

# INDIA

2014 - 2015

**Member Country of**



20th AsiaConstruct Conference

Meeting Construction Industry  
Resources Requirements

13-14 November, 2014  
Hotel ICON, HONG KONG

## THEME PAPER

## **INITIATIVE TAKEN FOR**

### **“MEETING OF CONSTRUCTION INDUSTRY RESOURCES REQUIREMENTS”**

The development of recommendations took in cognizance the issues listed above, needing address and encompassed existing impediments/limitations and relevant mitigation measures, having recognized that, the Construction Industry has a great contribution potential to the overall National Economy, having displayed consistent growth trend of around 8% during last plan period. These include the macro recommendations, which require policy intervention at Central and State Governments level, action by stakeholders, and certain implementation models at gross root level, which may be elicited as examples for detailing a blue print for action.

- i) Review of present procedures of procurement of projects & services including dispute resolution mechanisms, and quality issues and evolve measures for improvement, particularly in view of the increasing privatization in infrastructure sector. The Steering Committee recommends following:-

- a. The Contract Conditions being used by various Project Authorities in the Country, **whether in Public or Private Sector**, should be harmonized. The recommendations issued by the **Ministry of Statistics and Programme Implementation in this regard, must be implemented fully** by all Project Owners in the Country. This would require Government's intervention to convert guidelines of MOSPI into specific directions for all Public Agencies/ Undertakings/Organizations. The recommended guidelines on contract conditions & also the model works manual are hosted on the web site [www.cidc.in](http://www.cidc.in).
- b. For the Public Private Partnership models, the Model Concession Agreement developed by the Planning Commission for the Road & Highway Sector, could be used as a base model and modifications could be made to cater to other sub-sectors, as well.
- c. Necessary provisions in the procurement system, be made to ensure that standard quality certification (third party) systems are adhered to.

Some system giving incentives for timely completion and good performance by concerned construction agencies be suitably introduced. A system may also be developed and promoted to facilitate small and medium construction companies to share services and available plants and machinery at equipment banks. In fact similar systems have already been introduced in several highway construction projects of Maharashtra State Road Development Corporation.

- d. The emphasis must be laid on Institutional Arbitration system, instead of Ad-hoc system, as is being followed presently. The arbitration should be in line with Indian Arbitration and Conciliation Act 1996.
- e. To minimize “disputes” leading to time and cost overruns proper project planning process should be encouraged and DPRs may be completed before technical sanction.
- f. Suitable institutional modifications be introduced for risk mitigations. New insurance products should be developed.

- ii) A National Plan for **training and certification of Construction personnel** at all levels should be developed and implemented.

The plan should include initiating a system of ‘Graded Certification’ depending upon levels of proficiency achieved. To meet shortage of available trained manpower in certain urgently needed trades short terms courses may be introduced where ITI courses are of long duration.

It is further recommended that some kind of Permanent Identification number be granted to the workers, and a nation wide scheme of granting e-cards be launched for effective availability of the benefits.

The construction sites could be designated as the learning centers & introduction of mandatory Internship for the students of engineering programs both at Diploma and Degree level be made.

- iii) Well defined and harmonized institutional financing systems be evolved to

build the capacity of Construction Industry.

- iv) A comprehensive Draft **Construction Law** should be developed and **the Construction Law for India** be enacted through wider consultations.
- v) Present system of **asset management should be reviewed** at local/ state/ central government levels and strengthened. A policy frame work **ensuring mandatory provision for maintenance of assets supported by adequate budgetary allocations and trained manpower be set-up.**
- vi) A National strategy and policy framework focused particularly on **productivity enhancement** and **cost reduction** be developed to match with envisaged work load and delivery targets of various sectors and for sustainable development and growth of construction industry.

Induction of new technologies, construction systems and energy efficient materials (preferably based on waste recycling) should be adequately emphasized in the development of national strategy for enhancing productivity and efficiency and reducing cost of construction works. For rural roads sector, there appears to be strong need for developing and introducing use of “marginal materials” to enhance cost effectiveness of works.

It is therefore proposed, that a National Construction Research & Development fund be created & an authority be constituted under the auspices of a nodal ministry to administer this provision. As an initial seed support a sum of Rs. 100 crores be allocated to persue these objectives

- vii) An appropriate **Management Information System** should be developed and implemented at National, Provincial and Local levels for construction industry. An Institution be nominated as the repository of National Data Base for Construction Industry.
- viii) Systems & Institutions should be developed for **expansion of network for project export and attracting more foreign investment**. Interactions with Indian Missions abroad , should be intensified, through evolution of an Institutional mechanism.
- ix) A mechanism for **registration of professional engineers** need to be established for which a **nodal agency need to be identified**. Intake in academic institutions be regulated to mitigate declining trend in the availability of civil engineers
- x) **Taxation & Regulatory Systems should be revamped**. Sectoral classification and definition of Construction Industry should be established, as for taxation purposes construction “is treated as “Industry” as well as “Service” The Steering Committee recommends that construction be treated as Industry and the existing definitional anomalies, where for certain sub-sectors of construction sector, service taxes have been introduced, be removed.
- xi) **Institutional Arrangements be made to identify, prevent and mitigate the effects of Natural Disasters**. New programs should be taken as per guidelines and programs announced by National Disaster Management

Authority. The Steering Committee recommends that following actions should be taken up on priority.

- a) To develop the Human Resources in Disaster Mitigation and disaster resistant construction technologies and
  - b) Retrofitting Clinics and Disaster Identification Centres be set up in all major settlements and districts falling in disaster prone regions
- xii) An Institutional mechanism need to be developed for continuous evaluation of various economic parameters such as Construction Cost Indices and impact of policies of other sectors having impact on cost of construction works.
- xiii) A National Plan need to be developed for upgrading the prowesses of Engineering Consultants and advisors, and should be implemented.
- xiv) Adherence of standards should be ensured through relevant regulatory provisions.
- xv) A national plan to be evolved and implemented for entrepreneur development in Construction Industry for raising the capability levels.
- xvi) A conceptual plan to identify a nodal organization to implement and monitor above should be formalized and implemented upon.
- xvii) A national plan for insuring adherence to the Environment Protection Act (2006) be developed and Energy Efficiency issues be addressed in conformity to the Energy Conservation Act of 2001.

# 20<sup>TH</sup> ASIA CONSTRUCT

## MEETING CONSTRUCTION INDUSTRY RESOURCE REQUIREMENTS

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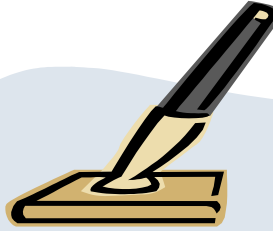
## REQUIREMENTS OF THE CONSTRUCTION INDUSTRY

- Construction is the vehicle for the growth of civilization. It helps build **structures that sustain a nation' s economy**. In our country' s National plans, Construction constitutes 40 to 50% of the **capital expenditure** on projects in various sectors such as Energy, Transport, Irrigation, Social sector, Communications, Defense, Rural and Urban Infrastructure and so on. It is highly **employment intensive**.
- India' s construction industry today faces enormous **challenges** posed by the massive sizes of the country' s **plans**, the need for **project exports** to countries which do not welcome the second best, a growing **domestic consciousness** about quality, speed and efficiency and the new economic policies of the government, viz., **liberalization** and **globalization** which have started throwing open a good deal of construction activity to the private sector, thus ushering in unprecedented **international competition within the country**.
- Overall growth of domestic construction industry has been over 10 percent, and is bound to show an upward trend owing to the need to develop the infrastructure to support the overall industrial development.



## THE AGENDA FOR THE ACHIEVEMENT OF RESOURCE REQUIREMENTS

- Reduction of Centrally Sponsored Schemes
- Expansions of project-based support to states
- Support to states contingent upon agreed programme of reforms
- Preference to the completion of existing projects than to new ones
- Plan funds to be given for critical repairs and maintenance activities
- Privatisation/closure of non-strategic PSUs in a time bound manner
- Reduction in subsidies in a time bound manner
- Selected fiscal targets to be achieved
- Tax reforms and implementation of VAT in a time bound



## MEETING CONSTRUCTION INDUSTRY RESOURCES REQUIREMENTS

- ✓ CIDC: Introduction
- ✓ HRD initiatives & Training
- ✓ Grading of Construction Entities
- ✓ IQAC
- ✓ Political, Legal & Social Framework
- ✓ Economic Overview
- ✓ Construction Industry Sub Sectors
- ✓ 12<sup>th</sup> Five Year Plan- Charts & Tables
- ✓ Promotion of Foreign Investment
- ✓ PPP Landscape in India



# CONSTRUCTION INDUSTRY DEVELOPMENT COUNCIL: INTRODUCTION

- The Planning Commission, Government of India jointly with the Indian construction industry has set up Construction Industry Development Council (CIDC) to take up activities for the development of the Indian construction industry.
- The Council provides the impetus and the organizational infrastructure to raise quality levels across the industry. This helps to secure wider appreciation of the interests of construction business by the government, industry and peer groups in society.
- CIDC is a change agent to accelerate a process of self-reform that should enable the industry to answer the challenges of the future.
- Clarity of purpose and intent forms CIDC's mandate. Since its inception in 1996, the Council has taken several initiatives for the development of the industry.



