



# A Tale of Two Giants: India's and China's Experience with Reform and Growth

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## **India's Recent Growth Experience**

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# Outline

- ◆ **Comparative Indicators**
- ◆ **Growth and Structural Change**
- ◆ **Sources of Growth**

# Comparative Indicators

# Ten Largest Economies

	GDP PPP (International \$ billion)			
	2001		1980	
	Rank		Rank	
United States	1	9792	1	2957
China	2	5111	9	421
Japan	3	3193	2	1085
<b>India</b>	<b>4</b>	<b>2930</b>	<b>5</b>	<b>529</b>
Germany	5	2087	3	803
Italy	6	1430	4	544
United Kingdom	7	1420	7	498
France	8	1420	6	518
Brazil	9	1269	8	467
Canada	11	843	11	274

Source: World Development Indicators 2003 CD-RoM.

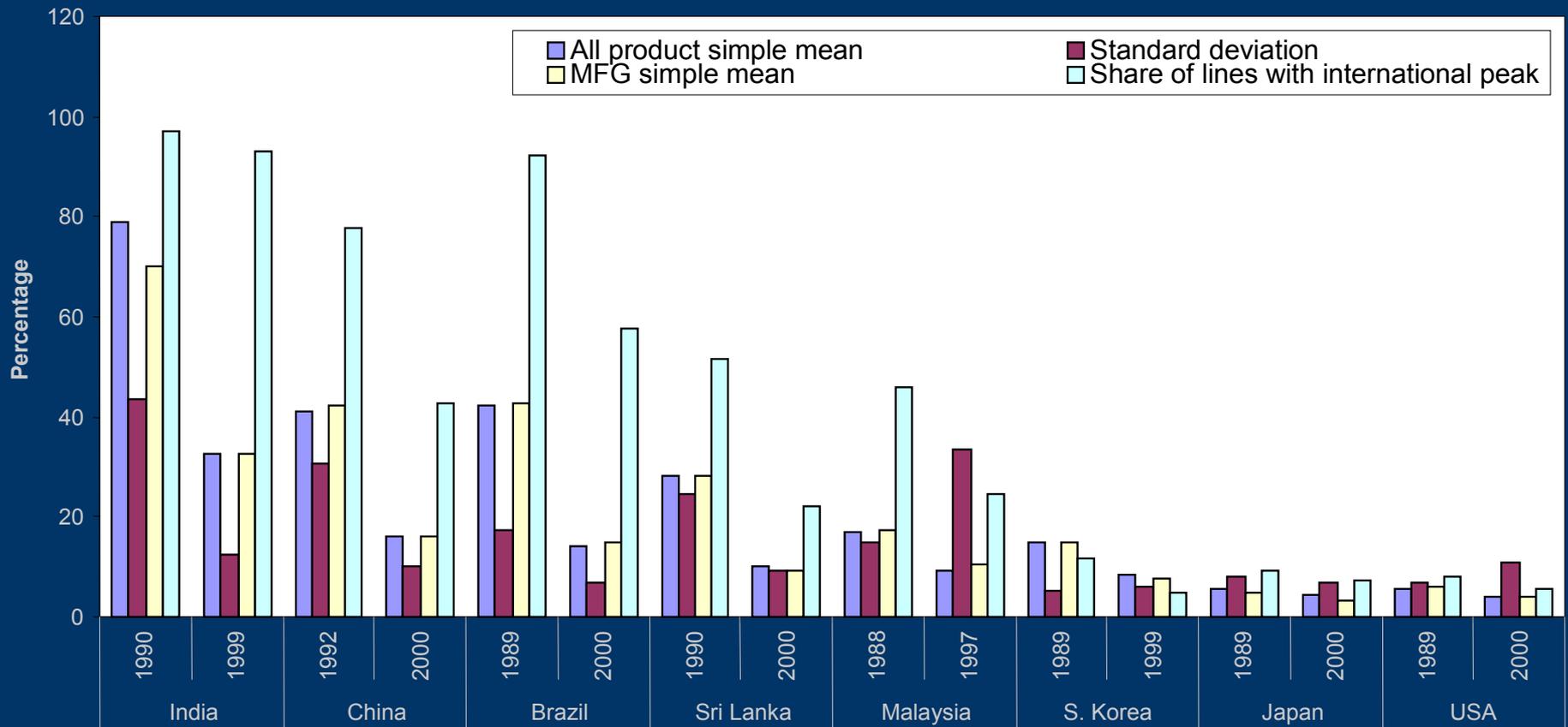
# Growth in the 1990s\*

Country Name	Growth Rate			Rank by growth		Ranking by Size
	1991-01	1991-95	1996-01	1991-95	1996-01	2001
Ireland	7.2	4.7	9.2	13	1	50
China	9.9	12	8.1	1	2	2
Vietnam	7.5	8.2	6.9	5	3	40
<b>India</b>	<b>5.5</b>	<b>5.3</b>	<b>5.6</b>	<b>12</b>	<b>4</b>	<b>4</b>
Bangladesh	4.8	4.4	5.2	17	5	32
Egypt, Arab Rep.	4.2	3.4	4.9	21	6	29
Korea, Rep.	6	7.5	4.7	7	7	14
Mexico	3.2	1.6	4.5	37	8	12
Poland	3.5	2.3	4.5	28	9	23

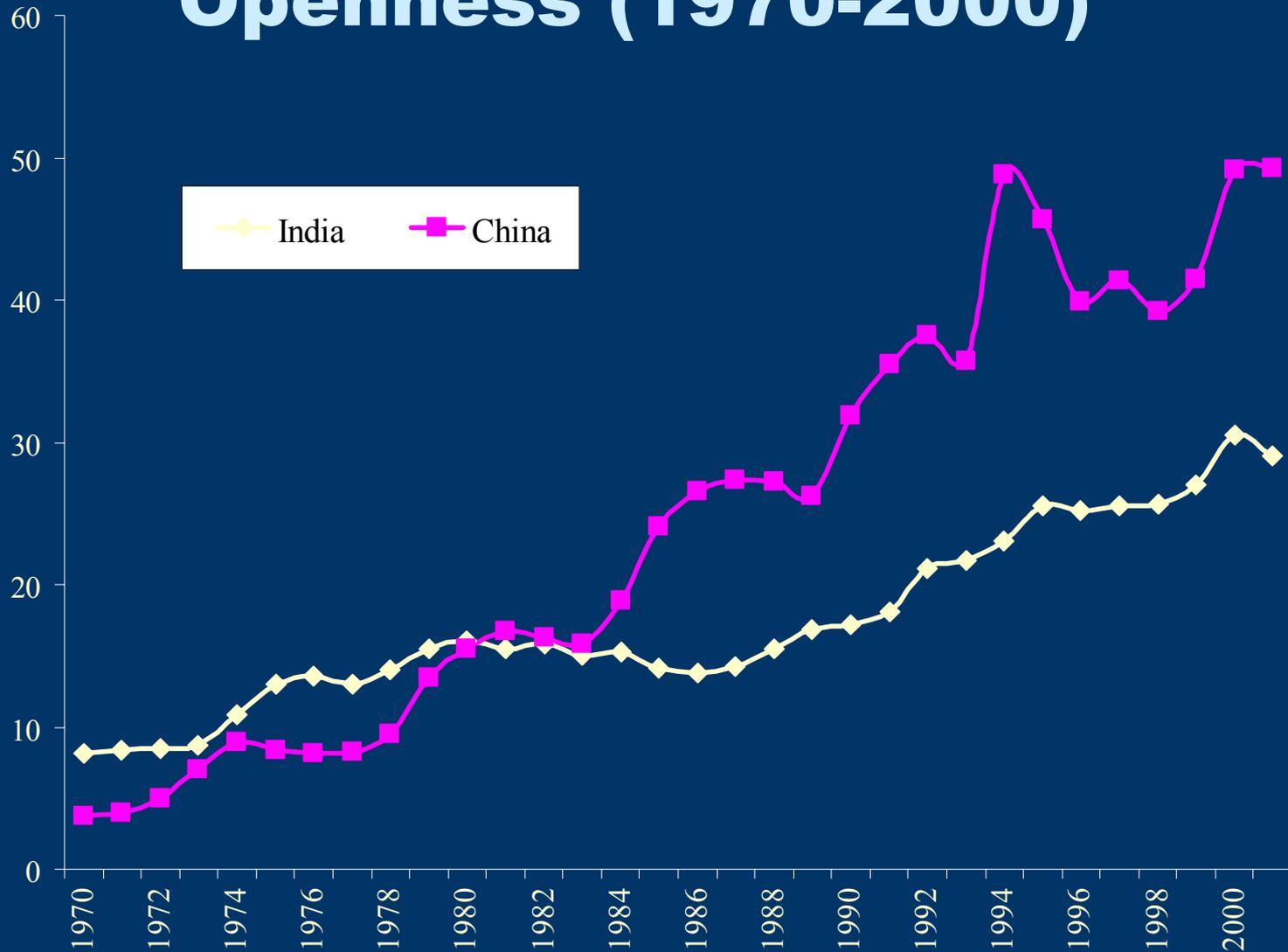
\*Above \$100 bn at 2001 PPP. Averages of the annual growth rates during the period.

**Source:** World Development Indicators 2003 CD-RoM.

# Trade Policies



# India and China: Economic Openness (1970-2000)\*



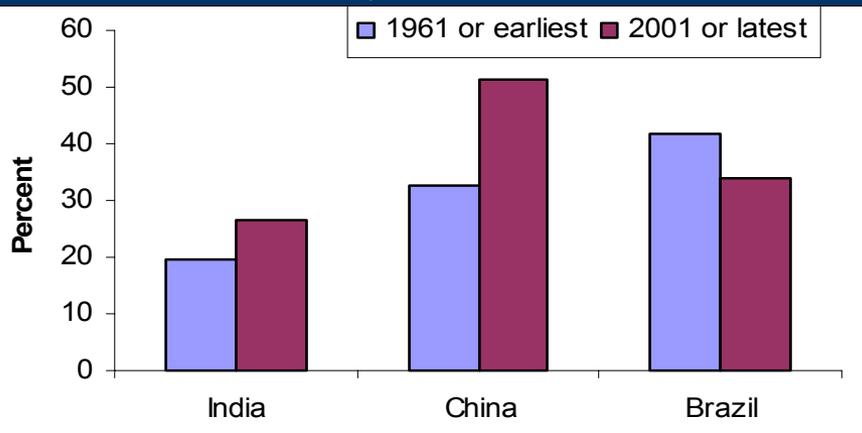
\*Export and import of goods and services as percentage of GDP.

# External Vulnerability (2001)

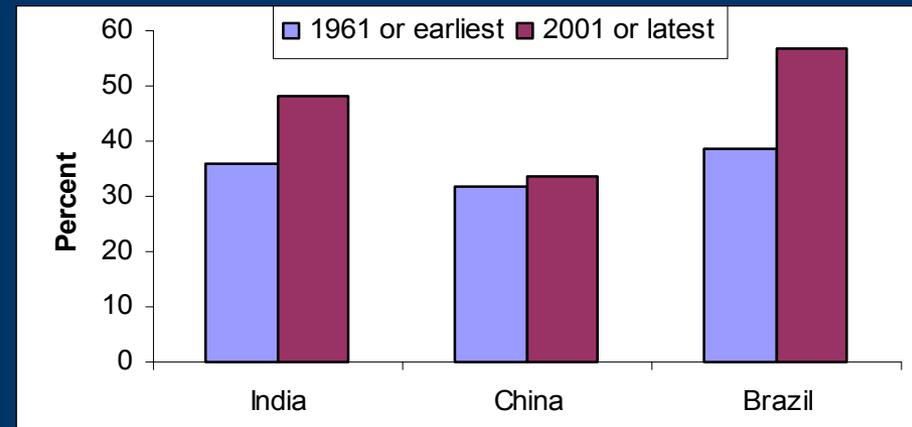
Vulnerability Indicators	India	China	Brazil	Indonesia	Korea	Malaysia
External Debt/GNP (%)	21	15	47	97	26	54
Short-term/Total External Debt (%)	3	26	13	16	32	12
Debt Service/Exports of Goods and Services (%)	12	8	75	24	14	6

