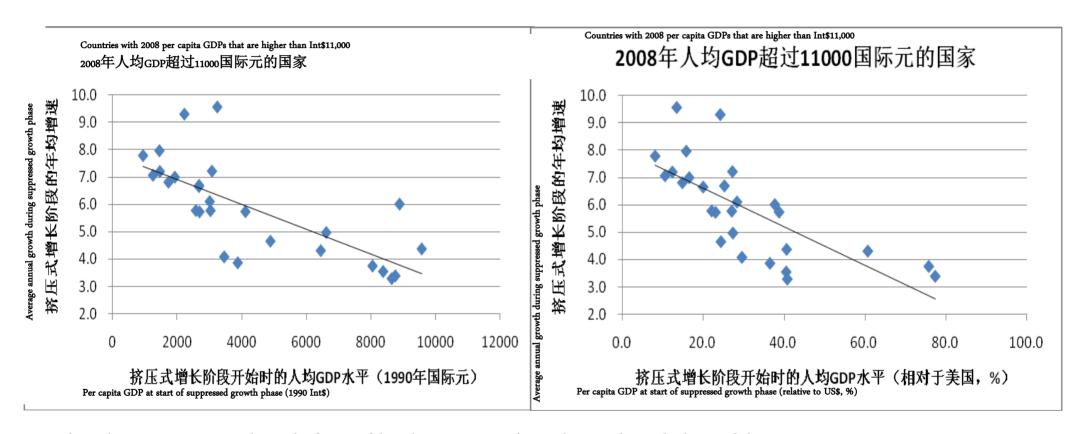
Of the economies that completed the climb from a per capital GDP of 1,800 international dollars to 11,000 international dollars, those that started later (at 1,800) required less time to complete it. This journey took the advanced economies over a century to complete. The UK spent 141 years, the US took 109 years and Germany spent 103 years. Some economies that developed later took only a few decades to complete the century-long journey that the advanced economies went through. Among them, Japan took 54 years, South Korea and Taiwan spent 27 years, and Hong Kong and Singapore respectively took 31 and 37 years.

完成人均GDP从1800到11000国际元增长历程的经济体,增长进程从1800国际元开始启动的时间越晚,完成该段历程所需要的时间就越短。从1800国际元到11000国际元,先行经济体用了上百年的时间。其中,英国用了141年,美国109年,德国103年。而一些后发经济体仅仅用了几十年的时间就完成了先发国家上百年的增长历程。其中日本用了54年,韩国和我国台湾均用了27年,香港和新加坡分别用了31年和37年。

Note: Sample includes 31 countries or regions (taken from Maddison data) that grew from Int\$1,800 to Int\$11,000

注:样本包括麦迪森数据当中所有从1800国际元左右到11000国际元的国家或地区,一共31个国家或地区。

Characteristic 2: Lower starting points means faster growth 特点二:起点越低、增速越快



Correlation between average annual growth of successful catch-up economies during their rapid growth phase and their starting points 成功追赶型经济体快速增长阶段的年均增速和起点水平的关系

Characteristic 3: Using the absolute levels of per capita GDP is more reasonable (compared to relative levels) when trying to determine when an economy's economic development phase and sustained rapid growth phase will end

特点三:判断经济发展阶段和持续快速增长阶段何时结束,用人均GDP的绝对水平比人均GDP的相对水平更加合理

Country or region 国家或地区	Corresponding year after end of suppressed growth phase 压缩式增长阶段结束时对 应的年份	Corresponding per capita GDP after end of suppressed growth phase 压缩式增长阶段结束时对应 的人均GDP	Corresponding per capital GDP % 相对的人均GDP,%	2008 per capital GDP 2008年的人均GDP	
Hong Kong 香港	1992	19270	82.7	31704	
S.Korea 韩国	1995	11850	48.2	19614	
Singapore 新加坡	1996	19638	77.8	28107	
Finland 芬兰	1975	11441	70.3	24344	
Netherlands 荷兰	1974	13497	81.8	24695	
Austria 奥地利	1974	11658	70.7	24131	
France 法国	1974	13113	79.5	22223	
Greece 希腊	1973	7655	45.9	16362	
Japan 日本	1973	11434	68.5	22816	
Taiwan 台湾	1989	9538	41.4	20926	
Italy 意大利	1968	9105	61.3	19909	
Ireland 爱尔兰	1978	8250	44.9	27898	
Canada 加拿大	1976	14902	87.8	25267	
Sweden 瑞典	1974	14485	87.8	24409	
Belgium 比利时	1974	12643	76.7	23655	
Israel 以色列	1974	10025	60.8	17937	
Portugal 葡萄牙	1973	7063	42.3	14436	
Germany 德国	1960	7705	68	20801	
Spain 西班牙	1974	8149	49.4	19706	

Characteristic 4: After a period of suppressed growth, average growth usually declines by 3-5 percentage points 特点四:压缩增长期结束后,平均增速通常下降3-5个百分点

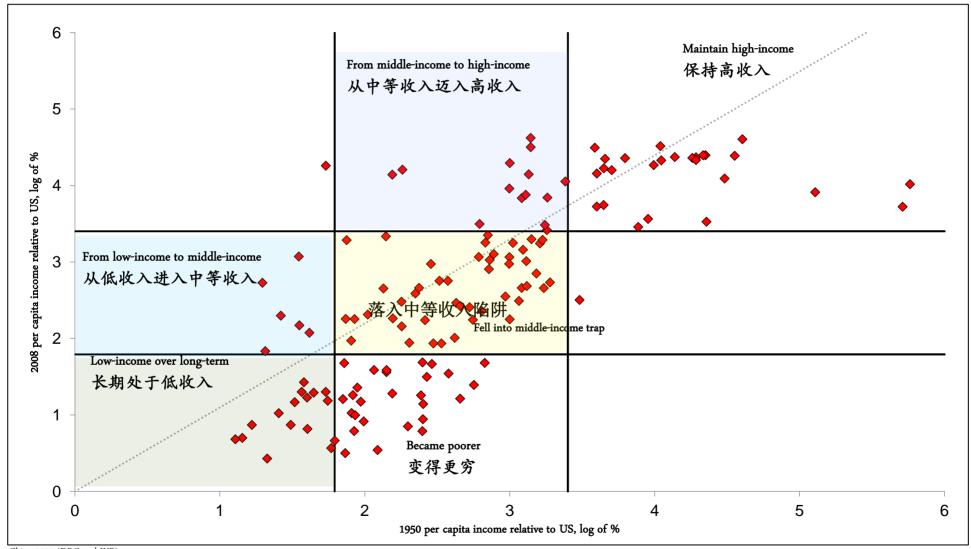
Region 地区	Average annual growth during rapid growth phase 快速增长阶段的年均增速	Average annual growth within 10 years after end of rapid growth phase 快速增长阶段结束后10年 之内的年均增速	Extent of growth/decline 增幅回落幅度	Average annual growth from end of rapid growth phase to 2008 快速增长阶段结束 到2008年期间的年 均增速	Extent of growth/decline 增幅回落幅度	
	%	%	Percentage point 百分点	%	Percentage point 百分点	
Western Europe and North America 西欧和北美	5.7	1.9	3.8	2.1	3.5	
Eastern Europe and former Soviet Union 东欧及前苏联	4.7	0.1	4.6	1.9	3.3	
Latin America 拉美	3.7	-2.0	5.7	0.5	3.2	
East Asia and Southeast Asia 东亚及东南亚	6.6	3.1	3.5	3.1	3.5	
Middle East 中东	6.0	-1.5	7.5 0.6		5.4	
Africa 非洲	5.0	0.4	4.5	1.6	3.4	
Global average 世界平均	5.3	0.3	4.9	1.6	3.6	

Source: Compiled from Maddison database

数据来源:根据麦迪森数据库整理。

Of the 101 middle-income economies that existed in 1960, only 13 managed to enter the high-income club by 2008 (Japan, Ireland, Spain, Portugal, South Korea, Mauritius, Puerto Rico, Singapore, Israel, Greece and Equatorial Guinea; after the Second World War, 13 economies achieved sustainable high growth, of which only six hit the high-income level, including many East Asian economies.

