PRS

Union Budget 2020-21

Analysis of expenditure by Ministries

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Overview

The central government's expenditure is authorised through the Union Budget every year. The Constitution requires all expenditure (other than charged expenditure) to be submitted to Lok Sabha in the form of ministry-wise Demand for Grants. These Demand for Grants are referred to the respective Departmentally Related Standing Committees for detailed examination. They are then discussed in the House and approved. After Lok Sabha authorises these demands, an appropriation Bill is introduced and passed to permit this expenditure out of the Consolidated Fund of India.

The Union Budget 2020-21 which was presented on February 1, 2020 proposes an expenditure of Rs 30,42,230 (net of devolution of taxes to states) for the year. This amount will be funded through receipts (excluding borrowings) of Rs 22,45,893 crore and borrowings of Rs 7,96,337 crore. While fiscal deficit is budgeted at 3.5% of GDP compared to 3.8% this year, the target for revenue deficit is 2.7%, higher than the estimate of 2.4% for this year. This implies a reduction in net capital outlay.

Devolution to states from centre's tax revenue is estimated to be Rs 7,84,181 crore in 2020-21. In 2019-20, the devolution to states reduced by 19% from an estimate of Rs 8,09,133 crore at the budgeted stage to Rs 6,56,046 crore at the revised stage. This could adversely impact the expenditure by states, where the taxes devolved from the centre forms a significant share.

Besides the overall financial outlay, the budget also provides details of tax proposals in the Finance Bill. In this budget, a new option of lower tax rates has been proposed. Other proposals include changes to the payment of the dividend distribution tax, introduction of a ceiling on deductions for social security constributions, and a change in the determination of residence within the country.

This document contains a short analysis of the Union Budget, and a close look at the allocations made by 13 large ministries. These ministries together account for 53% of the estimated total expenditure in 2020-21. Further, we analyse the allocation trends over the years, and the extent of their utilisation. We also examine the implementation of various schemes and policies and their resulting outcomes.

Allocations to the top 15 schemes account for 13% of the budget allocation. PM-KISAN scheme (income support to farmers) has the highest allocation in 2020-21 at Rs 75,000 crore. This is followed by the allocation to the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) at Rs 61,500 crore.

The issues discussed in the analysis of each ministry include the following.

- Defence: The Ministry of Defence has been allocated Rs 4,71,378 crore. This constitutes 15.5% of the central government's budget and 2.1% of India's estimated GDP for 2020-21. Expenditure on salaries forms the largest portion of the defence budget (30% of the defence budget), followed by pensions (28%) and expenditure on capital outlay (23%). The remaining amount is spent on maintenance of equipment and other administrative expenses. Note that in 2020-21, army pensions are expected to exceed salaries. Additionally, the budget for capital expenditure has been lower than budget for committed liabilities for the last few years.

- Home Affairs: The Ministry of Home Affairs has been allocated Rs 1,67,250 crore, which is an increase of 20% over the revised estimates in 2019-20. 63% of the Ministry's expenditure is on police (includes the central armed police forces and Delhi Police), and 32% is on grants made to Union Territories (UTs). The increase in 2020-21 budget is mainly due to accounting reasons. After their reconstitution as UTs, the devolution to Jammu and Kashmir and Ladakh now happens through the Ministry's budget. There is also a marginal increase of 2% in the budget for central armed police forces, despite a 11% vacancy.

- Agriculture: The Ministry has been allocated Rs 1,42,762 crore in 2020-21, which is 30% higher than the revised estimate for 2019-20. This increase is primarily due to a higher allocation of Rs 75,000 crore to the PM-KISAN scheme. This scheme that aims to provide Rs 6,000/year as direct cash transfer to small farmers. The revised estimate for 2019-20 is Rs 54,370 crore, down from the Rs 75,000 crore in the budget. The scheme was targeted to cover 14.5 crore beneficiaries this year, and has covered 8.9 crore till now.

- Consumer Affairs, Food and Public Distribution: The Ministry has two departments: (i) Food and Public Distribution, which has been allocated Rs 1,22,235 crore (98% of the Ministry's allocation), and (ii) Consumer Affairs, which has been allocated Rs 2,300 crore. Food subsidy is the largest component of the Food and Public Distribution Department's expenditure (95% of the allocation). The revised estimate for food subsidy is Rs 1,08,688 crore, which is 41% less than the Rs 1,84,220 crore budgeted. This is because FCI has not been paid for the subsidy and has been asked to borrow the funds. This trend is set to continue as the budget for the next year is estimated at Rs 1,15,570 crore.

- Rural Development: Expenditure by the Ministry of Rural Development is estimated at Rs 1,22,398 crore. This Ministry administers some large schemes such as MGNREGS, PMAY-G (rural housing) and PMGSY (rural roads). About 51% of the Ministry's allocation is towards MGNREGS. The allocation for MGNREGS is estimated to be 13% lower next year, while that for PMGSY is up by 39%.
- Human Resource Development: In 2020-21, the HRD Ministry has been allocated Rs 99,312 crore. Allocation to the Department of School Education and Literacy is estimated at Rs 59,845 crore (60% of the Ministry's total allocation). The Department of Higher Education has been allocated Rs 39,467 crore. Among schemes, the highest expenditure by the Ministry is on Samagra Shiksha (elementary and secondary education), and Mid-Day meals. Data from NSSO indicates a drop in attendance in higher classes. Gross enrollment rate has improved in secondary and higher secondary levels, as well as in higher education.
- Road Transport and Highways: Allocation to this Ministry is estimated at Rs 91,823 crore, which is 11% higher than the revised estimates for 2019-20. Since 2015-16, the Ministry has started spending more on capital expenditure as compared to revenue expenditure. The largest expenditure items are for building roads and bridges, and towards NHAI. There has been a consistent shortfall in the target for construction of national highways. For example, 10,855 km was constructed in 2018-19, compared to the targeted 15,000 km.
- Telecommunications: The Department of Telecommunications has been allocated Rs 66,432 crore, which is an 184% increase over the revised estimates of 2019-20. This significant increase is to provide for the revival plan for BSNL and MTNL. The non-tax revenue for 2020-21 from communication services is projected at Rs 1,33,027 crore, 126% higher than the revised estimates of 2019-20. This could be due to anticipated recovery of the AGR arrears from the service providers as per a recent Supreme Court decision, or from spectrum auction in the coming financial year. Further, note that the USO Fund has collected Rs 70,000 crore in the last 10 years but utilised only Rs 32,000 crore.
- Railways: Railways' revenue is estimated at Rs 2,25,913 crore which is a 10% increase from the revised estimates of 2019-20. Revenue expenditure by Railways is projected at Rs 2,19,413 crore which is an 8% increase from the revised estimates of 2019-20. The Operating ratio is estimated to be 97.4%. In the past few years, borrowings towards capital outlay has been increasing, while there has been a decline in revenue earning traffic. Overdependence on a few bulk freight items such as coal (30% of total revenue) is also a risk factor. Further, salaries and pensions constitute 66% of the costs, with the pension bill set to rise.
- Health: In 2020-21, the Ministry's estimated expenditure is Rs 67,112 crore. In the last decade, India's public health expenditure (central and state spending) has remained between 1.2% to 1.6% of GDP. This is much lower as compared to other countries such as China (3.2%), USA (8.5%), and Germany (9.4%). The largest programmes implemented by the Ministry are the National Health Mission and Ayushman Bharat. While there have been significant improvements in indicators such as infant mortality rate and maternal mortality rate, they haven't reached the targets set under NHM.
- Housing and Urban Affairs: Expenditure by the Ministry is estimated at Rs 50,040 crore. Of this, Rs 20,000 crore (40%) is for metro projects. AMRUT and Smart Cities together get a further 27% of the budget, and PMAY-U (urban housing) gets 16%. As on November 2019, only 25% of the 5,151 proposed Smart City projects have been completed, and 31% of the houses approved under PMAY-U have been constructed.
- Petroleum and Natural Gas: The Ministry has been allocated Rs 42,901 crore for 2020-21, which is the same as the revised estimates for the year 2019-20. About 87% of the ministry's budget is towards LPG subsidy. As expected, the subsidy bill has followed the trends in global crude oil prices.
- Jal Shakti: The Ministry was created in 2019 by integrating the Ministries of: (i) Water Resources, River Development, and Ganga Rejuvenation, and (ii) Drinking Water and Sanitation. These now form individual departments within the Ministry. The Ministry estimates an expenditure of Rs 30,478 crore in 2020-21. The Department of Drinking Water and Sanitation receives 71% of this allocation. Major schemes implemented by the Ministry are Jal Jeevan Mission, which aims to provide adequate and safe drinking water to the rural population, and Swachh Bharat Mission (Gramin), which targets universal sanitation coverage and cleanliness across the country.

Budget at a Glance 2020-21

Budget Highlights

- **Expenditure:** The government proposes to spend Rs 30,42,230 crore in 2020-21, which is 12.7% higher than the revised estimate of 2019-20.
- **Receipts:** The receipts (other than net borrowings) are expected to increase by 16.3% to Rs 22,45,893 crore, owing to higher estimated revenue from disinvestments.
- **GDP growth**: The government has assumed a nominal GDP growth rate of 10% (i.e., real growth plus inflation) in 2020-21. The nominal growth estimate for 2019-20 was 12%.
- **Deficits:** Revenue deficit is targeted at 2.7% of GDP, which is higher than the revised estimate of 2.4% in 2019-20. Fiscal deficit is targeted at 3.5% of GDP, lower than the revised estimate of 3.8% in 2019-20. Note that the government is estimated to breach its budgeted target for fiscal deficit (3.3%) in 2019-20 and the medium term fiscal target of 3% in 2020-21. This does not include off-budget borrowings (0.9% of GDP in 2020-21).
- **Ministry allocations:** Among the top 13 ministries with the highest allocations, the highest percentage increase is observed in the Ministry of Communications (129%), followed by the Ministry of Agriculture and Farmers' Welfare (30%) and the Ministry of Home Affairs (20%).

Tax proposals in the Finance Bill

In addition to changes in tax laws, the Finance Bill, 2020 also proposes certain non-tax changes to the Prohibition of Benami Properties Transactions Act, 1988.

- **Change in income tax rates**: The income tax rates have been changed. Table 1 below compares the current tax rates with the proposed tax rates. Note that the new personal tax rates are optional and may only be availed if the person satisfies certain conditions, such as if they do not claim certain exemptions or deductions. These include standard deductions, leave travel allowance, house rent allowance, interest payment on housing loan, and deductions under Chapter VI-A (investments in provident fund, insurance premium, donations to charities, etc.). Once the option is exercised, it will be applicable for all subsequent years.

Income	Current tax rate	Proposed tax rate
Up to Rs 5 lakh	Nil	Nil
Between Rs 5 lakh and Rs 7.5 lakh	20%	10%
Between Rs 7.5 lakh and Rs 10 lakh		15%
Between Rs 10 lakh and Rs 12.5 lakh	30%	20%
Between Rs 12.5 lakh and Rs 15 lakh		25%
Above Rs 15 lakh		30%

- **Option for lower tax rates**: The Income Tax Act was recently amended to give an option to domestic companies to avail of 22% tax rate if they did not claim certain deductions. The list has been expanded to include other deductions, such as those under Section 80G (donations to charities). Also, a similar facility has been provided to co-operatives.
- **Dividend Distribution Tax**: Currently, companies have to pay a tax of 15% on dividends distributed by it to shareholders. This has been removed, and the dividend income will now be taxable in the hands of the recipient.
- **Limit on deductions for social security contributions**: Currently, there is no combined limit for the purpose of deductions on the amount of contribution made by an employer towards a recognised provident fund, an approved superannuation fund and the National Pension Scheme. A combined ceiling of Rs 7.5 lakh is being introduced on deductions which may be claimed towards such contributions.
- **Residence in India**: The Income Tax Act, 1961 specifies various conditions for determining the resident status of an Indian citizen or a person of Indian origin. A person will be considered a resident, i.e. their global income is taxable in India, if they are in India for more than 182 days. This has been reduced to 120 days. In addition, any Indian citizen who is not liable to tax in any other country or territory by reason of domicile or residence shall be deemed to be a resident of India.

- **Tax on foreign remittances and overseas tour packages**: Under the Liberalised Remmittance Scheme of RBI (LRS), residents are allowed to freely remit up to USD 2,50,000 in a financial year, except for remittances on certain prohibited items (e.g., on lottery tickets). A tax of 5% has been introduced which will be collected at source by: (i) authorised dealers who receive an aggregate amount of seven lakh rupees or more in a financial year for remittances out of India under the LRS, and (ii) by sellers of overseas tour program packages. A tax of 10% will be collected in non-PAN/Aadhaar cases.
- **Benefits to corporates**: Currently, domestic manufacturing companies have an option to pay income tax at the rate of 15% if they do not claim certain deductions under the Act. This benefit has been extended to domestic companies engaged in electricity generation.
- **TDS on e-commerce transactions**: TDS of 1% will be levied on e-commerce transactions.
- **Housing incentives**: Currently, an exemption is provided on profits or gains arising out of building affordable houses if the project was approved by March 31, 2020. Further, an additional tax deduction of up to Rs 1,50,000 is provided on interest paid on loans for self-occupied house owners if the loan was sanctioned by March 31, 2020. The deadline in both cases has been extended to March 31, 2021.
- **Tax changes for start-ups**: Start-ups are allowed to get a full tax waiver on profits for any three consecutive years out of their first seven years, if they are incorporated between April 1, 2016 and March 31, 2021, and their turnover does not exceed Rs 25 crore. The waiver has been extended to start-ups for any three years out of their first ten years. In addition, the turnover threshold has been increased from Rs 25 crore to Rs 100 crore.
- Further, the tax on ESOPs (stock options) held by employees of start-ups will be payable only on the earliest of the following events: (i) expiry of 4 years from the end of the assessment year, (ii) sale of the options, or (iii) till the employee leaves the company.
- **Excise**: The rate of central excise duty on certain tobacco products such as cigarettes, chewing tobacco, and tobacco extracts has been increased. For example, the rate of duty on chewing tobacco has been increased from 10% to 25% per kg. Further, crude petroleum has been included at a rate of duty of Rs 50 per tonne.
- **Customs:** Customs duty has been raised on some items such as tableware and kitchenware, footwear, fans, and toys.
- **Health cess on customs**: A health cess will be levied (in addition to customs duty) on certain medical devices, such as X-ray machines, imported into India. This cess may be utilised for the financing of health infrastructure and services.
- **Obligations on charities**: Charitable organisations get an exemption from taxation under Section 12AA, and donations to them get exemptions under Sections 10(23C), 35, and 80G. From now, the approvals under these sections will be valid for a maximum of five years. Any entity having these approvals has to get them re-issued.
- **Commodities Transaction Tax:** Currently, the commodities transaction tax on commodity derivatives is 0.01%. The Bill creates three tax rates: (i) 0.01% payable by the seller on sale of commodity derivatives based on its price or price index, (ii) 0.0001% payable by the buyer on the sale of an option in goods resulting in the delivery of the goods, and (iii) 0.125% payable by the buyer on the sale of an option in goods resulting in cash payment.
- **Indian Stamp Act, 1899**: Stamp duty will not be charged in the case of transactions in stock exchanges and depositories established in international financial centres set up under the Special Economic Zones Act, 2005.
- **Sovereign wealth funds**: Income arising out of investments made by the Abu Dhabi Investment Authority and other notified sovereign wealth funds in certain infrastructure facilities will be exempt from tax. This exemption is available if the investment was made before March 31, 2024, and with a minimum lock-in period of three years.
- **The Prohibition of Benami Property Transactions Act, 1988:** The Act constitutes an adjudicating authority on issues related to benami properties. The qualifications for the chairperson and members of the authority are that they must have been: (i) a member of the Indian Revenue Service as Commissioner of Income-tax or equivalent, or (ii) a member of the Indian Legal Service as Joint Secretary or equivalent. The Bill states that an individual qualified for the position of District Judge may also be the chairperson or a member of the authority.
- **Removal of tax exemptions on certain allowances**: Certain exemptions on facilities to current and former members of the Union Public Service Commission and the Election Commission such as rent-free residence, conveyance allowance, and medical facilities are exempt from tax. This exemption has been removed.

Policy Highlights

- **Legislative Changes**: The Banking Regulation Act, 1949 will be amended for better governance of cooperative banks. The limit for NBFCs to be eligible for debt recovery under the SARFAESI Act, 2002 will be reduced. The asset size will be reduced from Rs 500 crore to Rs 100 crore, and loan size will be reduced from one crore rupees to Rs 50 lakh. The Deposit Insurance and Credit Guarantee Corporation has been permitted to increase deposit insurance coverage for a depositor, which will now be one lakh to five lakh rupees, per depositor. The Factor Regulation Act, 2011 will be amended to enable NBFCs to extend invoice financing to MSMEs. The PFRDA Act will be amended to separate NPS trust for government employees for PFRDAI. Laws where there is criminal liability for acts that are civil in nature will be examined and amended. Contracts Act will be strengthened to ensure that contracts are honoured.

- **GST Compensation**: GST compensation balances for 2016-17 and 2017-18 will be paid in two instalments. From now, transfer to GST Compensation Fund will be only through the compensation cess.
- **Disinvestment**: The government will sell a part of its holding in LIC through an Initial Public Offer. The government also plans to sell the balance of its holding in IDBI Bank.
- **Investment**: Certain specified categories of government securities will be opened fully for non-resident investors. The limit for Foreign Portfolio Investment in corporate bonds will be increased from 9% to 15% of the outstanding stock of corporate bonds. It has been proposed to set up an Investment Clearance Cell which will provide "end to end" facilitation and support, such as pre-investment advisory at the central and state level.
- **Commerce and Industry**: A scheme focused on encouraging manufacturing of mobile phones, electronic equipment, and semi-conductor packaging has been proposed. The National Technical Textiles Mission will be implemented from 2020-21 to 2023-24 with an outlay of Rs 1,480 crore. A scheme will be launched for the refund of duties and taxes on exported products, which are not getting exempted under any other existing mechanism.
- **Infrastructure and Urban Development**: The government will build 6,500 projects under the National Infrastructure Pipeline. These projects will include housing, safe drinking water, and healthcare, among others. A National Logistics Policy will be released which will clarify the roles of the central government, state governments, and key regulators. Further, it will create a single window e-logistics market. Five new smart cities will be developed in collaboration with states in public-private partnership mode.
- **Transport and Energy**: Four railway station re-development projects and operation of 150 passenger trains will be done through public-private partnership mode. The government will encourage states to replace conventional energy meters with prepaid smart meters by 2023. It has been proposed to expand the national gas grid from 16,200 km to 27,000 km.
- **Agriculture and allied activities**: The government will expand the Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan scheme to help 20 lakh farmers in setting up stand-alone solar pumps. Viability gap funding will be provided for setting up warehouses at the block level. All eligible beneficiaries of Pradhan Mantri Kisan Samman Nidhi will be covered under the Kisan Credit Card scheme. The government will propose comprehensive measures for 100 water stressed districts.
- **Technology**: A policy will be introduced to enable private sector to build data centre parks. Fibre to the Home connections through Bharatnet will link one lakh gram panchayats in 2020. A new National Policy on Official Statistics has been proposed which will use latest technology including Artificial Intelligence. An outlay of Rs 8,000 crore has been proposed for the National Mission on Quantum Technologies and Applications, over a period of five years.
- **Education**: The new National Education Policy will be announced. Steps will be taken to enable sourcing of External Commercial Borrowings and Foreign Direct Investment for education. Degree level online education programme will be started by institutions who rank within top 100 in the National Institutional Ranking framework.
- **Health**: Jan Aushadhi Kendra scheme will be expanded to all districts and 2,000 medicines and 300 surgical items will be offered by 2024. Viability gap funding window has been proposed for setting up hospitals in the public-private partnership mode.
- **Social Justice**: Legislative and institutional changes will be made to ensure that there is no manual cleaning of sewer systems or septic tanks. Rs 28,600 crore has been allocated for programs specific to women.
- **National Recruitment Agency**: National Recruitment Agency will be set up for recruitment of non-gazetted posts in government and public sector banks.

Budget estimates of 2020-21 as compared to revised estimates of 2019-20

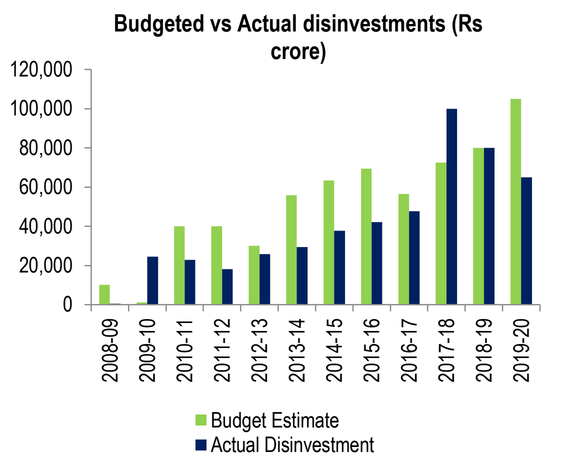
- **Total Expenditure:** The government is estimated to spend Rs 30,42,230 crore during 2020-21. This is 12.7% more than the revised estimate of 2019-20. Out of the total expenditure, revenue expenditure is estimated to be Rs 26,30,145 crore (11.9% growth) and capital expenditure is estimated to be Rs 4,12,085 crore (18.1% growth).
- **Total Receipts:** The government receipts (excluding borrowings) are estimated to be Rs 22,45,893 crore, an increase of 16.3% over the revised estimates of 2019-20. The gap between these receipts and the expenditure will be plugged by borrowings, budgeted to be Rs 7,96,337 crore, an increase of 3.8% over the revised estimate of 2019-20.
- **Transfer to states:** The central government will transfer Rs 13,90,666 crore to states and union territories in 2020-21. This is an increase of 17.1% over the revised estimates of 2019-20 and includes devolution of (i) Rs 7,84,181 crore to states, out of the centre's share of taxes, and (ii) Rs 6,06,485 crore in the form of grants and loans.
- **Deficits:** Revenue deficit is targeted at 2.7% of GDP, and fiscal deficit is targeted at 3.5% of GDP in 2020-21. The target for primary deficit (which is fiscal deficit excluding interest payments) is 0.4% of GDP.
- **GDP growth estimate:** The nominal GDP is estimated to grow at a rate of 10% in 2020-21. The estimated nominal GDP growth rate for 2019-20 was 12%.

Table 1: Budget at a Glance 2020-21 (Rs crore)

	Actuals 2018-19	Budgeted 2019-20	Revised 2019-20	Budgeted 2020-21	% change (RE 2019-20 to BE 2020-21)
Revenue Expenditure	20,07,399	24,47,780	23,49,645	26,30,145	11.9%
Capital Expenditure	3,07,714	3,38,569	3,48,907	4,12,085	18.1%
Total Expenditure	**23,15,113**	**27,86,349**	**26,98,552**	**30,42,230**	**12.7%**
Revenue Receipts	15,52,916	19,62,761	18,50,101	20,20,926	9.2%
Capital Receipts	1,12,779	1,19,828	81,605	2,24,967	175.7%
of which:					
Recoveries of Loans	18,052	14,828	16,605	14,967	-9.9%
Other receipts (including disinvestments)	94,727	1,05,000	65,000	2,10,000	223.1%
Total Receipts (without borrowings)	**16,65,695**	**20,82,589**	**19,31,706**	**22,45,893**	**16.3%**
Revenue Deficit	4,54,483	4,85,019	4,99,544	6,09,219	22.0%
% of GDP	**2.4**	**2.3**	**2.4**	**2.7**	
Fiscal Deficit	6,49,418	7,03,760	7,66,846	7,96,337	3.8%
% of GDP	**3.4**	**3.3**	**3.8**	**3.5**	
Primary Deficit	66,770	43,289	1,41,741	88,134	-37.8%
% of GDP	**0.4**	**0.2**	**0.7**	**0.4**	

Note: Budgeted estimates (BE) are budget allocations announced at the beginning of each financial year. Revised Estimates (RE) are estimates of projected amounts of receipts and expenditure until the end of the financial year. Actual amounts are audited accounts of expenditure and receipts in a year.
Sources: Budget at a Glance, Union Budget Documents 2020-21; PRS.

- Expenses which bring a change to the government's assets or liabilities (such as construction of roads or recovery of loans) are capital expenses, and all other expenses are revenue expenses (such as payment of salaries or interest payments).
- In 2020-21, **capital expenditure** is expected to increase by 18.1 % over the revised estimates of 2019-20, to Rs 4,12,085 crore. On the other hand, **revenue expenditure** is expected to increase by 11.9% over the revised estimates of 2019-20 to Rs 26,30,145 crore.
- From 2010-11 to 2020-21, capital expenditure had an annual average growth of 10.2%, while revenue expenditure had an annual average growth of 9.7%.
- **Disinvestment** is the government selling its stakes in Public Sector Undertakings (PSUs). In 2019-20, the government is estimated to meet 62% of its disinvestment target. The disinvestment target for 2020-21 has been set at Rs 2,10,000 crore.



Note: Figures for 2019-20 are revised estimates.
Sources: Receipts Budget, Union Budget Documents 2020-21; PF

Receipts Highlights for 2020-21

- **Total receipts (including borrowings)** in 2020-21 are estimated to be Rs 30,42,230 crore and net receipts (excluding borrowings) to be Rs 22,45,893 crore. Receipts (without borrowings) are estimated to increase by 16.3% over the revised estimates of 2019-20.
- **Gross tax revenue** is budgeted to increase by 12% over the revised estimates of 2019-20, which is higher than the estimated nominal GDP growth of 10% in 2020-21. The net tax revenue of the central government (excluding states' share in taxes) is estimated to be Rs 16,35,909 crore in 2020-21.
- **Devolution to states** from centre's tax revenue is estimated to be Rs 7,84,181 crore in 2020-21. In 2019-20, the devolution to states reduced by 19% from an estimate of Rs 8,09,133 crore at the budgeted stage to Rs 6,56,046 crore at the revised stage.
- **Non-tax revenue** is expected to be Rs 3,85,017 crore in 2020-21. This is 11.4% higher than the revised estimate of 2019-20.
- **Capital receipts** (without borrowings) are budgeted to increase by 175.7% over the revised estimates of 2019-20. This is on account of disinvestments, which are expected to be Rs 2,10,000 crore in 2020-21, as compared to Rs 65,000 crore as per the revised estimates of 2019-20.

Table 2: Break up of central government receipts in 2020-21 (Rs crore)

	Actuals 2018-19	Budgeted 2019-20	Revised 2019-20	Budgeted 2020-21	% change (RE 2019-20 to BE 2020-21)
Gross Tax Revenue	**20,80,465**	**24,61,195**	**21,63,423**	**24,23,020**	**12.0%**
of which:					
Corporation Tax	6,63,572	7,66,000	6,10,500	6,81,000	11.5%
Taxes on Income	4,73,003	5,69,000	5,59,500	6,38,000	14.0%
Goods and Services Tax	5,81,560	6,63,343	6,12,327	6,90,500	12.8%
Customs	1,17,813	1,55,904	1,25,000	1,38,000	10.4%
Union Excise Duties	2,31,982	3,00,000	2,48,012	2,67,000	7.7%
Service Tax	6,904	-	1,200	1,020	-
A. Centre's Net Tax Revenue	**13,17,211**	**16,49,582**	**15,04,587**	**16,35,909**	**-0.8%**
Devolution to States	**7,61,454**	**8,09,133**	**6,56,046**	**7,84,181**	**19.5%**
B. Non Tax Revenue	**2,35,704**	**3,13,179**	**3,45,513**	**3,85,017**	**11.4%**
of which:					
Interest Receipts	12,145	13,711	11,027	11,042	0.1%
Dividend and Profits	1,13,420	1,63,528	1,99,893	1,55,395	-22.3%
Other Non-Tax Revenue	1,10,139	1,35,940	1,34,593	2,18,580	62.4%
C. Capital Receipts (without borrowings)	**1,12,779**	**1,19,828**	**81,605**	**2,24,967**	**175.7%**
of which:					
Disinvestment	94,727	1,05,000	65,000	2,10,000	223.1%
Receipts (without borrowings) (A+B+C)	**16,65,694**	**20,82,589**	**19,31,705**	**22,45,893**	**16.3%**
Borrowings	**6,49,418**	**7,03,760**	**7,66,846**	**7,96,337**	**3.8%**
Total Receipts (including borrowings)	**23,15,113**	**27,86,349**	**26,98,552**	**30,42,230**	**12.7%**

Sources: Receipts Budget, Union Budget Documents 2020-21; PRS.

- **Indirect taxes:** The total indirect tax collections are estimated to be Rs 10,96,520 crore in 2020-21. Of this, the government has estimated to raise Rs 6,90,500 crore from GST. Out of the total tax collections under GST, 84% is expected to come from central GST (Rs 5,80,000 crore), and 16% (Rs 1,10,500 crore) from GST compensation cess.
- **Corporation tax:** The collections from taxes on companies are expected to increase by 11.5% in 2020-21 to Rs 6,81,000 crore. The revised estimates of 2019-20 indicate a 20.3% shortfall in collections from corporation tax over the budget estimates of 2019-20. This shortfall may be due to a cut in the corporate tax rates made earlier during the financial year.
- **Income tax:** The collections from income tax are expected to increase by 14% in 2020-21 to Rs 6,38,000 crore. The 14% growth is despite a reduction in tax rates. That is, income tax is estimated to grow at 21%, if not for the Rs 40,000 crore revenue foregone due to the reduction in tax rates.
- **Non-tax receipts:** Non-tax revenue consists of interest receipts on loans given by the centre, dividends and profits, external grants, and receipts from general, economic, and social services, among others. Non-tax revenue is expected to increase by 11.4% over the revised estimates of 2019-20 to Rs 3,85,017 crore.
- **Disinvestment target:** The disinvestment target for 2020-21 is Rs 2,10,000 crore. This target is 223.1% higher than the revised estimate of 2019-20 (Rs 65,000 crore).

Expenditure Highlights for 2020-21

- **Total expenditure** in 2020-21 is expected to be Rs 30,42,230 crore, which is 12.7% higher than the revised estimate of 2019-20. Out of this, (i) Rs 8,31,825 crore is proposed to be spent on central sector schemes (7.6% increase over the revised estimate of 2019-20), and (ii) Rs 3,39,894 crore is proposed to be spent on centrally sponsored schemes (7.3% increase over the revised estimate of 2019-20).
- The government is expected to spend Rs 2,10,682 crore on pensions in 2020-21, which is 14.4% higher than the revised estimate of 2019-20. In addition, expenditure on interest payments in 2020-21 is expected to be Rs 7,08,203 crore, which is 23% of the government's expenditure.