# Economic Structure

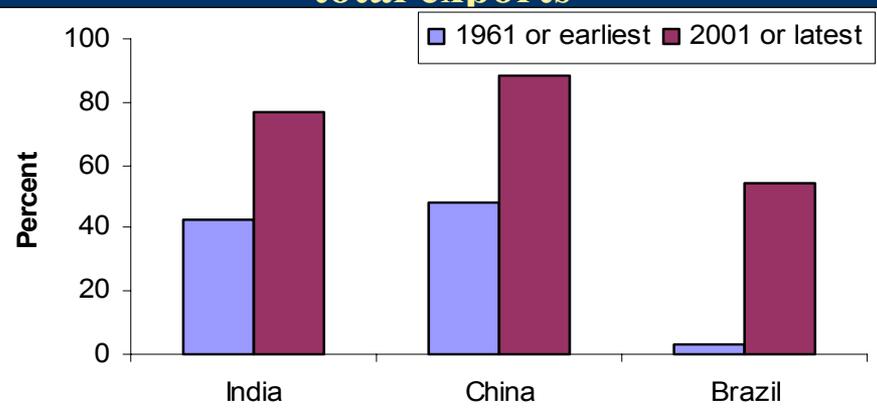
## Industry share in GDP



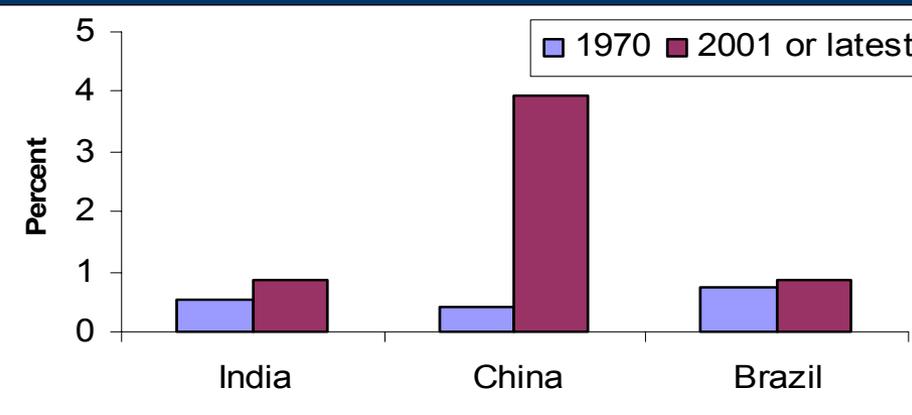
## Services share in GDP



## Exports of manufactures as percentage of total exports

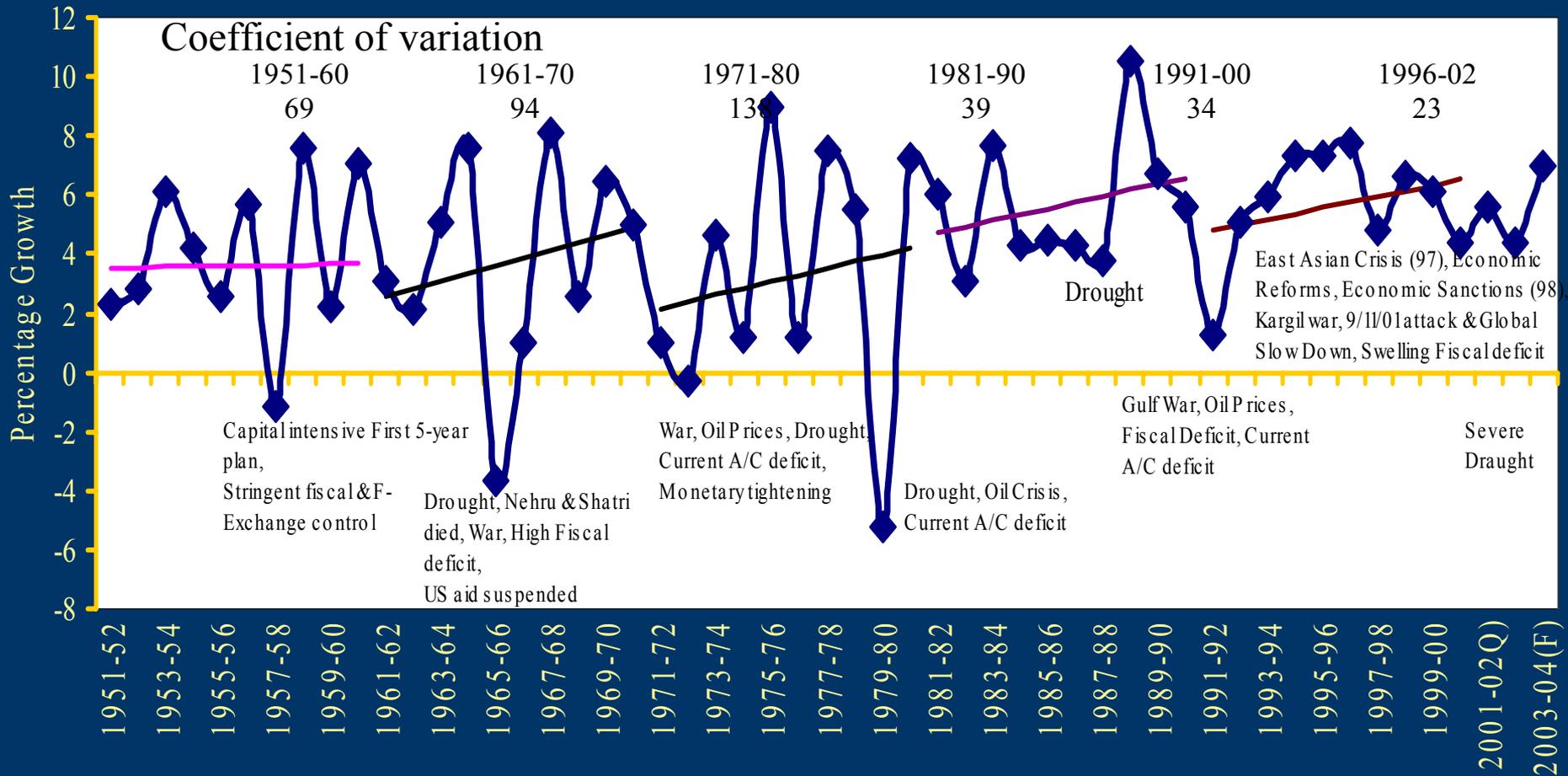


## Total exports as percentage of world exports

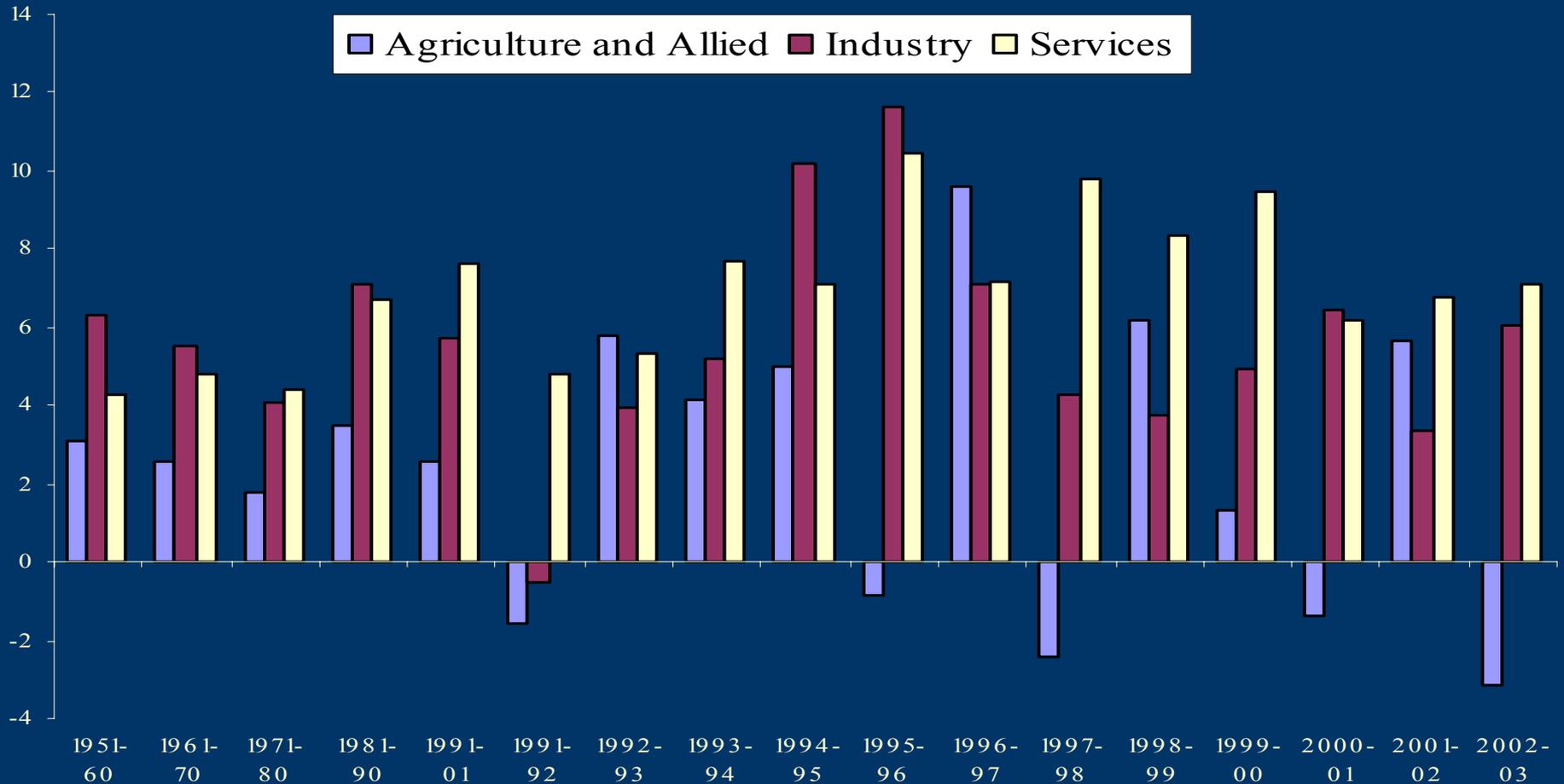


# **India: Growth and Structural Change 1951-2003**

# Growth Through Half a Century



# Growth of Real Sectoral GDP (1993-94 prices)



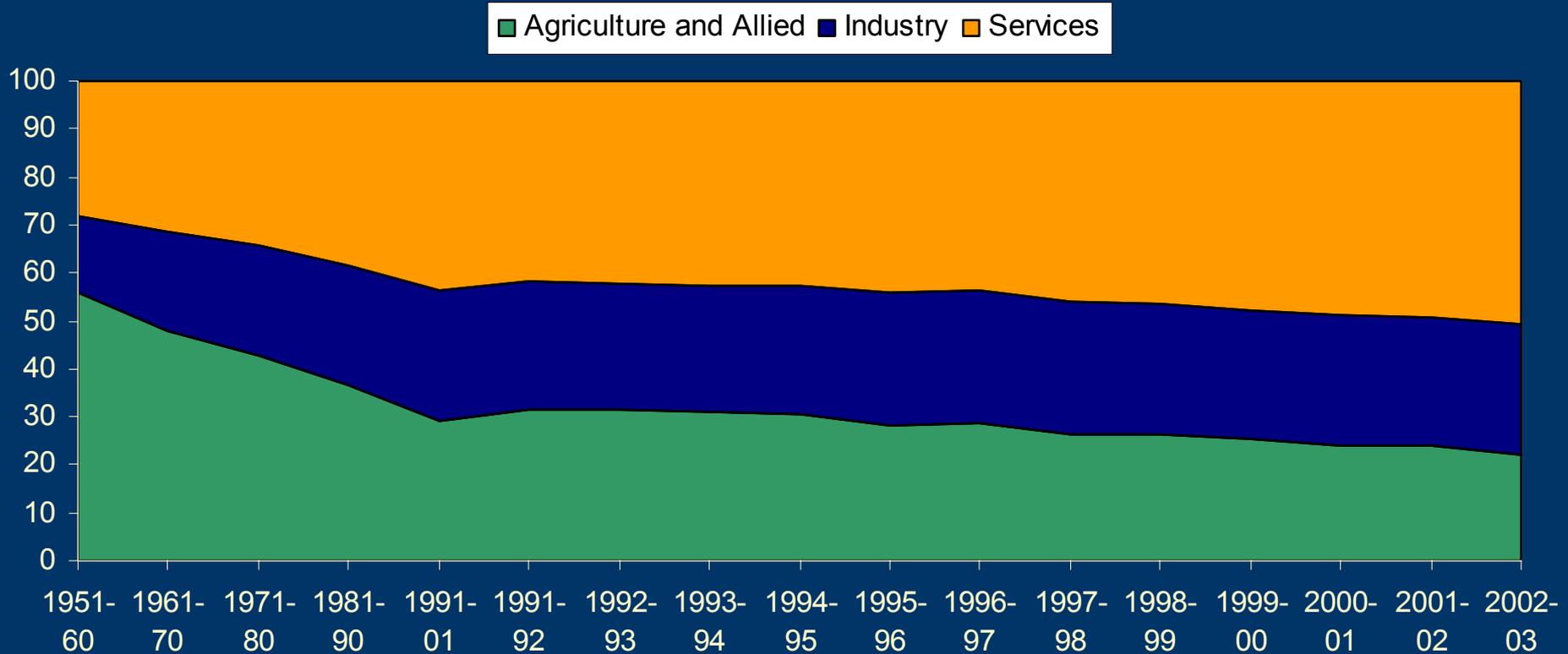
**Note:** Agriculture and Allied includes: Agriculture, Forestry and Fishing. Industry Includes: mining & quarrying, Manufacturing, electricity, gas & water supply and Construction. Services Include: trade, hotels & restaurant, transport, storage & comm., financing, insurance, real estate & business services and community, social & personal services.