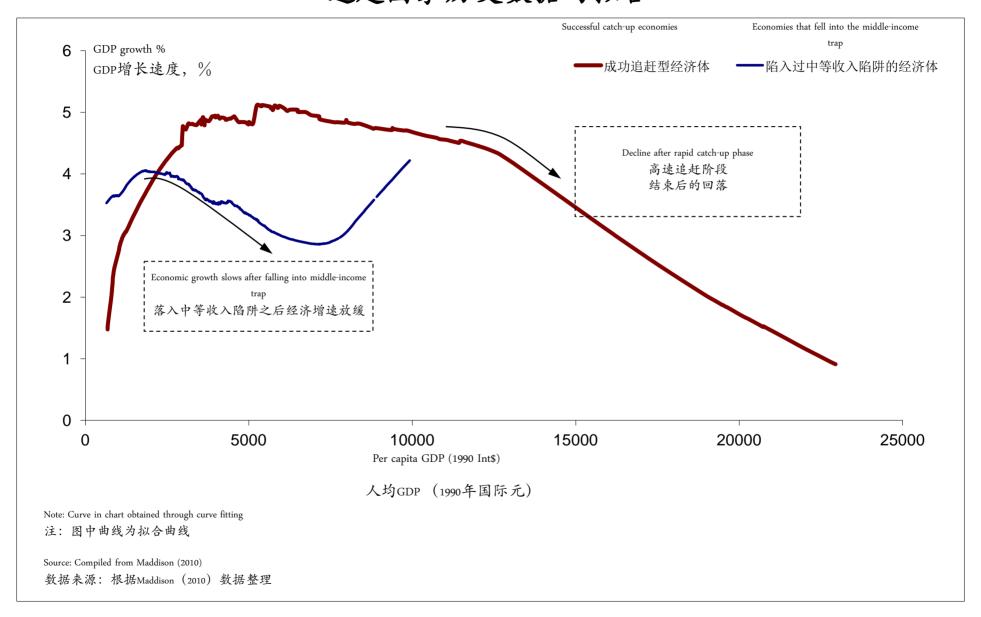
1960年时有101个中等收入经济体,到2008年只有13个迈入高收入阶段(日本、香港、台湾、爱尔兰、西班牙、葡萄牙、韩国、毛里求斯、波多黎各、新加坡、以色列、希腊和赤道几内亚);战后有13个经济体实现了可持续的高增长,其中只有6个发展到了高收入水平,其中大多数在东亚地区。



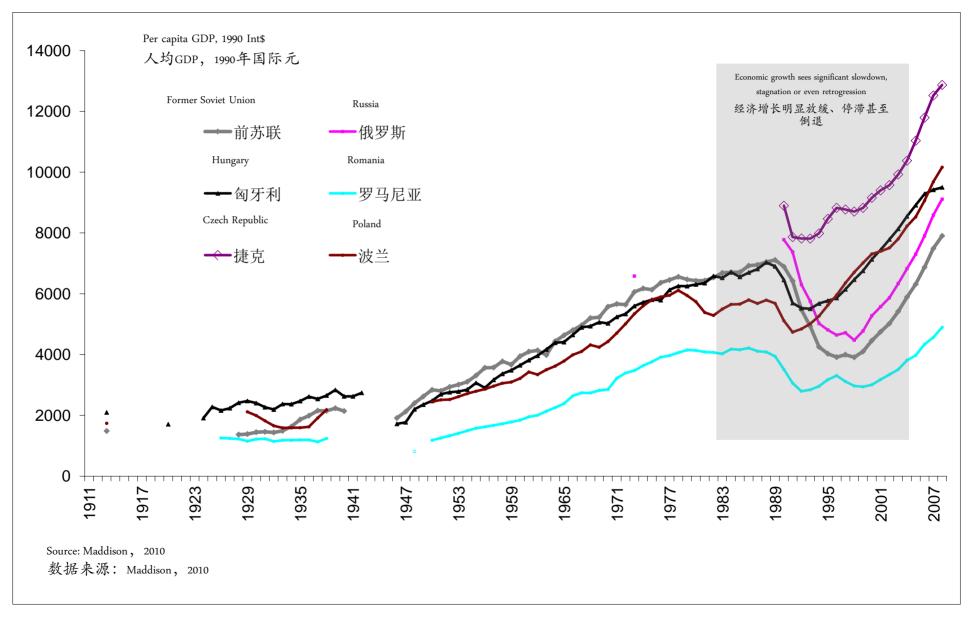
Source: China 2030 (DRC and WB).

来源: 《2030年的中国》 (DRC 和WB)。

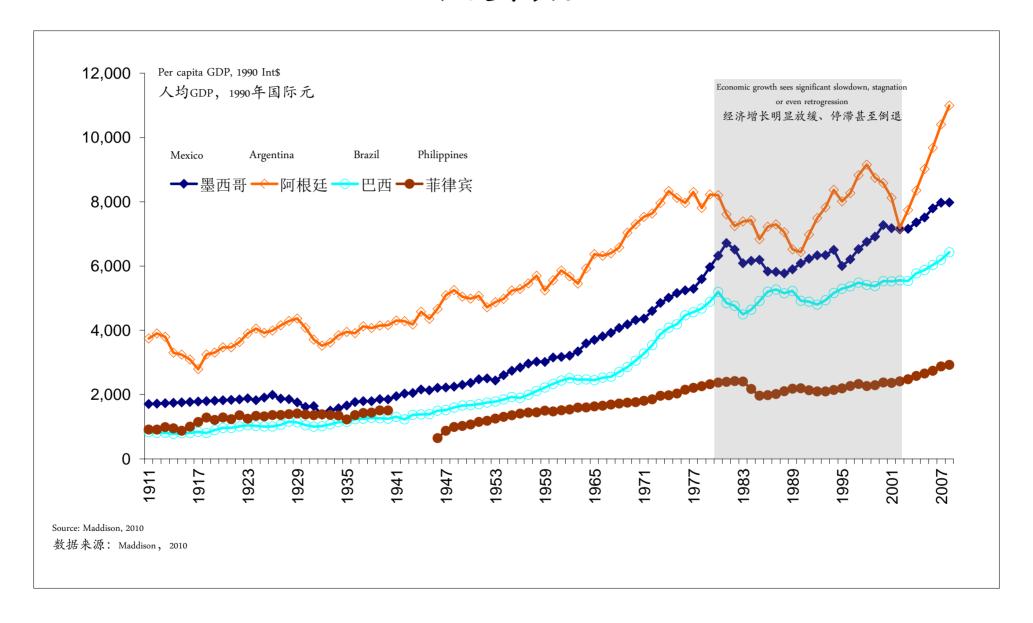
Historical Data of Catch-up Economies 追赶国家历史数据的拟合



