CHAPTER I : INTRODUCTION

1.1 Foreword

This Report relates to matters arising from the audit of the financial transactions of the Ministry of Defence and its following Organisations:

- Army,
- Inter Services Organisations,
- Defence Research and Development Organisation and its laboratories dedicated primarily to Army and Ordnance Factories,
- Defence Accounts Department
- Ordnance Factories, and
- Defence Public Sector Undertakings

The primary purpose of the report is to bring to the notice of the legislature important results of audit. Auditing standards require that the materiality level for reporting should be commensurate with the volume and magnitude of transactions. The findings of Audit are expected to enable the Executive to take corrective actions as also frame policies and directives that will lead to improved financial management of the Organisations, thus contributing to better governance and improved operational preparedness.

This chapter, in addition to explaining the planning and extent of audit, provides a synopsis of the significant audit observations, followed by a brief analysis of the expenditure of the above Organisations. Subsequent chapters present detailed findings and observations arising out of the audit and performance reviews of the Ministry and the aforementioned Organisations.

1.2 Audited entity profile

Ministry of Defence, at the apex level, frames policies on all Defence related matters. It is divided into four departments, namely, Department of Defence, Department of Defence Production, Department of Research and Development and Department of Ex-Servicemen Welfare. Each department is headed by a Secretary. The Defence Secretary who is the Head of the Department of Defence also coordinates the activities of other departments.

Army is primarily responsible for the Defence of the country against external aggression and safeguarding the territorial integrity of the nation. It also renders aid to the civil authorities at the time of natural calamities and internal disturbances. It is, therefore, incumbent upon the Army to suitably equip, modernize and train itself to meet these challenges.

DRDO, through its chain of laboratories, is engaged in research and development, primarily to promote self-reliance in Indian Defence sector. It undertakes research and development in areas like aeronautics, armaments, combat vehicles, electronics, instrumentation, engineering systems, missiles, materials, naval systems, advanced computing, simulation and life sciences.

The Inter Services Organisations, such as Armed Forces Medical Services, Military Engineer Services (MES), Defence Estates, Quality Assurance, etc., serve the Defence forces in the three wings of the Army, Navy and Air Force. They are responsible for development and maintenance of common resources for optimising cost-effective services. They function directly under Ministry of Defence.

Ordnance Factory Board (OFB) functions under the administrative control of the Department of Defence Production and is headed by Director General, Ordnance Factories. Thirty-nine factories are responsible for production and supply of ordnance stores to the armed forces.

Defence Public Sector Undertakings(DPSUs) function under the administrative control of Department of Defence Production. There are nine DPSUs which are headed by respective Chairman cum Managing Director (CMD).

1.3 Integrated Financial Advice and Control

Ministry of Defence and the Services have a full-fledged internal financial control system in place. With fully integrated Finance Division in the Ministry of Defence, the Secretary (Defence Finance) and his/her officers scrutinize all proposals involving expenditure from the Public Fund. Secretary (Defence Finance) is responsible for providing financial advisory services to Ministry of Defence and the Services at all levels, and for treasury control of the Defence expenditure.

Being Chief Accounting Officer of the Defence Services, Secretary (Defence Finance) is also responsible for the internal audit and accounting of Defence expenditure. This responsibility is discharged through the Defence Accounts Department with the Controller General of Defence Accounts as its head.

1.4 Authority for Audit

The authority for our audit is derived from Articles 149 and 151 of the Constitution of India and the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) (DPC) Act, 1971. We conduct audit of

Ministries/Departments of the Government of India under Section 13[1] of the CAG's (DPC) Act. Major Cantonment Boards are audited under Section 14[2] of the said Act. Principles and methodology of compliance audit are prescribed in the "Regulations of Audit and Accounts, 2007".

1.5 Planning and Conduct of Audit

Our audit process starts with the risk assessment of the Organisation as a whole and of each unit, based on expenditure incurred, criticality and complexity of activities, level of delegated financial powers, assessment of overall internal controls, and concerns of stakeholders. Previous audit findings are also considered in this exercise. Based on this risk assessment, the frequency and extent of audit are decided. An annual audit plan is formulated to conduct audit on the basis of such risk assessment.

After completion of audit of each unit, Local Test Audit Reports (LTARs) containing audit findings are issued to the Head of the unit. The units are requested to furnish replies to the audit findings within a month of receipt of the LTARs. Whenever the replies are received, audit findings are either settled or further action for compliance is advised. Important audit observations arising out of these LTARs are processed for inclusion in the audit reports which are submitted to the President of India under Article 151 of the Constitution of India. During 2012-13, audit of 614[3] units/formations and nine DPSUs was carried out by employing 18,785[4] partydays. Our audit plan ensured that most significant units/entities, which are vulnerable to risks, were covered within the available manpower resources.

1.6 Significant audit observations

Capital and Revenue procurements made by the Ministry of Defence and the Service Organisations form the critical area as far as the audit of Defence Sector is concerned. We have been pointing out deficiencies in the procurement process in the previous Audit Reports and the Ministry of Defence has taken several measures to improve the procedures involved. Periodical revisions of the Defence Procurement Procedure (DPP) and Defence Procurement Manual (DPM) are significant steps to evolve better practices.

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[1] Audit of (i) all expenditure from the Consolidated Fund of India (ii) all transactions relating to Contingency Funds and Public Accounts and (iii) all trading, manufacturing, profit & loss accounts & balance-sheet & other subsidiary accounts.

[2] Audit of receipt and expenditure of bodies or authorities substantially financed by grants or loans from the Consolidated Fund of India or of any State or of any Union Territory.

[3] Number of units/formations audited by O/o DGADS, New Delhi and O/o DG(OF) Kolkata.

