

**GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH**

**LOK SABHA
UNSTARRED QUESTION NO. 541
(TO BE ANSWERED ON 02.12.2015)**

SCIENTIFIC AND INDUSTRIAL RESEARCH DEVELOPMENT

541. DR. MAHENDER NATH PANDEY

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

- (a) Whether industrial development has been affected in the country owing to slow pace of research and development;**
- (b) If so, the details thereof and the action taken by the Government in this regard;**
- (c) the budgetary allocation made by the Government for scientific and industrial research and development under the current plan;**
- (d) Whether the Government proposes to make adhoc allocation for upgradation of basic research and development programmes; and**
- (e) if so, the details thereof?**

ANSWER

MINISTER OF STATE FOR SCIENCE AND TECHNOLOGY AND EARTH SCIENCES

(SHRI Y. S. CHOWDARY)

- (a) The pace of industrial development is dependent upon a number of international and domestic factors including the overall global environment as well as the pace of research and development (R&D).**

As projected by the Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, the rate of industrial growth, measured in terms of Index of Industrial Production (IIP) during the current financial year (April-September, 2015-16) is recorded higher at 4.0 per cent as compared to the growth of 2.9 per cent during the same period of previous year (April-September, 2014-15).

The pace of R&D, measured in terms of national expenditure on R&D as a percentage of Gross Domestic Product (GDP) as depicted in Table 1, is seen to be increasing over the years.

**Table 1: National Expenditure on R&D as a Percentage of GDP (RD-G) from
1995-96 to 2011-12**

Year	RD-G
1995-96	0.67
1996-97	0.68
1997-98	0.73
1998-99	0.75
1999-2000	0.78
2000-01	0.81

Year	RD-G
2001-02	0.79
2002-03	0.77
2003-04	0.77
2004-05	0.81
2005-06	0.88
2006-07	0.87

Year	RD-G
2007-08	0.86
2008-09	0.89
2009-10	0.87
2010-11	0.87
2011-12	0.88

Another measure of increase in the pace of R&D is the number of Intellectual Property Rights (IPR) applications. Annexure 1 depicts the status of IPR applications in recent years.

- (b) As per the publication titled “Research and Development Statistics (2011-12)” published by the Department of Science and Technology (DST), Ministry of Science & Technology, Government of India in December 2013, total national investment on R&D and the share of public and private sector companies during 2008-09, 2009-10, 2010-11 and 2011-12 is as shown in Table 2.**

Table 2: National Investment on R&D

Sector	2008-09	2009-10	2010-11*	2011-12*
Central & State Govt.	28619.40	32721.22	37908.32	43918.22
Higher Education	1911.56	2199.97	2547.43	2949.76
Public Sector Companies	2457.02	2814.56	#3264.84	#3787.15
Private Sector Companies	14365.40	15305.55	18332.88	21965.31
Total National Investment	47353.38	53041.30	62053.47	72620.44
Share of Public Sector Companies	5.19%	5.31%	#5.26%	#5.21%
Share of Private Sector Companies	30.34%	28.86%	29.54%	30.25%

Note: *Estimated #Projected

In comparison, the Government is aware that in the member countries of Organization for Economic Co-operation and Development (OCED) that are noted for strides in industrial development a substantial percentage of the total investment in R&D is made by private sector companies, e.g. 77% in Japan, 68% in Germany, 65% in USA, 45% in UK and 52% in France.

