

# India's Macroeconomic Evolution: Past, Present, and Future

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# CONTEXT AND OBJECTIVE OF THIS DOCUMENT

## **Context:**

- **The phenomenal and continuing growth of China has surprised several of the world's leading companies**
- **Most were late in realizing the benefits from the Chinese opportunity**
- **As a result, most companies today are looking at the other BRIC countries very seriously, and want to grasp the opportunity well in time**

## **This document will help you to...**

- **Develop a perspective on India's economic growth (past, present and future)**
- **Provide answers to your clients' frequently asked questions about India**
- **Understand the underlying strengths and drawbacks of the Indian economy**

# THE INDIAN ECONOMY: COMMONLY ASKED QUESTIONS

## Question

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- Is India a monolithic entity or is it diverse?
- How robust has been the economic growth in the past? What has driven this growth?
- Is the rate of investment high enough to drive growth? Could there be a lack of financial resources?
- When will India's much promised "middle class consumption boom" materialize?
- Given that the service sector leads India's growth, would the manufacturing sector constrain growth?
- Would India's infrastructure be sufficient to sustain rapid industrialization?
- How dependent is India's economy on the monsoon?
- Show me the crystal ball – How will India's economy grow and evolve in the future?

## Answer

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- India is a diverse country with various religions, languages, income levels, etcetera
- India's growth has accelerated since the 80s, and the country has grown at 5%-6% consistently for the past 20 years. The growth has been driven by a sustained reform agenda pursued by successive governments
- Investment rate is high enough. In addition, investment goes a longer way in India due to high capital efficiency. India has sufficient financial resources for growth
- Consumer spending is already growing rapidly, driven by an emerging middle class that has created a large market
- In addition to services, manufacturing is also growing rapidly, driven by labor productivity increases, and reflected in exports
- Road, rail, telecom, and power infrastructure meet basic needs and are being expanded and modernized
- Agriculture forms less than 25% of the economy and the correlation between economic downturn and monsoons is low
- Even if the government continues the current pace and theme of reforms, growth rates of ~6% are expected in future. This could go up to 8% if the government increases the pace of reform

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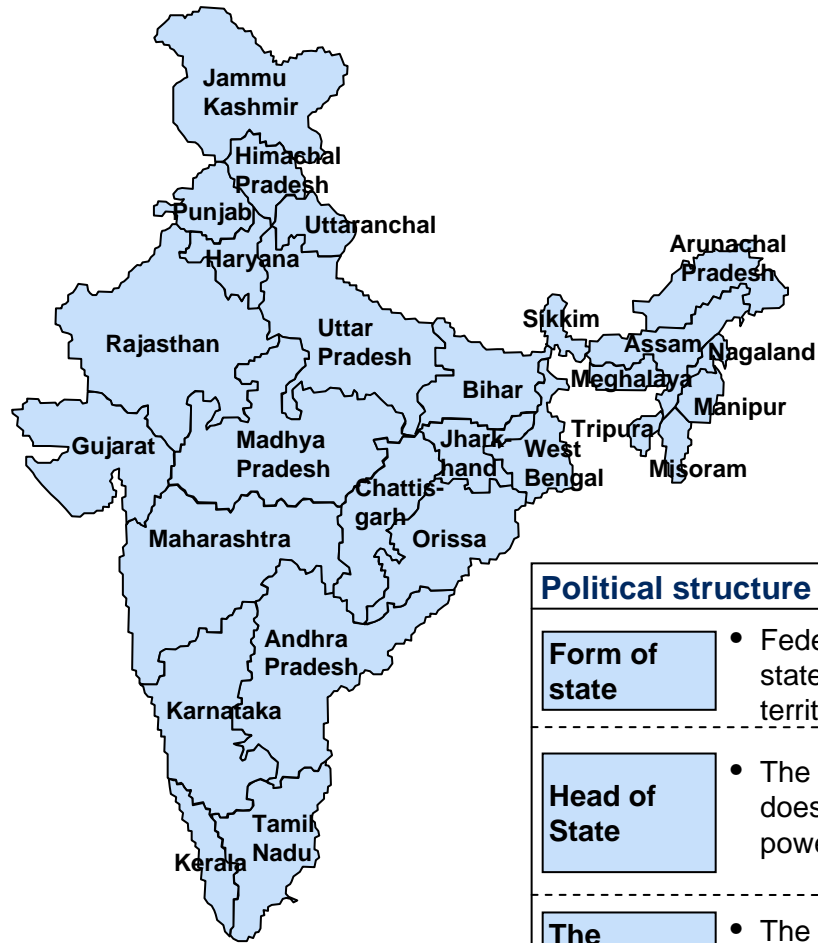
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# INDIA IS A DIVERSE COUNTRY

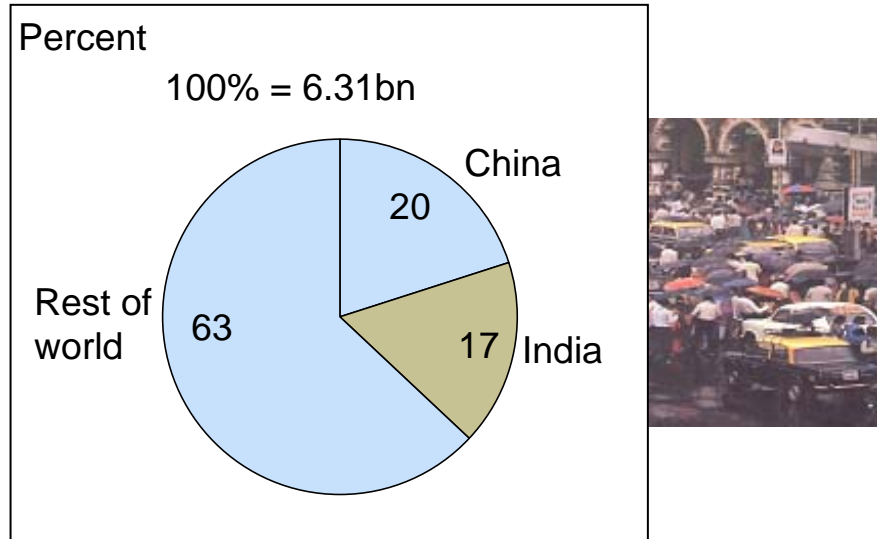
Overview	
<b>Land area</b>	<ul style="list-style-type: none"> <li>• 3,287,263 sq. km; including 57% agricultural land</li> </ul>
<b>Population</b>	<ul style="list-style-type: none"> <li>• 1,030mn people (2001 census)</li> </ul>
<b>Main towns</b> (Population in millions, 2001 census)	<ul style="list-style-type: none"> <li>• Mumbai (Bombay) - 11.9</li> <li>• Delhi - 9.8</li> <li>• Kolkata (Calcutta) - 4.6</li> <li>• Bangalore - 4.3</li> <li>• Chennai (Madras) - 4.2</li> <li>• Hyderabad - 3.5</li> </ul>
<b>Languages</b>	<ul style="list-style-type: none"> <li>• 13 officially recognized languages; over 1,700 dialects</li> <li>• Hindi national language; English widespread as a second language</li> </ul>
<b>Religion</b> (1991 census)	<ul style="list-style-type: none"> <li>• Hindu (82%)</li> <li>• Muslim (12.1%)</li> <li>• Christian (2.3%)</li> <li>• Sikh (1.9%)</li> <li>• Buddhist (0.8%)</li> <li>• Jain (0.4%)</li> </ul>
<b>Currency</b>	<ul style="list-style-type: none"> <li>• Rupee (Rs)</li> <li>• Average exchange rate in 2003: Rs46.59=\$1</li> </ul>



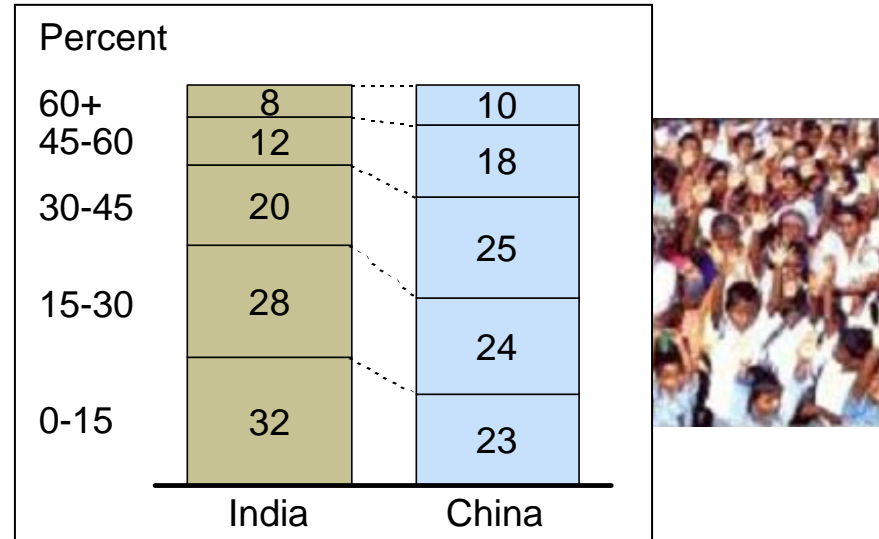
Political structure	
<b>Form of state</b>	<ul style="list-style-type: none"> <li>• Federal republic, with 28 states and seven union territories</li> </ul>
<b>Head of State</b>	<ul style="list-style-type: none"> <li>• The President (nominal head, does not have executive power)</li> </ul>
<b>The Executive</b>	<ul style="list-style-type: none"> <li>• The Prime Minister (presides over a council of ministers chosen from elected members of parliament)</li> </ul>
<b>National Legislature</b>	<ul style="list-style-type: none"> <li>• Bicameral                             <ul style="list-style-type: none"> <li>– The Rajya Sabha, or upper house, has 245 members</li> <li>– The Lok Sabha, or lower house, has 545 members</li> </ul> </li> </ul>

# INDIA IS DEMOGRAPHICALLY DIFFERENT FROM CHINA

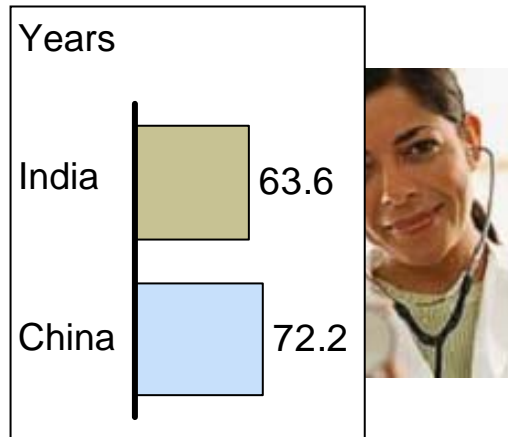
**Population, 2003**



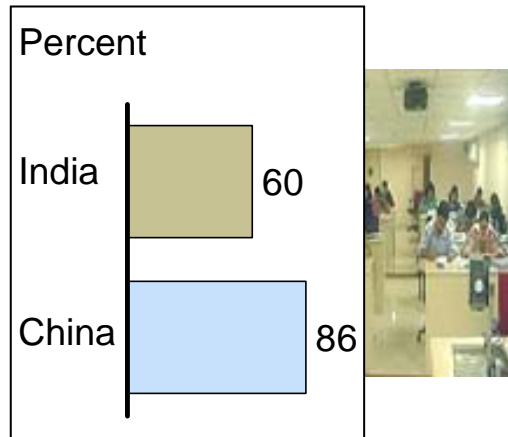
**Age profile, 2003**



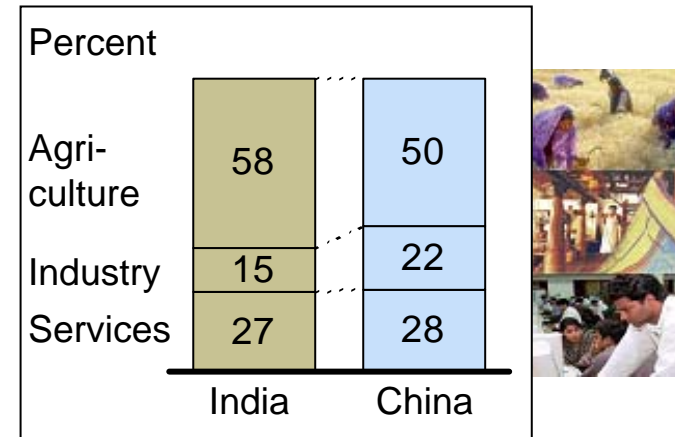
**Life expectancy, 2003**



**Literacy rate, 2003**

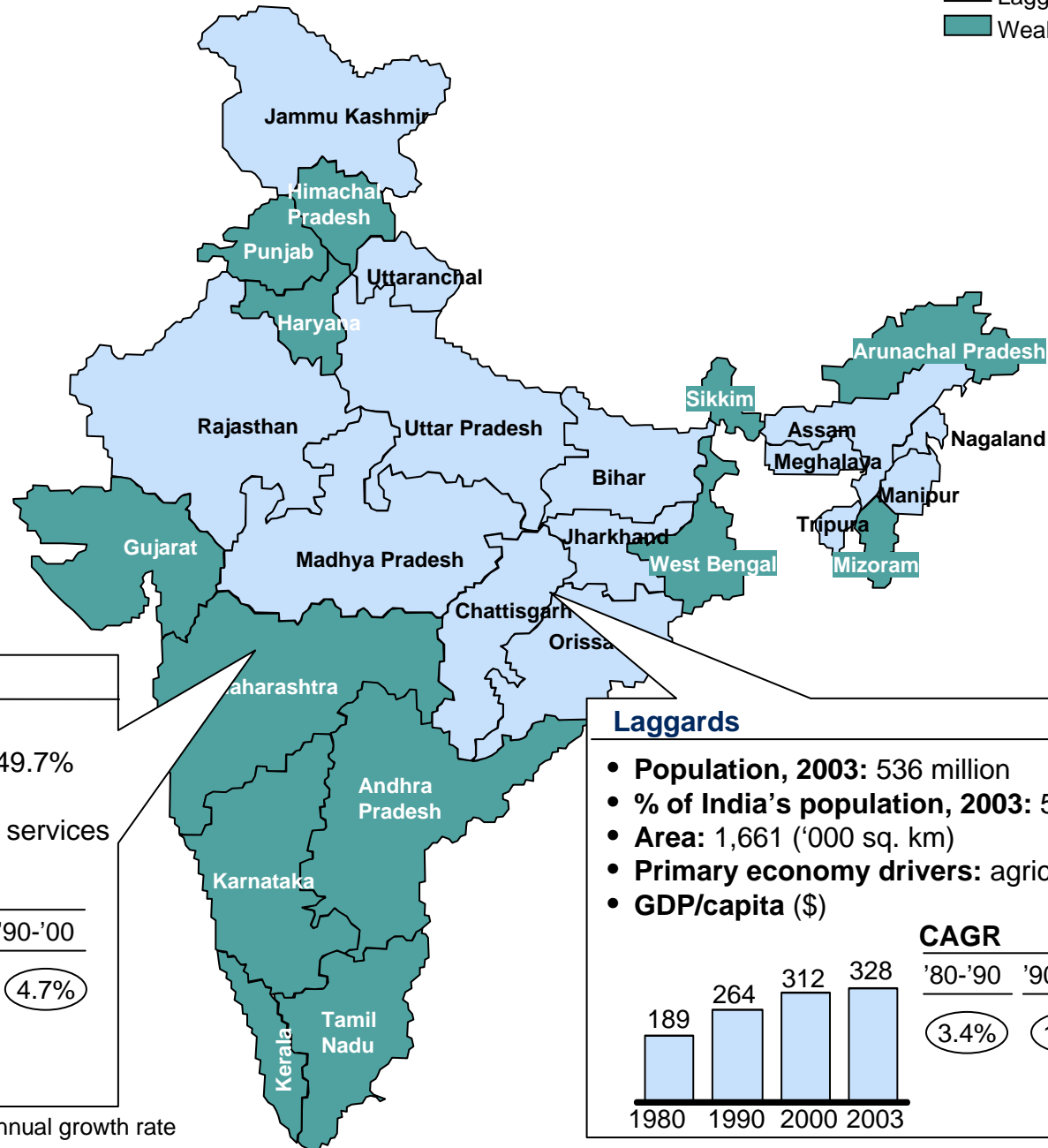


**Sources of employment, 2001**



# DEVELOPMENT HAS DIFFERED BETWEEN REGIONS

Laggards  
 Wealthy states



### Wealthy states

- **Population, 2003:** 530mn
- **% of India's population, 2003:** 49.7%
- **Area:** 1,494 ('000 sq. km)
- **Primary drivers:** manufacturing, services
- **GDP/capita (\$)**

Year	CAGR**	
	'80-'90	'90-'00
1980	267	3.8%
1990	386	4.7%
2000	612	
2003	720	

### Laggards

- **Population, 2003:** 536 million
- **% of India's population, 2003:** 50.3%
- **Area:** 1,661 ('000 sq. km)
- **Primary economy drivers:** agriculture
- **GDP/capita (\$)**

Year	CAGR	
	'80-'90	'90-'00
1980	189	3.4%
1990	264	1.7%
2000	312	
2003	328	

\* Base year = 2002; \*\* Combined annual growth rate  
 Sources: CSO; WEFA-WMM; team analysis; census

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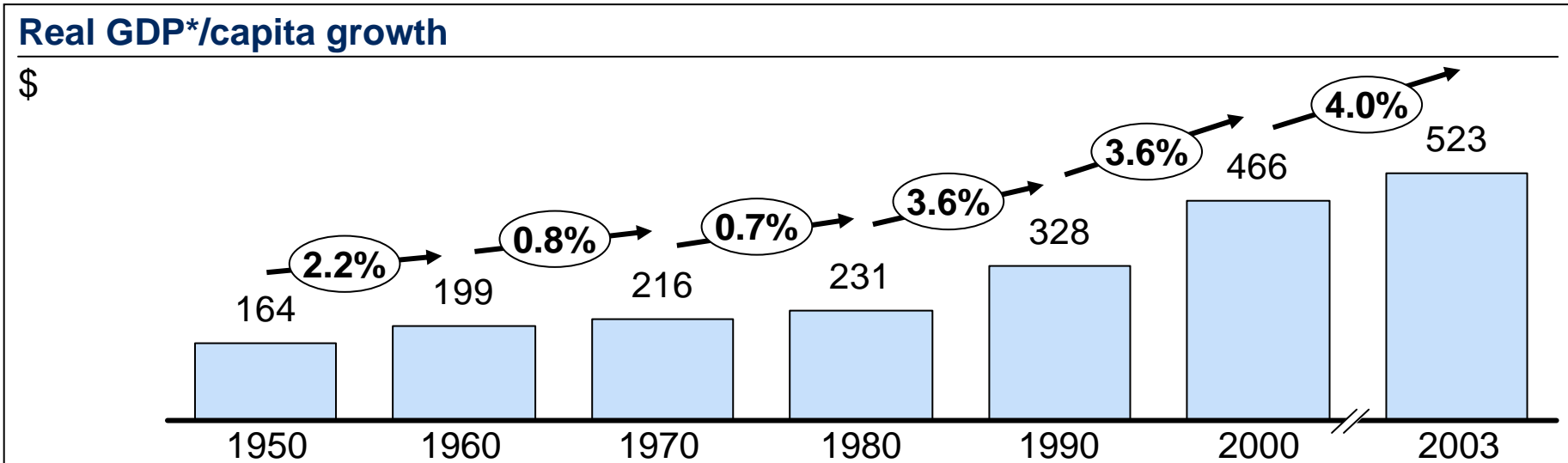
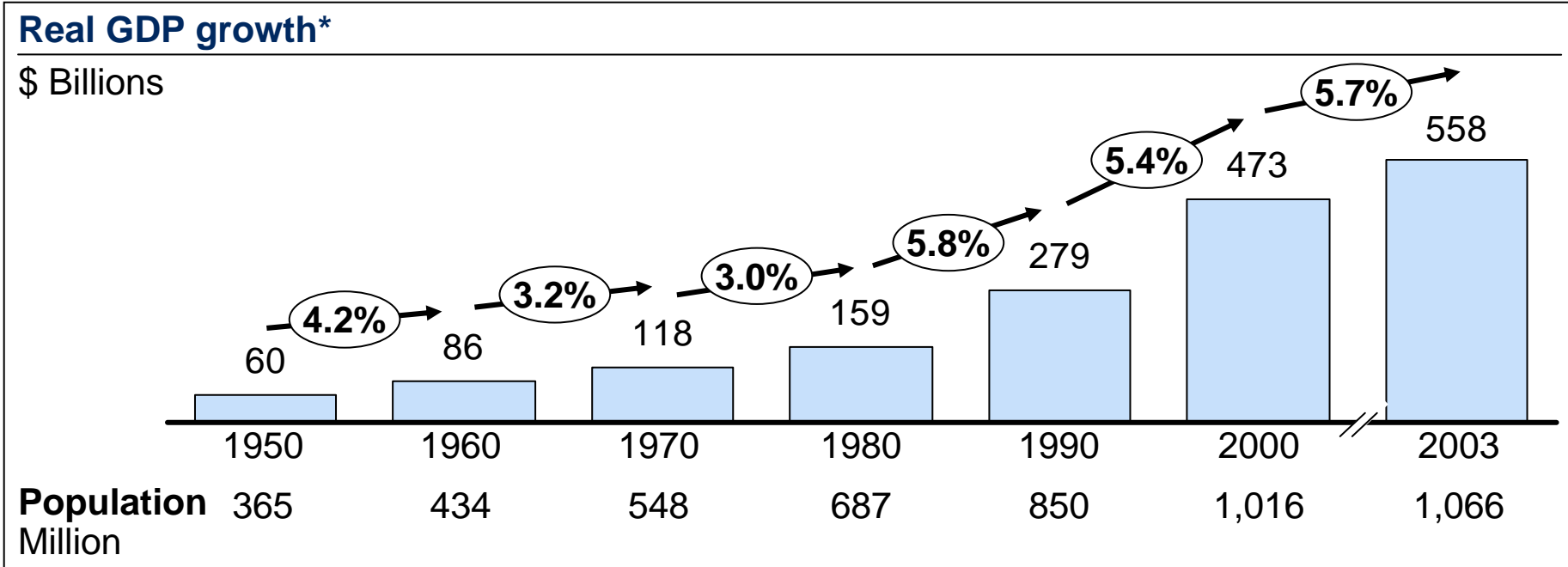
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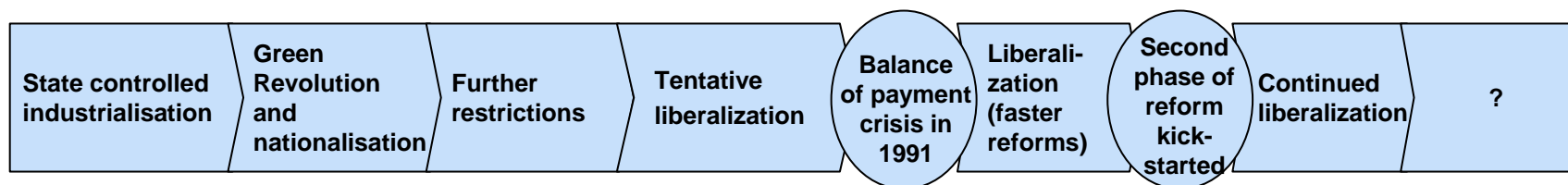
# INDIA HAS SEEN STRONG, ROBUST GROWTH OVER THE LAST 20 YEARS