[4] Number of Party days employed during the financial year 2012-13 by the O/o DGADS New Delhi, O/o DG(OF) Kolkata and O/o PDCA, Bengaluru

The present Report highlights cases which assume importance in the light of their impact on operational preparedness. The Report also brings out issues regarding improper management of Defence land, poor management of contract, inadmissible payments to contractors, procurement of substandard stores, excess payments etc which require immediate redressal.

- BEML signed a collaboration agreement for indigenisation of TATRA vehicles 28 years back in 1986, with Original Equipment Manufacturer (OEM)at the instance of the Ministry of Defence. The objective of attaining 86 *per cent* indigenisation by 1991 was envisaged by BEML. However, till 2014 the target is yet to be attained. BEML attributed the delay mainly to the failure of Ministry in placing order for sufficient number of vehicles between 1986 and 1991. The process for indigenisation of TATRA vehicles suffered due to lack of clear long term projection of orders by Army to BEML. Resultantly, the objective of self-reliance in production of TATRA vehicles was defeated. (Paragraph 2.1)

- Ministry of Defence imported 999 number of Individual Chemical Agent Detectors (ICADs) worth ₹ 27.32 crore between January 2010 and October 2010 for detecting the presence of chemical agents and toxic industrial compounds. Non conducting Field Evaluation Trials in conditions where equipment is likely to be deployed as prescribed by DPP, had resulted in acceptance of defective ICADs worth ₹ 27.32 crore. These equipment were awaiting replacement since August 2011 by the firm as of June 2014. (Paragraph 2.2)

- Injudicious planning for the procurement of nine items under Individual Protective Equipment relating to Chemical, Biological, Radiological and Nuclear equipment resulted in non procurement of NBC suit Permeable, the main constituent of IPE. An expenditure of ₹ 88.39 crore was incurred on other eight items of IPE without NBC suit Permeable which defeated the purpose of ensuring protection in case of NBC warfare.(Paragraph 3.1)

- Army Headquarters placed supply orders in February 2008 for supply of 3717 Tyres costing ₹ 2.97 crore. The firm was to deliver stores by August 2008. The firm supplied tyres of inferior material quality with manufacturing defects. The purchasing authority of AHQ also did not suspend the procurement of tyres pending finalisation of defect report. Continuance of supply of defective tyres by the firm led to payment of ₹ 2.65 crore.(Paragraph 3.4)

- Failure of Local Military Authorities at Chennai to correctly assess the requirement of married accommodation for JCOs had resulted in construction of 17 dwelling units at a cost of ₹ 1.79 crore in excess of the requirement and their subsequent re-appropriation as field area family accommodation. In another case, Station Commander Pune irregularly re-appropriated four Lieutenant dwelling units constructed at a cost of ₹ 47 lakh as 'Guest Rooms for Brigadier and above without the approval of Government of India. (Paragraph 4.1)

- DGBR sanctioned two works worth ₹ 0.90 crore for creation of two storage accommodation. These funds were actually utilized to create a Multipurpose Hall with an area of 1556 sqm defeating the objective of storage accommodation. (Paragraph 5.1)

- The performance of the Grants-in-Aid Scheme introduced in 1969 in DRDO to utilise the indigenously available research talent preferably in areas of interest to Defence was far from satisfactory. There were critical shortfalls in the management and monitoring of the Scheme such as improper budgeting process, awarding the project without arriving at viable and specific research and defining the quantified and qualitative target attained against the outlay, circulation of the Scheme so as to ensure adequate response from all interested parties and there was no evidence to suggest that all the proposals received through online application were duly considered and properly evaluated to ensure fair competition and selection of best possible proposals. (Paragraph 7)

- Against the Ministry's revised plan to induct 124 MBTArjun in 2002-09, Ordnance Factories issued 119 MBT Arjun to the Army during 2004-13. The production of 300 indigenous T-90 tanks, scheduled for delivery in 2006-10 based on Transfer of Technology from Russia (2001), lagged behind with production of 225 T-90 and issue of only 167 T-90 tanks to the Army during 2009-13. Inordinate delays in production of both the tanks led to fresh import (November 2007) of T-90 tanks worth ₹ 4,913 crore. While the progress of the project for augmentation of production capacity of T-90 tanks sanctioned in September 2011 was very slow, the existing facilities for MBT Arjun remained underutilised in absence of further order of MBT Arjun from the Army.(Paragraph 8.3).

1.7 Persistent irregularities in Defence Research and Development Establishment

Cases of non realization of project deliverables in terms of Staff projects, Technology Demonstration / Research and Development projects have been highlighted in Report No.24 of 2011-12 and Report No.16 of 2012-13. However, no significant improvement was noticed as reported in Chapter VI. Corrective steps need to be taken urgently in this regard.

1.8 Response of the Ministry/Department to Draft Audit Paragraphs

On the recommendations of the Public Accounts Committee, Ministry of Finance (Department of Expenditure) issued directions to all Ministries in June 1960 to send their response to the Draft Audit Paragraphs proposed for inclusion in the Report of the Comptroller and Auditor General of India within six weeks.

The Draft Paragraphs are forwarded to the Secretaries of the Ministry/ departments concerned drawing their attention to the audit findings and requesting them to send their response within six weeks. It is brought to their personal attention that in view of likely inclusion of such Paragraphs in the Audit Reports of the Comptroller and Auditor General of India, which are placed before Parliament, it would be desirable to include their comments in the matter.

Draft paragraphs proposed for inclusion in this Report were forwarded to the Secretaries concerned between April 2014 and October 2014 through letters addressed to them personally.

The Ministry of Defence did not send replies (October 2014) to 17 paragraphs out of 19 Paragraphs featured in Chapters II to VII, 13 of the 15 paragraphs included in Chapter VIII and 02 of the 05 paragraphs included in Chapter-IX of this report. However, the responses of Army Headquarters and Ordnance Factory Board and Management of DPSUs wherever received, have been suitably incorporated in the Report.