Table 3: Break up of central government expenditure in 2020-21 (Rs crore)

	Actuals 2018-19	Budgeted 2019-20	Revised 2019-20	Budgeted 2020-21	% change (RE 2019-20 to BE 2020-21)
Central Expenditure					
Establishment Expenditure of Centre	5,21,247	5,46,296	5,67,133	6,09,585	7.5%
Central Sector Schemes	6,38,495	8,70,794	7,73,196	8,31,825	7.6%
Other expenditure	6,77,403	7,72,129	7,41,553	8,87,574	19.7%
Centrally Sponsored Schemes and other transfers					
Centrally Sponsored Schemes	2,96,029	3,31,610	3,16,816	3,39,894	7.3%
Finance Commission Grants	93,704	1,20,466	1,23,710	1,49,925	21.2%
of which:					
Rural Local Bodies	35,064	52,558	58,616	69,925	19.3%
Urban Local Bodies	14,400	23,359	25,843	30,000	16.1%
Grants-in-aid	9,658	10,344	10,938	20,000	82.9%
Post Devolution Revenue Deficit Grants	34,582	34,206	28,314	30,000	6.0%
Other grants	88,235	1,45,054	1,76,144	2,23,427	26.8%
Total Expenditure	**23,15,113**	**27,86,349**	**26,98,552**	**30,42,230**	**12.7%**

Sources: Budget at a Glance, Union Budget Documents 2020-21; PRS.

Expenditure on Subsidies

In 2020-21, the total expenditure on subsidies is estimated to be Rs 2,62,109 crore, a decrease of 0.5% from the revised estimate of 2019-20. This is largely due to a decrease in expenditure on fertiliser subsidy. Details are given below:

- **Food subsidy:** Allocation to food subsidy is estimated at Rs 1,15,570 crore in 2020-21, a 6.3% increase as compared to the revised estimate of 2019-20. In 2019-20 budget, Rs 1,84,220 crore was allocated to food subsidy. However, the revised estimate is much lower than the budgeted estimate at Rs 1,08,688 crore. This is due to a 41% cut (Rs 75,532 crore in amount) in the allocation to food subsidy for 2019-20 from the budgeted stage to the revised stage.
- **Fertiliser subsidy:** Expenditure on fertiliser subsidy is estimated at Rs 71,309 crore in 2020-21. This is a decrease of Rs 8,689 crore (10.9%) from the revised estimate of 2019-20.
- **Petroleum subsidy:** Expenditure on petroleum subsidy is estimated to increase by 6.1% to Rs 40,915 crore in 2020-21. Petroleum subsidy consists of subsidy on LPG (Rs 37,256 crore) and kerosene subsidy (Rs 3,659 crore). In 2020-21, while the LPG subsidy is estimated to increase by Rs 3,170 crore over the previous year, kerosene subsidy is estimated to decrease by Rs 824 crore.
- **Other subsidies:** Expenditure on other subsidies includes interest subsidies for various government schemes, subsidies for the price support scheme for agricultural produce, and assistance to state agencies for procurement, among others. In 2020-21, the expenditure on these other subsidies has decreased by Rs 1,987 crore (5.5%) over the revised estimate of 2019-20. Table 4 provides details of subsidies in 2020-21.

Table 4: Subsidies in 2020-21 (Rs crore)

	Actuals 2018-19	Budgeted 2019-20	Revised 2019-20	Budgeted 2020-21	% change (RE 2019-20 to BE 2020-21)
Food subsidy	1,01,327	1,84,220	1,08,688	1,15,570	6.3%
Fertiliser subsidy	70,605	79,996	79,998	71,309	-10.9%
Petroleum subsidy	24,837	37,478	38,569	40,915	6.1%
Other subsidies	26,185	36,460	36,302	34,315	-5.5%
Total	**2,22,954**	**3,38,154**	**2,63,557**	**2,62,109**	**-0.5%**

Sources: Expenditure Profile, Union Budget 2020-21; PRS.

Expenditure by Ministries

The ministries with the 13 highest allocations account for 53% of the estimated total expenditure in 2020-21. Of these, the Ministry of Defence has the highest allocation in 2020-21, at Rs 4,71,378 crore. It accounts for 15% of the total budgeted expenditure of the central government. Other Ministries with high allocation include: (i) Home Affairs, (ii) Agriculture and Farmers' Welfare, (iii) Consumer Affairs, Food and Public Distribution, and (iv) Rural Development. Table 5 shows the expenditure on Ministries with the 13 highest allocations for 2020-21 and the changes in allocation as compared to the revised estimate of 2019-20.

Table 5: Ministry-wise expenditure in 2020-21 (Rs crore)

	Actuals 2018-19	Budgeted 2019-20	Revised 2019-20	Budgeted 2020-21	% change (RE 2019-20 to BE 2020-21)
Defence	4,03,457	4,31,011	4,48,820	4,71,378	5.0%
Home Affairs	1,12,189	1,19,025	1,39,108	1,67,250	20.2%
Agriculture and Farmers' Welfare	53,620	1,38,564	1,09,750	1,42,762	30.1%
Consumer Affairs, Food and Public Distribution	1,08,848	1,94,513	1,17,290	1,24,535	6.2%
Rural Development	1,13,706	1,19,874	1,24,549	1,22,398	-1.7%
Human Resource Development	80,345	94,854	94,854	99,312	4.7%
Road Transport and Highways	77,301	83,016	83,016	91,823	10.6%
Communications	35,395	38,637	35,749	81,957	129.3%
Railways	54,913	68,019	69,967	72,216	3.2%
Chemicals and Fertilisers	71,414	80,534	80,968	71,897	-11.2%
Health and Family Welfare	54,682	64,559	64,609	67,112	3.9%
Housing and Urban Affairs	40,612	48,032	42,267	50,040	18.4%
Petroleum and Natural Gas	32,371	42,901	42,901	42,901	0.0%
Other Ministries	10,76,261	12,62,809	12,44,703	14,36,648	13.8%
Total Expenditure	**23,15,113**	**27,86,349**	**26,98,552**	**30,42,230**	**12.7%**

Note: Expenditure is net of recoveries such as fines, and ticket sales.
Sources: Expenditure Budget, Union Budget 2020-21; PRS.

- **Ministry of Home Affairs:** Allocation to the Ministry of Home Affairs increased by Rs 28,142 crore (20.2%) in 2020-21, over the revised estimate of 2019-20. This is mainly on account of grants provided by the Ministry to the newly formed union territories of Jammu and Kashmir (Rs 30,757 crore), and Ladakh (Rs 5,958 crore).
- **Ministry of Communications:** Allocation to the Ministry of Communications increased by Rs 46,208 crore (129.3%) in 2020-21, over the revised estimate of 2019-20. This is mainly on account of capital infusion of Rs 20,410 crore in BSNL and MTNL for 4G spectrum, and Rs 13,184 crore of grants provided to them for Voluntary Retirement Scheme.
- **Ministry of Agriculture and Farmers' Welfare:** Allocation to the Ministry of Agriculture and Farmers' Welfare increased by 30.1% to Rs 1,42,762 crore in 2020-21 over the previous year. This is due to an increase of Rs 20,630 crore in allocation to the PM-KISAN scheme. In 2019-20, the Ministry was allocated Rs 1,38,564 crore, which has been revised down by 21% to Rs 1,09,750 crore (due to Rs 20,630 crore of estimated underspending in PM-KISAN).
- **Ministry of Consumer Affairs, Food and Public Distribution:** Allocation to the Ministry increased by Rs 7,245 crore (6.2%) over the previous year. In 2019-20, the Ministry was expected to spend Rs 1,94,513 crore, which has been revised down by 40% to Rs 1,17,290 crore (due to Rs 75,532 crore cut in allocation to the food subsidy).

Expenditure on Major Schemes

- Among schemes, the PM-KISAN scheme (income support to farmers) has the highest allocation in 2020-21 at Rs 75,000 crore. Allocation to the scheme has increased by 37.9% from the revised estimate of 2019-20. However, in 2019-20, allocation to the scheme has been cut by Rs 20,630 crore (28%) from the budgeted stage to the revised stage. In 2018-19, expenditure on the scheme saw a 94% cut, from an estimate of Rs 20,000 crore at the revised stage to an actual expenditure of Rs 1,241 crore.
- The Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) has the second highest allocation in 2020-21 at Rs 61,500 crore. This is a decrease of Rs 9,502 crore (13.4%) from the revised estimate of 2019-20. In 2019-20, allocation to the scheme has increased by 18% from Rs 60,000 crore at the budgeted stage to Rs 71,002 crore at the revised stage.
- Allocation to the Pradhan Mantri Gram Sadak Yojana has increased by 38.6% over the revised estimate of 2019-20 to Rs 19,500 crore. In 2019-20, allocation to the scheme has been cut by Rs 4,930 crore (26%) from the budgeted stage to the revised stage.

Table 6: Scheme wise allocation in 2020-21 (Rs crore)

	Actuals 2018-19	Budgeted 2019-20	Revised 2019-20	Budgeted 2020-21	% change (RE 2019-20 to BE 2020-21)
PM-KISAN	1,241	75,000	54,370	75,000	37.9%
MGNREGS	61,815	60,000	71,002	61,500	-13.4%
National Education Mission	30,830	38,547	37,672	39,161	4.0%
National Health Mission	31,502	33,651	34,290	34,115	-0.5%
Integrated Child Development Services	21,642	27,584	24,955	28,557	14.4%
Pradhan Mantri Awas Yojana	25,443	25,853	25,328	27,500	8.6%
Pradhan Mantri Gram Sadak Yojana	15,414	19,000	14,070	19,500	38.6%
Pradhan Mantri Fasal Bima Yojana	11,937	14,000	13,641	15,695	15.1%
AMRUT and Smart Cities Mission	12,085	13,750	9,842	13,750	39.7%
Green Revolution	11,758	12,561	9,965	13,320	33.7%
Swachh Bharat Mission	15,374	12,644	9,638	12,294	27.6%
National Rural Drinking Water Mission	5,484	10,001	10,001	11,500	15.0%
Pradhan Mantri Krishi Sinchai Yojana	8,143	9,682	7,896	11,127	40.9%
Mid-Day Meal Programme	9,514	11,000	9,912	11,000	11.0%
National Livelihood Mission	6,282	9,774	9,774	10,005	2.4%

Sources: Expenditure Profile, Union Budget 2020-21; PRS.

Expenditure on Scheduled Caste and Scheduled Tribe sub-plans and schemes for welfare of women, children and NER

- Programmes for the welfare of women and children have been allocated Rs 2,39,504 crore in 2020-21, an increase of 3.9% over the revised estimate of 2020-21. These allocations include programmes under all the ministries.
- The sub-plans for Scheduled Castes and Scheduled Tribes have been allocated a total of Rs 1,36,909 crore in 2020-21, a 12% increase over the revised estimate of 2019-20.

Table 7: Allocations for women, children, SCs, STs and NER (Rs crore)

	Budgeted 2019-20	Revised 2019-20	Budgeted 2020-21	% change (RE 2019-20 to BE 2020-21)
Welfare of Women	1,36,934	1,42,813	1,43,462	0.5%
Welfare of Children	91,644	87,642	96,042	9.6%
Scheduled Castes	81,341	72,936	83,257	14.1%
Scheduled Tribes	52,884	49,268	53,653	8.9%
North Eastern Region (NER)	59,370	53,374	60,112	12.6%

Sources: Expenditure Profile, Union Budget 2020-21; PRS.

Fiscal Responsibility and Budget Management targets

The Fiscal Responsibility and Budget Management (FRBM) Act, 2003 requires the central government to progressively reduce its outstanding debt, revenue deficit and fiscal deficit. The central government gives three year rolling targets for these indicators when it presents the Union Budget each year. Table 8 shows the targets for revenue deficit and fiscal deficit as given in the Medium Term Fiscal Policy Statement.

Fiscal deficit is an indicator of borrowings by the government for financing its expenditure. The estimated fiscal deficit for 2020-21 is 3.5% of GDP.

Revenue deficit is the excess of revenue expenditure over revenue receipts. Such a deficit implies the government's need to borrow funds to meet expenses which may not provide future returns. The estimated revenue deficit for 2020-21 is 2.7% of GDP.

Table 8: FRBM targets for deficits (as % of GDP)

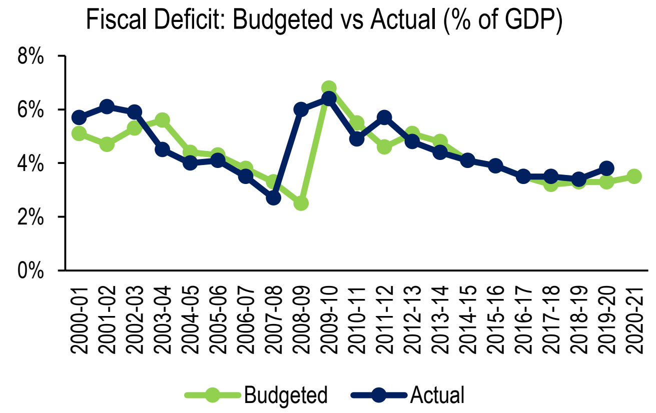
	Actuals 2018-19	Revised 2019-20	Budgeted 2020-21	Target 2021-22	Target 2022-23
Fiscal Deficit	3.4%	3.8%	3.5%	3.3%	3.1%
Revenue Deficit	2.4%	2.4%	2.7%	2.3%	1.9%

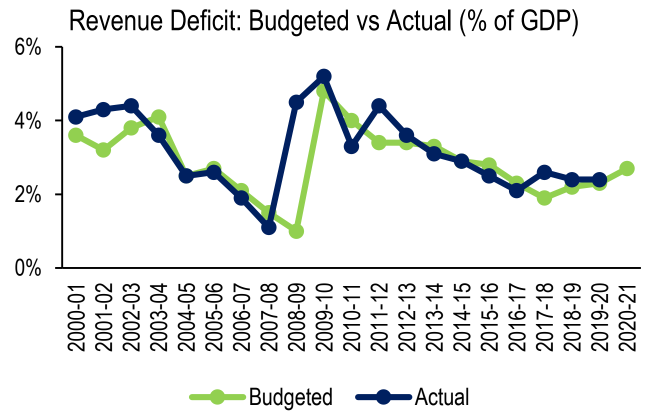
Sources: Medium Term Fiscal Policy Statement, Union Budget 2020-21; PRS.

Primary deficit is the difference between fiscal deficit and interest payments. It is estimated at 0.4% of GDP in 2020-21.

Extra-Budgetary Resources: In addition to the expenditure shown in the budget, the government also spends through extra-budgetary resources. These resources are raised by issuing bonds and through loans from the National Small Savings Fund (NSSF). In 2020-21, the government estimates an expenditure of Rs 1,86,100 crore through such extra-budgetary resources. This includes an expenditure of Rs 1,36,600 crore by the Food Corporation of India financed through loans from NSSF.

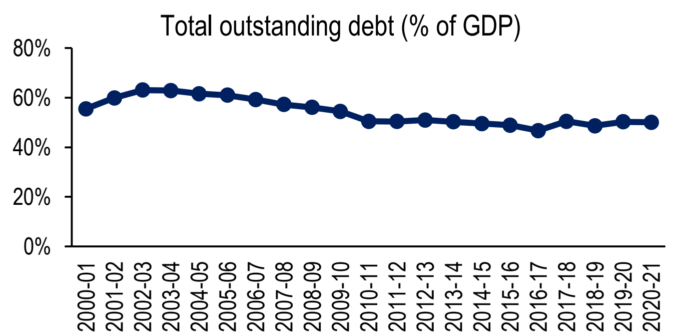
Since funds borrowed for such expenditure remain outside the budget, they do not get factored in the deficit and debt figures. If borrowings made in the form of extra-budgetary resources are also taken into account, the fiscal deficit estimated for the year 2020-21 would increase from 3.5% of GDP to 4.4% of GDP. Similarly, the fiscal deficit for the year 2019-20 would increase from 3.8% of GDP to 4.6% of GDP due to extra-budgetary borrowings of Rs 1,72,699 crore.





Sources: Medium Term Fiscal Policy Statement, Union Budget (multiple years); PRS.

- Over the past 15 years, the government has largely been able to keep the deficits below budgeted levels. In 2018-19, the government exceeded its budgeted target of fiscal deficit of 3.3% of GDP, as the actual deficit was at 3.4% of GDP.
- In 2019-20, the government had set a budget estimate of 3.3% of GDP for fiscal deficit, and 2.3% of GDP for revenue deficit. As per the revised estimates, both the deficits have exceeded the 2019-20 budget target.
- Outstanding debt is the accumulation of borrowings over the years. A higher debt implies that the government has a higher loan repayment obligation over the years.



Note: Figures for 2019-20 are revised estimates and for 2020-21 are budget estimates. Sources: Economic Surveys 2003-04 to 2018-19; Union Budget 2020-21; PRS.

- Total outstanding debt of the government has decreased from 55.5% of GDP in 2000-01 to 50.1% of GDP in 2020-21 (estimate). The FRBM Act sets a target of 40% of GDP for outstanding debt to be met by 2024-25.

Demand for Grants: Defence

The Ministry of Defence frames policies on defence and security-related matters, and ensures its implementation by the defence services (i.e. Army, Navy and Air Force). In addition, it is responsible for production establishments such as ordnance factories and defence public sector undertakings, research and development organisations, and ancillary services that assist the defence services, such as the Armed Forces Medical Services.

This note analyses budgetary allocation and expenditure trends of the Ministry. The note also analyses key issues affecting the three armed forces and other issues related to the defence sector.

Overview of finances

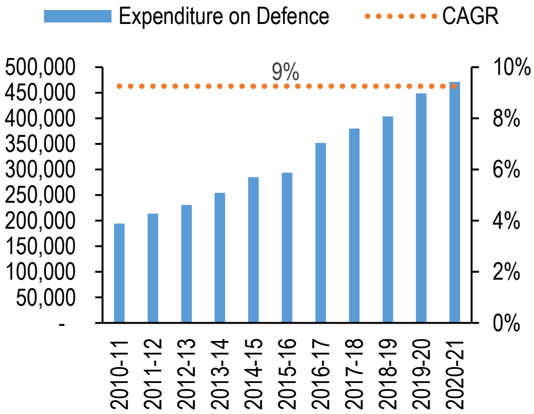
In 2020-21, the Ministry of Defence has been allocated Rs 4,71,378 crore. This includes expenditure for salaries of armed forces and civilians, pensions, modernisation of armed forces, production establishments, maintenance and research and development organisations.

The allocation to the Ministry of Defence is the highest allocation among all ministries of the central government. The expenditure on defence constitutes 15.5% of the central government's budget and 2.1% of India's estimated GDP for 2020-21.

Defence budget has decreased as a proportion of GDP over the years

Over the last 10 years (2010-11 to 2020-21), the budget of the Ministry of Defence has grown at an annual average rate of 9%. The year-wise budget of the Ministry is shown below in Figure 1.

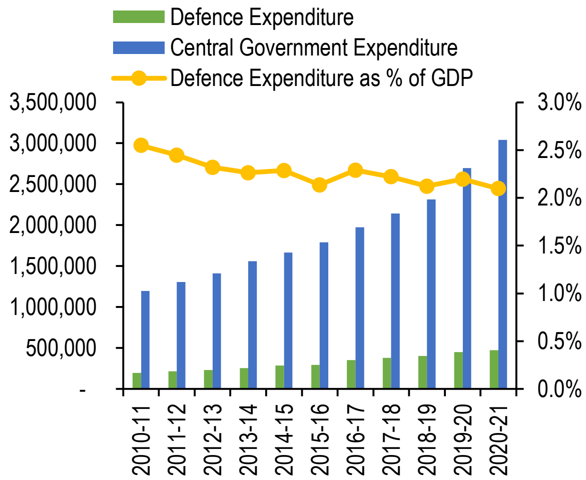
Figure 1: Budget of Ministry of Defence (2010-11 to 2020-21) (in Rs crore)



Sources: Union Budget Documents 2010-2020; PRS.
Note: Figures for 2020-21 are Budget Estimates and for 2019-20 are Revised Estimates.

However, over the last 10 years, defence expenditure as a proportion of central government expenditure and GDP has decreased. In 2010-11, defence expenditure was 2.5% of GDP and 16.3% of central government expenditure, which has decreased to 2.1% of GDP and 15.5% of government expenditure, respectively, in 2020-21. The Standing Committee on Defence (2018) had recommended that the Ministry of Defence should be allocated a fixed budget of about 3% of GDP to ensure adequate preparedness of the armed forces.[1]

Figure 2: Defence expenditure as a percentage of GDP and total central government expenditure (2010-11 to 2020-21) (in Rs crore)



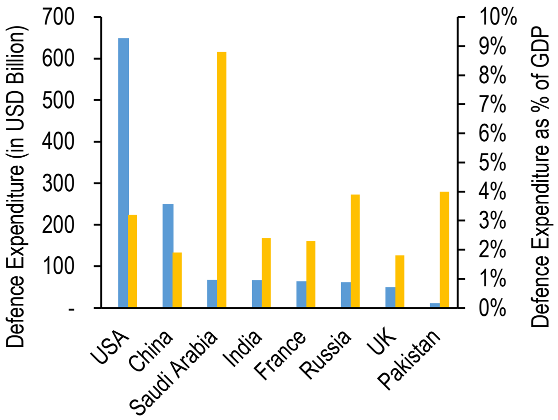
Sources: Union Budget 2010-20, Central Statistics Office; PRS.
Note: Figures for 2020-21 are Budget Estimates and for 2019-20 are Revised Estimates.

India was the fourth-largest defence spender in the world in 2018

According to the Stockholm International Peace Research Institute (SIPRI), India was the fourth-largest defence spender in absolute terms in 2018 (after USA, China and Saudi Arabia).[2]

Figure 3 compares India's defence expenditure with the seven largest spenders in absolute terms and as a percentage of GDP. Countries such as USA and Saudi Arabia spent higher than India on defence, both in absolute terms as well as percentage of GDP. China spent lower in terms of percentage of GDP, but its absolute expenditure on defence was 3.8 times that of India.

Figure 3: International comparison of defence expenditure (2018) (in USD Billion)



Sources: "SIRPI Military Expenditure Database", Stockholm International Peace Research Institute, 2018; PRS.

Growth of 5% over last year's budget

The budget of Ministry of Defence is estimated to grow by 5% in 2020-21 over revised estimates of 2019-20. The increase is highest for defence pensions, which is expected to grow at 13.6%. Allocations on salaries have increased by 5.6% and allocation for the capital outlay component of the budget has increased by 1.4% over the revised estimates of 2019-20. Capital outlay includes expenditure on construction work, machinery, and equipment such as tanks, naval vessels, and aircrafts.

Table 1: Defence Budget Allocation (Rs crore)

Major Head	Actual 18-19	Revised 19-20	Budgeted 20-20	% change (RE to BE)
Salaries	1,29,836	1,34,810	1,42,292	5.6%
Capital Outlay	89,783	1,05,727	1,07,233	1.4%
Pensions	1,01,775	1,17,810	1,33,825	13.6%
Stores	43,637	44,353	42,856	-3.4%
Others	38,427	46,119	45,172	-2.1%
Total	**4,03,457**	**4,48,820**	**4,71,378**	**5.0%**

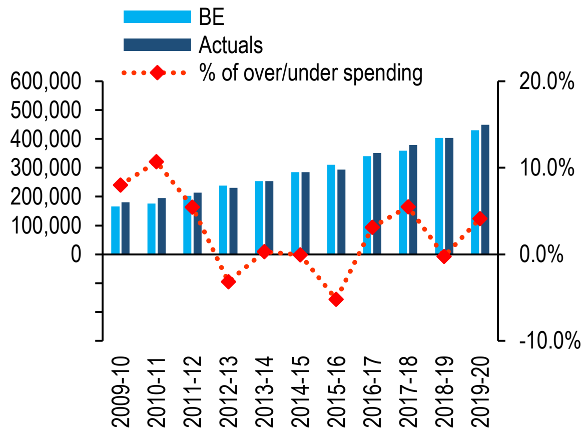
Note: Salaries, pensions and capital outlay are of the three services. Salaries include salary for civilians, auxiliary forces, Rashtriya Rifles, Jammu and Kashmir Light Infantry and Coast Guard. Pensions include rewards. Capital outlay includes capital expenses on border roads and coast guard. Stores includes ammunition, repairs and spares. Others include administration expenses, expense on research and development and housing. RE is revised estimate and BE is budget estimate.
Sources: Expenditure Budget, Union Budget 2020-21; PRS.

The Standing Committee (2019) had noted that the actual increase at the stage of revised estimates 2018-19 over actuals of 2017-18 was only 0.1% after adjusting inflation rate of 3.4% for the year.[3] The Committee recommended that budgetary allocations for the Ministry should be appropriately increased to factor in inflation.

Actual expenditure has been higher than the budgeted expenditure over the last few years

Between 2009-10 and 2019-20, the actual expenditure was higher than the budgeted allocation for six years, which implies overspending by the Ministry of Defence for a few years. This was mostly due to overspending on defence pensions. In contrast, the actual expenditure was lower than the budgeted allocation for four years. Figure 4 below shows the actual and budgeted expenditure for the period between 2009-10 to 2019-20, and the percentage of over/underspending across these years.

Figure 4: Budget estimates vs actual expenditure (2009-10 to 2019-20) (in Rs crore)

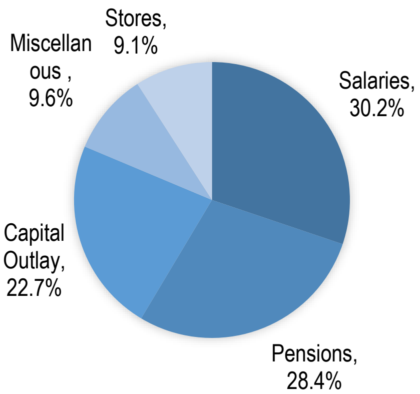


Sources: Union Budget 2009-2020; PRS.
Note: BE= Budget Estimates.

Changing composition of defence budget

For 2020-21, expenditure on salaries form the largest portion of the defence budget (Rs 1,42,292 crore or 30% of the defence budget). This is followed by pensions (Rs 1,33,825 crore or 28% of defence budget) and expenditure on capital outlay (Rs 1,07,233 crore or 23% of defence budget). The remaining allocation is towards stores (maintenance of equipment) and other items such as border roads, and administrative expenses. Salaries and pensions together comprise 58.6% of the defence budget.

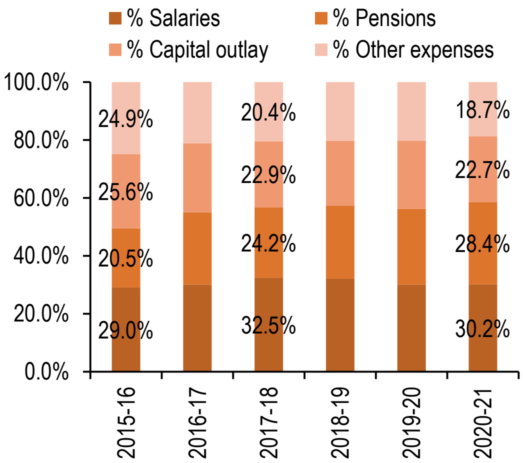
Figure 5: Composition of expenditure of ministry of defence for 2020-21 (in %)



Sources: Expenditure Budget, Union Budget 2020-21; PRS.

Over the last few years (2015-2020), there has been a shift in the composition of expenditure of the Ministry. For 2015-16, the expenditure on capital outlay and pensions was 26% and 21% of the defence budget, respectively. In contrast, in 2020-21, the expenditure on capital outlay has decreased to 23%, and the expenditure on pension has increased to 28% of the defence budget. This is illustrated in Figure 6 below.

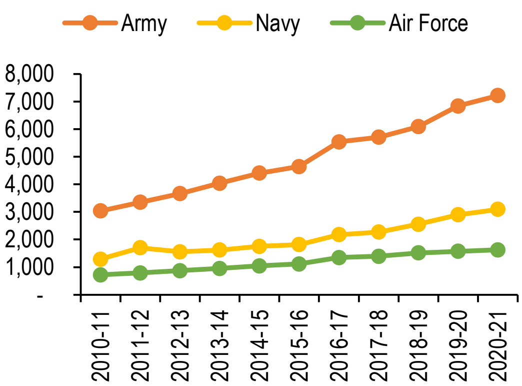
Figure 6: Changing composition of the defence budget (2015-16 to 2020-21)



Sources: Union Budget 2015-20; PRS.
Note: Figures for 2019-20 are Revised Estimates, and for 2020-21 are Budget Estimates.

Salaries of civilian employees of the armed forces have also been increasing. The expenditure on salaries of civilians for the three armed forces between 2010-20 is shown in Figure 7. This has increased at an annual average rate of 9% for the three forces during this time period. As of March 2016, the Ministry of Defence employed around four lakh civilian employees.[4]

Figure 7: Expenditure on salaries of civilian employees (2010-11 to 2020-21) (in Rs crore)



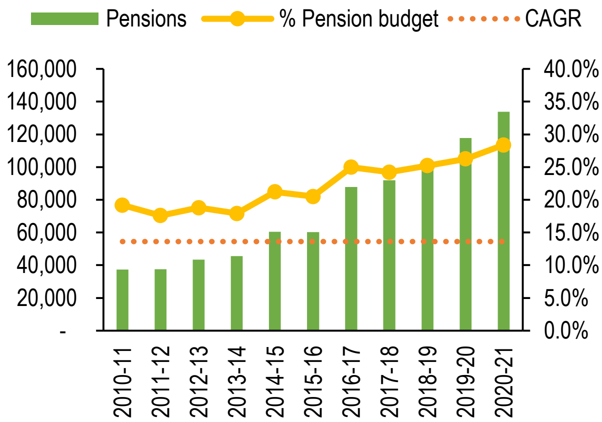
Sources: Union Budget 2010-2020; PRS.
Note: Figures for 2019-20 are Revised Estimates, and for 2020-21 are Budget Estimates.

Proportion of expenditure on pensions increasing over the years

Defence pensions provides for pensionary charges for retired Defence personnel of the three services (including civilian employees) and also employees of Ordnance Factories. It covers payment of service pension, gratuity, family pension, disability pension, commuted value of pension and leave encashment.

Expenditure on defence pensions have grown at an average annual rate of 14% in the last 10 years. This is higher than the average annual growth rate of the defence budget (9%). Figure 8 shows the expenditure on defence pensions between 2010-11 to 2020-21 and the pension budget as a percentage of the defence budget.

Figure 8: Expenditure on defence pensions (2010-11 to 2020-21) (in Rs crore)



Sources: Union Budget 2010-20; PRS.
Note: Figures for 2019-20 are Revised Estimates, and for 2020-21 are Budget Estimates.

The Standing Committee (December 2019) noted that while the budget in defence services estimates (defence budget excluding pensions and administrative expenses) has doubled in the past decade, pension has increased thrice in amount.[3] It noted that the defence pension liabilities will continue to increase exponentially every year due to increase in number of retirees, amount of dearness relief, gratuity, and other retirement benefits. The Committee observed that this increasing pension bill is a cause of concern.

As of April 2016, there were around 25 lakh defence pensioners.[5] The Standing Committee on Defence (January 2019) noted that the percentage of funds for pensions is bound to rise since approximately 60,000 personnel retire every year.[6]

The Committee noted that this reduces the funds available for modernisation of the armed forces. It stated that the government could reduce the pension bill by introducing some other pension scheme or assured jobs on early retirement.