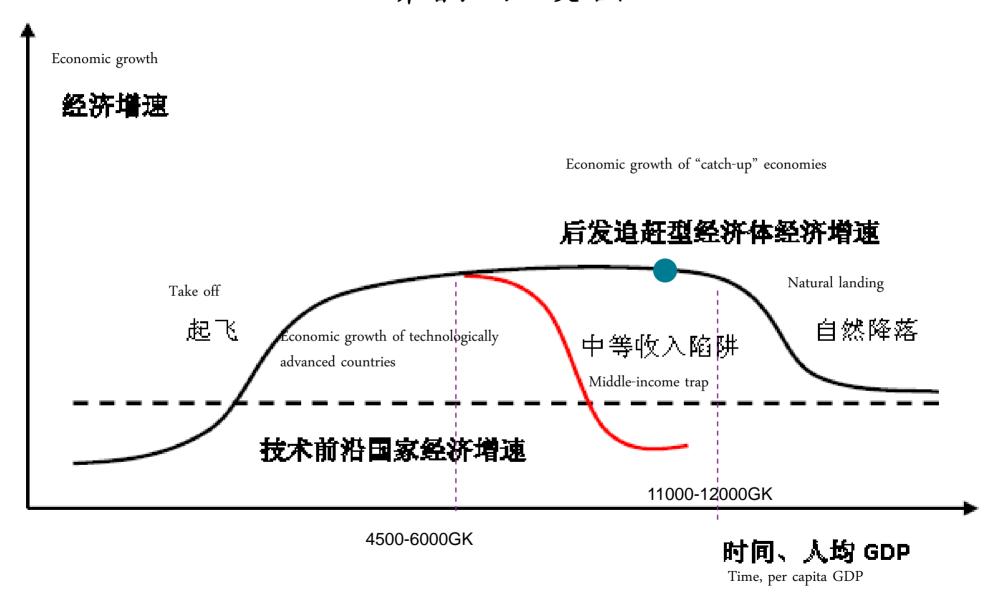
Typical Soviet sphere trend 前苏东典型



Typical Latin America trend 拉美等典型



Three phases of economic growth 经济增长的三类路径



Human capital: Overall expansion amid slowing growth 人力资本: 总量扩张但增速减缓

• China's working age population (aged 15-64) will begin to fall around 2015, and the 15-59 population has already started to fall in 2012

中国15-64岁的劳动力年龄人口将从2015年左右开始减少,15-59岁的劳动力年龄人口从2012年已经开始减少

• But over the next decade, rising education levels and changes to the urban and rural population structures will continue to drive the overall growth of human capital, but this growth will gradually slow from 1.5% to about 0.4%

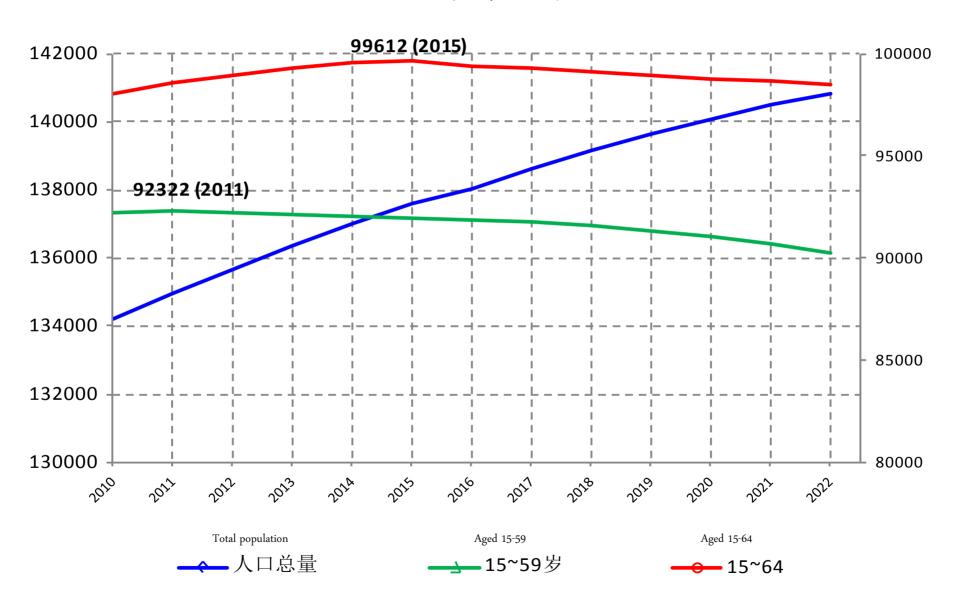
但今后十年教育水平提高及城乡人口结构变化等将推动人力资本总量继续增长,不过增速将逐渐从1.5%减缓到0.4%左右的水平

• Raising education and training standards to accumulate human capital is still an important mean of maintaining China's international competitiveness

