

What did the  
**Three Wise Men**  
of India say?

**1<sup>st</sup> Wise Man:**

**President APJ Abdul Kalam**

**India's GDP has to grow at a rate of**

**10%**

**over the next decade**

**Said at the 100th Annual General Meeting of the PHD Chamber of Commerce and Industry - on Dec. 21, 2005**

# How?

## Focus on five areas:

- **Agriculture and food processing**
- **Reliable and quality infrastructure**
- **Education and healthcare**
- **Information and communication technology**
- **Development of strategic sectors**

**2<sup>nd</sup> Wise Man:**

**Prime Minister Manmohan Singh**

**The ambition of the**

**UPA government**

**is to raise GDP growth further to**

**9-10%**

**Told business leaders ahead of his meeting with the Asean leaders and East Asia Summit -  
on Dec. 13, 2005**

# How?

## Focus on five areas:

- **Second green revolution**
- **Liberalization of economy**
- **Getting government out of business**
- **Getting rid of corruption**
- **Business participation in infrastructure development**

**3<sup>rd</sup> Wise Man: Deputy Chairman of Planning Commission,**

## **Montek Singh Ahluwalia**

**Work on a gross domestic product (GDP)**

**growth scenario of**

**8%-10%**

**on the approach paper to the Eleventh Plan (2007-12)**

**Told his perspective planning team which is working on the Eleventh Plan approach paper for the National Development Council (NDC) - on Jan. 9, 2006**

# How?

- In Ninth and Tenth Plans agriculture grew by just half of the projected 4% target. Intention is to give special attention to the sector in Eleventh Plan.
- Other thrust area is infrastructure development, where the role of public-private partnership would be encouraged to bring about qualitative and quantitative improvement.
- **Rs 100,000 Crore National Urban Renewal Mission** and the **Rs 174,000 Crore Bharat Nirman Programme** for rural areas would form the basis for upgrading the country's infrastructure.

# What is common for all three?

## **WANT**

**GDP growth rate of 8 to 10%  
&**

**Drive Agriculture and Infrastructure**



# B & K View

With savings rate at over 29% the Indian economy is matured to maintain a growth rate of 7-8% even if the current momentum in all segments of the economy remain at the same level. But with additional push to any specific segment the growth rate can be easily taken to 9-10%.

The two areas specifically targeted for additional thrust are Agriculture and infrastructure, with specific target plans and increased vigor.

At B & K we looked at the growth scenario for the economy at three different levels, such as :

1. **Current scenario continue to remain the same**
2. **Impact of additional thrust being planned for agriculture**
3. **Impact of additional thrust being planned for infrastructure**

**We have also analysed the past to find the correlation between various economic sectors with developments in agriculture and infrastructure, while analysing the plausibility of the additional thrust plans in these sectors.**

## B & K View

# Yes! Wise men are on target!!

### GDP growth projection under different situation

Current scenario:	7-8%
Agriculture growth at 3%:	8-9%
Agriculture growth at 4%:	9.5-11%
Infrastructure @ 1.5% additional:	9%
Infrastructure @ 2.5% additional:	11%

## GDP growth under Current Scenario

- Assuming Infrastructure sector reforms progress at a slow pace over FY2007-09, the Industry GDP growth is expected to slow down to an average of 7.8%.
- Farm sector growth is assumed to be around its trend rate of 2.5%.
- Services sector growth is assumed to slowdown to an average 8.7% mainly due to infrastructural bottlenecks.

	Agriculture	Industry	<i>Assuming</i>		Services	GDP
			<i>Infrastructure*</i>	<i>Manufacturing</i>		
FY06	2.2	9.0	4.0	9.4	9.8	8.1
FY07	2.5	7.9	4.0	9.1	9.2	<b>7.4</b>
FY08	2.5	7.6	4.1	8.5	8.7	<b>7.2</b>
FY09	2.5	7.8	4.2	8.9	8.2	<b>7.1</b>

Source: B&K Research; All figures as % YoY; \* Growth in Infrastructure index of 6 key industries

**With these assumptions, GDP growth is expected to average 7.2% over FY2007-09**

# IMPACT OF AGRICULTURE IN GDP

## Agriculture Growth Multiplier effect on industry

- Under this approach we forecast industry growth at different levels of farm growth.
- We assign k% increment to the base multiplier of **3.0x** (last 25 years average incremental farm/industry multiplier) every year till 2010.

**Incremental industry GDP in year x = Incremental farm GDP *multiply* Incremental multiplier of year x**

# Agriculture driving growth!!

Farm growth assumed at **2%**, Services growth at **9.8%**

FY	Incremental Farm GDP (Rs Bn)	Derived Multiplier (x)	Incremental Industry GDP (Rs Bn)	Industry growth (%)	GDP Growth (%)
2007	64	3.3	213	4.7	6.7
2008	66	3.6	238	5.0	7.1
2009	67	3.9	263	5.2	7.2
2010	68	4.2	290	5.5	7.4

Farm growth assumed at **3%**, Services growth at **9.8%**

2007	96	3.8	362	7.9	7.8
2008	99	4.5	447	9.1	8.3
2009	102	5.3	537	10.0	8.7
2010	105	6.0	632	10.7	8.9

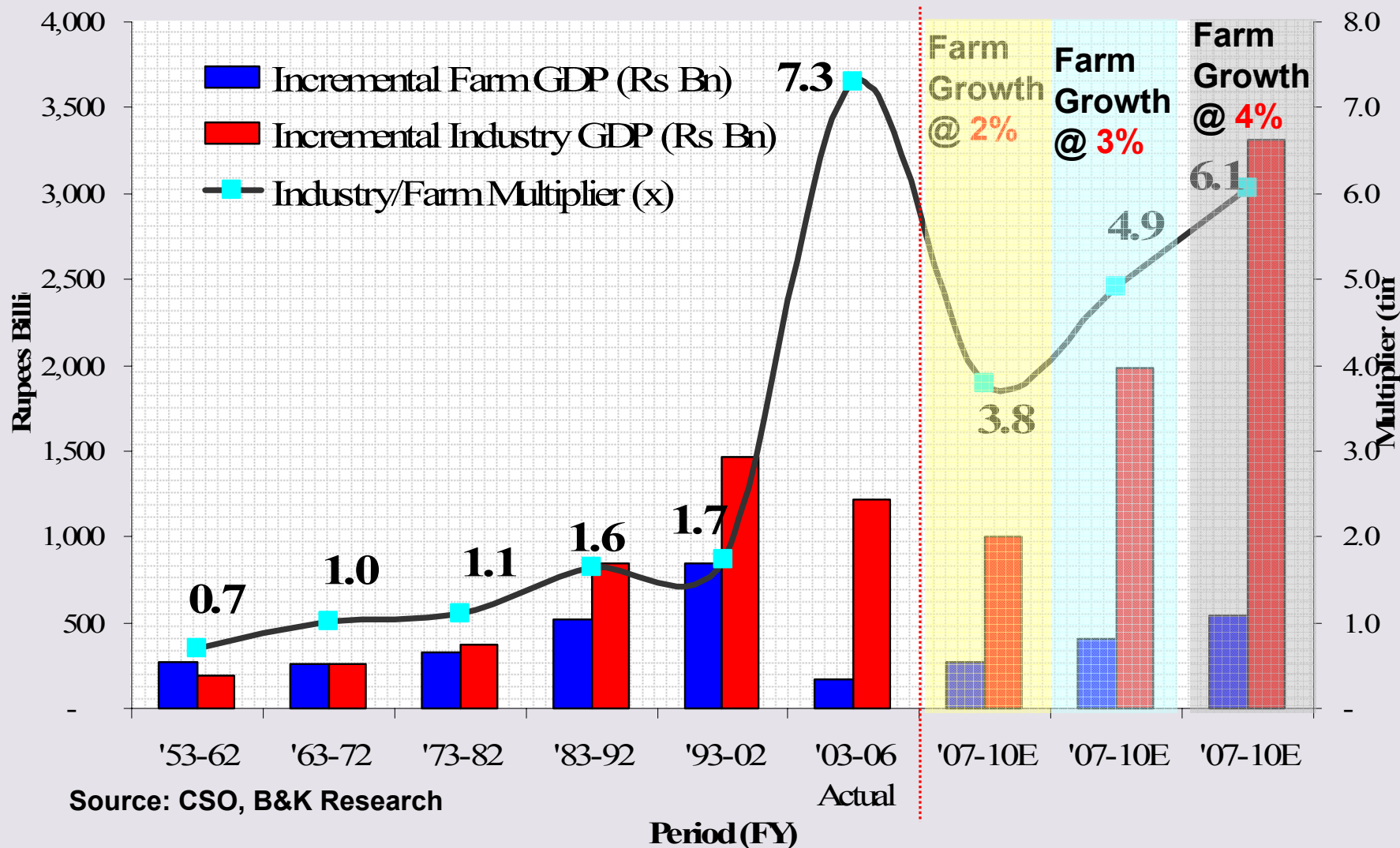
Farm growth assumed at **4%**, Services growth at **9.8%**

2007	129	4.2	540	11.8	9.1
2008	134	5.4	722	14.2	10.0
2009	139	6.6	919	15.8	10.5
2010	145	7.8	1,129	16.7	11.0

Source: B&K Research

GDP growth using derived multiplier at different levels of Farm growth

# Shifting Trajectory of Industry/Farm Multiplier from earlier 0.5-2x to now 5-7x



## Infrastructure driving growth!!

- Assuming Infrastructure sector spending rises substantially from FY2007 along with improvement in implementation, Industry growth is expected to average **9.1%**.
- Farm sector growth is assumed to be around its trend rate of **2.5%**.
- Services sector will gain further impetus from the improved infrastructure. We assume growth to accelerate and average **10.3%** over FY2007-09E.