In November 2015, a decision was taken to implement One Rank One Pension (OROP) for armed forces personnel. This implies that a uniform pension will be paid for defence personnel retiring at the same rank, irrespective of their date of retirement. It aims at bridging the gap between the rates of pension of current and past pensioners at periodic intervals.

Table 2 notes the amount disbursed on account of the implementation of OROP. The scheme had a total of 65,87,221 beneficiaries till May 2018.[3]

Table 2: Implementation of OROP: Amount disbursed (in Rs crore)

Year	Amount disbursed (Rs crore)
2015-16	2,862
2016-17	5,371
2017-18	2,563
Total	**10,795**

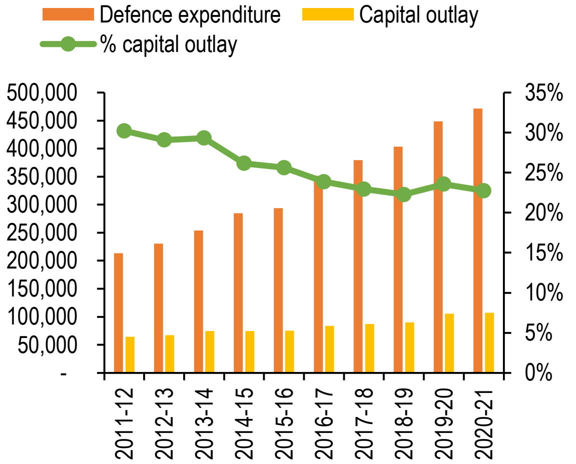
Sources: One Rank One Pension, Starred Question No. 68, June 26, 2019, Ministry of Defence, Lok Sabha; PRS.

Decreasing proportion of budget spent on capital outlay for armed forces

In 2020-21, total capital expenditure on the three forces has been budgeted at Rs 1,07,233 crore, which accounts for 23% of the budget of the Ministry. Capital outlay includes expenditure on purchasing defence equipment, weaponry, aircrafts, naval ships, land, and construction of roads and bridges in border areas.

Over the last 10 years, capital outlay as a percentage of total defence budget, has declined. The percentage was highest during 2011 at 30% of the total defence budget. Figure 9 shows the expenditure on capital outlay as percentage of defence expenditure over the last 10 years.

Figure 9: Capital outlay as percentage of defence expenditure (2011-12 to 2020-21) (in Rs crore)



Sources: Union Budgets 2011-2020; PRS.
Note: Figures for 2019-20 are Revised Estimates and 2020-21 are Budget Estimates.

Note that capital acquisition of the armed forces consists of two components: (i) committed liabilities, and (ii) new schemes. Committed liabilities are payments anticipated during a financial year in respect of contracts concluded in previous years (as acquisition is a complicated process involving long gestation periods). New schemes include new projects which are at various stages of approval and are likely to be implemented in future.

The Standing Committee on Defence (2019) analysed the allocation for modernisation of armed forces against the committed liabilities for the period between 2016-2019.[7] It observed that the budget allocation for modernisation which should cover both committed liabilities and new schemes did not cover committed liabilities itself.

The Committee noted that inadequate allocation for committed liabilities could lead to default on contractual obligations. It recommended that the promised allocations should be disbursed for committed liabilities.

Table 3: Committed liabilities and modernisation budget (2016-17 to 2019-20) (in Rs crore)

Year	Committed liabilities	Budget allocation	Shortfall (in %)
2016-17	73,553	62,619	14.9%
2017-18	91,382	68,965	24.5%
2018-19	1,10,044	73,883	32.9%
2019-20	1,13,667	80,959	28.8%

Sources: 3rd Report, Capital Outlay on Defence Services, Procurement Policy and Defence Planning, Standing Committee on Defence, December 2019; PRS.

Given the long-term nature of defence acquisition, the Standing Committee on Defence (2017) had recommended creation of a Non-Lapsable Capital Fund Account for defence modernisation.[8] According to the Committee, this would ensure that money allocated for a particular item is spent on the specific item only.

However, the Ministry of Finance has objected to the creation of such a fund on various grounds including that balances in the non-lapsable fund would not be available to the Ministry of Defence automatically, as their use would require parliamentary sanction.[9]

Analysis of the Forces

This section analyses the budget of each of the three armed forces, as well as issues related to their operational preparedness and modernisation.
In 2020-21, the total allocation to the three forces (including pensions) is Rs 4,45,483 crore (94% of the total defence budget). The rest of the allocation is towards research and development and defence services ordnance factories. Nearly 63% of the defence budget is allocated for the Army. 18% of

the budget is allocated for the Air Force, and 13% for the Navy. Table 4 details the defence budget allocation amongst the three forces, and towards the other and research and development.

Table 4: Budget of defence services (in Rs Crore)

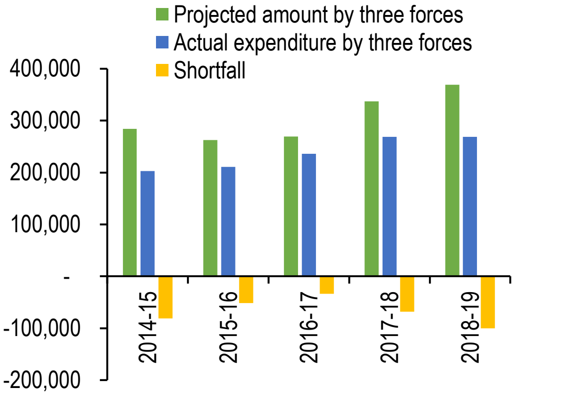
Major Head	RE 19-20	BE 20-21	% change (RE to BE)	% of BE 20-21
Army	2,77,093	2,97,035	7.2%	63.0%
Navy	60,882	61,890	1.7%	13.1%
Air Force	86,812	86,558	-0.3%	18.4%
Others	24,033	25,896	7.8%	5.5%
Total	**4,48,820**	**4,71,378**	**5.0%**	

Note: The above includes allocation for defence pensions and expense on Border Roads Organisation and Coast Guard Organisation. RE is revised estimate and BE is budget estimate.
Sources: Expenditure Budget, Union Budget 2020-21; PRS.

Actual expenditure has been less than the projected amount by the defence forces

The expenditure on defence by the three armed forces has been significantly lower than the amount projected by the three services. For instance, in 2016-17, while the forces projected a required expenditure of Rs 2,69,243 crore, the actual expenditure during the year was Rs 2,35,769 crore (a shortfall of 12%). Figure 10 shows the difference (shortfall) between the amounts projected by the three forces and the actual expenditure between 2014-15 and 2019-20. Note that there has been a consistent shortfall ranging from 10%-30%. The average shortfall was 22% during these years.

Figure 10: Shortfall between amount projected by the armed forces and actual expenditure (2014-15 to 2019-20) (in Rs crore)



Note: Expenditure for 2019-20 is budget estimate and expenditure for 2018-19 is based on the revised estimate.
Sources: 3rd Report, Capital Outlay on Defence Services, Procurement Policy and Defence Planning, Standing Committee on Defence, December 2019; PRS

Army

The Army is the largest of the three forces, both in terms of budget as well as number of personnel. An amount of Rs 2,97,035 crore has been allocated for the Army in 2020-21. This includes Rs 1,13,257 crore for pensions (38% of army's expenditure) and Rs 1,11,294 for salaries. The table below provides the composition of the Army's budget for 2020-21.

Table 5: Composition of Army Budget (2020-21) (in Rs crore)

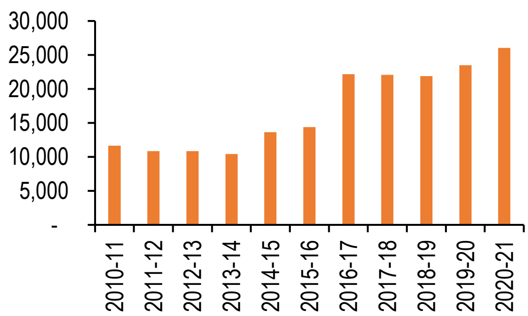
Head	Amount allocated	% of service budget
Pensions	1,13,257	38.1%
Salaries	1,11,294	37.5%
Modernisation	26,069	8.8%
Maintenance	18,328	6.2%
Others	28,088	9.5%
Total	**2,97,035**	

Sources: Union Budget 2020-21; PRS.
Note: Salaries include salary for civilians, auxiliary forces, Rashtriya Rifles, Jammu and Kashmir Light Infantry.
Modernisation funds for the Army is calculated from the following heads of the capital outlay: (i) Aircraft and Aeroengine, (ii) Heavy and Medium Vehicles, (iii) Other Equipment, (iv) Rolling Stock, and (v) Rashtriya Rifles.

Nearly 76% of the Army's budget (Rs 2,24,551 crore) has been allocated for salaries and pensions of personnel. Note that as of July 2017, the Army has a sanctioned strength of 12.6 lakh personnel.[10] Significant expenditure on salaries and pensions, leaves only 9% of the Army's budget (Rs 26,069 crore) for modernisation. Modernisation involves acquisition of state of the art technologies and weapons systems to upgrade and augment defence capabilities of the forces.

Figure 11 shows the expenditure on modernisation of the Army over the last 10 years. Funds for modernisation of the Army have grown at an annual average rate of 8% between 2010-11 and 2020-21.

Figure 11: Expenditure on modernisation of Army (2010 to 2020) (in Rs crore)



Sources: Union Budgets 2010-20; PRS.
Notes: Figures for 2019-20 are Revised Estimates and for 2020-21 are Budget Estimates.

The Standing Committee on Defence (2018) has noted that a modern armed forces should have one-third of its equipment in the vintage category, one-third in the current category, and one-third in the state-of-the-art category.[10]

However, the current position of the Indian Army is that 68% of its equipment is in the vintage category, 24% in the current category, and only 8% in the state-of-the-art category. Further, the Committee noted that the Indian Army has a significant shortage of weapons and ammunition. According to the Committee, these shortages have persisted since adequate attention was lacking both in terms of policy and budget for modernisation. The Committee stated that such a situation does not augur well in the context of a two-front war.[10]

Navy

The Navy has been allocated Rs 61,890 crore (including pensions) in 2020-21. Modernisation comprises 40% (Rs 24,598 crore) of the budget of the Navy. Table 6 below provides the composition of the Navy's budget for 2020-21.

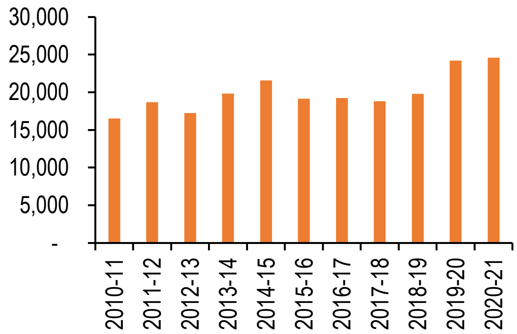
Table 6: Composition of Navy Budget (2020-21) (in Rs crore)

Head	Amount allocated	% of service budget
Modernisation	24,598	40%
Salaries	13,059	21%
Pensions	7,234	12%
Maintenance	6,960	11%
Others	10,039	16%
Total	**61,890**	

Sources: Union Budget 2020-21; PRS.
Note: Salaries include salary for civilians and coast guard. Modernisation funds for the Navy is calculated from the following heads of the capital outlay: (i) Aircraft and Aeroengine, (ii) Heavy and Medium Vehicles, (iii) Other Equipment, (iv) Joint Staff, (v) Naval Fleet, and (viii) Naval Dockyards and Projects.

Note that the percentage of capital outlay for the Navy to the total defence budget has declined from 6.8% in 2015-16 to 5.6% in 2020-21. The Standing Committee on Defence (2018) has stated that this could lead to a delay in induction of critical capabilities and resultant cost-overruns.[10] The Committee also observed that the number of ships and submarines was 138 and naval aircrafts was 235 in 2017, which decreased to 136 and 219 respectively in 2018.

Figure 12: Expenditure on modernisation of Navy (2010 to 2020) (in Rs crore)



Sources: Union Budgets 2010-20; PRS.
Notes: Figures for 2019-20 are Revised Estimates and for 2020-21 are Budget Estimates.

The Committee also observed delays in various projects of the Indian Navy.[10] For example, Project 75 (which involved construction of six Scorpene Class submarines), had an initial delivery date of all submarines by December 2017. However, the likely date of delivery of all submarines is February 2022.

Since acquisition of new ships and submarines involves a lengthy procurement process, accident prevention is an important aspect of the organisational set up of the Navy.[11] In an audit report of 2017, the CAG observed that between 2007-08 and 2015-16, 38 naval accidents took place, which claimed the lives of 33 sailors.[11] Further, all naval accidents are to be investigated by a Board of Inquiry. The CAG found that only 21% of the total recommendations made by these Boards were implemented. It recommended that a mechanism should be put in place for implementing these recommendations in a time-bound manner.

Air Force

The Indian Air Force (IAF) has been allocated Rs 86,558 crore for the year 2020-21 (including pensions for the retired personnel). Rs 39,031 crore has been allotted for modernisation of the IAF. Table 7 shows the composition of the budget of the service for the year.

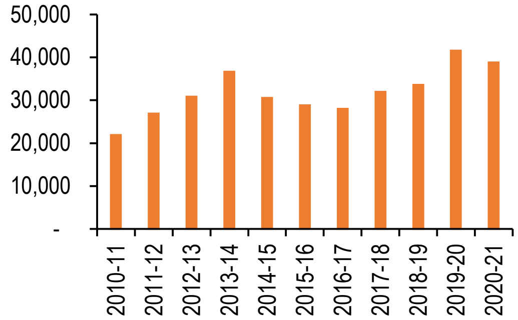
Table 7: Composition of Indian Air Force Budget (2020-21) (in Rs Crore)

Head	Amount allocated	% of service budget
Modernisation	39,031	45%
Salaries	17,939	21%
Pensions	13,313	15%
Maintenance	9,110	11%
Others	7,165	8%
Total	**86,558**	

Source: Union Budget 2020-21; PRS.
Note: Note: Salaries include salary for civilians. Modernisation funds for the Air Force is calculated from the following heads of the capital outlay: (i) Aircraft and Aeroengine, (ii) Heavy and Medium Vehicles, and (iii) Other Equipment.

Modernisation comprises 45% (Rs 39,031 crore) of the total budget of the IAF. Note that this is a 6% decrease from the revised estimate (Rs 41,800 crore) for 2019-20 for modernisation of IAF. Figure 13 below shows the expenditure on modernisation of the IAF over the last ten years. Funds for modernisation have grown at an annual average rate of 6% between 2010-11 and 2020-21.

Figure 13: Expenditure on modernisation of IAF (2010-20) (in Rs crore)



Sources: Union Budgets 2010-20; PRS.
Notes: Figures for 2019-20 are Revised Estimates and for 2020-21 are Budget Estimates.

The CAG has raised issues in relation to the capital acquisition process of the IAF.[12] In its report (2019), the CAG examined 11 contracts of capital acquisition signed between 2012-13 and 2017-18, with a total value of approximately Rs 95,000 crore. It found that the current acquisition system was unlikely to support the operational preparedness of the IAF and recommended that the Ministry of Defence undertake structural reforms of the entire acquisition process.[12]

One of the recommendations of the CAG related to the planning and tendering process. The acquisition of air assets starts with the formulation of user requirements known as the Air Staff Qualitative Requirements (ASQR). The CAG had recommended in 2007 that the ASQR should be stated in terms of functional parameters, which are measurable. However, it noted that instead of using functional parameters, the IAF made the ASQR exhaustive and included technical details. In this context, the CAG repeated its earlier recommendation that ASQR should be stated in terms of functional parameters. Further, it recommended that technical experts with knowledge of the systems being considered could be involved in the acquisition process.[12]

The Estimates Committee (2018) has noted that there should be 70% serviceability of aircrafts since aircrafts have to undergo standard maintenance checks.[13] However, as of November 2015, the serviceability of aircrafts was 60%.

Chief of Defence Staff

The Union Cabinet approved the creation of the post of Chief of Defence Staff (CDS) in December 2019. The creation of post was first recommended by the report of the Group of Ministers on 'Reforming the National Security System' (2001) to provide single-point military advice to the government. The CDS will be the permanent chairman of the Chiefs of Staff Committee. Further, the CDS will also administer the three services and act as a military advisor to the Nuclear Command Authority.

Further, the cabinet approved creation of the Department of Military Affairs under the Ministry of Defence. The Department will deal with matters related to defence procurement, training and staffing for the services, and promoting use of indigenous equipment. This department will be headed by the CDS.

Issues in defence procurement

Defence procurement refers to the acquisition of defence equipment, systems and platforms which is undertaken by the Ministry of Defence, and the three armed forces. The Ministry released the Defence Procurement Procedure (DPP), 2016 in March 2016 which lays down detailed guidelines regulating defence procurement in India.[14]

Procurement of defence hardware is a long process, involving large number of stakeholders. Coordination issues between these stakeholders sometimes results in delays.[13] For example, in the case of procurement of equipment for the air force, the CAG found that it took three to five years to just sign the contract, and another three to five years to complete the delivery.[12]

The defence procurement executive is currently in the Ministry of Defence.[15] An Expert Committee on Defence Procurement (2015) observed that a procurement organisation needs to have specialised knowledge of various fields including technology, commercial negotiations, cost estimations, and financial structures.[15] Therefore, it recommended the creation of a separate defence procurement executive, with specialist wings and personnel, outside the formal structure of the Ministry of Defence. This executive would spearhead the procurement process, with the Ministry of Defence and Service Headquarters. Note that countries such as France and the United Kingdom have independent agencies responsible for defence procurement.[15]

Note that the government has setup a Committee to review the DPP 2016 and the Defence Procurement Manual 2009 to remove procedural bottlenecks, simplify procedures, hasten defence acquisition, and ensure greater participation from the industry.[16]

High dependence on imports

According to the Stockholm International Peace Research Institute, India was the fourth-largest importer of defence goods and services in 2018.[2] The Estimates Committee (2018) had stated that dependence on foreign suppliers for military hardware not only results in huge expenditure on imports, but makes national security vulnerable as suppliers may not provide weapons during emergency situations.[13] Table 8 notes the total procurement from foreign and Indian vendors during 2014-15 to 2018-19.

Table 8: Total procurement from foreign and Indian vendors (2014-15 to 2018-19) (Rs crore)

Year	Total procurement	Foreign vendors	Indian vendors	% Foreign vendors
2014-15	65,860	25,981	39,879	39.4%
2015-16	62,342	23,192	39,150	37.2%
2016-17	69,150	27,278	41,872	39.4%
2017-18	72,732	29,035	43,697	39.9%
2018-19	75,921	36,957	38,964	48.7%

Sources: 3rd Report, Capital Outlay on Defence Services, Procurement Policy and Defence Planning, Standing Committee on Defence, December 2019; PRS.

An Expert Committee (Chair: Mr. Dhirendra Singh) was set up to suggest amendments to the Defence Procurement Procedure, to facilitate the 'Make in India' scheme in the defence sector.[15] The Expert Committee recommended three models for defence procurement: (i) strategic partnership model, for projects that are of strategic importance (such as aircrafts or submarines), (ii) development partnership model, where quality is critical and the vendor base is narrow, and (iii) competitive bidding process, where the vendor base is large and competition is feasible. Note that the DPP 2016, has a chapter on implementation of the Strategic Partnership Model.[14]

Further, the Draft Defence Production Policy, 2018 was released in April 2018.[17] The draft policy aims to reduce India's current dependence on imports, and achieve self-reliance in development and manufacture of 13 categories of weapon systems, including fighter aircraft, warships, and missile systems by 2025. In order to further self-reliance in the defence sector, the government has allowed 100% FDI in the defence sector, with 49% under automatic approval.[18]

However, the Estimates Committee (2018) has observed that the indigenisation level in the defence sector is increasing at a very slow rate. It further stated that nothing concrete has been done for the implementation of the strategic partnership model, which envisaged a key role for private players in building platforms such as submarines and fighter jets in India.[13] The Committee also noted the high dependence on external content by Defence Public Sector Undertakings (DPSUs). For example, the import content for platforms manufactured by Hindustan Aeronautics Limited (in terms of value of the platform), ranged between 40% to 60%.[13]

Border Roads Organisation

An amount of Rs 3,050 crore was allocated in 2020-21 for works carried out by the Border Roads Development Board (BRDB). This is 3% lower than the revised estimate for 2019-20 (Rs 3,141 crore). The BRDB was created in 1960 to ensure coordination of road construction projects in north and northeast states, for enhancing defence preparedness. The Border Roads Organisation (BRO) is the executive arm of BRDB.[19]

The Standing Committee on Defence (2019) observed that since 2007-08, the targets set for various construction works by BRO could not be achieved. However, despite the failure to achieve these targets, higher targets were set in subsequent years which led to further underperformance. The failure to achieve targets was attributed to various issues faced by BRO such as difficult terrain, limited working period, and lack of raw material.[19]

Further, the availability of construction equipment with the BRO was less than the authorised numbers in 2016-17.[19] Equipment such as stone crushers and tippers were 40% and 50% less than the authorised numbers, respectively. The Standing Committee also noted that BRO was using indigenous equipment as they operate in remote locations where use of sophisticated equipment is not feasible. It recommended that use of sophisticated construction equipment may be explored to ensure quicker completion of projects.[19]

Research and Development

For 2020-21, the expenditure on defence research and development is Rs 19,327 crore, which constitutes 4% of the total defence budget (6% of defence budget excluding pensions). The allocation is an increase of 9% over the revised estimates of 2019-20. However, the Standing Committee (2019) noted that India's expenditure on defence research and development is much lower compared to countries such as USA and China which spend 12% and 20% of their defence budget on research and development, respectively.[20]

Defence research is primarily carried out by the Defence Research and Development Organisation (DRDO). DRDO is engaged in developing defence technologies covering various areas including aeronautics, combat vehicles, and missiles.

The Estimates Committee (2018) in a report on defence production analysed the functioning of DRDO.[13] It stated that an examination of 14 mission mode projects, carried out by DRDO laboratories revealed that all projects failed to meet their timelines and the date of completion was extended many times. These projects included creation of a secure communication system between airborne platforms and ground stations, and an electronic warfare suit for the modified Mig-29 fighters.

[1] "40th Report: Demands for Grants (2018-19) General Defence Budget, Border Roads Organisation, Indian Coast Guard, Military Engineer Services, Directorate General Defence Estates, Defence Public Sector Undertakings, Welfare of Ex-Servicemen, Defence Pensions, Ex-Servicemen Contributory Health Scheme", Standing Committee on Defence, Lok Sabha, March 12, 2018, http://164.100.47.193/lsscommittee/Defence/16_Defence_40.pdf.

[2] "SIPRI Military Expenditure Database", Stockholm International Peace Research Institute, https://www.sipri.org/sites/default/files/Data%20for%20all%20countries%20from%201988%E2%80%932018%20as%20a%20share%20of%20GDP%20%28pdf%29.pdf.

[3] "1st Report: Demands for Grants (2019-20) General Defence Budget, Border Roads Organisation, Indian Coast Guard, Military Engineer Services, Directorate General Defence Estates, Defence Public Sector Undertakings, Welfare of Ex-Servicemen, Defence Pensions, Ex-Servicemen Contributory Health Scheme", Standing Committee on Defence, December 2019, http://164.100.47.193/lsscommittee/Defence/17_Defence_1.pdf.

[4] Annual Report on Pay and Allowances of Central Government Civilian Employees 2016-17, Ministry of Finance, December 2017, https://doe.gov.in/sites/default/files/PayAllowance2016-17%28English%29.pdf.

[5] Unstarred Question No. 287, Lok Sabha, Ministry of Defence, February 3, 2017, http://loksabhadocs.nic.in/loksabhaquestions/annex/11/AU286.pdf.

[6] "46th Report: Demands for Grants (2018-19) General Defence Budget, Border Roads Organisation, Indian Coast Guard, Military Engineer Services, Directorate General Defence Estates, Defence Public Sector Undertakings, Welfare of Ex-Servicemen, Defence Pensions, Ex-Servicemen Contributory Health Scheme", Standing Committee on Defence, January 2019, http://164.100.47.193/lsscommittee/Defence/16_Defence_46.pdf.

[7] 3rd Report, Capital Outlay on Defence Services, Procurement Policy and Defence Planning, Standing Committee on Defence, December 2019, http://164.100.47.193/lsscommittee/Defence/17_Defence_3.pdf.

[8] "32nd Report: Creation of Non-Lapsable Capital Fund Account, Instead of the Present System", Standing Committee on Defence, Lok Sabha, August 4, 2017, http://164.100.47.193/lsscommittee/Defence/16_Defence_32.pdf.

[9] "48th Report: Action Taken by the Government on the Observations/Recommendations contained in the Fortieth Report (16th Lok Sabha) on 'Demands for Grants of the year 2018-19 on Capital Outlay on Defence Services, Procurement Policy and Defence Planning", Standing Committee on Defence, Lok Sabha, January 7, 2019, http://164.100.47.193/lsscommittee/Defence/16_Defence_48.pdf.

[10] "41st Report: Demands for Grants (2018-19) Army, Navy, Air Force", Standing Committee on Defence, March 12, 2018, http://164.100.47.193/lsscommittee/Defence/16_Defence_41.pdf.

[11] "Report No. 20 of 2017: Union Government (Defence Services) Navy and Coast Guard", Comptroller and Auditor General of India, https://cag.gov.in/sites/default/files/audit_report_files/Report_No.20_of_2017_Compliance_audit_Union_Government_Defence_Services_Navy_and_Coast_Guard.pdf.

[12] "Report No. 3 of 2019: Performance Audit Report of the Comptroller and Auditor General of Indian on Capital Acquisition in Indian Air Force", Comptroller and Auditor General, February 13, 2019.

[13] "29th Report: Preparedness of Armed Forces- Defence Production and Procurement", Committee on Estimates, July 25, 2018, http://164.100.47.193/lsscommittee/Estimates/16_Estimates_29.pdf.

[14] Defence Procurement Procedure 2016, Ministry of Defence, March 28, 2016, https://mod.gov.in/dod/sites/default/files/Updatedver230818.pdf

[15] "Committee of Experts for Amendments to DPP 2013 Including Formulation of Policy Framework", Ministry of Defence, July 2015, https://mod.gov.in/sites/default/files/Reportddp.pdf.

[16] "Raksha Mantri Shri Rajnath Singh approves a Committee to review Defence Procurement Procedure to strengthen 'Make in India'", Press Information Bureau, Ministry of Defence, August 17, 2019.

[17] Draft Defence Production Policy 2018, Ministry of Defence, 2018, https://ddpmod.gov.in/sites/default/files/Draft%20Defence%20Production%20Policy%202018%20-%20for%20website.pdf.

[18] "Cabinet approves amendments in FDI policy", Press Information Bureau, Cabinet, January 10, 2018.

[19] "50th Report: Provision of all-weather connectivity under Border Roads Organisation (BRO) and other agencies up to International borders as well as the strategic areas including approach roads- An appraisal", Standing Committee on Defence, February 11, 2019, http://164.100.47.193/lsscommittee/Defence/16_Defence_50.pdf.

[20] "4th report: Ordnance Factories, Defence Research and Development Organisation, Directorate General of Quality Assurance and National Cadet Corps, Standing Committee on Defence, December 2019, http://164.100.47.193/lsscommittee/Defence/17_Defence_4.pdf.

Demand for Grants: Home Affairs

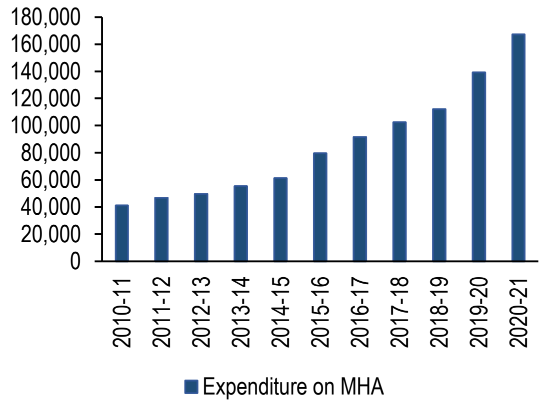
The Ministry of Home Affairs is responsible for matters concerning internal security, centre-state relations, central armed police forces, border management, and disaster management. In addition, the Ministry makes certain grants to the Union Territories. This note analyses the expenditure trends and budget proposals for the Ministry of Home Affairs for 2020-21. Further, it presents some issues in the sector.

Overview of Finances[1]

The Ministry of Home Affairs has been allocated Rs 1,67,250 crore in Union Budget 2020-21. This is an increase of 20% over the revised estimates in 2019-20, which was Rs 1,39,108 crore. Further, this is 41% higher than the budget allocation of last year, which was Rs 1,19,025 crore. A significant part of the increase is on account of funds to Jammu and Kashmir and Ladakh being allocated through Ministry of Home Affairs in 2020-21, following the reorganisation of Jammu and Kashmir into two Union Territories. The budget for the Ministry of Home Affairs constitutes 5% of the total expenditure budget of the union government in 2020-21.

Figure 1 below shows the expenditure of the Ministry of Home Affairs between 2010 to 2020. The average annual growth rate in the expenditure over the last ten years has been 15%.

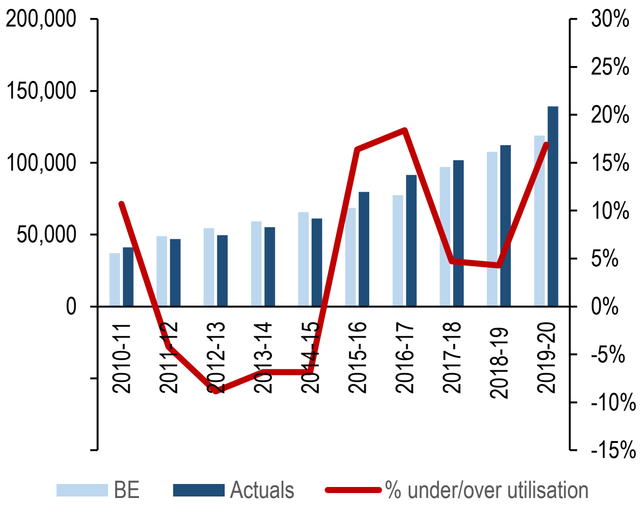
Figure 1: Expenditure of the Ministry of Home Affairs (in Rs crore) (2010-20)



Sources: Union Budget 2010-20; PRS.
Note: Figures for 2019-20 are Revised Estimates and for 2020-21 are Budget Estimates. Figures for all other years are actuals.

Figure 2 shows the actuals and budgeted expenditure over ten years, and the percentage of over/under utilisation of funds. Since 2015-16, the expenditure of the Ministry of Home Affairs has been higher than the budgeted expenditure every year.

Figure 2: Actuals vs budgeted expenditure (2010-20) (in Rs crore)



Sources: Union Budget 2010-20; PRS.
Note: 1. Figures for 2019-20 are Revised Estimates. 2. BE – Budget Estimates.

Of the total budget estimates for 2020-21, (i) 63% of the expenditure is on police (which includes the central armed police forces and Delhi Police); (ii) 32% is on grants made to Union Territories (UTs), and (iii) 5% is on miscellaneous items such as disaster management, rehabilitation of refugees and migrants, census and Cabinet. Table 1 shows the allocations to the heads under the Ministry of Home Affairs in the Union Budget over the last three years.

