

# The footprint of union government procurement in India

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## Abstract

A missing link in the field of public procurement in India is an empirical sense of the magnitudes involved. In this paper we construct conservative estimates of basic facts about purchases by the union government and by central public sector enterprises. These calculations are based on fiscal statistics from the detailed demand for grants of union ministries and the annual statements published by the CGA. We obtain estimates of revenue, capital and total procurement in 2016-17. The estimated total purchases work out to about 11 to 12 per cent of GDP of that year. This suggests that a 10% improvement in purchasing capability would yield gains of about 1% of GDP.

*JEL Codes:* H, H5

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# 1 Introduction

Public procurement is important in any economy. Government is frequently a large purchaser of goods, services and *works*<sup>1</sup> from private parties. In the study of state capacity in India, there is concern about the weaknesses of government contracting. When a private person is able to make a purchase of a fixed quality and within a given amount of time, the extent to which the price paid by the government (for the same quality and time taken) is higher is a measure of inefficiency of public procurement. Under such a situation, decision makers in government have a bias in favour of internal production, which exacerbates expenditure inefficiency. How to get to higher state capability involves learning how to do contracting better.

Given the size and organisational complexity of the Indian government, there is likely to be a vast number of such procurement transactions that are present in the economy at any given point in time. Some estimates of the magnitudes involved include Jatkar et al. 2012 and the World Bank's Global Public Procurement Database. However, these are sporadic and do not publish the methodology used to arrive at their estimates. Thus, it is difficult to find regularly updated estimates of the size and nature of public procurement in India, nor is there established methodology available that can be used to arrive at these estimates when required.

In this paper, we seek to establish empirical facts of public procurement by the Union government. We estimate total purchases, break this down by capital vs. current expenses, and break this down between goods, services and works. These facts constitute new knowledge in the field of government contracting in India.

We use the public fiscal disclosures to construct a data-set of expenditure by various object heads, and derive estimates of the revenue expense and the capital expense for procurement for that year by the union government. We further extend our work to estimate procurement by Central Public Sector Enterprises as well. Triangulation across multiple sources helps induce confidence of the accuracy of these estimates.

These methods are applied to one year, 2016-17. We find that out of a total expenditure of the union government of Rs.19.8 trillion, Rs.3.9 trillion (around 20%) was spent on procurement. Of this, Rs.1.7 trillion was oper-

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<sup>1</sup>Here, *works* includes a range of construction and maintenance services, for buildings, transport infrastructure, public services including water and sanitation, power distribution, and solid waste management, several of which are a part of projects which deliver public goods to citizens.

ating expenditure and Rs.2.6 trillion was capital expenditure. Thus, a little over 50% of the procurement was for capital purposes. A little more than 50% of the procurement operating expenses was on Goods, 20% was expenses on services and the rest was on minor works. A little more than 80% of the capital procurement expenditure was for major works.

We go on to study the purchases of Central Public Sector Enterprises (“CPSEs”). We find that the total amount procured by these enterprises was Rs.15.9 trillion, which is nearly  $3.5\times$  larger than the procurement by the Union Government itself. Nearly 81% of this is accounted by the top 15 CPSEs, ranging from Indian Oil Corporation Ltd. to P.T.C. Ltd. The bulk of this purchase is operating expenditures of Rs.13.7 trillion. CPSEs added nearly Rs.2.2 trillion of fixed assets to their balance sheet in 2016-2017.

This work is useful in establishing some facts and ratios. It also constitutes a proof of concept of estimation that can be applied to other situations (either union or state governments) where comparable fiscal transparency is present.

The sum of union government and CPSE purchases worked out to about 11 to 12 per cent of GDP in 2016-17. By this reasoning, if there was a 10% gain in the government procurement process (i.e. holding quality and delay intact, a 10% cost reduction), this would correspond to a saving of 1% of GDP. This cost saving would accrue to the economy on a *flow* basis. This helps encourage a greater focus by researchers and policy practitioners on the field of government contracting.

The paper is organised as follows: Section 2 lays out the context of the problem of estimating public procurement in India and the literature from which estimates of the public procurement are typically referred to. In Section 3, we present a strategy to estimate the size and nature of the Indian public procurement from public sources. We then implement this strategy to estimate procurement expenditure by the Union Government in Section 4, and by Central Public Sector Enterprises in Section 5. We present a summary of the work in Section 6.

## **2 The problem of measuring public procurement**

There are surprisingly few sources about the size of public procurement that are regularly available. This is unlike private firms for which regular information is available in the form of regularly published balance sheets. A

search for documents that regularly report the size of the Union government's procurement include the following:

The preface to the draft 'Public Procurement Bill, 2012'.<sup>2</sup>

This estimates that public procurement for India is in the range of Rs.12 to 15 trillion per year.

The research group at CUTS (2012)<sup>3</sup> estimated that total public procurement in 2012 was broken across *Union government* with Rs.2.5-Rs.3 trillion, *Central Public Sector Enterprises* (CPSEs) with Rs.10-10.6 trillion, and around Rs.2.5 trillion being attributed to *Others* (including state governments, ULBs and State PSEs).

The World Bank Global Public Procurement Database (GPPD) which is a cross-country database on the size of the public procurement as a fraction of the country's GDP. World Bank estimated that in 2015, India's public procurement was 20% of GDP (Djankov et al. 2017).

A proxy measure for the size of public procurement can be found at the *Central Public Procurement Portal* (CPPP), which is an electronic platform for tendering procurement bids.

The CPPP stated that more than Rs.6 trillion in e-tenders were published in 2016 and 2017.<sup>4</sup>

A common feature of these sources is that they publish aggregates about public procurement estimates. These do not provide details about the type and nature of public procurement. The estimates are usually outdated and the gap between estimates at different time points can be large. There is also a lack of clarity about *how* these aggregates are estimated. This poses a problem because of the following reason. Procurement in the Government of India is not centralised and each department or government agency undertakes its own procurement. An aggregate value of procurement has to ensure that the various expenditure heads are classified in an internally consistent

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<sup>2</sup>Public Procurement Bill, 2012 introduced in the Lok Sabha on 4th May, 2012. Text available at [https://prsindia.org/files/bills\\_acts/bills\\_parliament/Public\\_Procurement\\_Bill,\\_2012.pdf](https://prsindia.org/files/bills_acts/bills_parliament/Public_Procurement_Bill,_2012.pdf)

<sup>3</sup>Consumer Unity & Trust Society (CUTS) International, Government Procurement in India Domestic Regulations & Trade Prospects, October 2012. Available at [https://cuts-citee.org/pdf/Government-Procurement-in-India\\_Domestic-Regulations-Trade-Prospects.pdf](https://cuts-citee.org/pdf/Government-Procurement-in-India_Domestic-Regulations-Trade-Prospects.pdf)

<sup>4</sup>Source: Newsletter on Government e-Procurement System of NIC (GePNIC), February 2017. Available at <https://eprocure.gov.in/cppp/newsletterdisp/kbadqkdlcswfjdelrquehwuxcfmijmuidxngudufgbuubgubfugbububjxcgfvdbdihbgfGhdfgFHtyhRtMTc=>

and coherent way across all departments. Small differences in classification may generate wide differences in estimates of procurement.

At present, there is no central repository that is a reliable and comprehensive source of procurement data. A recent initiative in using digital technology in the public procurement measurement and monitoring domain is the Central Public Procurement Portal (CPPP) where public procurement contracts are tendered. Another perspective can be seen at the MSME *Sammadhan* portal, which is a platform where the small firms report payment delays and can be seen as a source of some estimates about the size of the public procurement to MSMEs. However, these are relatively new. They are also not a source of comprehensive public procurement information. Government departments and agencies publish tenders for procurement on their own platforms, and often exercise discretion in using these new platforms.

An objective of our work is to develop a methodology that examines publicly accessible information in order to reliably estimate both the *size* and the *nature* of public procurement. The objective of the approach is to answer the following questions:

- Q1** What is the estimated size of the annual public procurement in a given year? Can we apply the estimation approach consistently to observe the procurement by the ministries and departments of the Union government?
- Q2** Which government entities are larger procurers?
- Q3** What is the focus of their procurement – goods, services or works?
- Q4** Can this approach be used to estimate the procurement size and type for all the Central Public Sector Enterprises?

### **3 A strategy to estimate public procurement from public accounts**

The first step in a strategy to quantify public procurement for a given year is to identify readily accessible sources of what the government spends on. The input that we use are the *expenditure statements* of the Government. These are systematically published by government departments and entities and can be expected to be available on an annual basis. The key intuition that we use is that heads of expenditure disclosed in these statements can indicate whether they are likely to result in procurement. The details disclosed in expenditure statements by various government departments and ministries

can then be used to identify what heads of expenditure can be classified as procurement by the government or not in the following manner:

1. Category **P**: where it is almost certain that procurement from another firm or entity will take place.

As an example, within operating expenses, items such as supplies and material, fuel and power, outsourcing services can be classified as procurement items. Similarly, within capital expenditure, supplies and materials, construction and project management services, can be categorised as procurement heads.

2. Category **NP**: where it is almost certain that procurement from another firm or entity will not take place.

As an example, salaries, wages, pensions and bonuses of the government will not generate procurement expenditure.

3. Category **U**: which can be procurement related but we cannot be certain about this.

As an example, there may be expenses such as training, travel, other expenses which may or may not take the form of procurement.