\* Base year = 2002

Sources: WEFA-WMM; team analysis

# GROWTH HAS BEEN SPURRED BY THE POSITIVE DIRECTION AND TRACK RECORD OF REFORMS DURING THE PAST 20 YEARS



Era	1953	1969	1973	1984	1991	1991 to 2000	2000-2004	2004-
<b>Leaders (Prime Minister)</b>	<ul style="list-style-type: none"> <li>Jawaharlal Nehru</li> </ul>	<ul style="list-style-type: none"> <li>Lal Bahadur Shastri</li> <li>Indira Gandhi</li> </ul>	<ul style="list-style-type: none"> <li>Indira Gandhi</li> <li>Morarji Desai</li> <li>Charan Singh</li> </ul>	<ul style="list-style-type: none"> <li>Indira Gandhi</li> <li>Rajiv Gandhi</li> <li>V.P. Singh</li> <li>Chandra Shekhar</li> </ul>		<ul style="list-style-type: none"> <li>Narasimha Rao</li> <li>D. Gowda</li> <li>I.K. Gujral</li> </ul>	<ul style="list-style-type: none"> <li>A.B. Vajpayee</li> </ul>	<ul style="list-style-type: none"> <li>Manmohan Singh</li> </ul>
<b>Context</b>	<ul style="list-style-type: none"> <li>Overcoming colonial legacy</li> </ul>	<ul style="list-style-type: none"> <li>Liberalization of agriculture; government-controlled industrial growth</li> </ul>	<ul style="list-style-type: none"> <li>Increased emphasis on private sector competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>Acknowledgment of                             <ul style="list-style-type: none"> <li>Unprofitability of the public sector</li> <li>Stifling effect of controls</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>Pace of reforms increased due to pressure from World Bank and IMF</li> </ul>	<ul style="list-style-type: none"> <li>Continued and increased commitment for economic reforms in the country</li> </ul>	
<b>Policy</b>	<ul style="list-style-type: none"> <li>Soviet-style central planning                             <ul style="list-style-type: none"> <li>Focus on heavy industry</li> <li>Passive public-sector ownership</li> <li>Virtually closed to international trade</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Nationalisation of                             <ul style="list-style-type: none"> <li>Banks/ insurance</li> <li>Core sectors</li> </ul> </li> <li>Controls on expansion of large business houses</li> </ul>	<ul style="list-style-type: none"> <li>Significant restrictions on foreign exchange through Foreign Exchange Regulation Act</li> <li>Capital market controls</li> </ul>	<ul style="list-style-type: none"> <li>Entry barriers lowered for many sectors</li> </ul>		<ul style="list-style-type: none"> <li>Overhaul of                             <ul style="list-style-type: none"> <li>Trade policy</li> <li>Industrial policy</li> <li>Financial sector</li> <li>Tax system</li> <li>Public sector</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Deregulation in strategic sector such as telecom, petroleum, and power</li> <li>Increased emphasis on disinvestment</li> <li>Rationalization of tariff structure</li> <li>Introduction of value-added tax</li> </ul>	

# REFORMS IN INDIA ARE COMPARABLE WITH OTHER EMERGING ECONOMIES (1/2)

Reform Area	India	Brazil	Russia	China
1 Product reservation for small-scale industry (SSI)	<ul style="list-style-type: none"> <li>Items reserved for SSI reduced from 873 to 485</li> </ul>	<ul style="list-style-type: none"> <li>No reservation for SSI</li> </ul>	<ul style="list-style-type: none"> <li>No reservation for SSI</li> </ul>	<ul style="list-style-type: none"> <li>No reservation for SSI</li> </ul>
2 Tax and excise duties	<ul style="list-style-type: none"> <li>Excise duty is a single rate of 16% CENVAT*</li> <li>Corporate tax rate reduced from 51.8% in 1992 to 35% in 1998</li> </ul>	<ul style="list-style-type: none"> <li>VATs have been implemented - ICMS &amp; IPI</li> <li>Corporate tax rate is 15%</li> </ul>	<ul style="list-style-type: none"> <li>VAT of 18%</li> <li>Corporate tax rate is 24%</li> </ul>	<ul style="list-style-type: none"> <li>VAT of 13% for agriculture-related products and 17% for others</li> <li>Corporate tax rate is 33%</li> </ul>
3 Effective regulatory framework and strong regulatory bodies in telecom and power	<ul style="list-style-type: none"> <li>Independent regulatory bodies set up for most utilities (e.g., telecom and power) and financial services (e.g., securities and insurance)</li> </ul>	<ul style="list-style-type: none"> <li>Regulatory bodies for telecom and power sectors set up (e.g., ANEEL-Energy; ANATEL-Telecom)</li> </ul>	<ul style="list-style-type: none"> <li>Regulatory bodies for telecom and power sector have been set up (e.g., Russian Ministry of telecom and Federal Energy Commission)</li> </ul>	<ul style="list-style-type: none"> <li>Regulatory bodies for telecom and utilities sectors set up (e.g., MII – telecom, Ministry of Water Reserve, Elect. Regulatory Commission)</li> </ul>
4 Licensing and quota restrictions	<ul style="list-style-type: none"> <li>Licensing quotas and barriers removed from various sectors like telecom and insurance</li> </ul>	<ul style="list-style-type: none"> <li>The licenses/quasi-licensing requirements exist in sectors such as cars, textiles, and electronic gambling machines</li> </ul>	<ul style="list-style-type: none"> <li>Activities such as banking, construction, and the sale of pharmaceuticals are subject to licensing</li> </ul>	<ul style="list-style-type: none"> <li>Licenses required in most service sectors</li> <li>Quotas largely removed, even for imports</li> </ul>
5 Reducing import duties	<ul style="list-style-type: none"> <li>Import duties range from 15% to 40% (basic)</li> <li>Customs duty for commodities: Steel (10%), Al (10%), Cu (15%)</li> </ul>	<ul style="list-style-type: none"> <li>Import duties range from 0% to 30%</li> <li>Duty for commodities: Steel (4%), Al (6%), Cu (6%)</li> </ul>	<ul style="list-style-type: none"> <li>Average range of import duty is 0% to 20%</li> <li>Duty for commodities: Steel (0%), Al (0%), Cu (5%)</li> </ul>	<ul style="list-style-type: none"> <li>Average range of import duties from 0% to 30%</li> <li>Duty for commodities: Steel (1%-12%), Al (1.5%-7%), Cu (1%-8%)</li> </ul>
6 Foreign ownership	<ul style="list-style-type: none"> <li>Almost complete deregulation: 100% FDI allowed in most sectors, with few restrictions (e.g., insurance, telecom, retail)</li> </ul>	<ul style="list-style-type: none"> <li>There are no limits of foreign ownership for banking, insurance, or retail market</li> </ul>	<ul style="list-style-type: none"> <li>100% foreign ownership allowed in sectors such as retail, oil, and gas</li> <li>Foreign participation is set at 12% in banking and at 50% in insurance</li> </ul>	<ul style="list-style-type: none"> <li>100% foreign ownership allowed for retail, textile, electronic and telecom equipment etc.</li> <li>Foreign participation limited to electronic machinery, railway construction, cars</li> <li>Exceptions are common</li> </ul>

\* Central Value Added Tax

Sources: MGI (McKinsey Global Institute) report; press search; PwC; E&Y; team analysis

# REFORMS IN INDIA ARE COMPARABLE WITH OTHER EMERGING ECONOMIES (2/2)

Reform Area	India	Brazil	Russia	China
7 Unclear real estate titles	<ul style="list-style-type: none"> <li>Computerization of land records in some states</li> <li>Removal of Urban Land Ceiling Act</li> </ul>	<ul style="list-style-type: none"> <li>Most of the land is privately held. The land titles and records are difficult to trace</li> </ul>	<ul style="list-style-type: none"> <li>Russian government owns land. Companies take land on long term rent.</li> </ul>	<ul style="list-style-type: none"> <li>All domestic land is state owned. Companies take land on rent</li> </ul>
8 Property taxes, stamp duties, and surcharges	<ul style="list-style-type: none"> <li>Stamp duty rate ranges from 5% to 14.7%</li> <li>Property taxes are charged on “historical cost” rather than “market value”</li> </ul>	<ul style="list-style-type: none"> <li>The assessment of property tax is both on market value and historical cost</li> </ul>	<ul style="list-style-type: none"> <li>Property tax rate is established by regions but cannot exceed 2.2%</li> <li>Property tax based on book value</li> </ul>	<ul style="list-style-type: none"> <li>Property taxes are charged on historical cost or current rental</li> <li>Stamp duty range from 0.5‰ to 4‰</li> </ul>
9 Tenancy laws	<ul style="list-style-type: none"> <li>Tenancy laws favor tenants and it is difficult for owners to reclaim property in case of disputes</li> </ul>	<ul style="list-style-type: none"> <li>Tenancy laws favor tenants and it is difficult for owners to reclaim property in case of disputes</li> </ul>	<ul style="list-style-type: none"> <li>Tenancy laws favor tenants and it is difficult for owners to reclaim property in case of disputes</li> </ul>	<ul style="list-style-type: none"> <li>Tenancy laws favor tenants and it is difficult for owners to reclaim property in case of disputes</li> </ul>
10 Privatization of Public sector undertakings (PSUs)	<ul style="list-style-type: none"> <li>Government equity disinvested in PSUs like VSNL*,BALCO**,IBP, CMC, ITDC</li> <li>~\$2.3 earned from disinvestments</li> </ul>	<ul style="list-style-type: none"> <li>Government divested entities in sectors like utilities and telecom (1992-94: \$8.6bn and 1995-02: \$78.6bn)</li> </ul>	<ul style="list-style-type: none"> <li>Private ownership introduced to more than 130,000 companies but state still accounts for 50% of GDP. Main sectors are utilities, telecom.</li> </ul>	<ul style="list-style-type: none"> <li>Government divested entities in PSUs, but government still shareholder</li> </ul>
11 Labor laws	<ul style="list-style-type: none"> <li>Entities (&gt;100 workers) need government approval for employee retrenchment</li> <li>Removal of restrictions on using contract labor in SEZs***</li> </ul>	<ul style="list-style-type: none"> <li>Two-thirds of employees in any Brazilian company must be Brazilian</li> <li>Notice period is 30 days</li> </ul>	<ul style="list-style-type: none"> <li>Employment termination only allowed on grounds provided in Labor Code.</li> <li>Notice period is 2 weeks</li> </ul>	<ul style="list-style-type: none"> <li>Employment termination allowed on grounds in Labor Code</li> <li>Notice period is 30 days</li> </ul>
12 Infrastructure	<ul style="list-style-type: none"> <li>Private participation in infrastructure permitted (e.g., ports and airports)</li> </ul>	<ul style="list-style-type: none"> <li>Government trying to approve the PPP (Public-Private Partnership) law to expand the level of private investment in infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>A large part of infrastructure belongs to government, but last 2-3 years private companies (especially metals and oil &amp; gas) have started investing in ports and roads</li> </ul>	<ul style="list-style-type: none"> <li>Private participation in construction; operation and sharing of partnership of infrastructure, such as subway, bridges, ports operation are permitted</li> </ul>

\* Videsh Sanchar Nigam, Limited

\*\* Bharat Aluminium Company

\*\*\* Special Economic Zones

Sources: MGI (McKinsey Global Institute) report; press search; PwC; E&Y; team analysis

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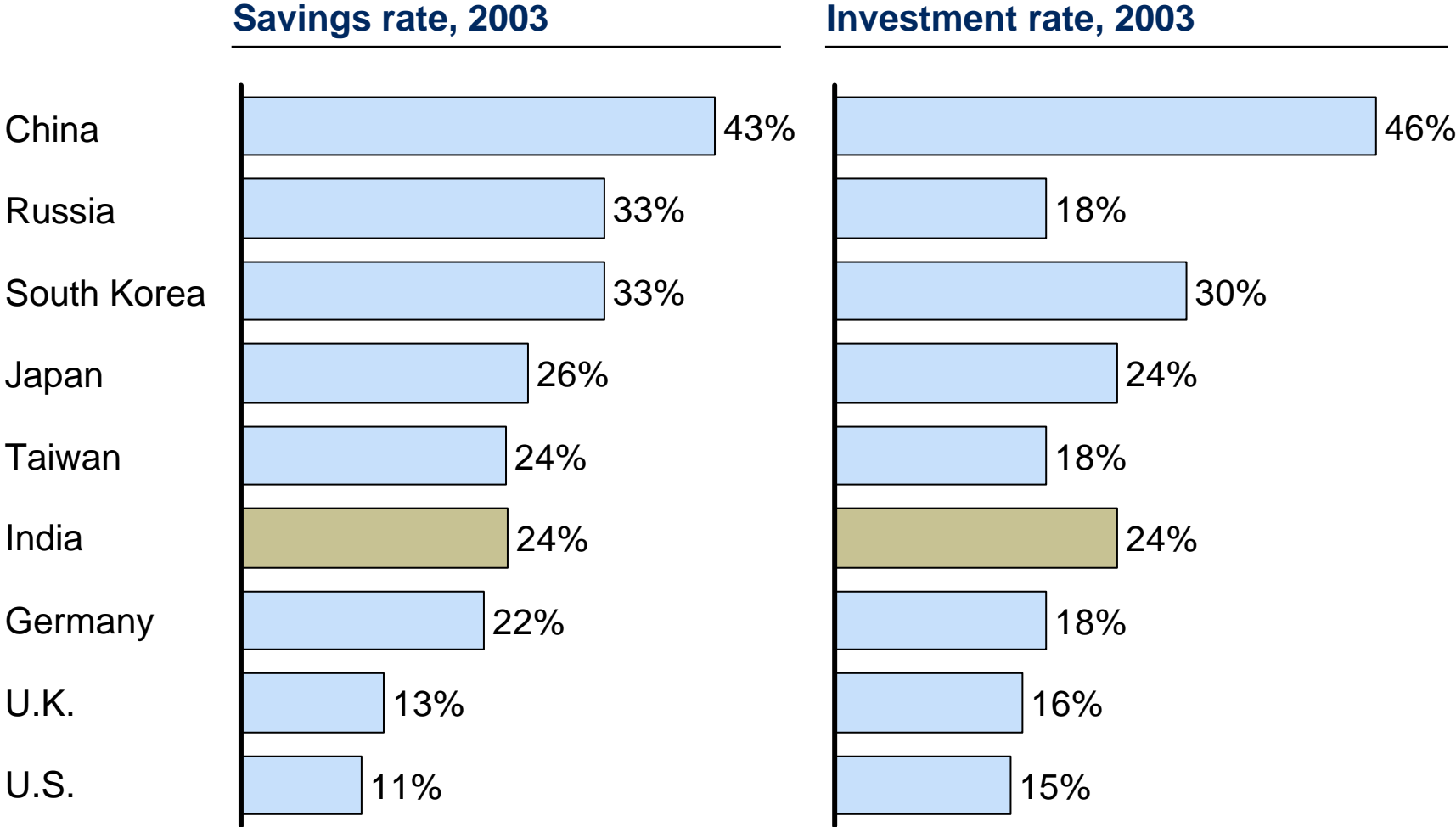
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# INVESTMENT RATES ARE COMPARABLE WITH OTHER EMERGING ECONOMIES