1.9 Action taken on earlier Audit Paragraphs

With a view to enforcing accountability of the Executive in respect of all issues dealt with in various Audit Reports, the Public Accounts Committee desired that Action Taken Notes (ATNs) on all paragraphs pertaining to the Audit Reports for the year ended 31 March 1996 onwards be submitted to them duly vetted by Audit within four months from the date of laying of the Reports in Parliament.

Review of ATNs relating to the Army as of September 2014 indicated that ATNs on 71 paragraphs included in the Audit Reports up to and for the year ended March 2012 remain outstanding, of which the Ministry had not submitted even the initial ATNs in respect of 11 Paragraphs and 18 ATNs (Sl. No.1 to 18) are outstanding for more than 10 years as shown in **Annexure-I**.

1.10 Financial Aspects and Budgetary Management

1.10.1 Introduction

The budgetary allocations of the Ministry of Defence are contained under eight Demands for Grants of which six grants are included under Defence Service Estimates (DSE) and two under Civil Grants.

- Two Civil Grants which include Demand No. 20 - Ministry of Defence (Civil) and Demand No. 21 - Defence Pensions.

- Six Grants of the Ministry of Defence, which include the following:

  Demand No.22, Defence Service - Army

  Demand No. 23, Defence Services - Navy

  Demand No. 24, Defence Services - Air Force

  Demand No. 25, Defence Ordnance Factories

  Demand No. 26, Defence Services - Research & Development

  Demand No. 27, Capital Outlay on Defence Services -Includes All Services and Departments other than those covered by the Demands for Grants of Ministry of Defence (Civil)

- The budgetary requirements for the Border Roads Organisation are provided by the Ministry of Road Transport & Highways.

The above mentioned Grants are broadly categorized into Revenue and Capital expenditure.

- **Revenue Expenditure:** This includes expenditure on Pay & Allowances, Transportation, Revenue Stores (like Ordnance stores, supplies by Ordnance Factories, Rations, Petrol, Oil and Lubricants, Spares, etc.), Revenue Works (which include maintenance of Buildings, water and electricity charges, rents, rates and taxes, etc.) and other miscellaneous expenditure.

- **Capital Expenditure:** This includes expenditure on Land, Acquisition of new weapon and ammunitions, Modernization of Services, Construction Works, Plant and Machinery, Equipment, Tanks, Naval Vessels, Aircraft and Aero-engines, Dockyards, etc.

Approval of Parliament[5] is taken for the Gross expenditure provision under different Demands for Grants. Receipts and Recoveries, which include items like sale proceeds of surplus/obsolete stores, receipts on account of services rendered to State Governments/other Ministries, etc. and other miscellaneous items are deducted from the gross expenditure to arrive at the net expenditure on Defence Services for the six Demands, *viz.* Demands Nos. 22 to 27. A brief analysis of these grants is given below except Grant No. 23, Defence Services-Navy and Grant No.24, Defence Services-Air Force which are commented upon in a separate report.

1.10.2 Grant No. 20- Civil Expenditure of the Ministry of Defence

The budgetary provisions and actual expenditure including Revenue and Capital expenditure for the year 2012-13 under Demand No. 20 is shown in Table - 1 below:

Table-1: Budgetary allocation and Actual Expenditure: MoD (Civil)

(₹ in crore)

Budget Estimates	Revised Estimates	Actual Expenditure
16,598.24	15,800.00	15,609.71

Major components of Gross Revenue expenditure of ₹ 14,012.06 crore for 2012-13 are Canteen Stores Department (CSD) (₹10,765.51 crore), Defence Accounts Department (₹ 1,030.60 crore), Coast Guard Organisation (CGO) (₹ 944.73 crore), Jammu & Kashmir Light Infantry (J&K LI) (₹ 853.24 crore) Defence Estates Organisation (DEO) (₹ 244.10 crore) etc. In the Capital Outlay of ₹ 1,597.65 crore the actual expenditure in 2012-13, the major components are Capital Outlay on Other Fiscal Services- Customs (₹ 1,564.71 crore), housing and office buildings (₹ 35.74 crore) and Miscellaneous Loans for Unit Run Canteen (URC) by CSD (₹ 0.75 crore).

1.10.3 Grant No. 21 - Defence Pensions

Defence Pensions, under Ministry of Defence, provides for pensionary charges in respect of retired Defence personnel (including Defence Civilian employees) of the three services, *viz.* Army, Navy and Air Force, and of employees of Ordnance Factories, etc. It covers payments of service pension, gratuity, family pension, disability pension, commuted value of pension, leave encashment, etc.

[5] Report No.20 of Standing Committee on Defence (2012-13, Fifteenth Lok Sabha)

The position of budgetary allocation and expenditure for the year 2012-13 under this Grant is as under:

Table- 2: Budgetary allocation and Actual Expenditure: Defence Pension

(₹ in crore)

Budget Estimates	Revised Estimates	Actual Expenditure
39,000.00	39,500.00	43,367.71