## GOALS AND OBJECTIVES

- Advice the Government on policy formulation related to construction industry.
- Standardization of construction contracts and procedures.
- Training manpower at skilled worker level and construction management level.
- Grading of construction entities
- Devise mechanisms for workers' welfare.
- Help evolve policies for financing.
- Help the industry move from the current state of rule-bound, lowest-price-based contracting to a more quality-conscious, time-bound & technology-driven one.
- Dispute Resolution in Construction Contracts.
- Interaction and networking with international organisations to promote emerging technologies and best practices.



- Accelerate growth rate of GDP from 8% to 10% and then maintain at 10% in the 12th Plan in order to double per capita income by 2016-17
- Increase agricultural GDP growth rate to 4% per year to ensure a broader spread of benefits
- Create 70 million new work opportunities.
- Reduce educated unemployment to below 5%.
- Raise real wage rate of unskilled workers by 20 percent.
- Increase infrastructure / Houses
- Increase energy efficiency by 20 percentage points by 2016-17
- Treat all urban waste water by cleaning river waters  
Increase energy efficiency by 20% points by 2016-17



# CIDC: HRD INITIATIVES & TRAINING

- In order to improve the work performance of construction industry and to generate value added employment opportunities, CIDC had initiated a country wide Human Resource Development initiative focused on developing a formidable work force to fructify various Infrastructure Development Projects in the Nation and also abroad.
- Over the last 18 years CIDC has made substantial achievements in the area of HRD especially for construction workers, Artisans and Supervisory cadre personnel. The program is now spread over 19 states and supported extensively by various State Governments.
- Over 4,00,000 personnel trained, tested and certified by CIDC for their skills.



# CONTD..

CIDC has been organizing trainings for all level of construction professionals starting from;

- ✓ Workers program in 48 disciplines
- ✓ Supervisor level programs for 10+2 pass outs
- ✓ Diploma engineering program in 3 disciplines
- ✓ Executive development programs (EDP) for senior experienced professionals







## CONTD..

- CIDC with its broad based initiatives towards all- inclusion growth of Indian Construction Industry is in the process of creating its **“CORPORATE OFFICE”** by the name of **‘Vishwakarma Pratham’** .
- Corporate Office is also one of its training center, where trainees got trained & helping CIDC to build its own Corporate office.





## POLITICAL, SOCIAL & LEGAL FRAMEWORK

- Secular Constitution.
- Stable Democratic environment since 1947.
- Broad consensus on Economic policy across party lines.
- Independent multi-tier judicial system.
- Judicial systems in sync with international practices.
- Preferred language of domestic business & international interactions is English.



# ECONOMIC OVERVIEW

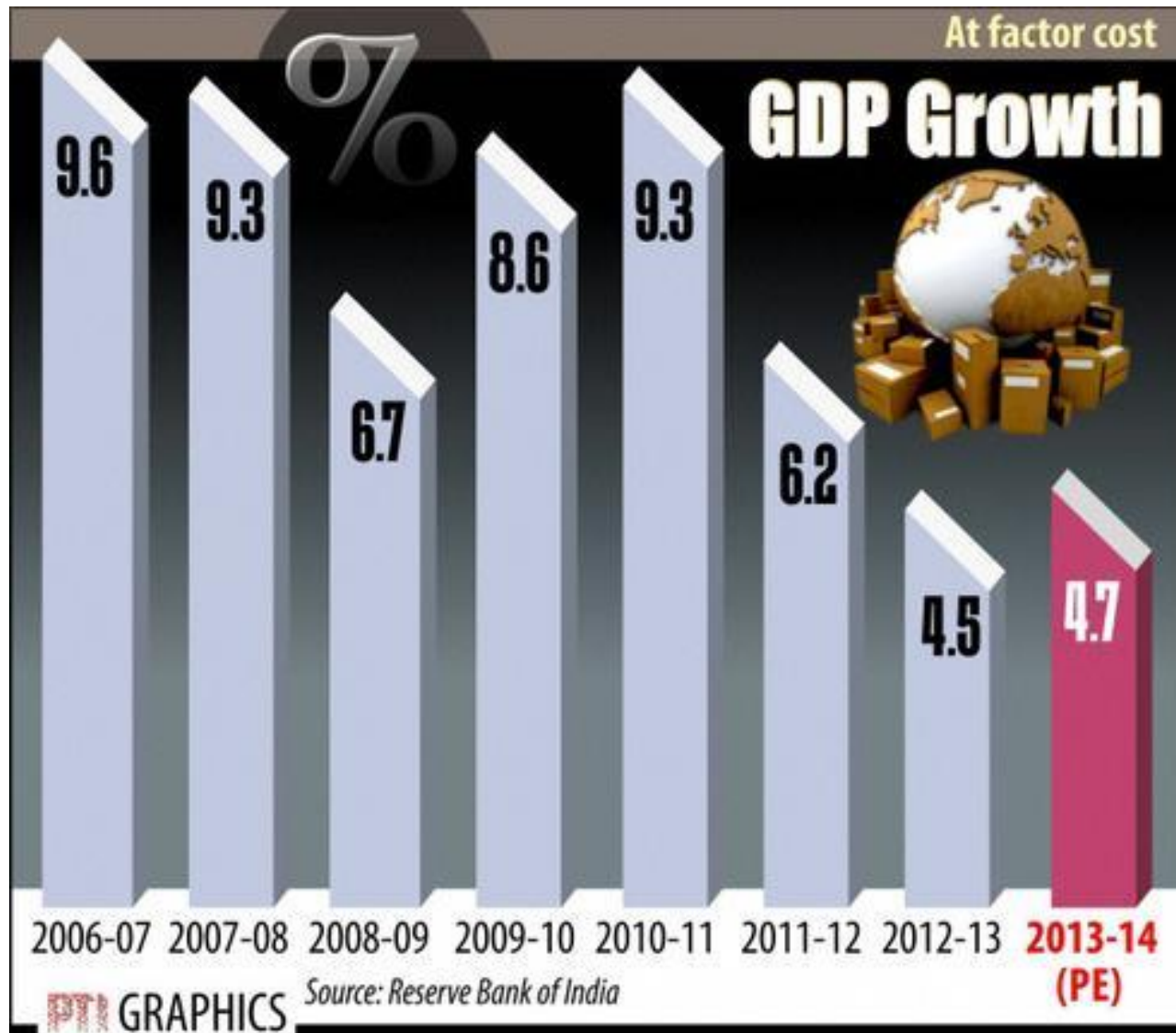
- India is the 2<sup>nd</sup> fastest growing economy.
- GDP Growth is 4.7% in 2014.
- The opportunities unfolding in India is as a result of reforms enacted from early 1990s as well as a result of India's increasing competitiveness and confidence.
- Positive outlook to international investments and trade policies.
- Fiscal incentives from Central Government and States support in physical and social infrastructure development.
- Very large pool of educated, trained and skilled manpower.
- Rapidly developing R&D, infrastructure, technical and marketing services.