Once the various components of expenditure is classified in this manner, values under the expenditure heads that are categorised as ‘P’ can be aggregated across all departments, ministries and entities to arrive at a conservative estimate of public procurement by the government. Since category ‘U’ items can be part of procurement, a more nuanced estimate can also include a fraction of the ‘U’ category of expenses. But the aggregated expenses that fall in the ‘NP’ category will *not* be included as procurement by the government. This is a simple approach, which if it can be reliably deployed for a given set of departments and ministries of the government, can be used to generate a reasonable estimate of procurement that the government undertakes for the period that the expenditure statements are published and can be accessed.

Since this is the first attempt to measure the scale of public procurement, we restrict our analysis to the Union government and the Central Public Sector Enterprises (CPSE). The key difference between estimates for government and estimates for CPSEs will arise from the fact that the Union government follows cash based accounting while the CPSEs, generally incorporated as companies, follow the accrual accounting system. This means that procurement estimates for the Union government will show us what has been paid out by it where as for the CPSEs will show us what was due to be paid out.

### 3.1 Government expenditure accounts structure

To understand whether the requisite information for applying the estimation framework is available we have to start with understanding the structure of Union government accounts. The Union government prepares its annual accounts on a cash basis. The Controller General of Accounts (CGA) is the principal advisor to the government on accounting matters and is responsible for preparing the Union government accounts. The CGA has devised the following six-tier accounting structure for Union government expenditure accounts:

- **Major head:** representing a major function of the government
- **Sub-major head:** representing a sub-function
- **Minor head:** representing a program
- **Sub-head:** representing a scheme
- **Detailed head:** representing a sub-scheme, and
- **Object head:** representing various heads of expenditure such as salaries, office expenses and so on.

Each department of the Union government prepares its accounts as per this structure, and the CGA consolidates these statements to prepare the aggregate accounts. The only exception to this are Railways, Defence, Post and Telecommunications departments. These departments have been allowed to determine the form of their accounts subject to certain conditions.<sup>5</sup>

For our analysis, we focus on the “object head” level data. Each of the object heads can be categorised in the following ways: (1) as P, NP and U based on whether they generate public procurement. Further, those items that are in the P category can be further categorised as Goods (G), Services (S), and Works (W). (2) Each object head into operating expenditure (OpEx) or capital expenditure (CapEx).

The first categorisation allows us to estimate the quantum of public procurement from the expenditure statement of the Union government, with a further classification of procurement into procurement of goods, services and works. The second allows us to capture if there are variations when procuring OpEx or CapEx, where the latter is more likely where infrastructure with the nature of public goods is being built.

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<sup>5</sup>Government Accounting Rules, 1990; Clause 6: Special provision relating to Railways, Posts, Telecommunications and Defence Departments.



## 3.2 Data sources to estimate public procurement

We start by looking at Union government expenditure for the period 2016-17. For this we find two main sources. The first is the annual statement of accounts published by the CGA. Two tables from this statement are of relevance for our analysis: (1) the department-wise expenditure table (See Appendix 8 of the statement, pages 59 – 73), and (2) object head-wise expenditure statement (See Appendix 12 of the statement, pages 90 –91).

The second is the statement of Detailed Demand for Grants (DDG) submitted by each Union government department to the Ministry of Finance for the purpose of consolidating the annual budget. Each DDG statement contains a statement of object level expenditure for three periods: (1) the current period budgetary demand, (2) the previous year’s budgetary demand and revised estimates, and (3) the actual expenditure two years prior. We get the actual expenditure data for 2016-2017 from the DDGs of 2018-2019.

There are two large ministries where the application of this methodology fails. One is the railways. The data on classification of railway expenditure can be extracted from railway DDGs for FY 18-19. But the railways follow a different object head-wise format from the other Union government departments. Thus, we do not estimate the procurement of the Railways. Another is the Ministry of Defence, for which no details of expenditure are available from the standard public domain sources such as the Defence ministry website. What is available are the CGA statements which contains the basic split of expenses into pay and allowances, capital outlay, pensions and other expenses. These two ministries account for around two-third of the total budget of the Union Government.

## 3.3 Methodology and validation

We organise, validate and categorise the Union government object head-wise, expenditure data as follows:

- The object head-wise expenditure of each department is mapped into a standard format.
- The departmental totals from DDGs are validated with the departmental totals from the CGA report.
- The object head-wise totals from DDGs are validated with the object head-wise totals from the CGA report.

- Each object head is classified into the following categories: (1) P, NP or U, and for the heads classified as P, a further classification into G, S or W, and (2) OpEx or CapEx.

The scheme of classification is laid out in Appendix A.

We find that both collecting and parsing the departmental DDGs is a painstaking task, even for a single year. For some departments, these statements are not available. In cases where the DDGs are available, the object-head-wise summary of expenditure was found to be missing. These then had to be constructed from the detailed major, minor and sub-head-wise expenditure tables.

A further bottleneck in creating a systematic process to validate the estimated procurement expenditure using DDGs is the form in which these can be accessed. DDG statements are available in PDF format. However, while some of these are available in a machine readable format, *most* are scanned documents which can only be analysed manually. Table 14 in Appendix section B gives details of the availability of DDGs as well as the object head-wise expenditure tables within these documents. The department-wise and object head-wise validations point to the mismatches between the two sources of data. Any analysis using the departmental DDGs is, therefore, likely to be imprecise. But it can help answer the following questions:

1. What is the nature of Union government expenditure?
2. How much of it is likely to result in procurement?
3. How much of procurement is of goods, services and of works?
4. How does procurement split between revenue and capital items?
5. Which Union government departments are the large procurers and of what?

In the following section, we present the results of our approach to estimate the procurement by the Union government for a single year.

## **4 Union government procurement estimates, 2016-2017**

We start by examining the Union government expenditure for the period 2016-17 from the following sources:

1. The CGA annual statement of accounts<sup>6</sup> for 2016-17.

Two tables from this statement are of relevance for our analysis: (1) the department-wise expenditure table (Appendix 8, pages 59 – 73), and (2) object head-wise expenditure statement (Appendix 12, pages 90 –91).

2. We get the actual expenditure data for 2016-2017 from the DDGs of 2018-2019.
3. The data on classification of railway expenditure is extracted from railway DDGs of 2018-2019.

These follow a different object head-wise format from the other Union government departments.

4. There are no details of expenditure for Defence that are available from the Ministry of Defence website.

However, the CGA statement contains the basic split of expenses into pay and allowances, capital outlay, pensions and other expenses.

## 4.1 Estimating procurement from expenditure

From the statements in the sources listed above, we observe the overall expenditure of the Union Government, along with the size and categories of its procurement in 2016-2017. In our reading of these statements, we classify various items separately in order to estimate procurement. We list our estimates of procurement, by breaking up procurement using the following classifications:

### Functional classification

The Union government incurred a total expenditure of Rs.19.8 trillion (14.8% of GDP) in 2016-2017.

Table 1 contains a breakup of this expenditure into functional heads. This shows that 85.5% of the expenditure was OpEx and 14.5% CapEx.

A significant portion of expenditure was in the form of transfers to state governments, in the form of grants (14.7%) and loans (1.9%). Expenditure was additionally categorised into general services (49.4%), economic services (29.2%) and social services (4.8%) expenditure based on functions of the government.<sup>7</sup>

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<sup>6</sup>Available at <http://www.cga.nic.in/GlanceReport/Published/2016-2017.aspx>

<sup>7</sup>General services expenditure is incurred on the functioning of the government. It includes expenditure associated with the functioning of the legislature, executive and judiciary, fiscal services or tax collection, police, pensions, defence services and interest and debt servicing.

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**Table 1** Functional classification of Union government expenditure, 2016-2017

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	(Rs. billion)		
	Revenue	Capital	Total
General Services	8,778.7	993.8	9,772.5
Economic Services	4,333.6	1,447.8	5,781.4
Social Services	907.6	53.2	960.8
Grants in Aid	2,910.0	-	2,910.0
Loans & Advances	-	368.1	368.1
Total	16,929.9	2,862.8	19,792.7

*Source:* CGA, Accounts at a Glance, 2016-2017, Page 21

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### Object-wise classification

Another way of looking at Union government expenditure is by object heads of expenditure and this is presented in Table 2. This classification shows that nearly 83% of Union government expenditure was on *salaries and pensions, interest payments, and subsidies, grants and loans to states. Capital outlay and other expenses* account for around 17% of total expenditure. This is based on our expectation that these are the heads that are likely to result in procurement.<sup>8</sup>

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Economic services cover expenditure on heads such as agriculture and allied activities, rural development, irrigation and flood control, energy, industry, transport, communications, science and technology, and environment.

Social services include expenditure on heads such as education, sports, art and culture, health, water supply and sanitation, housing and urban development, information and broadcasting, welfare of minorities and SC/STs, labour welfare, and nutrition.

<sup>8</sup>Grants and loans to state government and autonomous bodies will likely show up as procurement by these entities. However, the scale of this procurement will need to be evaluated.

**Table 2** Object head-wise classification of Union government expenditure, 2016-2017

	(Rs. billion)	Share of total (%)
Pay and allowances	2,939.7	12.6
Defence	1,312.94	5.6
Railways	611.04	2.6
Others	1,015.7	4.4
Pensions	2,614.3	11.2
Defence	878.3	3.8
Railways	351.0	1.5
Others	1385.1	5.9
Capital outlay	1,956.2	8.4
Defence	914.8	3.7
Railways	446.4	1.6
Others	720.0	3.1
Other Operating expenses	2,110.6	9.1
Defence	409.5	1.8
Railways	623.0	2.7
Others	1,078.1	4.6
Grants, contributions, loans, investment, subsidies, interest	13,951.0	59.8
Grants/Loans/Contributions	5,808.8	24.9
Investment	646.3	2.8
Subsidies	2,449.6	10.6
Interest	5,046.4	21.6
Receipts/recoveries	-259.1	-1.1
<b>Total</b>	<b>23,312.7</b>	<b>100</b>

*Source:* Author's estimates based on DDGs of various Union government departments and CGA Accounts at a Glance, 2016-17

### Procurement estimates

The information on expenditure presented in Tables 1 and 2 allows us to estimate the type and value of procurement undertaken by the Union Government in FY 2016-17.