# Share of Major Sectors in Real GDP (FC) (1993-94 prices)

	Agriculture and Allied	Industry (includes Construction)	Services
1951 – 1960	55.9	16	28.2
1961 – 1970	47.7	21	31.3
1971 – 1980	42.8	22.8	34.4
1981 – 1990	36.4	25	38.6
1991 – 1995	30.4	26.9	42.7
1996 – 2000	26.1	27.3	46.6
2001 – 2002	23.9	26.7	49.5
2002 – 2003	22.2	27.1	50.7

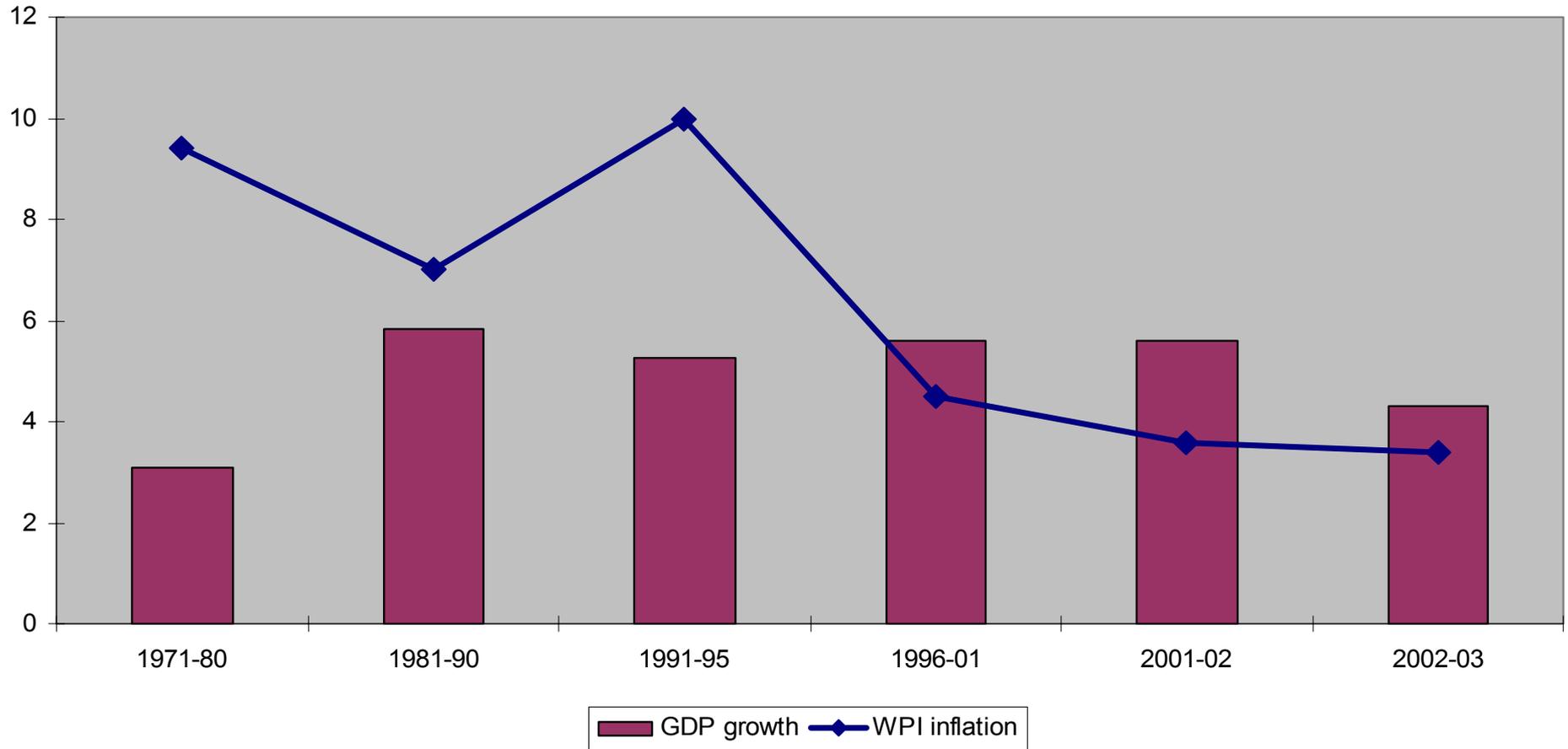
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# Sectoral Share



**Note:** Agriculture and Allied includes: Agriculture, Forestry and Fishing. Industry Includes: mining & quarrying, Manufacturing, electricity, gas & water supply and Construction. Services Include: trade, hotels & restaurant, transport, storage & comm., financing, insurance, real estate & business services and community, social & personal services.

# Growth and Inflation

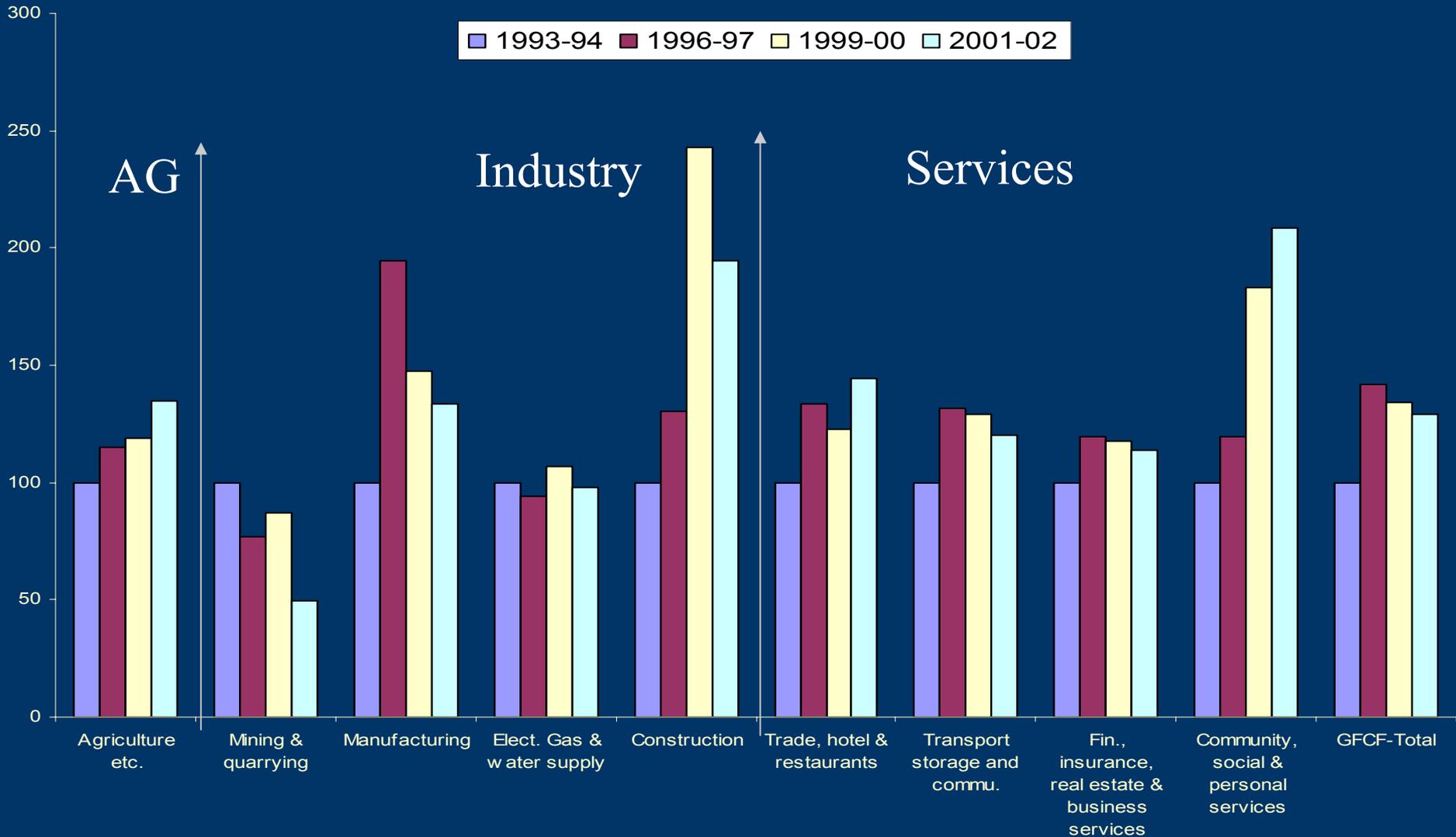


# Saving and Investment Rates (Percentage of GDP)



Institutions	1991-92	1995-96	2000-01	2001-02
<b>Domestic Saving Rates</b>	<b>22.03</b>	<b>25.15</b>	<b>23.37</b>	<b>23.95</b>
- Public Sector	1.97	2.03	-2.28	-2.51
- Private Corporate Sector	3.11	4.93	4.09	4.01
- Household Sector	16.96	18.19	21.56	22.45
<b>Domestic Investment Rates</b>	<b>22.55</b>	<b>26.9</b>	<b>23.99</b>	<b>23.74</b>
- Public Sector	8.82	7.66	6.37	6.32
- Private Corporate Sector	5.66	9.58	4.93	4.84
- Household Sector	8.06	9.66	12.68	12.58
Foreign Saving Rate	0.52	1.75	0.62	-0.21

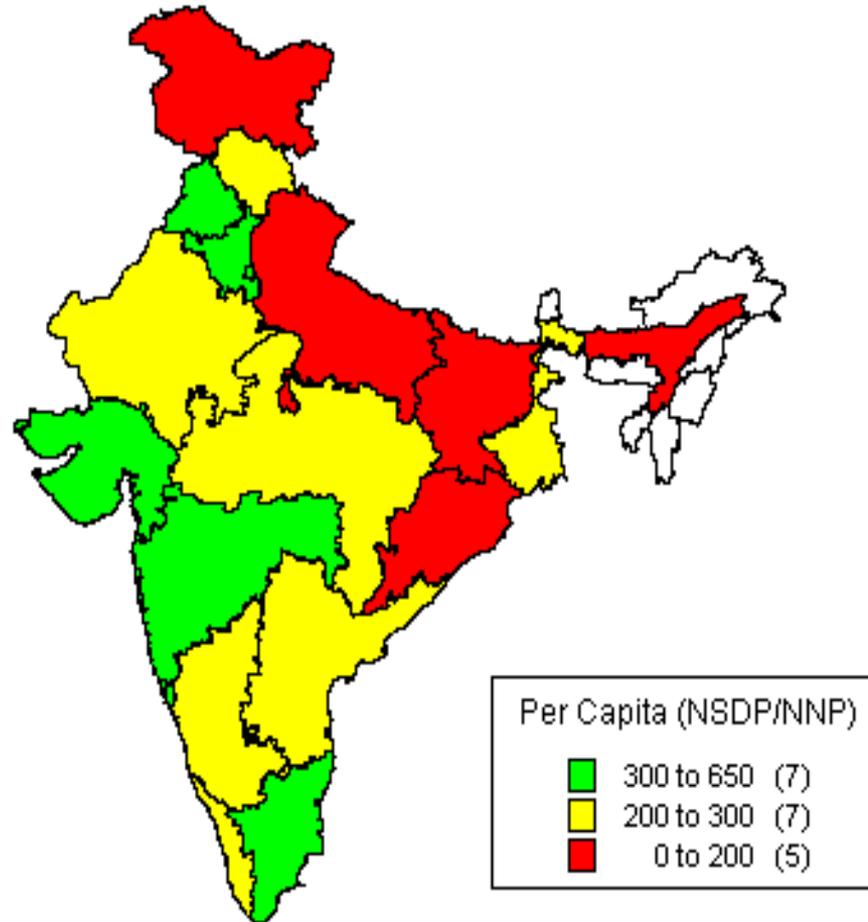
# Index of Gross Fixed Capital Formation (at 1993-94 Prices) 1993-94=100