1.11 Grant No. 22 to 27 – Defence Services Estimates

1.11.1 At a glance

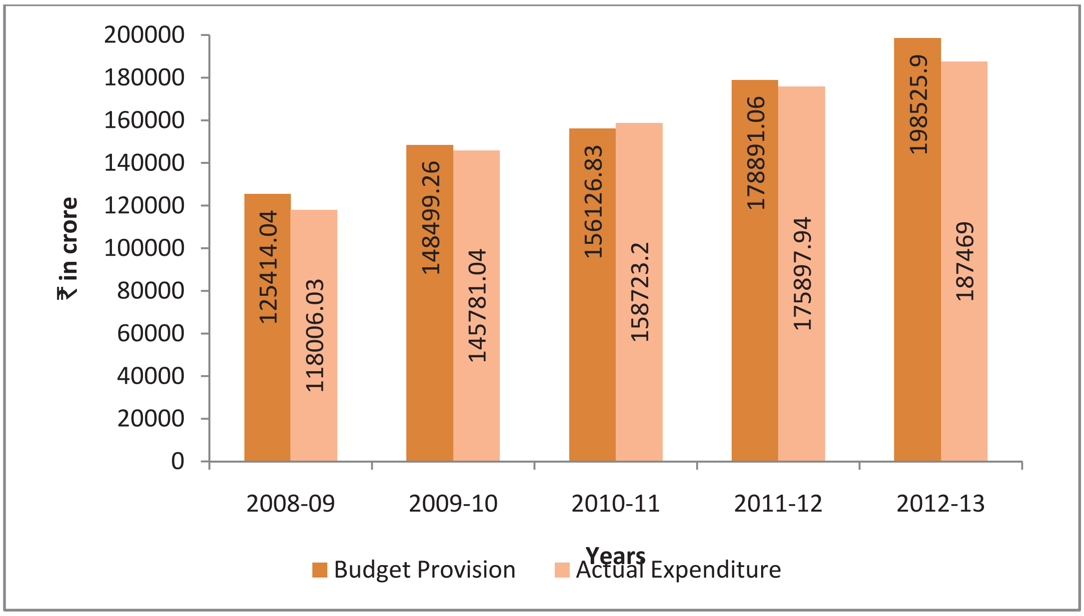
The overall Defence Budget (Grant No. 22 to 27) allocation and actual expenditure (Voted & Charged) for the period 2008-09 to 2012-13 are given in Table-3 and Chart -1 as under:

Table-3: Total Defence Budget allocation and Actual expenditure

(₹ in crore)

Year	Budget Provision	Actual Expenditure
2008-09	1,25,414.04	1,18,006.03
2009-10	1,48,499.26	1,45,781.04
2010-11	1,56,126.83	1,58,723.20
2011-12	1,78,891.06	1,75,897.94
2012-13	1,98,525.90	1,87,469.00

Chart-1: Budget Provision Vs Actual Expenditure

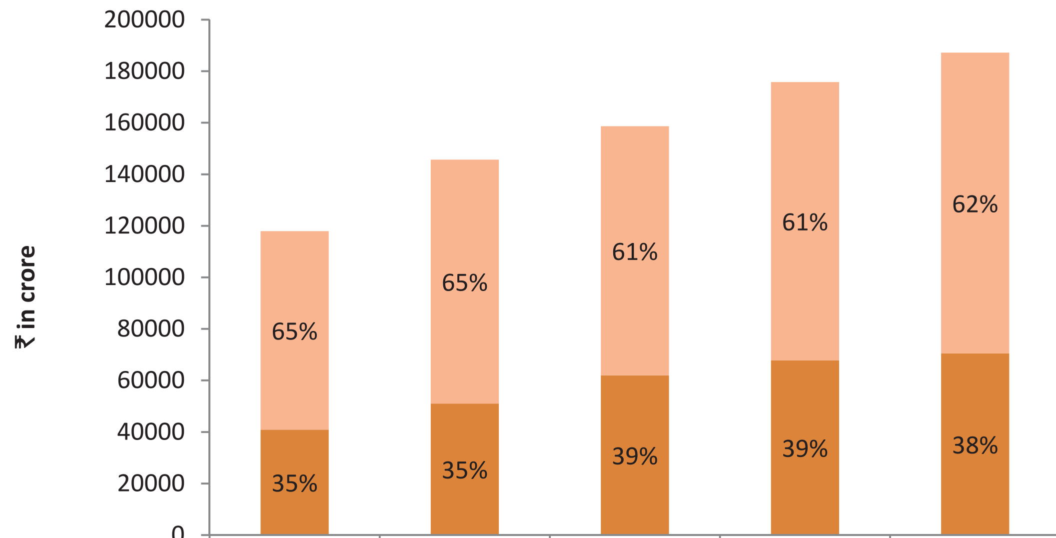


- The data relating to actual Defence expenditure shows an overall increase of 58.86 *per cent* during the period 2008-09 to 2012-13 whereas the increase in 2012-13 over the previous year is 6.58 *per cent.*

1.11.2 Revenue expenditure vs. Capital expenditure in Defence Services

Capital and Revenue expenditure (Voted) for the period 2008-09 to 2012-13 is given in Chart - 2 below:

Chart - 2: Revenue expenditure vs. Capital expenditure (Voted)



	2008-09	2009-10	2010-11	2011-12	2012-13
Revenue Expenditure (Voted)	77074.06	94645.46	96625.32	107961.1	116707.76
Capital Expenditure (Voted)	40894.97	51019.42	62011.53	67843.96	70483.32

The above data shows that the proportion of Capital expenditure as a percentage of total Defence expenditure has remained between 35 to 39 *per cent* during the period 2008-09 to 2012-13, however, there is a decrease by one per *cent* over the previous year in 2012-13.

1.12 Break-up of Expenditure (Voted) relating to Army, Ordnance Factories & R&D (Capital & Revenue) – Grant No. 22, 25, 26 and 27[6]

A detailed analysis of the expenditure (Voted) for the period 2008-09 to 2012-13 relating to Army, Ordnance Factories and R & D showing Revenue and Capital expenditure is given in Table-4 below.