In Table 3, we use the object head classified as *other operating expenditure* (OpEx) to estimate the Union government procurement. Since no details are available for Defence, we assume that around 70% of Defence OpEx will result in procurement. Put together, we estimate that procurement on account of operating expenditure is Rs.1.4 trillion. If we assume that 50% of the items that we categorise as **U** also result in procurement, this brings our estimate of OpEx procurement by the Union government to Rs.1.67 trillion.

**Table 3** Union government procurement operating expenditure estimates, 2016-2017

All items are marked according to the classification described in Section 3 where ‘P’ are object heads where it is almost certain that procurement from another firm or entity will take place; NP are where it is almost certain that procurement will not take place, and U are those where we are not certain. ‘NA’ is for Not Available.

		(Rs. billion)		
		Others	Railways	Defence
Medical treatment	U	42.8	5.0	NA
Travel	U	32.6	14.3	NA
Office expenses	P	93.9	0.8	NA
Rent, rates & taxes	P	21.0	-	NA
Publications/Publicity	P	29.6	-	NA
Supplies & material	P	483.5	96.6	NA
Minor works	P	91.2	-	NA
Professional services	P	69.7	-	NA
Contractual payments	P	25.1	58.2	NA
Electricity & Fuel	P	-	147.5	NA
Tax	NP	-	57.1	NA
Other expenses	U	188.7	43.2	NA
Inter-railway adjustment	U	-	201.2	NA
Total other OpEx		1,078.1	623.1	409.5
Other OpEx - procurement	P	814.0	302.3	286.7
Other OpEx - uncertain	U	264.1	263.7	NA

*Source:* Author’s estimates based on DDGs.

Table 4 shows the details of other capital expenditure for Railways and departments other than Defence. Excluding Defence, the value of public procurement from capital items is Rs. 1.4 trillion. Since no details are available for Defence, for simplicity, we assume that the entire CapEx will result in procurement. This brings the total value of public procurement on account of capital items to Rs. 2.2 trillion.

**Table 4** Union government procurement capital expenditure estimates, 2016-2017

All items are marked according to the classification described in Section 3 where ‘P’ are object heads where it is almost certain that procurement from another firm or entity will take place; NP are where it is almost certain that procurement will not take place, and U are those where we are not certain. ‘NA’ is for Not Available.

		(Rs. billion)		
		Others	Railways	Defence
Machinery & equipment	P	120.0	41.7	NA
Motor vehicles	P	7.3	-	NA
Major works	P	438.1	198.2	NA
Other CapEx	P	99.3	487.3	NA
Depreciation/Reserves	NP	1.5	101.1	NA
Write-offs	NP	53.8	-	NA
Gross other CapEx		720.0	828.4	NA
Credits	NP	-	-455.9	NA
Net other CapEx		720.0	372.5	863.7
CapEx procurement	P	664.7	727.3	863.7

*Source:* Author’s estimates based on departmental DDGs.

We summarise our estimation of public procurement by Union Government in 2016-2017 to be between Rs.3.67 and Rs.3.92 trillion (Table 5).

**Table 5** Estimated procurement by the Union government, 2016-2017

	(Rs. billion)		
	OpEx	CapEx	Total
Railway	302.3	727.3	1,029.6
Defence	286.7	863.7	1,150.4
Other departments	814.0	664.7	1,478.7
Total	1,403.0	2,255.7	3,658.7
Total adjusted for uncertain items	1,667.0	2,255.7	3,922.7

*Source:* Author summarised from Tables 3 and 4.

## 4.2 Procurement break up by department

The bottoms-up approach that we have applied to estimate the value of procurement by the Union government can be further used to identify which departments are the large spenders for that category.

For this analysis, we focus on the non-Railway, non-Defence OpEx of Rs. 814 billion and CapEx of Rs.665 billion reported in Table 5. The DDG statements published by each department gives us details of Rs. 45 billion (56%) of the stated OpEx procurement and of Rs. 499.6 billion (75%) of the CapEx procurement, which aggregates to 56% of the total procurement related expenditure. We present our learning about the distribution of the OpEx across major departments and across expenditure heads in Table 6. Table 7 shows the distribution of the CapEx across major departments and expenditure heads.

**Table 6** Department-wise, object-wise procurement operating expenditure, 2016-2017

Department	(as % of total estimated procurement)							Total
	Supplies & material	Minor works	Office expense	Prof. serv.	Pubn., publicity	Rent,rates taxes	Other serv.	
MHA-Police	12	1	2				4	19
Atomic Energy	16	2						18
Health	4				1			6
NHM	5							6
Road Transport and Highways		6						6
Law & Justice				5				5
MHA-UTs	4	1					1	6
MEA			1		1		1	4
CBDT			2				1	3
CBEC			2					3
Post		1	1	1				3
MoHUA		2					1	3
Electronics, IT			1	1				2
<b>Total</b>	<b>41</b>	<b>12</b>	<b>10</b>	<b>10</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>84</b>

MHA: Ministry of Home Affairs; NHM: National Health Mission; UT: Union territory; MEA: Ministry of External Affairs; CDBT: Central Board of Direct Taxes; CBEC: Central Board of Excise and Customs; MoHUA: Ministry of Housing and Urban Affairs



**Table 7** Department-wise, object-wise procurement capital expenditure, as percent of total

	Major works	Other CapEx	Machinery & equipment	Motor vehicles	Total
Road Transport and Highways	51				51
MHA-Police	9		1	1	11
Communications		6			6
MoF-DEA		5			5
PNG	5				5
Atomic Energy	3	0	2		5
MoHUA	3				3
Health	2				2
Total	73	12	4	1	89

MHA: Ministry of Home Affairs; MoF-DEA: Ministry of Finance, Department of Economic Affairs; PNG: Petroleum and Natural Gas; MoHUA: Ministry of Housing and Urban Affairs

These tables allow us to identify which departments, outside of Railways and Defense, are the larger procurers, and what type of procurement they undertake. We find that certain ministries have a large fraction of the total procurement expenses of government, in both CapEx or OpEx procurement. These are the Ministries of Road Transport and Highways, Home Affairs (Police), Atomic Energy, Health and National Health Mission (NHM), Finance (Dept. of Economic Affairs), Petroleum and Natural Gas.

The largest fraction of procurement OpEx goes under the “Supplies&Materials” head (41%) which falls under the Goods category. The Ministries of Home Affairs, Atomic Energy, Health, NHM and Road Transport and Highways account for the larger portion of these. The Ministries of Home Affairs (Police) and Atomic Energy have an equal fraction of OpEx procurement, and together account for a little under 40% of the OpEx procurement in 2016-2017.

The concentration of a ministry in CapEx procurement is even larger. The Ministry of Road Transport and Highways accounts for a little more than half of CapEx procurement in 2016-2017, which was spent in procuring Works. In fact, Works accounted for 73% of the CapEx procurement of the union government expenditure in this year. The other ministries that have significant procurement included the Ministries of Home Affairs (Police), Department of Communications and the Department of Economic Affairs at the Ministry of Finance. The CapEx procurement of the latter two ministries were in procuring “Other CapEx”.

### 4.3 Union government procurement estimates, 2016-2017

From the analysis using the expenditure statements described in the previous sections, emerge distinct patterns in procurement.

We estimate that the Union government procurement expenditure is between Rs.3.7-3.9 trillion in 2016-2017. This estimate of the Union government procurement amounts to 18.8-19.8 percent of the budget in that year.

We find that capital procurement expenditure is slightly higher at Rs.2.25 trillion compared to operations related procurement expenditure which is estimated to be between Rs.1.40-1.67 trillion.

We find that while there is potentially some procurement expenditure in all departments and ministries, the magnitude of procurement expenditure tends to be concentrated in a few of these. More than half the procurement estimated is from the Ministry of Road Transport at around 30 percent, the Ministry of Home Affairs-Police department (MHA-police) at around 14 percent and the Department of Atomic Energy at around 7 percent. We estimate that the The largest procurement expenditure is for ‘Supplies&Material’ and ‘Works’. This is important because inefficiencies in the procurement processes of these departments could adversely effect the overall public procurement performance. On the flip side, any improvements in the procurement processes and performance of these departments and ministries can have a material impact on the overall public procurement performance.

One feature about these estimates that we must highlight is that they are for the budget year 2016-2017. These features may be different for a different year. It will be important to track these patterns at different points in time, so that we can identify and confirm *trends* in these patterns of procurement. This would allow us to understand whether these patterns of expenditure are stable or whether they change. If there are changes, such estimates would help us to understand what drives the observed changes. Are these changes because of emerging requirements to suit changes in the economic environment and situations? If there are policy changes in the procurement process, can the time trends in these estimates be used to study and understand the impact of the policy as well?

Another feature of the above estimates is that these are the procurement estimates only for the Union government departments and ministries. Procurement spend is separately done and reported State government departments and ministries and by CPSEs. In the following section, we deploy the same

approach to estimate procurement expenditure by CPSEs in 2016-2017.

## 5 CPSE procurement estimates, 2016-2017

We next estimate the magnitude and nature of public procurement by CPSEs using the same approach. We collect expenditure statements for CPSEs. With these in place, we classifying the various heads of expenditure into the set of P, NP, U categories.