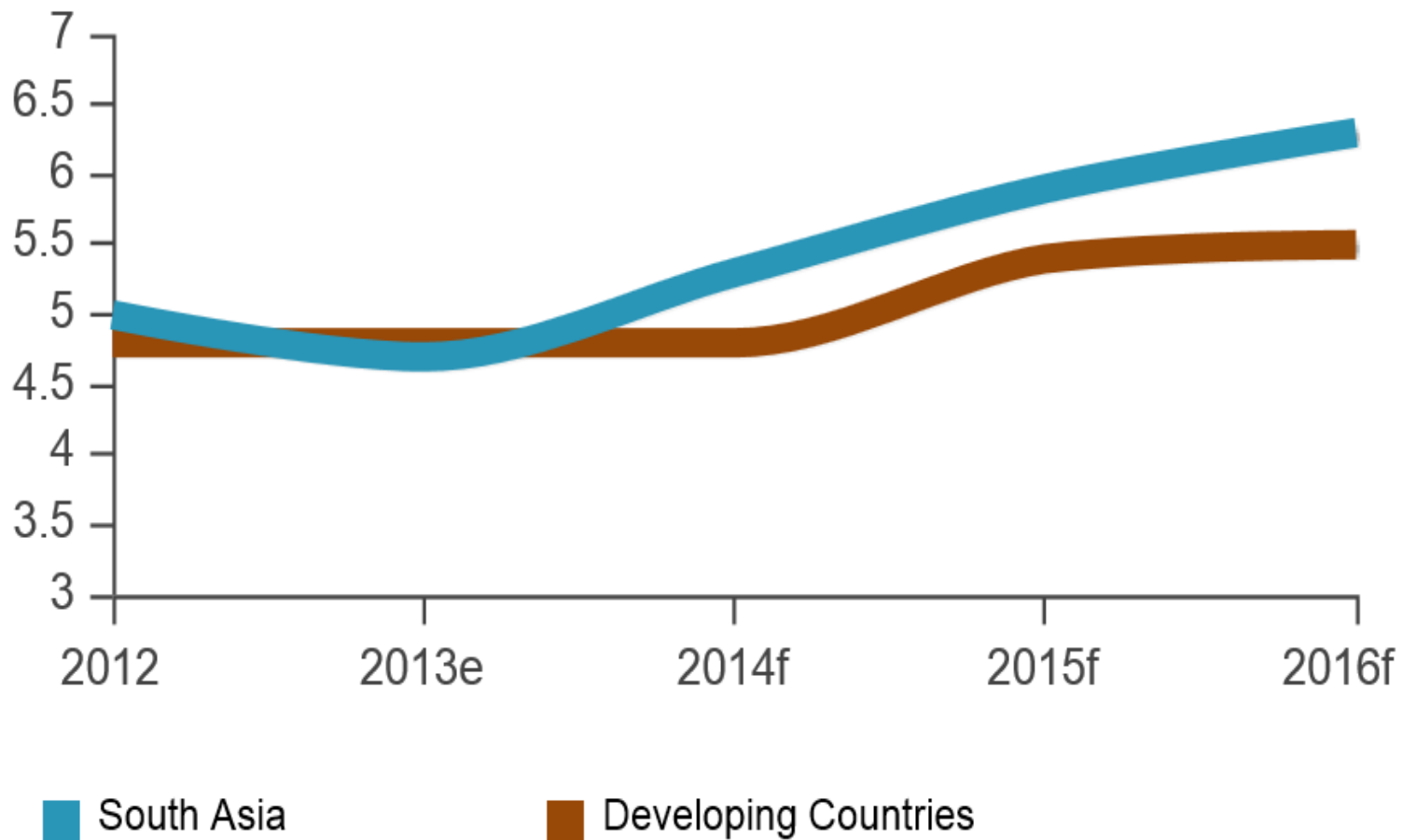
## CONTD..

- Agricultural self-sufficiency, rich mineral base and abundance of other natural resources.
- Large, diversified and geographically well distributed manufacturing capability.
- Diversified infrastructure facilities available and under development.
- Sound banking system with a network of 70,000 branches.
- Vibrant capital market comprising 23 stock exchanges with over 10,000 listed companies.
- Large coastline with easy access to South Asian markets.
- 3<sup>rd</sup> largest investor base in the world.
- GDP per capita
  - \$1,499 (nominal: 148th; 2013)
  - \$5,410 (PPP: 123th; 2013) (Source: World Bank)





## GDP % growth, annual



Source: World Bank



# KEY ECONOMIC INDICATORS

## SEPTEMBER, 2014

Table - 1  
Growth Rate of GDP at Factor Cost (at 2004-05 prices) (in %)

Industry	2007-08	2008-09	2009-10	2010-11 <sup>^</sup>	2011-12 <sup>@</sup>	2012-13 *	2013-14 (PE)
I. Agriculture	5.8	0.1	0.8	8.6	5.0	1.4	4.7
II. Industry	9.7	4.4	9.2	7.6	7.8	1.0	0.4
Mining & quarrying	3.7	2.1	5.9	6.5	0.1	-2.2	-1.4
Manufacturing	10.3	4.3	11.3	8.9	7.4	1.1	-0.7
Electricity, gas & water supply	8.3	4.6	6.2	5.3	8.4	2.3	5.9
Construction	10.8	5.3	6.7	5.7	10.8	1.1	1.6
III. Services	10.3	10.0	10.5	9.7	5.6	7.0	6.8
GDP at factor cost	9.3	6.7	8.6	8.9	6.7	4.5	4.7

*\*: First revised estimate, @: Second revised estimate, ^: Third revised estimate, PE: Provisional estimate.*

Source: Central Statistics Office.

Table - 2  
Sectoral Share in GDP at Constant (2004-05) Prices (in %)

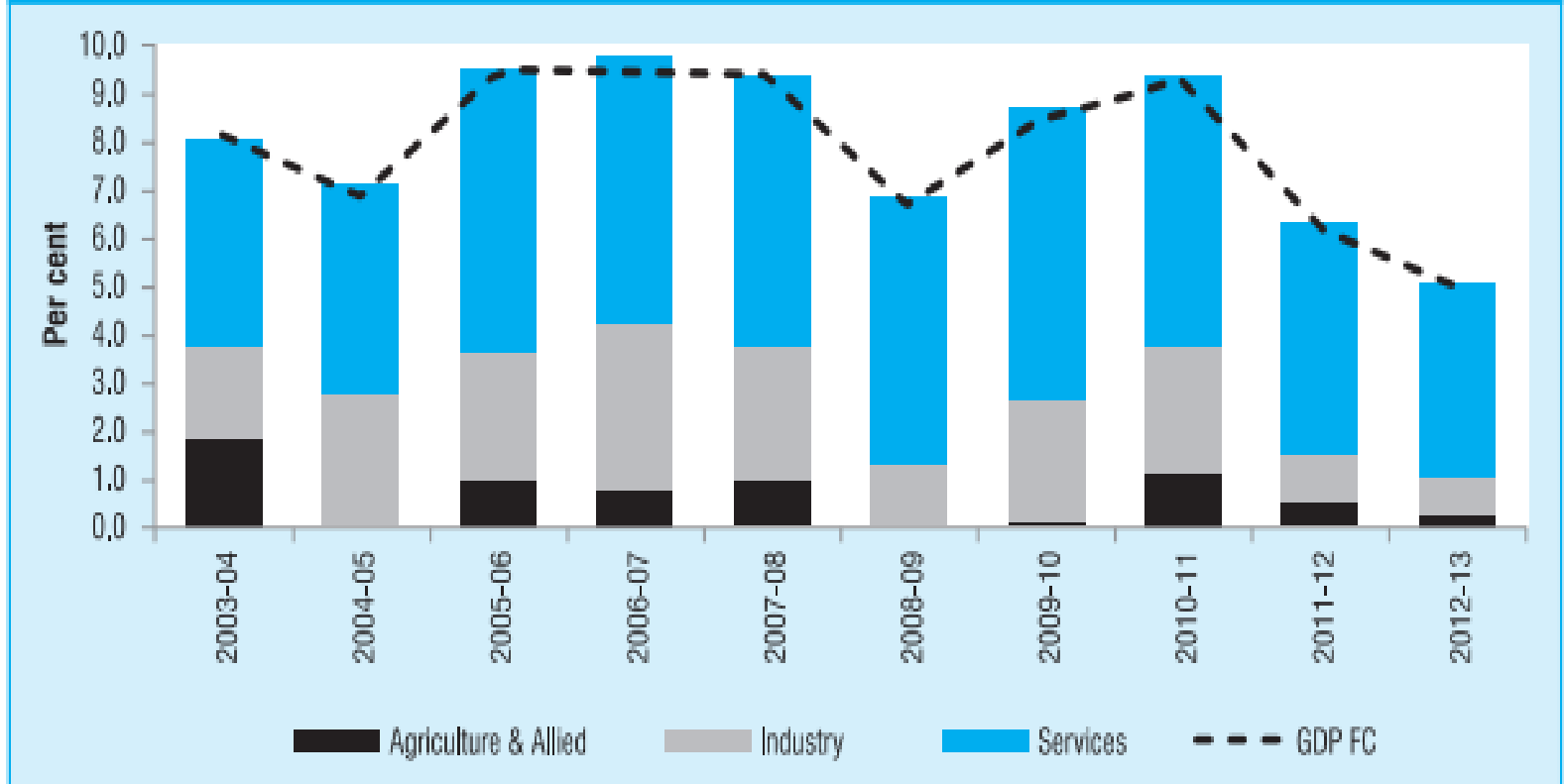
Industry	2007-08	2008-09	2009-10	2010-11 <sup>^</sup>	2011-12 <sup>@</sup>	2012-13 *	2013-14(PE)
I. Agriculture	16.8	15.8	14.6	14.6	14.4	13.9	13.9
II. Industry	28.7	28.1	28.3	27.9	28.2	27.3	26.1
Mining & quarrying	2.5	2.4	2.3	2.2	2.1	2.0	1.9
Manufacturing	16.1	15.8	16.2	16.2	16.3	15.8	14.9
Electricity, gas & water supply	2.0	2.0	2.0	1.9	1.9	1.9	1.9
Construction	8.1	8.0	7.8	7.6	7.9	7.7	7.4
III. Services	54.4	56.1	57.1	57.5	57.4	58.8	59.9
GDP at factor cost	100	100	100	100	100	100	100

*\*: First revised estimate, @: Second revised estimate, ^: Third revised estimate, PE: Provisional estimate.*

Source: Central Statistics Office.