Keeping the above in view, a number of steps have been taken by the Government to enhance industrial growth and increase the share of industries in R&D, significant among them being the following:

- **The Make in India programme with 25 thrust sectors which was launched in September 2014 is devised to transform India into a global design and manufacturing hub and includes major new initiatives designed to facilitate investment, foster innovation, protect intellectual property, and build best-in-class manufacturing infrastructure, thus boosting industrial development and R&D.**
- **The policy and procedures on Foreign Direct Investment has been progressively liberalized.**
- **For ease of doing business, Government has inter-alia set up an Investor Facilitation Cell, and launched e-biz Mission Mode Project providing 29 Government to Business (G2B) services.**
- **On creating world class infrastructure, Delhi Mumbai Industrial Corridor (DMIC) project is under implementation and many other initiatives including Amritsar-Kolkata Industrial Corridor, Chennai-Bengaluru Industrial Corridor, Bengaluru-Mumbai Economic Corridor and the Vizag-Chennai Industrial Corridor have been conceptualized.**
- **The industry sector has been urged to increase their share to 50% in the national R&D expenditure.**
- **The Government has targeted to raise the national R&D expenditure to 2% of GDP by the end of 12th five year plan.**
- **The guidelines on R&D for Central Public Sector Enterprises (CPSEs) issued by the Department of Public Enterprises prescribe that Maharatna & Navratna CPSEs and Miniratna - I & II & other CPSEs incur a minimum R&D expenditure of 1% and 0.5% of Profit After Tax (PAT), respectively.**
- **The Council of Scientific & Industrial Research (CSIR) through its constituent laboratories provides technology, product and knowledge-based services to the industry covering a wide spectrum of science and technology.**
- **There are various funding schemes under several Government ministries/ departments including the Ministry of Science & Technology, that support industry in undertaking technology development, upgradation and commercialization activities.**
- **The Government provides a number of fiscal incentives to the industrial sector to increase their investment in R&D, as listed in Annexure 2.**
- **The 'Start up India, Stand-up India' campaign was announced by the honourable Prime Minister on 15th August, 2015 seeking to provide an impetus to the entrepreneurial landscape of India.**

- **The Atal Innovation Mission (AIM) is being set up under National Institution for Transforming India (NITI Aayog). AIM will be an Innovation Promotion Platform involving academics, entrepreneurs, and researchers drawing upon national and international experiences to foster a culture of innovation, R&D in India.**
- **A mechanism called Self Employment and Talent Utilization (SETU) has been established under NITI Aayog. SETU will be a Techno-Financial, Incubation and Facilitation Programme to support all aspects of start-up businesses, and other self-employment activities, particularly in technology-driven areas.**
- **An India Aspiration Fund (IAF) managed by Small Industries Development Bank of India (SIDBI), which is India's Principal Financial Institution, has been established for the promotion, financing and development of the Micro, Small and Medium Enterprises (MSME) sector.**
- **SIDBI also launched the Make in India Loan for Small Enterprises (SMILE) Scheme. SMILE will offer quasi-equity and term based short term loans to Indian SMEs which will have less stringent rules and regulations.**
- **Micro Units Development and Refinance Agency (MUDRA) Bank will be responsible for regulating and refinancing all Micro-finance Institutions (MFI) which are in the business of lending to micro/small business entities engaged in manufacturing, trading and services activities.**

(c) Table 3 lists the budgetary allocation made by the Government to the Department of Scientific & Industrial Research (DSIR) for scientific and industrial research and development.

Table 3: Budgetary Allocation for DSIR in Rs crore

Year	2012-13		2013-14		2014-15		2015-16	
	Plan	Non-Plan	Plan	Non-Plan	Plan	Non-Plan	Plan	Non-Plan
BE	2013.00	1471.00	2013.00	1558.00	2100.00	1607.15	2281.00	1750.00
RE	1555.00	1401.00	1620.00	1558.00	1600.00	1800.00	2192.50	1644.20
AE	1544.84	1400.82	1602.82	1556.72	1594.15	1799.37		

(d)&(e) There are no indications that the Government proposes to make adhoc allocation for upgradation of basic research and development programmes.