# Infrastructure driving growth!!

	Agriculture	Industry	<i>Assuming</i>		Services	GDP
			<i>Infrastructure*</i>	<i>Manufacturing</i>		
FY06	2.2	9.0	4.0	9.4	9.8	8.1
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FY08	2.5	8.9	6.5	10.5	10.4	<b>9.0</b>
FY09	2.5	9.9	7.5	12.0	10.9	<b>11.0</b>

Source: B&K Research; All figures as % YoY; \* Growth in Infrastructure index

**With these assumptions, GDP growth is expected to average 9.3% over FY2007-09**

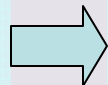


**How Agriculture was  
the driver  
in the past?**

# Agriculture sector - Strong demand driver for Indian economy

## Farm growth & Private Final Consumption Expenditure (PFCE) on *Basic Necessities*

- Cereals and bread
- Milk and milk products
- Meat, egg and fish
- Clothing
- Education
- Personal goods
- Total PFCE



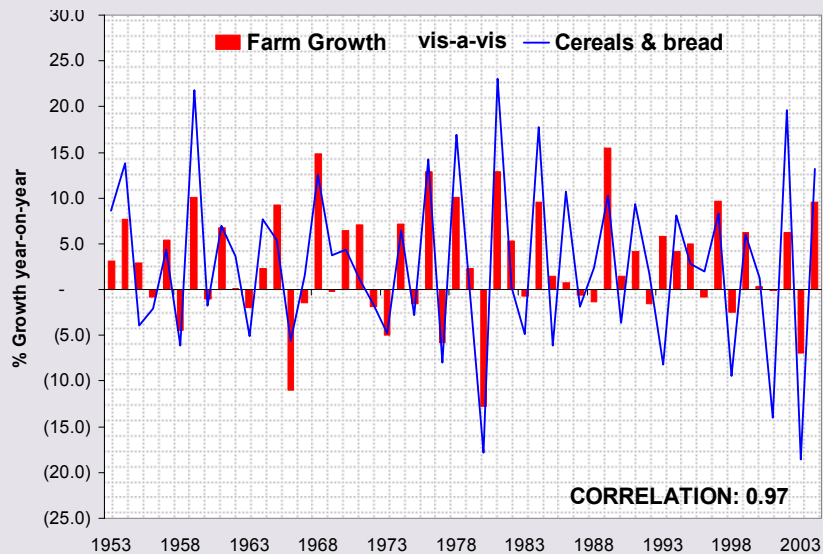
## Farm growth & Cascading impact on *Other Goods*

- Consumer durables
- Transport equipment
- Financial sector

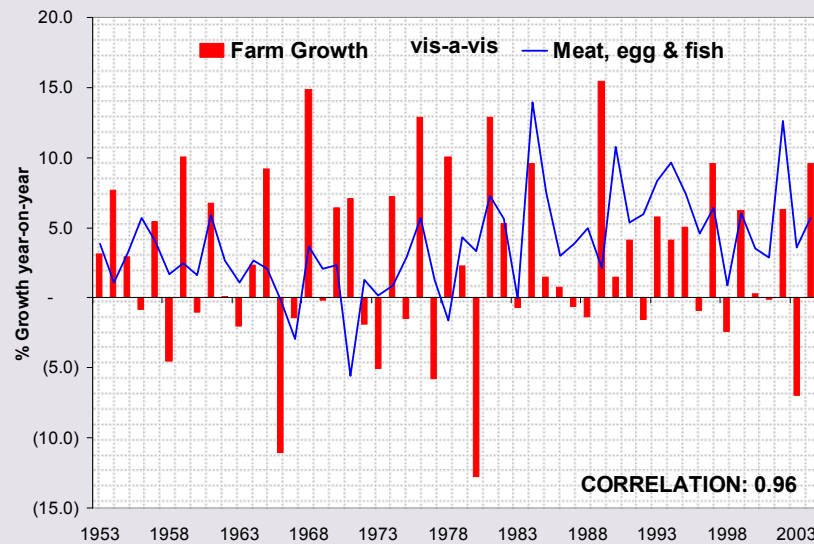
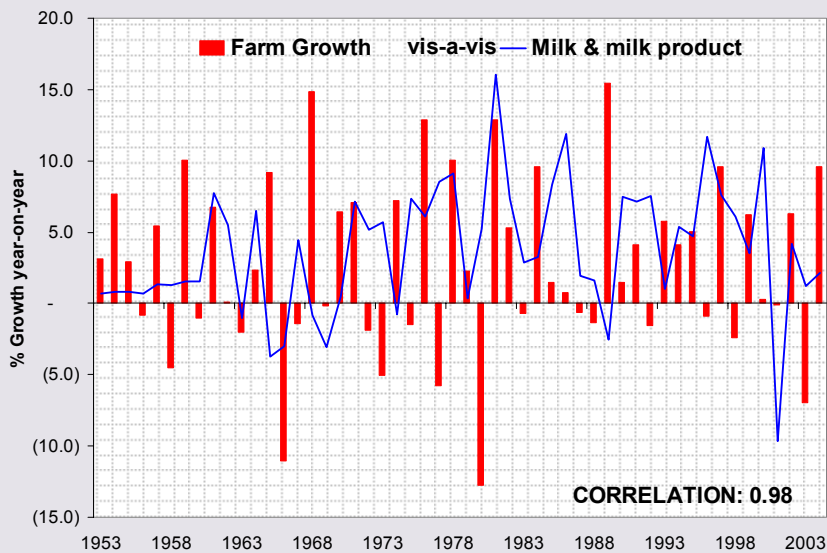
## Farm growth: Impact on Real economy

- Real Per Capita GDP
- Household gross capital formation (GCF)