In this exercise, we focus on the CPSEs from the non-financial sector only. We obtain the expenditure related variables from the stand alone annual financial statements of these CPSEs in the CMIE PROWESS DX database for financial year 2016-2017, which is the same period of the data as we used for the Union government estimates. We get expenditure related variables from the P&L statement and capital expenditure related variables from the CPSE balance sheet. We are able to include 365 Union government enterprises in this analysis, which have primary functions in the following sets of broad industry classifications:<sup>9</sup>

- 258 non-financial sector companies
- 14 banking companies,
- 69 financial sector companies,
- 21 statutory bodies, and
- 3 departmental undertakings

The classification of expenditure variables into the classification tree used for the Union Government accounts can be found in Appendix Section E. We apply the same approach for this list of the CPSEs, and aggregate the relevant expenditure items to arrive at an estimate of the aggregate CPSE procurement in 2016-2017.

### 5.1 Procurement estimates from CPSE expenditure

Table 8 shows that expenditure on procurement related heads by CPSEs in financial year 2016-2017 was Rs.13.8 trillion. A large fraction of this expenditure can be seen to be for the purchase of raw materials and stores.

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<sup>9</sup>A detailed list of entities and companies used in this analysis is included in Appendix D.

**Table 8** Estimate of procurement from CPSE revenue 2016-2017

	Rs.billion	Share of total (%)
ITES	0.7	0.0
Software development expense	0.2	0.0
Auditor fees	4.6	0.0
Consulting fees	7.9	0.0
Printing and stationery	7.5	0.0
Communications expense	14.0	0.1
Packaging	22.8	0.1
R and D	43.6	0.2
Travel	43.3	0.2
Insurance expense	47.3	0.2
Other outsourced Professional jobs	92.5	0.4
Outsourced professional jobs	105.0	0.4
Outsourced manufacturing jobs	117.8	0.5
Repair and maintenance	256.7	1.0
Rent	327.1	1.3
Power, fuel and water expenses	473.3	1.9
Selling and distribution expense	546.7	2.2
Raw material, stores and spares	5,789.1	23.3
Purchase of finished goods	5,953.7	23.9
Total procurement expenditure	13,853.7	55.71
Total revenue expenditure	24,866.0	

*Source:* Authors' calculation using CMIE Prowess

## 5.2 Estimates of CPSE OpEx procurement

Within the CPSEs, the top 15 entities<sup>10</sup> account for more than 80% of procurement expenditure (Table 9). For these CPSEs, around 90% of the OpEx procurement expenditure is towards purchase of raw materials, stores and spares.

<sup>10</sup>These are ranked in decreasing order by the value of procurement expenditure.

**Table 9** Procurement by the top 15 CPSEs, 2016-2017

	Rs.billion	Share of total (%)
1. Indian Oil Corpn. Ltd.	3,299.8	23.9
2. Bharat Petroleum Corpn. Ltd.	1,905.9	13.8
3. Hindustan Petroleum Corpn. Ltd.	1,787.4	12.9
4. Food Corpn. Of India	1,229.3	8.9
5. N T P C Ltd.	522.9	3.8
6. G A I L (India) Ltd.	398.4	2.9
7. Mangalore Refinery & Petrochemicals Ltd.	380.1	2.8
8. Steel Authority Of India Ltd.	335.0	2.4
9. Oil & Natural Gas Corpn. Ltd.	272.7	2.0
10. Chennai Petroleum Corpn. Ltd.	249.4	1.8
11. H P C L-Mittal Energy Ltd.	225.8	1.6
12. Petronet L N G Ltd.	216.9	1.6
13. Bharat Heavy Electricals Ltd.	161.7	1.2
14. Bharat Oman Refineries Ltd.	152.9	1.1
15. P T C India Ltd.	137.2	1.0
Total	11,275.3	81.6

*Source:* Authors' estimates based on expenditure reported in CMIE Prowess

Table 10 shows the procurement expenditure of CPSEs by industry. We see that 10 of the top 15 entities are from the oil and natural gas industry. Nearly Rs. 8 trillion of the procurement expenditure (60%) is by CPSEs within the refining industry. More than 90% of their procurement expenditure is towards raw materials. Around Rs.5.8 trillion of procurement expenditure is from CPSEs in other sectors.

**Table 10** CPSE OpEx procurement expenditure by industry, 2016-2017

	Rs. billion	Share of total (%)
Refinery	8,082.4	58.5
Wholesale trading	1,880.1	13.6
Conventional electricity	771.2	5.6
Natural gas trading & distribution	668.9	4.8
Steel	442.3	3.2
Crude oil & natural gas	290.9	2.1
Coal & lignite	224.9	1.6
Other transport equipment & ancillaries	166.0	1.2
Boilers & turbines	161.7	1.2
Fertilisers	160.5	1.2
Air transport services	105.8	0.8
Banking services	102.4	0.7
Communication equipment	94.9	0.7
Telecommunication services	79.4	0.6
Organic chemicals	73.5	0.5
Dairy products	73.1	0.5
Aluminium & aluminium products	42.1	0.3
Industrial construction	36.6	0.3
Air transport infrastructure services	36.2	0.3
Minerals	33.6	0.2
Miscellaneous manufactured articles	30.2	0.2
Electricity transmission	19.3	0.1
Mining & construction equipment	15.4	0.1
Diversified	15.1	0.1
Infrastructural construction	14.8	0.1
Shipping transport services	11.8	0.1
Other construction & allied activities	11.2	0.1
Pig iron	10.9	0.1
Lubricants, etc.	10.7	0.1
Total	13,665.7	99.0

*Source:* Authors' based on expenditure data from CMIE Prowess

### 5.3 Estimates of CPSE CapEx procurement

In 2016-2017, CPSEs added Rs.2.2 trillion of *fixed assets* to their balance sheets. The details of the heads under which fixed assets were added is listed in Table 11.

**Table 11** CPSE CapEx by expense head, 2016-2017

	Rs. Billion	Share of total (%)
Addition to plant and machinery	1,258.7	57.6
Addition to mining and oil and gas properties	278.1	12.7
Addition to transport infrastructure	267.9	12.3
Addition to building	150.6	6.9
Addition to other fixed assets	97.4	4.5
Addition to land	45.9	2.1
Addition to transport vehicles	36.1	1.7
Addition to electrical installations	9.1	0.4
Addition to furniture and fixtures	8.4	0.4
Addition to communication equipment	5.5	0.3
Addition to computer and IT equipment	4.3	0.2
Total	2,185.5	

*Source:* Authors' calculations using CMIE Prowess

In this list, *plant and machinery, mining, oil and gas assets* and *transport infrastructure* accounted for around 82% of the CapEx procurement.

The top 15 CPSEs account for more than 80% of the CapEx procurement as can be seen in Table 12.

**Table 12** CapEx procurement by CPSEs, 2016-2017

	Rs. Billion	Share of total (%)
Power Grid Corpn. Of India Ltd.	286.6	7.9
Indian Oil Corpn. Ltd.	236.1	7.1
Oil & Natural Gas Corpn. Ltd.	233.4	7.5
O N G C Petro Additions Ltd.	201.4	7.0
N T P C Ltd.	143.1	5.4
Teesta Urja Ltd.	124.3	4.9
Nuclear Power Corpn. Of India Ltd.	106.3	4.4
Bharat Petroleum Corpn. Ltd.	101.7	4.4
Steel Authority Of India Ltd.	70.9	3.2
Hindustan Petroleum Corpn. Ltd.	55.7	2.6
Bharat Sanchar Nigam Ltd.	55.4	2.7
O N G C Videsh Ltd.	52.7	2.6
Damodar Valley Corpn.	42.0	2.1
Air India Ltd.	28.3	1.5
Oil India Ltd.	27.2	1.4
Total	1,765.2	80.8
Overall CapEx procurement	2,185.5	

*Source:* Authors' estimates using expenditure data from CMIE Prowess

## 6 Conclusion

In this paper, we develop a strategy to estimate the magnitude of public procurement from the published accounts and detailed demand for grants statements by the departments of the Union Government as well as by the Central Public Sector Entities. Using this, we are able to answer the questions that were posed at the outset.

*Q1: Can we arrive at an estimate of size of public procurement in a given year? If so, what is the size of the annual public procurement?*

We can categorise published expenditure accounts for a given year into ‘P’ items which is almost surely procurement related, ‘NP’ which is not, and ‘U’ about which there is ambiguity. We validate these numbers against hand-collected data from the DDGs. The sum of all the items categorised as ‘P’ across departments and ministries is a first estimate of public procurement.

For 2016-2017, we estimate that public procurement by the Union government was Rs.4 trillion.

*Q2: Can we identify the government entities that are the larger procurers?*

Yes, the estimation strategy can be applied to all the departments and agencies of the government using their expenditure statements. Once the size of procurement is estimated for all these entities, they can be ranked to identify the larger procurers.

Of the Rs.3.6-3.9 trillion that we estimated for the 2016-2017 Union government procurement, we estimate that the estimated procurement was split nearly evenly across defence, railways and other departments (Table 5). For CPSEs in 2016-2017, we estimate that around Rs.16 trillion (10.5% of GDP) of expenditure was procurement oriented.

*Q3: What is the focus of their procurement – goods, services or works?*

For 2016-2017, we found that ‘Works’ and ‘Supplies & Material’ were the largest items of procurement by the Union government.

Of the estimated procurement in 2016-2017 for the Union government, capital expenditure related procurement was around Rs.2.2 trillion. In the non-defence departments, the capital expenditure related procurement was significantly taken for major works procurement. An estimated Rs.1.8 trillion was of the nature of OpEx procurement, a bulk of which was in procure-



ment of supplies and materials by the Railways, Ministry of Home Affairs, Department of Atomic Energy and Ministry of Health.