**Figure 1.1: GDP growth and point contribution of different sectors**

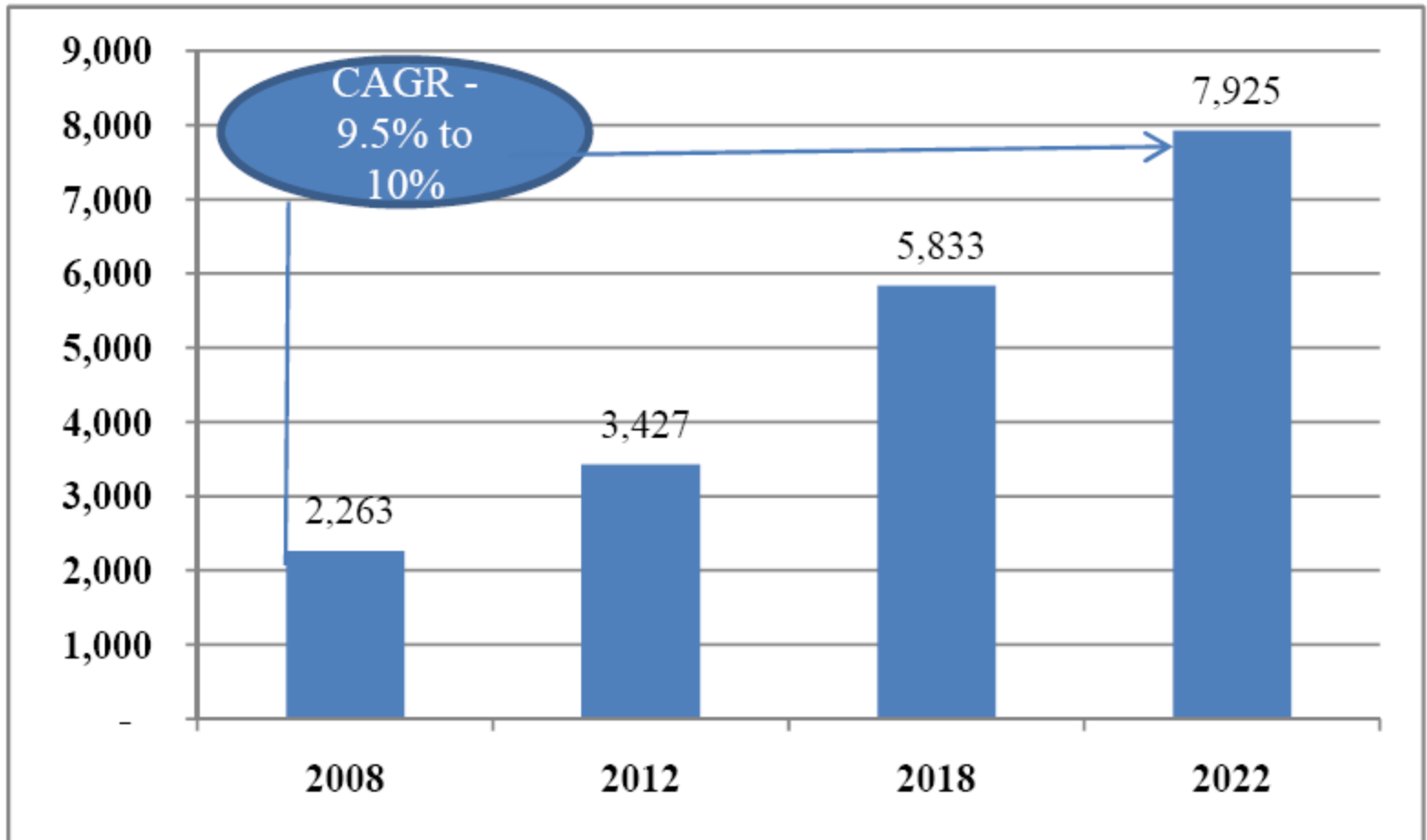


**Note :** Data for 2012-13 is as per Advance Estimates released by CSO.





*Figure 22: Projected Real GDP of Construction sector (Rs. billion)*



*Source: IMaCS analysis*



*Table 10: Share of economic activity estimated in the Infrastructure segment*

<b>Sector in Infrastructure</b>	<b>% of economic activity</b>
<b>Electricity</b>	32.4%
<b>Road and Bridges</b>	15.3%
<b>Telecommunication</b>	12.6%
<b>Railways (including MRTS)</b>	12.7%
<b>Irrigation</b>	12.3%
<b>Water Supply and Sanitation</b>	7.0%
<b>Ports</b>	4.3%
<b>Airports</b>	1.5%
<b>Others</b>	1.9%

*Source: Planning Commission's Tenth and Eleventh Five Year Plan and IMaCS analysis*



*Table 11: Projected human resource requirement between 2008 and 2022 (in '000s)*

	2008	2012	2018	2022	Incremental
<b>Infrastructure</b>	25,177	33,868	48,280	58,289	33,111
<b>Real Estate</b>	10,790	14,515	20,692	24,981	14,191
<b>Total</b>	35,968	48,383	68,972	83,270	47,302

*Source: IMaCS analysis*

*Table 12: Incremental human resource requirement – education-wise (in '000s) between 2008 and 2022*

	Ph.D/ Research/ Design	Engineers	Diploma	ITI and other vocationally trained	Other graduates	CA/ MBA/ etc.	10th standard and below/ dropouts
<b>Infrastructure and Real Estate</b>	473	946	946	5,953	473	473	38,038
<b>Incremental human resource requirement</b>				47,302			

*Source: IMaCS analysis*



*Table 13: Incremental human resource requirement across the workforce (including skilled workforce) between 2008 and 2022 (in '000s)*

<b>Profile of people</b>	<b>Incremental Requirement</b>
<b>Project Managers and Engineers</b>	473
<b>Supervisors</b>	473
<b>Foremen</b>	946
<b>Crane operators</b>	7
<b>Electricians</b>	473
<b>Welders</b>	473

<sup>15</sup> *Note on Methodology of Estimation of Incremental Requirement:* The a incremental human resource requirement has been calculated based on a) the investments in the Eleventh Plan Period and projected investments into various sectors, b) the amount of man-days required for completion of projects in sectors such as Road, Rail, Power, etc. for a specific investment size, and c) estimates on productivity increase. The GDP growth and size of construction and real estate services have been projected based on econometric modelling.



*Human Resource and Skill Requirements in Building, Construction Industry and Real Estate Services*