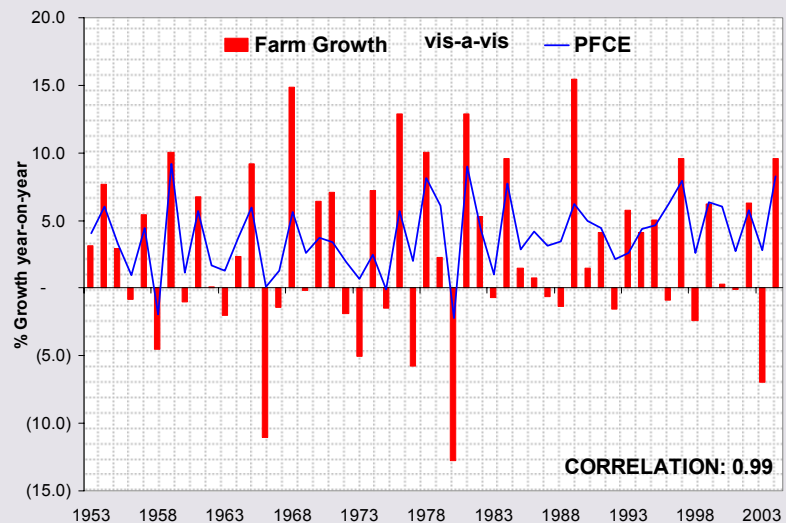
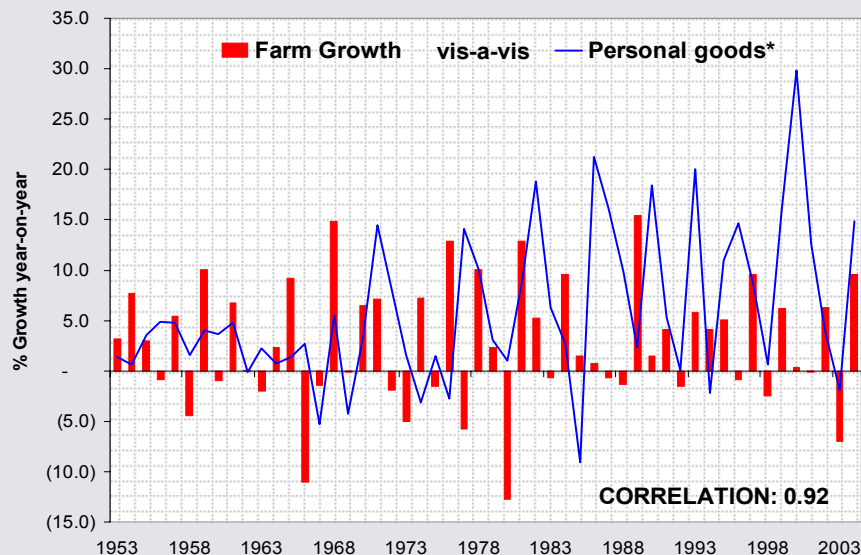
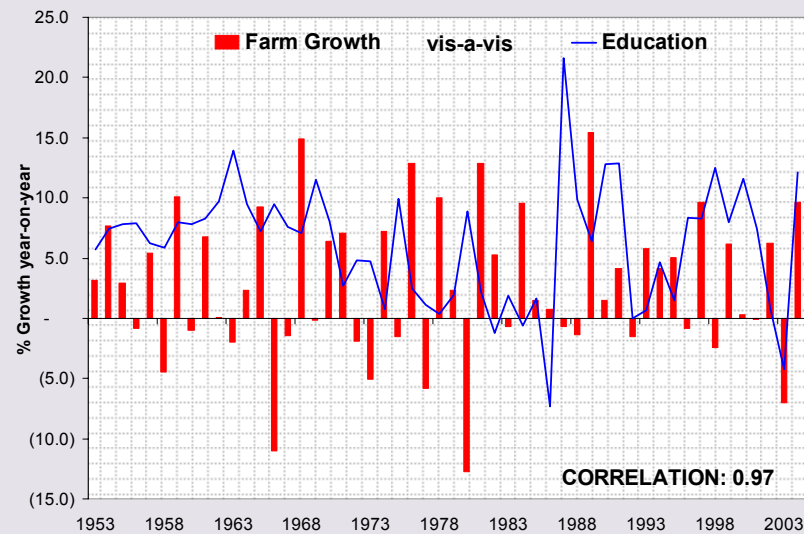
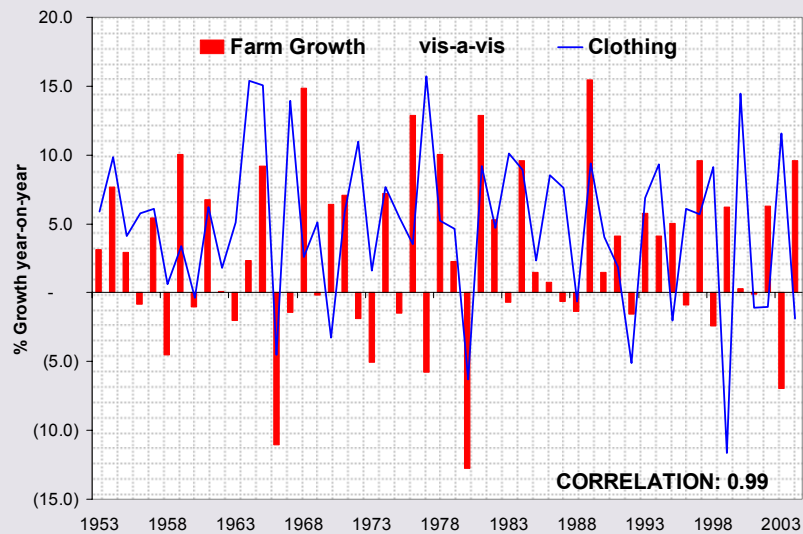




**Demand for basic necessities like food and food products is strongly correlated with farm growth!!**

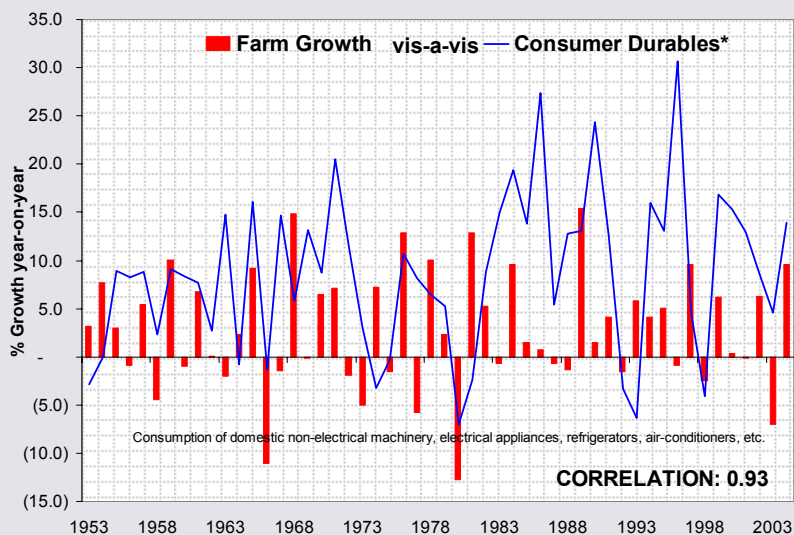


# Final consumption spending highly correlated with Farm growth

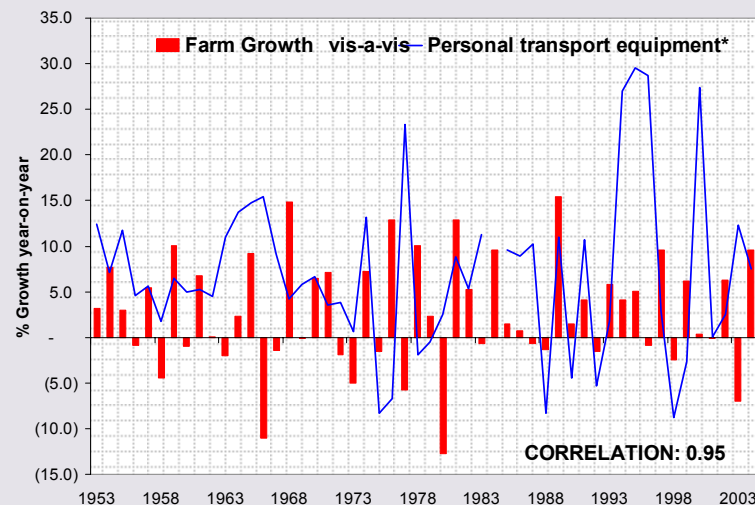


\*Consumption of jewellery, watches, clocks, leather products other than footwear, non-metallic mineral products, toilet products, etc.

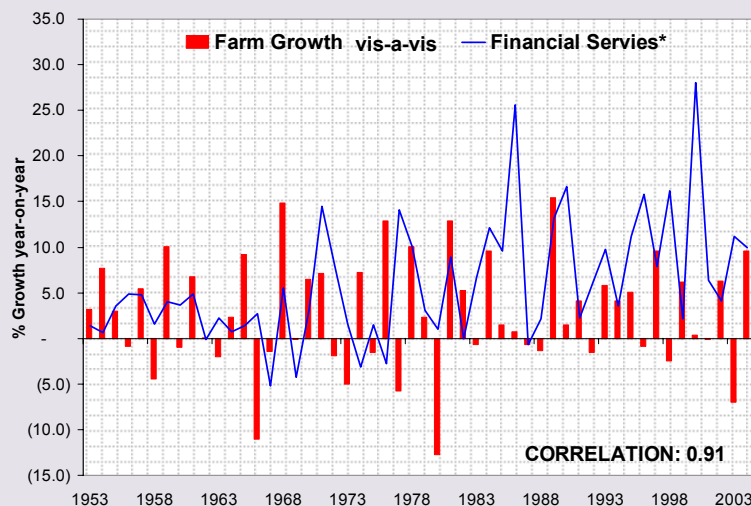
# Cascading Impact of better farm growth underpins it's importance



\*Consumption of domestic non-electrical machinery, electrical appliances, refrigerators, air-conditioners, etc.