Of the estimated Rs.16 trillion of CPSE procurement, Rs.13.8 trillion was towards OpEx and Rs.2.2 trillion towards CapEx procurement. Around 55% of the OpEx was towards purchase of raw materials, stores and spares by CPSEs in the refining sector. Of the Rs.2.2 trillion of CapEx, nearly 80% was towards procurement of plant and machinery, transport infrastructure and mining and oil and gas assets. The largest 15 entities accounted for more than 80% of the procurement irrespective of whether it was OpEx or for capital expenditure.

*Q4: Can we carry out this exercise reliably each year using a transparent and well-documented procedure, so that this can become a system using which to build a time trend of public procurement, government entities and what they procure from the economy each year, and in what sectors they procure?*

The estimation strategy requires access to the expenditure and detailed demand for grant statements for all the ministries and departments of the Union government. If these documents are available for all the years in a specified period, the strategy can be used to estimate the procurement for each year in the period.

However, it is not possible to readily build an automated system to create such a time series. Often, the source files are missing. When they are available, the required files are published in the form of PDF files. However, they are not all machine readable, when they are available. Thus, the collection, collation and classification of the data requires to be carried out by researchers, rather than by automated systems.

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## A Classifying Union government object heads into procurement heads

**Table 13** Categorisation of object heads of expenditure

	Category 1 (P/NP/U)	Category 2 (G/S/W)	Category 3 (OpEx/CapEx)
Salaries	NP	-	OpEx
Wages	NP	-	OpEx
Overtime Allowance	NP	-	OpEx
Rewards	NP	-	OpEx
Scholarship and Stipend	NP	-	OpEx
Domestic Travel Expenses	U	S	OpEx
Foreign Travel Expenses	U	S	OpEx
Office Expenses	P	G/S	OpEx
Rent, Rates and Taxes	P	S	OpEx
Publication	P	S	OpEx
Other Administrative Expenses	U	-	OpEx
Supplies and Materials	P	G	OpEx
Advertising and Publicity	P	S	OpEx
Minor Works	P	W	OpEx
Professional Services	P	S	OpEx
Other Contractual Services	P	S	OpEx
Arms and Ammunition	P	G	OpEx
Clothing and Tentage	P	G	OpEx
Cost of Ration	P	G	OpEx
Grant-in-aid General	NP	-	OpEx
Grants for Creation of Capital Assets	NP	-	OpEx
Grant-in-Aid Salaries	NP	-	OpEx
Contribution	NP	-	OpEx
Subsidies	NP	-	OpEx
Loans and Advances	NP	-	CapEx
Inter Accounts Transfer	NP	-	OpEx/CapEx
Investment	NP	-	CapEx
Motor Vehicles	P	G	CapEx
Machinery and Equipment	P	G	CapEx
Major Works	P	W	CapEx
Other Capital Expenditure	P	G/S	CapEx
Medical Treatment	U	S	OpEx
POL	P	-	OpEx
Other Charges	U	G/S	OpEx
Secret Service Expenditure	U	G/S	OpEx
Lump-sum provision	U	-	OpEx
Suspense	NP	-	OpEx
Write off/losses	NP	-	CapEx
Depreciation	NP	-	CapEx
Reserves	NP	-	CapEx

*Source:* Author's categorisation

In Category 1, P stands for items that can be classified as almost certainly procured from another entity, NP those that are almost certainly not procured, and U where we are uncertain. In Category 2, G stands for Goods, S for Services and W for Works. In Category 3, OpEx stands for operating expenses and CapEx for Capital Expenses.

## B Data availability

**Table 14** Availability of object head-wise expenditure statement, 2016-2017

Ministry	DDG FY 18-19 availability	Object head-wise FY 16-17 summary availability
Agriculture and Farmers Welfare	Y	Y
Atomic Energy	Y	Y
Ayush	Y	Y
Chemical and Fertilisers	Y	Y <sup>1</sup>
Civil Aviation	Y	Y
Coal	Y	Y
Commerce and Industry	Y	Y
Communications and IT	Y	Y
Consumer Affairs, Food and Public Distribution	Y	Y
Corporate Affairs	Y	Y
Culture	Y	Y
Defence	N	N
Development of North Eastern Region	Y	Y
Earth Sciences	Y	Y
Environment, Forest and Climate Change	Y	Y
External Affairs	Y	Y
Finance	Y	Y
Food Processing Industries	Y	Y
Health and Family Welfare	Y	N
Heavy Industries and Public Enterprises	Y	Y
Home Affairs	Y	Y
Housing and Urban Affairs	Y	Y
Human Resource Development	Y	N
Information and Broadcasting	Y	Y
Labour and Employment	Y	Y
Law and Justice	Y	Y <sup>2</sup>
MSME	Y	Y
Mines	Y	Y
Minority Affairs	Y	Y
New and Renewable Energy	N	N
Panchayati Raj	N	N
Parliamentary Affairs	Y	Y
Personnel, Public Grievances and Pensions	Y	Y
Petroleum and Natural Gas	Y	Y
Planning (NITI)	Y	Y <sup>3</sup>
Power	Y	Y
President, Parliament, UPSC and Secretariat	Y	Y <sup>4</sup>
Railways	Y	Different format
Road Transport and Highways	Y	Y
Rural Development	Y	Y
Science and Technology	Y	Y
Shipping	Y	Y
Skill Development and Entrepreneurship	Y	Y
Social Justice and Empowerment	Y	N
Space	N	N
Statistics and Programme Implementation	Y	Y
Steel	Y	Y
Textiles	Y	Y
Tourism	Y	Y
Tribal Affairs	Y	N
UTs	Y	Y
Water Resources, River Development and Ganga Rejuvenation	Y	Y
Women and Child Development	N	N
Youth Affairs and Sports	Y	Y

<sup>1</sup>Pharmaceuticals DDG not mapped

<sup>2</sup>Election Commission and Supreme Court DDG not mapped

<sup>3</sup>Planning DDG not mapped

<sup>4</sup>President, Parliament and Secretariat DDG not mapped

## C Validation using DDG statements, CAG reports

**Table 15** Level 1 Validation: Object head level expenditure cross DDG and CGA

The table shows the object level expenditure across departments with the aggregate object level expenditure statement provided by the CGA. The object heads have also been classified into 'P', 'NP' and 'U' as discussed in Section 3.

Items with a substantial difference are highlighted in red.

Object head	Category	Expenditure (Rs. crore)	
		From CGA	From DDGs
Salaries	NP	1,19,256	98,894
Wages	NP	844	830
Overtime Allowance	NP	836	115
Rewards	NP	72	61
Scholarship and Stipend	NP	1,873	2,051
Domestic Travel Expenses	P	2,731	2,075
Foreign Travel Expenses	P	532	481
Office Expenses	P	9,396	6,592
Rent, Rates and Taxes	P	2,103	2,060
Publication	P	669	651
Other Administrative Expenses	P	1,164	737
Supplies and Materials	P	42,446	13,704
Advertising and Publicity	P	2,286	2,313
Minor Works	P	9,123	6,375
Professional Services	P	6,965	5,612
Other Contractual Services	P	2,507	2,655
Arms and Ammunition	P	822	822
Clothing and Tentage	P	630	611
Cost of Ration	P	3,393	3,393
Grant-in-aid General	NP	3,01,397	2,82,431
Grants for Creation of Capital Assets	NP	1,66,560	1,63,481
Grant-in-Aid Salaries	NP	30,689	33,579
Contribution	NP	21,709	21,784
Subsidies	NP	2,44,959	2,51,564
Loans and Advances	NP	60,239	60,078
Inter Accounts Transfer	NP	1,65,352	1,56,807
Investment	NP	57,441	57,592
Motor Vehicles	P	729	642
Machinery and Equipment	P	12,003	2,633
Major Works	P	43,810	40,834
Other Capital Expenditure	P	9,931	5,852
Medical Treatment	U	4,279	2,014
POL	U	1,060	786
Other Charges	U	15,347	15,438
Secret Service Expenditure	U	311	311
Lump-sum provision	U	1	1
Write off/losses	NP	5,375	5,377
Depreciation	NP	24	24
Suspense	NP	104	71
Reserves	NP	128	128
<b>Total Gross</b>		<b>13,49,096</b>	<b>12,51,458</b>
Deduct Receipts/Recoveries		-1,91,261	-1,33,176
<b>Total Net</b>		<b>11,57,835</b>	<b>11,18,281</b>
Total Gross P	P	1,51,241	98,041
Total Gross NP	NP	11,76,858	11,34,867
Total Gross U	U	20,998	18,549

**Table 16** Level 2 validation: Ministry level expenditure from DDG and CGA

Items highlighted in red have more than a 5% difference between the DDG and CAG.