Table 1: Ministry of Home Affairs budget estimates (in Rs crore) (2020-21)

	2018-19 Actuals	2019-20 Revised	2020-21 Budget	% Change (20-21 BE/ 19-20 RE)
Police	91,693	1,03,202	1,05,244	2%
UTs	14,073	15,026	52,864	252%
Others	6,423	20,880	9,142	-56%
Total	**1,12,189**	**1,39,108**	**1,67,250**	**20%**

Sources: Union Budget 2020-21; PRS.
Note: BE – Budget Estimates, RE – Revised Estimates.

Police: For 2020-21, Rs 1,05,244 crore has been allocated toward police. Budget estimate for police has increased by 2% from revised estimate for 2019-20, (Rs 1,03,202 crore).

Grants and loans to Union Territories: 32% of the Ministry's budget, i.e. Rs 52,864 crore, has been allocated for grants and loans for the administration of Union Territories. This includes five Union Territories without legislatures (Andaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli and Daman and Diu, Lakshadweep, Ladakh), and three Union Territories with legislatures (Delhi, Puducherry, and Jammu and Kashmir).

The 2020-21 budget estimates for grants and loans to Union Territories have increased by 252% (Rs 52,864 crore) from revised estimates for 2019-20, which was Rs 15,026 crore. The increase in allocation can be mostly attributed to the creation of two new Union Territories: Ladakh (Rs 5,958 crore), and Jammu and Kashmir (Rs 30,757 crore).

Jammu and Kashmir Reorganisation Act, 2019[2]

The Jammu and Kashmir Reorganisation Act, 2019 was passed by Parliament on August 6, 2019. The Act provides for the reorganisation of the state of Jammu and Kashmir into the Union Territory of Jammu and Kashmir and Union Territory of Ladakh. The reorganisation came into effect on October 31, 2019. The Union Territory of Ladakh comprises of Kargil and Leh districts, and the Union Territory of Jammu and Kashmir comprises of the remaining territories of the existing state of Jammu and Kashmir.

The Act states that the President will make a reference to the 15th Finance Commission to include the Union Territory of Jammu and Kashmir in the divisible pool from which it may receive a share of the centre's taxes. Note that in its report the 15th Finance Commission has recommended that the share of states in the centre's taxes be decreased from 42% to 41% for 2020-21. The 1% decrease is to provide for the newly formed Union Territories of Jammu and Kashmir, and Ladakh from the resources of the central government (in this case the Ministry of Home Affairs).[3]

Other items: Other miscellaneous expenditure items of the Ministry of Home Affairs have been allocated Rs 9,142 crore. This includes subjects such as disaster management, rehabilitation of refugees and migrants, and administrative matters (relating to the census, the secretariat and Cabinet). Expenditure on these items constitutes 5% of the Ministry's total budget for 2020-21. Further, the 2020-21 budget estimates for miscellaneous expenditures have decreased by 56% from revised estimates for 2019-20, which was Rs 20,880 crore. This can be attributed to the fact that Rs 14,563 crore was provided as grants to Jammu and Kashmir and Ladakh in lieu of Finance Commission grants in 2019-20 revised estimates (Rs 14 crore in 2020-21 budget estimates).

Under the miscellaneous items of expenditure, there has been an increase in the allocation for census and statistics. For 2020-21, the budgeted estimate for this head is Rs 4,568 crore compared to the revised estimates for 2019-20 (Rs 1,121 crore). This increase can be attributed to the proposal for conducting the Census of India 2021 and updation of the National Population Register.[4]

Analysis of key areas of expenditure

Police

In 2020-21, Rs 1,05,244 crore has been budgeted for police expenditure. This includes allocations to police organisations that are under the control of the central government, such as:

- The Central Armed Police Forces which are primarily responsible for border protection and internal security.
- The Delhi Police which is responsible for maintenance of law and order and prevention of crime in the national capital territory
- The Intelligence Bureau which is the nodal agency for collection of domestic intelligence.

Further, the Ministry of Home Affairs provides financial assistance to states for modernisation of state police. In addition to this, funds are allocated for building projects as well as creation of infrastructure in border areas.

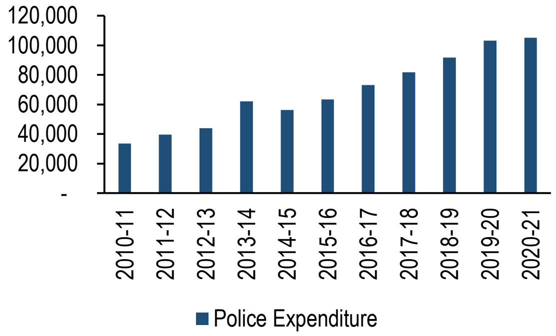
Table 2: Major expenditure items under police (in Rs crore)

	2018-19 Actual	2019-20 RE	2020-21 BE	% Change (20-21 BE/ 19-20 RE)
Central Armed Police Forces	67,670	76,169	77,887	2%
Delhi Police*	7,333	8,084	8,242	2%
Police Infrastructure	5,085	4,479	4,135	-8%
Modernisation of police	3,260	4,155	3,162	-24%
Intelligence Bureau	2,109	2,446	2,575	5%
Border Infrastructure	2,030	2,128	1,997	-6%
Others**	4,206	5,741	7,247	26%
Total	**91,693**	**1,03,202**	**1,05,244**	**2%**

Sources: Union Budget 2020-21; PRS.
Notes: *Includes expenditure on traffic and communication network, upgradation of infrastructure and training, and induction of technology. ** Other items include heads such as schemes for safety of women, education and research, criminology and forensic science, Land Port Authority of India, and India Reserve Battalion. BE – Budget Estimates, RE – Revised Estimates.

The total budget for police for 2020-21 has increased by 2% over the revised estimates of 2019-20. Figure 3 below shows the trend in police expenditure over the last ten years (2010-20). Expenditure on police has increased at an average annual rate of 12%.

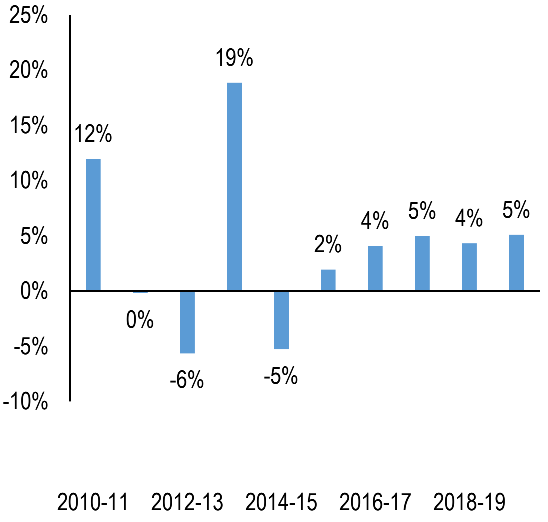
Figure 3: Expenditure on police (in Rs crore) (2010-20)



Sources: Union Budgets 2010-20; PRS.
Note: Revised Estimates used for 2019-20 and Budget Estimates for 2020-21. Actuals used for all other years.

Further, the actuals expenditure on police has been higher than budget estimates in six out of ten years. Figure 4 shows the difference between the budget estimates and actuals in percentage from 2010-20.

Figure 4: Actuals vs budgeted expenditure (2010-20)



Sources: Union Budget 2010-20; PRS.
Note: Figures for 2019-20 are Revised Estimates.
BE – Budget Estimates, RE – Revised Estimates.

Central Armed Police Forces

The Ministry of Home Affairs is responsible for the Central Armed Police Forces composed of seven forces: (i) Central Reserve Police Force (CRPF) which assists in internal security and law and order, (ii) Central Industrial Security Force (CISF) which protects vital installations (like airports) and public sector undertakings, (iii) National Security Guards (NSG) which is a special counter-terrorism force, and (iv) four border guarding forces, Border Security Force (BSF), Indo-Tibetan Border Police (ITBP), Sashastra Seema Bal (SSB) and Assam Rifles (AR).

The CAPFs are estimated to receive a total allocation of Rs 77,887 crore in 2020-21. This accounts for 74% of the expenditure on police. The highest expenditure is towards the CRPF which received 34% (Rs 26,259 crore) of the total allocation. The second highest expenditure is towards the Border Security Force which has been allocated 27% of the budget, i.e. Rs 20,952 crore.

Excessive deployment and training

The Estimates Committee noted in 2018 that there was heavy dependence of states on CAPFs, even for everyday law and order issues.[5] The number of companies of CAPF deployed in states for over six months increased from 1,769 in 2017-18 to 1,873 in 2018-19.[6] The Committee stated that this was likely to affect the counter- insurgency and border guarding operations, as well as curtail their time for training. It recommended that states must develop their own systems, and augment their police forces by providing them adequate training and equipment.[5]

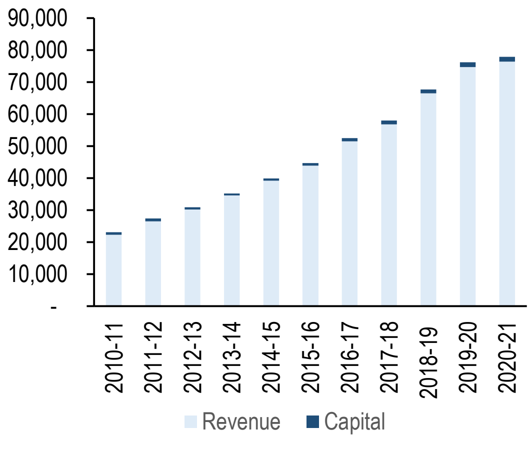
All CAPFs have set up training institutes to meet their training requirements and imparting professional skills on specialised topics. The Estimates Committee (2018) stated that with the emergence of new security threats, there is an urgent need to upgrade the curriculum and infrastructure in training institutes.[5] It recommended that the contents of training should be a mix of conventional matters as well as latest technologies such as IT and cyber security. Further, the Committee stated that while purchasing the latest equipment, training needs should be taken care of, and if required, should be included in the purchase agreement itself.[5]

Modernisation of CAPFs

The Estimates Committee observed in 2018 that a significant proportion of funds allocated to the CAPFs were used for salaries (which comprised 74% of the total allocation during 2016).[5] The Modernisation Plan-II was approved by the Cabinet Committee on Security for the period of 2012-17, with an allocation of Rs 11,009 crore. However, during 2013-16, the expenditure was Rs 198 crore.[5]

Figure 5 shows the distribution between revenue and capital expenditure for the seven CAPFs between 2009-10 and 2019-20. The average percentage spent on capital during this period was 2% of the total expenditure on CAPFs. Capital expenditure is allocation for procurement of machinery and equipment, and motor vehicles, whereas revenue expenditure is on items such as salaries, arms and ammunition, and clothing (note that the capital component does not include funds for construction).

Figure 5: Revenue vs Capital expenditure for CAPFs (2010-20)



Sources: Union Budget 2010-20; PRS.
Note: Figures for 2019-20 are Revised Estimates and for 2020-21 are Budget Estimates. Figures for all other years are actuals.

The Estimates Committee (2018) also observed that the procurement process under the Modernisation Plan was cumbersome and time-consuming.[5] It recommended that bottlenecks in procurement should be identified and corrective action taken. Further, it stated that the Ministry of Home Affairs and CAPFs should hold negotiations with ordinance factories and manufacturers in public or private sector to ensure uninterrupted supply of equipment.[5]

Vacancies and service conditions

As of January 2019, 11% of sanctioned posts were vacant in the CAPFs.[6] The table below shows the percentage of vacancies for seven CAPFs as of January 2019.

Table 3: Vacancies in CAPFs (as of January 2019)

CAPFs	Sanctioned Strength	Actual Strength	% of vacancies
AR	66,408	61,976	7%
BSF	2,63,905	2,42,440	8%
CISF	1,56,013	1,43,216	8%
CRPF	3,24,093	3,01,830	7%
ITBP	89,438	82,861	7%
NSG	10,844	10,358	4%
SSB	99,221	81,119	18%
Total	**2,65,911**	**2,36,314**	**11%**

Sources: "Data of Police Organizations", Bureau of Police Research and Development, 2019; PRS.
Note: CRPF- Central Reserve Police Force; BSF- Border Security Force; CISF-Central Industrial Security Force; AR-Assam Rifles; ITBP-Indo Tibetan Border Police; SSB-Sashastra Seema Bal; NSG-National Security Guard.

The Standing Committee on Home Affairs (2018) has observed that there is lack of foresight, planning, and estimation of future vacancies.[7] It recommended that the Ministry of Home Affairs could explore the possibility of proactively identifying vacancies and reporting the same to recruitment agencies.

Further, there has been stagnation in promotion among personnel of the CAPFs. For example, in the ITBP, a constable gets promoted to head constable in 12-13 years, against the required period of five years.[7] In the case of CISF, the same promotion takes 22 years.[8] In this context, the Standing Committee recommended that cadre review of the CAPFs must be expedited to ensure that promotions take place in a timely manner.[8]

Mobility in border areas

Mobility of border guarding forces has been identified as an issue affecting their operational efficiency.[7] The Standing Committee on Home Affairs (2018) noted that there was a requirement of construction of 4,210 km of roads, in areas where the BSF is deployed (the Indo-Pakistan and Indo-Bangladesh border).[7] Similarly, it noted personnel of the Assam Rifles are located in remote areas, and therefore require all-weather roads to improve their working conditions.[7]

Table 4 shows the expenditure towards border infrastructure and management. This includes allocations for maintenance of border works, border check posts and out posts, and capital outlays for various items including barbed wire fencing, construction of roads, and Hi-tech surveillance on Indo-Bangladesh and Indo-Pakistan borders.

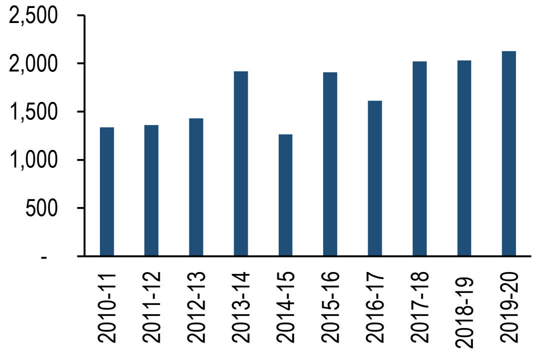
Table 4: Expenditure related to border infrastructure and management (in Rs crore)

	2018-19 Actuals	2019-20 Revised	2020-21 Budget	% Change BE 20-21/ RE 19-20
Maintenance and Border Check post	224	247	208	-16%
Capital Outlay	1,806	1,881	1,788	-5%
Total	**2,030**	**2,128**	**1,997**	**-6%**

Sources: Union Budget 2020-21; PRS.

For 2020-21, Rs 1,997 crore has been budgeted for border infrastructure and management. This is a decrease of 6% from the 2019-20 revised estimates (Rs 2,128 crore). Figure 6 shows the expenditure on border infrastructure and management between 2010 and 2020. The expenditure has increased at an annual average growth rate of 4% during this period.

Figure 6: Expenditure on border infrastructure and management (in Rs crore) (2010-20)



Sources: Union Budgets 2010-20; PRS.
Note: Revised Estimates used for 2019-20 and Budget Estimates used for 2020-21. Figures for all other years are actuals.

The Border Roads Organisation (BRO) is responsible for construction of roads in border areas. The Standing Committee on Defence (2019) observed that since 2007-08, the targets set for various construction works by BRO had not been achieved.[9] For example, while 4,189 meters of major bridges were planned in 2016-17, only 40% of this target was constructed (1,657 meters). However, despite the failure to achieve these targets, higher targets were set in subsequent years, which led to further underperformance.

Issues relating to land acquisition have resulted in considerable delay in construction of border roads, bridges, and tunnels.[9] These include delays in joint survey for land acquisition, non-disbursement of land acquisition payment, and demands for additional compensation. The Standing Committee on Defence (2019) observed that 593 land compensation cases were pending in various courts.[9] Further, delays in obtaining forest clearances have also affected projects in border areas. According to the Standing Committee on Defence (2019), 29 cases for forest approvals were pending with the state governments.[9]

To resolve issues related to land acquisition and forest clearances, Empowered Committees (ECs) have been constituted for coordination between BRO and state governments.[9] However, in states where large number of land acquisition cases were pending, such as Jammu and Kashmir, and Arunachal Pradesh, the ECs have met only once between 2015 and 2018.[9]

Delhi Police

An amount of Rs 8,242 crore has been allocated to the Delhi Police in the 2020-21 budget. This is 2% higher than the revised estimates for 2019-20.

Quality of investigation

In 2015 and 2016, 73% of cases reported to Delhi Police remained unsolved. In 2017, 65% cases remained unsolved.[10] The number of solved and unsolved cases of the Delhi Police between 2015-2018 is given below.

Table 5: Number of cases reported to and unsolved by the Delhi Police (2015-2018)

Year	Cases reported	Cases solved	% of cases unsolved
2015	1,91,377	52,091	73%
2016	2,09,519	55,957	73%
2017	2,33,580	81,219	65%
2018 (up to July 15, 2018)	1,25,668	37,390	70%

Sources: Starred Question No. 227, Rajya Sabha, Ministry of Home Affairs, August 8, 2018; PRS.

The Standing Committee on Home Affairs in its report on the functioning of Delhi Police (2014), had recommended that investigation should be separated from law and order duties.[11] Note that the Delhi Police has created specialised cells for economic offences, cyber-crimes and crimes against women.[12] Further, the Committee observed that since investigation requires legal expertise, the training module of Delhi Police must include advanced courses on law and jurisprudence.[11]

Vacancies

Similar to the Central Armed Police Forces, vacancies have been reported in the Delhi Police. As of January 2019, 11% of the total sanctioned posts (91,963) were vacant.[13] The vacancies in Delhi Police between 2015-19 are given in Table 6.

Table 6: Vacancies in Delhi Police (2015-19)

Year	Sanctioned strength	Actual strength	% of vacancies
2015	82,242	77,083	**6%**
2016	82,224	76,348	**7%**
2017	84,417	82,979	**2%**
2018	86,531	74,712	**14%**
2019	91,963	82,190	**11%**

Sources: "Data of Police Organizations", Bureau of Police Research and Development, 2014-18; PRS.

The Standing Committee on Home Affairs (2014) stated that steps should be taken to assess the actual requirement of police strength to improve the police-population ratio.[11] It recommended that the Delhi Police may take the assistance of the Bureau of Police Research and Development to improve the operational efficiency of the organisation.

Intelligence Bureau

The Intelligence Bureau (IB) is responsible for collection of intelligence within India, and is the primary agency for counter-intelligence. An amount of Rs 2,575 crore has been allocated to the IB in 2020-21, which is 5% higher than the revised estimates of 2019-20 (Rs 2,446 crore). Note that in 2018-19, expenditure on the IB was Rs 2,109 crore.

Multi Agency Centre

The government set up a Group of Ministers (GoM) in the year 2000, to comprehensively review the national security apparatus.[14,15] The GoM recommended that the Ministry of Home Affairs should put in place arrangements for intelligence sharing, in which the IB would play the lead role, along with representatives of the state and central police forces.[14] Based on these recommendations, the Multi Agency Centre was set up in the IB, for collating and sharing intelligence with all other security agencies.[14,16] Further, Subsidiary Multi Agency Centres have been set up at the state-level to ensure better coordination between the different intelligence agencies.[14]

The Standing Committee on Home Affairs observed in 2017 that state agencies have made lower contribution in the overall inputs received by the Multi Agency Centre.[14] It recommended that the Ministry should hold consultations with states to find out the reasons for this low level of contribution. Further, the Committee recommended that there should be a mechanism to perform validity checks on information obtained from other agencies, before it is shared by the Multi Agency Centre.[14]

Modernisation of Police Forces

For 2020-21, the central government has made allocations towards four items related to modernisation of police force. These are: (i) Modernisation of State Police Forces Scheme; (ii) the Crime and Criminal Tracking Network and Systems (CCTNS) scheme; (iii) Security related expenditure (SRE) scheme; and (iv) Special Infrastructure scheme (SIS) for Left Wing Areas. A total of Rs 3,162 crore has been allocated for modernisation of police forces in 2020-21, which is 24% lower than the revised estimates for 2019-20.

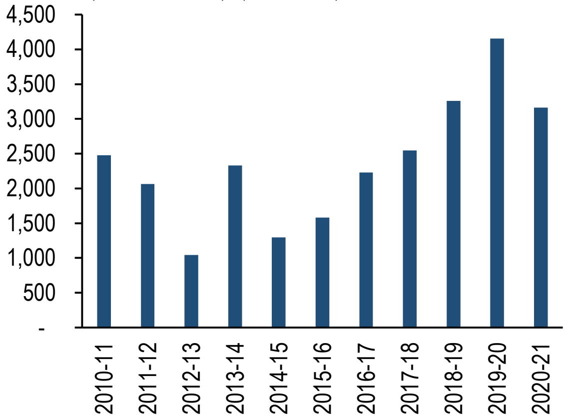
Table 7: Expenditure related to modernisation of police (in Rs crore)

	2018-19 Actuals	2019-20 Revised	2020-21 Budget	% Change BE 20-21/ RE 19-20
SRE and SIS for LWE areas	2,346	3,215	2,377	-26%
Modernisation of State Police Forces and CCTNS	914	939	784	-16%
Total	**3,260**	**4,155**	**3,162**	**-24%**

Sources: Union Budget 2020-21; PRS.
BE – Budget Estimates, RE – Revised Estimates.

Figure 7 shows the expenditure on modernisation of police forces between 2010-20. The expenditure has increased at an average annual rate of 2.5% during this period.

Figure 7: Expenditure on modernisation of police scheme (in Rs crore) (2010-20)



Sources: Union Budgets 2010-20; PRS.
Notes: Revised Estimates used for 2019-20 and Budget Estimates used for 2020-21. Actuals used for all other years.

Shortage of infrastructure

Funds from the modernisation scheme are utilised for improving police infrastructure through construction of police stations, and provision of modern weaponry, surveillance, and communication equipment. Upgradation of training infrastructure, police housing, and computerisation are also important objectives under the scheme.

The Comptroller and Auditor General (CAG) has observed lapses in the implementation of the modernisation scheme in various states.[17] An audit of Karnataka for the period 2012-13 to 2016-17, found shortage of weapons ranging between 37% and 72% for various types of arms.[17] The audit also found that, as of March 2017, all communication sets available with the Karnataka police were old and out of date.[17]

In the case of Maharashtra, an audit was carried out for the period 2011-12 to 2016-17.[18] The CAG found a shortage of 45% for modern weaponry in the state. Further, only 8% of the planned construction work under the scheme (including police stations), was completed between 2011-16.[18]

The Standing Committee on Home Affairs noted in 2017 that funds meant for mobility, communication, weapons, and equipment have been misused by states for procuring vehicles.[19] This misuse was happening despite releasing funds after obtaining utilisation certificates from states. Note that as per the revised guidelines for the modernisation scheme, states cannot use more than 25% of funds for the acquisition of vehicles.[20]

Disaster management

The Ministry of Home Affairs is the nodal ministry for handling all disasters other than drought, which is handled by the Ministry of Agriculture.[21] Disaster management includes capacity building, mitigation, and response to natural calamities and man-made disasters. Table 8 shows the allocation for various items related to disaster management.

Table 8: Expenditure on major items related to disaster management (in Rs crore)

	2018-19 Actuals	2019-20 Revised	2020-21 Budget	% change BE 20-21 /RE 19-20
National Disaster Response Force	874	983	1,019	4%
Disaster management infrastructure	199	147	72	-51%
National Cyclone Risk Mitigation Project	303	283	296	5%
Other schemes	108	125	113	-9%
Total	**1,484**	**1,539**	**1,500**	**-3%**

Sources: Union Budget 2020-21; PRS.
Note: BE – Budget Estimates, RE – Revised Estimates.

National Cyclone Risk Mitigation Project

The National Cyclone Risk Mitigation Project (NCRMP) was launched by the Ministry of Home Affairs with the aim of minimising vulnerability in states and Union Territories that are prone to cyclone hazards. Key objectives of the project include: (i) improving early warning dissemination systems, and (ii) construction and maintenance of cyclone shelters.

For 2020-21, a budgetary allocation of Rs 296 crore has been made to this project. This is a 5% increase from the revised estimates for 2019-20, which was Rs 283 crore.

In its report on the impact of Cyclone Ockhi (2018), the Standing Committee on Home Affairs noted that forecasting the rapid intensification of cyclones (as in the case of cyclone Ockhi), is an area of concern. It stated that the rapid intensification of cyclones is no longer a rare phenomenon due to global warming, and recommended that the existing capacity for advanced cyclone warning needs to be bolstered.[25]

National Disaster Response Force

The National Disaster Response Force is a specialised force that is responsible for disaster response and relief. For 2020-21, the budget estimate for the National Disaster Relief Force is Rs 1,019 crore, which is 4% higher than the revised estimates of 2019-20.

Deployment of NDRF

The Standing Committee on Home Affairs (2018) observed that during Cyclone Ockhi, the deployment of the National Disaster Response Force was not optimal.[25] It stated that seven battalions were pre-positioned in Gujarat, where the impact of the cyclone was minimal, while four were pre-positioned in Kerala, where damage was on a larger scale. The Committee noted that there was a standard operating procedure for deployment of National Disaster Response Force during a disaster, according to which, states can requisition for forces. However, states may be unable to make optimal assessments of the requirements which could lead to competing demands for mobilisation of forces in disaster-stricken areas. The Committee therefore recommended that the National Disaster Management Authority make an independent assessment of the number of battalions required to be deployed. This would ensure rational assessment of needs and optimal prepositioning of National Disaster Response Force.[25]

National Disaster Response Fund

The Disaster Management Act, 2005, mandates the creation of a National Disaster Response Fund and State Disaster Response Funds. Relief assistance is provided to states from the National Disaster Response Fund in case of severe natural calamities, where the State Disaster Response Fund is insufficient to cover the required expenditure.[22] Allocations to the National Disaster Response Fund are made by the Ministry of Finance, though it is administratively controlled by the Ministry of Home Affairs.[22] For the year 2020-21, a budgetary allocation of Rs 2,930 crore has been made to the fund, which is a 5% increase from the revised estimates of 2019-20 (Rs 2,790 crore).

The National Disaster Response Fund is financed through the National Calamity Contingency Duty (NCCD) imposed on specified goods under central excise and customs.[23] The Standing Committee on Finance (2019) noted that with the introduction of GST, the scope of NCCD is shrinking.[23] The revenue collected from NCCD has decreased significantly by Rs 3,190 crore between 2015-16 and 2018-19. The Committee stated that the GST Council and Ministry of Finance should consider augmenting this fund.

Damage assessment

In order to receive assistance from the NDRF, state governments must submit a memorandum indicating the damage and requirement of funds.[24] On receipt of the memorandum, an Inter-Ministerial Central Team (IMCT) is constituted which will submit a report after an on-the-spot assessment of the damage. Thereafter, a High-Level Committee approves the amount of relief to be released from the NDRF.

The Standing Committee on Home Affairs (2018) noted that there was significant difference between funds sought by state governments and amounts approved by the High-Level Committee.[25] In most cases the shortfall was more than 70%, and in some cases more than 95%. According to the Committee, a reason for this shortfall could be that by the time the IMCT reaches the disaster-affected area, the signs of disaster are on the verge of diminishing. Therefore, it recommended that the IMCT should make a preliminary visit to the disaster affected areas, within one week of the disaster. Further, a joint preliminary damage assessment should be done with the state governments concerned.[25]

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[2] Jammu and Kashmir Reorganisation Act, 2019, https://prsindia.org/sites/default/files/bill_files/Jammu%20and%20Kashmir%20Reorganisation%20Act%2C%202019.pdf

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[8] "215th Report: Working Conditions in Non-Border Guarding Central Armed Police Forces (Central Industrial Security Force, Central Reserve Police Force, and National Security Guard)", Department-Related Standing Committee on Home Affairs, Rajya Sabha, December 12, 2018, https://rajyasabha.nic.in/rsnew/Committee_site/Committee_File/ReportFile/15/107/215_2018_12_15.pdf.

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[11] "176th Report: The Functioning of Delhi Police", Department-Related Parliamentary Standing Committee on Home Affairs, Rajya Sabha, February 19, 2014, https://rajyasabha.nic.in/rsnew/Committee_site/Committee_File/ReportFile/15/15/176_2016_6_17.pdf.

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[13] Unstarred Question No. 1633, Lok Sabha, Ministry of Home Affairs, March 6, 2018, http://164.100.24.220/loksabhaquestions/annex/14/AU1633.pdf.

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Annexure

Table 9: Allocation of the Ministry of Home Affairs (in Rs crore)

Major Head	2019-20 Budget	2019-20 Revised	2020-21 Budget	% Change BE 2020-21/ BE 2019-20	% Change BE 2020-21/ RE 2019-20
Police	98,202	1,03,202	1,05,244	7%	2.0%
Miscellaneous*	4,896	19,955	8,002	63%	-60%
UTs without legislature	12,385	12,388	19,288	56%	56%
Grants & Loans to Jammu and Kashmir, Delhi & Puducherry	2,713	2,638	33,576	1138%	1172.8%
Cabinet	829	925	1,140	38%	23%
Total	**1,19,025**	**1,39,108**	**1,67,250**	**41%**	**20%**

Sources: Union Budget 2020-21; PRS.
Note: *Includes expenditure on disaster management, social security, rehabilitation of refugees, migrants, census, civil defence, secretariat.
BE – Budget Estimates, RE – Revised Estimates.

Table 10: Expenditure of the Central Armed Police Forces (in Rs crore)

	2012-13	2013-14	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
CRPF	9,983	11,124	12,747	14,327	16,804	21,974	25,647	26,259
BSF	9,095	10,294	11,687	12,996	14,909	18,652	20,388	20,952
CISF	3,798	4,301	4,955	5,662	6,563	9,115	9,990	10,180
ITBP	2,506	3,051	3,399	3,773	4,641	5,699	6,627	6,522
AR	2,901	3,276	3,450	3,848	4,724	5,694	5,780	6,062
SSB	2,179	2,719	3,148	3,418	4,045	5,420	6,533	6,600
NSG	500	498	527	569	697	1,007	1,091	1,190
Total	**30,962**	**35,263**	**39,913**	**44,591**	**52,383**	**67,560**	**76,055**	**77,765**

Sources: Union Budget 2014-20; PRS.
Notes: Actuals used for all years except 2019-20 and 2020-21. Revised Estimates used for 2018-19 and Budgeted Estimates used for 2020-21; CRPF: Central Reserve Police Force; BSF: Border Security Force; CISF: Central Industrial Security Force; AR: Assam Rifles; ITBP: Indo Tibetan Police Force; SSB: Sashastra Seema Bal; NSG: National Security Guard.