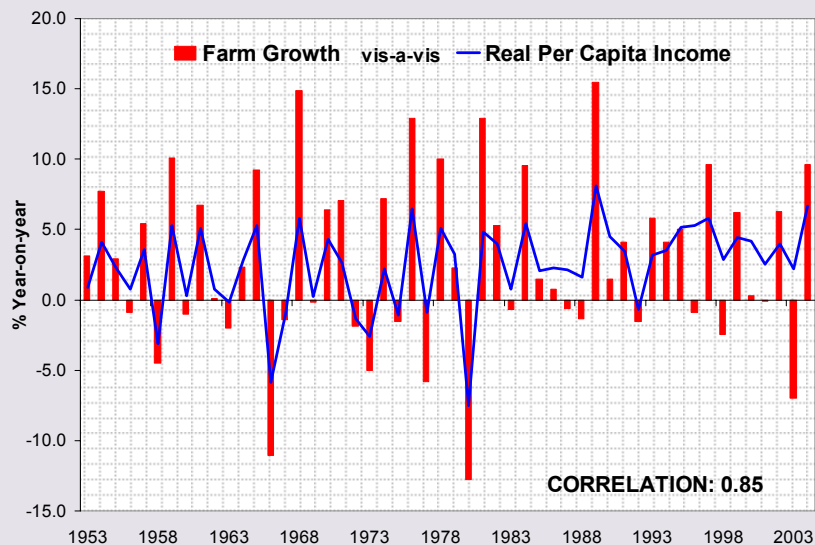


\*Purchase of automobiles like passenger cars, motor cycles, scooters, mopeds and bicycles.



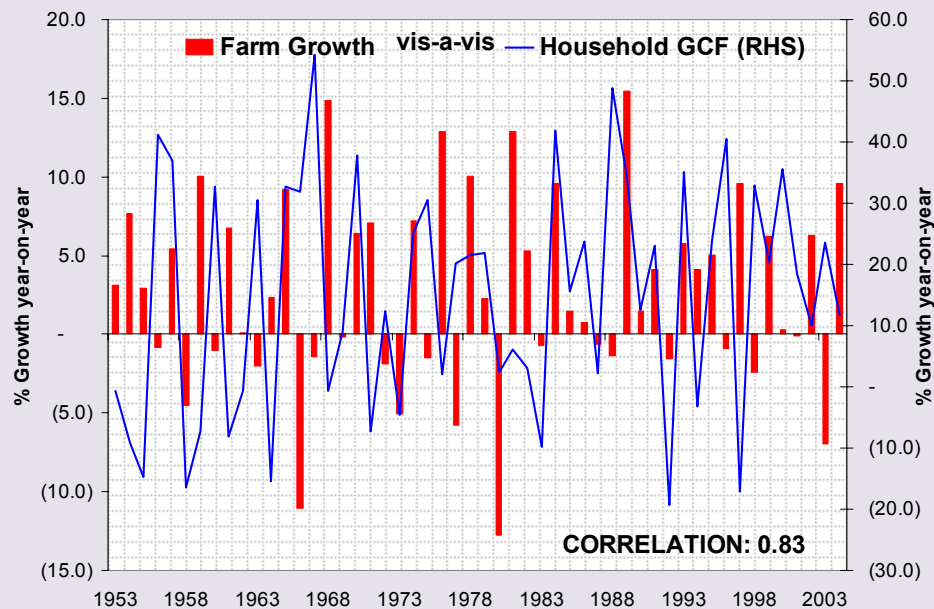
\*Services like banking, legal, business, life insurance, etc.

# + Impact of farm growth on the Real Economy



← Real purchasing power in India is strongly related to the level of farm growth

Household Gross capital formation has a correlation of **0.83** with farm growth!!

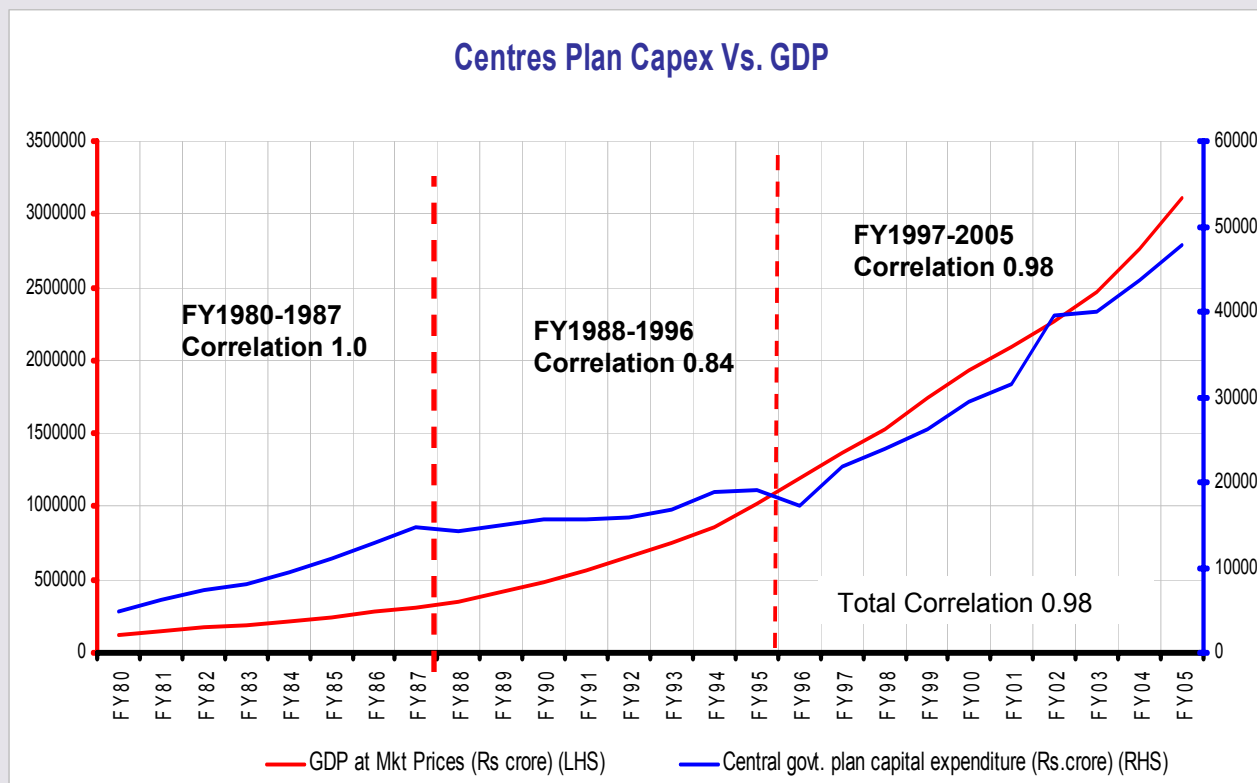


**How infrastructure**

**failed**

**to support growth in the past?**

# GDP & Centre's Planned Capex



Source: GOI

Period	Correlation
FY1980-1987	1.00
FY1988-1996	0.84
FY1997-2005	0.98

Source: B&K Research

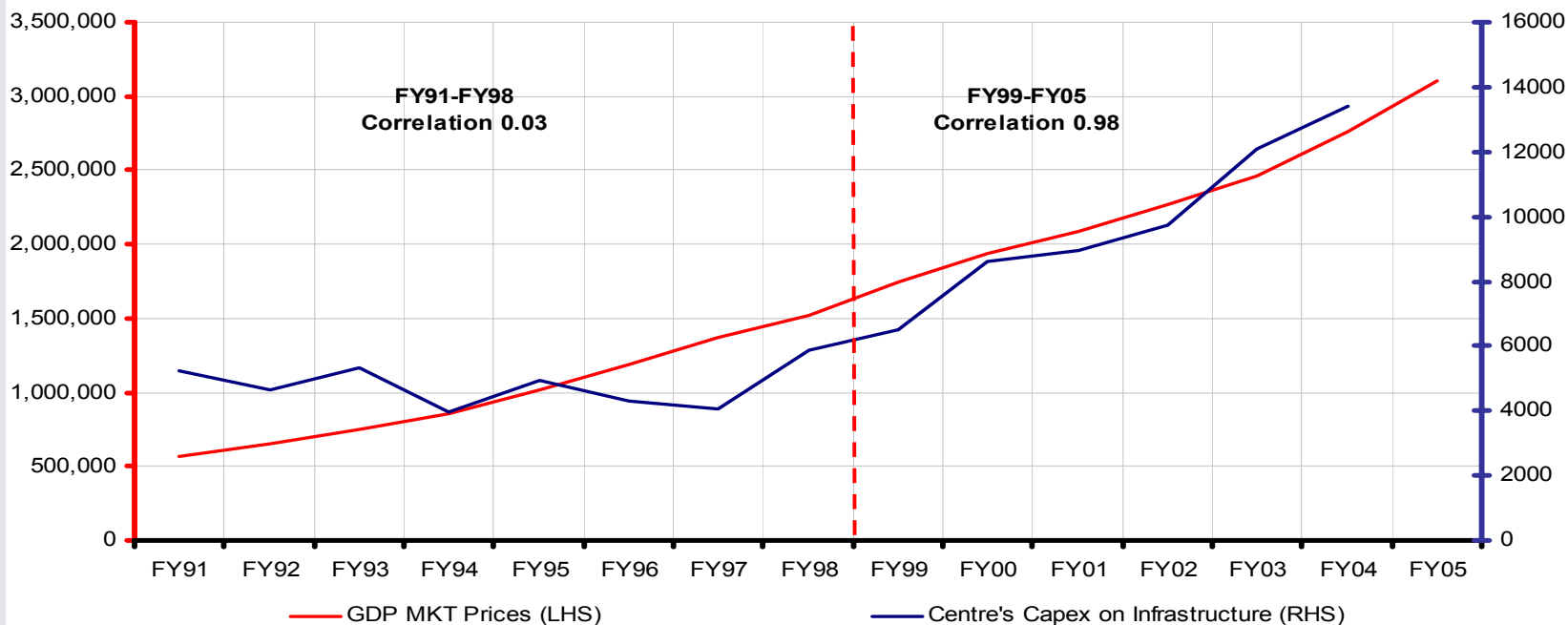
**Nineties is the decade when there is a strong disconnect in the correlation between GDP growth and growth in Planned Capex.**