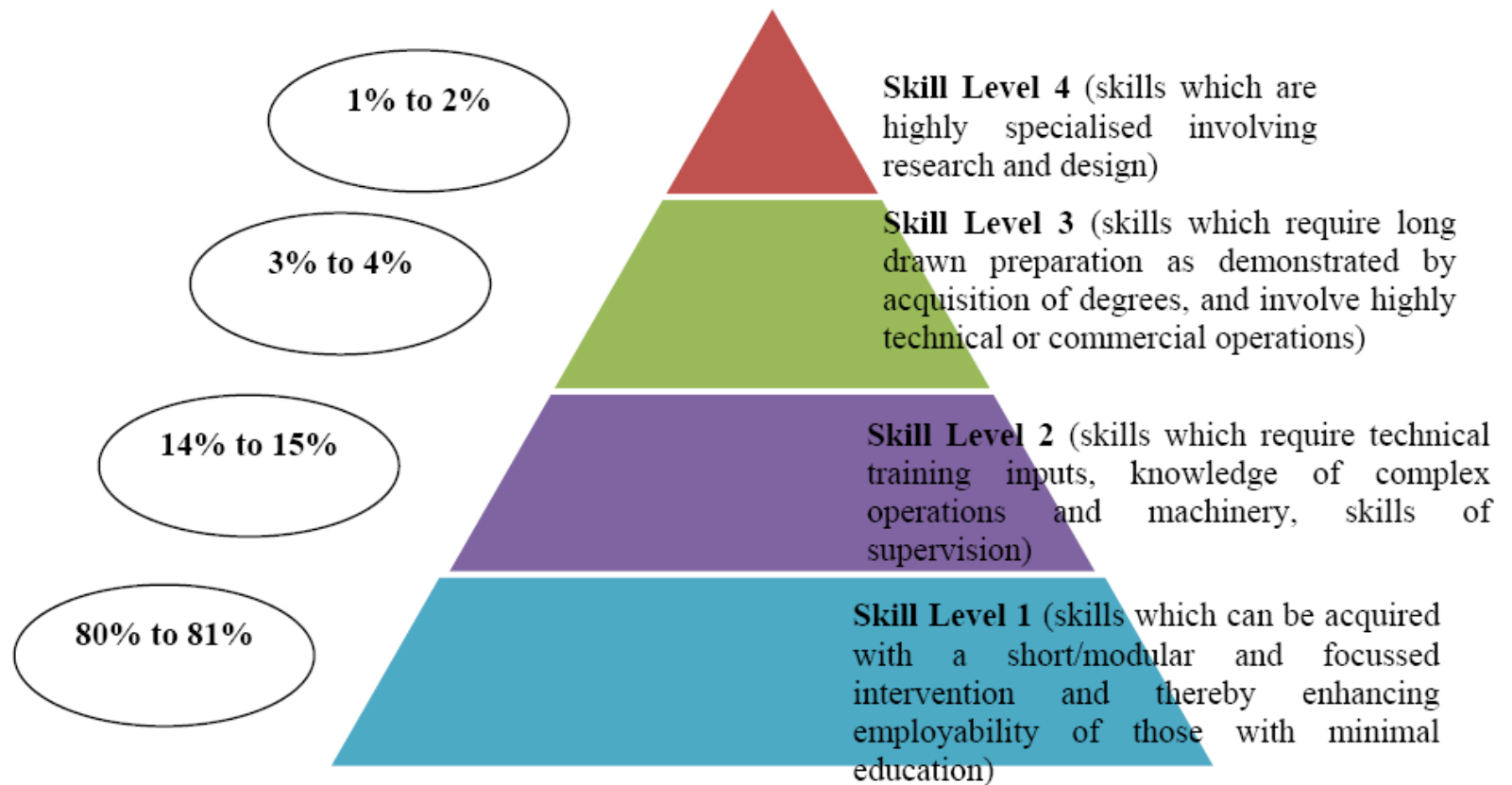
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<b>Profile of people</b>	<b>Incremental Requirement</b>
<b>Bar Benders</b>	1,419
<b>Masons<sup>16</sup> (see footnote)</b>	1,419
<b>Plumbers</b>	1,183
<b>Carpenters</b>	1,892
<b>Surveyors</b>	47
<b>Others (including Quality, Glazing workers, painters, equipment operators)</b>	459
<b>Minimally Educated</b>	38,038
<b>Total</b>	47,302

*Source: IMaCS analysis*



*Figure 23: Skill Pyramid for the Construction industry*



*Source: Primary Research and IMAcS analysis*



*Table 14: Major segments where persons would be employed in Construction (in '000s) till 2022 – total and incremental human resource requirement*

<b>Activity</b>	<b>Total Requirement in 2022</b>	<b>Incremental requirement between 2008 and 2022</b>
<b>Real Estate - Housing and Buildings</b>	24,981	14,191
<b>Electricity</b>	19,717	11,201
<b>Road and Bridges</b>	8,947	5,082
<b>Railways (including MRTS)</b>	7,745	4,400
<b>Irrigation</b>	10,681	6,068
<b>Water Supply and Sanitation</b>	6,061	3,443
<b>Ports</b>	2,551	1,449
<b>Airports</b>	889	505
<b>Others</b>	1,698	964
<b>Total</b>	<b>83,270</b>	<b>47,302</b>

*Source: Primary Research and IMaCS analysis*



# CONSTRUCTION INDUSTRY: SUB-SECTORS

- Housing, SEZs, Township development
- Surface Transportation Systems  
(Roads/Highways/Maritime Transport/Railways)
- Power Generation & distribution
- Aviation Structures
- Core Sector/Mining
- Irrigation and Water Management
- Defense Construction
- Oil and Petrochemicals
- Utilities
- Maintenance of Assets
- Rural Constructions







# COMPARISON OF BUDGETARY ALLOCATION 11<sup>TH</sup> (2007-12) & 12<sup>TH</sup> FIVE YEAR PLAN (2012-17)

Major sectors	11th Plan (Rs in Millions)		12th Plan (Rs in Millions)		Increase over 11th Plan (in %)
	Realisation	% share	Projection	% share	
Agriculture and water resources	11,65,540	7.3	28,40,300	7.96	143.69
Rural Development and Panchayatiraj	39,75,240	25.01	67,30,340	18.86	69.31
Scientific departments	5,86,900	3.69	14,21,670	3.98	142.23
Transport and energy	20,40,760	12.84	44,87,360	12.57	119.89
Education	17,75,380	11.17	45,37,280	12.71	155.57
Health and child development	11,26,460	7.09	40,85,210	11.45	262.66
Urban Development	6,34,650	3.99	16,40,780	4.60	158.53
Others	45,88,490	28.87	99,43,330	27.86	116.70
<b>Total Plan allocation</b>	<b>158,93,420</b>	<b>100.00</b>	<b>356,86,260</b>	<b>100.00</b>	<b>124.53</b>



## The budgetary allocation under the 12h Five Year Plan is 125 per cent more than that of the 11th Five Year

Major sectors	11th Plan (Rs in Millions)		12th Plan (Rs in Millions)		Increase over 11th Plan (in %)
	Realisation	% share	Projection	% share	
Agriculture and water resources	11,65,540	7.3	28,40,300	7.96	143.69
Rural Development and Panchayat raj	39,75,240	25.01	67,30,340	18.86	69.31
Scientific departments	5,86,900	3.69	14,21,670	3.98	142.23
Transport and energy	20,40,760	12.84	44,87,360	12.57	119.89
Education	17,75,380	11.17	45,37,280	12.71	155.57
Health and child development	11,26,460	7.09	40,85,210	11.45	262.66
Urban Development	6,34,650	3.99	16,40,780	4.60	158.53
Others	45,88,490	28.87	99,43,330	27.86	116.70
Total Plan allocation	158,93,420	100.00	356,86,270	100.00	124.53



The new plan proposes to spend Rs.56,31,692 in Millions. Private sector will Contribute Rs.27,13,853 (in Millions) of the proposed amount.

### Electricity (Rs in Millions)

	11 <sup>th</sup> Plan	12 <sup>th</sup> Plan
Total	69,01,930	150,16,660
Centre	19,52,000	44,07,960
States	18,46,960	44,07,960
Private	131,02,970	71,38,270

### Renewable energy (Rs in Millions)

	11 <sup>th</sup> Plan	12 <sup>th</sup> Plan
Total	8,92,240	31,85,730
Centre	96,340	3,30,030
States	10,180	53,720
Private	7,85,720	28,01,980



## Roads and bridges (Rs in Millions)

	11th Plan	12th Plan
<b>Total</b>	45,31,210	96,94,060
<b>Centre</b>	19,46,780	36,35,290
<b>States</b>	16,59,030	27,44,330
<b>Private</b>	9,25,400	33,14,450

## Telecommunications (Rs in Millions)

	11th Plan	12th Plan
<b>Total</b>	38,49,620	94,38,990
<b>Centre</b>	8,63,750	72,11,100
<b>Private</b>	29,85,860	87,17,890

## Railways (Rs in Millions)

	11th Plan	12th Plan
<b>Total</b>	20,12,370	52,17,990
<b>Centre</b>	19,21,470	41,92,210
<b>Private</b>	90,900	10,25,780



## Mass Rapid Transit System (Rs in Millions)

	11th Plan	12th Plan
<b>Total</b>	12,07,740	25,49,520
<b>Centre</b>	4,60,030	8,90,150
<b>States</b>	7,46,070	15,05,820
<b>Private</b>	1,640	63,550

## Irrigation (including watershed) (Rs in Millions)

	11th Plan	12th Plan
<b>Total</b>	4,16,690	12,41,580
<b>Centre</b>	2,14,690	3,97,000
<b>State</b>	1,47,860	3,19,010
<b>Private</b>	54,140	5,25,570

## Water supply and sanitation (Rs in Millions)

	11th Plan	12th Plan
<b>Total</b>	12,07,740	25,49,520
<b>Centre</b>	4,60,030	8,90,150
<b>States</b>	7,46,070	15,05,820
<b>Private</b>	1,640	63,550



## Oil and gas pipeline (Rs in Millions)

	11th Plan	12th Plan
<b>Total</b>	6,25,340	14,89,330
<b>Centre</b>	3,51,790	7,15,940
<b>States</b>	40,700	59,690
<b>Private</b>	2,32,840	7,13,700