Ministry	Net expenditure (Rs. crore)	
	From CGA	From DDG
<b>Available and mapped</b>		
Consumer Affairs, Food and Public Distribution	1,22,399	1,22,399
Rural Development	96,728	96,728
Home	78,360	78,305
HRD	72,016	72,692
<b>Finance</b>	<b>69,402</b>	<b>72,999</b>
Chemical and Fertilisers	65,529	66,510
<b>Road Transport and Highways</b>	<b>52,232</b>	<b>95,138</b>
<b>Agriculture</b>	<b>44,500</b>	<b>48,732</b>
<b>Communications and IT</b>	<b>39,714</b>	<b>42,405</b>
Health and Family Welfare	38,995	39,094
Housing and Urban Affairs	36,946	37,260
PNG	30,231	30,233
<b>Water Resources, River Development and Ganga Rejuvenation</b>	<b>21,073</b>	<b>19,515</b>
Women and Child Development	16,874	16,874
<b>Atomic Energy</b>	<b>12,894</b>	<b>16,913</b>
External Affairs	12,753	12,764
<b>UTs</b>	<b>11,015</b>	<b>12,265</b>
Power	11,009	11,114
Science and Technology	10,143	10,251
Social Justice and Empowerment	7,289	7,289
Commerce and Industry	6,481	6,481
Textiles	6,150	6,228
<b>Heavy Industries and Public Enterprises</b>	<b>5,356</b>	<b>8,356</b>
Tribal Affairs	4,817	4,817
Labour and Employment	4,743	4,564
Statistics and Program Implementation	4,269	4,271
Law and Justice	3,996	3,616
I&B	3,656	3,786
MSME	3,626	3,626
Civil Aviation	3,406	3,546
<b>Minority Affairs</b>	<b>2,832</b>	<b>3,049</b>
Development of North Eastern Region	2,496	2,466
<b>Culture</b>	<b>2,297</b>	<b>2,303</b>
<b>Environment, Forest and Climate Change</b>	<b>2278</b>	<b>1,461</b>
Tourism	1,631	1,631
Youth Affairs and Sports	1,574	1,576
Skill Development and Entrepreneurship	1,553	1,564
Earth Sciences	1,361	1,361
<b>Shipping</b>	<b>1,330</b>	<b>1,717</b>
Personnel, Public Grievances and Pensions	1,278	1,279
Ayush	1,246	1,293
President, Parliament, UPSC and Secretariat	1,222	242
Mines	1,075	1,075
Food Processing Industries	713	713
Coal	538	538
Steel	428	428
Corporate Affairs	395	395
Parliamentary Affairs	17	17
Total available & mapped	9,20,983	9,81,876
Available, not mapped		
President, Parliament, UPSC and Secretariat	0	980
Law and justice	0	380
Chemical and Fertilisers	0	308
Planning	0	225
Total available, not mapped	0	1,893
Not available		
Space	7989	NA
New and Renewable Energy	3,829	NA
Panchayati Raj	674	NA
Total not available	12,492	NA
Grand Total	9,33,475	9,83,769

## D CPSEs for which procurement is estimated

**Table 17** Union government statutory enterprises, non-finance

<b>Company Name</b>	<b>Industry name</b>
Airports Authority Of India	Air transport infrastructure services
Damodar Valley Corpn.	Conventional electricity
Food Corpn. Of India	Wholesale trading
Jawaharlal Nehru Port Trust	Diversified non-financial services
Kitco Ltd.	Business services & consultancy
Bharatiya Reserve Bank Note Mudran Pvt. Ltd.	Miscellaneous manufactured articles
Calcutta-Haldia Port Road Co. Ltd.	Infrastructural construction
New Mangalore Port Road Co. Ltd.	Infrastructural construction
Chandigarh International Airport Ltd.	Air transport services
Cochin Port Road Co. Ltd.	Road transport infrastructure services
Paradip Port Road Co. Ltd.	Road transport infrastructure services
Tuticorin Port Road Co. Ltd.	Infrastructural construction
National Highways & Infrastructure Development Corporation Ltd.	Infrastructural construction
Biotechnology Industry Research Assistance Council	Business services & consultancy

**Table 18** Union government statutory enterprises, finance

<b>Company Name</b>	<b>Industry name</b>
Nabsamruddhi Finance Ltd.	Other fund based financial services
Nabkisan Finance Ltd.	Other asset financing services
Export-Import Bank Of India	Other asset financing services
Nabard Financial Services Ltd.	Other asset financing services
National Bank For Agriculture & Rural Development	Other asset financing services
S I D B I Trustee Co. Ltd.	Other fund based financial services
Small Industries Devp. Bank Of India	Other asset financing services

**Table 19** Union government departmental undertaking, finance

<b>Company Name</b>	<b>Industry name</b>
Oil Industry Devp. Board	Other asset financing services
Indian Strategic Petroleum Reserves Ltd.	Other fund based financial services
Bharatiya Nabhikiya Vidyut Nigam Ltd.	Other fund based financial services

**Table 20** List of Union government commercial enterprises, non-finance

<b>Company</b>	<b>Industry</b>
Air India Express Ltd.	Air transport services
Airline Allied Services Ltd.	Air transport services
Antrix Corporation Ltd.	Business services & consultancy
Artificial Limbs Mfg. Corpn. Of India	Other electronics
Assam Ashok Hotel Corpn. Ltd.	Hotels & restaurants
B E L Optronics Devices Ltd.	Other electronics
Balmer Lawrie & Co. Ltd.	Diversified
Balmer Lawrie-Van Leer Ltd.	Plastic packaging goods
Braithwaite Burn & Jessop Construction Co. Ltd.	Infrastructural construction
Bharat Coking Coal Ltd.	Coal & lignite
Bharat Dynamics Ltd.	Communication equipment
B E M L Ltd.	Mining & construction equipment
Bharat Electronics Ltd.	Communication equipment
Bharat Heavy Electricals Ltd.	Boilers & turbines
Bharat Immunologicals & Biologicals Corpn. Ltd.	Drugs & pharmaceuticals
Bharat Oman Refineries Ltd.	Refinery
Bharat Petroleum Corpn. Ltd.	Refinery
Bharat Sanchar Nigam Ltd.	Telecommunication services
Bhel-Ge Gas Turbine Services Pvt. Ltd.	Wholesale trading
Bisra Stone Lime Co. Ltd.	Minerals
Braithwaite & Co. Ltd.	Other transport equipment & ancillaries
Bridge & Roof Co. (India) Ltd.	Industrial construction
Cement Corpn. Of India Ltd.	Cement
Central Coalfields Ltd.	Coal & lignite
Central Cottage Inds. Corpn. Of India Ltd.	Wholesale trading
Central Electronics Ltd.	Diversified machinery
Central Mine Planning & Design Institute Ltd.	Business services & consultancy
Central Warehousing Corpn.	Storage & distribution
Certification Engineers Intl. Ltd.	Business services & consultancy
Chennai Petroleum Corpn. Ltd.	Refinery
Cochin International Airport Ltd.	Diversified non-financial services
Cochin Shipyard Ltd.	Other transport equipment & ancillaries
Container Corpn. Of India Ltd.	Railway transport services
Cotton Corporation Of India Ltd.	Other agricultural products
Arunachal Pradesh Donyi Polo Hotel Corpn. Ltd.	Hotels & restaurants
Dredging Corpn. Of India Ltd.	Shipping transport infrastructure services
Eastern Coalfields Ltd.	Coal & lignite
E D C I L (India) Ltd.	Business services & consultancy
Electronics Corporation Of India Ltd.	Communication equipment
Engineering Projects (India) Ltd.	Industrial construction
Engineers India Ltd.	Industrial construction
Kamarajar Port Ltd.	Shipping transport infrastructure services
Export Promotion Council For Handicrafts	Other miscellaneous services
Ferro Scrap Nigam Ltd.	Other ferrous metal products
Fertilisers & Chemicals, Travancore Ltd.	Fertilisers
Garden Reach Shipbuilders & Engineers Ltd.	Other transport equipment & ancillaries
G A I L (India) Ltd.	Natural gas trading & distribution
Goa Antibiotics & Pharmaceuticals Ltd.	Drugs & pharmaceuticals
Goa Shipyard Ltd.	Other transport equipment & ancillaries
H M T (International) Ltd.	Wholesale trading
H M T Bearings Ltd.	General purpose machinery



**Table 21** List of Union government commercial enterprises, non-finance

<b>Company</b>	<b>Industry</b>
H M T Ltd.	Diversified
H M T Machine Tools Ltd.	Machine tools
H M T Watches Ltd.	Other consumer goods
Handicrafts & Handlooms Exports Corpn. Of India Ltd.	Retail trading
Heavy Engineering Corpn. Ltd.	Industrial machinery
Hindustan Aeronautics Ltd.	Other transport equipment & ancillaries
Hindustan Antibiotics Ltd.	Drugs & pharmaceuticals
Hindustan Copper Ltd.	Copper & copper products
Hindustan Fluoro Carbons Ltd.	Plastic furniture, floorings & miscellaneous items
H I L (India) Ltd.	Pesticides
H L L Lifecare Ltd.	Other chemical products
Hindustan Newsprint Ltd.	Paper & newsprint
Hindustan Organic Chemicals Ltd.	Organic chemicals
Hindustan Petroleum Corpn. Ltd.	Refinery
Hindustan Prefab Ltd.	Other construction & allied activities
Hindustan Salts Ltd.	Diversified
Hindustan Shipyard Ltd.	Other transport equipment & ancillaries
Hindustan Steelworks Construction Ltd.	Industrial construction
H S C C (India) Ltd.	Business services & consultancy
Hotel Corpn. Of India Ltd.	Hotels & restaurants
I F C I Financial Services Ltd.	Securities broking
I T I Ltd.	Diversified
India Exposition Mart Ltd.	Business services & consultancy
India Tourism Devp. Corpn. Ltd.	Hotels & restaurants
India Trade Promotion Orgn.	Other recreational & allied services
Indian Additives Ltd.	Lubricants, etc.
I D M C Ltd.	Industrial machinery
Indian Immunologicals Ltd.	Drugs & pharmaceuticals
Indian Oil Corpn. Ltd.	Refinery
Indian Potash Ltd.	Wholesale trading
Indian Railway Catering & Tourism Corpn. Ltd.	Hotels & restaurants
Indian Rare Earths Ltd.	Minerals
Indian Sugar Exim Corpn. Ltd.	Wholesale trading
Indraprastha Gas Ltd.	Natural gas trading & distribution
Instrumentation Ltd.	Other electronics
Intelligent Communication Systems India Ltd.	Business services & consultancy
Iron International Ltd.	Industrial construction
Jute Corpn. Of India Ltd.	Wholesale trading
Karnataka Antibiotics & Pharmaceuticals Ltd.	Drugs & pharmaceuticals
Konkan Railway Corpn. Ltd.	Infrastructural construction
K I O C L Ltd.	Minerals
M M T C Ltd.	Wholesale trading
M S T C Ltd.	Wholesale trading
Madhya Pradesh Ashok Hotel Corpn. Ltd.	Hotels & restaurants
M P C O N Ltd.	Business services & consultancy
Madras Fertilizers Ltd.	Fertilisers
Mahanadi Coalfields Ltd.	Coal & lignite
Mahanagar Telephone Nigam Ltd.	Telecommunication services
Maharashtra Executor & Trustee Co. Pvt. Ltd.	Other fee based financial services
Mangalore Refinery & Petrochemicals Ltd.	Refinery
M O I L Ltd.	Minerals