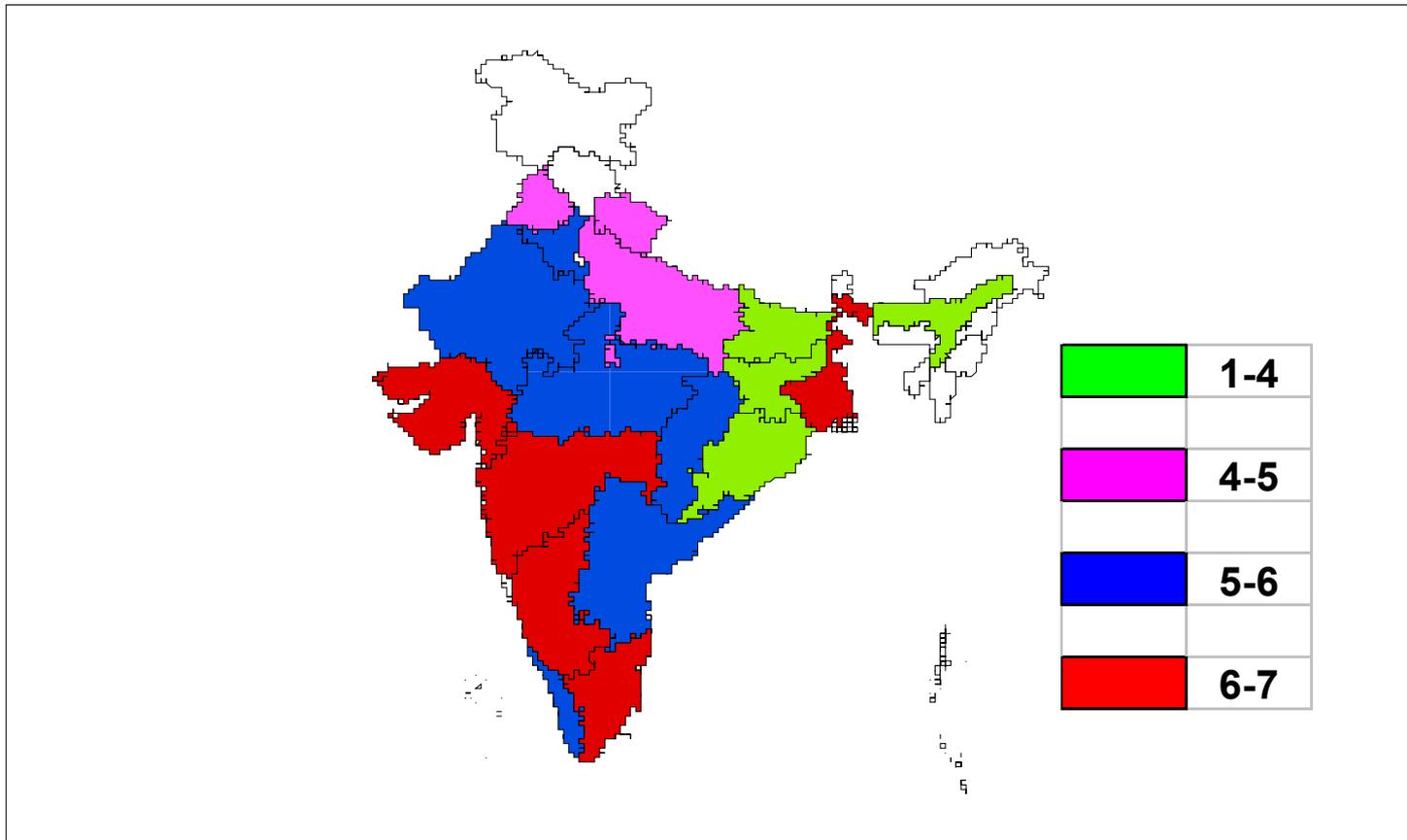
# Contribution of Public Sector

	<b>Share in Gross Domestic Capital formation</b>	<b>Share in Organized Sector Employment</b>	<b>Share in real Net domestic product at factor cost</b>
<b>1971-80</b>		<b>65.8</b>	<b>13.1</b>
<b>1981-85</b>	<b>46.8</b>	<b>69.4</b>	<b>23.5</b>
<b>1986-90</b>	<b>46.5</b>	<b>71.2</b>	<b>26.0</b>
<b>1991-95</b>	<b>36.5</b>	<b>70.7</b>	<b>26.1</b>
<b>1996-00</b>	<b>29.8</b>	<b>69.0</b>	<b>26.0</b>

# Regional Variation in Per Capita Income (US\$):1996-97

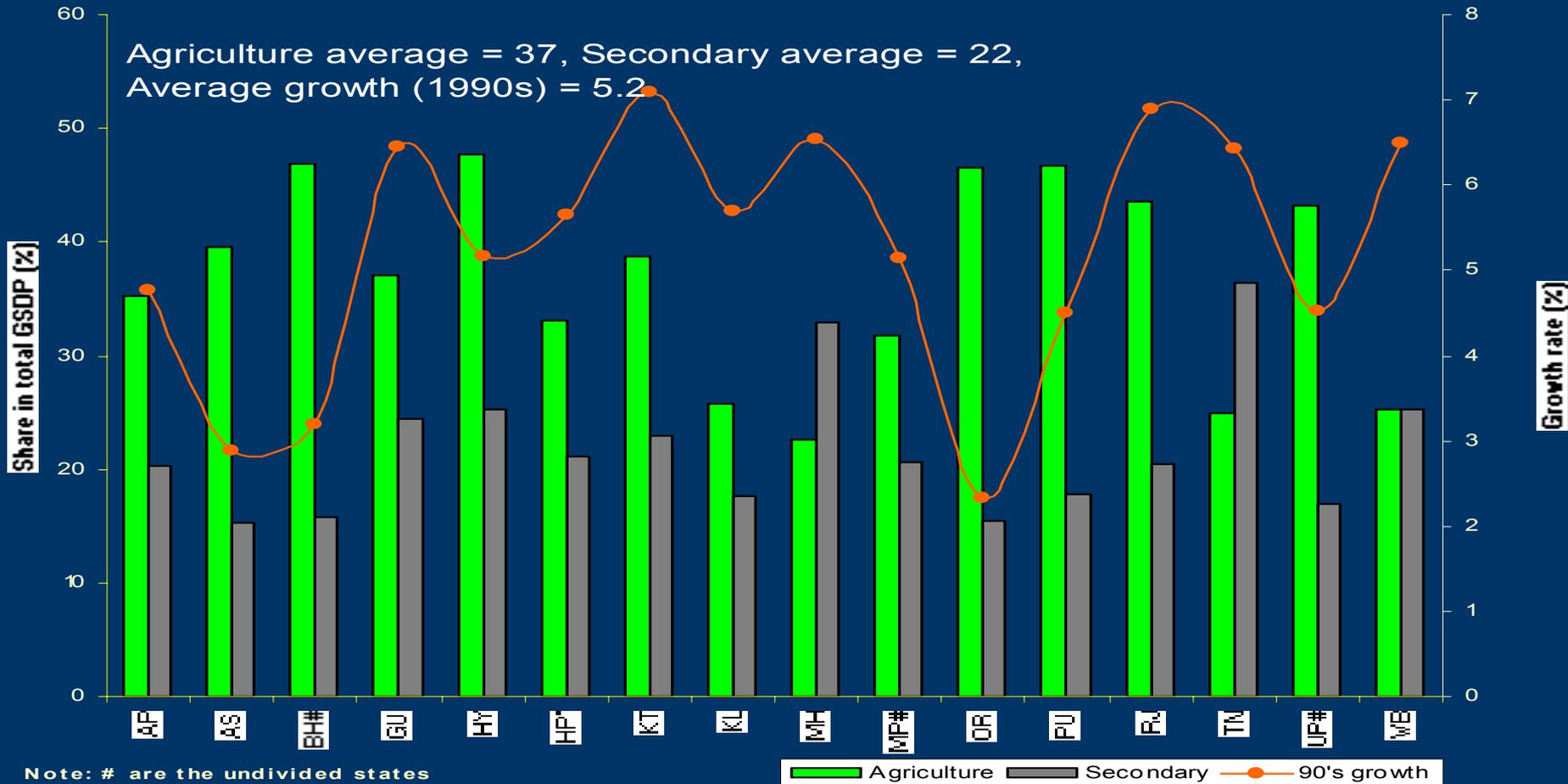


# Annual Average Growth Rate of Real NSDP in 1990s



# Economic Growth: Across States

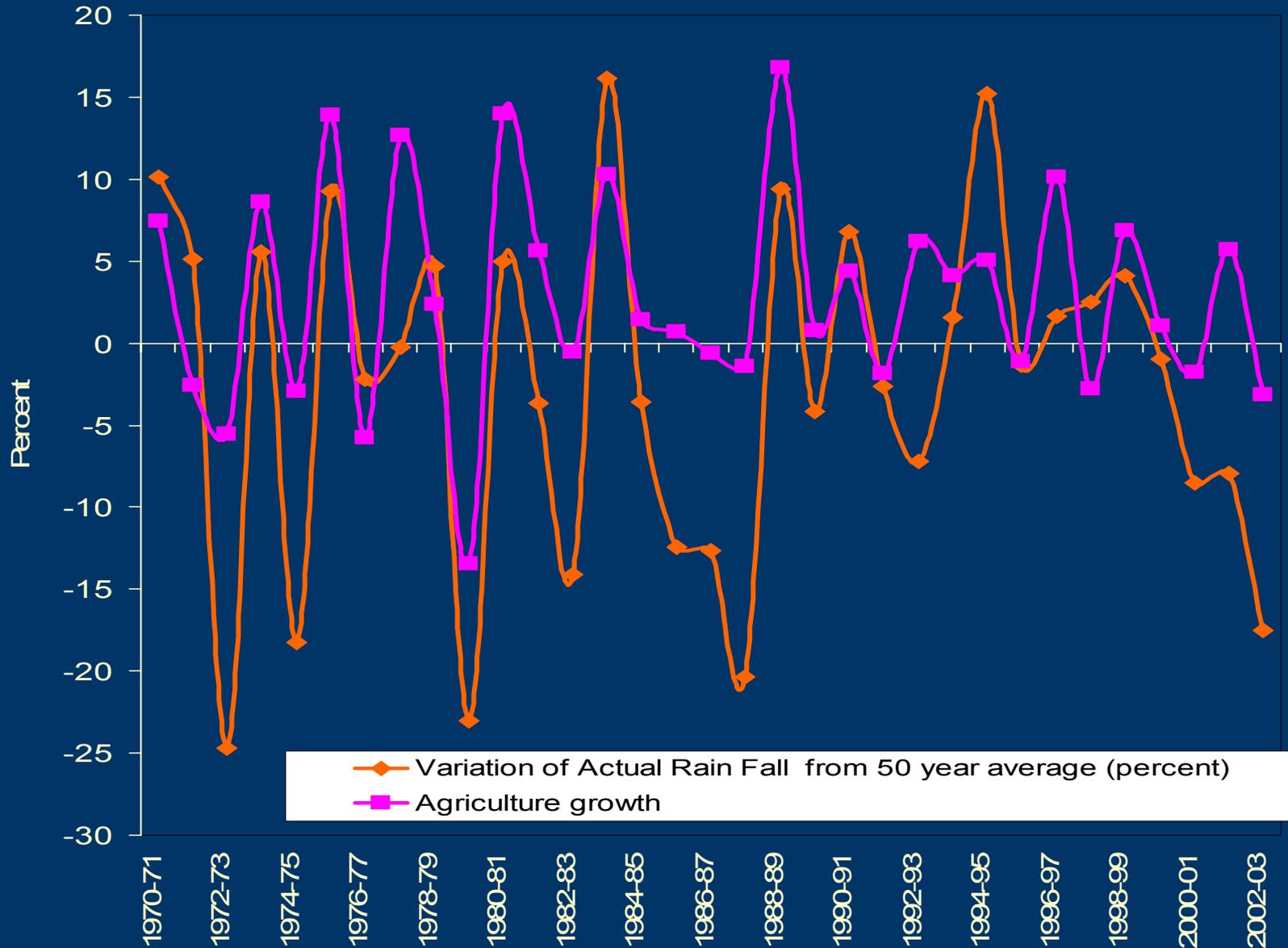
Share of Sectoral GSDP during the period 1980-81 and States' growth during 1990s