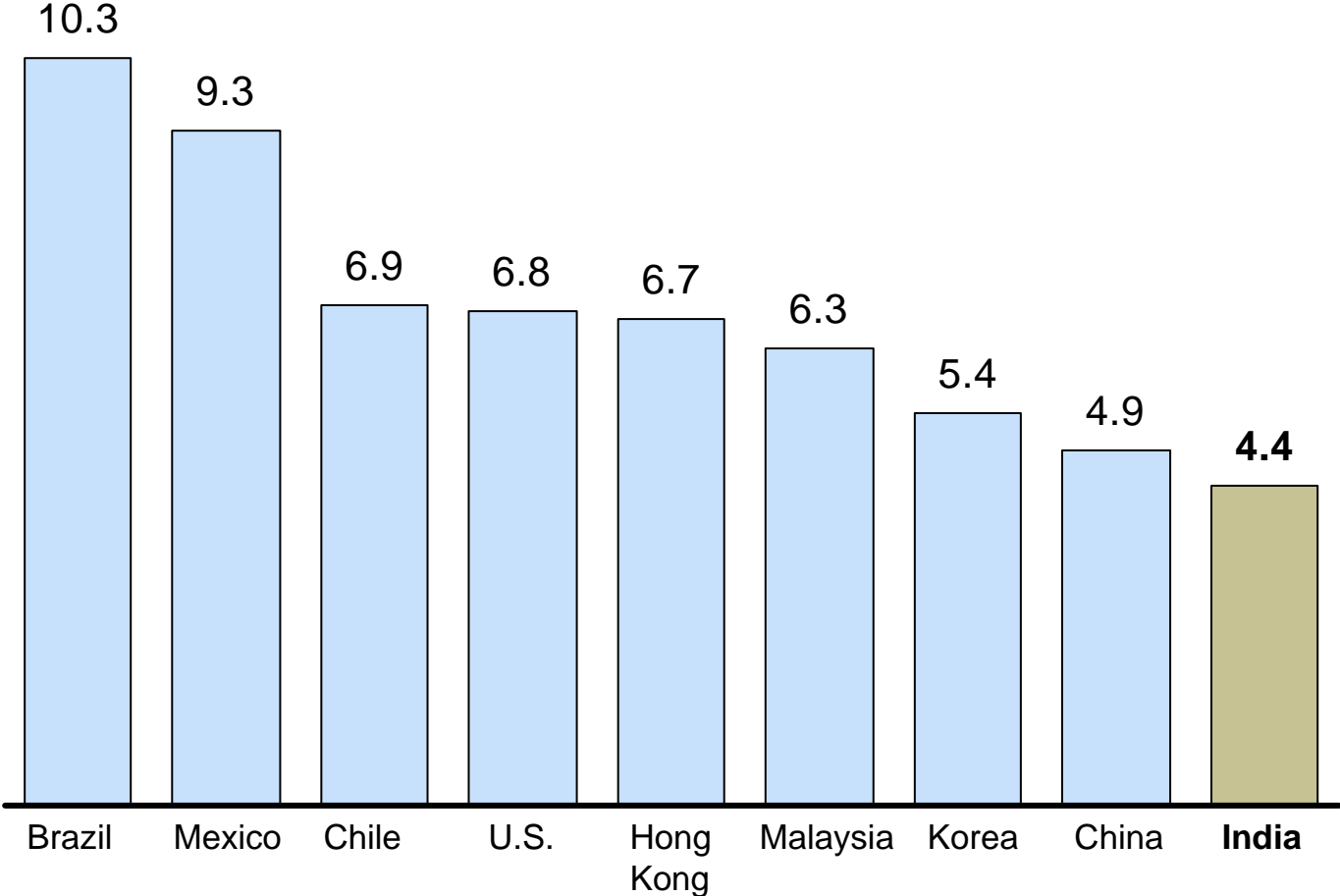
Percentage of GDP



Sources: Global Insight; CSO-India; economic survey; planning commission

# INVESTMENT GOES A LONGER WAY IN INDIA

Incremental capital output ratio (ICOR)\*, 2003

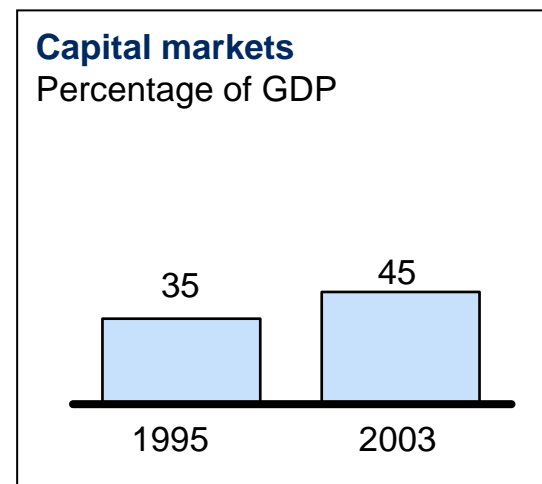
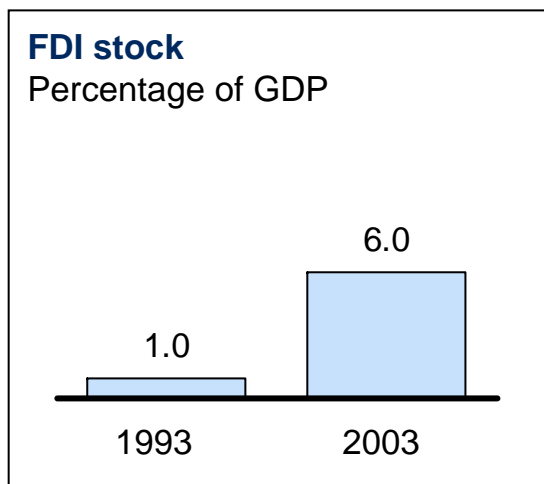
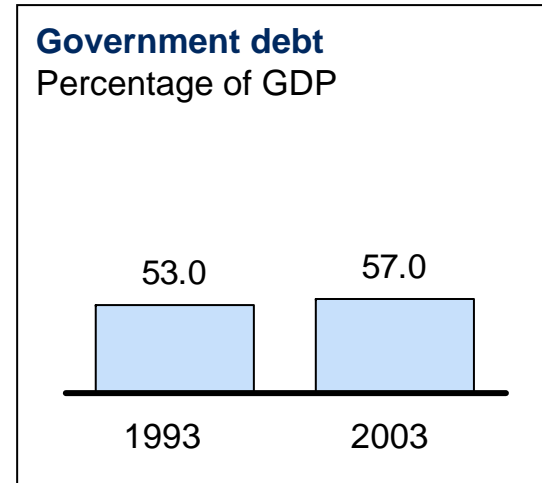
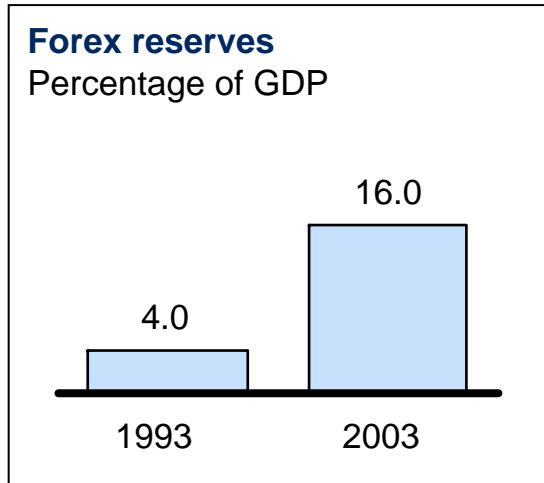


- ICOR measures the efficiency of the economy in using capital resources
- Defined as the units of incremental capital required to generate one additional unit of output
- The higher the ICOR, lower the efficiency

\* Average share of fixed investment in GDP during the previous four years, divided by average growth rate of real GDP in previous four years = ICOR

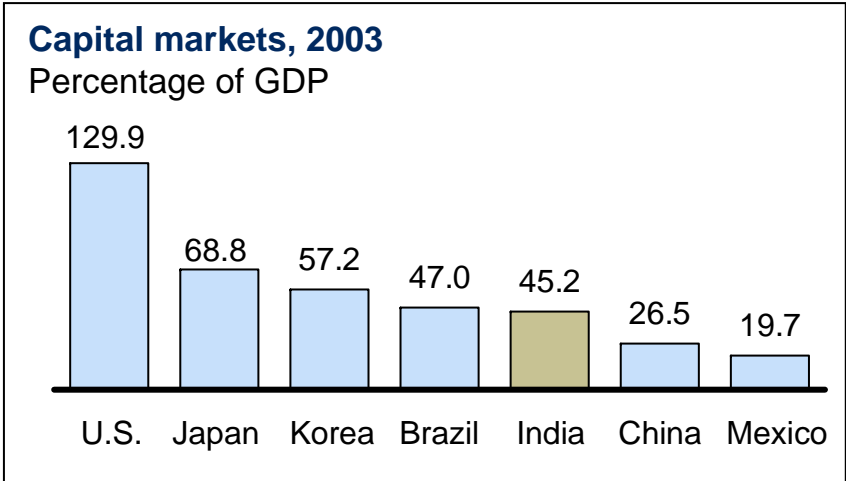
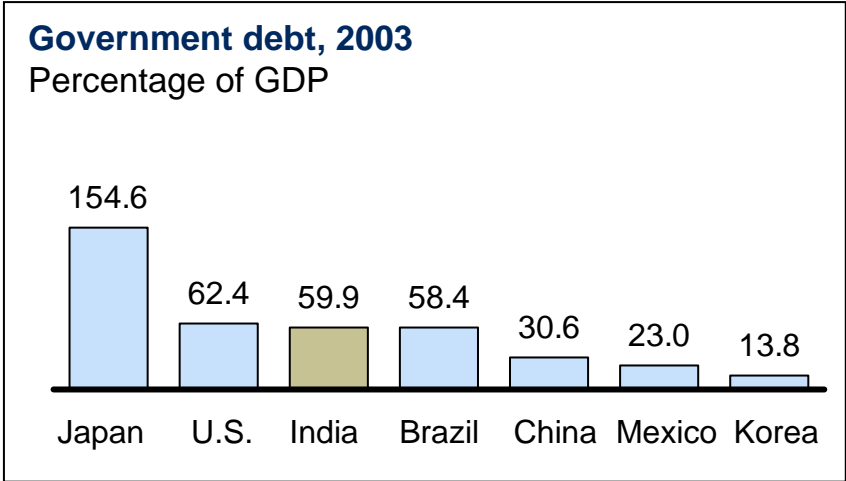
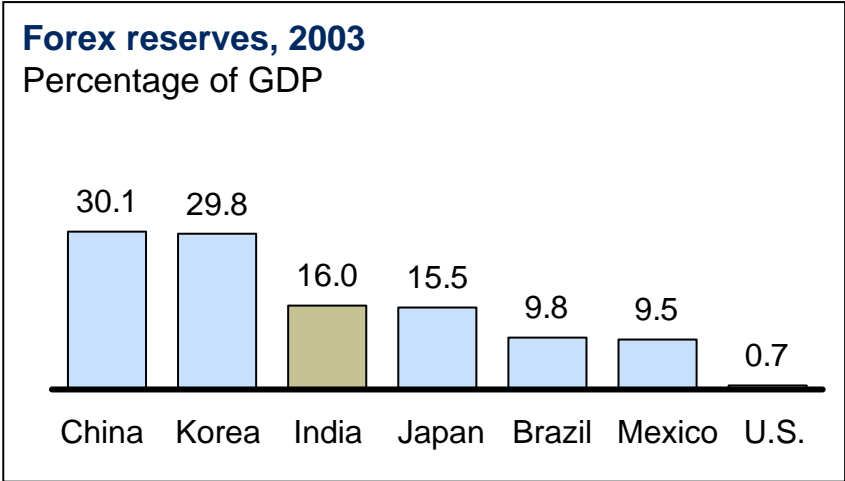
Sources: EIU; team analysis

# INDIA HAS SUFFICIENT FINANCIAL RESOURCES FOR GROWTH





# COMPARISON OF INDIA'S FINANCIAL RESOURCES WITH OTHER COUNTRIES'



Sources: Global Insight; EIU; FIBV; team analysis

# THE INDIAN ECONOMY: COMMONLY ASKED QUESTIONS

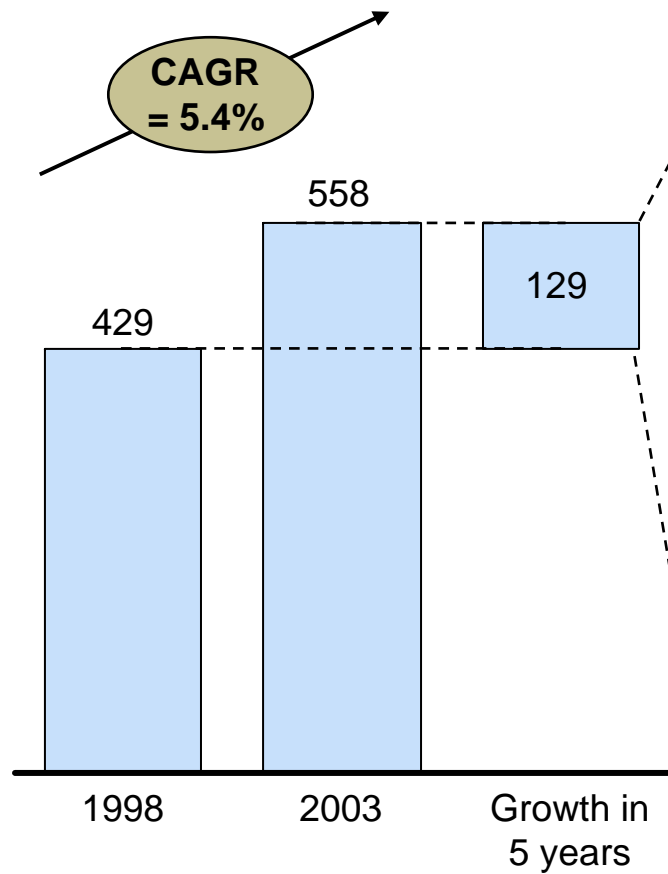
## Question

## Answer

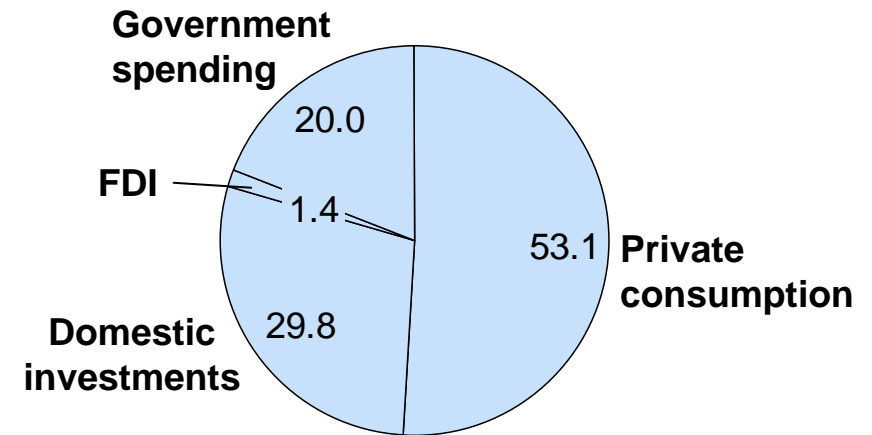
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# CONSUMPTION IS ALREADY DRIVING INDIA'S GDP GROWTH

India's real GDP\* growth  
\$ Billions



Sources of GDP Growth  
Percent



\* Net trade contribution – 4.3%

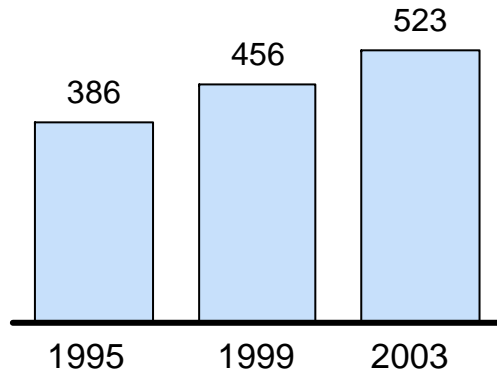
\* Base year = 2002

Sources: WEFA-WMM; CMIE; EIU; team analysis

# CONSUMER SPENDING IS RISING SIGNIFICANTLY

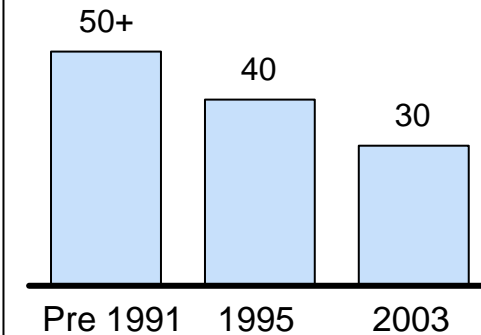
## 1 Increasing earnings

GDP/capita\*, \$



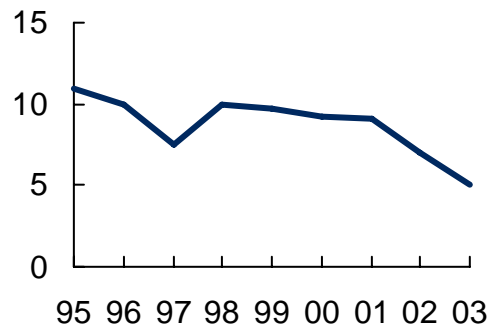
## 2 Rising disposable income

Peak personal income tax rate, percent



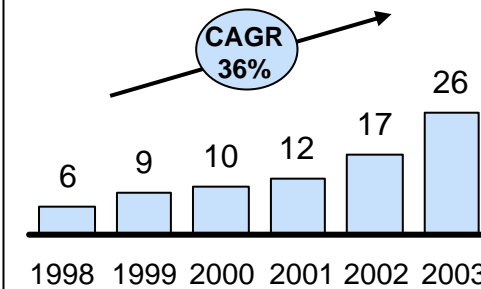
## 3 Reducing incentive to save

Deposit interest rate, percent



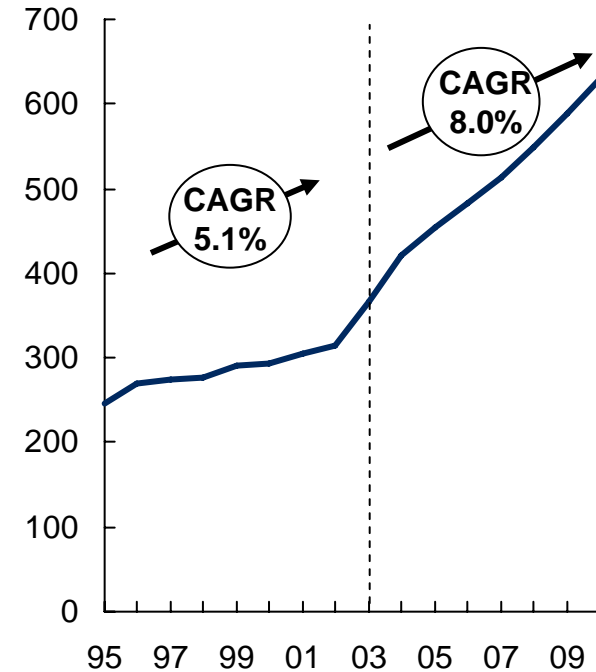
## 4 Availability of consumer finance

Retail asset market\*\*, \$ billions



## Rising consumer spending per capita

\$ per person



## Consumer spending per capita comparison, CAGR (2003-2010)

U.S.	3.7%	China	7.7%
U.K.	7.5%		
Japan	0.8%		

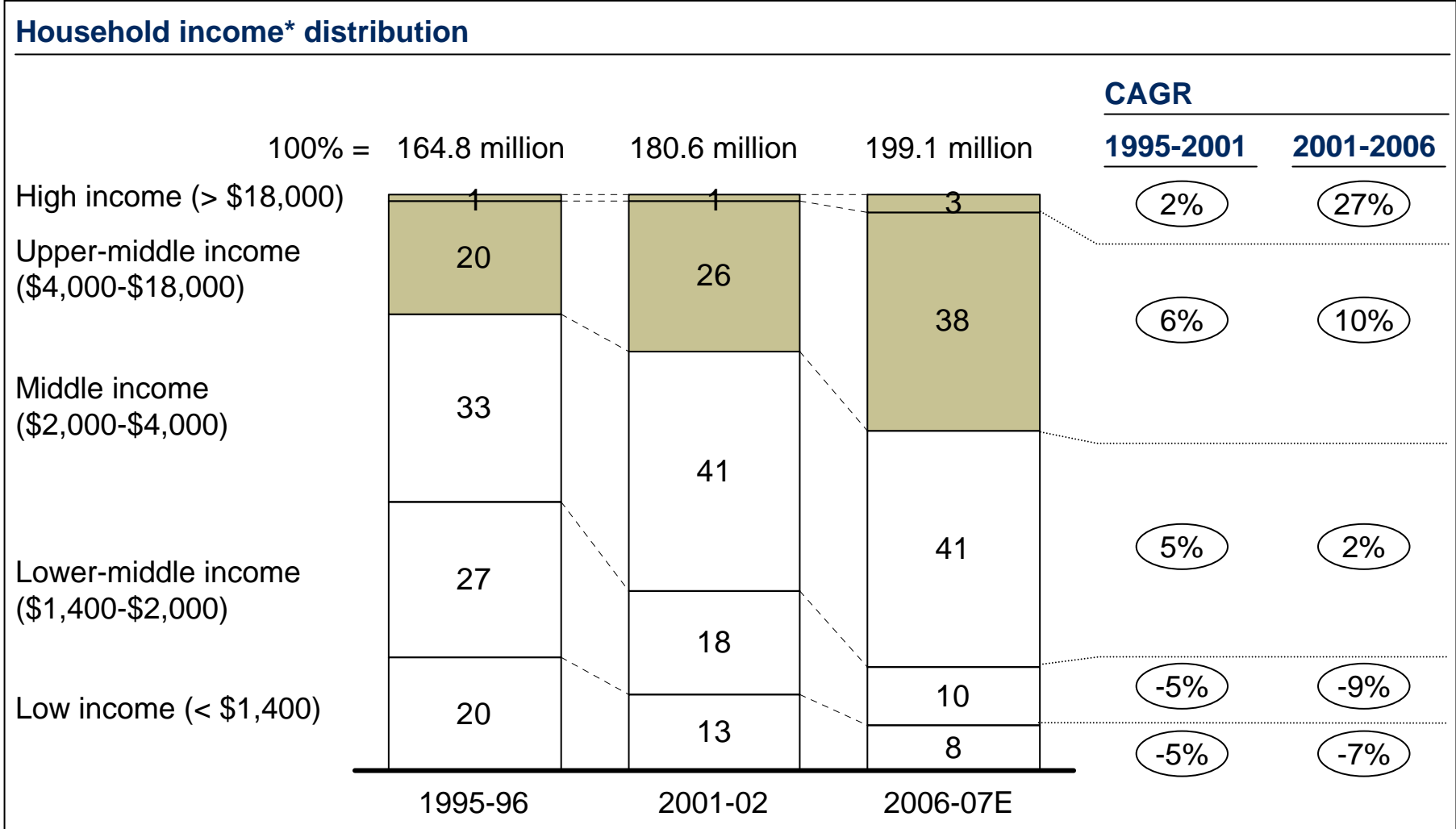
\* 2002 terms

\*\* Includes car finance, housing finance, personal loans, credit cards, two-wheeler credit, commercial vehicle credit, and consumer durable financing