Table 11: Vacancies in CAPFs (2012-19)

Year	Sanctioned strength (in lakhs)	Actual strength (in lakhs)	% of vacancies
2012	8.9	7.6	**14%**
2013	9.1	8.3	**9%**
2014	9.3	8.7	**6%**
2015	9.5	8.9	**7%**
2016	9.7	9.0	**7%**
2017	11.5	9.9	**14%**
2018	10.8	10	**7%**
2019	11	10	**9%**

Sources: "Data of Police Organizations", Bureau of Police Research and Development, 2012-19; PRS.
Note: Figures for each year are as of January 1 of that year.

Table 12: State-wise releases from NDRF in 2019-20 (in Rs crore)

State	Releases from NDRF
Andhra Pradesh	571
Bihar	400
Himachal Pradesh	518
Karnataka	3,197
Maharashtra	3,431
Odisha	3,114
Rajasthan	1,165
Total	**14,108**

Sources: Allocation and Release of Funds from SDRF/ NDRF during 2019-2020, Disaster Management Division, Ministry of Home Affairs; PRS.
Notes: Data as of February 3, 2020.

Demand for Grants : Agriculture and Farmer's Welfare

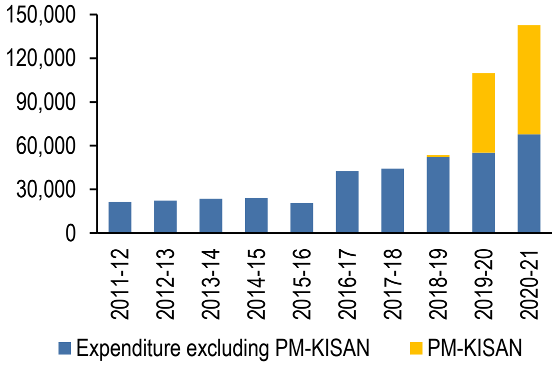
The Ministry of Agriculture and Farmers' Welfare has two Departments: (i) Agriculture, Cooperation and Farmers' Welfare, which implements policies and programmes related to crop husbandry and farmers' welfare, and manages agriculture inputs, and (ii) Agricultural Research and Education, which coordinates and promotes agricultural research and education in the country. This note examines the allocations to the two Departments within the Ministry and their expenditure, and discusses issues in the agriculture sector.

Overview of Finances

The Ministry has been allocated Rs 1,42,762 crore in 2020-21.[1] Allocation to the Ministry accounts for 5% of the central government's budget. This allocation is 30% higher than the revised estimate for 2019-20, primarily due to a higher allocation of Rs 75,000 crore to PM-KISAN (income support scheme for farmers) for 2020-21.[2] For 2019-20 as well, the scheme was allocated Rs 75,000 crore at the budgeted stage, which has now been revised down to an estimate of Rs 54,370 crore.

PM-KISAN accounts for 53% of the allocation to the Ministry in 2020-21. Other expenditure items of the Ministry, including interest subsidy for short-term credit to farmers and Pradhan Mantri Fasal Bima Yojana, have been allocated Rs 67,762 crore in 2020-21, a 22% increase over the previous year.

Figure 1: Expenditure of the Ministry during the 2011-21 period (in Rs crore)



Note: Figures for 2019-20 are revised estimates. Figures for 2020-21 are budget estimates.
Sources: Expenditure Budget, Union Budgets (2011-21); PRS.

Note that the Ministry's expenditure saw a major increase in 2016-17 due to the Interest Subsidy Scheme (for providing interest subsidy on short-term loans to farmers). The scheme, which is being accounted under the Ministry of Agriculture since 2016-17, was under the Ministry of Finance earlier.

Policy proposals in the Budget Speech

In her budget speech, the Finance Minister made the following proposals regarding agriculture:

- The government will encourage states which undertake the implementation of model laws relating to land leasing, agricultural produce and livestock marketing, and contract farming.
- The government will provide Viability Gap Funding for setting up warehouses at the block/ taluk level. A Village Storage scheme has been proposed to be run by Self-Help Groups.
- 'Kisan Rail' with refrigerated coaches will be set up to build a seamless national cold supply chain for perishables. 'Krishi Udaan' will be launched on international and national routes.

Departments: The Department of Agriculture, Cooperation and Farmers' Welfare has received 94% of the allocation to the Ministry in 2020-21, while 6% has been allocated to the Department of Agricultural Research and Education (Table 1).

Table 1: Allocations to the Ministry (in Rs crore)

Department	2018-19 Actuals	2019-20 Revised	2020-21 Budgeted	% change in 2020-21 over 2019-20
Agriculture, Cooperation and Farmers' Welfare	46,076	1,01,904	1,34,400	31.9%
Agricultural Research and Education	7,544	7,846	8,363	6.6%
Total	**53,620**	**1,09,750**	**1,42,762**	**30.1%**

Sources: Expenditure Budget, Union Budget 2020-21; PRS.

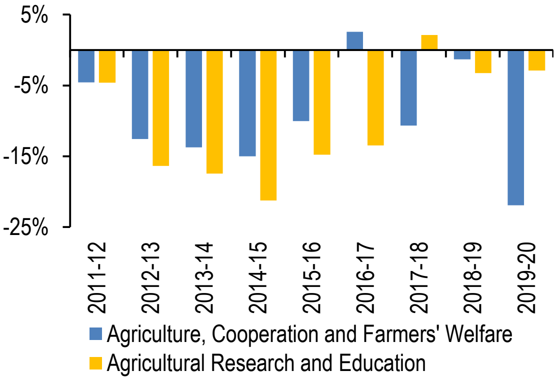
The Department of Agriculture, Cooperation and Farmers' Welfare has been allocated Rs 1,34,400 crore in 2020-21, a 32% increase over the revised estimate of 2019-20. More than 78% of the Ministry's budget is proposed to be spent on three schemes under this Department: PM-KISAN (53%), Interest Subsidy Scheme (15%), and Pradhan Mantri Fasal Bima Yojana (11%).

In 2020-21, Agricultural Research and Education has been allocated Rs 8,363 crore, a 7% increase over the revised estimate of 2019-20.[3] The allocation to Indian Council of Agricultural Research (ICAR) accounts for 61% of the Department's allocation in 2020-21. **Table** 6 and **Table 7** in the Annexure show the major heads of allocation in the two Departments.

Budgeted vs actual expenditure: Expenditure by both the Departments has been lower than their budget allocations in most years during the period 2011-20 (**Figure 2**).

In 2019-20, the Ministry has estimated a 21% cut in expenditure as compared to the budget allocation, primarily due to Rs 20,630 crore underspending in PM-KISAN. The Standing Committee on Agriculture (2015-16) observed that a slow pace of utilisation of funds in the first half of the financial year results in a cut in allocation for the rest of the year, which leads to underspending.[4]

Figure 2: Deviation from budgeted expenditure



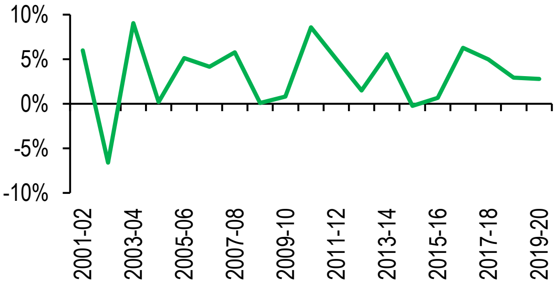
Note: Figures for 2019-20 are revised estimates.
Sources: Expenditure Budget, Union Budgets (2011-20); PRS.

Issues in the sector

Growth of the agriculture sector

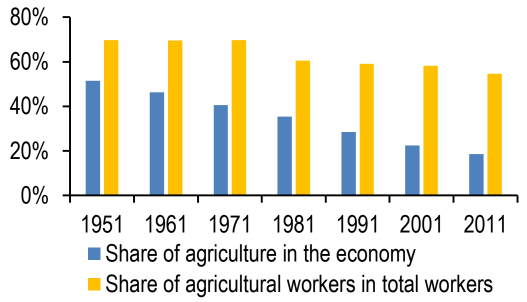
Growth of the sector comprising of agriculture and allied activities has been volatile over the years (**Figure 3**). In 2019-20, the sector is estimated to grow at 2.8%, as compared to 2.9% in 2018-19.

Figure 3: Growth of agriculture sector (in %)



Sources: Central Statistics Office (CSO), MOSPI; PRS.

Figure 4: Share of agriculture in the economy and in the total number of workers (in %)



Sources: Agricultural Statistics at a Glance 2017, Ministry of Agriculture and Farmers' Welfare; CSO, MOSPI; PRS.

The contribution of the agriculture sector in the economy has significantly decreased from 51% in 1951 to 19% in 2011. As per the Economic Survey 2019-20, this has declined to 16.5% in 2019-20.[5]

Meanwhile, the share of workers who are dependent on agriculture has decreased at a lower rate from 70% in 1951 to 55% in 2011. This implies that the average income of these workers grew at a slower pace than that of workers in other sectors. The Committee on Doubling Farmers' Income (Chair: Mr. Ashok Dalwai, 2017) observed that one way of significantly improving income of farmers is by shifting the agricultural workforce to more productive employment in non-farm sectors.[6]

Income support to farmers

The PM-KISAN scheme was launched in February 2019 to provide income support of Rs 6,000 per year (disbursed in three instalments of Rs 2,000) to farmer families with the aim of supplementing their financial needs in procuring inputs for appropriate crop health and yields.[7]

Earlier, only small and marginal landholder farmer families, i.e. families with total cultivable landholding of up to two hectares, were eligible for the scheme. In May 2019, the Union Cabinet approved extension of the scheme to all farmer families irrespective of their size of landholdings. With this increase in coverage, expenditure on the scheme was estimated to increase from Rs 75,000 crore to Rs 87,218 crore in 2019-20.[8] However, allocation to the scheme for 2019-20 has been cut down from Rs 75,000 crore at the budgeted stage to Rs 54,370 crore at the revised stage. Till December 13, 2019, Rs 29,877 crore was released under the scheme for the year 2019-20.[9]

Further, in 2018-19, of the estimated Rs 20,000 crore expenditure under the scheme, only Rs 1,241 crore (6.2% of the budget allocation) was spent.

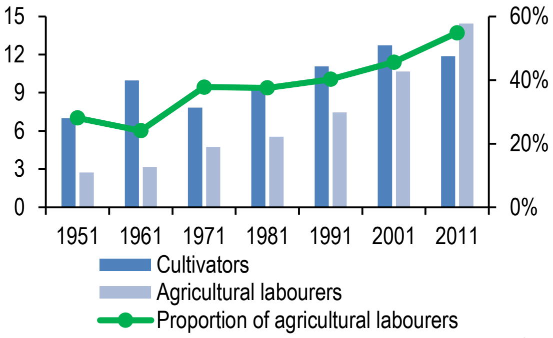
Implementation: Initially, the scheme was expected to cover 12.5 crore beneficiaries.[8] With the increase in coverage, the revised number of beneficiaries are estimated to be 14.5 crore.[8] As on February 11, 2020, 8.9 crore beneficiaries have been covered under the scheme.[10] However, the number of beneficiaries reached under different instalments vary. The number of beneficiaries under the four instalments disbursed so far is as follows: (i) 8.5 crore (December 2018-March 2019), (ii) 7.6 crore (April-July 2019), (iii) 6.2 crore (August-November 2019), and (iv) 3.1 crore (December 2019-March 2020). State-wise details are given in **Table 9** in the Annexure.

The Standing Committee on Agriculture (2019-20) noted that the issues being faced in the implementation of the scheme are: (i) non-availability of proper land records in many states, (ii) slow pace of identification of beneficiaries and uploading of data by states, (iii) issues with matching of demographic data between PM-KISAN database and Aadhaar data, (iv) incorrect bank accounts, and (v) poor internet connectivity in rural areas hampering the uploading of data.[11] The

Committee recommended that the government enhance coordination with states where enrolment is slow and take corrective steps.

Land as an eligibility criterion: Farmer families which own cultivable landholding are eligible for receiving income support under the scheme. The beneficiaries are identified by states based on their land records. The scheme does not cover landless agricultural labourers who form 55% of the agricultural workers in the country (**Figure 5**).[12] Agricultural workers include cultivators and labourers working in the agriculture sector. The share of landless agricultural labourers in total agricultural workers has increased over the years from 28% in 1951 to 55% in 2011. The share of cultivators has reduced from 72% to 45% during the same period.

Figure 5: Breakup of agricultural workers into cultivators and agricultural labourers (in crore)



Sources: Agricultural Statistics at a Glance 2017, Ministry of Agriculture and Farmers' Welfare; PRS.

Agricultural credit

Agriculture credit is provided to farmers at a subsidised cost through the Interest Subsidy scheme.[13] Under the scheme, interest subsidy of two percent is provided to farmers on their short-term crop loans of up to three lakh rupees. An additional interest subsidy of three percent is provided to farmers repaying their loan on time (within a year).

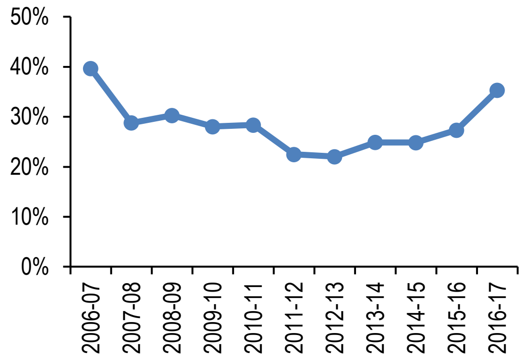
In 2020-21, the scheme has been allocated Rs 21,175 crore, an 18.5% increase over the 2019-20 revised estimates.

Inadequate allocation for unsettled claims: The Standing Committee on Agriculture (2017) noted that the budget allocation to the scheme has been inadequate.[42] It observed that, in 2018-19, against an estimated requirement of Rs 41,748 crore for unsettled claims (including past claims), Rs 15,000 crore (36%) was allocated. Of this, Rs 13,046 crore was spent hence, leaving Rs 28,702 crore as unsettled claims.

Short-term vs long-term loans: In 2015, the Committee on Medium-term Path on Financial Inclusion under the Reserve Bank of India (RBI) observed that the Interest Subsidy Scheme for short-term crop loans discriminates against long-term loans.[14] Short-term crop loans are used for pre-harvest activities such as weeding, harvesting, sorting and transporting. Long-term loans are taken to invest in agricultural machinery and equipment, or irrigation. The Committee observed that the scheme does not incentivise long-term capital formation in agriculture, which is essential to boost productivity in the sector.

The share of long-term loans in total agricultural credit declined between 2006-07 (40%) and 2012-13 (22%) (**Figure 6**).[15] However, the share has increased to 35% in 2016-17. A low share of long-term loans in agricultural credit implies that farmers are taking loans for recurring expenditures rather than to fund long-term investments.

Figure 6: Share of long-term credit (2006-17)



Sources: Committee on Doubling Farmers' Income (2017), Ministry of Agriculture and Farmers' Welfare; PRS.

An Internal Working Group under the RBI (2015) observed that the Interest Subsidy scheme has distorted the agricultural credit system.[16] Further, it stated that banks granted loans under the scheme without establishing that the loans are for agriculture, and claiming interest subsidy as well as priority sector benefit.

Land ownership: The RBI Committee (2015) observed that the owner of the land is often not the cultivator even in the case of small and marginal holdings. For example, a landowner may get the benefit of subsidised credit at times, and may be the moneylender to his cultivator.14 The Committee recommended that agricultural credit must flow to the actual cultivator for which substantial reform is necessary.14 Further, it stated that the subsidised credit increases the probability of misuse. The Committee on Comprehensive Financial Services for Small Businesses and Low-Income Households (2016) also recommended the transfer of benefits to farmers directly, instead of subsidy and waivers.[17]

Considering that access to agricultural credit is linked to formal land titles, the RBI Committee (2015) recommended that credit eligibility certificates, which would act as tenancy or lease certificates, should be issued to tenant farmers.[14] These certificates would enable landless tenant cultivators to obtain agricultural credit.

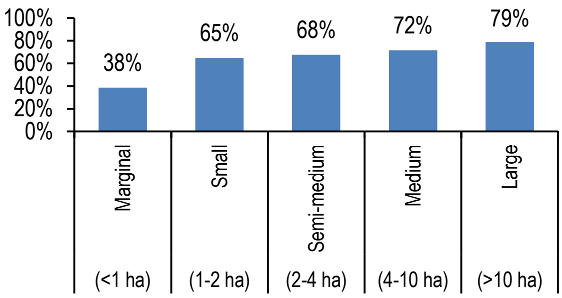
An Internal Working Group of the RBI constituted to review Agricultural Credit (2019) noted that the absence of a proper land leasing framework and a lack of land records inhibited access to institutional credit. It recommended that the centre should encourage the states to digitise and update land records in a timebound manner.[19]

Small and marginal farmers: Farmers with landholdings of less than a hectare primarily borrow from informal sources of credit such as moneylenders, whereas those with landholdings of two or more hectares primarily borrow from banks (**Figure 7**).[14] Informal sources of credit are typically offered at higher rates of interests, and may not have proper documentation.

Note that 68% of the agricultural landholdings in the country belong to the marginal (less than one hectare) category.[18] Another 18% belong to the small (between one to two hectare) category. Further, the share of the marginal category in total agricultural landholdings has been increasing over the years, from 51% in 1970-71 to 68% in 2015-16.

The Internal Working Group of the RBI to Review Agricultural Credit (2019) observed that only 41% of small and marginal farmers had been covered by banks. It recommended that bank lending targets to small and marginal farmers be revised upwards from the existing 8% to 10%.[19]

Figure 7: Share of borrowings from institutional sources across various landholders (2012-13)



Sources: Committee on Medium-term Path on Financial Inclusion (2015), Reserve Bank of India; PRS.

Crop insurance

Crop insurance is provided to farmers under the Pradhan Mantri Fasal Bima Yojana (PMFBY).[20] The scheme covers all farmers, including tenant farmers and sharecroppers, who are growing notified crops in notified areas. In 2020-21, the scheme has been allocated Rs 15,695 crore, a 15% increase over the 2019-20 revised estimate. Issues related to crop insurance raised over the years are:

Awareness about crop insurance: The Economic Survey 2018-19 noted that the share of agricultural households insuring their crops was low.[21] Less than 5% of the agricultural households cultivating major crops, such as rice and wheat, insured crops. Lack of awareness about crop insurance among farmers was the major factor for not insuring their crops. Further, lack of awareness about availability of crop insurance programmes was another reason.

The Standing Committee on Finance (2016) recommended that awareness should be created about what crops should be grown based on factors such as soil quality and incidence of rainfall.[22]

Coverage of farmers: In 2018-19, 5.18 crore farmers were insured under the scheme.[23] Note that PMFBY is mandatory for farmers with loans and optional for those without loans.20 Majority (73%) of the farmers had to compulsorily enrol under the scheme, whereas 27% were non-loanee farmers.

The Comptroller and Auditor General of India (2017) observed a low coverage of farmers without loans under the previous crop insurance schemes. It recommended the Ministry to ensure coverage of more farmers including those without loans.[24]

Assessment of losses: The Standing Committee on Agriculture (2017) observed that the state governments are not readily accepting and adopting the use of technology for assessing yield loss. It also observed that crop cutting experiments are not being carried out diligently.[42] The Committee recommended that the Ministry should pursue state governments to adopt technology aids and satellite imagery for crop cutting experiments.

Timely settlement of claims: Claims under the insurance scheme must be settled within two months from the crop harvest. The Standing Committee on Agriculture (2017) recommended that an institutional mechanism be put in place to monitor faster settlement of pending claims.[42]

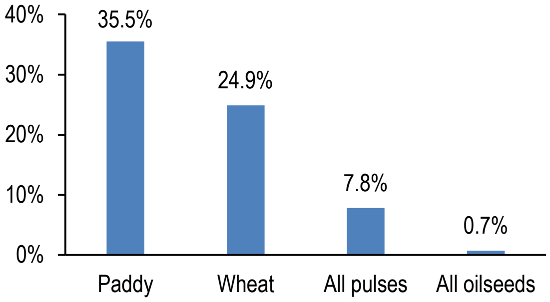
The Ministry revised the operational guidelines of the scheme in September 2018 (effective from the Rabi season 2019-20).[25] The revised operational guidelines specify penalties for state governments and insurance companies in case of a delay in settlement of claims. Insurance companies are required to pay farmers 12% interest on the claim amount in case of a delay beyond two months. Further, states are required to pay 12% interest for a delay in release of their share of premium.

Minimum Support Prices (MSPs)

MSP is the price at which the government agencies purchase farmers' produce of certain notified crops.

The Finance Minister in the 2019-20 budget speech announced that MSPs for certain Rabi and Kharif crops will be provided at least at one and a half times the production cost.[26] This production cost, A2+FL, includes costs of inputs such as seeds and fertilisers, and implied cost of family labour. While MSPs are announced for 23 crops every year, public procurement is limited to a few such as paddy, wheat, and, to a limited extent, pulses.[27] The procurement is also largely from a few states. Three states (Haryana, Madhya Pradesh, and Punjab) which produce 45% of the wheat in the country account for 81% of its procurement.[28] For paddy, six states (Andhra Pradesh, Chhattisgarh, Haryana, Odisha, Punjab, and Telangana) with 38% of production have 82% share in procurement.[28]

Figure 8: Percentage of crop production that was procured at MSP in 2016-17



Sources: Committee on Doubling Farmers' Income (2017), Ministry of Agriculture and Farmers' Welfare; PRS.

Other issues with the implementation of MSPs include: (i) low awareness among farmers before the sowing season (according to NITI Aayog, 62% of the farmers were informed of MSPs after the sowing season), (ii) long distances to the procurement centres, (iii) increasing cost of transportation for farmers, and (iv) inadequate storage capacity.[29] The NITI Aayog noted that the agricultural pricing policy needs to be reviewed to ensure that farmers are receiving remunerative prices for their produce. Farmers are often forced to engage in distress sales, i.e. selling below MSPs.

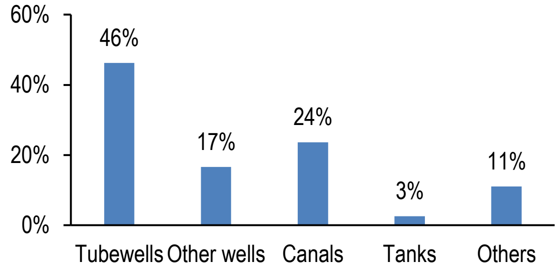
In September 2018, the Union Cabinet approved the PM-AASHA scheme for procurement of crops from farmers.[30] The scheme provides states with the option to opt for another procurement mechanism (price deficiency payment system). This mechanism does not involve any physical procurement of crops. Direct payment of the difference between the MSPs and the selling/modal prices of the crops will be made to pre-registered farmers in their bank accounts. Farmers who sell their crops in the notified market yards through a transparent auction process will be eligible.

Irrigation

As of 2014-15, 49% of the country's net sown area was under irrigation.[31] The remaining agricultural area in the country depends on rainfall. Major irrigation sources for agriculture include tubewells (46%) and other wells (17%), and canals (24%).[32]

Sources such as canals and tubewells use the flood irrigation technique, where water is allowed to flow in the field and seep into the soil.[33] This results in wastage of water since excess water seeps into the soil or flows off the surface without being utilised. It has been recommended that farmers move from flood irrigation to micro-irrigation (drip or sprinkler irrigation systems) to conserve water.[34]

Figure 9: Sources of irrigation (2014-15)



Sources: Land Use Statistics at a Glance (2014-15), Ministry of Agriculture and Farmers' Welfare; PRS.

The Pradhan Mantri Krishi Sinchai Yojana (PMKSY) was launched in 2015 to increase the coverage of the irrigated area.[35] The Ministry implements the 'Per Drop More Crop' component under the scheme to increase water efficiency through micro-irrigation and other interventions. In 2020-21, Rs 4,000 crore has been allocated for the scheme, a 97% increase over the revised estimates of 2019-20. During the 2013-20 period, 50.7 lakh hectares (ha) of the area has been covered under micro-irrigation (**Table 2**).[36]

Table 2: Area covered under micro-irrigation in lakh hectares under PMKSY

Year	Target	Achievement	In %
2013-14	6.6	4.3	65%
2014-15	5.7	4.2	74%
2015-16	5	5.7	114%
2016-17	8	8.4	105%
2017-18	12	10.5	88%
2018-19	16	11.6	73%
2019-20*	14	6	43%
Total	**67.3**	**50.7**	75%

Note: Data as of February 14, 2020.
Sources: Website of Pradhan Mantri Krishi Sinchai Yojana, as accessed on February 5, 2020; PRS.

Shortfall in funds: Allocation to the scheme has been increasing over the years, but it is revised down at later stages (**Table 3**). Allocation to the scheme in 2019-20 has been revised down by 42% from Rs 3,500 crore (BE) to Rs 2,032 crore (RE).

Table 3: Budgeted vs actual expenditure under PMKSY under the Ministry (in Rs crore)

Year	Budgeted	Actual	% shortfall
2015-16	1,800	1,556	14%
2016-17	2,340	1,991	15%
2017-18	3,400	2,819	17%
2018-19	4,000	2,918	27%
2019-20 (RE)	3,500	2,032	42%

Note: Figure for 2019-20 are Revised Estimates.
Sources: Expenditure Budget, Union Budgets (2015-20); PRS.

Soil health and fertilisers

While the Department of Fertilisers under the Ministry of Chemicals and Fertilisers is responsible for monitoring the production, distribution, and prices of fertilisers, the Department of Agriculture, Cooperation and Farmers' Welfare is responsible for the promotion of balanced use of fertilisers.[37] Balanced use refers to the use of a proper combination of various nutrients and other micro-nutrients. Three major nutrients are primarily used: Nitrogen (N), Phosphatic (P), and Potassic (K). The government subsidises fertilisers through: (i) subsidy for urea (containing N fertiliser), and (ii) nutrient-based subsidy for P and K fertilisers.

Rs 71,309 crore is allocated to the Department of Fertilisers for fertiliser subsidy in 2020-21, an 11% decrease (Rs 8,689 crore) over the 2019-20 revised estimate (**Table 4**).

Table 4: Fertiliser subsidy allocation (Rs crore)

Subsidy	2018-19 Actuals	2019-20 Revised	2020-21 Budgeted	% change in 2020-21 over 2019-20
Urea	46,514	53,629	47,805	-10.9%
Nutrient based	24,090	26,369	23,504	-10.9%
Fertiliser subsidy	**70,604**	**79,998**	**71,309**	**-10.9%**

Sources: Expenditure Budget, Union Budget 2020-21; PRS.

Prices of urea are controlled by the government, whereas the prices of P and K fertilisers are market-driven.[37] This has led to the lower prices of urea (N) over the years, whereas market prices of P and K fertilisers have remained higher. This is one of the reasons for imbalanced use of nutrients as urea is used more than other fertilisers.[37] While the recommended ratio of use of the N, P, and K fertilisers is 4:2:1, this ratio in India in 2016-17 was at 6.7:2.7:1.[38] Details of consumption of N, P, and K fertilisers are given in **Table 8** in the Annexure.

Overuse of fertilisers could lead to an imbalance of nutrients in the soil and deteriorate the soil quality. The Standing Committee on Agriculture (2015) observed that use of fertilisers in the country was not based on scientific analysis of soil due to near absence of soil testing facilities, low awareness, and over-reliance on urea.[38]

In order to provide farmers with information regarding the quality of their soil, the Soil Health Card scheme was launched in 2015. Under the Soil Health Card scheme, farmers are issued soil health cards, which contain information such as nutrient status of soil and recommended dose of nutrients to be provided to improve its fertility.

Rs 315 crore has been allocated for the National Project on Soil Health and Fertility in 2020-21, a 102% increase over the revised estimates of 2019-20. During the first cycle (2015-17) of the scheme, 10.74 crore soil health cards were provided.[39] During the year 2019-20, 12.4 lakh Soil Health Cards were distributed to farmers under Model Village Project.[40]

Rashtriya Krishi Vikas Yojana

The umbrella scheme was initiated in 2007 for ensuring holistic development of agriculture and allied sectors by allowing states to choose their own development activities as per district and state agriculture plans.[41]

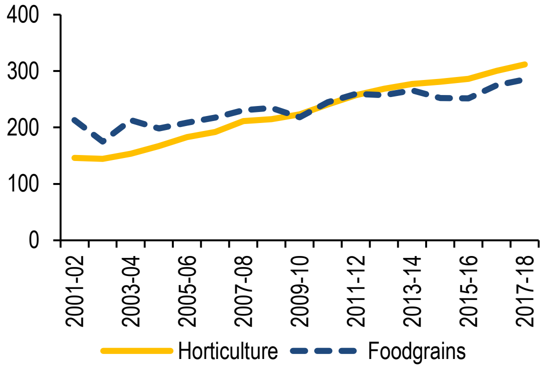
With the aim of making farming a remunerative economic activity, the Ministry provides financial assistance to states to spend on sub-schemes such as: (i) pre-harvest and post-harvest infrastructure, (ii) value addition using agribusiness models, and (iii) projects based on local and national priorities.

Rs 3,700 crore has been allocated to the scheme for 2020-21, a 34% increase over the 2019-20 revised estimate. The Standing Committee on Agriculture (2017) observed that allocations are not utilised optimally and timely. This is due to delay in the approval of projects and funds by states and consequent slow progress of implementation, causing a reduction in the release of funds.[42] For instance, in 2019-20, the scheme was allocated Rs 3,745 crore at the budgeted stage, which has been cut down by 26% to Rs 2,760 crore as per the revised estimates.

Horticulture

Between 2001-02 and 2018-19, the production of horticulture crops increased from 146 million tonnes to 312 million tonnes (**Figure 10**).[43] This implies that the horticulture production increased at an average rate of 4.9%. Production of food grains increased at a rate of 1.7% during the same period.

Figure 10: Comparison of horticulture and food grain production (million tonnes)



Sources: Horticulture Statistics at a Glance 2018, Ministry of Agriculture and Farmers' Welfare; PRS.

In 2018-19, fruits and vegetables contributed to 31% and 59% of the total horticultural production respectively. The National Mission on Horticulture seeks to promote horticulture by providing availability of quality inputs such as planting material, and post-harvest interventions such as reduction in losses and access to markets. In 2020-21, the scheme has been allocated Rs 2,300 crore, which is 45% more than the revised estimate of 2019-20.

Over the past few years, the actual expenditure under horticulture has been lower than the budgeted allocation, except in 2013-14 (**Table 5**).

Table 5: Expenditure under central sector schemes and centrally sponsored schemes on horticulture (in Rs crore)

Year	Budgeted	Actual	Budget vs Actual
2012-13	2,212	1,860	-15.9%
2013-14	2,556	2,857	11.8%
2014-15	2,263	1,959	-13.4%
2015-16	2,000	1,699	-15.1%
2016-17	1,620	1,496	-7.7%
2017-18	2,329	2,035	-12.6%

Sources: Horticulture Statistics at a Glance 2018, Ministry of Agriculture and Farmers' Welfare; PRS.

Agricultural Marketing

The Integrated Scheme on Agriculture Marketing includes sub-schemes such as: (i) agriculture marketing infrastructure, to create storage capacity and farmer consumer markets, (ii) market research and information network, (iii) strengthening of Agmark grading facilities, (iv) agro-business development to provide market linkages to farmers, and (v) e-NAM (National Agriculture Market), which is a national electronic market platform on which farmers can sell their produce.