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[6] Grant No. 23 – Navy and Grant No. 24 – Air Force are analysed in the Compliance Audit Report of the Union Government (Defence Services) Air Force and Navy

Table-4: Expenditure (Voted) of Army, Ordnance Factories & R&D

(₹ in crore)

Description of Grant	Components of Expenditure	2008-09	2009-10	2010-11	2011-12	2012-13
Army	Actual	59,663.53	77,512.29	80,789.82	86,776.05	94,274.06
	Revenue	49,052.51 (82.22%)	62,716.64 (80.91%)	65,001.96 (80.46%)	71,832.66 (82.78%)	79,516.95 (84.35 %)
	Capital	10,611.02 (17.78%)	14,795.65 (19.09%)	15,787.86 (19.54%)	14,943.39 (17.22%)	14,757.11 (15.65 %)
Ordnance Factory	Actual	3,309.13	3,520.27	1,527.00	1,704.15	2,116.26
	Revenue	2,957.00 (89.36%)	3,279.98 (93.17%)	1,073.42 (70.30%)	1,427.94 (83.79%)	1,754.03 (82.88%)
	Capital	352.13 (10.64%)	240.29 (6.83%)	453.58 (29.70%)	276.21 (16.21%)	349.07 (16.60%)
R&D	Actual	7,730.66	8,507.87	1,0191.99	9,932.29	9,860.56
	Revenue	3,873.55 (50.11%)	4,355.57 (51.20%)	5,230.88 (51.32%)	5,321.24 (53.58%)	5,218.32 (52.92%)
	Capital	3,857.11 (49.89%)	4,152.30 (48.81%)	4,961.11 (48.68%)	4,611.05 (46.43%)	4,642.24 (47.08%)

Note: Figure in the brackets represents the Revenue/Capital expenditure as a percentage of the Actual expenditure

- The total Army expenditure during 2012-13 has registered an increase of 8.64 *per cent* over the previous year with the Capital expenditure recording a decrease of 1.25 *per cent* and the Revenue expenditure registering an increase of 10.70 *per cent.*

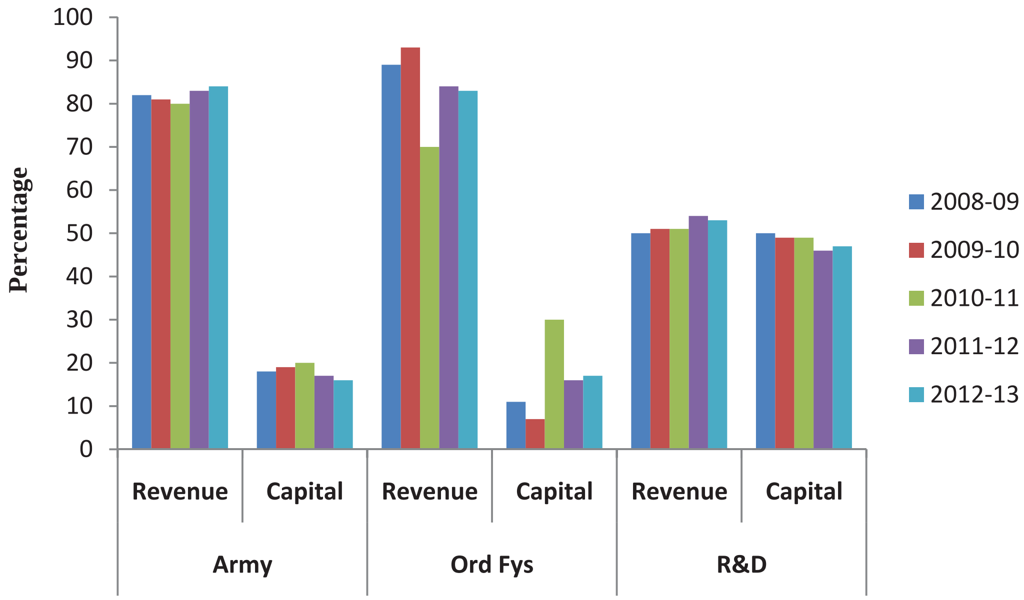
- The total Ordnance Factory expenditure during 2012-13, has recorded an increase of 24.18 *per cent* over the previous year with the Capital expenditure registering an increase of 31.14 *per cent* and the Revenue expenditure an increase of 22.84 *per cent.*

- The total R&D expenditure during 2012-13, has recorded a decrease of 0.72 *per cent* over the previous year with Capital expenditure registering an increase of 0.68 *per cent* and the Revenue expenditure a decrease of 1.93 *percent*.

1.12.1 Analysis of total Expenditure in respect of Army, Ordnance Factories and Research & Development - Capital and Revenue

A trend of total Army, Ordnance Factories and Research and Development expenditure both Capital and Revenue as a proportion of actual expenditure during the period 2008-09 to 2012-13 is given in Chart-3 below:

Chart-3: Analysis of total Capital and Revenue Expenditure in respect of Army Ordnance Factories (Ord Fys) and Research & Development (R&D)



- **Army*:*** In the year 2012-13 Revenue component of the total Army expenditure has increased by 2 *per cent* since 2008-09 from 82 *per cent* in 2008-09 to 84 *per cent* in 2012-13 while the Capital component has recorded a corresponding decrease during the same period from 18 *per cent* (2008-09) to 16 *per cent* (2012-13).