Annexure 1

Increase in IPR applications and IPRs granted:-

Patents

Year	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15 (up to December 2014)
Filed	17466	24505	28940	35218	36812	34287	39400	43197	43674	42950	32269
Examined	14813	11569	14119	11751	10296	6069	11208	11031	12268	18306	15525
Granted	1911	4320	7539	15316	16061	6168	7509	4381	4126	4225	4817
Disposals				15795	17136	11339	12851	8488	9027	11672	9893

Designs

Year	2006-08	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15 (up to December 2014)
Filed	5521	6402	6557	6092	7589	8373	8337	8533	7124
Examined	4976	6183	6446	6266	6277	6511	6771	7281	5811
Registered	4250	4928	4772	6025	9206	6590	7250	7178	5373

Trade Marks

Year	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15 (up to December 2014)
Filed	103419	123514	130172	141943	179317	183588	194216	200005	153991
Examined	85185	63605	105219	25875	205065	116263	202385	203086	109661
Registered	109361	100857	102257	67490	115472	51765	44361	67873	32784
Disposal			126540	76310	132507	57867	69736	104753	70365

Geographical Indications

Year	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15 (up to December 2014)
Filed	33	37	44	40	27	148	24	75	25
Registered	3	31	45	14	29	23	21	22	0

Comparative Trends of IPRs Granted/Registered

Year	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15 (up to December 2014)
Patents	7539	15316	16061	6168	7509	4381	4126	4225	4817
Designs	4250	4928	4772	6025	9206	6590	7250	7178	5373
Trade Marks	109361	100857	102257	67490	115472	51765	44361	67873	32784
Geographical Indications	3	31	45	14	29	23	21	22	0

Annexure 2

Some of the incentives and support measures presently available for enhancing scientific R&D.

- 100% write-off of revenue expenditure on R&D under section 35(1)(i) of I.T. Act, 1961.
- 100% write-off of capital expenditure on R&D in the year the expenditure is incurred under section 35(1)(iv) of I.T. Act, 1961.
- Weighted Tax deduction @200% on expenditure incurred in approved in-house R&D facility, to companies engaged in business of biotechnology or in any business of manufacture or production of any article or thing (*not being an article or thing specified in the list of the eleventh schedule*) under section 35(2AB) of I.T. Act, 1961. Provision is valid till 31-03-2017.
- Weighted tax deductions@200% for sponsored research programmes in approved National laboratories, Universities and IITs (Section 35(2AA) of I.T. Act).
- Income tax rebate @175% on donations for scientific research made to non-commercial research organization approved and notified under section 35(1)(ii) and 35(1)(iii) of I.T. Act, 1961.
- Tax Holiday for ten consecutive assessment years to commercial R&D companies under section 80-IB(8A) of I.T. Act, 1961 approved before 31-03-2007.
- Accelerated depreciation allowance upto 40% on investment on new plants and machinery based on indigenous technology as per rule 5(2) of I.T. Rules.
- Customs duty exemption on goods imported for R&D and central excise duty waiver on purchases of indigenous goods for R&D to public funded and privately funded institutions registered with DSIR. (Notification No.51/96-customs dated 23 July 1996 and No. 24/2007-customs dated 1 March 2007; Notification No. 10/97-central excise dated 1 March 1997 and No. 16/2007- central excise dated 1 March 2007).
- Customs duty exemption on imports made for use in R&D projects funded by Govt. in industries (Notification No. 50/96-customs dated 23 July 1996).
- DSIR recognized in-house R&D units engaged in R&D in biotechnology and pharmaceuticals sectors can import specified equipment duty free (List 28). In respect of R&D units with manufacturing facilities, the benefits of full customs duty exemption for specified equipment is also available for manufacturing activity to the extent of 25% of the previous year's export turnover.
- Central excise duty waiver for 3 years on specified goods designed and developed by a wholly owned Indian company, National laboratory, Public funded research institutions or Universities and patented in any two countries from amongst India, USA, Japan and in any one country of the European Union. The specified goods are manufactured by a wholly owned Indian Company. This exemption is available based on certification from DSIR (Notification No. 13/99-central excise dated 28th February 1999).