**Table 22** List of Union government commercial enterprises, non-finance

<b>Company</b>	<b>Industry</b>
Mazagon Dock Shipbuilders Ltd.	Other transport equipment & ancillaries
Mecon Ltd.	Industrial construction
Millennium Telecom Ltd.	Diversified non-financial services
Mineral Exploration Corpn. Ltd.	Wholesale trading
Mishra Dhatu Nigam Ltd.	Ferro alloys
Mother Dairy Fruit & Vegetables Pvt. Ltd.	Dairy products
Mumbai Railway Vikas Corpn. Ltd.	Railway transport infrastructure services
S J V N Ltd.	Conventional electricity
National Aluminium Co. Ltd.	Aluminium & aluminium products
N B C C (India) Ltd.	Housing construction
S H C I L Services Ltd.	Securities broking
National Fertilizers Ltd.	Fertilisers
National Film Devp. Corpn. Ltd.	Other recreational & allied services
National Handloom Devp. Corpn. Ltd.	Wholesale trading
N H P C Ltd.	Conventional electricity
N M D C Ltd.	Minerals
National Research Devp. Corpn.	Business services & consultancy
National Seeds Corpn. Ltd.	Wholesale trading
National Small Inds. Corpn. Ltd.	Wholesale trading
N T P C Ltd.	Conventional electricity
Neelachal Ispat Nigam Ltd.	Pig iron
Nepa Ltd.	Paper & newsprint
N L C India Ltd.	Conventional electricity
North Eastern Electric Power Corpn. Ltd.	Conventional electricity
North Eastern Handicrafts & Handloom Devp. Corpn. Ltd.	Wholesale trading
Northern Coalfields Ltd.	Coal & lignite
Nuclear Power Corpn. Of India Ltd.	Conventional electricity
Numaligarh Refinery Ltd.	Refinery
Oil & Natural Gas Corpn. Ltd.	Crude oil & natural gas
Oil India Ltd.	Crude oil & natural gas
Omnibus Indl. Devp. Corp. Of Daman & Diu & DNH Ltd.	Wholesale trading
O N G C Videsh Ltd.	Crude oil & natural gas
P E C Ltd.	Wholesale trading
Pawan Hans Ltd.	Air transport services
Petronet C C K Ltd. [Merged]	Storage & distribution
Petronet L N G Ltd.	Natural gas trading & distribution
Petronet M H B Ltd.	Storage & distribution
Pondicherry Ashok Hotel Corpn. Ltd.	Hotels & restaurants
Power Grid Corpn. Of India Ltd.	Electricity transmission
P T C India Ltd.	Wholesale trading
Prize Petroleum Co. Ltd.	Business services & consultancy
Projects & Devp. India Ltd.	Business services & consultancy
Rites Ltd.	Business services & consultancy
Railtel Corporation Of India Ltd.	Telecommunication services
Rajasthan Electronics & Instruments Ltd.	Other electronics
Ranchi Ashok Bihar Hotel Corpn. Ltd.	Hotels & restaurants
Rashtriya Chemicals & Fertilizers Ltd.	Fertilisers
Rashtriya Ispat Nigam Ltd.	Steel
National Projects Construction Corpn. Ltd.	Industrial construction
Richardson & Cruddas (1972) Ltd.	Diversified
N T P C-S A I L Power Co. Ltd.	Conventional electricity

**Table 23** List of Union government commercial enterprises, non-finance

<b>Company</b>	<b>Industry</b>
Sambhar Salts Ltd.	Processed foods
Scooters India Ltd.	Two & three wheelers
Shipping Corpn. Of India Ltd.	Shipping transport services
South Eastern Coalfields Ltd.	Coal & lignite
State Trading Corpn. Of India Ltd.	Wholesale trading
Steel Authority Of India Ltd.	Steel
Stock Holding Corpn. Of India Ltd.	Other financial services
Tamilnadu Telecommunications Ltd.	Wires & cables
Telecommunications Consultants India Ltd.	Other construction & allied activities
Tide Water Oil Co. (India) Ltd.	Lubricants, etc.
Uranium Corpn. Of India Ltd.	Minerals
Utkal Ashok Hotel Corpn. Ltd.	Hotels & restaurants
Vignyan Industries Ltd.	Castings & forgings
Wapcos Ltd.	Industrial construction
Western Coalfields Ltd.	Coal & lignite
Yule Financing & Leasing Co. Ltd.	Other fee based financial services
Bhagyanagar Gas Ltd.	Natural gas trading & distribution
H M T Chinar Watches Ltd.	Other consumer goods
Tamilnadu Trade Promotion Organisation	Other recreational & allied services
Proseal Closures Ltd.	Rubber products
Broadcast Engineering Consultants India Ltd.	Wholesale trading
Brahmaputra Valley Fertilizer Corpn. Ltd.	Fertilisers
Indraprastha Power Generation Co. Ltd.	Conventional electricity
Rail Vikas Nigam Ltd.	Infrastructural construction
N T P C Vidyut Vyapar Nigam Ltd.	Wholesale trading
N T P C Tamilnadu Energy Co. Ltd.	Conventional electricity
Kutch Railway Co. Ltd.	Railway transport services
O N G C Tripura Power Co. Ltd.	Conventional electricity
Air India Air Transport Services Ltd.	Transport logistics services
F C I Aravali Gypsum & Minerals India Ltd.	Minerals
N L C Tamil Nadu Power Ltd.	Conventional electricity
Bhartiya Rail Bijlee Co. Ltd.	Conventional electricity
Kanti Bijlee Utpadan Nigam Ltd.	Conventional electricity
Chhattisgarh Surguja Power Ltd.	Miscellaneous manufactured articles
Coastal Karnataka Power Ltd.	Miscellaneous manufactured articles
Coastal Maharashtra Mega Power Ltd.	Miscellaneous manufactured articles
Teesta Urja Ltd.	Conventional electricity
O N G C Petro Additions Ltd.	Organic chemicals
Air India Engg. Services Ltd.	Other miscellaneous services
Cochin International Aviation Services Ltd.	Other miscellaneous services
Delhi Mumbai Indl. Corridor Devp. Corpn.	Business services & consultancy
Bharat Petroresources Ltd.	Crude oil & natural gas
Bharat Petroresources J P D A Ltd.	Other financial services
O N G C Mangalore Petrochemicals Ltd.	Organic chemicals
H P C L-Mittal Energy Ltd.	Refinery
Air India Ltd.	Air transport services
Coastal Tamil Nadu Power Ltd.	Conventional electricity
Stockholding Document Mgmt. Services Ltd.	Business services & consultancy
R E C Transmission Projects Co. Ltd.	Business services & consultancy
R E C Power Distribution Co. Ltd.	Business services & consultancy
Creda - H P C L Biofuel Ltd.	Other chemical products