## Ports (Rs in Millions)

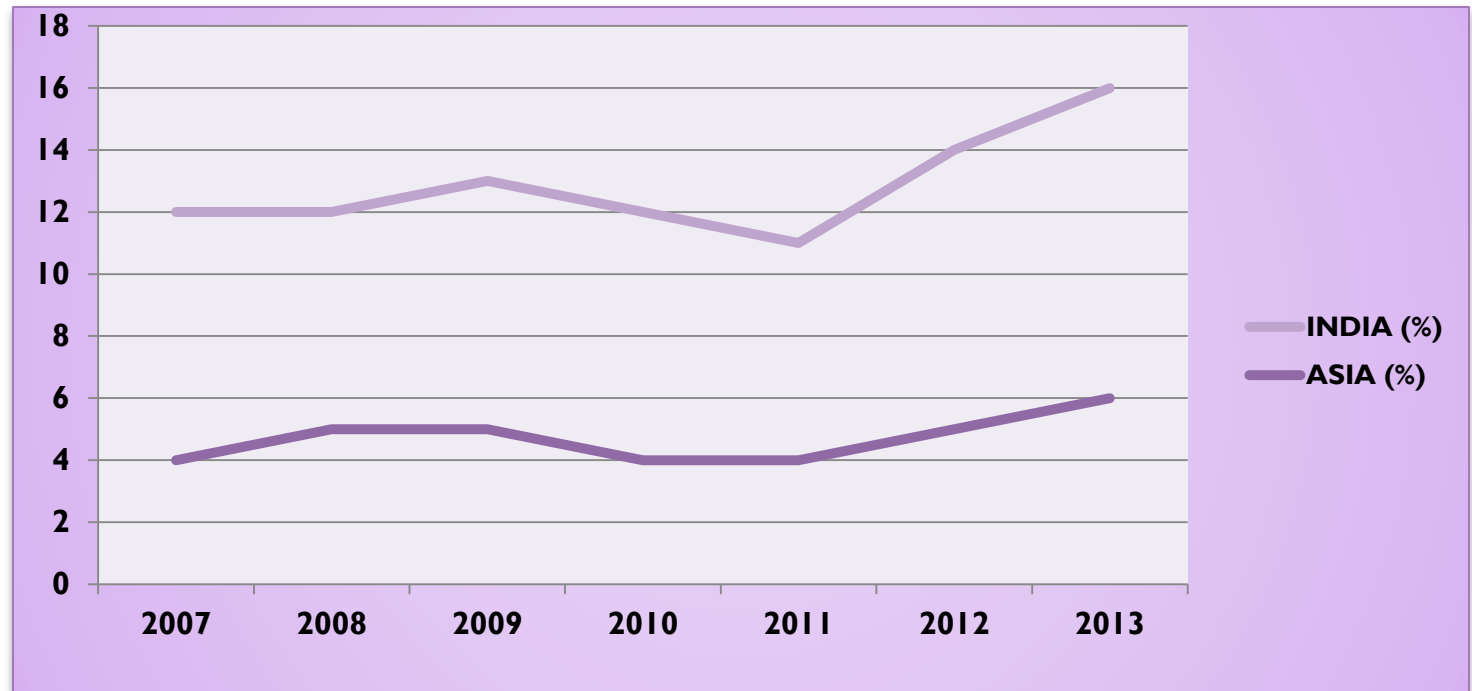
	11th Plan	12th Plan
<b>Total</b>	4,45,360	19,77,810
<b>Centre</b>	54,800	2,06,700
<b>State</b>	27,590	5,630
<b>Private</b>	3,62,980	17,15,480

## Airports (Rs in Millions)

	11th Plan	12th Plan
<b>Total</b>	3,63,110	8,77,140
<b>Centre</b>	1,18,730	1,50,410
<b>State</b>	10,300	24,490
<b>Private</b>	2,34,080	7,02,240



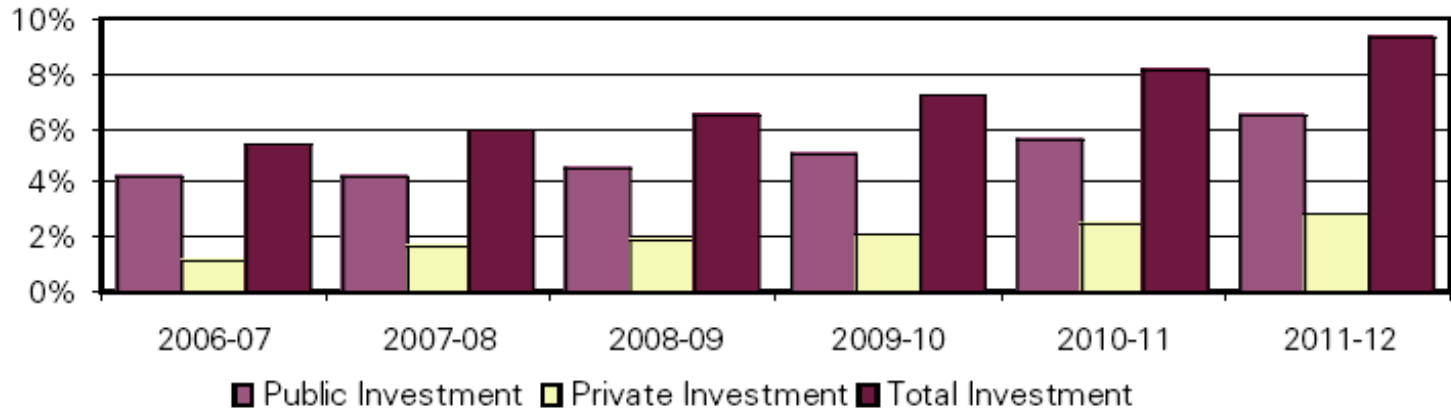
## India' s Construction Growth relative to Asia



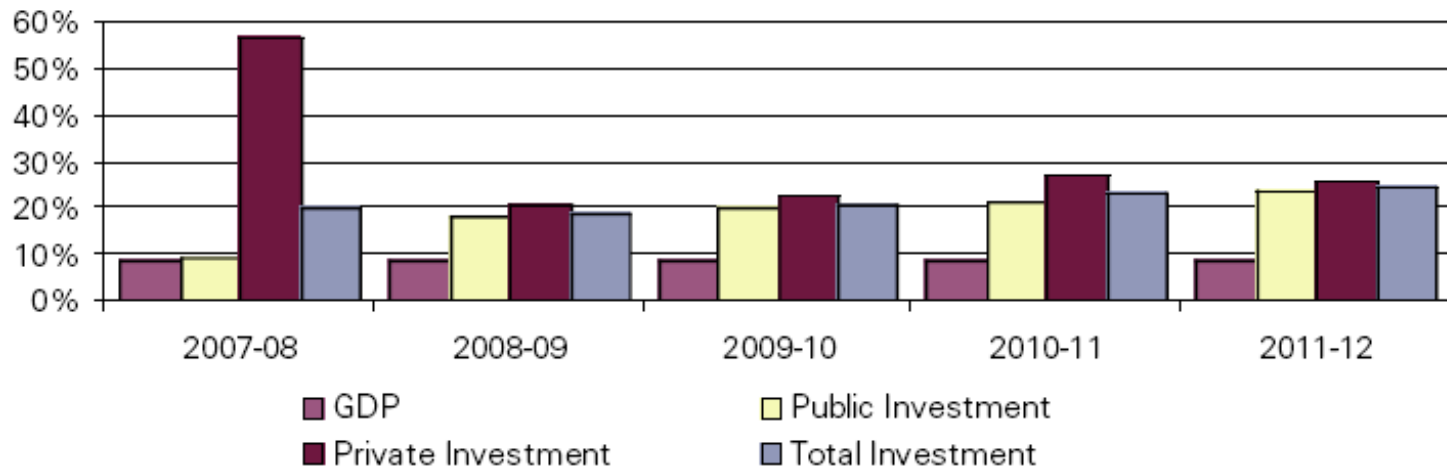
Source: Economic Survey



## Investments as a Percentage of GDP



## Investment Growth Rates



Source: CSO for estimates for 2006-07 and computations of the Planning Commission





## Construction Sector: Contribution to GDP

Year	GDP(at current Prices) (new series) (Rs in Millions)	( GDP: Construction (at current prices) (new series) (Rs in Millions)	Percentage Contribution of G DP by Const. Sector to Total GDP
12005	287,77,010	21,28,070	7.4
2006	328,23,850	26,41,730	8.0
2007	377,93,850	31,91,800	8.4
2008	432,08,920	37,62,660	8.7
2009	49,33,1830	43,70,170	8.9