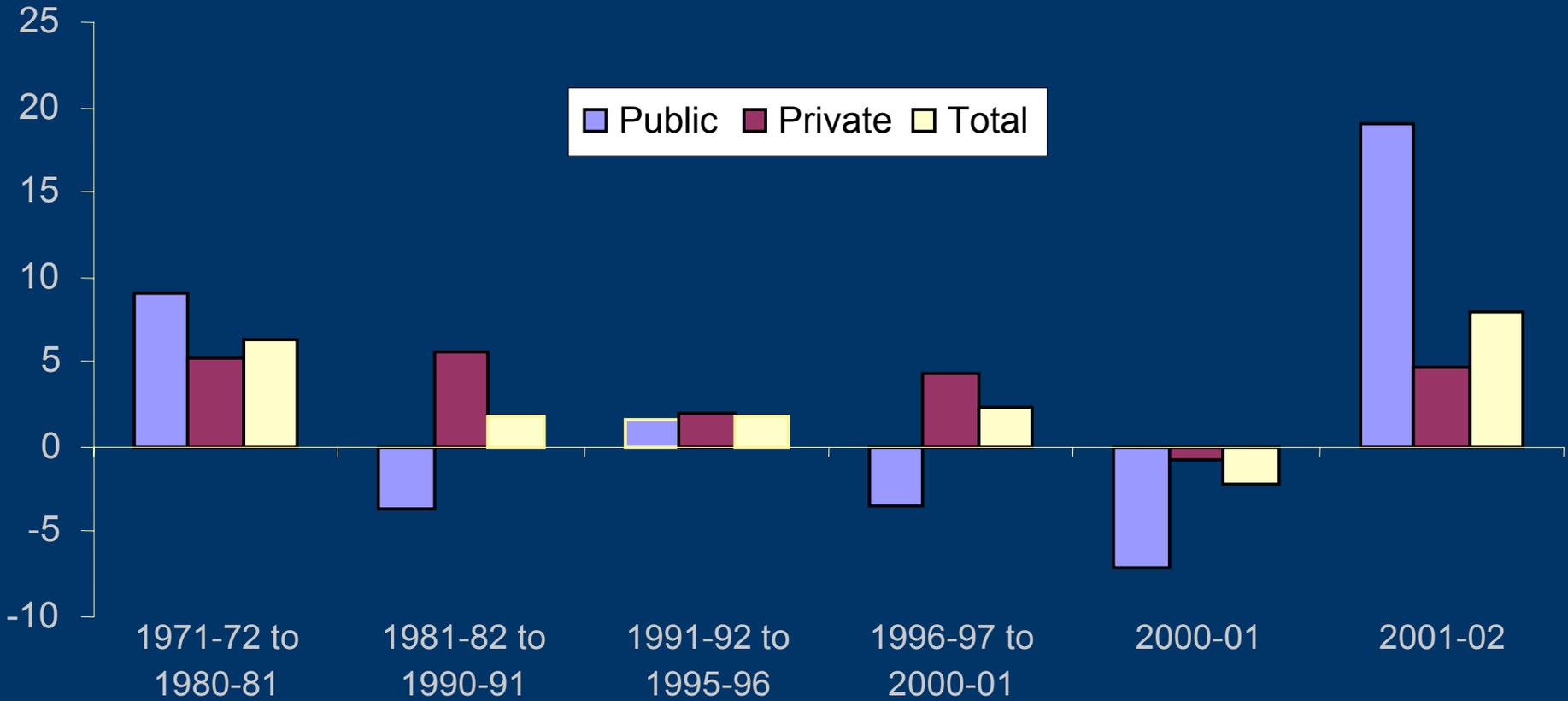
# Sectoral Growth: Agriculture

- ◆ Agriculture still dependent on rain.
- ◆ Growth in yields slowed from 3.2 percent in the 1980s to about 1.7 percent during the 1990s.
- ◆ Shift in consumption from cereals to higher value items requires new research and innovation.
- ◆ Investment levels have been falling.
- ◆ Government expenditure suboptimal.

# Rainfall and Agriculture Growth



# Agriculture: Real Gross Fixed Capital Formation (Growth Rates: Percent Per Annum)



# Sectoral Growth: Industry

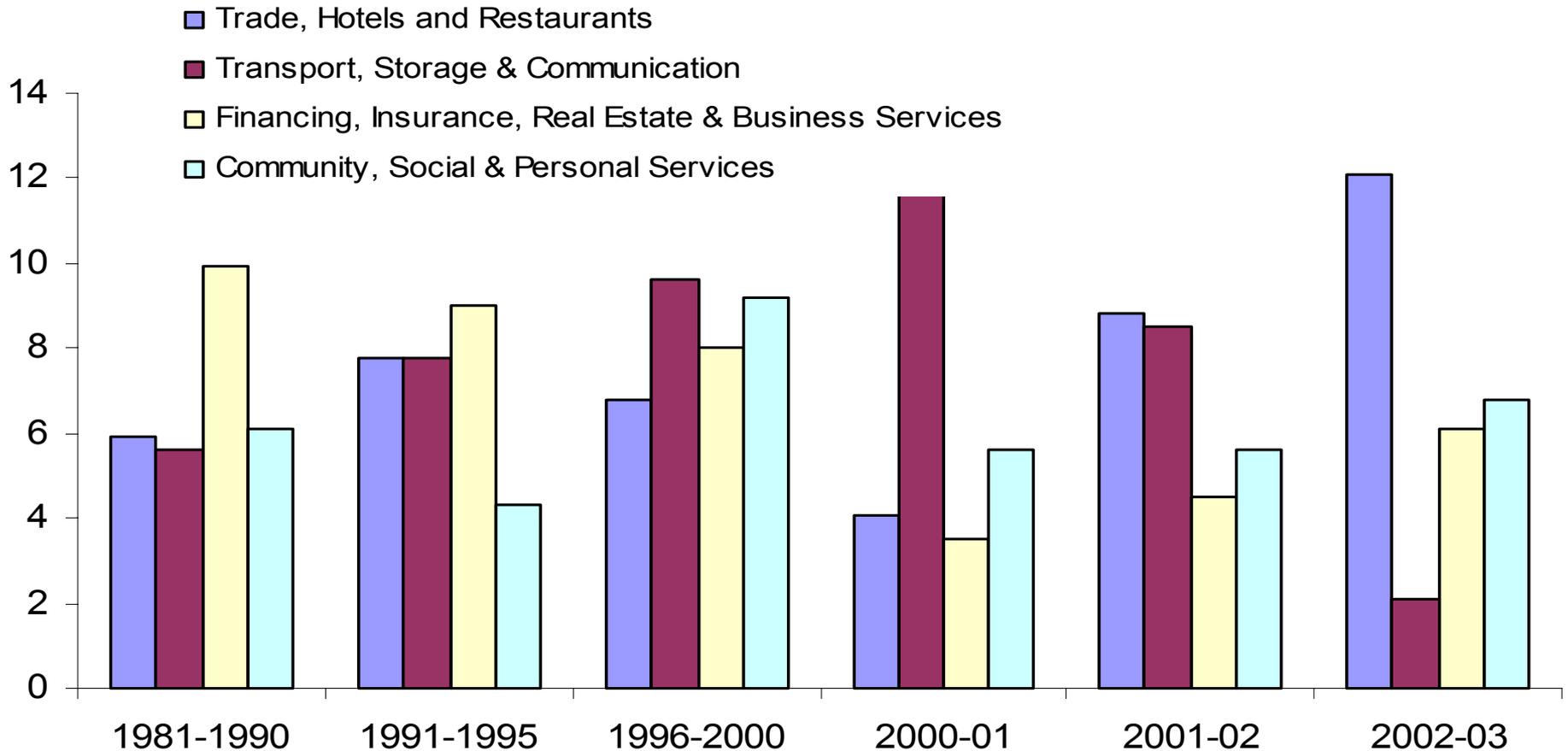
- ◆ Capital formation in mining and electricity retarded by fiscal, policy constraints.
- ◆ Capital formation in manufacturing has also slowed.
- ◆ Savior: construction

# Index of Industrial Production - Growth Rates (Percent Annual)

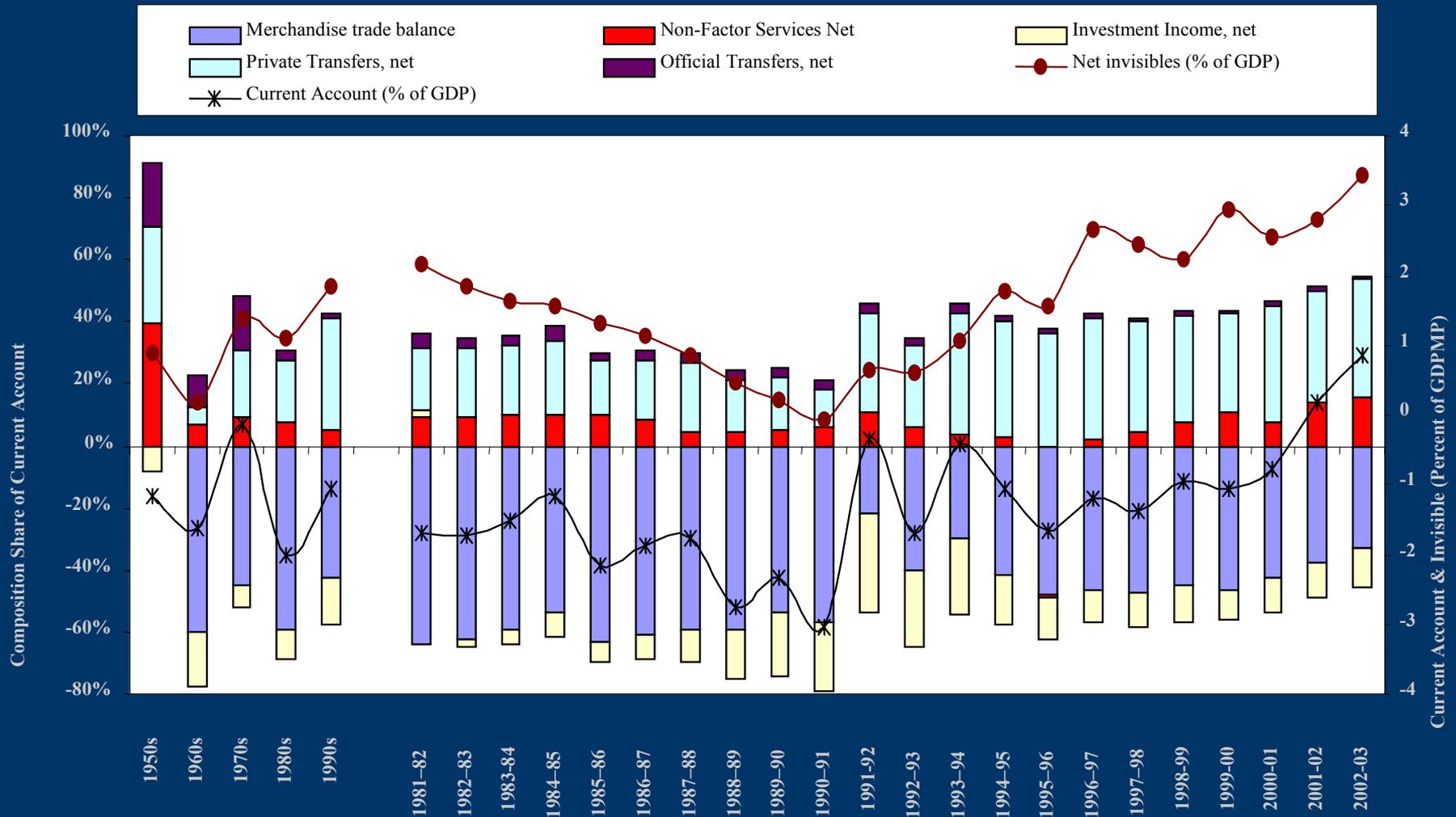


YEAR	General	Key category			Use based classification				Consumer goods	
		Manufacturing	Mining	Electricity	Basic Goods	Capital Goods	Intermediate	Consumer Goods	Consumer Durable	Consumer Non-durable
<b>Wt</b>	<b>100.00</b>	<b>79.36</b>	<b>10.47</b>	<b>10.17</b>	<b>35.57</b>	<b>9.26</b>	<b>26.51</b>	<b>28.66</b>	<b>5.36</b>	<b>23.3</b>
1981-91	7.85	7.61	8.34	9.02	7.88	11.46	5.92	6.67	13.87	5.47
1991-95	6.22	6.14	4.83	7.52	7.78	0.34	7.93	6.33	9.29	5.76
1996-00	5.70	6.17	1.80	5.66	4.19	7.71	7.14	5.51	9.35	4.33
2001-02	2.62	2.85	0.43	3.10	2.42	-3.38	1.56	6.00	11.46	4.11
2002-03	5.78	6.02	5.81	3.19	4.82	10.43	3.81	7.19	-6.42	12.25
2003-04 (Apr-Aug)	5.65	6.16	4.37	2.37	4.26	7.74	3.31	8.86	4.81	10.19