**Period of extremely low infrastructure growth which virtually choked the industrial momentum set in the early stage of liberalization.**



# GDP growth and public spending

Centre's Infrastructure Capex\* Vs. GDP



Note: \*Railways, Urban Development, Power Irrigation, Flood Control, Transport, Communication, Public Works

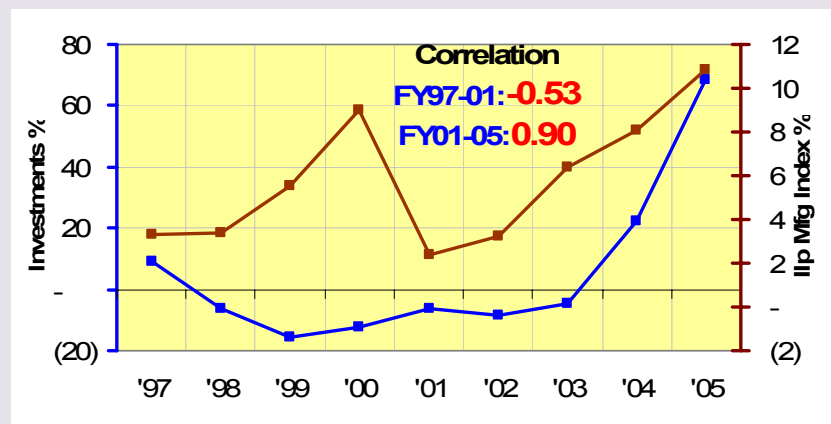
Source: GOI, B&K Research

Period	Correlation
FY1991-2005	<b>0.91</b>
FY1991-1998	<b>0.03</b>
FY1997-2005	<b>0.98</b>

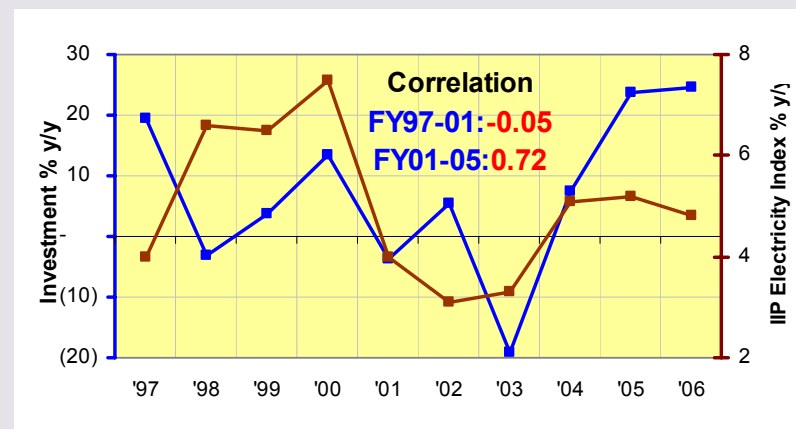
**Even public spending in infrastructure failed the nation during 90's**

# Infrastructure Capital Outlay & growth in Production

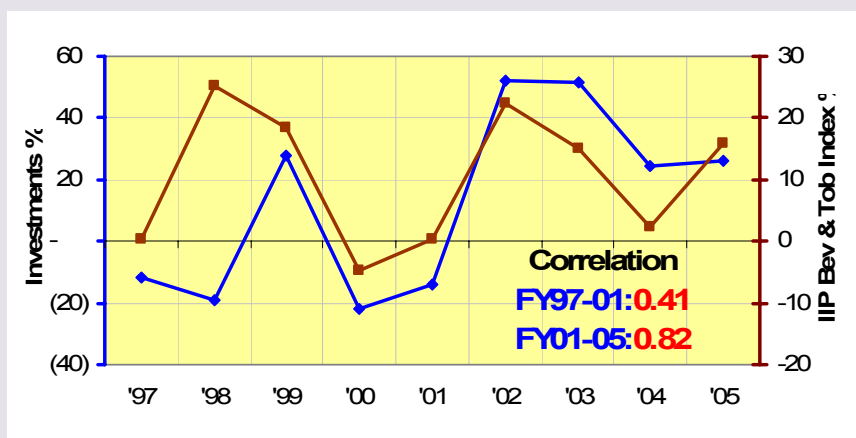
## Manufacturing



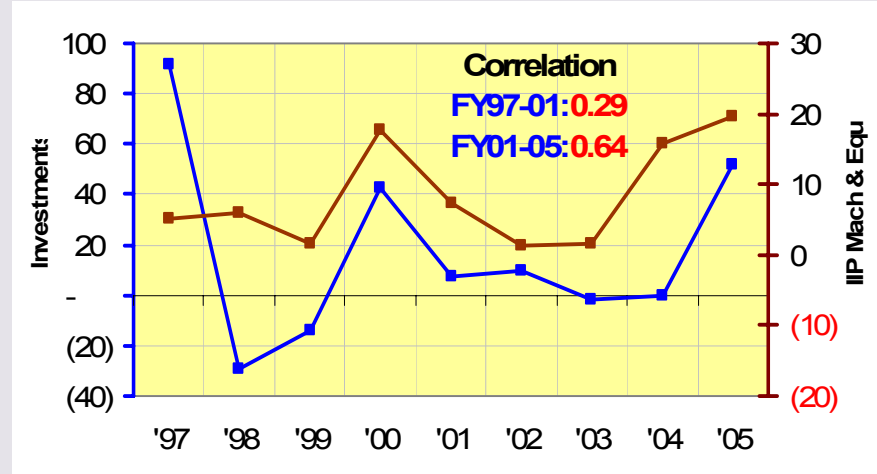
## Electricity



## Beverages & Tobacco



## Machinery & Equipments



Source: CMIE, RBI, B&K Research

**Better correlation gets established since 2002**

**What are the**

**Triggers**

**For achieving wise men's target?**

## Agriculture

# Bharat Nirman Yojana

**Rs. 1,74,000 Cr. (\$40Bn.) between 2005 – 2009\***

## Programme

Irrigating 10 mn hectare

Electrify 125,000 villages

Drinking water for 74,000 villages

Electric connection to 23 mn HH

6 mn rural houses

Village road connectivity

## Benefit

Income of Rs. 45,000 Crores

24% increase in elec. Appl. stock

Save 22 lakh man days per day

Improved standard of living

Improved confidence

Improved mobility

\* Government of India

## Agriculture

# Irrigate 10 Mn. hectare

- Under Bharat Nirman Yojana to irrigation for 10 mn. Hectare by 2009
- Every hectare to produce additional revenue of Rs. 45,000 per annum
- When implemented will generate additional rural income of Rs. 45,000 crores (450 Bn.) annually.