- **Ordnance Factories:** The Revenue component of the total actual expenditure of the Ordnance Factories for the period 2008-09 to 2012-13 decreased by 6 *per cent* from 89 *per cent* in 2008-09 to 83 *per cent* in 2012-13, whereas the Capital component of expenditure increased by a corresponding percentage from 11 *per cent* to 17 *per cent.*

- **Research & Development:** The Revenue expenditure on R&D has increased by 3 *per cent* from 50 *per cent* in 2008-09 to 53 *per cent* in 2012-13 during the period 2008-09 to 2012-13 while the Capital expenditure has decreased by a similar percentage from 50 *per cent* to 47 *per cent.*

1.13 Analysis of Major components of Revenue expenditure (Voted)

1.13.1 Army (Voted)

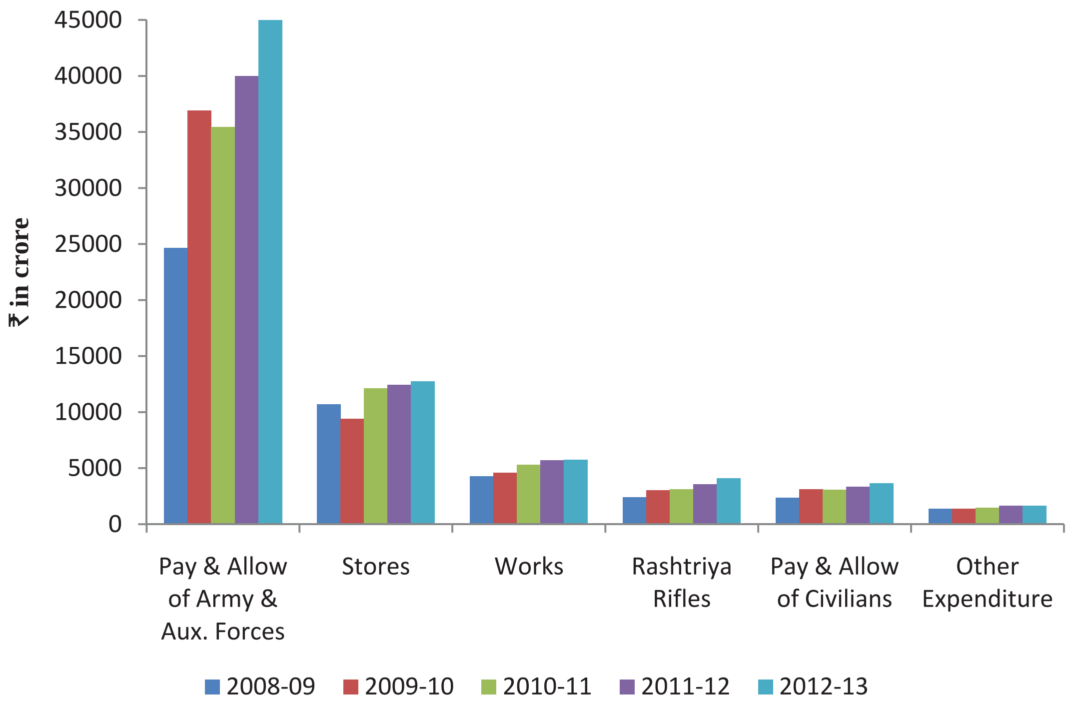
During the period 2008-09 to 2012-13 maximum Revenue expenditure was incurred under six Minor Heads (MH) of the Army as given in Table-5 and in the Chart-4 below:

Table-5: Details of Major components of Revenue expenditure of Army

(₹ in crore)

Year	Pay & Allowances (MH-101& 103)	Stores (MH-110)	Works (MH-111)	Rashtriya Rifles (MH-112)	Pay & allow. of Civilians (MH-104)	Other expenditure (MH-800)
2008-09	24,656.04	10,712.51	4,282.97	2,419.72	2,353.11	1,370.11
2009-10	36,896.23	9,404.65	4,608.34	3,047.58	3,132.27	1,380.31
2010-11	35,445.39	12,144.48	5,308.35	3,098.71	3,051.42	1,475.79
2011-12	39,996.27	12,442.20	5,708.68	3,585.38	3,361.21	1,644.18
2012-13	46,057.23	12,749.70	5,768.73	4,076.22	3,673.96	1,638.63

Chart-4: Major components of Revenue expenditure of Army



- **Rise in expenditure by more than 50*per cent*:** A rise in expenditure of more than 50 *per cent* has been recorded under Minor Heads of Pay & Allowances of Army & Auxiliary Forces, Pay & Allowances of Civilians and Expenditure relating to Rashtriya Rifles at 86.80 *per cent*, 56.13 *per cent* and 68.46 *per cent*, respectively during the period 2008-09 to 2012-13.