# Growth of Major Components of Services Sector (1993-94 Prices)



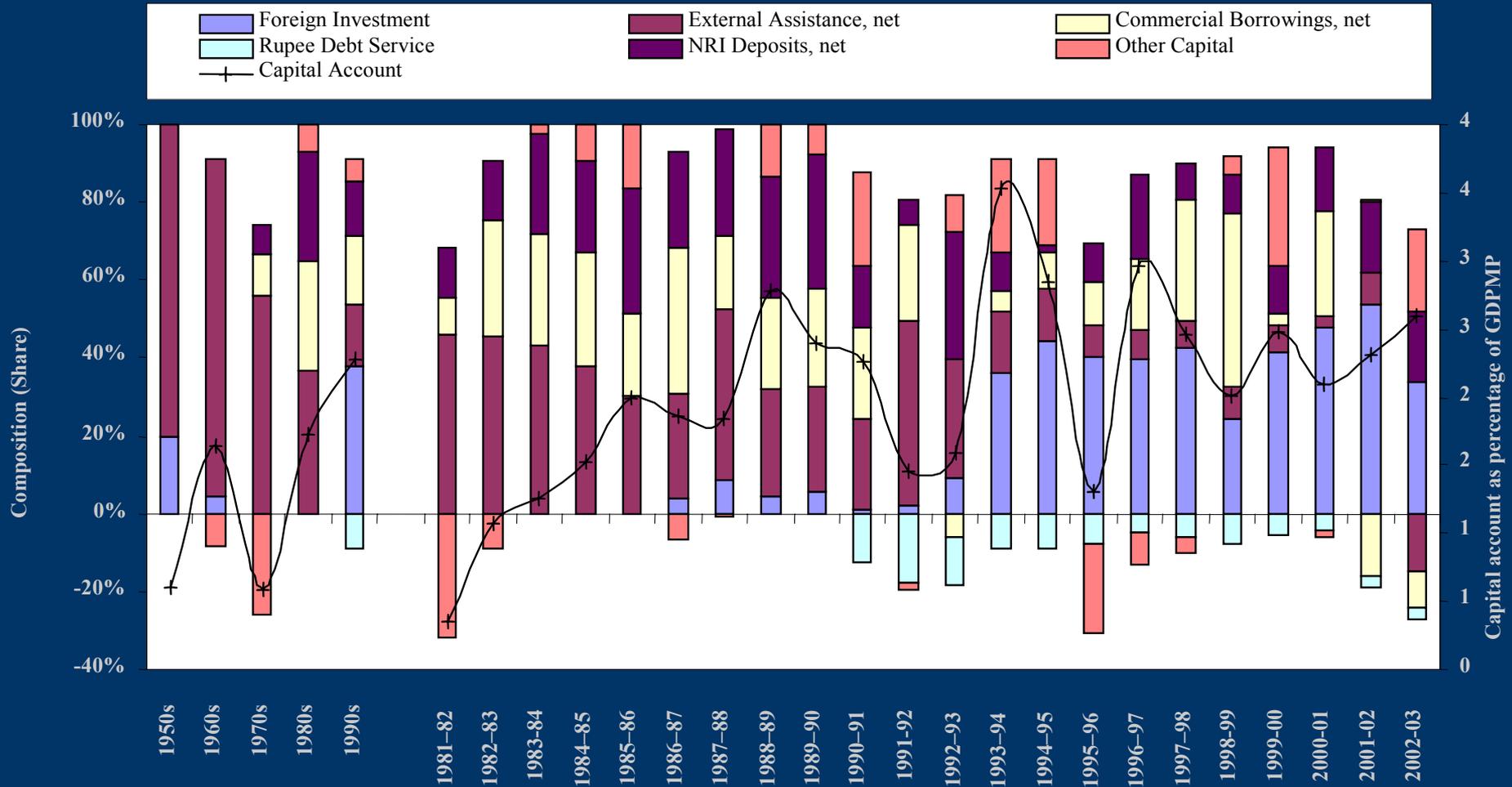
# External Sector: Current Account



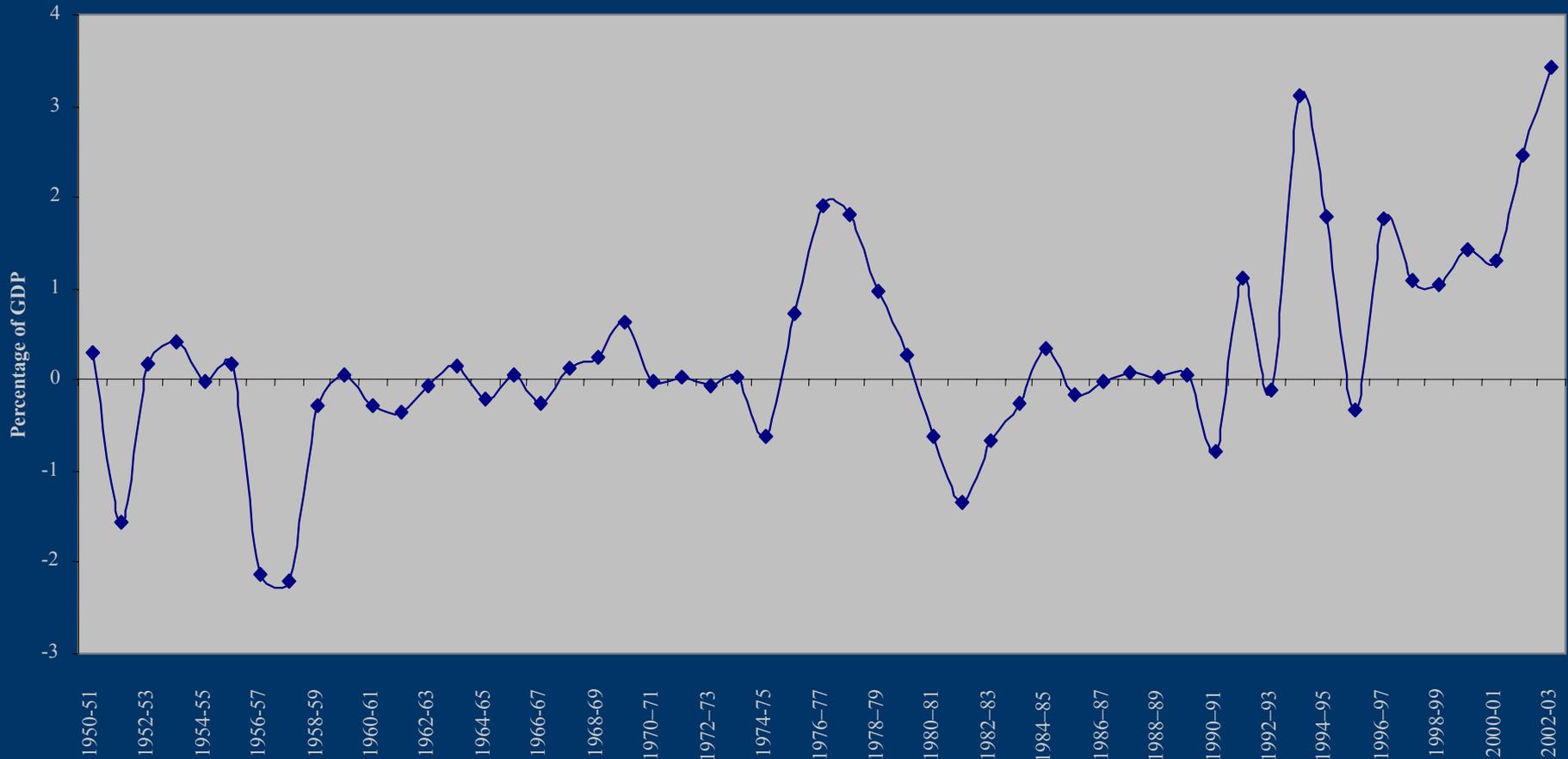
# Economic Growth: Export and Its Determinants

	<b>REER5</b>	<b>IIPG5</b>	<b>Merchandise export</b>
<b>1993-95</b>	<b>-2.8</b>	<b>2.3</b>	<b>19.7</b>
<b>1995-00</b>	<b>-0.3</b>	<b>3</b>	<b>7.3</b>
<b>2001-02</b>	<b>1.2</b>	<b>3.5</b>	<b>-1.6</b>
<b>2002-03</b>	<b>-4.6</b>	<b>1.1</b>	<b>19.2</b>