**Over 1.4% of GDP at current level!!**

Rural  
Development

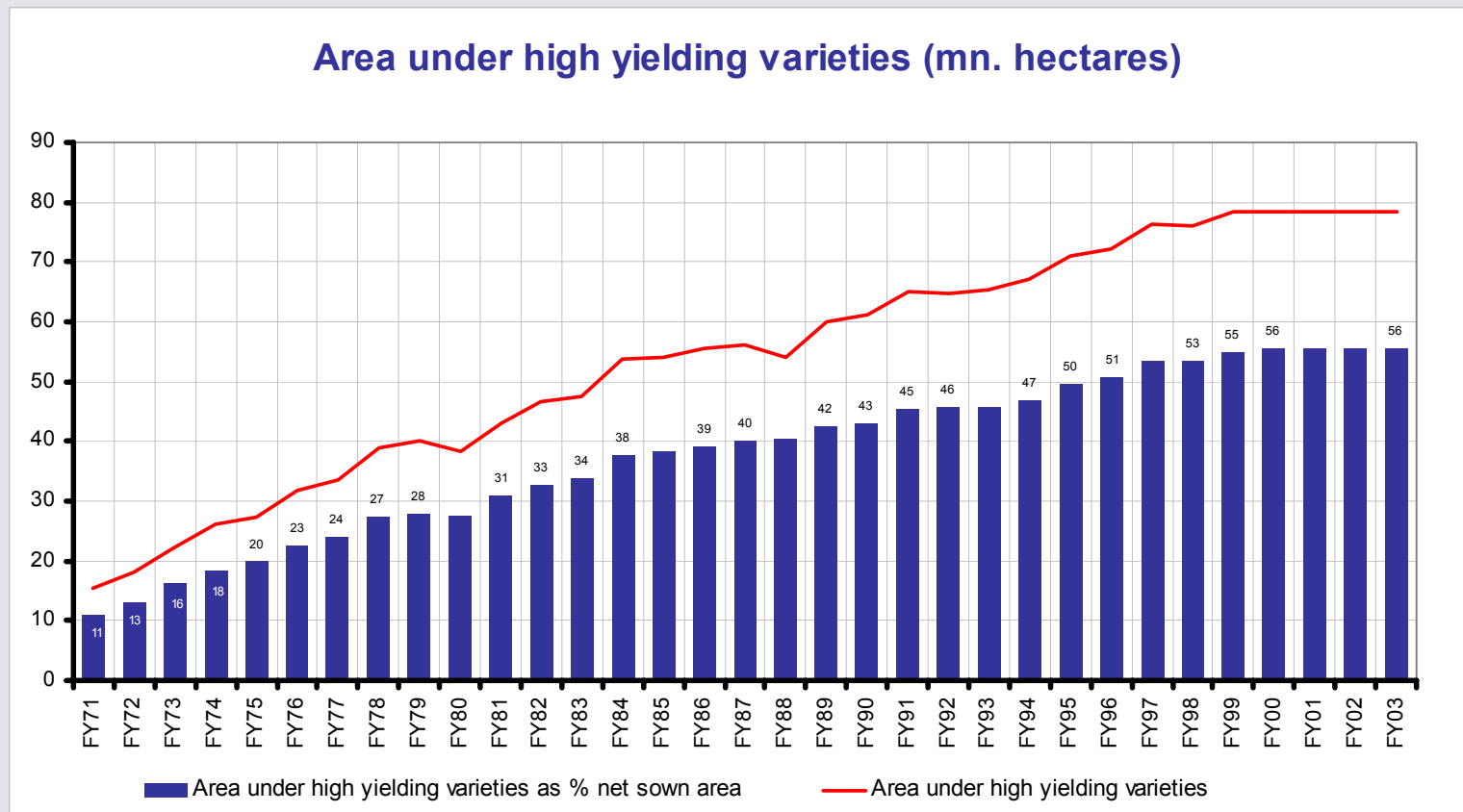
# Employment Guarantee Scheme

- **Hundred days of rural guaranteed work at Rs 60 day**
- **Cover all the 600 districts in the country by 2010.**
- **Covering 150 districts would cost Rs 9000 crore yearly and if it is extended to all 600 districts, the cost would be Rs 36,000 a year.**
- **To cost Rs 40,000 crore (Rs 400 billion) annually.**

**1.25% of GDP at current level!**

## Agriculture

## PRODUCTIVITY

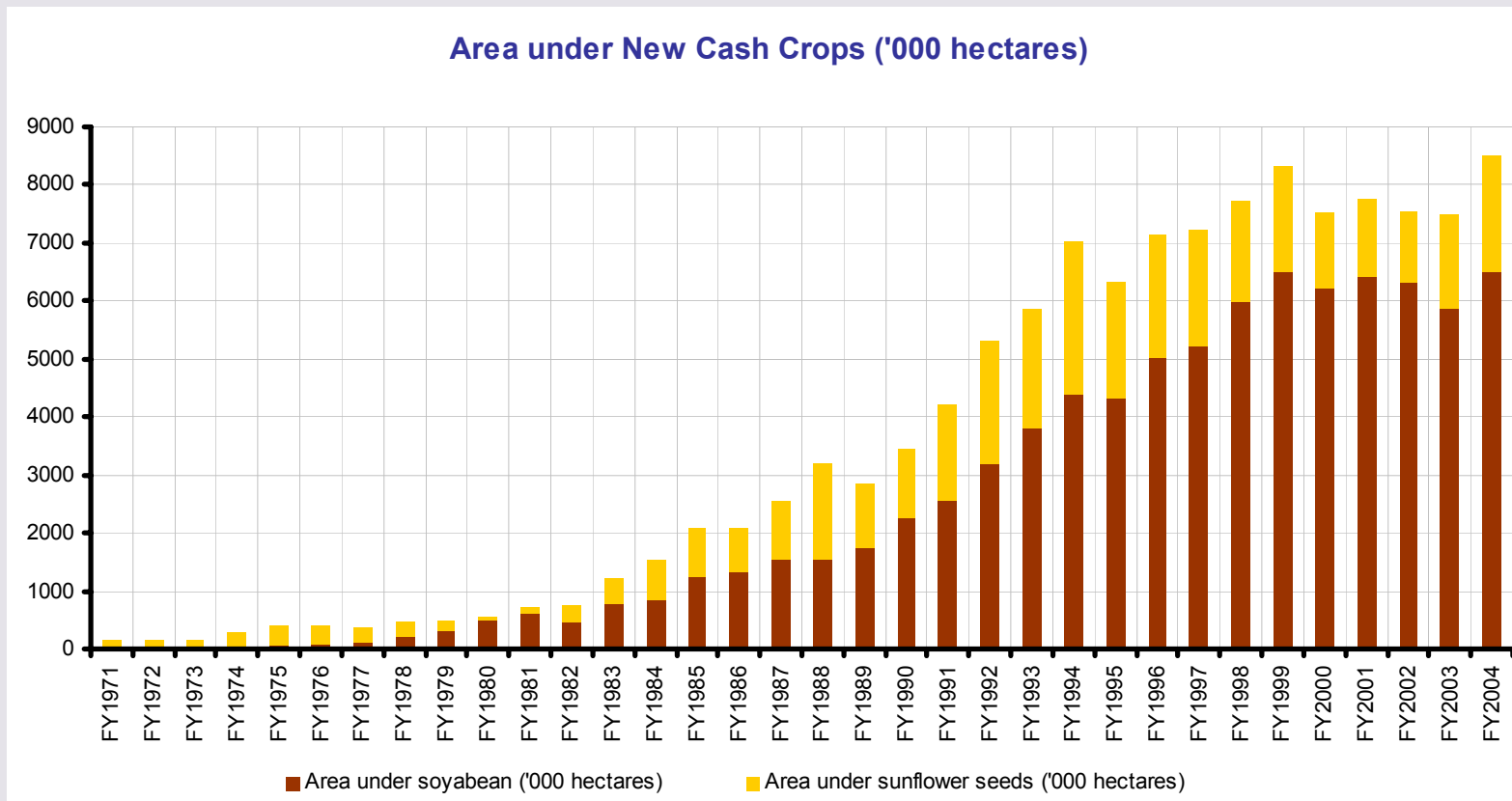


Source: Ministry of Agriculture

**Area under high yield variety stagnant for five years, scope for enhancement**

Agriculture

# New Cash Crops



Source: Ministry of Agriculture

**Scope for improvement with introduction of new Cash Crops such as Jethropa, Vanilla, mentha etc.**



# National Urban Renewal Mission

## Rs 1 Lakh Crore Outlay

### Programme

- To cover 60 cities with a million-plus population in the next seven years.
- 2005-2006 outlay of Rs.5,500 crores to support 7 mega, 28 metro and 25 'C' cities.
- Stamp duty rationalization – below 5%.
- Repeal of the Urban Land Ceiling Act.
- Reform rent control laws.
- System to improve efficiency of drinking water supply.
- Independent regulators for urban services.