Sources: WEFA-WMM; CMIE; CSO; EIU; SSKI report; team analysis

# INDIA'S MIDDLE CLASS IS GROWING RAPIDLY

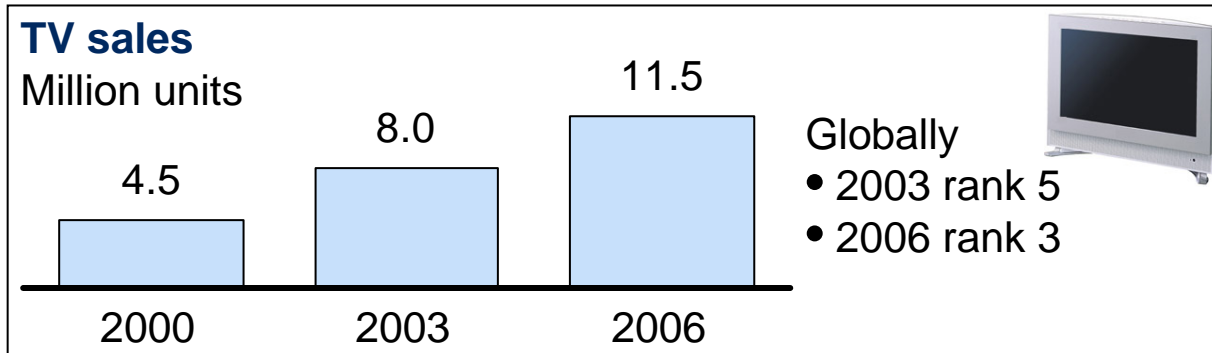
Percent



\* Annual Income at PPP levels (PPP = purchasing power parity); average size of a household is 5.8 people  
 Source: NCAER

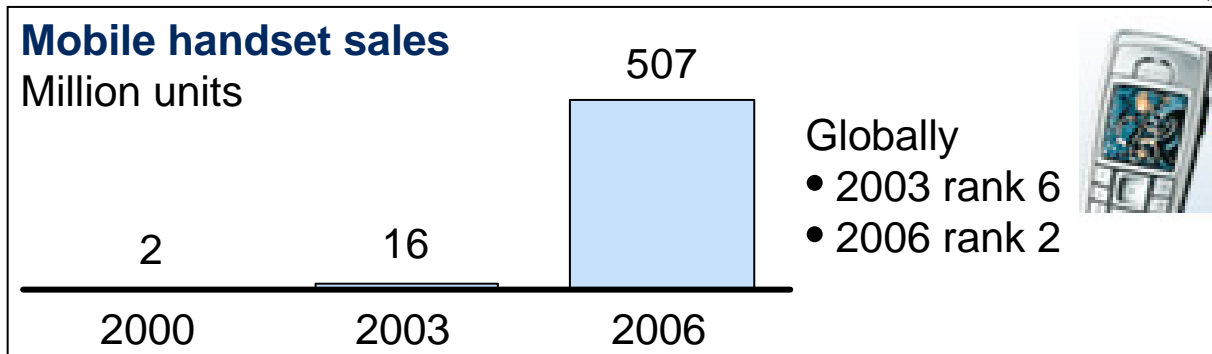
# AS A RESULT, INDIA'S CONSUMER MARKETS ARE GROWING FAST AND ALREADY RANK AMONG THE WORLD'S LARGEST

EXAMPLE

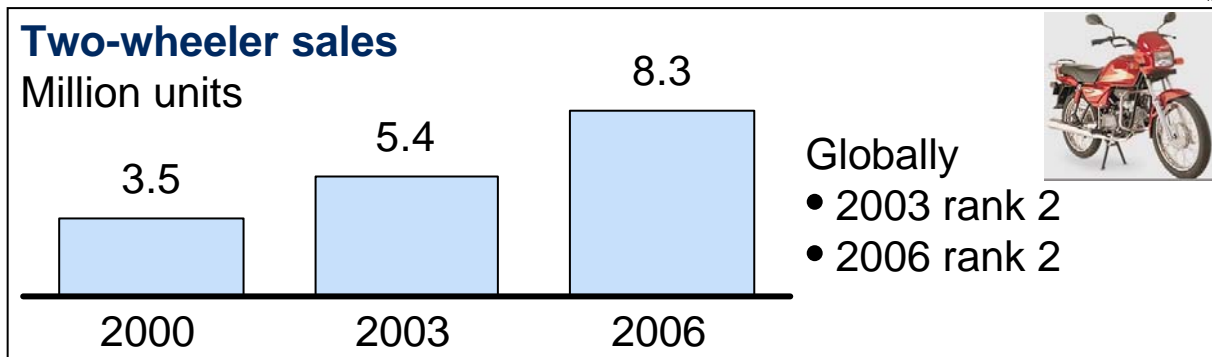


## Key manufacturers

- Samsung
- Sony
- LG
- Philips
- Toshiba
- Panasonic



- Nokia
- Ericsson
- Motorola
- Siemens
- Alcatel



- Bajaj
- Hero Honda
- TVS
- Yamaha
- Kinetic Motor Co.

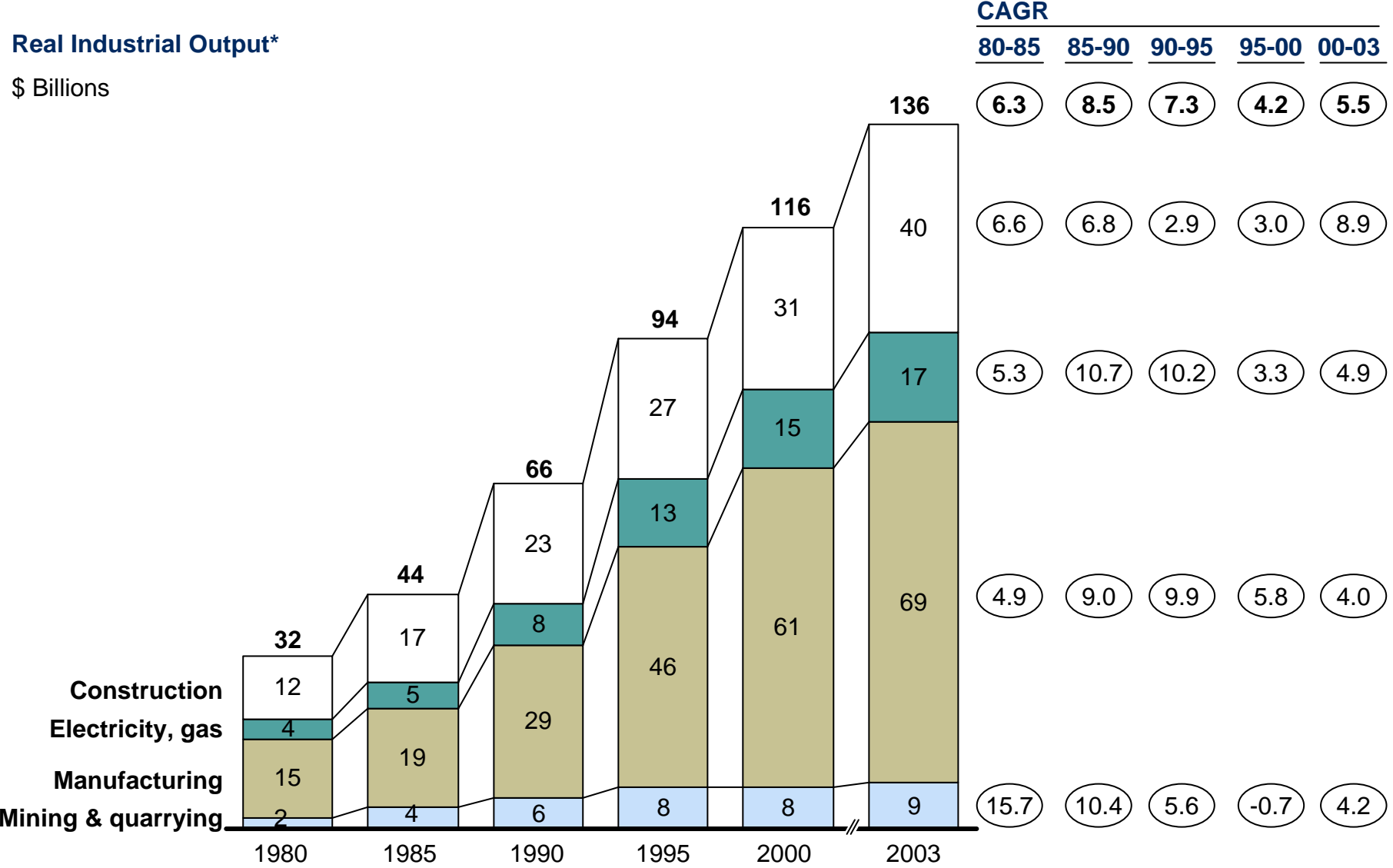
# THE INDIAN ECONOMY: COMMONLY ASKED QUESTIONS

## Question

## Answer

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# MANUFACTURING SECTOR IS GROWING...



\* Base year = 2002

Sources: WEFA-WMM/WIM; Global Insight; team analysis



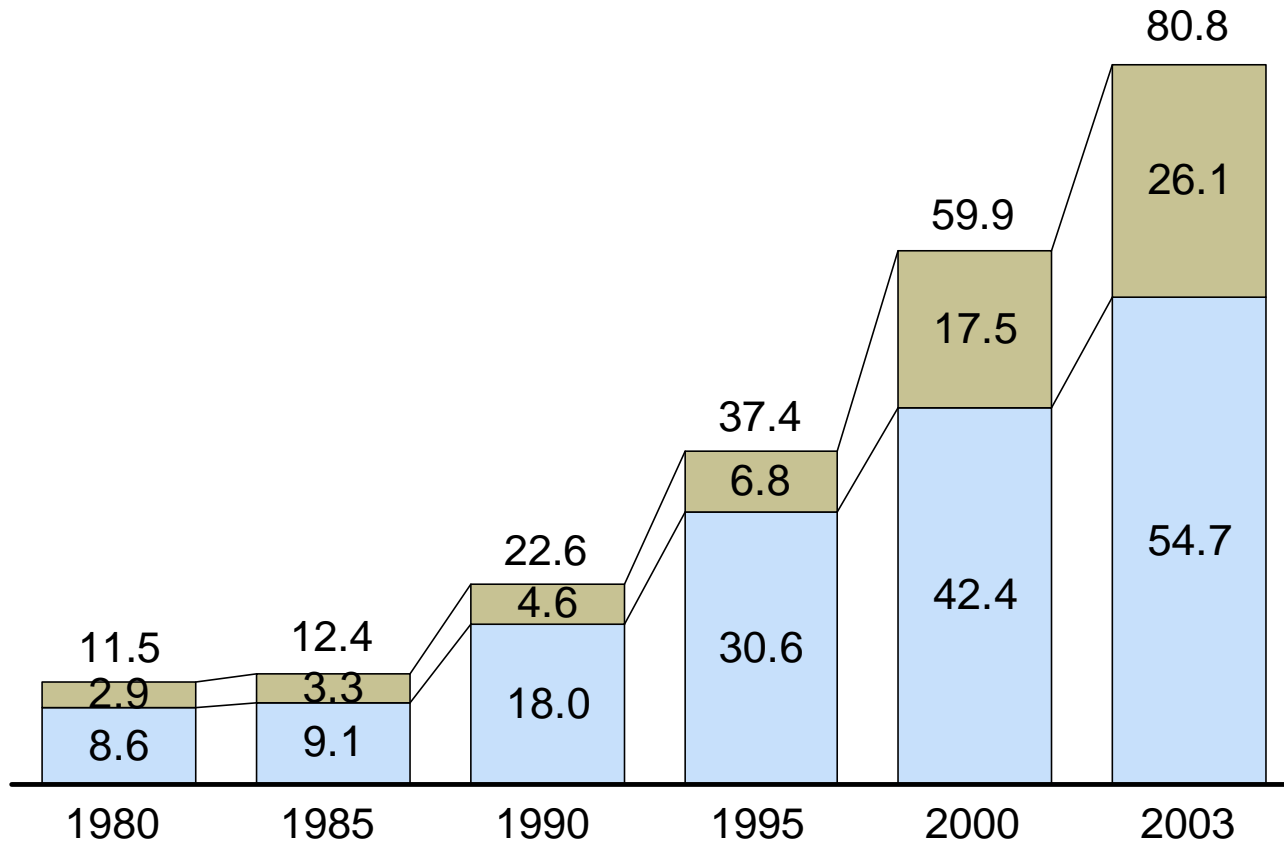
# ... AND MERCHANDISE EXPORTS ARE RISING

\$ Billions



## CAGR

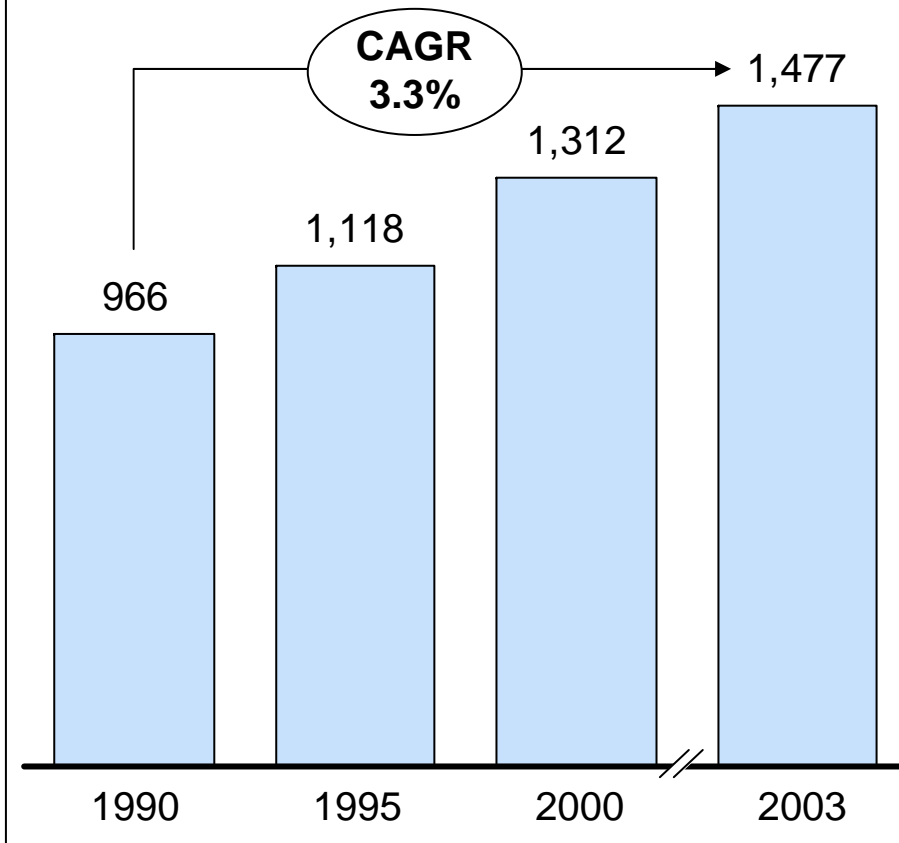
1980-1995	1995-2003
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# LABOR PRODUCTIVITY IS INCREASING AND THERE IS POTENTIAL FOR FURTHER IMPROVEMENT WITH REMOVAL OF BARRIERS

## Labor productivity has improved

Real GDP per worker\*, \$



\* Base year = 2002

## Potential to improve is high

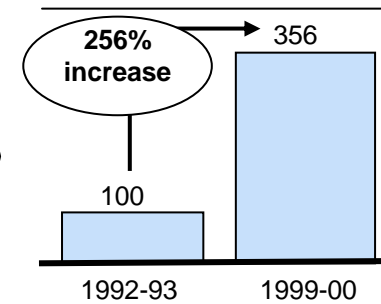
Reform in the automotive industry has led to significant growth in productivity

Index: India = 100 in 1992-93

### Barriers removed

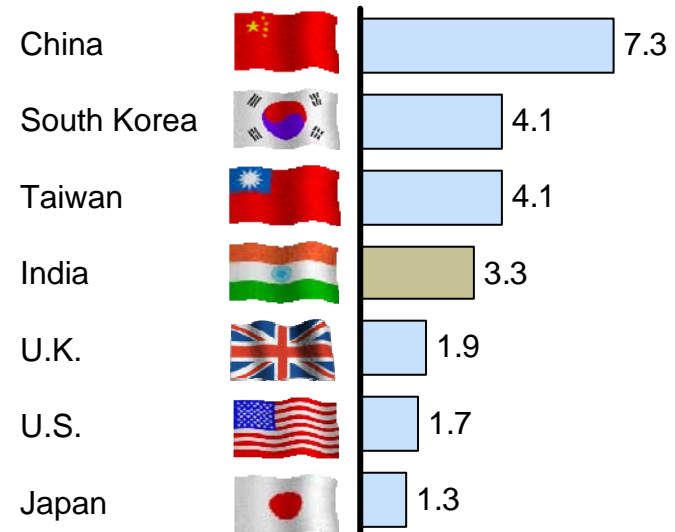
- Licensing abolished
- FDI allowed

Labor productivity



## Labor productivity growth comparison

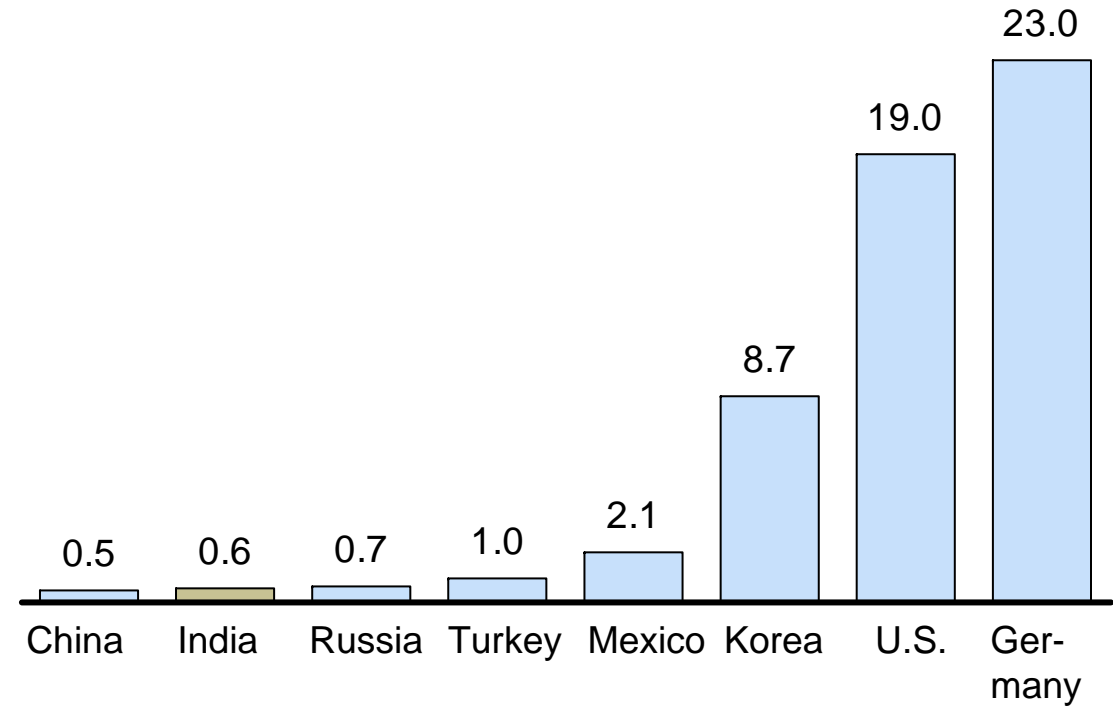
CAGR in percent (1990-2003)