In 2020-21, the scheme has been allocated Rs 490 crore. This is 48% higher than the 2019-20 revised estimate. However, the allocation in 2019-20 has been revised down by 45%, from Rs 600 crore to Rs 331 crore. As of January 2019, 585 mandis across 18 states were integrated with e-NAM.[44]

APMCs: Agriculture marketing in most states is regulated by the Agriculture Produce Marketing Committees (APMCs) established by state governments. The Standing Committee on Agriculture (2018) observed that small and marginal farmers face various issues in selling their produce in APMC markets such as inadequate marketable surplus, long-distance to nearest APMC markets, and lack of transportation facilities. Most farmers lack access to government procurement facilities including APMC markets.[44]

The Committee observed that provisions of the APMC Acts are not implemented in their true sense, due to reasons such as: (i) limited number of traders in APMC markets thereby reducing competition, (ii) cartelisation of traders, and (iii) undue deductions in the form of commission charges and market fee.[44] It observed that APMC Acts need to be reformed urgently. The Acts are highly restrictive in promotion of multiple channels of marketing and competition in the system.

15th Finance Commission's recommendations on agricultural reforms

The 15th Finance Commission, in its report for 2020-21, proposed certain criteria for providing performance-linked incentives to states. The Commission included the implementation of agricultural reforms as one of the criterion. States would be eligible for certain financial incentives if they enacted and implemented the features of: (i) The Model Agricultural Produce and Livestock Marketing (Promotion and Facilitation) Act, 2017, (ii) The Model Agricultural Produce and Livestock Contract Farming and Services (Promotion and Facilitation) Act, 2018, and (iii) The Model Agricultural Land leasing Act, 2016.[45]

***The Model Agricultural Produce and Livestock Marketing (Promotion and Facilitation) Act, 2017*:** The Act aims to create a single agricultural market for agricultural produce and livestock. It seeks to remove intermediaries by integrating farmers, exporters, consumers and others in a single supply chain and by promoting a direct interface between producers and consumers. The Act aims to encourage e-trading to promote both transparency and integration of markets within each State/UT. Inter-state trading license, grading and standardization and quality certification are provided for with an aim to promote a national market for agricultural produce and livestock.

The Model Agricultural Produce and Livestock Contract Farming and Services (Promotion and Facilitation) Act, 2018: The Act aims to facilitate contract farming to improve production and marketing of agricultural produce and livestock. It constitutes "Registering and Agreement Recording Committee" at District, Block or Taluka level. It seeks to support contracting farmers by providing insurance cover and purchasing agricultural produce as per the contract. The Act aims to expand contract farming to small and marginal farmers through the promotion of Farmer Producer Organisation or Companies.

The Model Agricultural Land Leasing Act, 2016: The Act aims to improve access to land by landless and marginal farmers by permitting and facilitating the leasing of agricultural land. It legalises land leasing in all areas. The Act provides for the automatic resumption of the land after the lease period and removes the clause of adverse possession of the land. It promotes access to institutional loans, insurance and relief to tenants and sharecroppers.

Agricultural Research

The Indian Council of Agricultural Research (ICAR) has been allocated Rs 5,138 crore for the year 2020-21. This is 5.5% higher than the revised estimate of 2019-20. The allocation is primarily for salaries, pensions and administrative expenses and support for different schemes under ICAR.

Research under crop sciences and animal sciences have been allocated Rs 965 crore and Rs 486 crore in 2020-21. Observing that vegetable oils, pulses, cashew are among the major commodities imported between 2011 and 2016, the Standing Committee on Agriculture (2017) observed that there is a need for enhancing the production of these commodities.[46] It also recommended the central government to allocate additional funds to ICAR for this purpose.

The Committee noted that the production of animal vaccine is inadequate in the country. It recommended that adequate resources and manpower must be devoted to ICAR for the development of animal vaccines.

International comparison: The Committee on Doubling Farmers' Income (Chair: Mr. Ashok Dalwai, 2018) observed that the expenditure on agricultural research in India has remained around 0.3-0.4% of the agriculture GDP since 2001 (except in 2011 when it was 0.52% because of higher plan allocations by the government).[47]

The Committee observed that this is substantively lower in comparison to many developed countries, and also vis-à-vis comparable developing economies. The share of agricultural research in agriculture GDP is much higher in Brazil (1.8%), Mexico (1.05%), Malaysia (0.99%), and China (0.62%). It observed that in the high-income countries, the share stands at 3.01%. The Committee recommended that expenditure on agricultural research should be increased to up to one percent of agriculture GDP.

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Annexure

Allocation to major expenditure heads under the Departments

Table 6: Allocation to major heads of expenditure under the Department of Agriculture, Cooperation and Farmers' Welfare in 2020-21 (Rs crore)

	2018-19 Actuals	2019-20 Budgeted	2019-20 Revised	% change in RE of 2019-20 over BE of 2019-20	2020-21 Budgeted	% change in BE of 2020-21 over RE of 2019-20
PM-KISAN	1,241	75,000	54,370	-27.5%	75,000	37.9%
Interest subsidy for short-term credit to farmers	11,496	18,000	17,863	-0.8%	21,175	18.5%
Pradhan Mantri Fasal Bima Yojana	11,937	14,000	13,641	-2.6%	15,695	15.1%
Pradhan Mantri Krishi Sinchai Yojana (Per Drop More Crop)	2,918	3,500	2,032	-41.9%	4,000	96.8%
Market intervention scheme and price support scheme (MIS-PSS)*	1,400	3,000	2,010	-33.0%	2,000	-0.5%
PM-AASHA	4,721	1,500	321	-78.6%	500	55.8%
Pradhan Mantri Kisan Man Dhan Yojana	-	900	200	-77.8%	220	10.0%
Green Revolution	11,758	12,561	9,965	-20.7%	13,320	33.7%
Rashtriya Krishi Vikas Yojna	3,370	3,745	2,760	-26.3%	3,700	34.1%
National Mission on Horticulture	1,997	2,225	1,584	-28.8%	2,300	45.2%
National Food Security Mission	1,606	2,000	1,777	-11.2%	2,100	18.2%
Department	**46,076**	**1,30,485**	**1,01,904**	**-21.9%**	**1,34,400**	**31.9%**

*for procurement of pulses and oilseeds

Sources: Demand no. 1, Expenditure Budget, Union Budget 2020-21; PRS.

Table 7: Allocation to major heads of expenditure under the Department of Agricultural Research and Education in 2020-21 (Rs crore)

	2018-19 Actuals	2019-20 Budgeted	2019-20 Revised	% change in RE of 2019-20 over BE of 2019-20	2020-21 Budgeted	% change in BE of 2020-21 over RE of 2019-20
ICAR headquarters	5,056	4,869	4,869	0.0%	5,138	5.5%
Crop sciences	868	934	859	-8.1%	965	12.3%
Agricultural education	761	819	688	-16.0%	740	7.6%
Animal sciences	421	453	452	-0.2%	486	7.4%
Department	**7,544**	**8,079**	**7,846**	**-2.9%**	**8,363**	**6.6%**

Sources: Demand no. 2, Expenditure Budget, Union Budget 2020-21; PRS.

Consumption of Fertilisers

Table 8: Consumption of fertilisers in terms of N, P, and K nutrients (in lakh tonnes)

Year	Urea (N)	Phosphatic (P)	Potassic (K)	Total (N+P+K)
2005-06	127.2	52.0	24.1	203.4
2006-07	137.7	55.4	23.3	216.5
2007-08	144.2	55.1	26.4	225.7
2008-09	150.9	65.1	33.1	249.1
2009-10	155.8	72.7	36.3	264.9
2010-11	165.6	80.5	35.1	281.2
2011-12	173.0	79.1	25.8	277.9
2012-13	168.2	66.5	20.6	255.4
2013-14	167.5	56.3	21.0	244.8
2014-15	169.4	60.9	25.3	255.8
2015-16	173.7	69.8	24.0	267.5
2016-17	167.4	67.1	25.1	259.5
2017-18	169.6	68.5	27.8	265.9

Sources: Agricultural Statistics at a Glance 2018, Ministry of Agriculture and Farmers' Welfare; PRS.

Implementation of PM-KISAN

Table 9: State-wise number of beneficiaries of the PM-KISAN scheme and instalment-wise number of recipients (As on February 11, 2020)

State	Number of Beneficiaries	First Instalment (Dec 18-Mar 19)	Second Instalment (Apr 19-July 19)	Third Instalment (Aug 19-Nov 19)	Fourth Instalment (Dec 19-Mar 20)
Andaman and Nicobar Islands	16,584	16,504	15,909	15,048	10,617
Andhra Pradesh	51,54,980	51,17,781	41,75,957	41,14,193	31,35,612
Arunachal Pradesh	56,628	50,820	42,529	8,556	2,765
Assam	31,07,195	27,04,200	24,14,304	19,74,747	9,52,266
Bihar	54,98,078	53,48,465	47,02,794	31,56,473	6,70,525
Chandigarh	457	457	425	267	247
Chhattisgarh	19,81,216	18,80,819	16,54,160	9,93,519	1,04,905
Dadra and Nagar Haveli	10,564	10,435	10,309	8,656	5,761
Daman and Diu	3,587	3,463	3,372	3,095	2,331
Delhi	13,727	12,479	11,468	9,047	1,864
Goa	8,339	7,248	6,278	5,176	3,173
Gujarat	47,88,238	48,26,236	47,01,941	43,84,553	25,63,936
Haryana	15,42,748	14,54,111	14,37,275	13,43,219	10,01,515
Himachal Pradesh	8,75,212	8,63,955	8,43,492	7,73,642	5,35,693
Jammu and Kashmir	9,57,049	9,30,696	8,84,219	7,89,200	5,48,782
Jharkhand	15,15,528	14,52,601	7,43,938	6,56,350	3,20,170
Karnataka	49,73,543	49,05,076	46,72,645	36,04,478	3,52,488
Kerala	28,23,238	27,73,270	27,11,527	25,95,771	19,74,496
Lakshadweep	1,516	0	0	0	0
Madhya Pradesh	57,53,671	55,13,954	49,57,931	28,86,351	123
Maharashtra	90,73,782	84,57,153	68,21,942	52,87,162	20,21,367
Manipur	2,05,549	1,73,789	96,815	50,988	31,649
Meghalaya	72,690	70,236	64,747	36,890	22,010
Mizoram	69,420	67,534	65,510	53,698	21,598
Nagaland	1,70,286	1,68,749	1,61,731	87,829	29,996
Odisha	36,54,583	36,28,657	29,30,610	20,65,516	3,94,684
Puducherry	9,778	9,503	9,170	7,509	914
Punjab	22,39,849	22,40,071	22,14,919	14,67,311	14,32,400
Rajasthan	59,54,395	52,04,516	48,20,425	37,22,203	18,84,456
Sikkim	8,849	11	11	0	0
Tamil Nadu	36,16,504	35,28,387	33,72,052	31,41,155	23,17,369
Telangana	35,02,566	34,81,591	34,14,194	31,67,793	22,91,010
Tripura	1,96,462	1,94,696	1,89,720	1,82,126	1,40,460
Uttar Pradesh	2,02,34,707	1,87,35,405	1,71,04,668	1,49,91,796	77,28,816
Uttarakhand	7,14,783	7,01,781	6,70,035	6,03,658	4,53,114
West Bengal	0	0	0	0	0
Total	**8,88,06,301**	**8,45,34,649**	**7,59,27,022**	**6,21,87,975**	**3,09,57,112**

Sources: Website of PM-KISAN scheme as accessed on February 12, 2020; PRS.

Demand for Grants: Food and Public Distribution

The Ministry of Consumer Affairs, Food and Public Distribution has two Departments: (i) Food and Public Distribution, and (ii) Consumer Affairs. Allocation to the Ministry accounts for 4% of the budget of the central government in 2020-21.[1]

Department of Food and Public Distribution is responsible for ensuring food security through procurement, storage, and distribution of food grains, and for regulating the sugar sector.[2] In 2020-21, the Department has been allocated Rs 1,22,235 crore (98% of the Ministry's allocation).[3] This is 6% higher than the revised estimate of 2019-20.

Department of Consumer Affairs is responsible for spreading awareness among consumers about their rights, protecting their interests, implementing standards, and preventing black marketing.[4] In 2020-21, the Department has been allocated Rs 2,300 crore, which is 12% higher than the revised estimate of 2019-20.[5]

This note examines the allocations to the Department of Food and Public Distribution. It also looks at the broad issues in the sector, along with key observations and recommendations made by expert committees over the years.

Overview of Finances

Table 1: Allocations to the Ministry (in Rs crore)

Department	2018-19 Actuals	2019-20 Revised	2020-21 Budgeted	% change in 2020-21 over 2019-20
Food & Public Distribution	1,07,078	1,15,240	1,22,235	6.1%
Consumer Affairs	1,770	2,050	2,300	12.2%
Total	**1,08,848**	**1,17,290**	**1,24,535**	**6.2%**

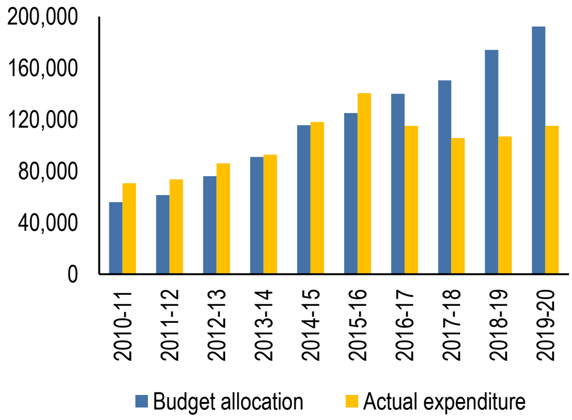
Sources: Expenditure Budget, Union Budget 2020-21; PRS.

In 2020-21, allocation to the Department of Food and Public Distribution has increased by Rs 6,995 crore (6.1%) over the revised estimate of 2019-20. However, the estimated expenditure for 2019-20 has reduced by 40% from Rs 1,92,240 crore at the budgeted stage to Rs 1,15,240 crore at the revised stage. This is due to a Rs 75,532 crore cut in the allocation to food subsidy for the year 2019-20.

Since 2016-17, the Department's expenditure has been much lower than the funds allocated to it in the budget (Figure 1) as an increasing portion of food subsidy was replaced by borrowings by the Food Corporation of India (FCI). As a result, the payment due to FCI by the end of 2019-20 is estimated to be Rs 2.4 lakh crore.[6]

In 2018-19, the Department utilised 61% of the allocation, while Rs 67,081 crore remained unspent. Due to this underspending trend, in 2020-21, the Department's allocation is Rs 18,285 crore less than what it spent five years ago (2015-16).

Figure 1: Actual expenditure of the Department vis-à-vis budget estimates (in Rs crore)



Note: Figures for 2019-20 are revised estimates.
Sources: Expenditure Budget, Union Budgets (2010-20); PRS.

Food subsidy

Food subsidy is the largest component of the Department's expenditure. It accounts for 95% of the allocation to the Department in 2020-21 (details of other expenditure heads are given in Annexure).[3]

The subsidy is given to the Food Corporation of India (FCI) and states for procuring food grains from farmers at government notified prices and selling them at lower subsidised prices (known as Central Issue Prices), under the National Food Security Act, 2013.[3] The Act mandates coverage of 75% of the population in rural areas and 50% in urban areas, and currently covers 81 crore people.[7,8]

The subsidy also covers the storage cost incurred by FCI in maintaining buffer stocks in order to ensure food security in the country.[3] **Table 2** (on the next page) shows the expenditure on food subsidies during 2010-21.

The expenditure on food subsidy increased from Rs 63,844 crore in 2010-11 to Rs 1,39,419 crore in 2015-16. The Standing Committee (2016-17) on Food, Consumer Affairs and Public Distribution noted that the reasons for increase in food subsidy include: (i) increase in the procurement cost of food grains, (ii) non-revision of the Central Issue Prices since 2002, and (iii) implementation of the National Food Security Act, 2013 in all states.[9]

Table 2: Expenditure on food subsidy during the period 2010-11 to 2020-21 (in Rs crore)

Year	Food subsidy	% increase over the previous year	% of allocation utilised
2010-11	63,844	9%	115%
2011-12	72,822	14%	120%
2012-13	85,000	17%	113%
2013-14	92,000	8%	102%
2014-15	1,17,671	28%	102%
2015-16	1,39,419	18%	112%
2016-17	1,10,173	- 21%	82%
2017-18	1,00,282	- 9%	69%
2018-19	1,01,327	1%	60%
2019-20	1,08,688	7%	59%
2020-21	1,15,570	6%	-

Note: Figures for the years 2019-20 and 2020-21 are estimates.
Sources: Expenditure Budget, Union Budgets (2011-21); PRS.

However, since 2016-17, spending on food subsidy by the Department has comparatively decreased, as a major part of the funds allocated for food subsidy remain unspent (40% of the budget allocation was not utilised in 2018-19). This underspending by the Department has increased over the years, even though the actual requirement of funds for food subsidy being higher than the amount it spends.[10] This gap can be bridged if more funds are spent by the Department for food subsidy. To fill this gap in the meanwhile and meet the cost incurred each year in subsidising food, FCI relies on borrowings.

Components of food subsidy

Expenditure on food subsidy can be classified under three heads (break-up in **Table 3**):

- **Subsidy to FCI:** The Food Corporation of India (FCI) receives subsidy for procuring food grains from farmers at government notified prices and selling them at lower subsidised prices. It also receives subsidy for the storage cost incurred in maintaining buffer stocks.
- **Subsidy to states:** Under the decentralised procurement scheme, states may choose to undertake the operations of procurement, storage, and distribution on behalf of FCI, for which they are provided with subsidy.
- **Sugar subsidy:** Sugar subsidy is provided for giving one kg of sugar per month at subsidised rates to families covered under the Antyodaya Anna Yojana (i.e. poorest of the poor families).

Majority of the budget for food subsidy is allocated to FCI. However, subsidy released to FCI by the Department has decreased from Rs 1.12 lakh crore in 2015-16 to Rs 70,098 crore in 2018-19. This is due to a consistent cut in FCI's share of the food subsidy budget (for instance, Rs 68,025 crore, or 49%, cut in 2018-19 from the budgeted stage).

Table 3: Break-up of food subsidy (in Rs crore)

Subsidy	2018-19 Actuals	2019-20 Revised	2020-21 Budgeted	% change in 2020-21 over 2019-20
Subsidy to FCI	70,098	75,000	77,983	4.0%
Subsidy to states (decentralised procurement)	31,029	33,508	37,337	11.4%
Sugar subsidy	200	180	250	38.9%
Total	**1,01,327**	**1,08,688**	**1,15,570**	**6.3%**

Sources: Demand no. 15, Department of Food and Public Distribution, Expenditure Budget, Union Budget 2020-21; PRS.

Issues in the Sector

FCI and state agencies procure food grains from farmers at the government notified Minimum Support Prices (MSPs). These food grains are provided to the economically weaker sections at subsidised prices through fair price shops under the public distribution system. The central and state governments provide food grains to beneficiaries under the National Food Security Act, 2013 as well as certain other welfare schemes such as the Mid-Day Meal scheme. In this section, we examine some issues relating to the: (i) pending dues of FCI, (ii) provision of food subsidy, (iii) Public Distribution System (PDS), and (iv) sugarcane dues to farmers.

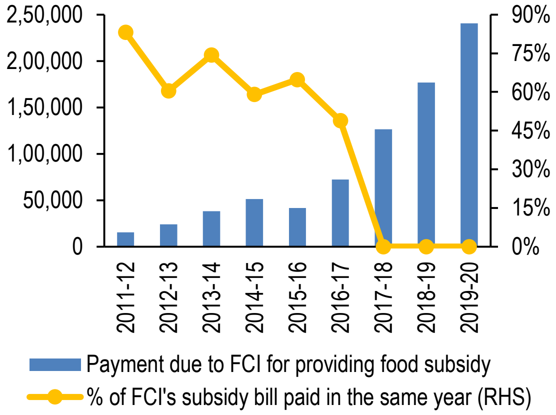
Pending dues of FCI

The central government provides food subsidy to FCI as reimbursement of the loss it incurs in its procurement, storage, and distribution operations. The CAG (2019) observed that when the budget for food subsidy is not sufficient to clear the dues of FCI, such dues are carried over to the next year.[11] As a result of such carryovers each year, payment due to FCI for food subsidy has increased from Rs 41,517 crore at the end of 2015-16 to Rs 2.4 lakh crore at the end of 2019-20.6 Note that the subsidy paid to FCI by the Department has decreased from Rs 1.12 lakh crore in 2015-16 to Rs 75,000 crore in 2019-20. Although the Department had received a much higher allocation during the period 2016-20 for payment to FCI, due to budget cuts made during the year, the actual amount paid to FCI decreased.

For instance, in 2019-20, subsidy to FCI has been cut by 50% from Rs 1.51 lakh crore at the budgeted stage to Rs 75,000 crore at the revised stage. As the subsidy dues of FCI increased significantly vis-à-vis the budget expenditure, since 2017-18, all the payments being made to FCI by the Department are going towards clearing past dues.

Due to this delay in clearing dues by the Department, FCI has to borrow money from various sources for giving subsidy and funding its operations. When FCI uses such borrowings, the Department has to provide additional funds for payment of interest on these borrowings. The CAG observed that the central government has adopted this off-budget method of financing the subsidy dues, thereby deferring the payment to FCI.[12] This understates a particular fiscal year's expenditure by keeping deferred expenditure off-budget, and prevents transparent depiction of fiscal indicators.[12] For instance, if the central government had to clear all the subsidy dues of FCI in the year 2019-20 itself, its fiscal deficit (borrowings) for the year 2019-20 would increase from 3.8% of GDP to 5% of GDP.

Figure 2: Payment due to FCI for food subsidy and payment status during 2011-20 (in Rs crore)



Sources: Food Corporation of India; PRS.

Note that in November 2019, the Union Cabinet approved increasing the equity of FCI from Rs 3,500 crore to Rs 10,000 crore.[13] As per the revised estimates for 2019-20, an amount of Rs 1,000 crore has been allocated for this purpose. Further, Rs 1,000 crore has been budgeted for 2020-21. This increased equity could be leveraged by FCI to borrow from the market.

Provision of food subsidy

The Targeted Public Distribution System (TPDS), through which food grains are distributed at subsidised prices, seeks to provide food security to people below the poverty line. Over the years, while the spending on food subsidy has increased, the ratio of people below the poverty line has decreased from 54.9% in 1973-74 to 21.9% in 2011-12 (**Table 4**).

Table 4: Poverty ratio and no. of poor persons

Year	Poverty ratio (in %)	No. of Poor (in crore)
1973-74	54.9%	32.1
1977-78	51.3%	32.9
1983-84	44.5%	32.3
1987-88	38.9%	30.7
1993-94	36.0%	32.0
2004-05	27.5%	30.2
2011-12	21.9%	26.9

Note: Figures from 1973-74 to 2004-05 have been computed using the Lakdawala methodology, and figures for 2011-12 have been computed using the Tendulkar methodology.
Sources: Planning Commission; PRS.

A similar trend can also be seen in the proportion of undernourished persons in India, which reduced from 23.7% in 1990 to 15.2% in 2014 (**Table 5**).

Table 5: Undernourishment data (1990-2016)

Year	Proportion of population undernourished (in %)	Number of undernourished persons (in crore)
1990-92	23.7%	21.0
2000-02	17.5%	18.6
2005-07	20.5%	23.4
2010-12	15.6%	19.0
2014-16	15.2%	19.5

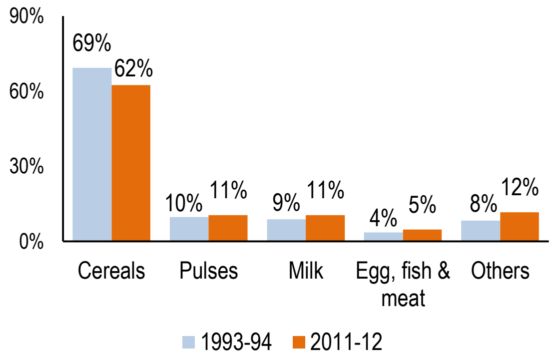
Note: Figures for 2014-16 are provisional estimates.
Sources: Food and Agriculture Organisation, 2015: Table 5.14, Chapter 5, Volume II, Economic Survey 2015-16; PRS.

Nutritional balance: The National Food Security Act, 2013 guarantees five kg of food grains per person per month to entitled beneficiaries at subsidised prices. Further, Antyodaya Anna Yojana households, which constitute the poorest of the poor, are entitled to 35 kg per household per month at subsidised prices. Presently, the food items provided by the central government for distribution under PDS are rice, wheat, and sugar.[14]

As can be seen in Figure 3 and Figure 4, there has been a change in the pattern of nutritional intake among people in both rural and urban areas (details given in Tables 9 and 10 in the Annexure).

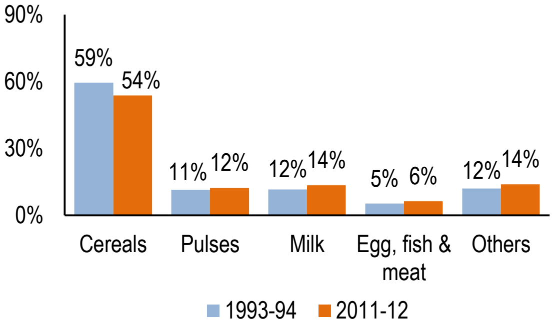
Although cereals or food grains contain only 10% protein, their share as a percentage of the total protein intake has been over 50% in both rural and urban areas.[15] However, other foods such as meat and pulses contain more than 20% protein but contribute to only 15% of the total protein intake of the country.[15]

Figure 3: Protein intake (%) in rural areas



Sources: Nutritional intake in India (2011-12), NSSO; PRS.

Figure 4: Protein intake (%) in urban areas

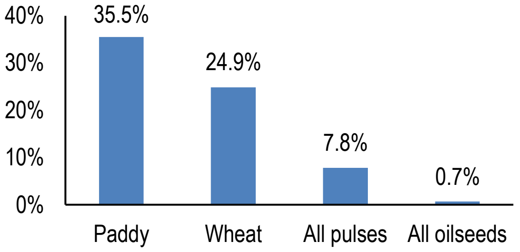


Sources: Nutritional intake in India (2011-12), NSSO; PRS.

The share of cereals in calorie intake has reduced by 10% in rural areas and 7% in urban areas, whereas that of milk, eggs, fish, and meat has increased (Table 9 in the Annexure).[15] This indicates a reduced preference for wheat and rice, and a rise in preference towards other protein-rich food items. The National Food Security Act, 2013 requires the central and state governments to undertake steps to diversify commodities distributed under PDS.[7]

Imbalance in farm production: Minimum Support Price (MSP) is the price at which the government agencies purchase farmers' produce of certain notified crops. Typically, MSP is higher than the market price and seeks to incentivise farmers to grow crops on which the support is offered. As wheat and rice (paddy) are major food grains provided under the PDS, the focus of procurement is on these crops. While a significant proportion of these two crops are procured at MSP, there is very limited procurement of other crops (see Figure 5).[16,17,18]

Figure 5: Percentage of crop production that was procured at MSP in 2016-17



Sources: Committee on Doubling Farmers' Income (2017), Ministry of Agriculture and Farmers' Welfare; PRS.

This skews the production of crops in favour of wheat and paddy, and does not offer an incentive for farmers to produce other items such as pulses.[19] Further, this puts pressure on the water table as these crops and sugarcane (which also has an assured procurement price- see page 6 and 7) are water-intensive crops.[20]

As procurement of wheat and paddy is done at MSP (which is often above market prices), its stocks have grown. At the end of 2018-19, the stocks of these crops were more than the offtake for a full year (see **Table 12** in the Annexure).

Revision of central issue price (CIP)

Under the National Food Security Act, 2013 (NFSA), food subsidy is given to beneficiaries at the CIP, which was last revised in 2002. CIP for wheat and rice can be found in **Table 6**.

Table 6: Central Issue Price (Rs/Kg)

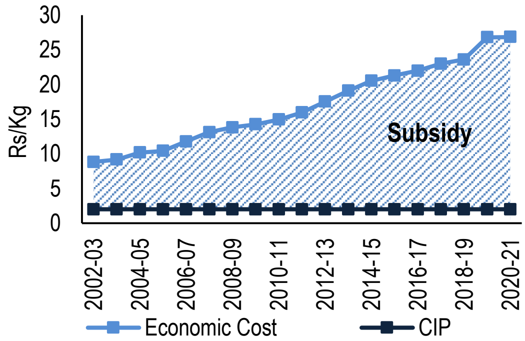
Commodity	AAY	BPL	APL
Rice	3.00	5.65	7.95
Wheat	2.00	4.15	6.10

Note: AAY – Antyodaya Anna Yojana, BPL – Below Poverty Line, APL – Above Poverty Line.
Sources: Food Grain Bulletin (December 2019), Department of Food and Public Distribution; PRS.

In comparison to the CIP, the economic cost (including procurement, stocking, distribution) for wheat is Rs 27/kg and for rice is Rs 37/kg as of February 2020.[21] Food subsidy is calculated as the difference between the economic cost of procuring food grains, and their CIP.

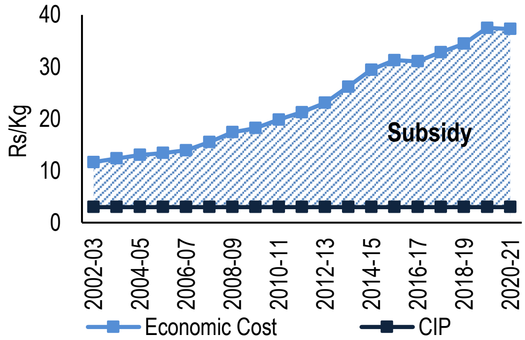
While the economic cost for rice has increased from Rs 1,098/quintal (Rs 11/kg) in 2001-02 to Rs 3,727/quintal (Rs 37/kg) in 2020-21, and of wheat from Rs 853/quintal (Rs 9/kg) to Rs 2,684/quintal (Rs 27/kg) over the same period, the CIP has not been revised.[21] This has led to an increasing gap between the economic cost and CIP, leading to an increase in expenditure on food subsidy.[29] Trends in economic cost, CIP and subsidies for wheat and rice can be found in Figure 6 and Figure 7.

Figure 6: Subsidy on a kg of wheat (Rs)



Sources: Food Corporation of India; PRS.

Figure 7: Subsidy on a kg of rice (Rs)



Sources: Food Corporation of India; PRS.

In 2018-19, the Ministry had stated that increasing the CIP could be one of the measures to bridge the gap between the funds it requires, and the funds it is actually allocated. Details related to the procurement of food grains, off-take and stock can be found in **Table 12** of the Annexure.