**Table 24** List of Union government commercial enterprises, non-finance

<b>Company</b>	<b>Industry</b>
G A I L Gas Ltd.	Natural gas trading & distribution
Power System Operation Corpn. Ltd.	Diversified non-financial services
Central Railside Warehouse Co. Ltd.	Storage & distribution
Brahmaputra Cracker & Polymer Ltd.	Polymers
P F C Consulting Ltd.	Business services & consultancy
Sakhigopal Integrated Power Co. Ltd.	Conventional electricity
Ghogarpalli Integrated Power Co. Ltd.	Conventional electricity
P T C Energy Ltd.	Renewable electricity
I F C I Infrastructure Devp. Ltd.	Diversified
H P C L-Mittal Pipelines Ltd.	Storage & distribution
I F I N Commodities Ltd.	Other miscellaneous services
H P C L Biofuels Ltd.	Sugar
Indianoil-Creda Biofuels Ltd.	Other agricultural products
Energy Efficiency Services Ltd.	Wholesale trading
Raichur Sholapur Transmission Co. Pvt. Ltd.	Electricity transmission
Ircon Infrastructure & Services Ltd.	Business services & consultancy
Jangipur Bengal Mega Food Park Ltd.	Business services & consultancy
Union Asset Mgmt. Co. Pvt. Ltd.	Asset management services (mutual funds)
J K B Financial Services Ltd.	Securities broking
Bhel Electrical Machines Ltd.	Generators, transformers & switchgears
Indian Catalyst Pvt. Ltd.	Miscellaneous manufactured articles
Sail Sindri Projects Ltd.	Miscellaneous manufactured articles
H L L Biotech Ltd.	Drugs & pharmaceuticals
Sail Refractory Co. Ltd.	Refractories
Powergrid Vizag Transmission Ltd.	Electricity transmission
High Speed Rail Corpn. Of India Ltd.	Railway transport infrastructure services
Neyveli Uttar Pradesh Power Ltd.	Conventional electricity
I I F C L Asset Mgmt. Co. Ltd.	Asset management services (mutual funds)
Powergrid Unchahar Transmission Ltd.	Electricity transmission
Indian Railway Stations Devp. Corpn. Ltd.	Infrastructural construction
Sidcul Concor Infra Co. Ltd.	Transport logistics services
Powergrid Kala Amb Transmission Ltd.	Electricity transmission
Concor Air Ltd.	Transport logistics services
Solar Energy Corpn. Of India Ltd.	Renewable electricity
Railway Energy Mgmt. Co. Ltd.	Business services & consultancy
T C I L Bina Toll Road Ltd.	Road transport infrastructure services
Ballabgarh-Gn Transmission Co. Ltd.	Electricity transmission
Punjab Logistics Infrastructure Ltd.	Transport logistics services
T C I L Lakhnadone Toll Road Ltd.	Road transport infrastructure services
Cial Infrastructures Ltd.	Renewable electricity
H L L Infra Tech Services Ltd.	Infrastructural construction
Powergrid Warora Transmission Ltd.	Electricity transmission
Powergrid Parli Transmission Ltd.	Electricity transmission
Powergrid Southern Interconnector Transmission System Ltd.	Electricity transmission
Visakhapatnam Port Logistics Park Ltd.	Transport logistics services
Mohindergarh-Bhiwani Transmission Ltd.	Electricity transmission
N B C C Services Ltd.	Business services & consultancy
Patratu Vidyut Utpadan Nigam Ltd.	Conventional electricity
Ircon P B Tollway Ltd.	Infrastructural construction
Ircon Shivpuri Guna Tollway Ltd.	Diversified
Powergrid Medinipur Jeerat Transmission Ltd.	Infrastructural construction
N B C C Engineering & Consultancy Ltd.	Business services & consultancy
Cial Dutyfree & Retail Services Ltd.	Retail trading
India Post Payments Bank Ltd.	Business services & consultancy

**Table 25** List of Union government commercial enterprises, financial services

<b>Company</b>	<b>Industry</b>
A F C India Ltd.	Other fee based financial services
Allbank Finance Ltd.	Other fund based financial services
Andhra Bank Financial Services Ltd.	Other fund based financial services
Cent Bank Home Finance Ltd.	Housing finance services
Centbank Financial Services Ltd.	Other fee based financial services
Coal India Ltd.	Other fund based financial services
Corpbank Securities Ltd.	Other fund based financial services
Eastern Investments Ltd.	Other fund based financial services
Fertilizer Corpn. Of India Ltd.	Other fund based financial services
I F C I Factors Ltd.	Diversified financial services
Goldline Milkfood & Allied Inds. Ltd.	Other fund based financial services
Hindustan Cables Ltd.	Other fund based financial services
Hindustan Fertilizer Corpn. Ltd.	Other fund based financial services
Hindustan Photo Films Mfg. Co. Ltd.	Other fund based financial services
Housing & Urban Devp. Corpn. Ltd.	Other asset financing services
I F C I Ltd.	Infrastructure finance services
I F C I Venture Capital Funds Ltd.	Other fund based financial services
Indian Railway Finance Corpn. Ltd.	Other asset financing services
Indian Renewable Energy Devp. Agency Ltd.	Other asset financing services
Indian Vaccines Corpn. Ltd.	Other fund based financial services
J & K Mineral Devp. Corpn. Ltd.	Other fund based financial services
Karnataka Trade Promotion Organisation	Other fund based financial services
Iffin Securities Finance Ltd.	Other fund based financial services
N H D C Ltd.	Diversified financial services
National Backward Classes Finance & Devp. Corpn.	Other fund based financial services
National Capital Region Planning Board	Other fund based financial services
National Co-Op. Devp. Corpn.	Other asset financing services
National Dairy Devp. Board	Other fund based financial services
National Handicapped Finance & Devp. Corpn.	Other asset financing services
National Jute Mfrs. Corpn. Ltd.	Other fund based financial services
National Safai Karamcharis Finance & Devp. Corpn.	Other asset financing services
National Scheduled Castes Finance & Devp. Corpn.	Diversified financial services
North Eastern Devp. Finance Corpn. Ltd.	Other asset financing services
Orissa Minerals Development Co. Ltd.	Other fund based financial services

**Table 26** List of Union government commercial enterprises, financial services

<b>Company</b>	<b>Industry</b>
Power Finance Corpn. Ltd.	Infrastructure finance services
R E C Ltd.	Infrastructure finance services
Semi-Conductor Laboratory	Other fund based financial services
S T C L Ltd.	Other fund based financial services
Tourism Finance Corpn. Of India Ltd.	Other asset financing services
National Minorities Devp. & Finance Corpn.	Other asset financing services
Balmer Lawrie Invsts. Ltd.	Other fund based financial services
National Scheduled Tribes Finance & Devp. Corpn.	Other asset financing services
N T P C Electric Supply Co. Ltd.	Other asset financing services
Sethusamudram Corporation Ltd.	Other fund based financial services
Ifin Credit Ltd.	Other fund based financial services
India Infrastructure Finance Co. Ltd.	Infrastructure finance services
Syndbank Services Ltd.	Other financial services
Fresh & Healthy Enterprises Ltd.	Other fund based financial services
Air Kerala Intl. Services Ltd.	Other fund based financial services
P T C India Financial Services Ltd.	Infrastructure finance services
Orissa Integrated Power Ltd.	Diversified financial services
Tatiya Andhra Mega Power Ltd.	Other fund based financial services
Loktak Downstream Hydroelectric Corpn. Ltd.	Other fund based financial services
S J V N Thermal Pvt. Ltd.	Other fund based financial services
Chenab Valley Power Projects Pvt. Ltd.	Other fund based financial services
I P L Gujarat Port Ltd.	Other fund based financial services
Powergrid N M Transmission Ltd.	Other fund based financial services
P F C Capital Advisory Services Ltd.	Other fund based financial services
Sail Jagadishpur Power Plant Ltd.	Other asset financing services
I I F C L Projects Ltd.	Other fee based financial services
Kudgi Transmission Ltd.	Diversified financial services
H P C L Rajasthan Refinery Ltd.	Other fund based financial services
Chhattisgarh East-West Railway Ltd.	Other asset financing services
Chhattisgarh East Railway Ltd.	Other asset financing services
Oil India International Ltd.	Other fund based financial services
Bundelkhand Saur Urja Ltd.	Other fund based financial services
Powergrid Jabalpur Transmission Ltd.	Other asset financing services
Bel-Thales Systems Ltd.	Other fund based financial services
Railtel Enterprises Ltd.	Other fund based financial services

**Table 27** List of Union government commercial enterprises, banking services

<b>Company</b>	<b>Industry</b>
Allahabad Bank	Banking services
Andhra Bank	Banking services
Bank Of Maharashtra	Banking services
Central Bank Of India	Banking services
Corporation Bank	Banking services
Dena Bank [Merged]	Banking services
Indian Overseas Bank	Banking services
Jammu & Kashmir Bank Ltd.	Banking services
Oriental Bank Of Commerce	Banking services
Punjab & Sind Bank	Banking services
Syndicate Bank	Banking services
Uco Bank	Banking services
Union Bank Of India	Banking services
United Bank Of India	Banking services

## E Classifying CPSE expenditure heads into procurement heads

**Table 28** CPSE expenditure heads categorisation

Expense head	Category 1 (P/NP/U)	Category 2 (G/S/W)	Category 3 (OpEx/CapEx)
Rawmaterials, stores and spares	P	G	OpEx
Packaging	P	G	OpEx
Purchase of finished goods	P	G	OpEx
Power, fuel and water expenses	P	G	OpEx
Employee compensation	NP	-	-
Welfare and training expense	U	-	-
Rent	P	S	OpEx
Repair and maintenance	P	G/S/W	OpEx
Insurance expense	P	S	OpEx
Outsourced manufacturing jobs expense	P	S	OpEx
Outsourced professional jobs expense	P	S	OpEx
Auditor fees	P	S	OpEx
Consulting fees	P	S	OpEx
Other outsourced professional jobs	P	S	OpEx
Software development expenses	P	S	OpEx
ITES	P	S	OpEx
Selling and distribution expense	P	G/S	OpEx
Travel expense	P	G/S	OpEx
Communications expense	P	G/S	OpEx
Printing and stationery	P	G	OpEx
R and D	U	-	-
Financial services expense	NP	-	-
Provisions	U	-	-
Depreciation	NP	-	-
Amotisation	NP	-	-
Indirect taxes	NP	-	-
Direct taxes	NP	-	-
Addition to land and building	P	G/S/W	CapEx
Addition to leasehold improvements	P	W	CapEx
Addition to plant and machinery	P	G/S/W	CapEx
Addition to computer	P	G/S	CapEx
Addition to electrical installation	P	G/S/W	CapEx
Addition to transport equipment	P	G/S	CapEx
Addition to communication equipment	P	G/S/W	CapEx
Addition to furniture and fixtures	P	G/S	CapEx
Addition to other fixed assets	P	G/S/W	CapEx
Addition to capital work in progress	P	G/W	CapEx

*Source:* Author's categorisation

In Category 1, P stands for items that can be classified as almost certainly procured from another entity, NP those that are almost certainly not procured, and U where we are uncertain. In Category 2, G stands for Goods, S for Services and W for Works. In Category 3, OpEx stands for operating expenses and CapEx for Capital Expenses.