# THERE IS ABUNDANT AVAILABILITY OF HIGH-QUALITY, LOW-COST WORKFORCE

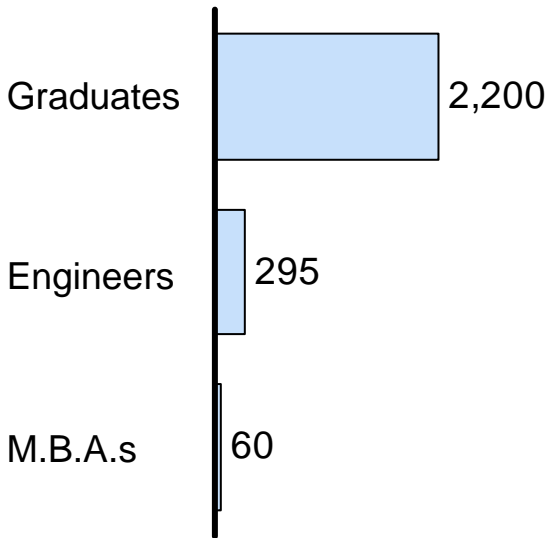
**Wage rate comparison\***

\$ per hour



**Workforce addition each year**

Thousands

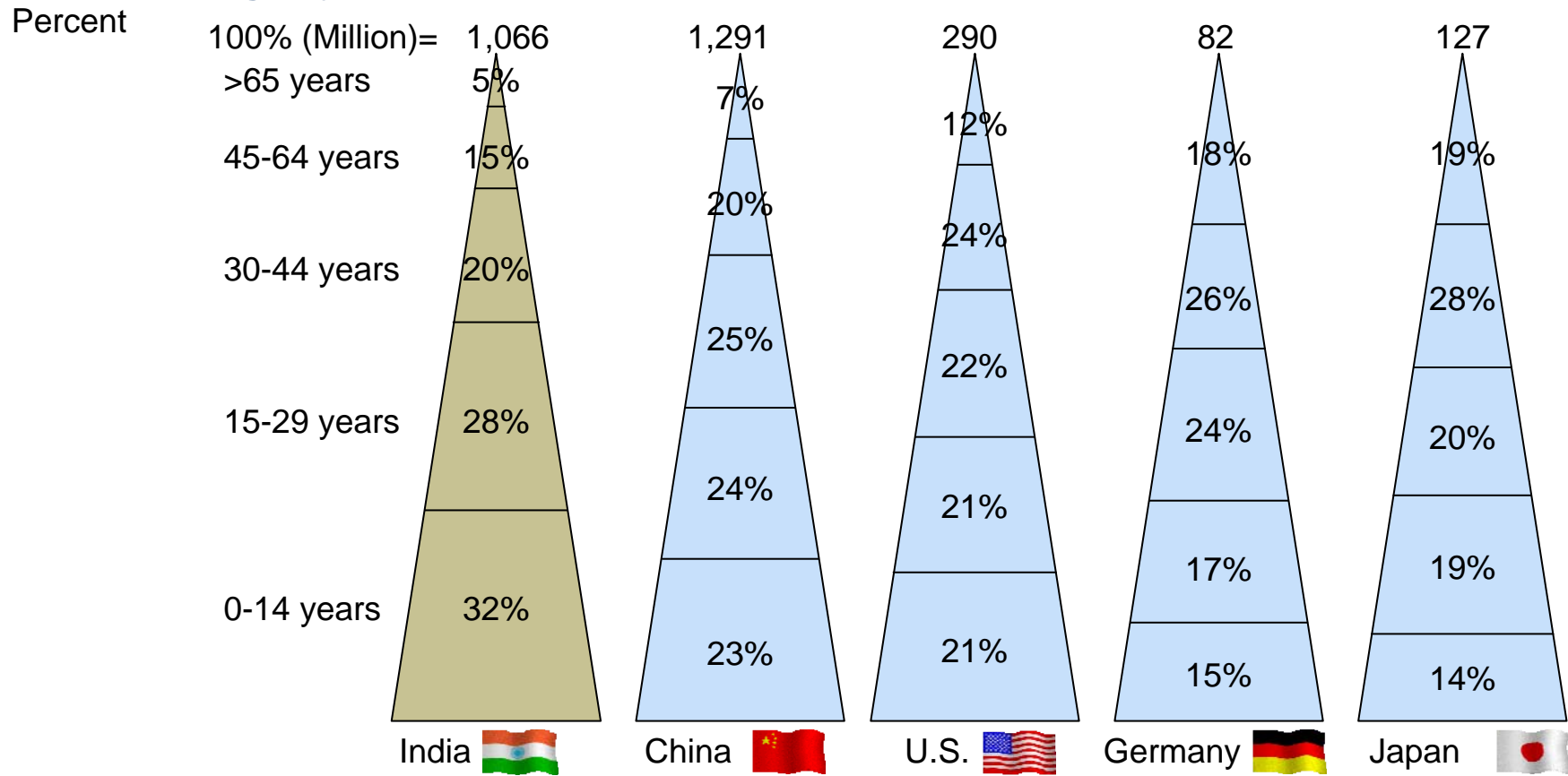


\* Unskilled/semiskilled labor

Sources: EIU; Manpower Profile of India; Human Resource Development Ministry

# INDIA WILL CONTINUE TO HAVE A LARGE POOL OF ECONOMICALLY ACTIVE POPULATION

Population age pyramid for selected countries, 2003



## Economically active population\*

• Millions	672	898	193	55	85
• Percentage	63%	70%	67%	67%	67%

Employment rate (percent)	91**	90	94	90	95
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\* Economically active population is aged 15-64 years

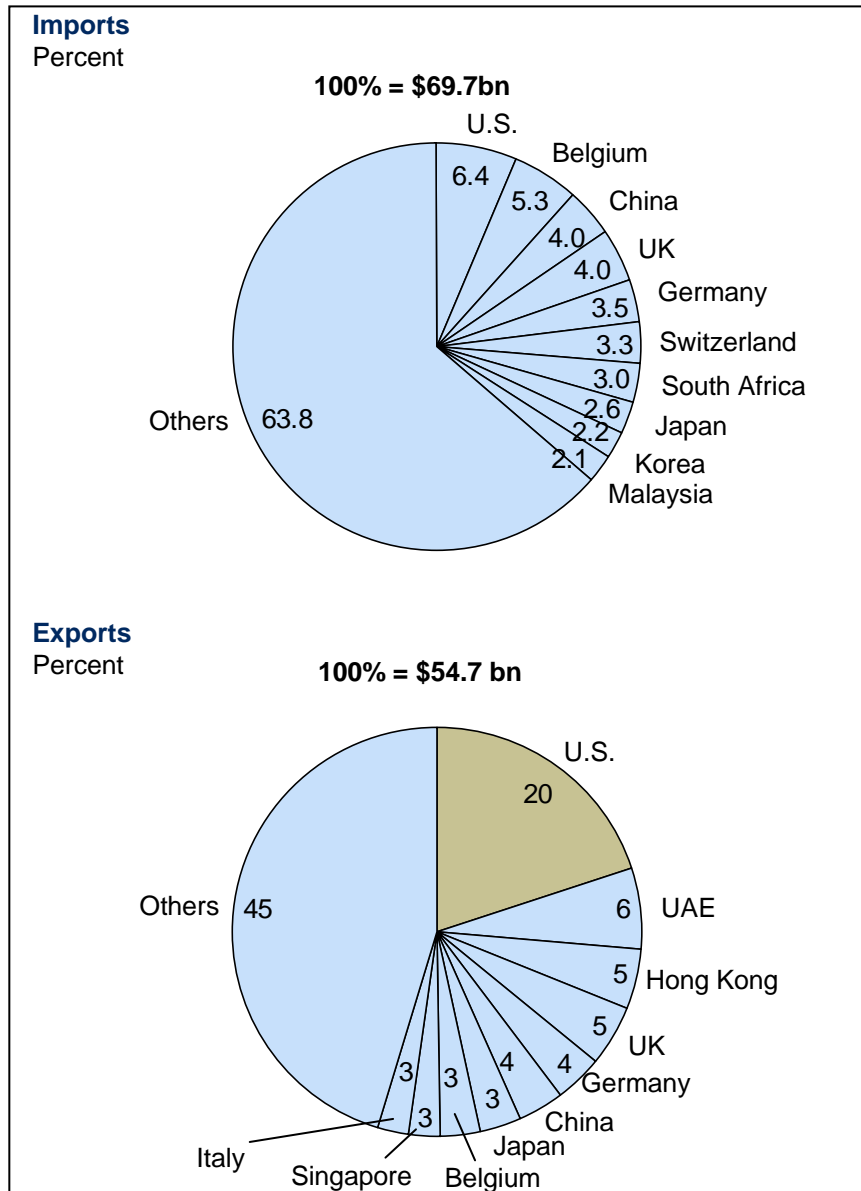
\*\* Official statistics; however, a lot of underemployment in India

Sources: U.S. Census Bureau; WEFA-WMM; EIU; ILO

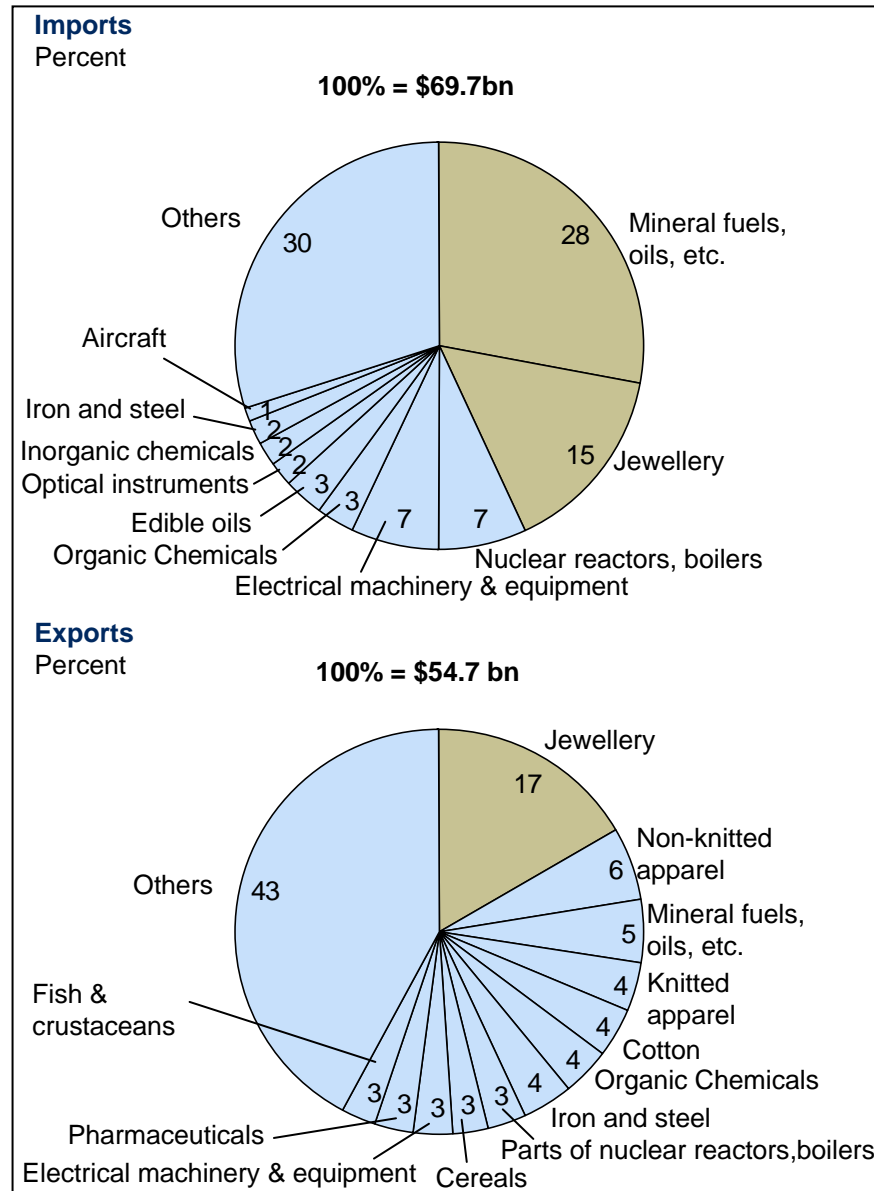
# INDIA MAINLY TRADES IN MINERALS AND JEWELRY

BACKUP

Top trade partners, 2003



Top traded commodity, 2003



Source: CMIE (Indiatrades); WTO; team analysis

# THE INDIAN ECONOMY: COMMONLY ASKED QUESTIONS

## Question

## Answer

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- How robust has been the economic growth in the past? What has driven this growth?
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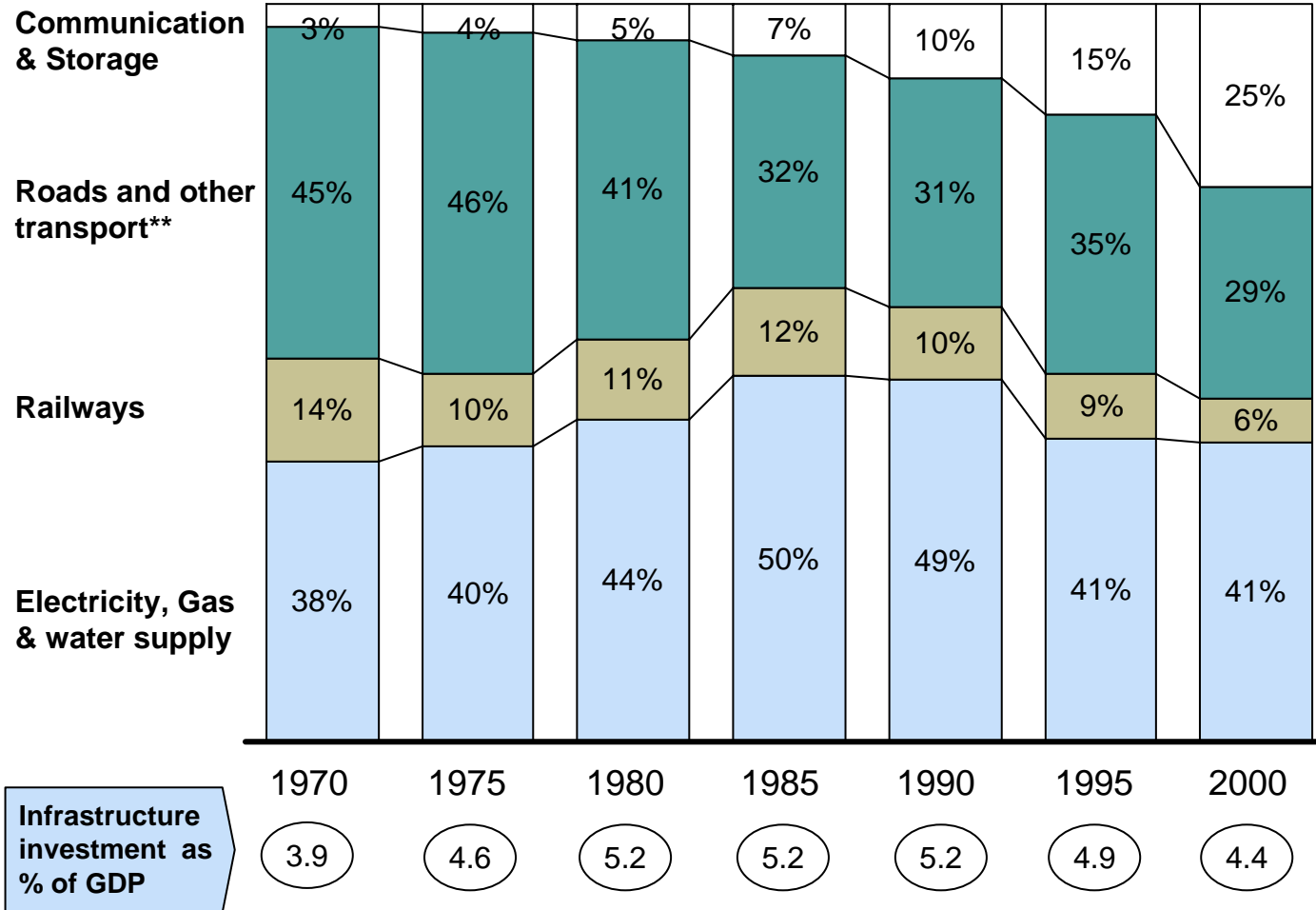
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# HISTORICALLY, INFRASTRUCTURE INVESTMENT HAS GROWN WITH GDP

## Real Infrastructure Investment\*

Percent

100% =  
(\$ Billions)



CAGR

70-80 80-00

6.0 4.7

10.2 14.0

5.0 3.0

3.3 1.6

7.7 4.3

\* Infrastructure investment is the gross capital formation in the specified sectors; Base year = 2002

\*\* Includes ports, civil aviation, and inland waterways

Sources: CMIE; Global Insight; World Bank

# GOVERNMENT IS SPENDING ON ROAD INFRASTRUCTURE DEVELOPMENT

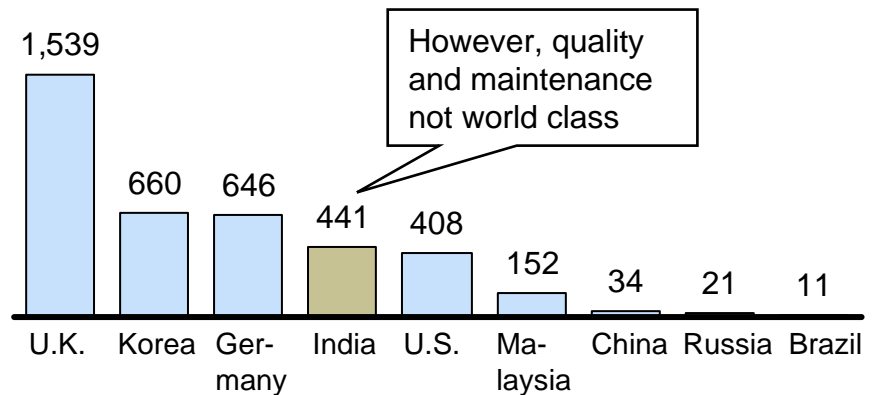
## HIGHWAYS

### National highway system



### Road density

Km of paved road per 1,000 sq. km of area



- National Highway Development Project (NHDP) launched India's largest highway project with
  - 4/6 laning of around 13,146 km
  - Total cost of about \$12bn
  - 24% of the project has been completed, while another 28% is under implementation
  - Expected completion is by December 2007
- Construction of 46,800 km of state highways and district roads also being targeted for 2007
- Expressways for high density corridors are planned. Land acquisition and feasibility studies of about 1,000 km of expressways has been planned for 2007



# THE INDIAN ROAD SYSTEM IS IMPROVING

## HIGHWAYS

**Old highways**



**Mumbai-Pune Expressway**



**State/district roads**

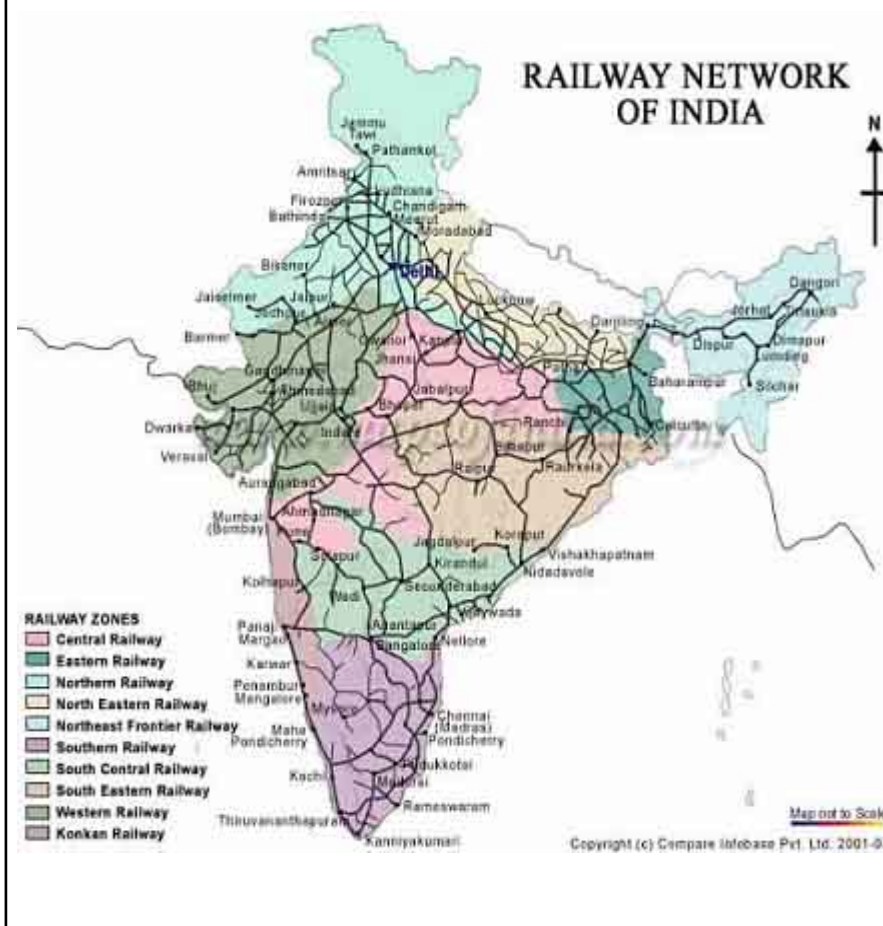


**New highway infrastructure**



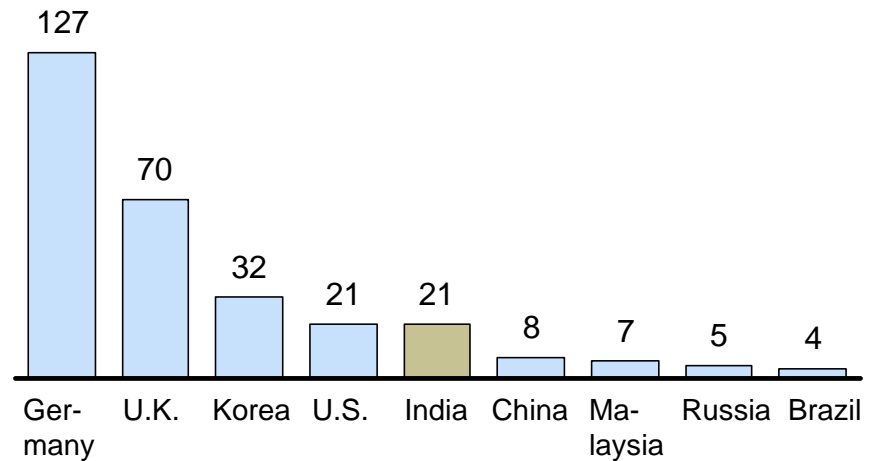
# THE EXTENSIVE RAILWAY NETWORK IS POISED FOR SIGNIFICANT EXPANSION

Existing railway network in India



Railroad density, 2002

Km of track per 1,000 sq. km of land



- “National Rail Vikas Yojana” to remove bottlenecks in critical sections of rail network
  - Strengthening of network linking major cities to enable running of express trains at higher speeds of 100 kmph
  - Improving rail connectivity to ports
- Expected to be completed by 2007 with a total investment of \$3.3bn