Delivery of food subsidy

Leakages in PDS: Leakages refer to food grains not reaching intended beneficiaries. Note that recent public data on leakage is not available. The latest available data is for 2011. According to the 2011 data, leakages in PDS were estimated to be 46.7% (see Table 11 in the Annexure).[22,23]

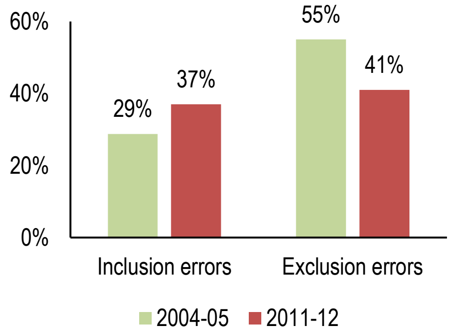
Leakages may be of three types: (i) pilferage or damage during transportation of food grains, (ii) diversion to non-beneficiaries at fair price shops through issue of ghost cards, and (iii) exclusion of people entitled to food grains but who are not on the beneficiary list.[24,25] Studies have shown that targeting mechanisms such as TPDS are prone to large exclusion and inclusion errors.[26]

Exclusion errors occur when entitled beneficiaries do not get food grains. It refers to the percentage of poor households that are entitled to but do not have PDS cards. Exclusion errors had declined from 55% in 2004-05 to 41% in 2011-12 (Figure 8).

Inclusion errors occur when those that are ineligible get undue benefits. Inclusion errors increased from 29% in 2004-05 to 37% in 2011-12.

Declining exclusion errors and increasing inclusion errors are due to two reasons. First, increase in the coverage of TPDS has reduced the proportion of poor who do not have access to PDS cards. Second, despite a decline in poverty rate, non-poor are still identified as poor by the government thus allowing them to continue using their PDS cards.[27]

Figure 8: Inclusion and exclusion errors (%)



Sources: Evaluation study on the role of PDS in shaping households and nutritional security in India, NITI Aayog, December 2016; PRS.

Note that under NFSA, states are responsible for the identification of beneficiaries. In 2016, the Comptroller and Auditor General of India (CAG) found that this process had not been completed by the states, and 49% of the beneficiaries were yet to be identified.[28]

Alternative subsidy systems: Over the years, several solutions that have been suggested include: (i) DBT of food subsidy, and (ii) end-to-end computerisation of the entire system.22[,46]

The NFSA states that the centre and states should introduce schemes for cash transfers to beneficiaries[.7] Various experts and bodies have also suggested replacing TPDS with a Direct Benefit Transfer (DBT) system.[29,30] Advantages and disadvantages of these methods of delivering benefits have been discussed below.

- **TPDS:** TPDS assures beneficiaries that they would receive food grains, and insulates them against inflation and price volatility. Further, food grains are delivered through fair price shops in villages, which are easy to access.[31,32]

  However, high leakages have been witnessed in the system, both during transportation and distribution. These include pilferage and errors of inclusion and exclusion from the beneficiary list. In addition, it has also been argued that the distribution of wheat and rice may cause an imbalance in the nutritional intake.[7] Beneficiaries have also reported receiving poor quality food grains as part of the system.

- **Cash Transfers:** Cash transfers seek to increase the choices available with a beneficiary, and provide financial assistance. It has been argued that the costs of DBT may be lesser than TPDS, owing to lesser costs incurred on transport and storage. These transfers may also be undertaken electronically.[31,32]

  On the other hand, it has been argued that cash received as part of DBT may be spent on non-food items. Further, such a system may expose beneficiaries to inflation. In this regard, one may need to consider the low penetration and access to banking in rural areas.[33]

In 2015, the Department released two notifications: The Cash Transfer of Food Subsidy Rules and The Food Security (Assistance to State Governments) Rules.[34,35] As per these notifications, the central government offers state governments two choices for reforming their respective PDS machinery: (i) replacing the existing PDS with DBT, or (ii) Fair Price Shop automation, which involves installation of Point of Sale devices, for authentication of beneficiaries and electronic capture of transactions.

So far, more than 4.3 lakh (82%) Fair Price Shops have been automated across the country.[36] Details regarding the status of computerisation of PDS can be found in **Table 13** of the Annexure.

The High-Level Committee on Restructuring of FCI in 2015 had suggested that switching to DBT for food subsidy would reduce the food subsidy bill of the government by more than Rs 30,000 crore.22 While making this recommendation, the Committee illustrated this by taking the case of subsidy given on rice (**Table 7**). It assumed that as part of DBT, the government would transfer Rs 22/Kg for rice to a beneficiary.

Table 7: Illustration: subsidy given on Rice

1. CIP	Rs 3/Kg
2. MSP	Rs 20/Kg
3. Subsidy (3=2-1)	Rs 17/Kg
4.Cost to government (Subsidy + Costs on procurement, storage and distribution)	Rs 27/Kg
5. Cash subsidy to beneficiaries	Rs 22/Kg
6. Government saving (6=5-4)	Rs 5/Kg
7. Increase in beneficiary benefit (7=5-3)	Rs 5/Kg

Sources: High-Level Committee Report on Reorienting FCI, January 2015; PRS.

Aadhaar: The High-Level Committee (2015) had also recommended the introduction of biometrics and Aadhaar to plug leakages in PDS. Such transfers could be linked to Jan Dhan account, and be indexed to inflation.22 As of December 2017, 119 crore Aadhaar cards have been issued, covering 98% of the population.[37]

In February 2017, the Ministry made it mandatory for beneficiaries under NFSA to use Aadhaar as proof of identification for receiving food grains.[38] This was aimed to facilitate the removal of bogus ration cards, check leakages and ensure better delivery of food grains.22[,39,40]

Note that beneficiaries may face issues with Aadhaar authentication while availing PDS benefits. According to data submitted by UIDAI to the Supreme Court in *Justice K. S. Puttaswamy vs Union of India*, the Aadhaar authentication failure rate (across all purposes) was 8.5% for iris scans and 6% for fingerprints.[41] However, in the judgement, the Court had held that services cannot be denied due to Aadhaar authentication failure.

Further, as of July 2017, while 100% ration cards had been digitised, the seeding of these cards with Aadhaar was at 79%.[42] Between 2016 and 2018, around 1.5 crore ration cards were deleted due to detection of bogus, fake, and duplicate cards during Aadhaar seeding (see Table 15 of the Annexure for the state-wise breakup).

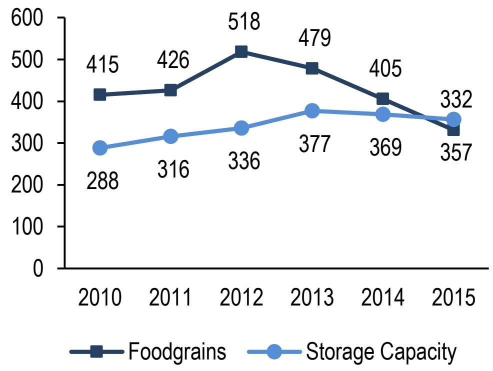
Current challenges in PDS

Storage: The Department allocates funds for the construction of godowns to increase storage capacity. This includes allocations for the Warehousing Development and Regulatory Authority (WADA). In 2019-20, Rs 60 crore has been allocated for storage and godowns, and Rs eight crore has been allocated to WADA.

As of December 2017, the total storage capacity in the country is 725 lakh tonnes, of which 359 lakh tonnes is with the FCI and 366 lakh tonnes is with the state agencies.[43] The total stock of food grains in the country as of July 2017 was 555 lakh tonnes. The CAG in its performance audit found that the available storage capacity in states was inadequate for the allocated quantity of food grains.[44] For example, as of October 2015, of the 233 godowns sanctioned for construction in Maharashtra, only 93 had been completed. In Assam, although the storage capacity was enough for the state's allocation, the conditions of the godowns were found to be too damp for storage. Some of the storage in Jharkhand was also found to be unfit, either because of its remote location or the damaged condition of the godowns.

The CAG also noted that in four of the last five years, the stock of food grains in the central pool had been higher than the storage capacity available with the FCI (see Figure 9).[33]

Figure 9: Stock and Capacity of FCI (lakh tonnes)



Sources: CAG Performance Audit on Preparedness for Implementation of National Food Security Act, 2013; PRS.

As seen in **Figure** 9, it was only in 2015 that the stock of food grains was lower than the storage capacity. According to the CAG, this was owing to an increase in procurement under Decentralised Procurement (DCP), and less food grains in the central pool.[33] Under DCP, the state governments undertake procurement, storage and distribution of food grains on behalf of the central government. The states are reimbursed by the centre for the expenditure incurred by them.[45]

The Standing Committee on Food, Consumer Affairs and Public Distribution (2017) has recommended increasing the procurement undertaken by states, and reducing the expenditure on centralised procurement by the FCI.9 They noted that this would drastically reduce the transportation cost borne by the government as states would distribute the food grains to the targeted population within their respective states. As on December 2019, only 17 states have adopted decentralised procurement.[36]

Fair Price Shops: Fair Price Shops are licensed ration shops which provide food grains and kerosene under the public distribution system. They may also sell certain other goods in some states. It has been observed by various experts and the Ministry that the margins on which the Fair Price Shops operate are low.[46] Further, in the absence of economic viability, there may be cases where the dealer resorts to unfair practices. In order to make these shops viable, some states have taken steps such as:

- Chhattisgarh provided seed capital of Rs 75,000 to each fair price shop free of any interest for 20 years. It also increased the commission on food grains from Rs 8/quintal to Rs 30/quintal.
- States such as Assam and Delhi have permitted the sale of non-PDS items at these fair price shops. Such items include oil, potatoes, onion, tea, and mobile recharge coupons.

Sugarcane dues

The Department is also responsible for formulation of policies and regulations for the sugar sector.

In 2020-21, Rs 2,602 crore has been allocated for providing assistance to sugar mills through various measures, which is 97% higher than the revised estimate of 2019-20. These measures include: (i) direct assistance to mills for clearing sugarcane dues of farmers, (ii) reimbursing the mills for maintaining buffer stocks, (iii) facilitating exports, and (iv) improving ethanol production capacity. The assistance is being provided with the aim of improving the liquidity of sugar mills in order to facilitate payment of sugarcane dues of farmers.[47,48]

Note that as on September 15, 2019, payment of Rs 11,784 crore is pending with sugar mills as dues for 2018-19 and earlier years.[49] State-wise details of the dues are given in Table 16 of the Annexure.

These sugarcane dues accumulate due to delay in payments to farmers for their produce. In years of surplus production, the sugar prices fall impacting the sale of sugar and liquidity of mills.[50] As a result, mills are unable to pay farmers leading to delay in payments and accumulation of dues. Note that sugar mills are obligated to purchase sugarcane from all farmers within their specified area at a price fixed by the government. Conversely, farmers are bound to sell to the respective mills.

Rationalisation of sugarcane pricing has been recommended as one of the steps for improving the efficiency of the sugar industry. The central government fixes the Fair and Remunerative Price (FRP) for sugarcane, which is the minimum price that must be paid by sugar mills to farmers.[51] The FRP is fixed based on the recommendations of the Commission for Agricultural Costs and Prices (CACP). It is recommended taking into consideration: (i) the cost of production, (ii) rate of recovery of sugar, (iii) availability of sugar to consumers at a fair price, (iv) returns to farmers from alternative crops and the general trend of prices of agricultural commodities, (v) realisation from sale of by-products, and (vi) reasonable margins for farmers on account of risks and profits.

State governments can also intervene in sugarcane pricing by announcing a State Advised Price (SAP). SAPs are usually much higher than the FRP. This creates a distortion in the industry as SAP is neither linked to sugar recovery nor it takes into account domestic and global prices and other relevant parameters. As a result, when sugar prices are low, mill owners are unable to pay farmers resulting in delayed payment and accumulation of dues. The CACP (2018) recommended that the FRP must be implemented in all states and the announcement of SAP by states should be stopped immediately.[51] In case state governments decide to continue with SAP, the difference between SAP and FRP should be paid by the state governments directly to farmers.

[1] Ministry-wise Summary of Budget Provisions, Union Budget 2020-21, https://www.indiabudget.gov.in/doc/eb/sumsbe.pdf.

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Annexure

Table 8: Allocation to major heads of expenditure under the Department in 2020-21 (Rs crore)

	2018-19 Actuals	2019-20 Budgeted	2019-20 Revised	2020-21 Budgeted	% change in BE of 2020-21 over RE of 2019-20
Food subsidy	1,01,327	1,84,220	1,08,688	1,15,570	6.3%
Subsidy to Food Corporation of India (FCI)	70,098	1,51,000	75,000	77,983	4.0%
Subsidy to states (decentralised procurement)	31,029	33,000	33,508	37,337	11.4%
Sugar subsidy payable under PDS	200	220	180	250	38.9%
Assistance to state agencies for intra-state movement of food grains and for margin of fair price shops' dealers	3,884	4,102	1,679	3,983	137.2%
Investment in equity capital of FCI	500	1,000	1,000	1,000	0%
Assistance to sugar mills for the 2017-18 season	376	100	63	-	-
Assistance to sugar mills for the 2018-19 season	-	1,000	2,000	200	-90%
Assistance to sugar mills for the 2019-20 season	-	-	100	500	400%
Scheme for defraying expenditure towards internal transport, freight, handling and other charges on export	-	501	551	200	-63.7%
Scheme for creation and maintenance of buffer stock of sugar	200	350	550	200	-63.6%
Scheme for extending soft loan to sugar mills	-	200	100	120	20%
Financial assistance to sugar mills for enhancement and augmentation of ethanol production capacity	-	100	50	50	0%
Schemes for development of sugar industries	443	351	221	172	-22.2%
Department	**1,07,078**	**1,92,240**	**1,15,240**	**1,22,235**	**6.1%**

Sources: Demand no. 15, Department of Food and Public Distribution, Expenditure Budget, Union Budget 2020-21; PRS.

Table 9: Share of calorie intake from different food groups (%)

	Cereals	Pulses, nuts, & oilseeds	Vegetables & fruits	Meats, eggs, & fish	Milk & milk products	Miscellaneous
Rural						
1993-94	71.0	4.9	2.0	0.7	6.2	15.2
1999-00	67.6	5.5	2.0	0.8	6.2	17.9
2004-05	67.5	5.0	2.2	0.8	6.4	18.1
2009-10	64.2	4.5	1.8	0.7	6.8	22.0
2011-12	61.1	5.2	1.9	0.8	7.1	23.9
Urban						
1993-94	58.5	6.1	3.3	1.0	8.0	23.1
1999-00	55.1	6.9	2.9	1.1	8.2	25.8
2004-05	56.1	6.7	3.2	1.1	8.6	24.3
2009-10	55.0	5.9	2.6	1.0	9.4	26.1
2011-12	51.6	6.4	2.6	1.1	9.1	29.2

Sources: Table T18, Nutritional Intake in India, 2011-12, NSSO; PRS.

Table 10: Share of protein intake (%)

Year	Cereals	Pulses	Milk and milk products	Egg, fish, and meat	Other food
Rural					
1993-94	69.4	9.8	8.8	3.7	8.4
1999-00	67.4	10.9	9.2	4.0	8.4
2004-05	66.4	9.5	9.3	4.0	10.8
2009-10	64.9	9.1	10.0	4.0	12.0
2011-12	62.5	10.6	10.6	4.7	11.7
Urban					
1993-94	59.4	11.5	11.7	5.3	12.1
1999-00	57.0	13.1	12.4	6.0	11.5
2004-05	56.2	11.0	12.3	5.5	15.0
2009-10	56.4	11.3	13.8	5.6	13.0
2011-12	53.7	12.4	13.6	6.4	13.9

Sources: Table T21, Nutritional Intake in India, 2011-12, NSSO; PRS.

Table 11: Leakages in PDS for wheat and rice (in lakh tonnes)

State/UT	Total consumption from PDS	Offtake (2011-12)	Leakage	% leakage
Andhra Pradesh	36.1	40.7	4.6	11.3%
Arunachal Pradesh	0.8	1.0	0.2	20.0%
Assam	9.5	24.4	14.9	61.1%
Bihar	11.3	36.2	24.9	68.8%
Chhattisgarh	16.7	16.7	0.0	0.0%
Goa	0.4	0.8	0.4	50.0%
Gujarat	4.4	15.7	11.3	72.0%
Haryana	2.2	7.3	5.1	69.9%
Himachal Pradesh	4.9	6.3	1.4	22.2%
Jammu and Kashmir	8.8	9.1	0.3	3.3%
Jharkhand	3.1	12.4	9.3	75.0%
Karnataka	16.2	30.1	13.9	46.2%
Kerala	11.4	20.1	8.7	43.3%
Madhya Pradesh	15.5	30.7	15.2	49.5%
Maharashtra	19.3	42.7	23.4	54.8%
Manipur	0.0	2.0	2.0	100.0%
Meghalaya	0.8	2.5	1.7	68.0%
Mizoram	0.9	1.1	0.2	18.2%
Nagaland	0.1	2.0	1.9	95.0%
Odisha	15.4	24.4	9.0	36.9%
Punjab	3.4	8.7	5.3	60.9%
Rajasthan	10.1	29.8	19.7	66.1%
Sikkim	N/A	N/A	-	-
Tamil Nadu	39.5	45	5.5	12.2%
Tripura	2.7	3.3	0.6	18.2%
Uttar Pradesh	43.2	82.9	39.7	47.9%
Uttarakhand	4.6	6.6	2.0	30.3%
West Bengal	13.4	43.9	30.5	69.5%
Total	**295.5**	**554.5**	**259**	**46.7%**

Note: Data from National Sample Survey 2011-12.
Sources: Table 1, Working Paper 294, "Leakages from Public Distribution System", ICRIER, January 2015; PRS.

Table 12: Procurement, offtake and stocks of food grains (in million tonnes)

Year	Procurement			Offtake			% Offtake	Stocks		
	Rice	Wheat	Total	Rice	Wheat	Total		Rice	Wheat	Total
2003-04	22.9	15.8	38.7	25.0	24.3	49.3	127%	13.1	6.9	20.6
2004-05	24.7	16.8	41.5	23.2	18.3	41.5	100%	13.3	4.1	18.0
2005-06	27.6	14.8	42.4	25.1	17.2	42.2	100%	13.7	2.0	16.6
2006-07	25.1	9.2	34.3	25.1	11.7	36.8	107%	13.2	4.7	17.9
2007-08	28.7	11.1	39.9	25.2	12.2	37.4	94%	13.8	5.8	19.8
2008-09	34.1	22.7	56.8	24.6	14.9	39.5	70%	21.6	13.4	35.6
2009-10	32.0	25.4	57.4	27.4	22.4	49.7	87%	26.7	16.1	43.3
2010-11	34.2	22.5	56.7	29.9	23.1	53.0	93%	28.8	15.4	44.3
2011-12	35.0	28.3	63.4	32.1	24.3	56.4	89%	33.4	20.0	53.4
2012-13	34.0	38.2	72.2	32.6	33.2	65.8	91%	35.5	24.2	59.8
2013-14	31.9	25.1	56.9	29.2	30.6	59.8	105%	30.6	17.8	49.5
2014-15	31.6	28.0	59.6	30.7	25.2	56.0	94%	23.8	17.2	41.3
2015-16	34.1	28.1	62.2	31.8	31.8	63.7	102%	28.8	14.5	43.6
2016-17	36.5	23.6	60.1	32.8	29.1	61.9	103%	29.8	8.1	38.1
2017-18	37.6	30.6	68.2	35.0	25.3	60.3	88%	30.0	13.2	43.3
2018-19	42.7	35.0	77.7	34.4	31.5	65.9	85%	37.7	34.9	72.7

Sources: Handbook of Statistics on Indian Economy (2019), Reserve Bank of India; PRS.

Table 13: Status of operation of end-to-end computerisation of PDS (October 2019)

State/ UT	Digitisation of Ration Cards	Aadhaar Seeding with Ration Cards	Online Allocation of Food grains	Computerisation of Supply Chain	% of Fair Price Shops with Operational ePoS
Andhra Pradesh	100%	100%	Implemented	Implemented	100%
Arunachal Pradesh	100%	57%	Implemented	-	1%
Assam	100%	0%	Implemented	-	0%
Bihar	100%	78%	Implemented	Implemented	15%
Chhattisgarh	100%	98%	Implemented	Implemented	97%
Goa	100%	98%	Implemented	Implemented	100%
Gujarat	100%	99%	Implemented	Implemented	100%
Haryana	100%	100%	Implemented	Implemented	100%
Himachal Pradesh	100%	100%	Implemented	Implemented	100%
Jammu and Kashmir	100%	82%	Implemented	-	100%
Jharkhand	100%	95%	Implemented	Implemented	100%
Karnataka	100%	100%	Implemented	Implemented	99%
Kerala	100%	99%	Implemented	Implemented	100%
Madhya Pradesh	100%	90%	Implemented	Implemented	100%
Maharashtra	100%	97%	Implemented	Implemented	100%
Manipur	100%	79%	Implemented	-	0%
Meghalaya	100%	0%	Implemented	-	0%
Mizoram	100%	93%	Implemented	-	0%
Nagaland	100%	65%	Implemented	-	0%
Odisha	100%	96%	Implemented	Implemented	100%
Punjab	100%	99%	Implemented	Implemented	100%
Rajasthan	100%	96%	Implemented	Implemented	97%
Sikkim	100%	90%	Implemented	Implemented	100%
Tamil Nadu	100%	100%	Implemented	Implemented	100%
Telangana	100%	99%	Implemented	Implemented	100%
Tripura	100%	100%	Implemented	Implemented	100%
Uttar Pradesh	100%	100%	Implemented	Implemented	100%
Uttarakhand	100%	93%	Implemented	Implemented	50%
West Bengal	100%	64%	Implemented	Implemented	77%
Andaman and Nicobar Islands	100%	97%	Implemented	Implemented	96%
Chandigarh	100%	100%	NA	NA	NA
Dadra and Nagar Haveli	100%	100%	Implemented	Implemented	100%
Daman and Diu	100%	100%	Implemented	Implemented	100%
Delhi	100%	100%	Implemented	Implemented	0%
Lakshadweep	100%	100%	Implemented	NA	100%
Puducherry	100%	100%	NA	NA	NA
Total	**100%**	**88%**	**34**	**26**	**82%**

Sources: Report no. 2, Standing Committee of Food, Consumer Affairs and Public Distribution, Lok Sabha, December 10, 2019; PRS

Table 14: Minimum Support Prices for paddy and wheat from 2009-10 to 2020-21 (in Rs/quintal)

Year	Paddy (common)	% increase over last year	Wheat	% increase over last year
2009-10	1,000	17.6%	1,100	1.9%
2010-11	1,000	0.0%	1,120	1.8%
2011-12	1,080	8.0%	1,285	14.7%
2012-13	1,250	15.7%	1,350	5.1%
2013-14	1,310	4.8%	1,400	3.7%
2014-15	1,360	3.8%	1,450	3.6%
2015-16	1,410	3.7%	1,525	5.2%
2016-17	1,470	4.3%	1,625	6.6%
2017-18	1,550	5.4%	1,735	6.8%
2018-19	1,750	12.9%	1,840	6.1%
2019-20	1,815	3.7%	1,925	4.9%

Sources: Commission for Agricultural Costs and Prices, Ministry of Agriculture and Farmers' Welfare; PRS.

Table 15: Deleted* Ration Cards (during 2016-18)

States/UTs	2016	2017	2018	State-wise Total
Andhra Pradesh	4,75,023	5,449	-	4,80,472
Andaman & Nicobar Islands	-	-	-	0
Arunachal Pradesh	4,396	56	-	4,452
Assam	1,08,681	42,077	1,35,250	2,86,008
Bihar	6,291	-	-	6,291
Chandigarh	-	88	-	88
Chhattisgarh	1,50,000	1,50,000	-	3,00,000
Dadra & Nagar Haveli	549	-	-	549
Daman & Diu	101	272	4,898	5,271
Delhi	22,696	3,969	486	27,151
Goa	10,115	-	-	10,115
Gujarat	22,119	18,965	95,659	1,36,743
Haryana	19,648	29,686	2,91,926	3,41,260
Himachal Pradesh	1,148	172	56,858	58,178
Jammu and Kashmir	50,709	664	-	51,373
Jharkhand	4,46,025	-	-	4,46,025
Karnataka	1,44,432	3,26,382	4,572	4,75,386
Kerala	-	-	3,314	3,314
Lakshadweep	442	-	-	442
Madhya Pradesh	3,89,124	1,84,673	-	5,73,797
Maharashtra	11,55,908	-	-	11,55,908
Manipur	-	336	-	336
Meghalaya	-	-	370	370
Mizoram	101	559	-	660
Nagaland	-	8,521	-	8,521
Odisha	6,50,471	35,740	-	6,86,211
Puducherry	9,886	-	-	9,886
Punjab	-	69,945	34,972	1,04,917
Rajasthan	13,71,230	73,110	8,016	14,52,356
Sikkim	11,714	1,126	-	12,840
Tamil Nadu	84,470	9,089	-	93,559
Telangana	5,21,790	-	-	5,21,790
Tripura	92,728	-	-	92,728
Uttar Pradesh	25,86,541	44,41,748	-	70,28,289
Uttarakhand	89,984	3,18,718	1,26,268	5,34,970
West Bengal$	-	-	-	0
Total	**84,26,322**	**57,21,345**	**7,62,589**	**1,49,10,256**

Note: *Cards deleted due to detection of ghost/fraudulent/duplicate/ineligible/migration /deaths etc. during the process of digitisation, de-duplication, Aadhaar seeding in run-up /implementation of National Food Security Act. $West Bengal has individual Ration Cards system.
Sources: Second Report, Standing Committee on Food, Consumer Affairs and Public Distribution (2019-20); PRS.

Table 16: Sugarcane dues (as on September 15, 2019) (Rs crore)

State	2016-17 & Earlier	2017-18	2018-19	Total Arrears
Andhra Pradesh	1	5	132	138
Bihar	39	8	478	524
Chhattisgarh	0	2	39	41
Goa	0	0	5	5
Gujarat	35	2	804	841
Haryana	0	0	80	80
Karnataka	33	0	225	258
Madhya Pradesh	8	8	9	25
Maharashtra	174	62	396	632
Odisha	3	0	19	21
Puducherry	22	0	0	22
Punjab	0	26	589	615
Rajasthan	0	0	0	0
Tamil Nadu	1,529	65	346	1,940
Telangana	0	0	46	46
Uttar Pradesh	144	41	5,990	6,174
Uttarakhand	25	109	286	420
West Bengal	0	0	0	0
Total	**2,014**	**326**	**9,444**	**11,784**

Sources: Second Report, Standing Committee on Food, Consumer Affairs and Public Distribution (2019-20); PRS.

Demand for Grants: Rural Development

The Ministry of Rural Development is responsible for development and welfare activities in rural areas. The Ministry has two departments: (i) rural development, and (ii) land resources.

The **Department of Rural Development** under the Ministry is responsible for implementation of many major schemes in rural areas. These schemes are targeted at poverty reduction, provision of basic services, employment generation, rural infrastructure and habitation development.

The **Department of Land Resources** aims to increase productivity of degraded land through the process of integrated watershed management. It also aims to develop an integrated land information management system to improve real-time information on land, and to optimise use of land resources.

This note presents the budgetary allocations to the Ministry of Rural Development, and analyses various issues related to the schemes implemented by the Ministry.

Allocation in Union Budget 2020-21

The Ministry of Rural Development has the fourth highest allocation across Ministries in 2020-21, at Rs 1,22,398 crore.

In 2020-21, the Department of Rural Development has an allocation of Rs 1,20,147 crore, accounting for 98% of the Ministry's allocation. It witnessed a 2% decrease in funds from revised estimates of 2019-20. In 2019-20, the Department was allocated Rs 1,17,647 crore, which increased by Rs 5,002 crore (4%) in the revised estimates stage for that year.

On the other hand, the Department of Land Resources has an allocation of Rs 2,251 crore, which is 18.5% more than the revised estimates of 2019-20. In 2019-20, the Department was allocated Rs 2,227 crore, which decreased by Rs 327 crore (15%) in the revised estimates stage for that year.

Table 1 gives the trend in budgetary allocation towards the Ministry over the past three years.

Table 1: Budgetary allocation to the Ministry of Rural Development (Rs crore)

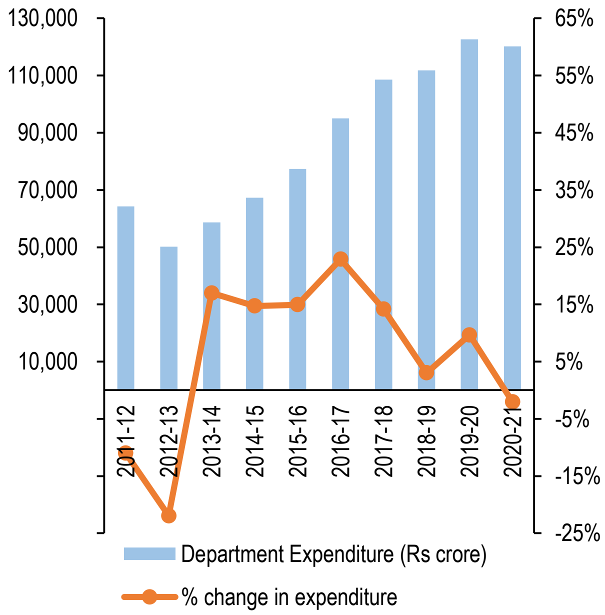
Department	Actuals (18-19)	RE (19-20)	BE (20-21)	% change (RE to BE)
Rural Development	1,11,842	1,22,649	1,20,147	-2.0%
Land Resources	1,864	1,900	2,251	18.5%
Total	1,13,706	1,24,549	1,22,398	-1.7%

Note: BE is budget estimate and RE is revised estimate.
Sources: Demands for Grants 2020-21, Ministry of Rural Development; PRS.

Department of Rural Development

In the past 10 years, the expenditure of the Department of Rural Development has seen an annual growth of 7.2%. Except in 2011-12 and 2012-13, when the Department reduced its spending, its expenditure increased in all other years up till 2019-20. In 2020-21 the estimated expenditure is 2% less than the revised estimates for the previous year.

Figure 1: Expenditure by the Department of Rural Development over the years (Rs crore)



Note: Values for 2019-20 and 2020-21 are revised estimates and budget estimates respectively.
Sources: Union Budgets 2011-12 to 2020-21; PRS.

Major schemes under the Department

Table 2 represents the budgetary allocation for major schemes under the Department of Rural Development.