### Benefits

- Improved housing, transportation systems, health and education standards.
- Improved urban utilities & services.
- Transparent secondary transaction
- Increase in land stock
- Stimulate private investment
- Healthy living condition
- Improved Administrative efficiency

## Infrastructure

# Urban Development

- **Metro transport system for all major cities – Mumbai project alone to cost Rs. 20,000 crores over 10 years**
- **Drinking water facilities for urban areas – Rs. 500 Crores desalination plant for Chennai.**
- **Airports improvement – New Delhi & Mumbai privatized**
- **water and sanitation systems, solid waste management facilities and low-income housing - Rs 300,000 crores of investment needed over the next decade**
- **Urban infrastructure for North Eastern Region - Rs.114.50 crore allocated**
- **19 new infrastructure projects for National Capital Region - Rs.1,272 crore with loan component of Rs.824 crore.**
- **Mumbai Western Freeway Sea Link Project – at a Cost of Rs 3535 Crore**
- **33 Km Bangalore Metro Rail project – at a cost of Rs. 6207 crores.**

## Infrastructure

## Major projects on line-1

## Power

Capacity	Investments	Status	Company Name	State
2000 MW	8,000 cr	Proposed	States of Gujarat & MP	Gujarat in Madhya Pradesh
2000 MW	9,000 cr	Proposed	Neyveli Lignite Corporation	Tamil Nadu
3,740 MW	11,000 cr	Proposed	Reliance eGen Ltd(REL)	UP
3000 MW	8,700 cr	Completed in Feb 2005	NIPC	Orissa
	7,000 cr	Proposed	APTransco	Andhra Pradesh
12500 MW	50,000 cr	Proposed for the next 5		Maharashtra
1000MW	\$ 1 billion	Proposed for the next 3 year.	State Govts	Himachal Pradesh, Rajasthan, Maharashtra, West Bengal and other states, each with a capacity of up to 100 MW.
3000 MW	13,500 cr	Proposed	Tata Power	Jharkhand
750 MW	4,000 cr		ONGC's Tripura Project	Tripura

## Infrastructure

## Major projects on line-2

## Roadways

Capacity	Investments	Status	Company Name	State
Inter State Highway		Proposed	State Govts	Kerala and Tamil Nadu
Inter State Highway	3567 cr	Approved 11th Feb 2005	Haryana State Industrial Development Corporation (HSIDC) and NHAI	Delhi, Haryana and Uttar Pradesh
77 km of Pilot Project	\$336 million	Work in Progress	Kerala State Transport Project(KSIP)	Kerala
Mega Integrated Rail-cum-Bus Transit Project (IRBIP)	2239 cr	Approved	Central Government	Uttar Pradesh, Delhi and Haryana
Extension of Delhi Metro Project	870 cr	Proposed	Delhi Metro Rail Corporation(DMRC)	Delhi, Haryana and Uttar Pradesh
Phase III A 4000 km Phase III B 6000 km	55000 cr		NHDP	Various States
42 flyovers	1000 cr	Proposed in the next 3 years	World Bank-funded Mumbai Urban Transport Project (MUIP).	Maharashtra
6700 km Comprehensive Road Infrastructure Development Programme.	920 cr		NHAI	Various States

## Infrastructure

## Major projects on line-3

## Ports/Shipping

Capacity	Investments	Status	Company Name	State
	1000 cr	Proposed	Gujarat Pipavav Port	Gujarat.
	1850 cr	Proposed	Vizhinjam container terminal	Kerala
Third Container Terminal Project		Achieved Financial Closure	Gateway Terminals india Pvt Ltd (SPV floated By Maersk and Container Corporation of India)	Maharashtra.
Dredging corporation Phase 1 and 2.	1640 cr	Proposed	JNPT.	Maharashtra.
Comprehensive Maritime Policy	\$1 trillion	Proposed	Union Shipping Industry	Various States

## Infrastructure

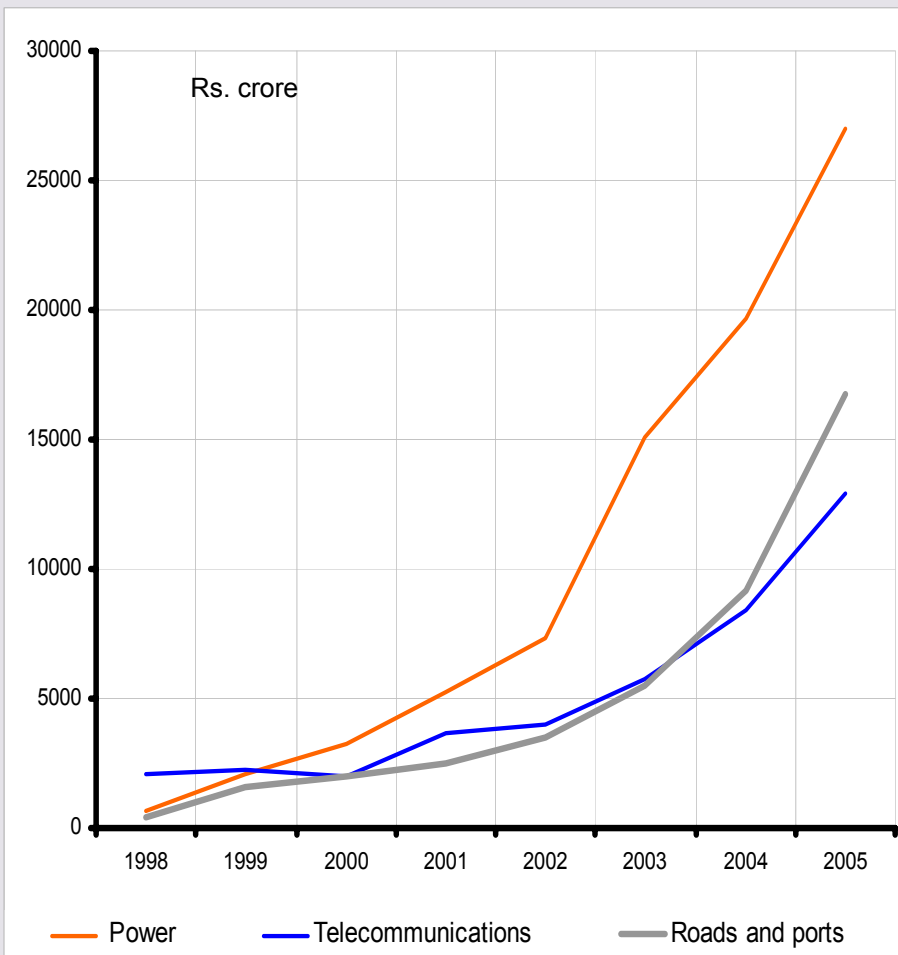
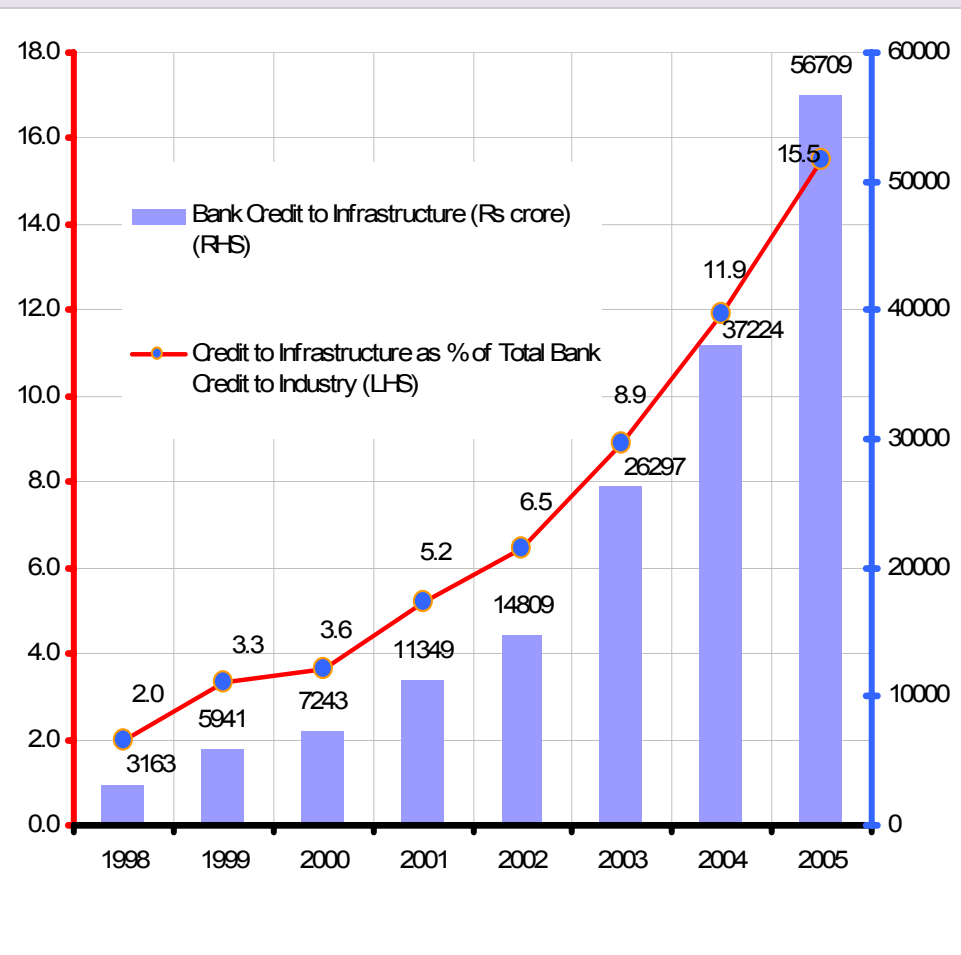
## Major projects on line-4