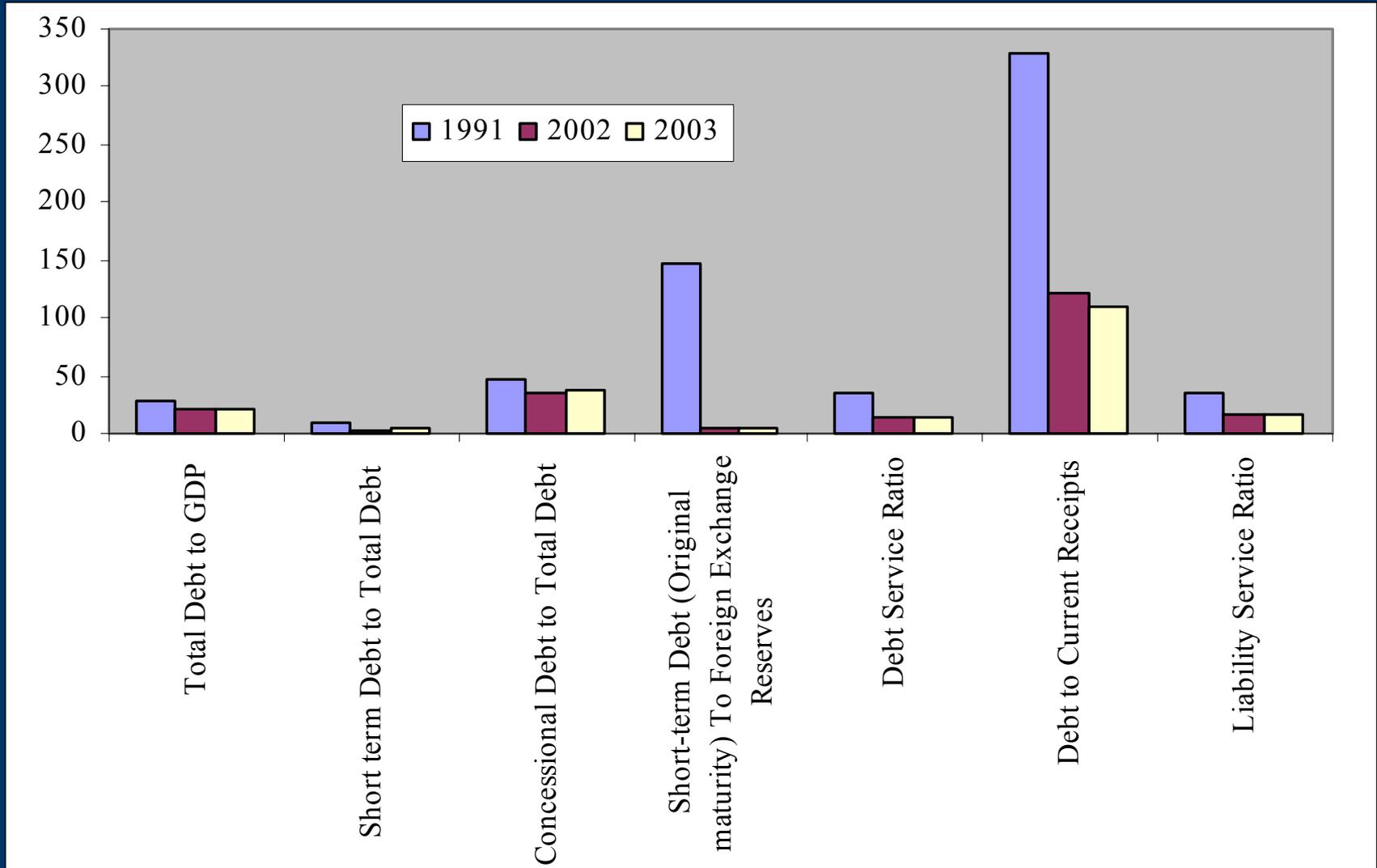
# External Sector: Capital Account



# External sector: Overall balance



# External Debt (as at end-March)

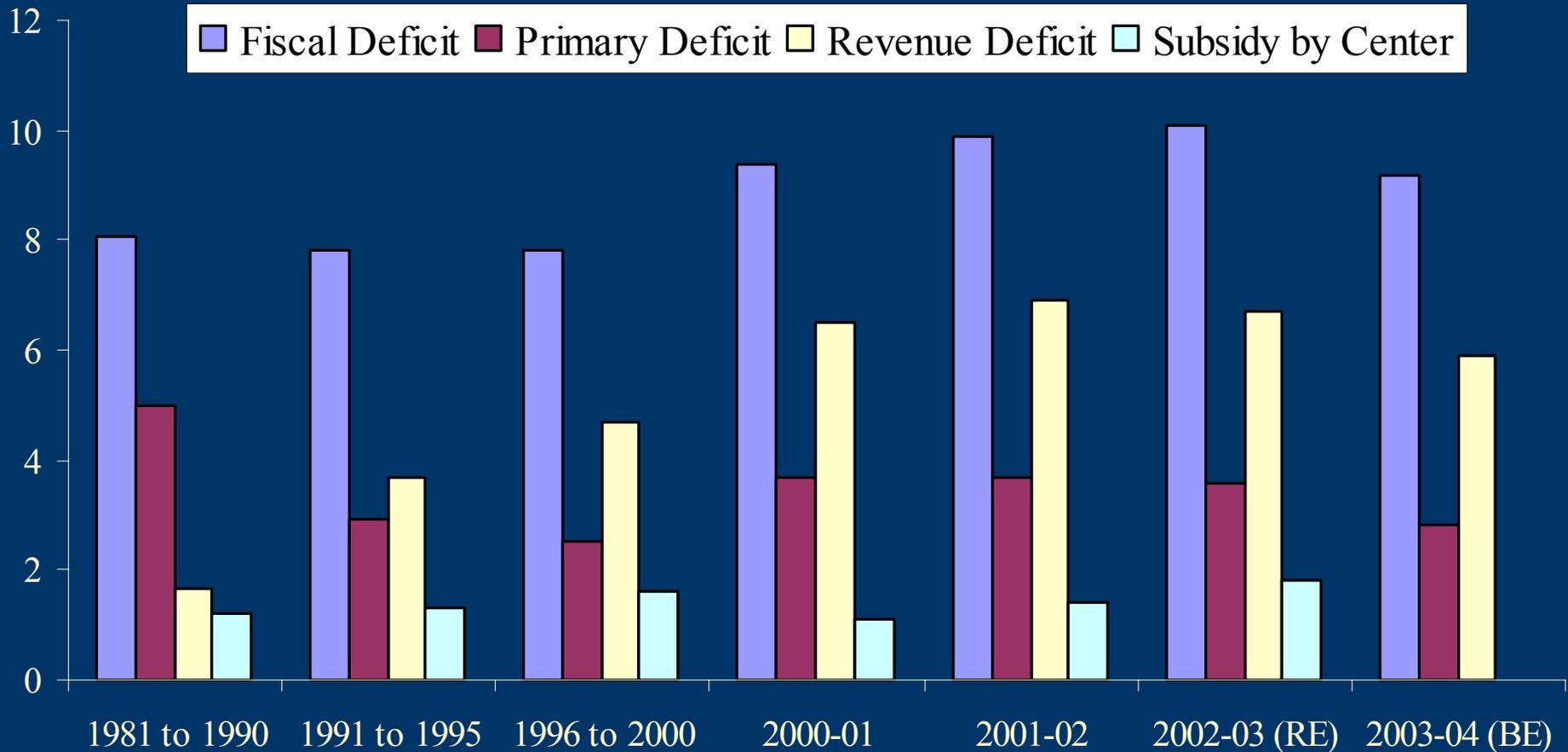


# Consolidated Deficits of Central and State Governments

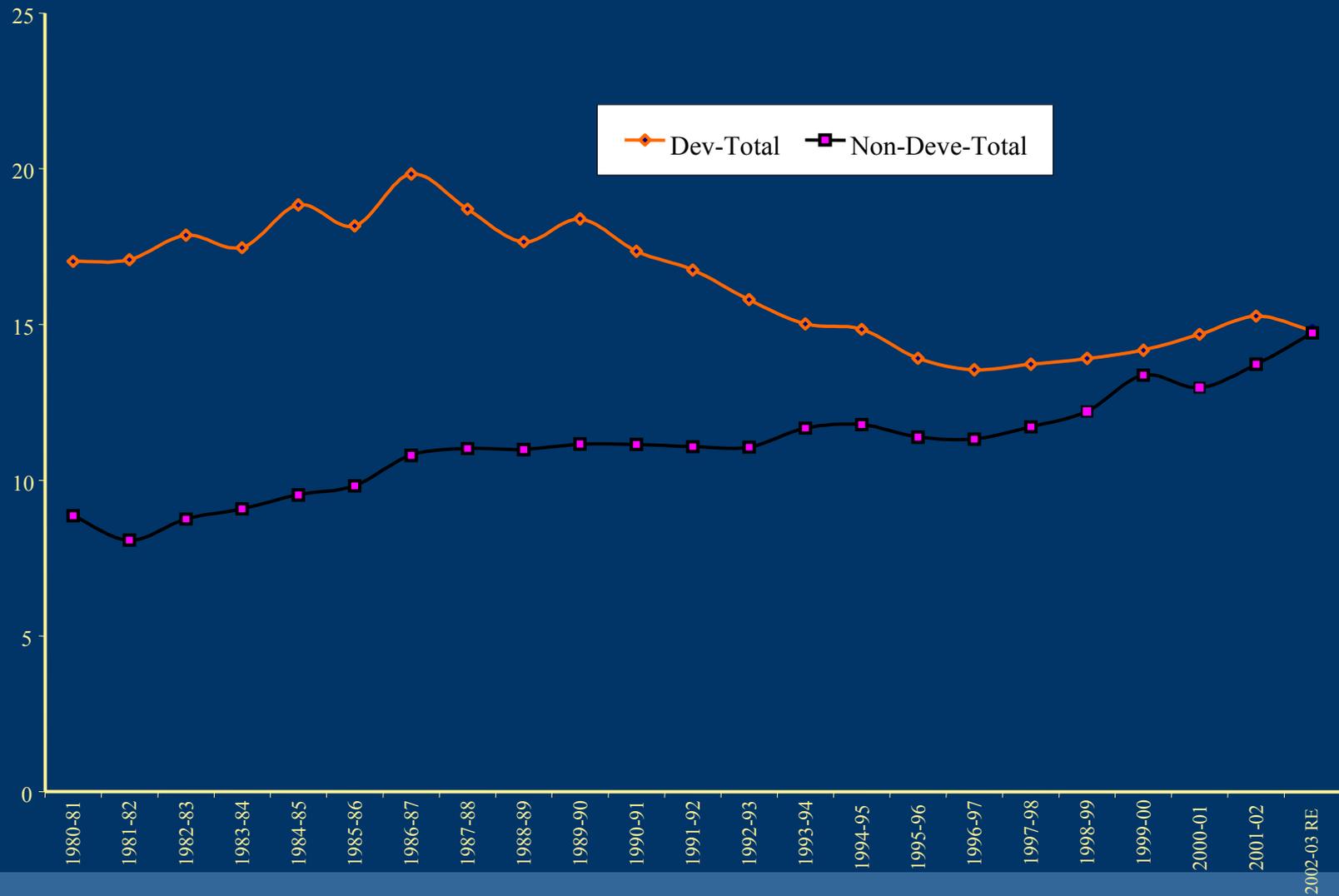


	<b>Fiscal Deficit</b>	<b>Primary Deficit</b>	<b>Revenue Deficit</b>	<b>Subsidy by Center</b>
<b>1981 to 1990</b>	<b>8.05</b>	<b>5</b>	<b>1.65</b>	<b>1.2</b>
<b>1991 to 1995</b>	<b>7.8</b>	<b>2.9</b>	<b>3.7</b>	<b>1.3</b>
<b>1996 to 2000</b>	<b>7.8</b>	<b>2.5</b>	<b>4.7</b>	<b>1.6</b>
<b>2000-01</b>	<b>9.4</b>	<b>3.7</b>	<b>6.5</b>	<b>1.1</b>
<b>2001-02</b>	<b>9.9</b>	<b>3.7</b>	<b>6.9</b>	<b>1.4</b>
<b>2002-03 (RE)</b>	<b>10.1</b>	<b>3.6</b>	<b>6.7</b>	<b>1.8</b>
<b>2003-04 (BE)</b>	<b>9.2</b>	<b>2.8</b>	<b>5.9</b>	

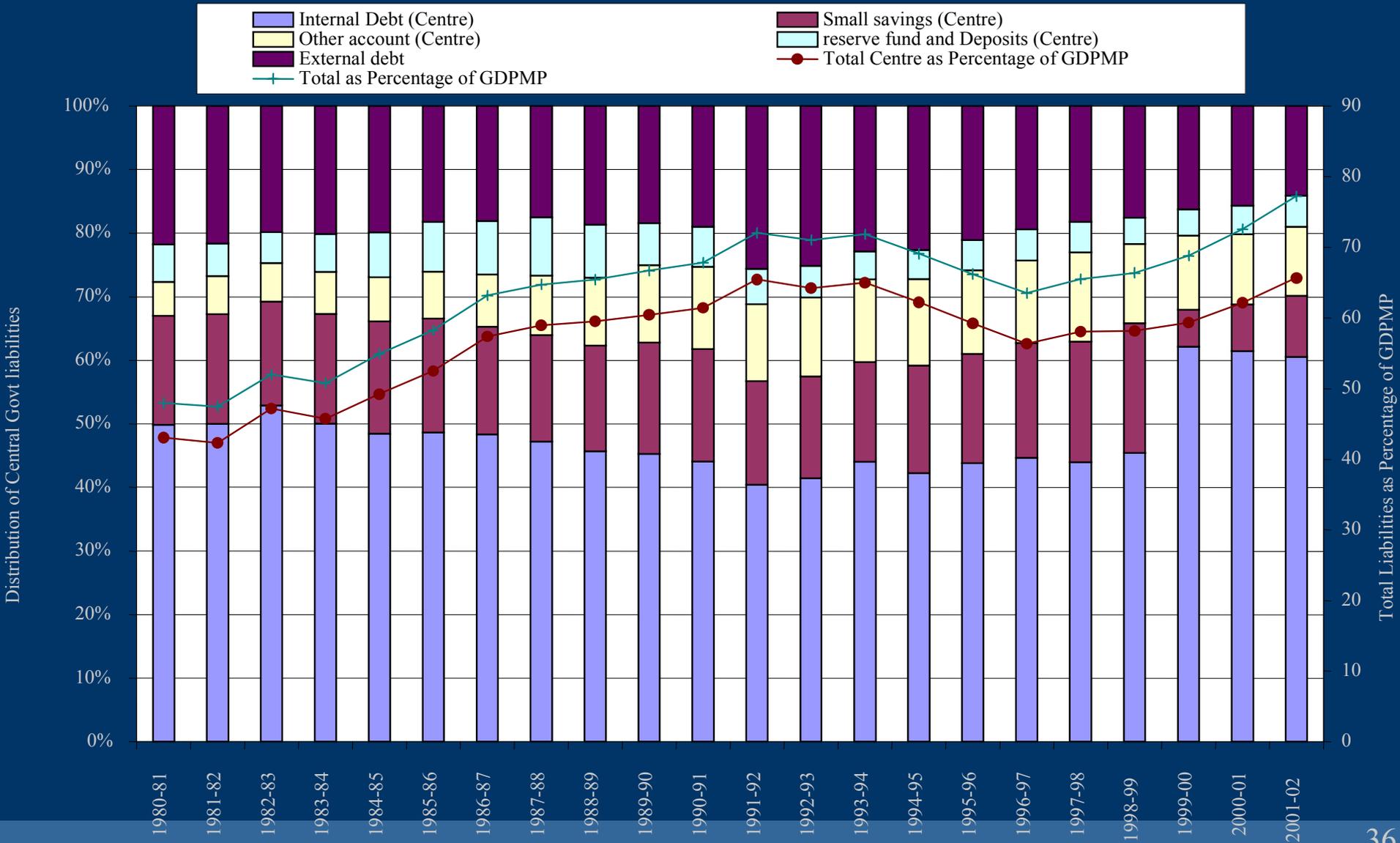
# Consolidated Deficits of Central and State Governments