1.13.2 Ordnance Factories (Voted)

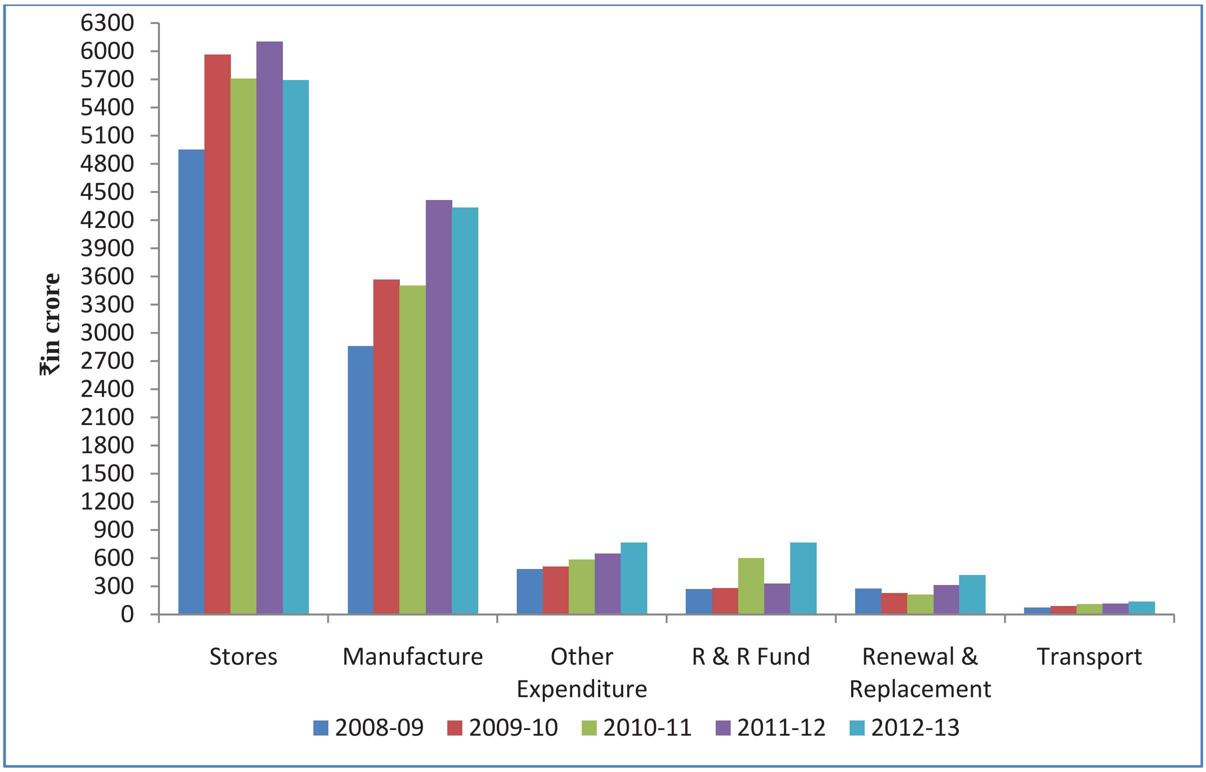
During the period 2008-09 to 2012-13 maximum Revenue expenditure was incurred under six MH of the Ordnance Factories as given in Table-6 and in the Chart-5 below:

Table-6: Major components of Revenue expenditure of Ordnance Factories

(₹ in crore)

Year	Stores MH-110	Manufacture-MH-054	Other expenditure MH-800	Renewal& Reserve (R&R) Fund-MH-797	Renewal & Replacement MH-106	Transport MH-105
2008-09	4,948.22	2,858.54	483.05	271.00	276.22	73.62
2009-10	5,965.16	3,566.03	506.74	280.00	228.24	86.59
2010-11	5,704.96	3,499.75	582.66	600.00	207.82	110.73
2011-12	6,101.41	4,415.33	649.75	325.00	310.25	115.98
2012-13	5,691.76	4,335.73	767.68	350.00	415.85	135.01

Chart 5: Major components of Revenue expenditure of Ordnance Factories



- **Expenditure under** Minor head ‘Transportation’, 'Other Expenditure', Manufacture, 'Renewal and Replacement', ‘R&R Fund’ and Stores have shown an increase of 83.39 *per cent*, 63.06 *per cent*, 51.68 *per cent*,50.55 *per cent*, 29.15 *per cent* and 15.09 *per cent* respectively during the period 2008-09 to 2012-13.

1.13.3 Research & Development (Voted)

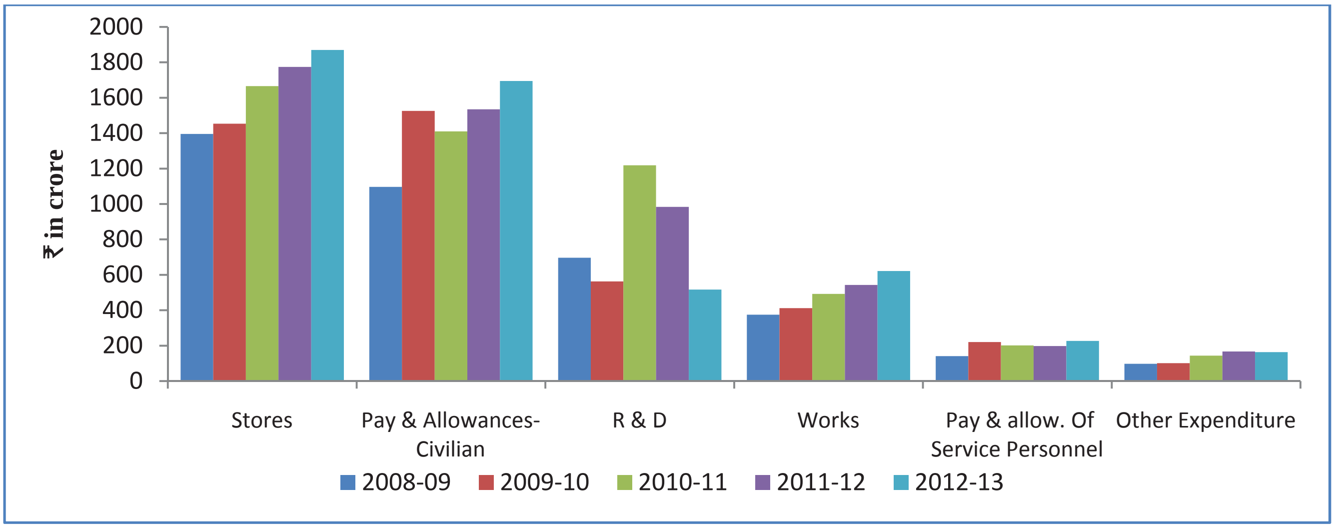
During the period 2008-09 to 2012-13 maximum Revenue expenditure was incurred under six Minor Heads (MH) of the R&D as given in Table-7 and Chart-6 below:

Table-7: Major components of Revenue expenditure of Research & Development

(₹in crore)

Year	Stores MH-110	Pay & Allowances-Civilian MH-102	R&D MH-004	Works MH-111	Pay & Allowance of Service Personnel MH-101	Other Expenditure MH-800
2008-09	1,395.99	1,096.76	696.51	374.86	140.67	97.87
2009-10	1,453.76	1,525.66	562.81	411.80	220.34	101.31
2010-11	1,665.91	1,409.71	1,218.25	492.17	201.61	144.02
2011-12	1,774.18	1,534.88	983.91	543.20	198.23	167.55
2012-13	1,870.19	1,694.22	516.97	621.39	226.38	163.43

Chart 6: Major components of Revenue expenditure of Research &Development



- The expenditure under Minor Head- Works and 'Other Expenditure' have shown an increase of 65.76 *per cent* and 66.99 *per cent*, respectively during the period 2008-09 to 2012-13.