# INDIAN RAILROADS ARE EFFICIENT

The hill train on the Shimla route



Electrified railroad



The Royal Orient Express-  
luxury train



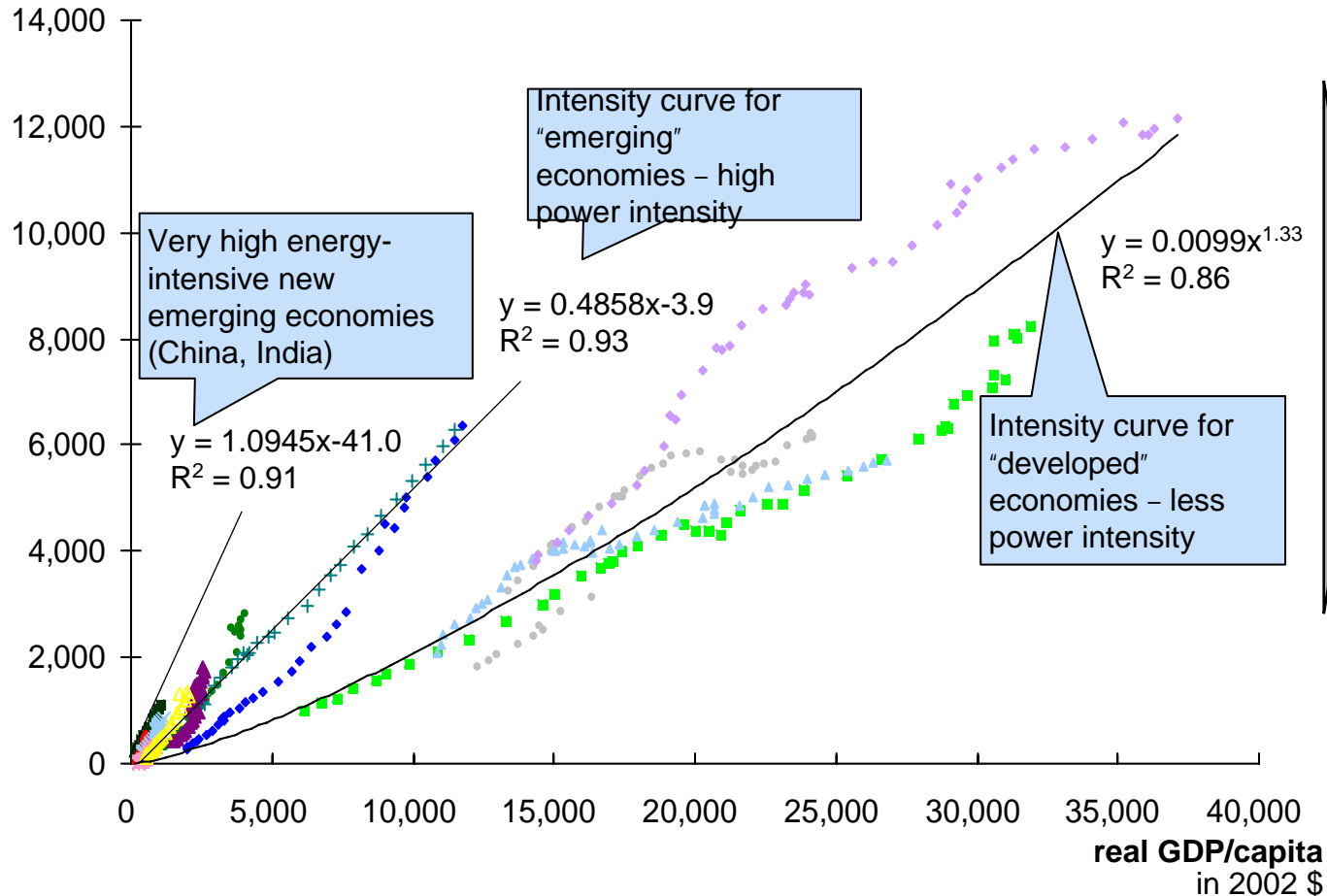
Calcutta metro



# INDIA IS A POWER-HUNGRY COUNTRY

- **Power intensity curve**
- 1960 - 2003 data, in 2002 \$ terms

**Power consumption**  
kilowatt-hour/capita



## POWER

- ▲ India
- China
- Malaysia
- + Taiwan
- ◆ Korea
- ▲ Thailand
- × Egypt
- Japan
- ▲ UK
- Germany
- ◆ U.S.
- ▲ Brazil
- ▲ Indonesia

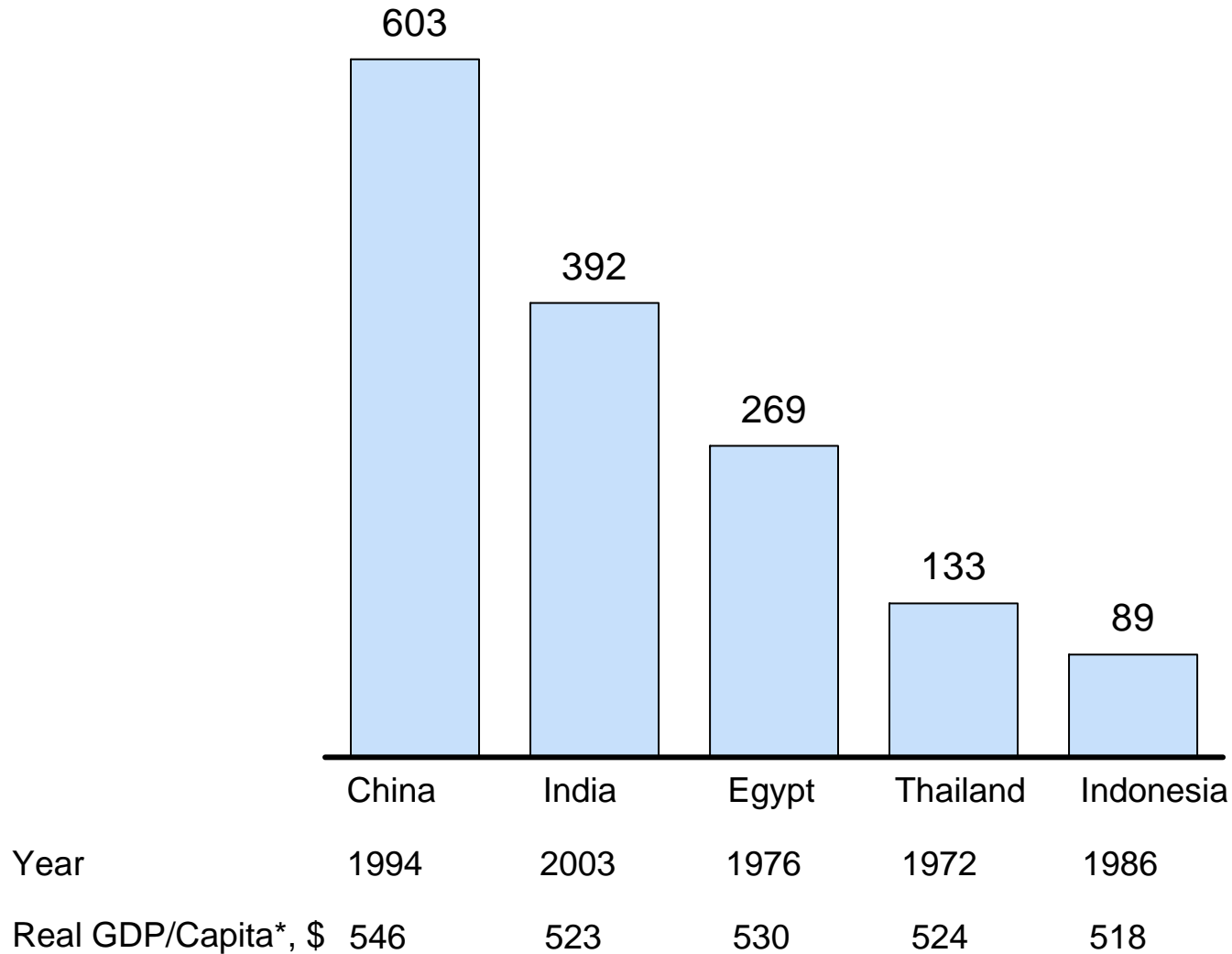
- Strong correlation between per capita GDP and power consumption
- The later an economy develops, the more power "hungry" it is, as a result of technology advancements (relatively more applications that consume power used)
- Given India's current level of development, it is expected that India will continue to follow the very high power intensity curve in the medium term (e.g., up to 2025)

# POWER INTENSITY COMPARISON AT COMPARABLE GDP PER CAPITA

POWER

BACKUP

Per capita power consumption, kWh

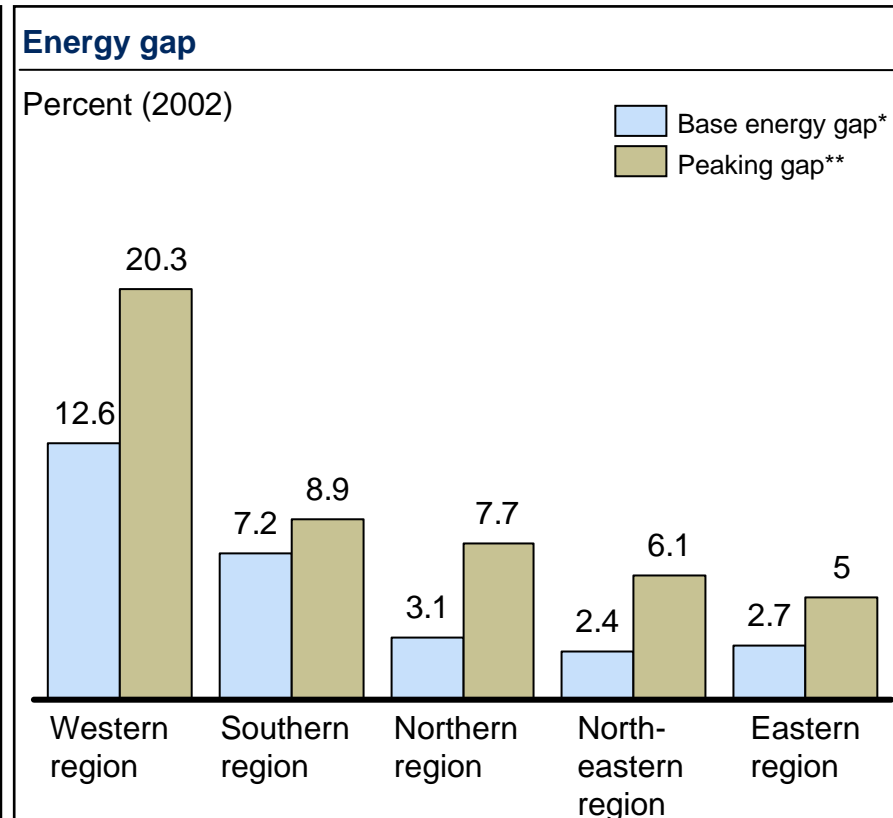
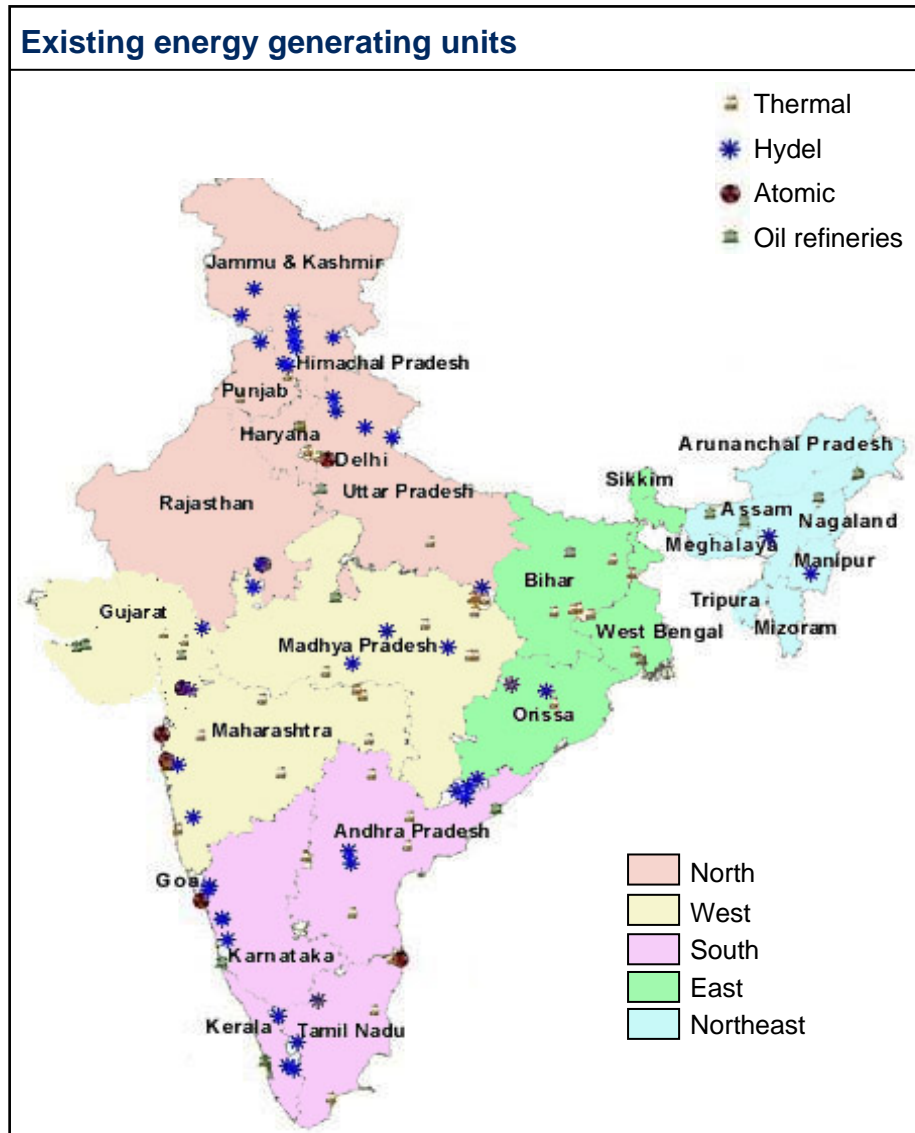


\* Base year = 2002

Source: WEFA-WMM; team analysis

# POWER INFRASTRUCTURE IS CURRENTLY UNDERDEVELOPED...

POWER



### Energy gap driven by

- Inadequate generation capacity
- Inadequate transmission capacity, leaving even available generation unevacuated
- Inefficient and inadequate distribution capacity with high T&D losses (50%)

\* Year-round average difference between unconstrained energy requirement and energy supply

\*\* Peak period average difference between unconstrained energy requirement and energy supply

Sources: Analyst reports; Ministry of Power

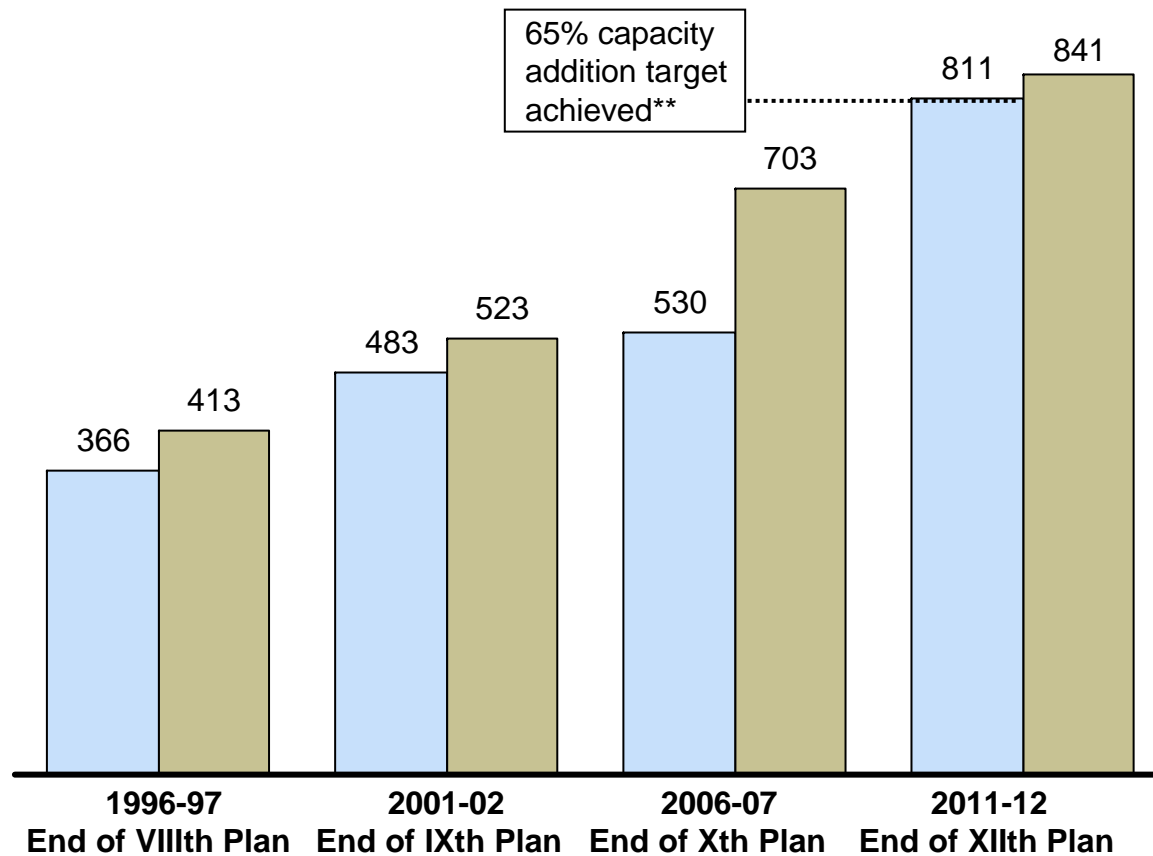
# ...BUT WILL BE SUFFICIENT IF THE GOVERNMENT DELIVERS AGAINST PLANS

## POWER

- Power availability
- Power requirement

### Power availability and requirement

Billions kWh



- Planned power generation capacity in India is still relatively smaller than China. China is adding the power capacity in one year that India is adding in 5-6 years
- Planned power generation capacity addition annually is double what was added on average over the past 5 years
- The government's achievement of planned targets has risen to 80% as observed in the past two years. Its not yet clear if this will be maintained or fall back to ~50% (as seen in previous plans)

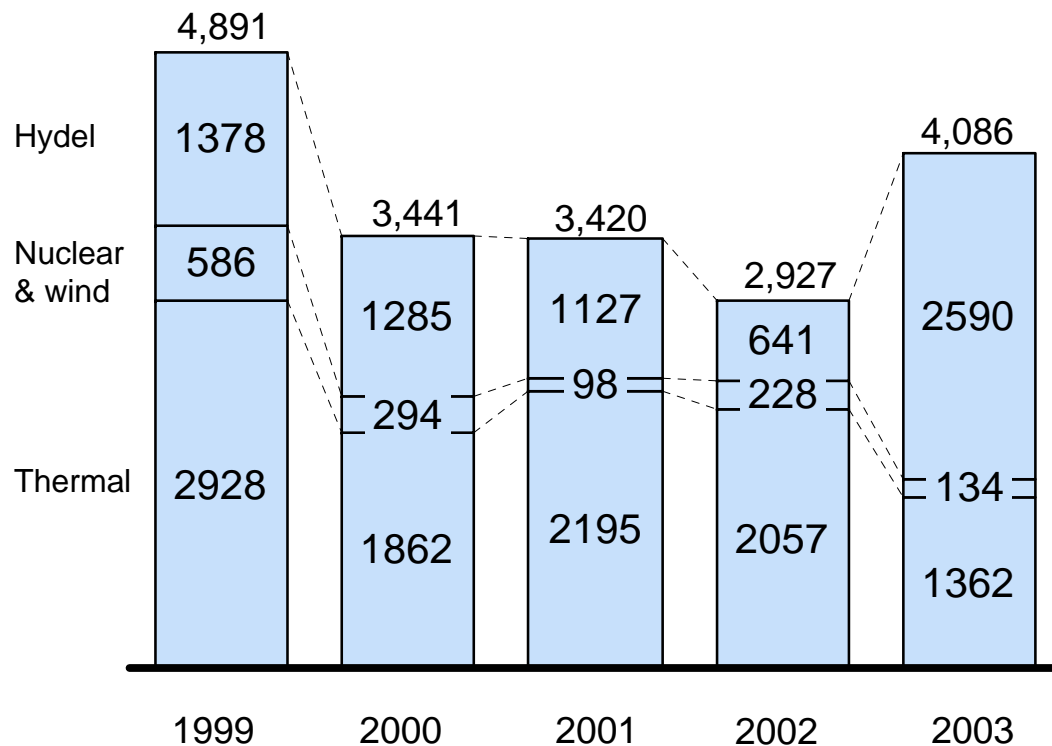
\*Demand estimation in "Services-led growth" scenario – GDP growth 5.5% CAGR (03-10)