通过提高人口教育和培训水平积累人力资本,仍是我国国际竞争优势的重要来源

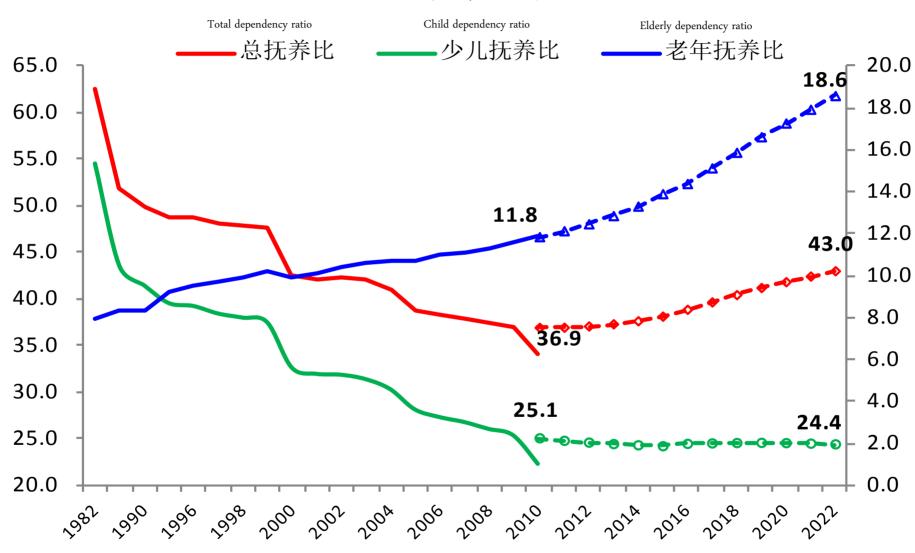
Population and labor force

人口和劳动力



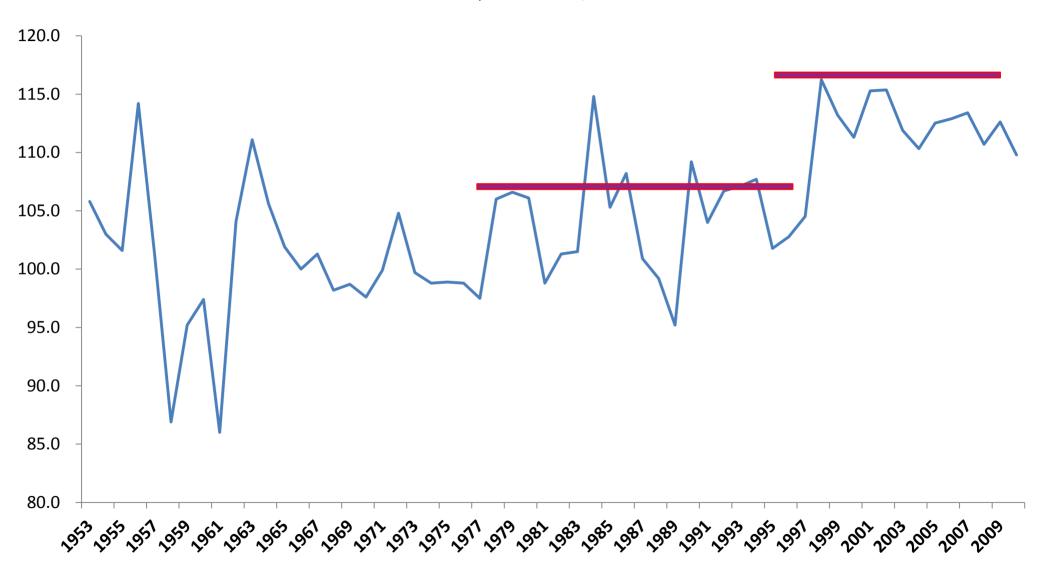
Population and labor force

人口和劳动力



Average real wage index

实际平均工资指数



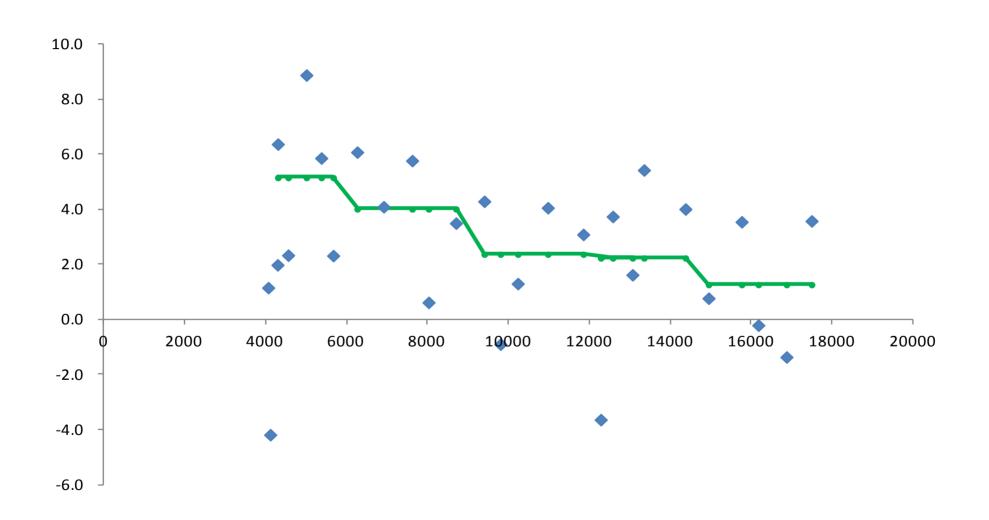
Innovation and TFP: From focus on efficiency to focus on innovation 创新和TFP: 从效率驱动走向创新驱动

- China is lower on the innovation index compared to major developed countries, its performance is comparable of theirs at this growth phase. 中国创新指标的总体表现落后于主要发达国家,但与发达国家在相同增长阶段的水平基本相当
- At present, raising efficiency is key to China's growth. The next decade is a crucial period for China to intensify efforts to raise efficiency levels and establish the institutional and technological foundation for a future shift towards innovation.

当前阶段效率提升对增长发挥主要作用。未来十年是中国加速推进效率提升,并为向创新驱动转换奠定体制和科学技术基础的关键时期

• Over the past 30 years or so, China's average annual TFP growth was close to 3% and has contributed nearly 30% to its economic growth. Over the next decade, the potential to drive the rapid growth of China's TFP through factor reallocation will become increasingly smaller. China's TFP is projected to fall by about 1 percentage point, and this is consistent with the experience of other countries. 过去30多年中国TFP年均增长接近3%,对经济增长的贡献接近30%;未来十年通过要素重新配置促进中国TFP高速增长的潜力越来越小。TFP预期将比之前平均水平下降1个百分点左右。这也是与国际经验相吻合的。

Technological progress and efficiency (TFP outlook) 技术进步与技术效率 (TFP展望)



Capital stock per capita is not high, but investment efficiency has fallen 人均资本存量不高,但投资效率下降

Overall return on assets has dropped and overcapacity has become a serious problem. China's incremental capital output ratio (ICOR) has been rising rapidly since 2008, reaching 4.6 in 2011, the highest since 1992.

总体资产回报率有所下降,产能过剩问题相当突出。我国的增量资本产出率 (ICOR) 自2008年后持续快速上升,2011年达到4.6,为1992年以来最高记录。



Potential for industrialization-driven domestic demand growth to gradually shrink 工业化特征的内需增长空间逐步变小

The basic characteristics of industrialization are a shift towards standardized and large-scale production, continued refinements to division of labor within industries, and the growth of intermediate inputs. On one hand, there will be a rapid growth in demand for industrial goods and capital goods, as well as a rapid rise in the production of steel, electricity, automobiles, cement and home appliances. On the other hand, populations and factors will become more concentrated, the domestic market will become increasingly integrated, urbanization growth will accelerate, and the demand for infrastructure development will be huge. History has shown that when GDP reaches about 11,000 international dollars, the production of key industrial products will also peak in value, and urbanization growth will slow. Based on this trend and China's key industrial product per capital levels at present, the absolute peak or growth peak for steel, cement, housing construction and automobile production will be gradually attained from 2015 onwards.

工业化的基本特征是产品生产的标准化、规模化,工业内部分工不断细化,中间投入不断提高。与之相伴随,一方面对重要工业品和资本品的需求快速增长,如钢铁、电力、汽车、水泥、家电等产量快速增加;另一方面是人口和要素的集聚,国内市场日趋一体化,城市化率快速提升,基础设施建设需求巨大。经验证明,当人均GDP达到11000国际元左右时,主要工业品生产的峰值也将同时出现,而且城市化率增速趋于放缓。根据这一规律和我国现有人均重要工业产品水平推算,钢铁、水泥、房屋建筑、汽车产量的绝对峰值或增速峰值会自2015年后逐步出现。

Export growth to slow 出口增长速度会有所放慢

Plugging into globalization and achieving rapid expansion through external demand has become an important driver of China's rapid economic growth. Noteworthy is the fact that China's share of world trade (11%) is already comparable to Japan and Germany's historical peaks. With the upgrading of China's industries, the pressure from two ends will gradually intensify. On one end, the further upgrading of China's exported products will pit it against even stronger competitors (primarily developed countries like the US, Japan and countries in Europe), from a differentiated competitive landscape to a homogeneous one, growing one's international market share will become increasingly difficult. On the other end, China's labor costs has been rising, and competition from emerging countries that possess traditional export advantages will also intensify. Additionally, the post-crisis global economy is growing relatively slowly, and these factors will gradually slow down the growth of China's exports. The original average annual growth projection of 20% will be fall to around 10% and this will reduce the role of exports as a driver of the economy.