- **"Research & Development":** The "Research and Development' on the other hand has shown a decrease of 25.77 *per cent* during the period 2008-09 to 2012-13. However, during 2012-13 there is a significant decrease of 47.46 *per cent* over the previous.

1.14. Analysis of Capital expenditure - Major Head-4076-Grant no. 27-Capital Outlay on Defence Services

1.14.1 Components of Capital expenditure

There are eight Sub Major Heads (SMH) under this Grant, viz. Sub Major Head 01- Army, Sub Major Head 02 - Navy, Sub Major Head 03- Air Force, Sub Major Head 04- Ordnance Factories, Sub Major Head 05 - R&D, Sub Major Head 06 - Inspection Organisation, Sub Major Head 07 - Special Metal and Super Alloys Projects and Sub Major Head 08 - Technology Development.

1.14.2 Trend Analysis of Capital expenditure (Voted) of Army, Ordnance Factories and R&D[7]

The details of Capital expenditure of Army, Ordnance Factories and R&D i.e.; SMH-01, 04 and 05 during the period 2008-09 to 2012-13 is given in Table - 8 below:

Table-8: Total Capital Expenditure (Defence Services) Vs Army, Ordnance Factories and R&D

(₹in crore)

Year	Total Capital Expenditure	Capital Expenditure of Army	Capital Expenditure of Ordnance Factories	Capital Expenditure of R&D
2008-09	40,894.97	10,611.02	352.13	3,857.11
2009-10	51,019.42	14,795.65	240.29	41,52.30
2010-11	62,011.53	15,787.86	453.58	4,961.11
2011-12	67,843.96	14,943.39	276.21	4,611.05
2012-13	70,483.32	14,757.11	349.07	4,642.24

- **Total Capital Expenditure of Defence Services**: The total Capital expenditure of Defence Services has recorded an overall increase of 72.35 *per cent* during the period 2008-09 to 2012-13. Compared to this the component-wise increase in Capital expenditure of Army, Ordnance Factories and R & D were 39.09 *per cent*, 2.87 *per cent* and 20.36 *per cent*, respectively.

- **Army Capital Expenditure:** The component Capital expenditure of Army against the total Capital expenditure of Defence Services decreased by 5 *per cent* from 25.95 *per cent* in 2008-09 to 20.94 *per cent* in 2012-13. The Capital expenditure of Army during 2012-13 has recorded a decrease of 1.25 *per cent* over the previous year, despite an increase of 3.89 *per cent* in the Capital expenditure of Defence Services.

- **Ordnance Factory Capital Expenditure:** Capital expenditure of Ordnance Factory has not seen any significant variations as a component of the total Capital expenditure during the period 2008-09 to 2012-13.

[7] SMH- 02 and SMH- 03 are analysed separately in Audit Report of Union Government (Defence Services) Air Force and Navy. In respect of SMH- 06- and SMH- 08 total expenditure during the period 2008-09 to 2012-13 was 71.76 crore and 111.05 crore respectively. In respect of SMH-07 the expenditure during these years was Nil.

From 0.86 *per cent* of the total Capital expenditure in 2008-09 it has decreased to 0.50 *per cent* in 2012-13. Over the previous year, the Capital expenditure on Ordnance Factory in 2012-13 has shown an increase of 26.38 *per cent*.

- **R&D Capital Expenditure:** Capital expenditure of R&D has seen a decrease of nearly 3 *per cent* i.e. from 9.43 *per cent* (2008-09) to 6.59 *per cent* (2012-13) with respect to total Capital expenditure. Compared to the previous year, the Capital expenditure of R&D has increased by 0.68 *per cent*.

1.14.3 Trend of Saving/Excess in Capital Expenditure (Voted)

The trend of 'Saving' and 'Excess' in Capital expenditure for the period 2008-09 to 2012-13 is given in Table-9 below:

Table-9: Trend of Saving/Excess in Capital Expenditure

(₹in crore)

Year	Total Grant (Voted)	Total Expenditure	Under Total Capital Grant	
			Saving (-)	Excess (+)
2008-09	47,976.10	40,894.98	7,081.12 **(14.76%)**	-
2009-10	54,779.62	51,019.42	3,760.20 **(6.86%)**	-
2010-11	60,776.21	62,011.52	-	1,235.31 **(2.03 %)**
2011-12	69,148.01	67,843.96	1,304.04 **(1.89%)**	-
2012-13	79,526.99	70,483.32	9,043.67 **(11.37%)**	

Note: Figure in brackets represents the saving (-)/excess (+) as a percentage of Total Grant (Voted).

- It is evident from the above table that during the period 2008-09 to 2012-13 there were persistent "Savings' except in the year 2010-11 when there was an "excess" of 2.03 *per cent*. The 'Savings' have ranged 14.76 *per cent* to 1.89 *per cent* during this period.

- An increase in 'Savings' was noticed from ₹1,304 crore (1.89 *per cent)* during 2011-12 to ₹9,043.67crore (11.37 *per cent*) in the year 2012-13. However, funds amounting to ₹ 9,990.79 crore (4.17 *per cent*) were surrendered on the last working day of the financial year 2012-13 which was more than savings.