\*\*Last five-year average of 65% capacity addition target achievement assumed

Sources: Ministry of Power; CMIE; Central Electricity Authority; Global Insight; team analysis

# GOVERNMENT HAS DELIVERED ON CAPACITY EXPANSION PLANS IN THE RECENT PAST AND IS LIKELY TO CONTINUE DOING SO

**Generation capacity addition**  
Megawatts



### Track record of target achievement

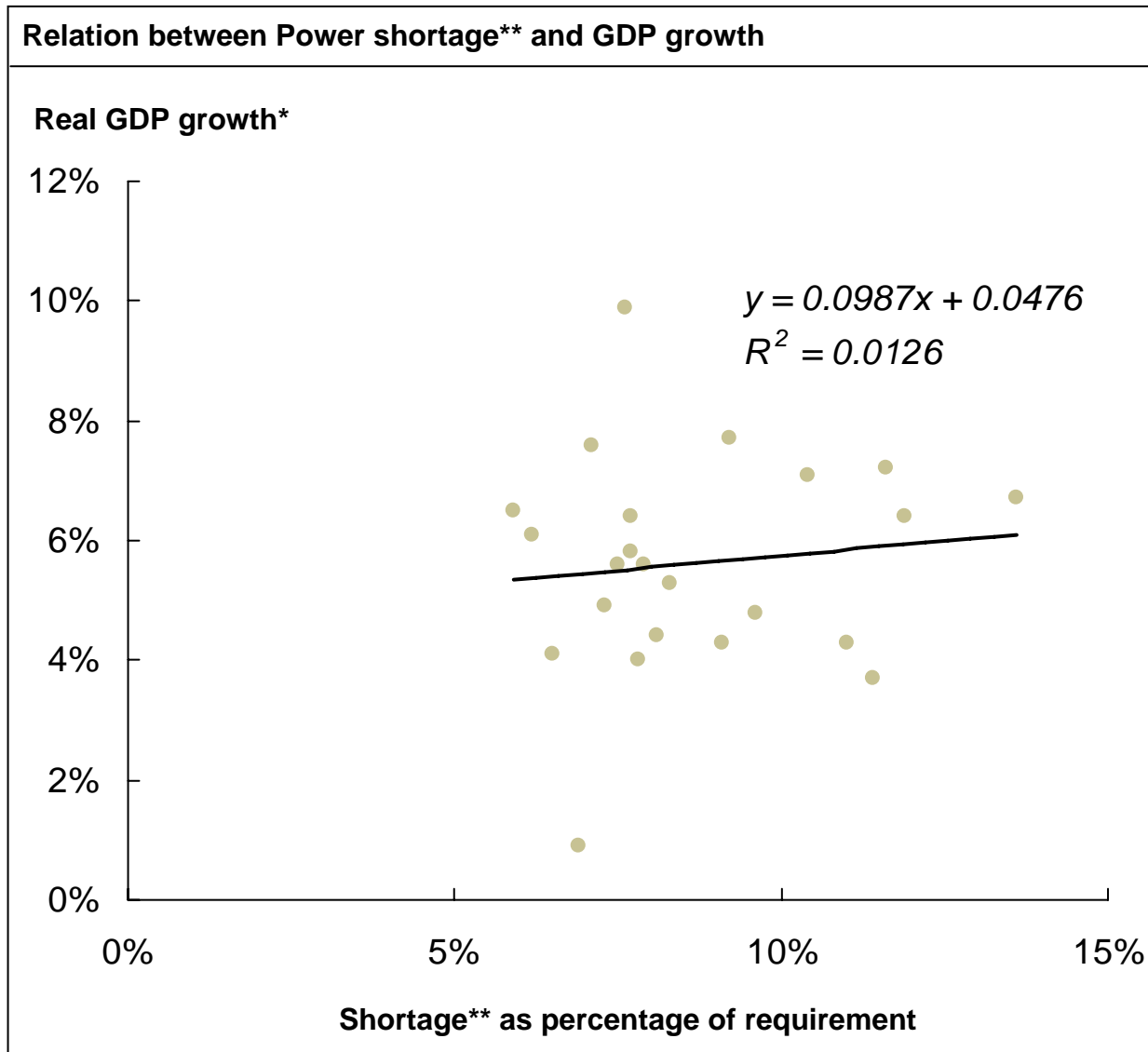
- Actual capacity addition of 16,423 MW vs. target of 30,528 MW (54% target achievement) from 1992-1997
- Actual performance from 1997-2002 was power generation capacity addition of 19,015 MW vs. target of 40,245 MW (47% target achievement) because of inability to implement private sector projects because of regulatory uncertainty
- However, for 2003, target achievement has been 80% in power generation owing to strong project monitoring

### Planned generation capacity addition

- Up to 2012, government's stated plan is to invest \$15bn-\$20bn in power sector
- Plan to add 100,000 MW of generation capacity by 2012, augment transmission network significantly expand or upgrade distribution network
- Ministry of Power's goal to electrify all villages by 2007 and all households by 2012



# INTERESTINGLY, POWER SHORTAGES IN THE PAST HAVE NOT PREVENTED ECONOMIC GROWTH, AS THE INDUSTRY HAS 'WORKED AROUND' THE POWER ISSUE

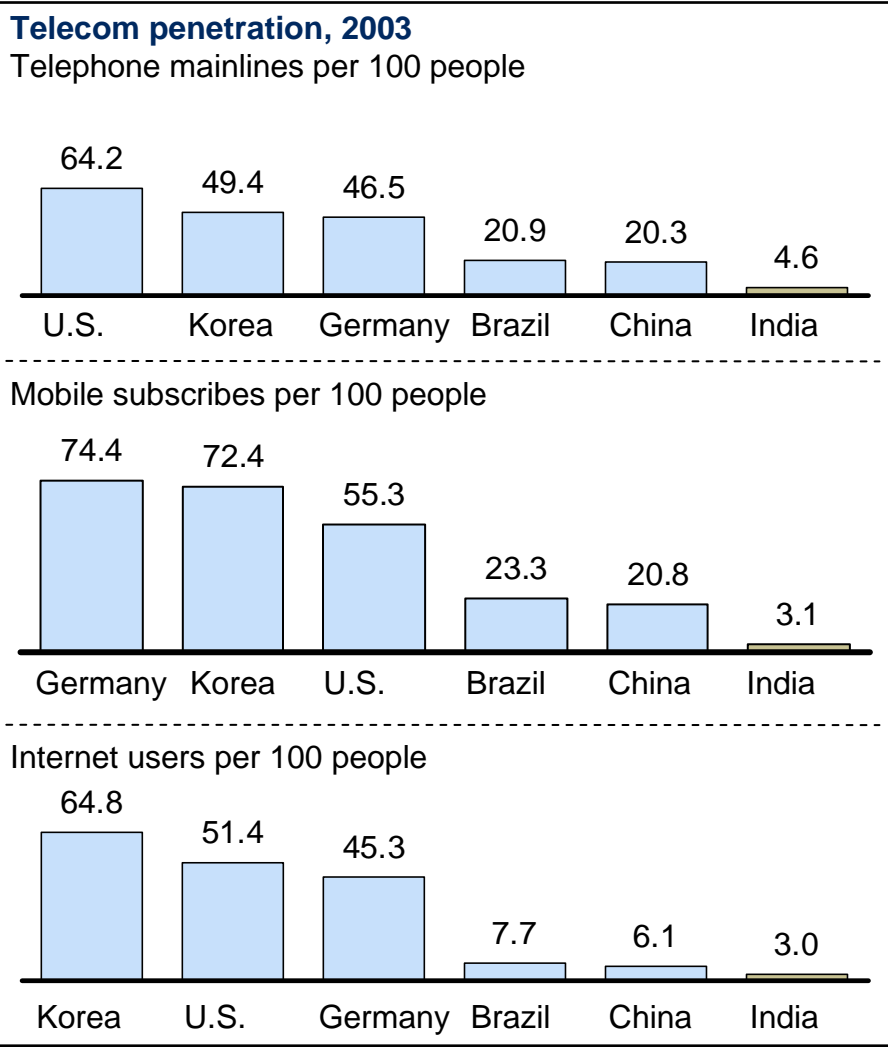
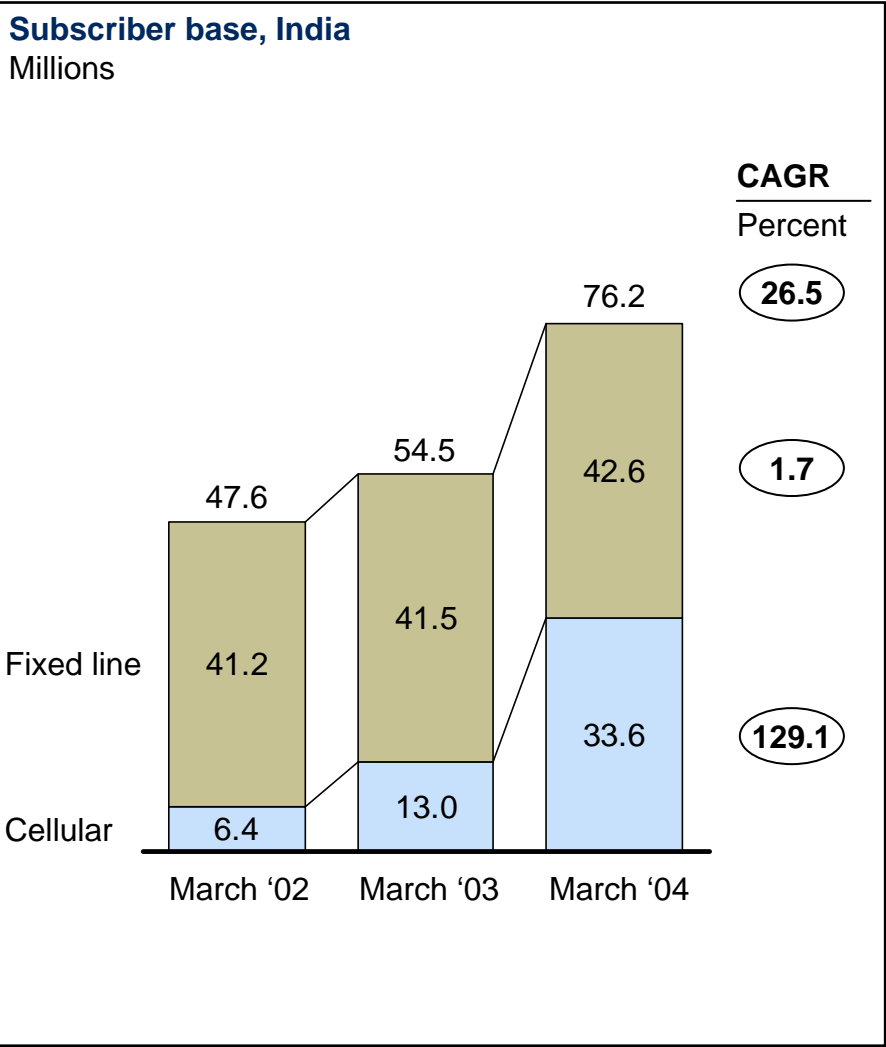


- Growth rates of 5%-6% have been consistently achieved during the last 20 years in spite of power shortages
- Industry has learned to work around the power shortage issue
  - Many large manufacturing firms have in-house power plants
  - Most smaller manufacturing or services firms have backup generators

\* Base year = 2002; \*\* Shortage is defined as the difference between unconstrained energy requirement and energy availability

Sources: CMIE; WEFA-WMM; team analysis

# TELECOM INFRASTRUCTURE IS STILL UNDERDEVELOPED, BUT IS IMPROVING RAPIDLY



Sources: TRAI EIU; ITU; Pyramid Research; Ministry of Information Industry (China)

# THE INDIAN ECONOMY: COMMONLY ASKED QUESTIONS

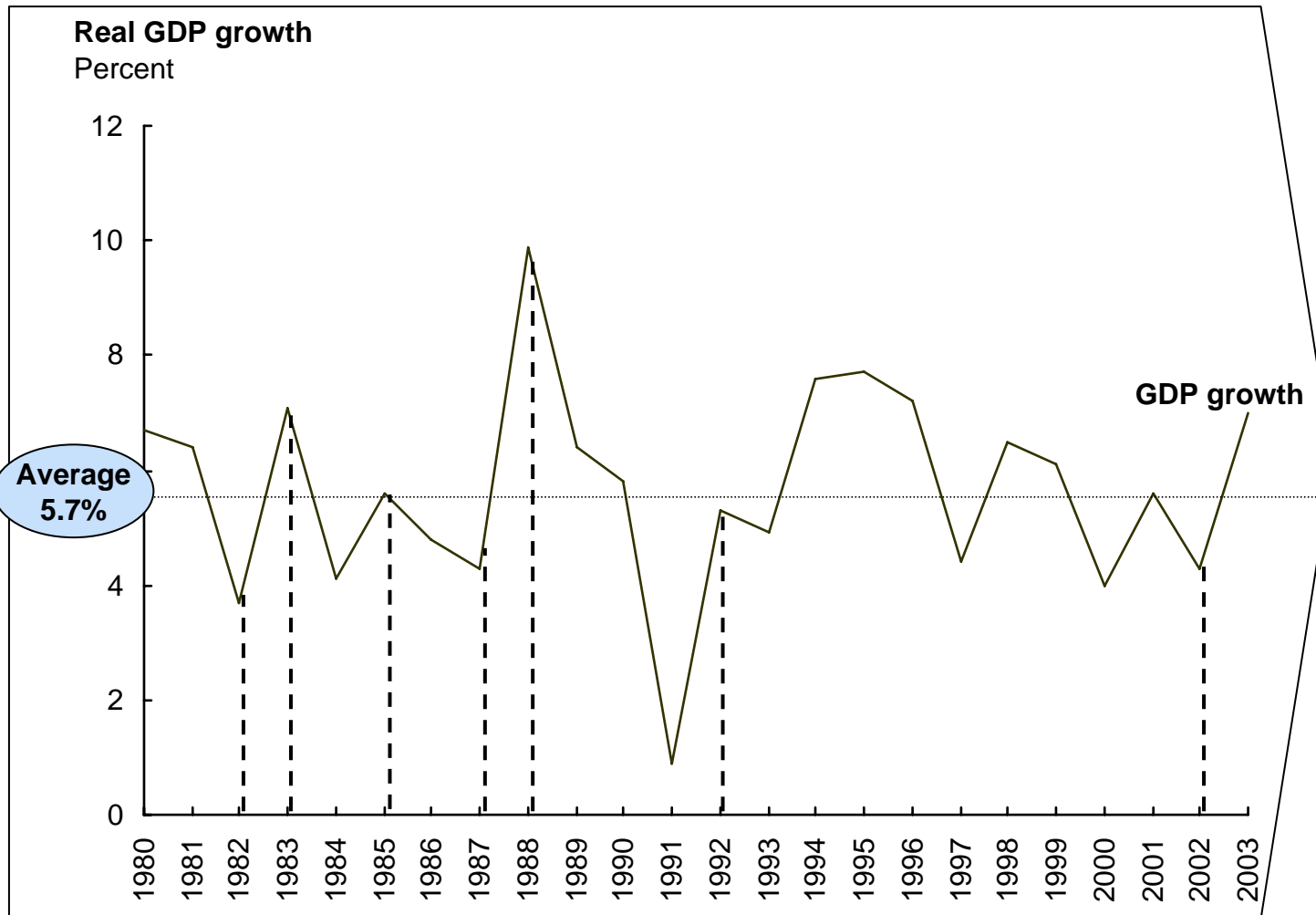
## Question

## Answer

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| <ul style="list-style-type: none"><li>• When will India's much promised "middle class consumption boom" materialize?</li></ul>                         | <ul style="list-style-type: none"><li>• Consumer spending is already growing rapidly, driven by an emerging middle class that has created a large market</li></ul>   |
| <ul style="list-style-type: none"><li>• Given that the service sector leads India's growth, would the manufacturing sector constrain growth?</li></ul> | <ul style="list-style-type: none"><li>• In addition to services, manufacturing is also growing rapidly, driven by labor productivity increases, and reflected in exports</li></ul>   |
| <ul style="list-style-type: none"><li>• Would India's infrastructure be sufficient to sustain rapid industrialization?</li></ul>                       | <ul style="list-style-type: none"><li>• Road, rail, telecom, and power infrastructure meet basic needs and are being expanded and modernized</li></ul>   |
| <ul style="list-style-type: none"><li>• How dependent is India's economy on the monsoon?</li></ul>   | <ul style="list-style-type: none"><li>• Agriculture forms less than 25% of the economy and the correlation between economic downturn and monsoons is low</li></ul>   |
| <ul style="list-style-type: none"><li>• Show me the crystal ball – How will India's economy grow and evolve in the future?</li></ul>                   | <ul style="list-style-type: none"><li>• Even if the government continues the current pace and theme of reforms, growth rates of ~6% are expected in future. This could go up to 8% if the government increases the pace of reform</li></ul>                      |

# INDIA HAS SHOWN GROWTH IN THE LAST 20 YEARS DESPITE SOME POOR MONSOONS

DROUGHT YEARS



Years of poor monsoon	GDP growth
1982	3.7%
1983	7.1%
1985	5.6%
1987	4.3%
1988	9.9%
1992	5.3%
2002	4.3%

\* Base year = 2002

Sources: WEFA-WMM; Ministry of Agriculture; Center of Studies in Resource Engineering (IIT-Bombay); team analysis

# THE INDIAN ECONOMY: COMMONLY ASKED QUESTIONS

## Question

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- Is India a monolithic entity or is it diverse?
- How robust has been the economic growth in the past? What has driven this growth?
- Is the rate of investment high enough to drive growth? Could there be a lack of financial resources?
- When will India's much promised "middle class consumption boom" materialize?
- Given that the service sector leads India's growth, would the manufacturing sector constrain growth?
- Would India's infrastructure be sufficient to sustain rapid industrialization?
- How dependent is India's economy on the monsoon?