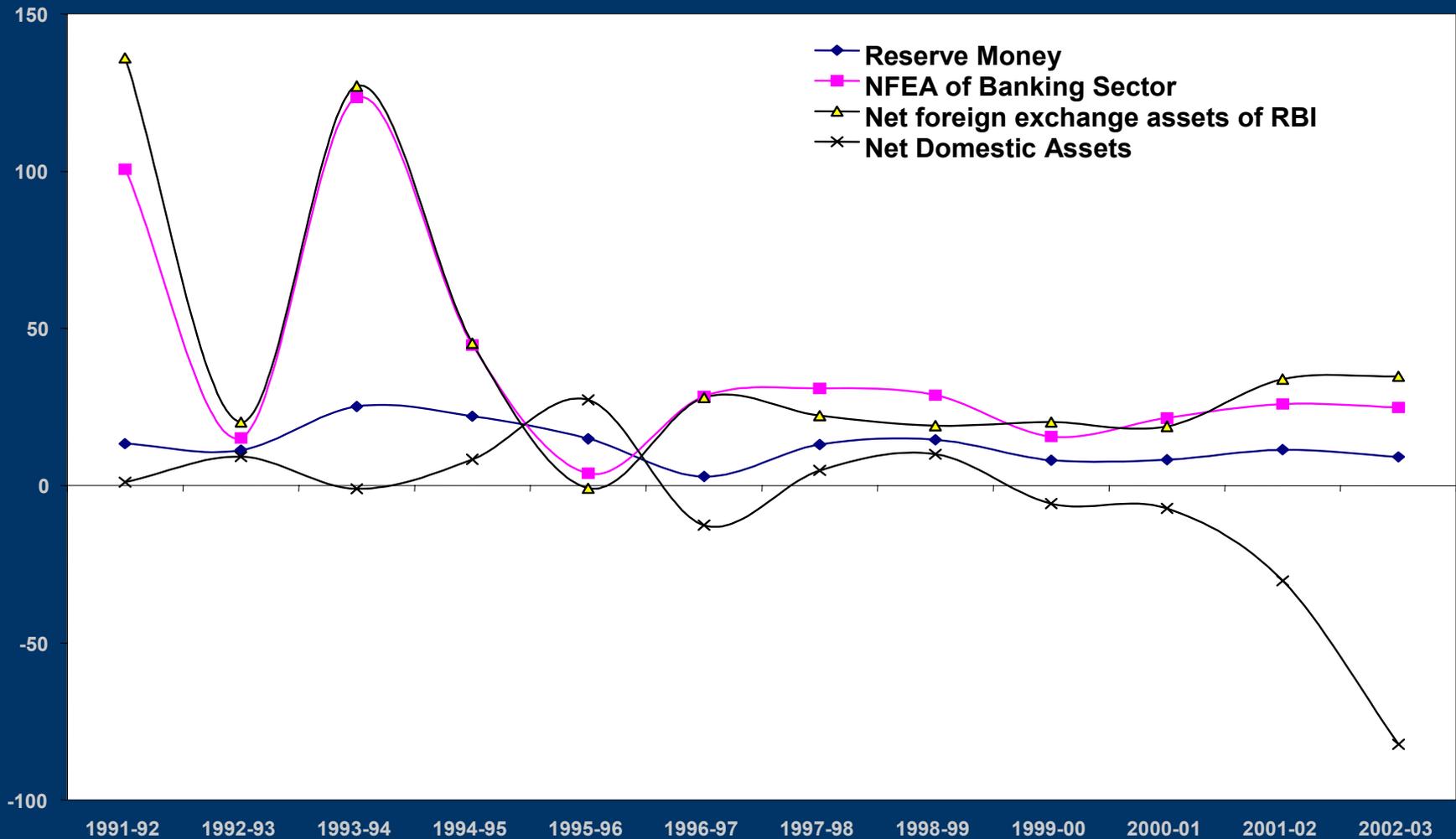
# Developmental and Non-developmental Expenditure of Both Centre and State Governments As Percentage of GDP



# Components of government debt

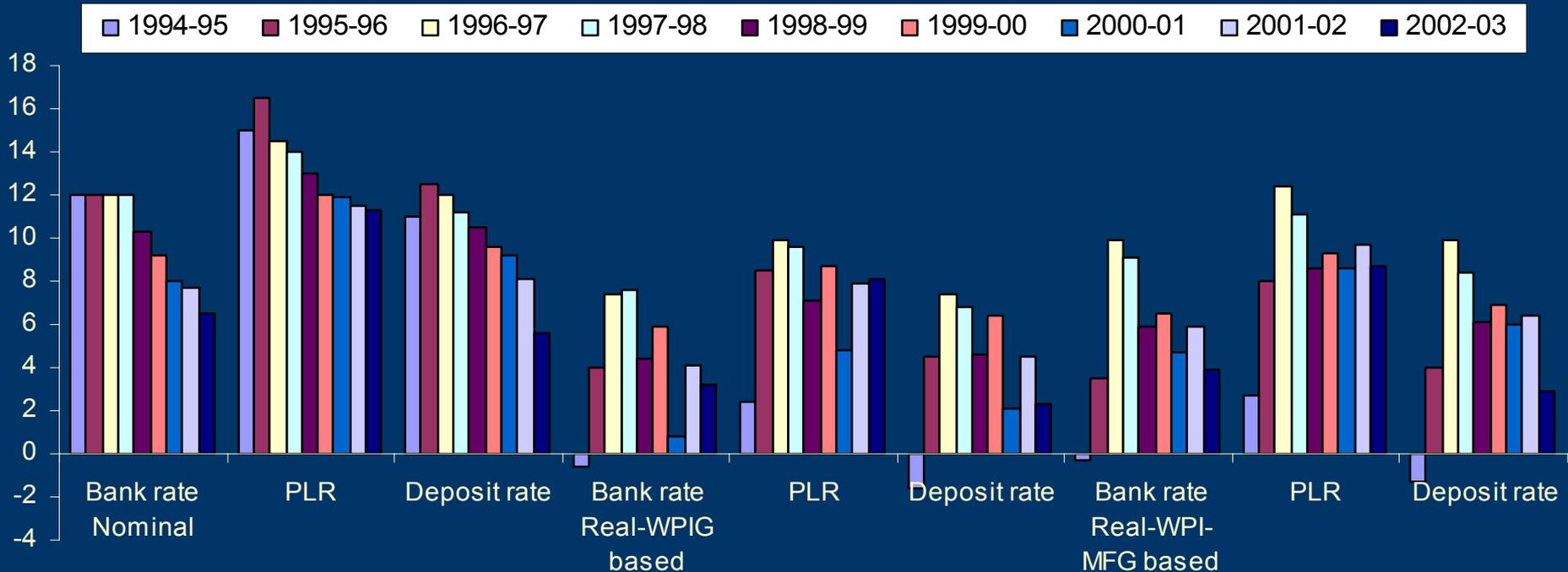


# Sources of Reserve Money Growth



# Interest Rates

Movements in deposit and lending rates (per cent) with bank rates



# Sources of Growth

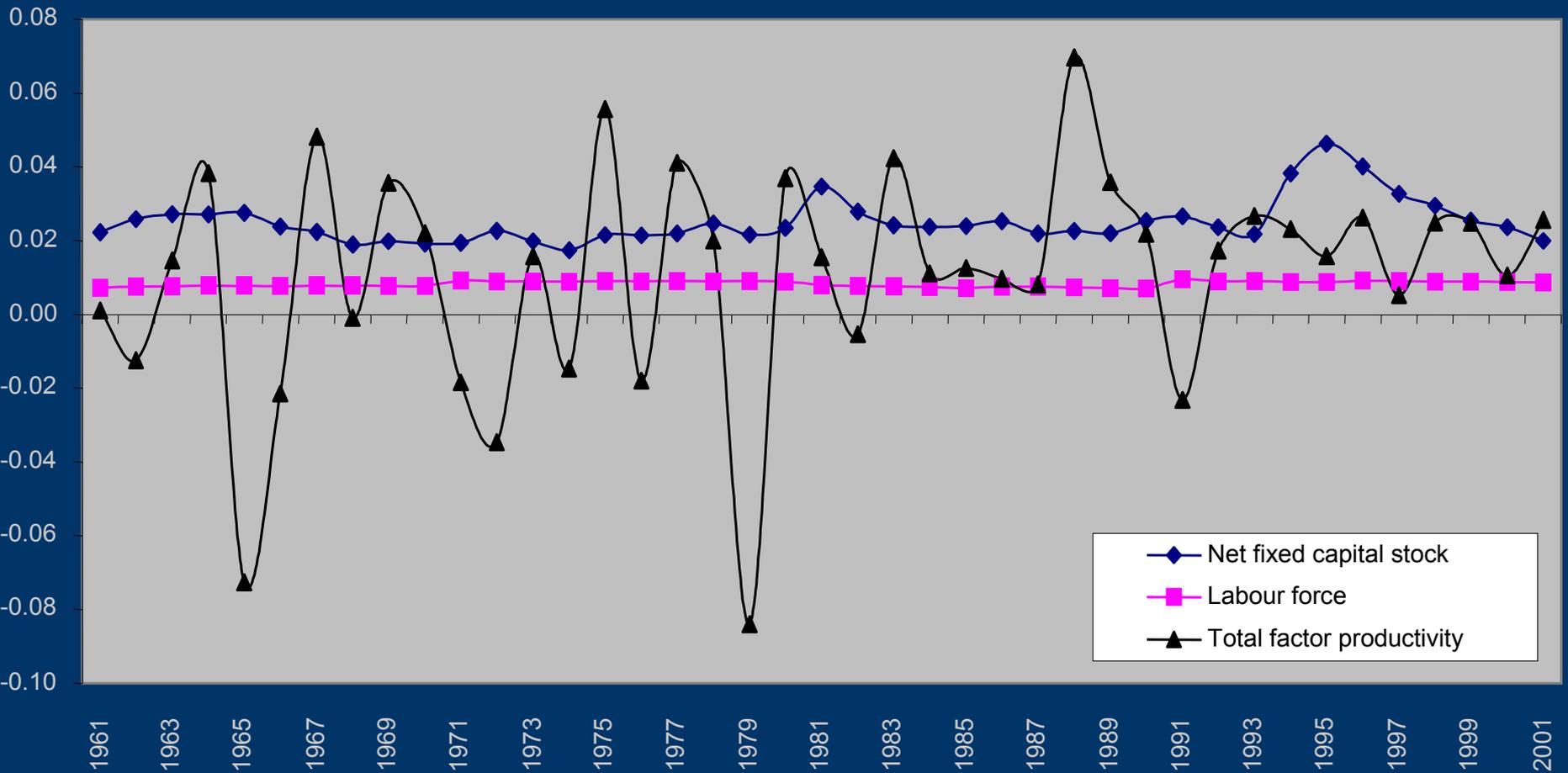
# Aggregate Sources of Growth: Factor Decomposition

- ◆ Simple Decomposition of growth in shares of fixed capital stock, labour and Solow's Residuals
- ◆ Capital stock is taken from CSO NFCS at 1993-94 prices
- ◆ Total labour force from WDI CD-RoM 2003
- ◆ Income share of capital assumed to be 60 percent based on historical data of factor income. No adjustment made for rent of agriculture.

# Aggregate Sources of Growth: TFP Growth

- ◆ Most contribution comes from capital
- ◆ Most variations come from variations in TFP growth (same conclusion as Guha & Bari 2003)
- ◆ TFP growth for second half increased to 1.95 per cent as compared to 1.19 in first half
- ◆ This explains growth despite low investment and adverse external shocks.
- ◆ TFP growth Explained and simulated. Simulated TFP growth for 2003-04: 3.7 leading to 6.6 percent growth in GDP at same level of investment and employment growth as 2001-02.

# Factor Decomposition of Growth in Real GDP



# Decomposition of Growth 1960-2001 (Period Averages)



Period	Real GDP growth	Growth due to fixed capital stock	Growth due to total labour force	Growth in total factor productivity
1961-70	3.63	2.34	0.77	0.52
1971-80	3.03	2.14	0.90	0.00
1981-90	5.47	2.51	0.74	2.21
1991-95	5.22	3.13	0.90	1.19
1996-01	5.74	2.85	0.88	1.95

# Economic Variables Explaining TFP Growth



- ◆ Deviations of Rain from Normal (NCAER Database)
- ◆ WPI Inflation (Economic Survey, Base 1993-94=1)
- ◆ Change in Literacy Rate (WB CD-RoM, 2003)
- ◆ Terms of Trade (Economic Survey, Base 1993-94=1)
- ◆ Change in Current Account Balance (RBI Statistics)

**THANK YOU**