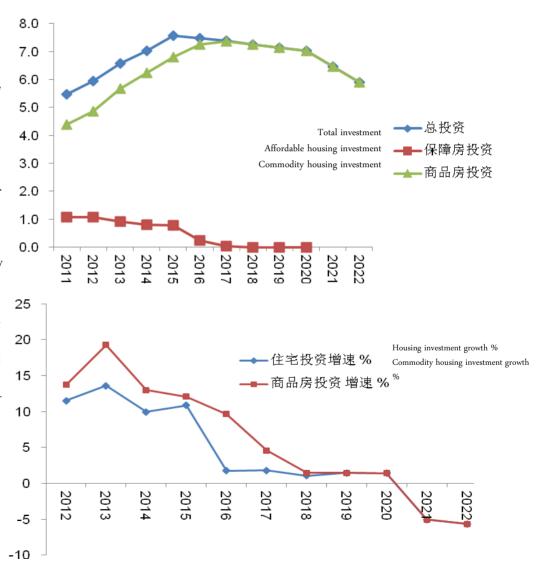
融入全球化,外需空间得到快速拓展,成为推动我国经济快速增长的重要动力。值得注意的是,我国贸易占世界份额(11%)已经与日本、德国历史峰值水平相当。随着我国产业升级,"两头挤压"的情况日渐明显。一方面,随着我国出口产品进一步升级,竞争对手将更加强大(主要是欧美日等发达国家),错位竞争将为变为同质竞争,抢占国际市场空间的难度不断增加。另一方面,由于我国劳动力成本不断攀升,传统出口优势来自新兴国家的竞争也日益激烈。加上危机后全球经济进入相对低速增长期,这都将使我国出口增速逐渐放缓,预计原来超过20%的年均增长将下降到10%左右,对经济的拉动左右趋于减弱。

Housing: How many houses do we need?

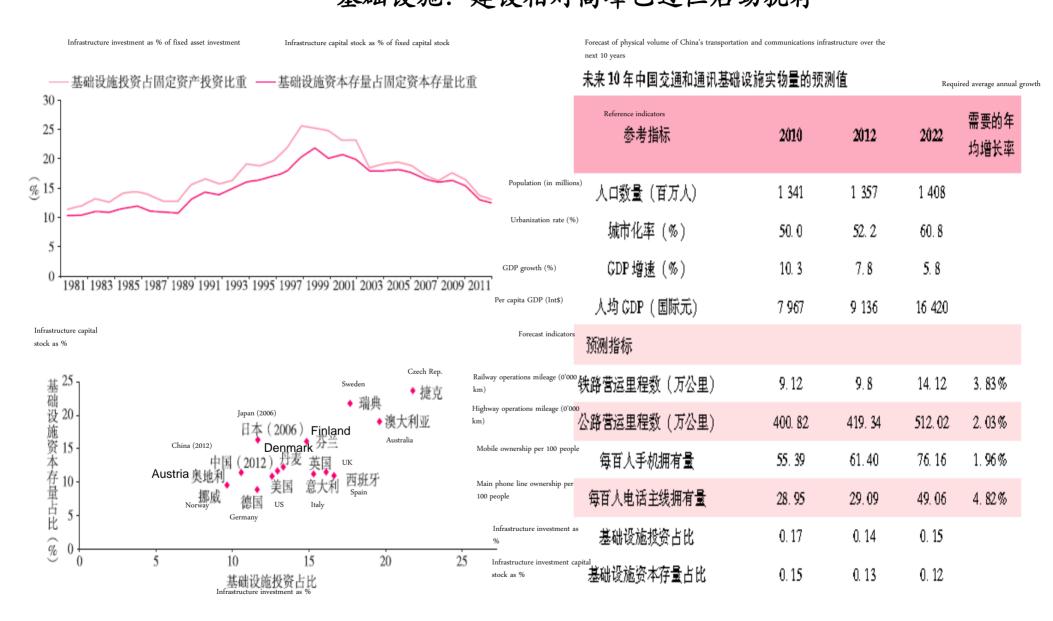
住宅: 我们到底需要多少房子

- •The annual growth of housing demand in Chinese cities is estimated to peak at 12m-13m units. Based on the scale of ongoing projects and construction progress, urban housing investment growth is projected to decline significantly from 2016 onwards, and investment scale will also near or reach its peak by then. 中国城镇每年新增住宅需求峰值预计在1200-1300万套之间。根据已经铺开的规模和建设进度推断,城镇住宅投资增速预计从2016年前将出现明显回落,相应的投资规模也将接近或达到峰值。
- •New commercial residential projects may also peak around 2014 and will gradually decline after that; construction area may peak around 2016 while completed area may do so around 2018. 新开工商业住宅的峰值可能在2014年左右就会出现,之后逐步下降;施工面积峰值可能要到2016年左右出现,而竣工面积峰值可能在2018年左右出现。
- •If affordable housing and commodity housing construction are considered together, housing investment may peak around 2015. By 2015, China's urban housing inventory would have reached 273m units, and the urban resident population's housing area per capita would have hit 31 square meters; by 2020, total urban housing would have underwent a net growth of 51m units from 2015, and the urban housing area per capita will near 34 square meters.

如果把保障性住房和商品住宅建设加总,住房投资可能在2015年左右达到高点。到2015年中国城镇住房存量将达到2.73亿套,城镇常住人口人均住宅建筑面积为31平方米;到2020年,城镇住房总量还将在2015年的基础上净增长5100万套,城镇人均住房面积将接近34平方米。



Infrastructure: Relative construction peak has passed but momentum remains 基础设施:建设相对高峰已过但后劲犹存



Automobiles: Entering second high growth period

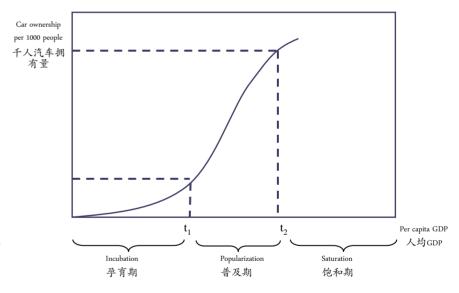
汽车: 进入次高增长的普及期

•It is forecast that by 2015 and 2022, China's total car ownership will reach 160m-165m units and 320m-330m units respectively, production and sales of new cars will hit 26m-27m units and 39m-40m units, and car ownership per 1000 people will climb to 117-119 units and 230-235 units.