### Construction Components Involved in creation of Physical Infrastructure

	Construction Intensity (%)		Construction Intensity (%)
Building	76.0	Mineral Plant	18.0
Roads	63.0	Medium Industry	20.0
Bridges	65.0	Transmission	22.0
Dams, etc.	75.0	Urban Infrastructure	66.0
Power	38.0	Maintenance	81.0
Railways	78.0		

Source: 12<sup>th</sup> Five Year Plan



## Structure of Global GDP (in current US \$ Trillion)

	2000	2011	2016	2020	2025
World GDP	32.2	68.7	90.5	110.5	140.5
Advanced Economies	25.7 (79.7%)	44.4 (64.6%)	53.3 (58.9%)	61.1 (55.3%)	71.7 (51.1%)
Developing and Emerging	6.5 (20.3%)	24.3 (35.4%)	37.2 (41.1%)	49.4 (44.7%)	68.8 (48.9%)
<i>of which</i>					
Developing Asia	2.3 (7.3%)	10.5 (15.2%)	17.4 (19.3%)	26.6 (24.1%)	40.7 (28.9%)
of which India	0.5 (1.5%)	1.9 (2.8%)	3.6 (4.0%)	5.8 (5.2%)	10.0 (7.1%)
Sub-Saharan Africa	0.3 (1.0%)	1.2 (1.8%)	1.7 (1.9%)	2.5 (2.2%)	3.9 (2.8%)
West Asia and North Africa	0.8 (2.5%)	2.8 (4.0%)	3.8 (4.2%)	5.0 (4.5%)	7.1 (5.0%)
Latin America and Caribbean	2.1 (6.6%)	5.5 (8.0%)	7.4 (8.2%)	9.7 (8.8%)	13.3 (9.5%)

*[Figures in parentheses denotes share of world GDP]*

*Source: The World Economic Outlook database of the International Monetary Fund. This data up to 2010 in most cases (up to 2009 and earlier in a few) is actual data. Thereafter the figures up to 2016 are projections by the IMF. The projections for India and other countries beyond 2016 have been made internally in the DPPP Division of the Planning Commission.*

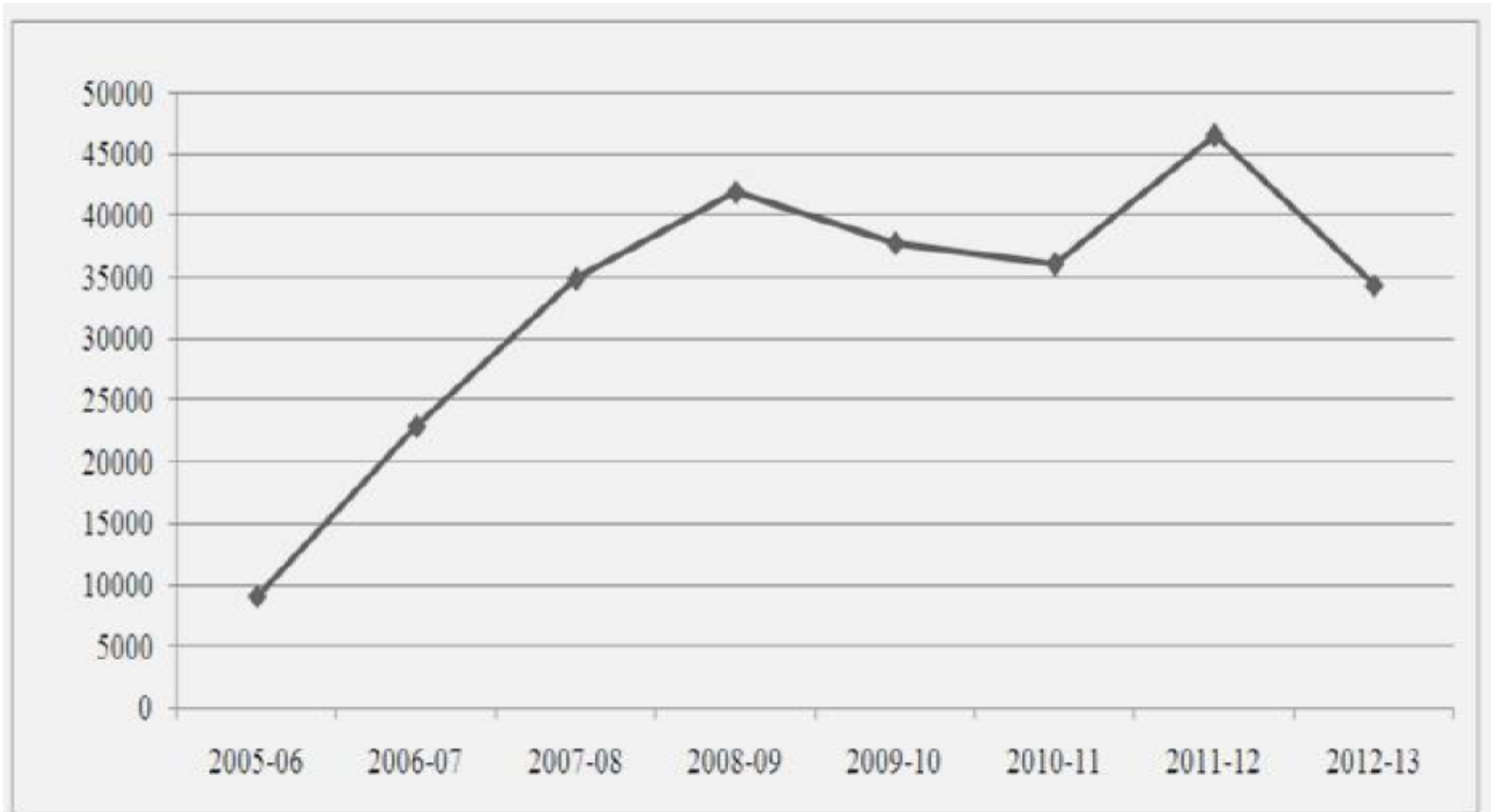


# PROMOTION OF FOREIGN INVESTMENT

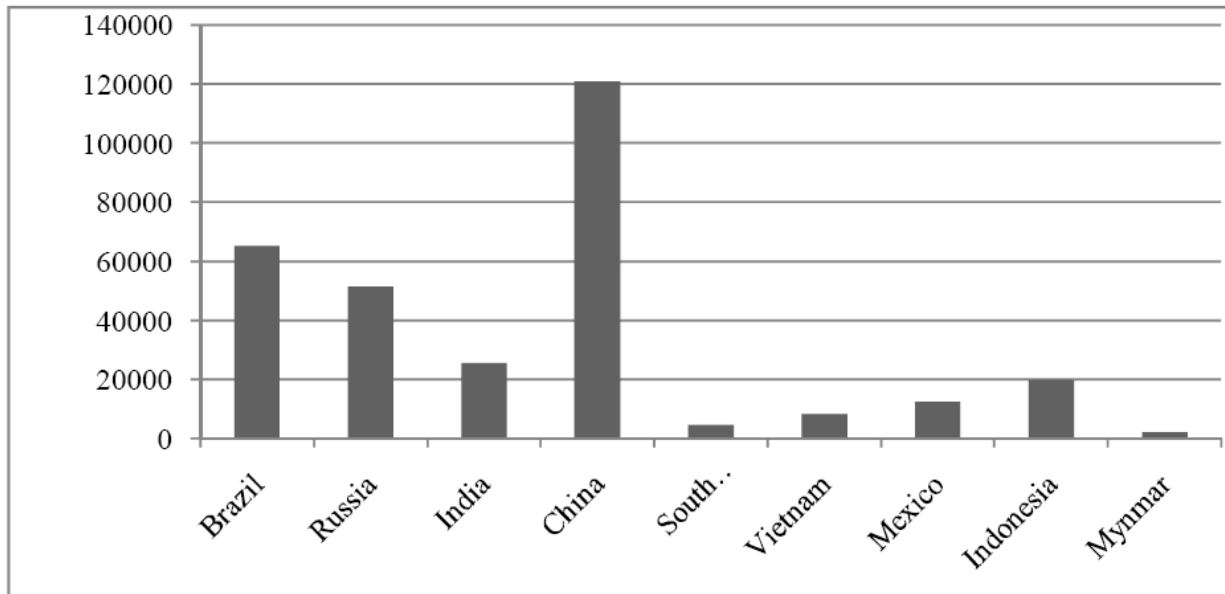
- 100% FDI allowed in most infrastructure projects, through the 'Automatic' route.
- Repatriation of 100% profits from investments allowed in most cases.
- India has been ranked at the fourth place in global foreign direct investments in 2014.
- India attracted FDI equity inflows of US\$ 34,298 million in April 2012 to 2013.
- The cumulative amount of FDI equity inflows from April 2000 to January 2014 stood at US\$ 212,031. million.
- Foreign investment, liberalized across the board, excluding certain restricted or prohibited industries.