## Irrigation, Railways , Water and Waste Management

Sector	Capacity	Investments	Status	Company Name
Irrigation	2.5 lakh acres	878 cr	Order Bagged	Patel Engineering
Irrigation	16.60 Lakh acres (8 Projects)	5776 cr		
Railways	Rail Frieght Corridor	60000 cr		
Water Management		1800 cr	Deadline 2009	Storm Water drainage Projects .
Waste Management		1600 cr	To be commissioned in 2010	Middlle Vaitarna Water Supply Project.
Waste Management		2376 cr	Ddeadline 2012	Sewage Disposal Project

# Infrastructure

# Bank Credit



Source: RBI

Source: RBI

**Bank credit to infrastructure picking up since 2002**

# Other Private Initiatives

- **Industrial parks** - Mahindra and Mahindra & L&T
- **Special economic zones** - Reliance industries & Poonawalla
- **Contract forming** - HLL & ITC
- **Rural information** - ITC (eChoupal & Choupal Sagar)
- **Micro credit** - ICICI & HLL
- **BOOT projects**  
**Gesco** - Gammon, HCC, IVCRL & Mahindra
- **IT Parks** - TCS, HCL & Flextronics



## A novel corporate initiative

# ITC's e-Choupal & Sagar

- It is a rural information dissemination plan to improve rural communication and income
- Already set up 5372 eChoupals covering 31,000 villages in 7 states of India & empowered 3.5 million farmers
- Sourcing a range of Agriculture commodities (Oilseeds, Grains, Coffee, Aquaculture)
- Marketing a variety of goods & services like Agriculture Inputs, Consumer Goods and services and Insurance

2003-04 Transactions US\$ 100 Million

- 20,000 eChoupals covering 100,000 villages in 15 states to Empower 25 million farmers by the end of 2010
- Increase range of agriculture commodities such as Spices, Horticulture, Cotton etc., and to widen variety of goods & services in Education, Health, Entertainment, etc.
- **Projected transactions of US\$ 2.5 Billion by the end of 2010**

## Micro Finance & SHG

**14 million** poor families access micro finance through **881,154** Self Help Groups (SHG)

**SHG** are linked to over **30 000 branches of 504 banks** comprising commercial banks, regional rural banks and cooperative bank

India's micro credit **demand over Rs.500 billion**

Micro Credit raised so far: **Rs.18 billion**

Current Demand (Households) : **7.5 million poor households** need support

Rural households taking credit outside the formal sector : **36%**

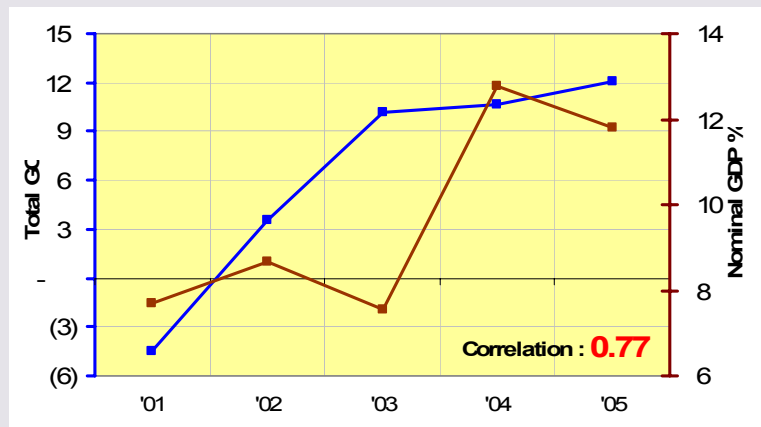
Prominent Government Agencies into micro credit :

- National Bank for Agriculture and Rural Development (**NABARD**)
- Small Industrial Development of India (**SIDBI**)

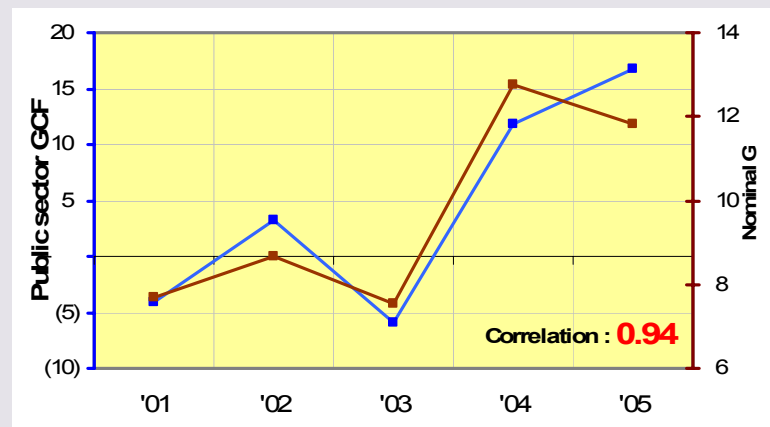
Driving low income group self employment programmes

# GDP Growth and Gross Capital Formation

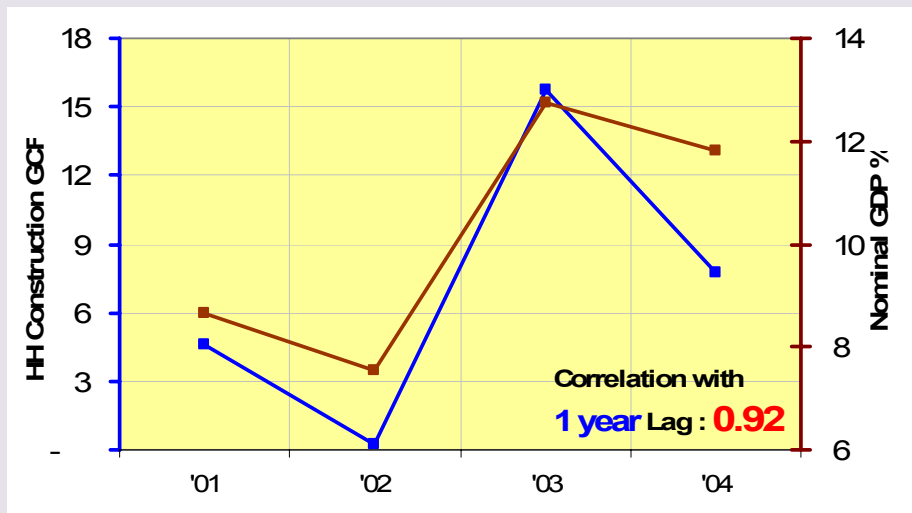
## GDP vs. Total GCF



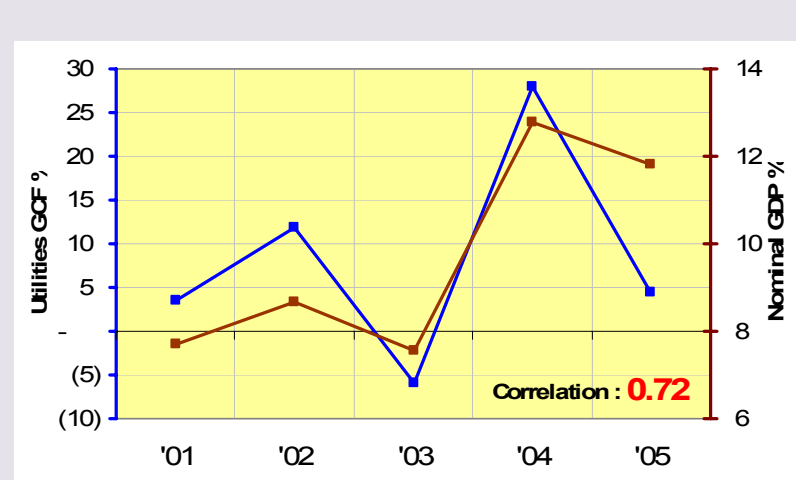
## GDP vs. Public sector GCF



## GDP vs. Household Construction GCF



## GDP vs. Utilities GCF



Source: CSO, RBI

Since 2001 GDP is supported by improved capital formation

# Caution

If there is any slippage in the  
planned  
**infrastructure investment**  
we will certainly see the repeat of  
nineties.

**B&K Economic Research**

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