预计到2015年和2022年,我国总汽车保有量分别将达到1.60-1.65亿辆和3.20-3.30亿辆,新车产销规模将分别达到2600-2700万辆和3900-4000万辆,千人汽车拥有量将达到117-119辆和230-235辆。

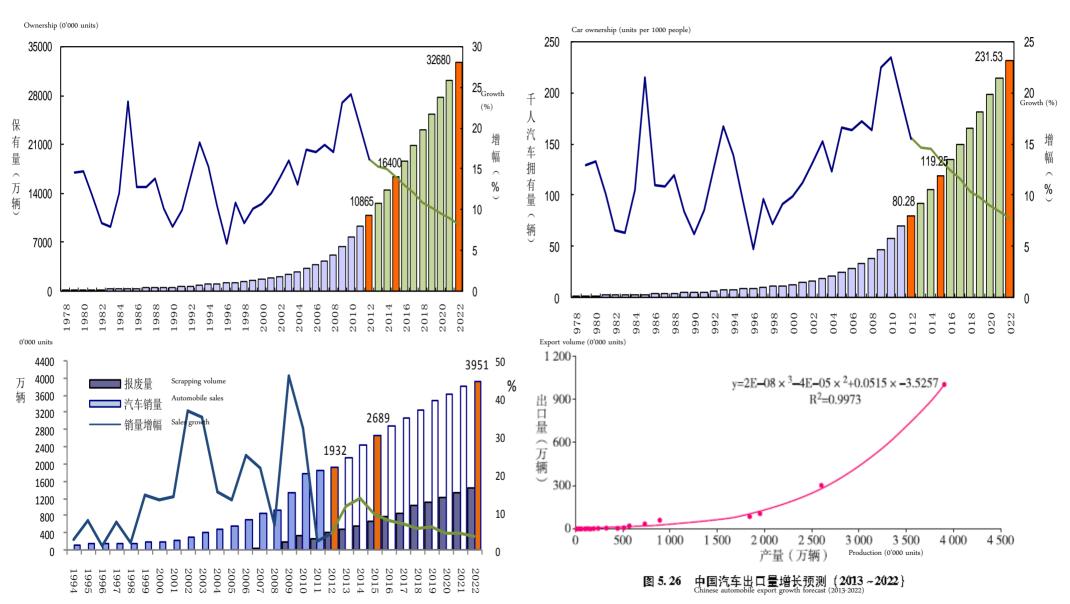
•The elasticity of automobile exports with respect to production is roughly 0.5-0.6. With the rising quality of Chinese automobiles, conservative estimates put the vehicle and complete knock-down export volume at over 3m units by 2015, and nearly 10m units by 2022, representing an average annual growth of about 24%.

汽车出口量对产量的弹性大致为0.5-0.6。随着中国汽车品质的不断提升,保守预测到2015年,中国汽车整车及成套散件出口将超过300万辆,到2022年将接近1000万辆,年均增长24%左右。

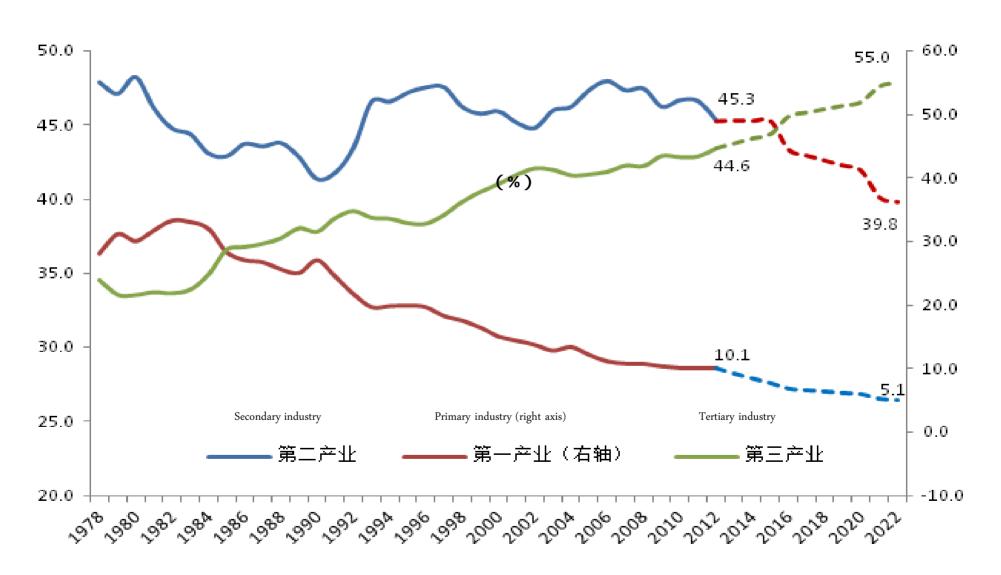


Automobile demand: A future highlight

汽车是未来需求的一个亮点



Tertiary industry: Structural change and sector upgrade 三次产业: 结构变动与产业升级



Agriculture sector: Continued growth amid tight balance

农业: 持续增长下的紧平衡

• Daily calorie intake per capita peaks around 3000 kcal and the types of agricultural products consumed by people will increase in diversity. Non-food grain consumption will significantly outpace food grain consumption, and after entering the upper middle-income phase, total grain demand will continue to grow for a very long time.

人均每日摄入的食物能量峰值在3000大卡左右,人们对农产品的消费品种将更加丰富和多元,非食用消费的粮食将大幅超过食用粮食消费,粮食需求总量将在进入上中等收入阶段后很长一段时间内保持增长态势。

• Over the next 10 years, production of China's main agricultural products will continue to grow, but since consumption growth will be faster, the balance between overall demand and supply of agricultural products will be kept tight, and the gaps will be relatively large for some products.

未来10年中国主要农产品产量仍未保持增长趋势,但是由于消费的增长速度更快,农产品供求总体讲保持紧平衡状态、部分产品缺口会比较大。

Grain demand and production forecasts (0'000 tonnes) 粮食需求量与产量预测(万吨)

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Grain deman	ぬ 粮食需求	62619	63303	64010	64719	65483	66273	67090	67935	68807	69708
Of which: Provisions	其中; 口粮	26979	26775	26562	26326	26111	25892	25666	25433	25193	24945
Feed grain	饲料用粮	20785	21258	21743	22238	22745	23263	23793	24335	24890	25457
Processing & conversion	加工转化	13566	13986	14425	14880	15356	15852	16368	16908	17470	18055
Seed grains	种子用粮	1289	1284	1280	1275	1271	1267	1263	1259	1255	1251
Grain production	粮食产量	59141	59325	59509	59694	59880	60067	60254	60441	60629	60818
Of which: Rice	其中; 稻谷	20464	20499	20535	20570	20606	20641	20677	20712	20748	20784
Wheat	小麦	12145	12232	12319	12408	12497	12586	12677	12768	12859	12952
Corn	王米	21008	21205	21404	21606	21809	22014	22221	22430	22641	22853
Total of above three	三粮合计	53616	53936	54259	54584	54911	55241	55574	SS 9 10	56248	56589