## Trends in Inward FDI (in USD Millions)

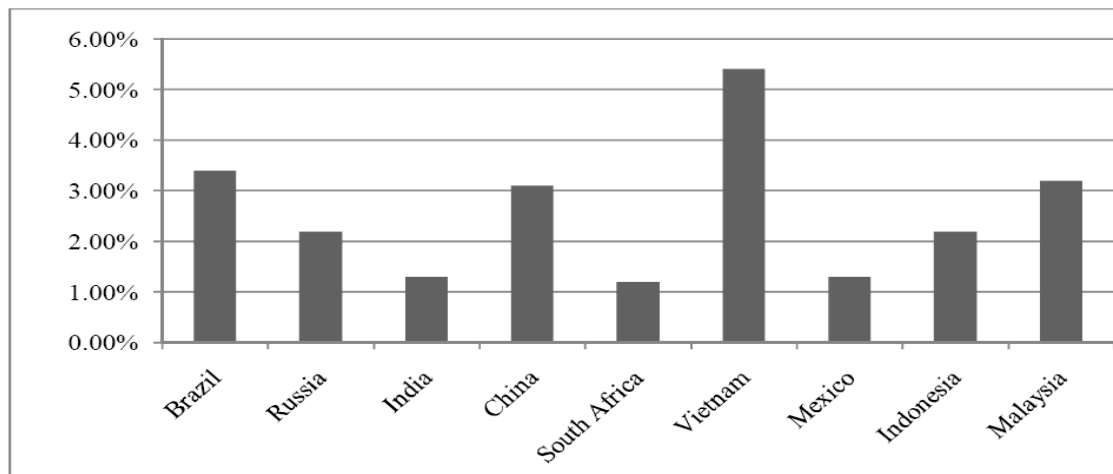


*Source:* Reserve Bank of India Database



Source: UNCTAD Database

**Fig. 2:** FDI inflows in Developing Economies 2012

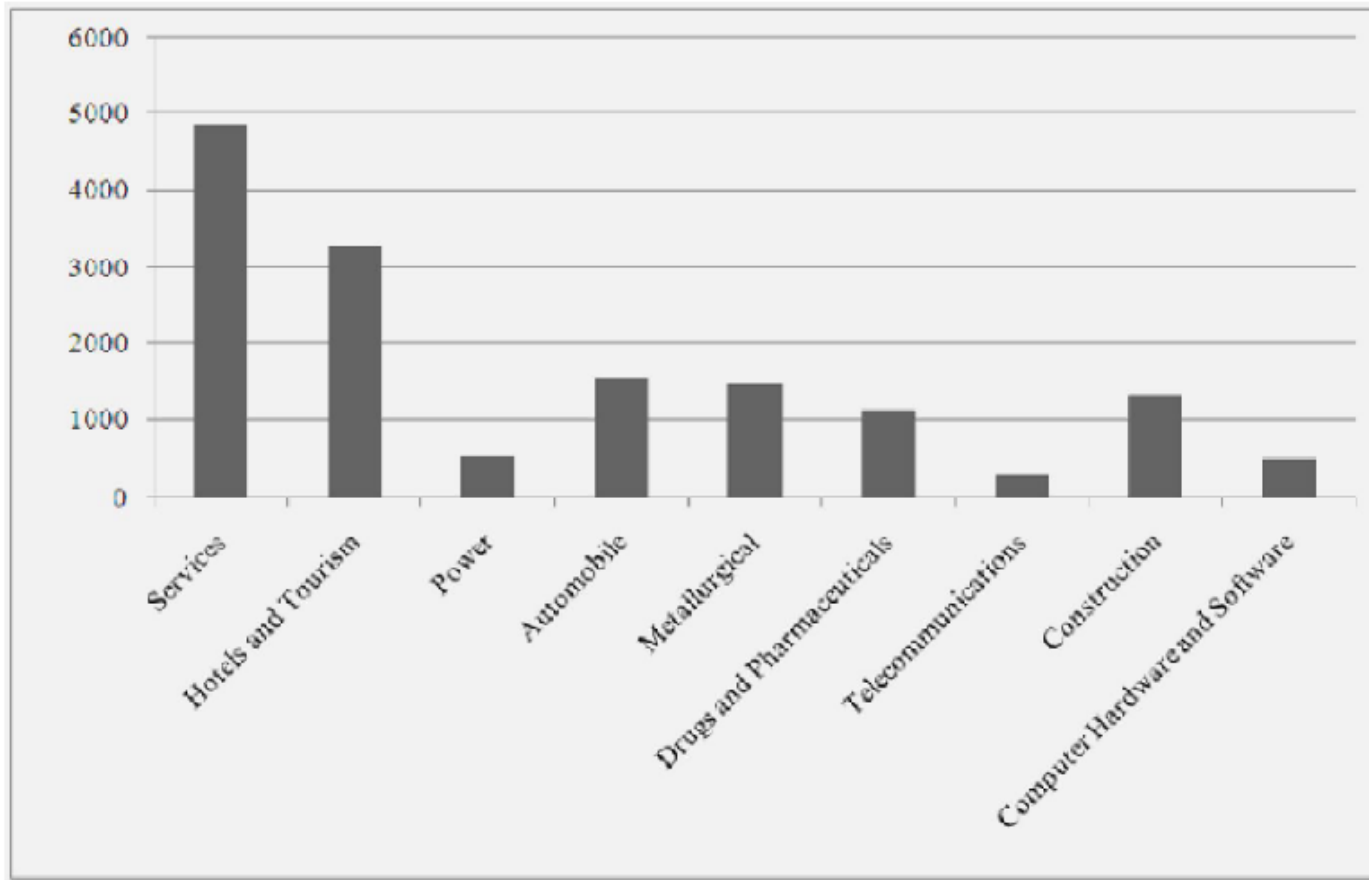


Source: World Bank Database

**Fig. 3:** FDI as a % of GDP in 2012.



## Sectors attracting highest FDI inflows in 2012-13 (in USD millions)



*Source:* Department of Industrial Policy and Promotion, Ministry of Commerce & Industry, Government of India



# FDI INFRASTRUCTURE EQUITY CEILING

Real Estate townships)	100%
Roads	100%
Power	100%
Airlines	74%
Airports	74%
Banks (Private)	74%
Mining	74%
Telecom	74%
Defence	49%
Insurance	49%



# PPP LANDSCAPE IN INDIA

- The **economy of India** is fourth largest economy in the world the by purchasing power parity (PPP).
- Well established processes for private sector participation.
- Provision of viability gap funding.
- Enabling fiscal environment.
- Promotion of foreign investment.





## New Technologies

- Several new technologies developed to impart a unique set of benefits.
- The Housing Authority in India adopted prefabrication design that attempted to standardize the size and shape of walls & fast Construction .

## Open Prefab Systems & Small Building Components

- Open prefab systems based on an appropriate production level and small, easily to handle elements with rationalised production methods have attracted the attention of housing experts as an important option for arresting the rapidly rising escalation in the costs of material and labour.
- Building Centers in different regions of India have been instrumental propagating several of these prefab systems at the grass-root level



## New Initiatives

- ❖ A stable and predictable taxation regime which will be investor friendly and spur growth.
- ❖ Promotion of FDI selectively in sectors.
- ❖ The composite cap of foreign investment to be raised to 49 per cent with full Indian management and control through the FIPB route.
- ❖ The manufacturing units to be allowed to sell its products through retail including E-commerce platforms
- ❖ Developing one hundred Smart Cities.
- ❖ Incentives for Real Estate Investment Trusts (REITS). Modified REITS type structure for infrastructure projects as the Infrastructure Investment Trusts (INVITS). These two instruments to attract long term finance from foreign and domestic sources including the NRIs
- ❖ Simplification of norms to facilitate education loans for higher studies.
- ❖ Pan India programme “Digital India” launched.



## Cont.....

- ❖ “National Centre for Excellence in Animation, Gaming and Special Effects to be set up.
- ❖ urban habitations to be provided support for renewal of infrastructure and services in next 10 years through PPPs.
- ❖ Metro Projects in various Indian cities.
- ❖ Development of industrial corridors with emphasis on Smart Cities linked to transport connectivity to spur growth in manufacturing and urbanization will be accelerated.
- ❖ Comprehensive policy to promote Indian ship building industry.
- ❖ Development of new airports in Tier I and Tier II Cities launched.
- ❖ Work on select expressways in parallel to the development of the Industrial Corridors will be initiated.
- ❖ Ultra-Modern Super Critical Coal Based Thermal Power Technology is introduced.

*Thank  
you*



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