## Answer

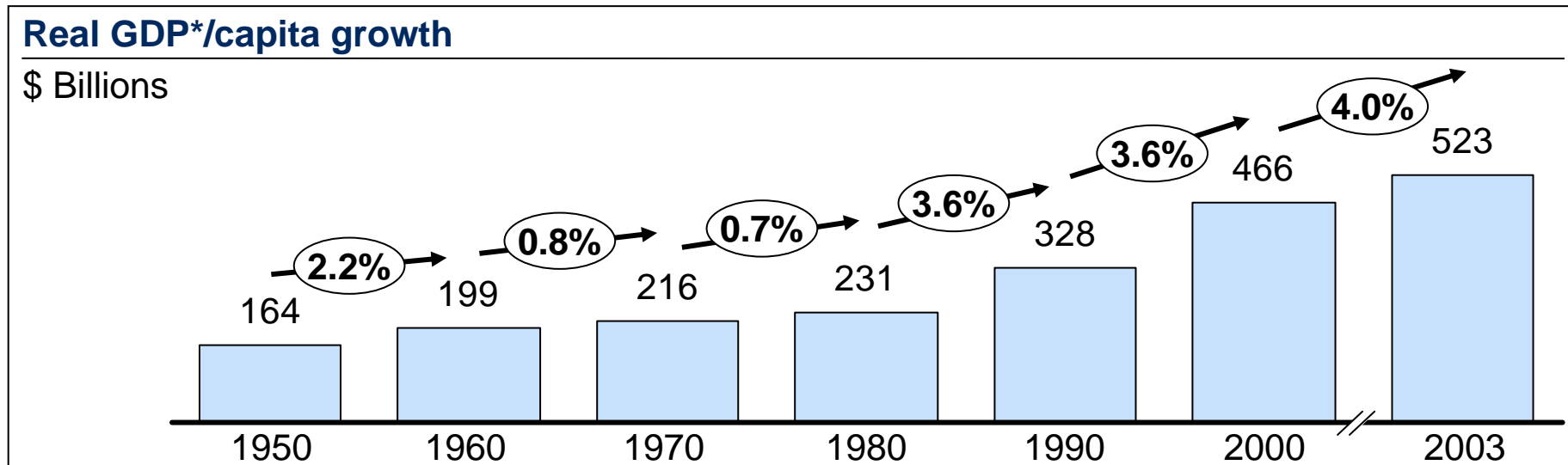
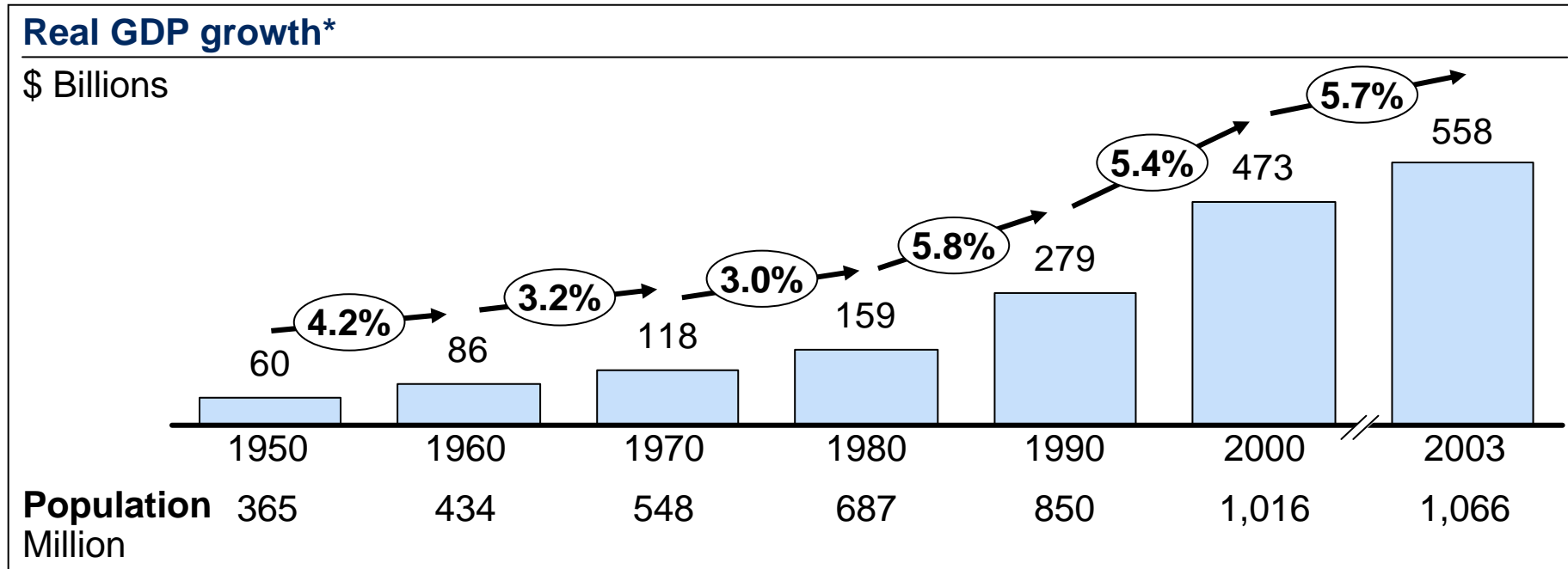
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- India is a diverse country with various religions, languages, income levels, etcetera
- India's growth has accelerated since the 80s, and the country has grown at 5%-6% consistently for the past 20 years. The growth has been driven by a sustained reform agenda pursued by successive governments
- Investment rate is high enough. In addition, investment goes a longer way in India due to high capital efficiency. India has sufficient financial resources for growth
- Consumer spending is already growing rapidly, driven by an emerging middle class that has created a large market
- In addition to services, manufacturing is also growing rapidly, driven by labor productivity increases, and reflected in exports
- Road, rail, telecom, and power infrastructure meet basic needs and are being expanded and modernized
- Agriculture forms less than 25% of the economy and the correlation between economic downturn and monsoons is low

• Show me the crystal ball – How will India's economy grow and evolve in the future?

• Even if the government continues the current pace and theme of reforms, growth rates of ~6% are expected in future. This could go up to 8% if the government increases the pace of reform

# INDIA HAS SHOWN STRONG, ROBUST GROWTH OVER THE LAST 20 YEARS



\* Base year = 2002

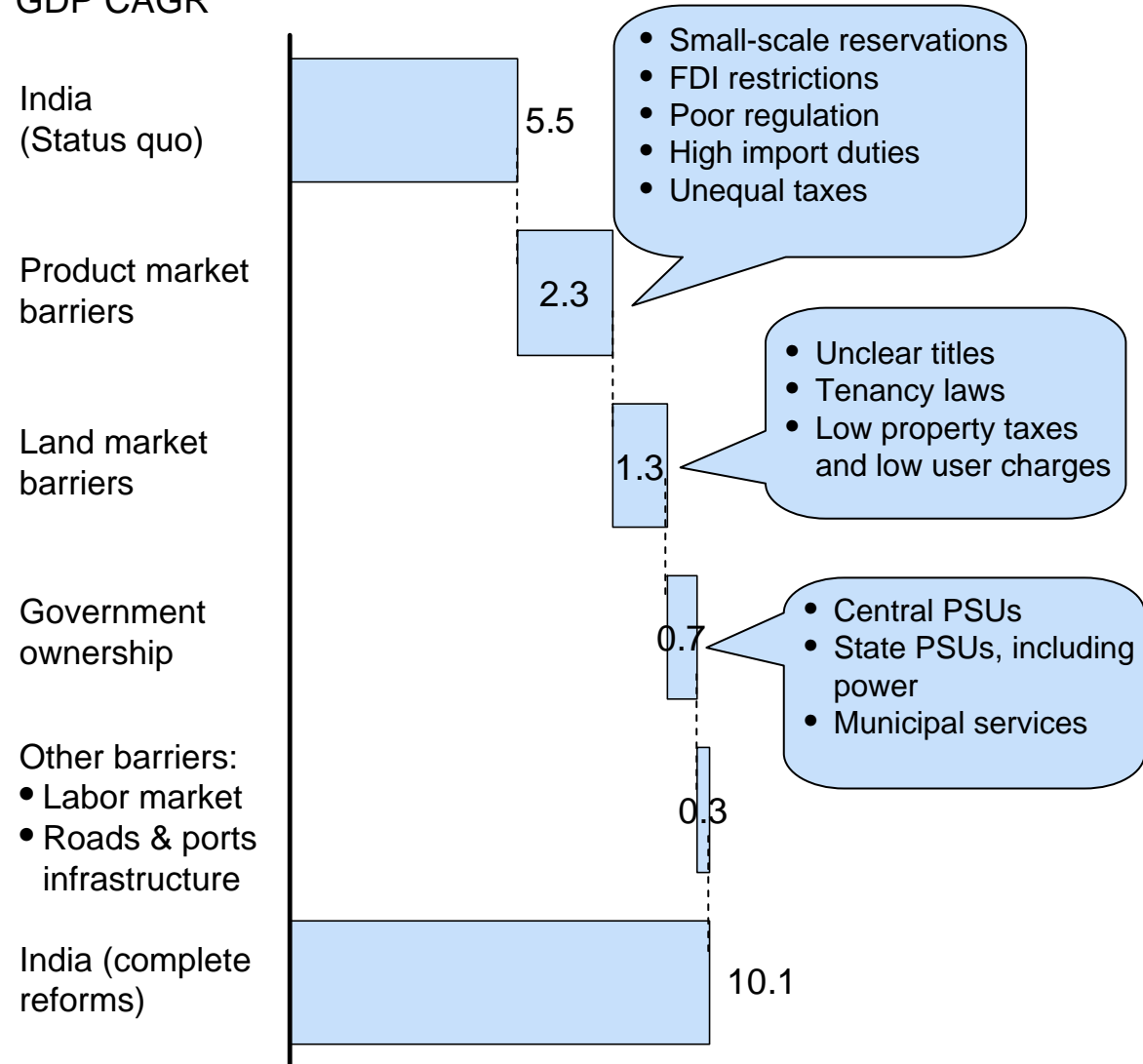
Sources: WEFA-WMM; team analysis

# GOING FORWARD, GOVERNMENT POLICY IS THE KEY VARIABLE AS IMPLEMENTATION OF ECONOMIC REFORMS WOULD FURTHER UNLOCK INDIA'S GROWTH POTENTIAL

## MGI study on India

- McKinsey Global Institute (MGI) study focused on estimating growth potential by unlocking barriers to productivity
- Product market barriers and land market distortions found to be the largest barriers to growth
- Contrary to popular belief, low labor skills and infrastructure constraints do not have a significant impact on productivity
  - With appropriate training, even illiterate workers can achieve high productivity in sectors like construction
  - Companies have learned to overcome infrastructure constraints e.g., companies build own power generation facilities to overcome power shortage, locate production facilities close to assembly plants to overcome poor roads

## India's growth potential from reforms GDP CAGR



# IN ANY CASE, INDIA WILL BE A GLOBAL TOP 10 ECONOMY IN 2025

## Real GDP\* development for world's biggest economies

2003	2010F	CAGR	2025F	CAGR
\$ Billions	\$ Billions	%, '03-'10	\$ Billions	%, '10-'25
U.S. 10,752	U.S. 13,589	3.4	U.S. 20,718	2.9
Japan 4,089	Japan 4,592	1.7	Japan 5,926	1.7
Germany 1,989	Germany 2,244	1.7	China 5,598	6.4
U.K. 1,598	China 2,217	7.4	Germany 2,879	1.7
France 1,438	U.K. 1,905	2.5	<b>India<sup>1</sup></b> 2,730	8.0
China 1,348	France 1,670	2.2	U.K. 2,740	2.5
Italy 1,189	Italy 1,368	2.0	France 1,834	2.2
Canada 750	Canada 930	3.1	<b>India<sup>2</sup></b> 1,908	5.9
Spain 669	<b>India<sup>1</sup></b> 863	6.4	Italy 1,834	2.0
Mexico 645	Mexico 824	3.6	Mexico 1,568	4.4
<b>India</b> 558	<b>India<sup>2</sup></b> 811	5.5	<b>India<sup>3</sup></b> 1,420	4.1
S. Korea 490	Spain 797	2.5	Canada 1,354	2.5
Brazil 454	<b>India<sup>3</sup></b> 774	4.8	S. Korea 1,205	3.4
Netherlands 417	S. Korea 725	5.8	Spain 1,138	2.4

\* Base year = 2002

India 1: High growth at ~8% p.a.

India 2: Status- quo growth at ~6% p.a.

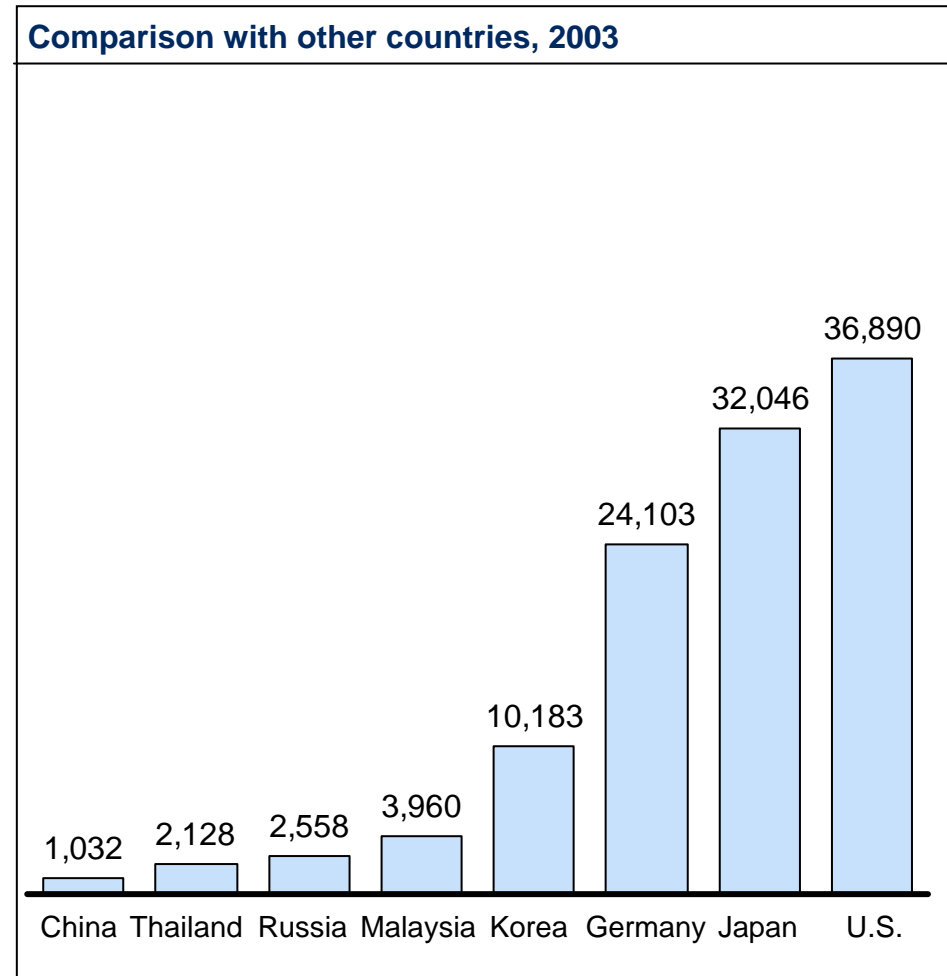
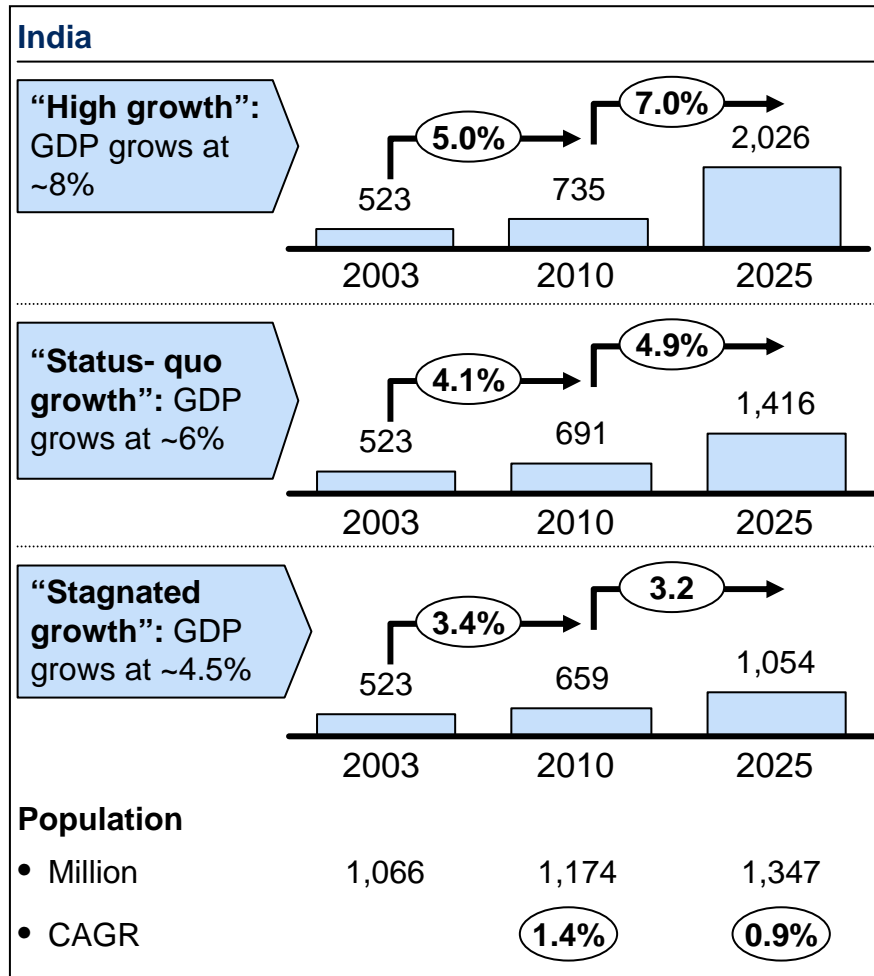
India 3: Stagnated growth at ~4.5% p.a.

Sources:WEFA-WMM; team analysis



# AVERAGE INDIVIDUAL WEALTH WOULD STILL BE MODERATE

Real GDP/capita\*, \$



\* Base year = 2002

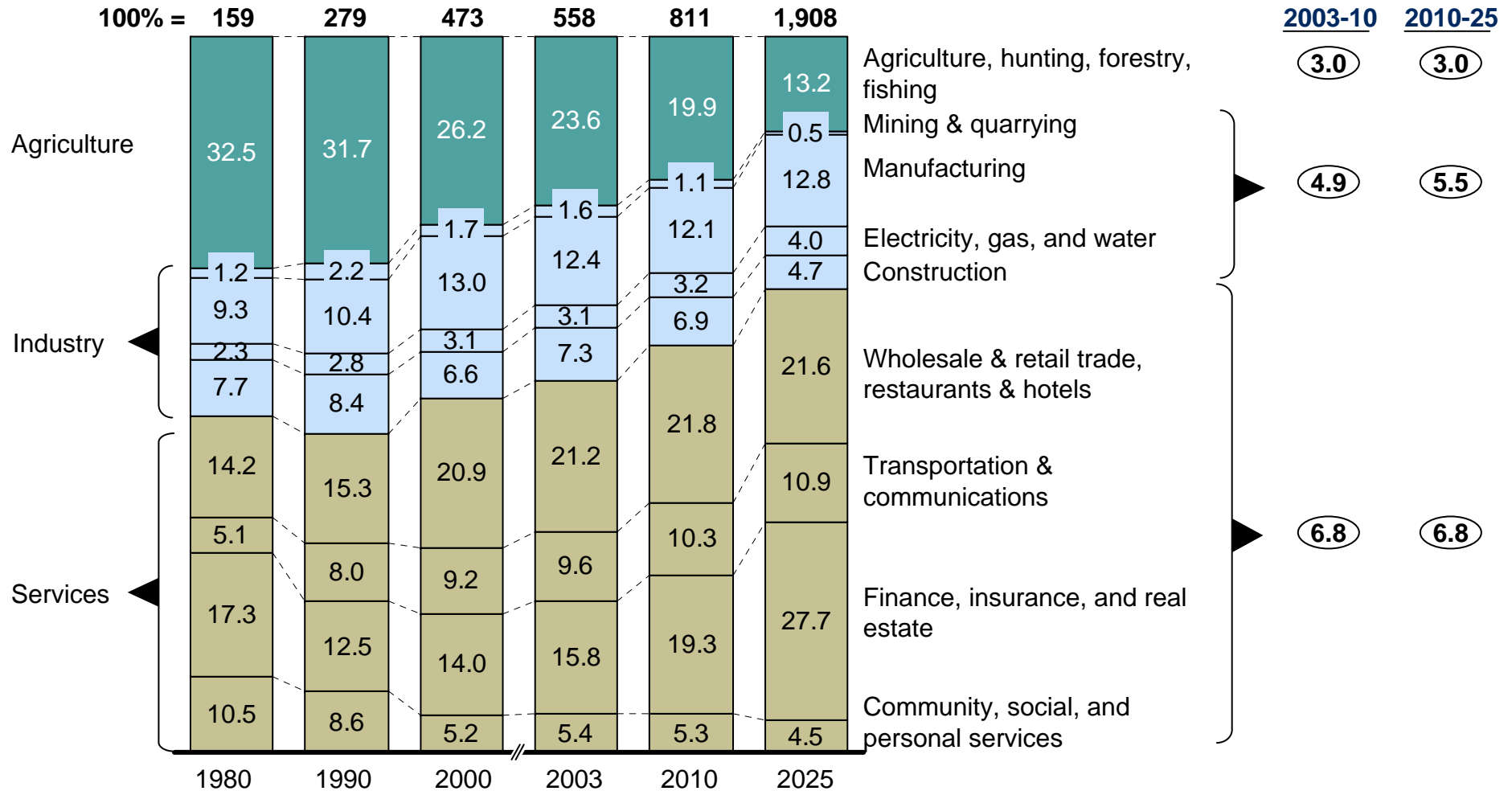
Sources: WEFA-WMM; team analysis

# THE SERVICE SECTOR WILL REMAIN THE KEY GROWTH DRIVER IN THE MID AND LONGER TERM

SCENARIO:  
STATUS – QUO  
GROWTH

Real GDP\*

\$ Billions, percent



\* Base year = 2002.

Sources: WEFA-WMM/WIM; team analysis