Manufacturing sector: Upgrading amid relative stability

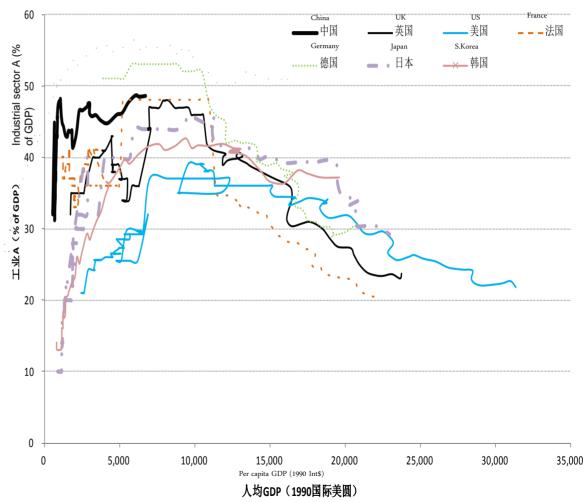
制造业: 相对稳定中的升级之路

As per capita GDP increases gradually, a typical industrialized country's manufacturing sector will rise as a percentage of GDP and fall thereafter. It is estimated that China's industrialized value added as a percentage has already hit peak value during the 11th Five Year period. But different sectors hit their peak values at different periods, and this is also the result of an upgrading process with the industrial sector.

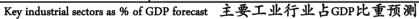
随着人均GDP的逐步上升,典型工业化国家的制造业比先升后降。估计中国工业增加值占比峰值已经在十一3期间(2006年)达到。但内部各行业达到峰值的时间存差异,这也是工业内部升级的结果。

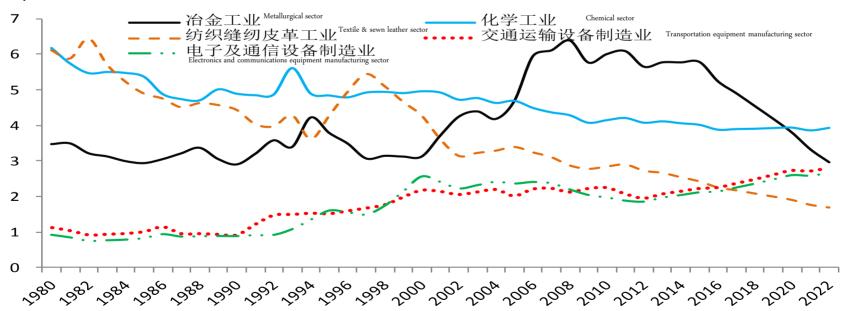
In China, heavy industry sectors like metallurgy and building materials will peak percentage) around 2015 and continue to decline thereafter; capital and technolog intensive sectors such as machinery and electronics will continue to rise (as a percentage) and are expected to stabilize around 2020.

中国冶金、建材等重工业部门比重在2015年左右达到峰值,随后持续回落;机械、电子等资本和技术密集型;业比重将继续上升,大约在2020年左右时趋于稳定。



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Industry structure										
产业结构										
Primary industry	9.2	0.5	7.8	6.9	(7	(5	(2)	(1	5.0	5.1
第一产业	9.2	8.5	7.8	6.9	6.7	6.5	6.3	6.1	5.3	5.1
Secondary industry	45.4	45.0	45.0	40.4	40.0	42.6	40.0	41.9	40.1	39.8
第二产业	45.4	45.3	45.3	43.4	43.0	42.0	42.3	41.9	40.1	39.8
Service industry		v. a	<i>(</i> , 0	40.5	#0.0	#0.0		FD 0		== 0
服务业	45.4	46.2	46.9	49.7	50.3	50.9	51.4	52.0	54.5	55.0
Employment structure										
就业结构										
Agriculture	32.4	31.2	30.0	28.7	27.4	26.2	24.9	23.6	22.5	21.4
农业	32.4	31.2	30.0	28.7	27.4	20.2	24.9	23.6	22.5	21.4
Secondary industry	30.4	30.7	31.1	30.4	20.7	21.0	21.2	31.6	20.0	21.1
第二产业	30.4	30.7	31.1	30.4	30.7	31.0	31.3	31.6	30.9	31.1
Service industry	37.2	38.1	38.9	40.9	41.0	42.9	43.8	44.8	46.6	47.5
服务业	37.2	56.1	38.9	40.9	41.9	42.9	43.8	44.8	40.0	47.5





Service sector: Prospect as a dominant sector gradually showing 服务业:未来主导产业初露端倪

• China's service sector is currently developing in parallel with the industrial sector. Changes to the service sector's internal structure have basically been consistent with the experience of typical industrialized countries at this development phase, and particularly so for China's producer service sector (compared to experience of other countries). However, the service sector's overall development still lags behind to some extent, especially in the distribution service sector when the difference is more significant.

中国服务业正处于与工业并行发展的阶段,服务业内部结构变动趋势基本符合典型工业化国家相同发展阶段的典型事实,其中生产性服务业发展轨迹与国际经验吻合度很高,但服务业发展整体水平还存在一定差距,特别是流通性服务业比重明显偏低。

• The value added of China's service sector as a percentage of GDP is projected to break 50% during the 12th Five Year period and reach about 55% by 2022. Over the next decade, China's distribution service sector will rise (as a percentage of GDP) before falling, its producer service sector will continue to climb (as a percentage of GDP) and is expected to overtake the former around 2014, thus putting it in a dominant position within the service sector. China's personal service sector will rise steadily (as a percentage of GDP) and its social service sector will experience significant growth (as a percentage of GDP).

预计"十三五"中期中国服务业增加值占GDP比重将突破50%,2022年达到55%左右。未来十年,中国流通性服务业比重小幅上升后趋于回落;生产性服务业比重持续提高,预计2014,年左右超过前者,成为服务业内部的主导行业。中国个人服务业比重稳中微升,社会服务业比重则呈明显升高的趋势。

• At present, China's financial system is compatible with its extensive economic growth phase in which resources are pooled to achieve major objectives. When China's economy shifts towards an innovation-driven and intensive growth model, its financial system will also have to become more market-oriented and liberalized. Since financial growth usually outpaces the growth of national output and wealth, the potential for China's financial development remains huge going forward.

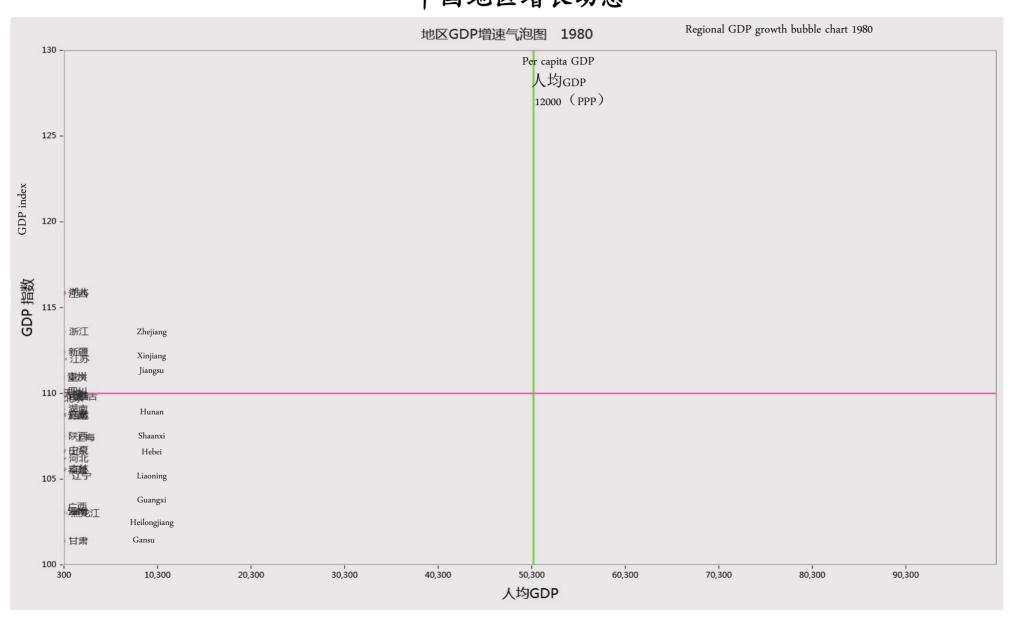
当前中国金融系统是与集中资源办大事的粗放式经济增长阶段相适应的;当中国经济转向由创新驱动的集约化增长模式时,中国金融系统相应的也需要更加市场化和更为开放。由于金融增长通常快于国民产出和国民财富的增长,未来我国金融发展的仍十分巨大。

Four phases of service sector development and their main characteristics

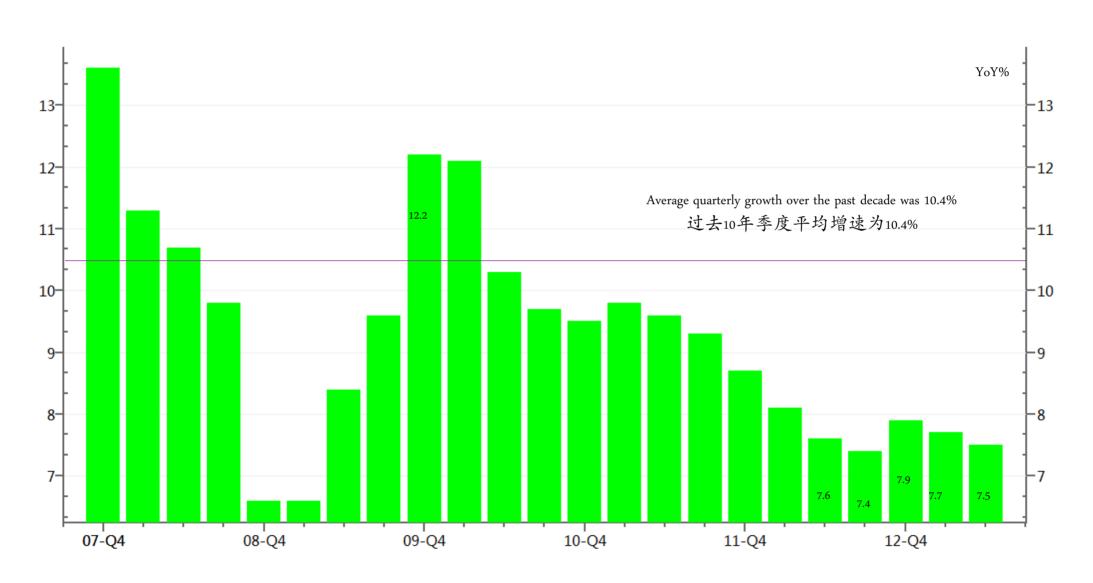
服务业发展的四个阶段及其主要特征

Per capita GDP (1990 Int\$) 人均GDP h (1990年国际元)	Development phase 发展阶段	Service sector value added as a % 服务业增加值比重
Below Int\$3000 3000元以下	Low-level development 低水平发展阶段	From below 40% to 55% 由不足40%提高到55 %
In\$3000-11000 3000~11000元	Development in parallel with industrial sector 与工业并行发展阶段	Between 55% to 60% 介于55%~60%之间
In\$11000-22000 11000~22000元	Accelerating development 加速发展阶段	Rises rapidly from 60% to 70% 由60%快速上升到70 %
Above In\$22000 22000元以上	Developed 发达阶段	Remains steady above 70% 稳定在70%以上水平

China's regional growth dynamics 中国地区增长动态

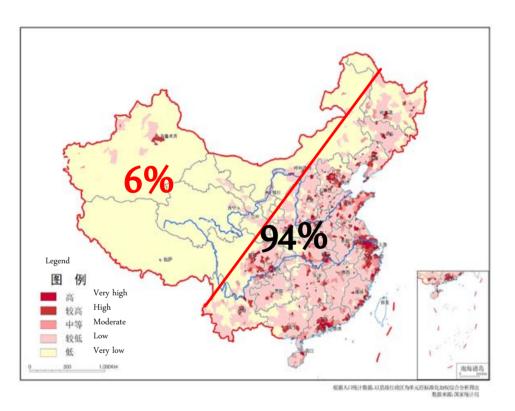


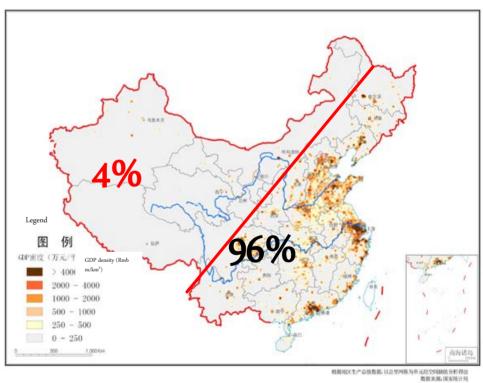
China's quarterly GDP growth 中国季度GDP增速



Population distribution 人口分布

GDP distribution GDP分布





Future potential

未来潜在的空间

- I. Potential of "reform dividends" remains considerable
- 一是"改革红利"空间依然较大
- II. Urbanization potential is still huge
- 二是城镇化潜力依然巨大
- III. New competitive strengths may form
- 三是新竞争优势可能形成
- IV. Robust household consumption growth

四是居民消费升级方兴未艾

V. New opportunities arising from globalization

五是全球化的新机遇

Overall outlook

总体判断

Considering these various factors and the experience of other countries, it is projected (based on the DRC model) that over the next 10 years, the effective implementation of China's key reforms will enable its economy to shift from a high annual growth of about 10% on average to a moderate growth of about 6.5% on average. Even so, this is still a rather high growth rate on the global stage. If the fastest phase of China's economic growth is over, it would also mean the most challenging yet equally exciting phase of China's economic development has arrived, a phase that will see the shift from industrialization to "maturalization" and the creation of a high-income and middle-class society.

综合各种因素和历史经验,如果中国关键改革能够有效启动,根据DRC模型测算,预计未来10年,我国经济增速将由过去年均10%左右的高速增长阶段,转入平均6.5%左右的中速增长阶段。即便如此,这在全球范围内仍是一个较高增速。如果说中国经济增长最快的阶段已经过去,那么中国经济发展最富挑战,同时也最激动人心的阶段已经到来,最接近实现工业化并走向成熟,迈向高收入社会并全面实现小康的阶段正在开启。

Earth at night (Oct.2012)



Source: NASA.