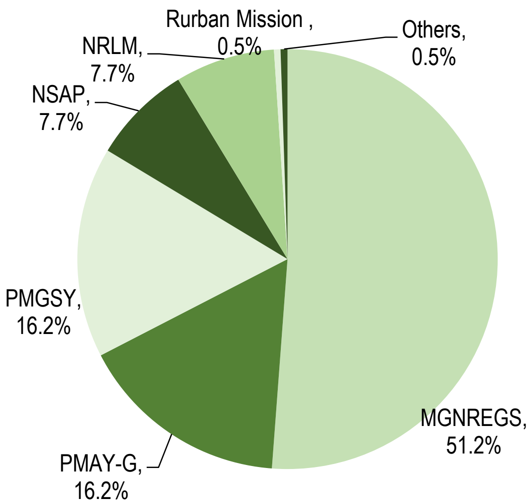
Table 2: Allocation to the Department of Rural Development (Rs crore)

Department	Actuals (2018-19)	Revised (2019-20)	Budgeted (2020-21)	% change (RE to BE)
MGNREGS	61,815	71,002	61,500	-13%
PMAY-G	19,308	18,475	19,500	6%
PMGSY	15,414	14,070	19,500	39%
NSAP	8,418	9,200	9,197	0%
NRLM	5,783	9,024	9,210	2%
Rurban Mission	433	300	600	100%
Others	671	578	640	11%
Total	**1,11,842**	**1,22,649**	**1,20,147**	**-2%**

Note: BE is budget estimate and RE is revised estimate. Others include central sector projects like management support to rural development programs, socio-economic and caste census survey and centre's expenditure.
Sources: Demands for Grants 2020-21, Department of Rural Development, Ministry of Rural Development; PRS.

- Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), continues to account for more than half of the Department's budget. However, the funds allocated to it have decreased by 13% this year.
- Funds allocated for the rural roads scheme, Pradhan Mantri Gram Sadak Yojana (PMGSY) has seen an increase of 39% from the revised estimates of 2019-20.

Figure 2: Top expenditure heads in 2020-21, as a percentage of total departmental allocation



Sources: Demands for Grants 2020-21, Department of Rural Development, Ministry of Rural Development; PRS.

Figure 2 shows the composition of expenditure of the Department of Rural Development. In 2020-21, 51% of the Department's expenditure is estimated to be on the MGNREGS. This is followed by the rural component of Pradhan Mantri Awaas Yojana – Gramin (16.2%), and PMGSY (16.2%).

Financial allocations comparing outcomes

Mahatma Gandhi National Rural Employment Guarantee Scheme

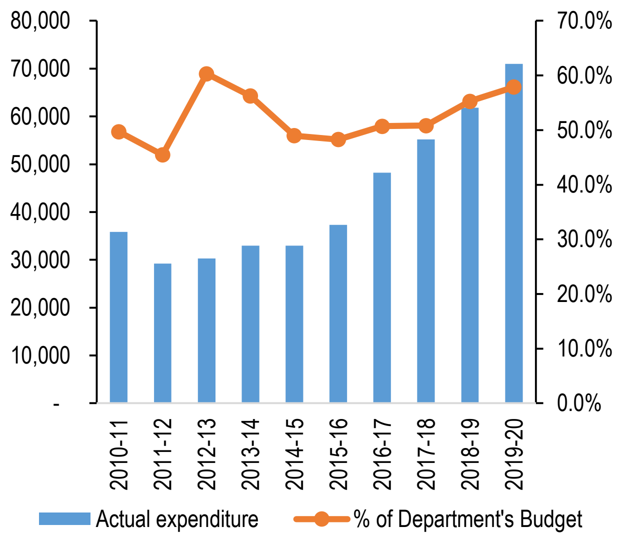
The main goal of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) is to provide guaranteed 100 days of wage employment per financial year to every rural household whose adult members volunteer to do unskilled manual work.[1]

The Mahatma Gandhi National Rural Employment Guarantee Act specifies a list of works that can be undertaken to generate employment. These are related to water conservation, land development, construction, and agriculture, among others. The scheme at present covers all districts of the country with the exception of those that have a 100% urban population.[2]

In 2020-21, it has been allocated Rs 61,500, which is 51% of the Department's budget.

Budgeted versus actual expenditure: Figure 3 shows the expenditure on the scheme from 2010-11 to 2020-21. For most of these years, expenditure on the scheme has been more than or around 50% of the Department's budget.

Figure 3: Expenditure on MGNREGS over the years (Rs crore)



Note: Values for 2019-20 are revised estimates.
Sources: Union Budgets 2010-11 to 2020-21; PRS.

Table 3 shows the trends in allocation and actual expenditure on MGNREGS over the past nine years.

Table 3: Budgeted versus actual expenditure on MGNREGS (Rs crore)

Year	Budgeted	Actuals	% of Budgeted
2011-12	40,000	29,212	73%
2012-13	33,000	30,273	92%
2013-14	33,000	32,992	100%
2014-15	34,000	32,977	97%
2015-16	34,699	37,341	108%
2016-17	38,500	48,215	125%
2017-18	48,000	55,166	115%
2018-19	55,000	61,815	112%
2019-20	60,000	71,002	118%

Note: The 'actuals' figure for 2019-20 is the revised estimate.
Sources: Union Budgets 2011-12 to 2020-21; PRS.

The budget estimates for the last five years have been similar to the actuals from the previous year. However, the actual expenditure on the scheme for these years has exceeded the budget estimates. Note that in 2020-21, the allocation to the scheme saw a 13% decline from the revised estimates of 2019-20.

Demand for work: MGNREGS is a demand driven scheme. From 2013-14 to 2019-20, the average demand from registered households is 41% (in the range of 36% to 43%). The share of households that were provided employment as compared to the ones demanding employment has reduced from 93% in 2013-14 to 87% in 2019-20.[3]

Employment Provided: The scheme guarantees 100 days of employment. However, from 2012 to 2018, the average number of days of employment has been 45.5 days, with a maximum of 49 days of employment in 2015-16. As MGNREGS is a demand driven scheme, this could be due to either lower demand for such work (signalling sufficient opportunities to obtain work in the open market) or not providing employment when demanded.

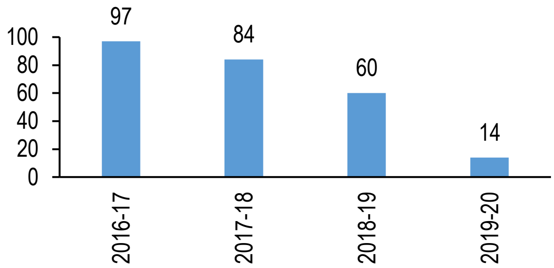
Table 4: Average days of employment provided per household

Year	Average days of employment provided per household
2012-13	46
2013-14	46
2014-15	40
2015-16	49
2016-17	46
2017-18	46

Sources: MGNREGS MIS Report 2018-19; PRS.

Work Completed: The scheme also aims to create durable assets to improve rural livelihood through the work done while providing employment. As indicated in figure 4, the percentage of work completed under the scheme has been falling since the last four years. In 2019-20 (as of February 2020) percentage of work completed was at 14%.

Figure 4: Percentage of work completed (in %)



Sources: MGNREGS MIS Report (as on February 8, 2020); PRS.

Delayed payments: MGNREGS stipulates that wage payments must be made within 15 days of the date of closure of the muster roll.[2] Delays in payments are calculated from the 16th day onwards. **Table 5** shows the percentage of delayed payments out of the total payments over the past six years. It also indicates the number of days that payments were delayed by. As shown in the table, the proportion of delayed payments has reduced from 71.6% in 2014-15 to 3.4% in 2019-20. In 2017-18, delays in payments came down substantially from the previous year. The Economic Survey 2018-19, stated that the implementation of direct benefit transfers has helped in reducing delays in payments.[4]

Table 5: Trends in delayed payment of wages under MGNREGS (in %)

Year	% Delayed Payment	Composition of delayed payments(%)			
		>90 days	61-90	31-60	15-30
2014-15	71.6%	13.4%	9.8%	22.0%	26.3%
2015-16	63.1%	9.5%	8.1%	19.0%	26.5%
2016-17	56.6%	14.2%	8.4%	15.9%	18.1%
2017-18	15.5%	1.8%	0.9%	3.6%	9.2%
2018-19	10.4%	1.9%	0.7%	2.0%	5.8%
2019-20	3.4%	0.2%	0.2%	0.7%	2.3%

Sources: MGNREGS MIS Report, Delayed Payments (as on February 8, 2020); PRS.

Currently under the MGNREGS, unemployment allowance (if employment is not provided within 15 days of application) is paid from state government funds.[1] The CAG report (2013) on the scheme states that this puts an additional burden on the states.[5] The CAG suggested that the Ministry of Rural Development should consider partial reimbursement of unemployment allowance.[5]

Indexing of minimum wage rate: The minimum wage rate under the scheme is fixed by the central government on the basis of the Consumer Price Index-Agricultural Labourers (CPI-AL). If this not available, the minimum wage rate fixed by the states for agricultural labourers is considered.[6] The

Standing Committee on Rural Development (2019-20) noted that the wage rate under MGNREGS is much less than the minimum wages fixed by states. It recommended that wages under MGNREGS should be increased and linked to an index which takes inflation into account.[7]

Further, the Committee on Alignment of MGNREGS wages under the Ministry of Rural Development (2017) noted that the type of work done by agricultural labourers and MGNREGS workers is different. Thus, there should be difference in their minimum wages. It also noted that the weighting diagram of Consumer Price Index-Rural was more recent and provided for higher expenditure on education and medical care compared to CPI-AL. It recommended using Consumer Price Index-Rural instead of the existing CPI-AL for revising MGNREGS wages.[8]

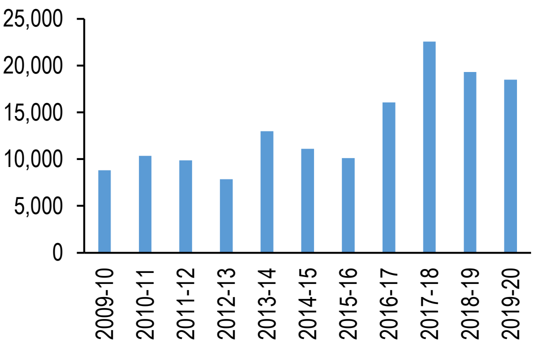
Difference in states minimum wage: If CPI-AL is not available, the minimum wage rate fixed by the states for agricultural labourers is considered. Every state has its defined Schedule of Rates for defining work output and calculating wages, thus the wage can be different for every state. The Committee on Alignment of MGNREGS (2017) observed that this variation is unsustainable for a programme where wage component is fully funded by the centre. It recommended convergence on Schedule of Rates across states to avoid variation.[8]

Pradhan Mantri Awaas Yojana- Gramin

Pradhan Mantri Awaas Yojana- Gramin (PMAY-G) got the second highest allocation in the Department's budget this year. The funds allocated to the scheme (Rs 19,500 crore) comprise 16.2% of the Department's finances.

In the past eleven years, the expenditure on the scheme has seen an annual growth of 8%.

Figure 5: Expenditure on PMAY-G over the years (Rs crore)



Note: Value for 2019-20 is the revised estimates.
Sources: Union Budgets 2009-10 to 2020-21; PRS.

Table 6 shows the trends in allocation and actual estimates of expenditure on rural housing scheme (previously Indira Awaas Yojana and now PMAY-G) over the past 10 years.

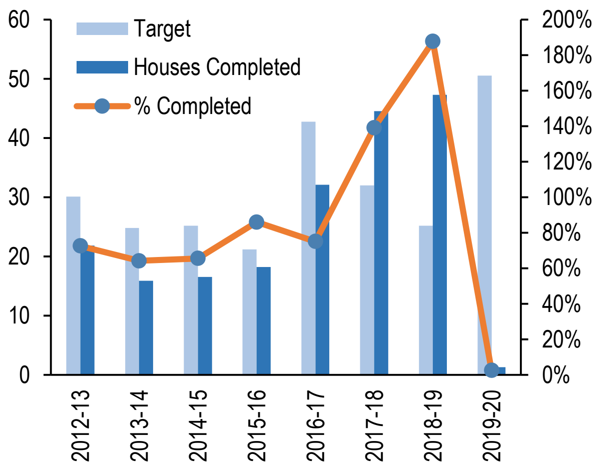
Table 6: Budgeted versus actual expenditure on rural housing scheme (Rs crore)

Year	Budgeted	Actuals	% of Budgeted
2010-11	8,996	10,337	115%
2011-12	8,996	9,872	110%
2012-13	9,966	7,868	79%
2013-14	13,666	12,981	95%
2014-15	16,000	11,106	69%
2015-16	10,025	10,116	101%
2016-17	15,000	16,071	107%
2017-18	23,000	22,572	98%
2018-19	21,000	19,308	92%
2019-20	19,000	18,475	97%

Note: The 'actuals' figure for 2019-20 is the revised estimate. Note that the numbers for years to 2010-11 to 2014-15 are the allocations towards Indira Awaas Yojana.
Sources: Union Budgets 2010-11 to 2020-21; PRS.

Target construction of houses: Figure 6 shows the number of houses completed compared to the target construction in the last eight years. The construction rate has been lower than the target from 2012 to 2017. In 2017-18 and 2018-19, the completion rate saw a high increase. However, as of November 2019, the completion rate for 2019-20 was at 3%.

Figure 6: Construction performance of Pradhan Mantri Awaas Yojana (no. of houses in lakhs)



Note: Data for 2019-20 is as of November 23, 2019.
Sources: Report on Demand for Grants, Standing Committee on Rural Development, Ministry of Rural Development 2017-18, 2019-20; PRS.

In the budget speech of 2019-20, it was highlighted that under PMAY-G, 1.95 crore houses are proposed to be provided to eligible beneficiaries by 2021-22. As per the implementation of budget announcements, against the target of 60 lakh houses set for 2019-20, 1.82 lakh houses were completed, as of November 22, 2019.[9]

The Standing Committee on Rural Development (2019-20) noted that there are sanctioned beneficiaries whose houses are incomplete or the construction is yet to start. It noted that this is a major obstacle in the achievement of target of housing for all by 2022. It recommended fast completion of houses targeted under the scheme.[7]

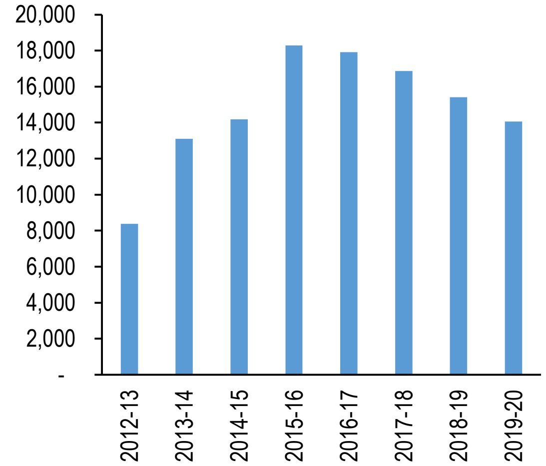
Increase in financial assistance under PMAY-G: Under PMAY-G, financial assistance of Rs 1,20,000 in plain areas and Rs 1,30,000 in hilly areas is provided to rural BPL households for construction of a dwelling unit. The Standing Committee on Rural Development (2019-20) noted that the financial assistance provided is not proportionate with the rising inflationary cost of the construction, material and other aspects of house building. It recommended the Ministry to review the assistance provided by them.[7]

Pradhan Mantri Gram Sadak Yojana

Pradhan Mantri Gram Sadak Yojana (PMGSY) seeks to provide all-weather road connectivity to all eligible unconnected habitations, existing in the core network in rural areas of the country. The scheme has been allocated Rs 19,500 crore in 2020-21, accounting for 16.2% of the Department's budget.

As Figure 7 indicates, over the past years, the expenditure on the scheme had been increasing until 2015-16. However, it has been decreasing since then.

Figure 7: Expenditure on PMGSY over the years (Rs crore)



Note: Value for 2019-20 is the revised estimates.
Sources: Union Budgets 2012-13 to 2020-21; PRS.

Inconsistency in budgetary allocation: Table 7 shows the trends in allocation and actual estimates of expenditure on PMGSY. In most years, there has been significant underutilisation of funds. In 2018-19, the expenditure on the scheme was 81% of its allocation. A similar trend can be seen in 2019-20.

Table 7: Budgeted versus actual expenditure on Pradhan Mantri Gram Sadak Yojana (Rs crore)

Year	Budgeted	Actuals	% of Budgeted
2012-13	24,000	8,387	35%
2013-14	21,700	13,095	60%
2014-15	14,391	14,188	99%
2015-16	14,291	18,290	128%
2016-17	19,000	17,923	94%
2017-18	19,000	16,862	89%
2018-19	19,000	15,414	81%
2019-20	19,000	14,070	74%

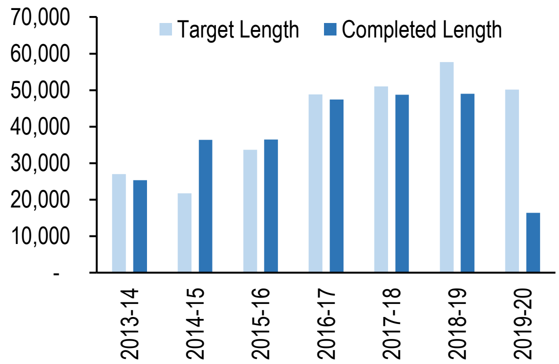
Note: The 'actuals figure for 2019-20 is the revised estimate.
Sources: Union Budgets 2012-13 to 2020-21; PRS.

Slow pace of work: The Standing Committee on Rural Development (2018-19) noted that the pace of work under the scheme has been really low, especially in hilly states like Uttarakhand. It recommended that the pace of completion of projects be increased to ensure achievement of the target of the scheme.[10]

Difference between targets and achievements:

Figures 8 and 9 give details of length of roads constructed and habitations connected in the last seven years, under the scheme.

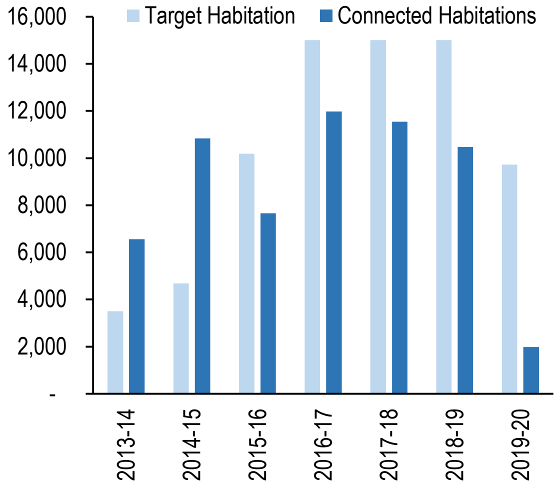
Figure 8: Length of road constructed under PMGSY (in km)



Note: Data for 2019-20 is as of February 9, 2020.
Sources: Pradhan Mantri Gram Sadak Yojana Online Management, Monitoring and Accounting System (OMMAS), Ministry of Rural Development; PRS.

In 2014-15 and 2015-16, the length completed was more than the target length. However, since 2016-17, the Ministry has not been able to achieve its targets for both number of habitations to be connected and length of road. As of February 8, 2020, in 2019-20, 33% of target road length had been constructed and 20% of the target habitations had been connected.

Figure 9: Habitations connected under PMGSY



Note: Data for 2019-20 is as of February 9, 2020.
Sources: Pradhan Mantri Gram Sadak Yojana Online Management, Monitoring and Accounting System (OMMAS), Ministry of Rural Development; PRS.

In the budget speech of 2019-20, it was highlighted that the target of connecting all eligible and feasible habitations under PMGSY will be completed by 2019. The budget documents indicate that 95% of the eligible (as per the census 2001) and feasible habitations have been connected.[9]

Maintenance of roads: For ensuring sustainability of roads built under PMGSY, each contractor has to provide for: (i) defect liability for five years, and (ii) paid routine maintenance after completion of work. The Standing Committee on Rural Development (2019-20) noted that the upkeep and maintenance of roads has been poor. It recommended that the Ministry ensure stricter norm compliance, and hold the contractors and agencies accountable for their negligence.[7]

National Social Assistance Program

National Social Assistance Program (NSAP) is a welfare program which comprises of a number of sub-schemes that primarily aim to provide public assistance to citizens in case of unemployment, old age, sickness, and any form of disability. The major schemes include Indira Gandhi National Old Age Pension Scheme, Indira Gandhi National Widow Pension Scheme, and Indira Gandhi National Disability Pension Scheme.

The funds allocated to the scheme (Rs 9,197 crore) comprise 7.7% of the Department's finances.

Table 8 shows the budget estimates and actual expenditure by states under the scheme from 2012-13 to 2019-20.

Table 8: Expenditure under NSAP (Rs crore)

Year	Budgeted	Actuals	% of Budgeted
2012-13	8,447	6,912	82%
2013-14	9,615	8,534	89%
2014-15	10,635	7,087	67%
2015-16	9,082	8,616	95%
2016-17	9,500	8,854	93%
2017-18	9,500	8,694	92%
2018-19	9,975	8,418	84%
2019-20	9,200	9,200	100%

Note: The 'Actuals' figure for 2019-20 is the revised estimate.
Sources: Union Budget 2012-13 to 2020-21; PRS.

Shortfall and underutilisation of funds: The Standing Committee on Rural Development (2018-19) noted shortfall of funds for the scheme due to the slow rate of fund release.[11] The reason given by the Ministry for the same is non-submission of requisite documents by the states/UTs in time. This impacts the implementation of the scheme.[11] At the same time, the Committee also noted that there was continuous underutilisation of funds under the scheme. This can also be seen in Table 8. In 2018-19, 16% of the funds budgeted were not utilised. However, in 2019-20 the budgeted amount is estimated to be fully utilised.

National Rural Livelihoods Mission

National Rural Livelihoods Mission (NRLM) aims to reduce poverty through promotion of diversified and gainful self-employment and skilled wage employment opportunities. In 2020-21, the funds allocated to the scheme (Rs 9,210 crore) comprise 7.7% of the Department's finances.

Table 9 shows the actual expenditure by states under the scheme from 2012-13 to 2019-20.

Table 9: Expenditure under NRLM (Rs crore)

Year	Budgeted	Actuals	% of Budgeted
2012-13	3,915	2,195	56%
2013-14	4,000	2,022	51%
2014-15	4,000	1,413	35%
2015-16	2,705	2,514	93%
2016-17	3,000	3,157	105%
2017-18	4,500	4,327	96%
2018-19	5,750	5,783	101%
2019-20	9,024	9,024	100%

Note: From 2015-16, allocation to start-up village entrepreneurship program has also been included.
Sources: Union Budgets 2012-13 to 2020-21; PRS.

Department of Land Resources

The Department of Land Resources implements two key schemes: (i) Integrated Watershed Development Component of Pradhan Mantri Krishi Sinchai Yojana (WDC-PMKSY), and (ii) Digital India Land Records Modernisation Programme (DILRMP). This year, the

Department saw a 18% increase in allocation, over the revised estimates of 2019-20.

Out of the Rs 2,251 crore allocated to the Department, Rs 2,000 crore will be spent on WDC-PMKSY, and Rs 239 crore will be spent on DILRMP. The allocation for WDC-PMKSY has increased by 9% and the allocation for DILRMP has increased by 377%, from the revised estimates of the previous year.

Table 10: Budgetary allocation to the Department of Land Resources (Rs crore)

Major Heads	Actuals 18-19	Revised 19-20	Budgeted 20-21	% Change (RE to BE)
WDC - PMKSY	1,786	1,838	2,000	9%
DILRMP	68	50	239	377%
Secretariat	10	12	13	5%
Total	1,864	1,900	2,251	18%

Note: WDC - Watershed Development Component PMKSY is Pradhan Mantri Krishi Sinchai Yojana. DILRMP is Digital India Land Records Modernisation Programme. BE is budget estimate and RE is revised estimate.
Sources: Demands for Grants 2020-21, Department of Land Resources, Ministry of Rural Development; PRS.

Watershed Development Component of Pradhan Mantri Krishi Sinchai Yojana

The Integrated Watershed Management Programme aims to develop rain fed portions of net cultivated area and culturable wastelands.[12] In 2015, it was subsumed as one of the components of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY).

The activities under Watershed Development Component are drainage line treatment, soil and moisture conservation, rain water harvesting, and afforestation, among others.

The scheme received the highest allocation of Rs 2,000 crore (89%) under the Department's budget. Table 11 shows the actual expenditure by states under the scheme from 2015-16 to 2019-20. Note that there is under-utilisation of the budgeted amounts since the last four years.

Table 11: Expenditure under WDC-PMKSY (Rs crore)

Year	Budgeted	Actuals	% of Budgeted
2015-16	1,530	1,527	100%
2016-17	1,550	1,510	97%
2017-18	2,150	1,671	78%
2018-19	2,251	1,786	79%
2019-20	2,066	1,838	89%

Note: Values for 2019-20 is revised estimate.
Sources: Union Budgets 2015-16 to 2020-21; PRS.

Completion of projects: The Standing Committee on Rural Development (2019-20) noted that as of November 2019, of the 8,214 sanctioned projects, 2,770 (34%) projects have been reported completed.[13] The Committee recommended that the delay in completion of projects needs to be resolved fast.

Digital India Land Records Modernisation Programme (DILRMP)

DILRMP is a part of the Digital India initiative.[14] The scheme was changed into a Central Sector Scheme in April 2016.[15] With this change, the scheme is now implemented by the central government with 100% of the grants coming from the centre.

The major components of the programme include: (i) computerisation of all existing land records, (ii) digitisation of maps, (iii) survey/re-survey, and updating of all the settlement records, and (iv) computerisation of registration and its integration with the land records maintenance system.

In 2020-21, the programme has been allocated Rs 239 crore, which is a 377% increase over the revised estimates of 2019-20. **Table 13** shows the trends in allocation and actual expenditure on the programme over the past ten years. Note that there is significant underspending across all the years. In 2018-19, the expenditure on the scheme was 27% of the budget estimates for the year. Similarly, 2019-20, the revised estimates for the scheme are 33% of the budget estimates for the year.

Table 12: Budgeted versus actual expenditure on Land Records Modernisation Programme (Rs crore)

Year	Budgeted	Actuals	% of Budgeted
2010-11	200	156	78%
2011-12	150	106	71%
2012-13	150	95	63%
2013-14	378	213	56%
2014-15	250	179	72%
2015-16	90	40	44%
2016-17	150	139	93%
2017-18	150	93	62%
2018-19	250	68	27%
2019-20	150	50	33%

Note: The 'utilised' figure for 2019-20 is the revised estimate.
Sources: Union Budgets 2009-10 to 2020-21; PRS.

Progress of components under DILRMP: DILRMP is currently being implemented in all states, but with differential progress.[16]

Land records have been computerised for 90% of the villages.[16] However, the mutation records (recording the transfer of ownership) have been computerised for only 59% of the villages.[16] This means that the remaining 41% of the villages do not have updated records with the current data on ownership. If the intent of digitising records is to have easy access to correct data, real time updating of property records becomes essential.

However, real time updation of Record of Right (RoR) and maps has been done for only 22% of the villages.[16] The RoR is the primary record that shows how rights on land are derived for the land owner, and records the property's transactions from time to time. 22 states/ UTs have started issuing digitally signed RoRs.[16]

Slow pace of work: The Standing Committee on Rural Development (2019-20) noted that the work under the programme is being completed at a slow pace. It recommended the Ministry to ensure expeditious completion of modernisation of land records in all states.[13]

[1] The National Rural Employment Guarantee Act, 2005 https://nrega.nic.in/amendments_2005_2018.pdf.

[2] Mahatma Gandhi National Rural Employment Guarantee Act, 2005, Operational Guideline 2013, https://nrega.nic.in/Circular_Archive/archive/Operational_guidelines_4thEdition_eng_2013.pdf.

[3] MNREGA MIS Report, 2013-14 to 2019-20, Ministry of Rural Development, http://mnregaweb4.nic.in/netnrega/MISreport4.aspx.

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Demand for Grants: Human Resource Development

The Ministry of Human Resource Development consists of two departments: (i) school education and literacy, and (ii) higher education. In 2020-21, the Ministry has been allocated Rs 99,312 crore, the sixth highest allocation among all Ministries. The allocation constitutes 3% of the central government's estimated expenditure for 2020-21. This note presents the trends in expenditure, and discusses some of the issues related to the education sector.

The **Department of School Education and Literacy** under the Ministry is broadly responsible for education imparted between the ages of six to 18 years, i.e., school education. Under the Right to Education (RTE) Act, 2009 the government is mandated to provide elementary education to all children between six to 14 years of age. Secondary education is imparted between classes nine to 12 for children between 14-18 years of age.

In 2020-21, this Department has been allocated Rs 59,845 crore, accounting for 60% of the Ministry's total allocation.

The **Department of Higher Education** is responsible for higher education, and training for students above 18 years of age. Higher education includes undergraduate and postgraduate courses, doctoral degrees, and certificates following the completion of 12 years of schooling or equivalent.

In 2020-21, the Department has been allocated Rs 39,467 crore, accounting for 40% of the Ministry's total allocation.

Overview of finances

Budget Estimates 2020-21

The Ministry has been allocated Rs 99,312 crore in 2020-21. This is a 4.7% increase over the revised estimate of 2019-20.[1]

Table 3: Budget allocations for the MHRD (2020-21) (in Rs crore)

Department	Actuals 2018-19	RE 2019-20	BE 2020-21	% change (RE to BE)
School Education & Literacy	48,441	56,537	59,845	5.9%
Higher Education	31,904	38,317	39,467	3.0%
Total	**80,345**	**94,854**	**99,312**	**4.7%**

Note: BE – Budget Estimate; RE – Revised Estimates.
Sources: Expenditure Budget, Ministry of Human Resource Development, 2020-21; PRS.

Table 2 depicts the major heads under which the Ministry spends its funds (as a percentage of its total allocation). In 2020-21, expenditure on centrally sponsored schemes (Samagra Shiksha and Mid-Day Meal Programme in Schools) constitute 50% of the estimated spending of the Ministry. This is followed by expenditure towards autonomous bodies such as the Kendriya Vidyalaya Sangathan (9%) and grants to central universities (8%).

Table 2: Top expenditure heads for the Ministry (2020-21) (in %)

Expenditure head	Allocation (%)
Samagra Shiksha	39%
Mid-Day Meal Programme	11%
Autonomous Bodies	9%
Grants to Central Universities	8%
IITs	7%
UGC and AICTE	5%
Others	20%
Total	**100%**

Note: Autonomous Bodies include Kendriya Vidyalaya and Sangathan, Navodaya Vidyalaya Samiti.
'Others' includes other schemes and programmes under the Ministry each with an allocation of less than 5% of the total expenditure.
Sources: Expenditure Budget, Vol. 2, Ministry of Human Resource Development, 2020-21; PRS.

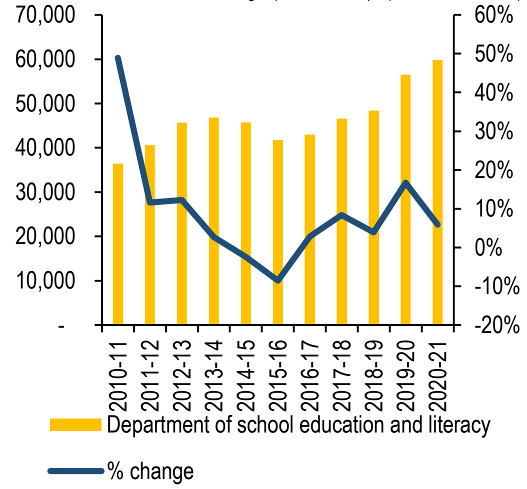
Budget speech highlights 2019-20

- A new National Education Policy will be released. The new Policy proposes major changes in both school education and higher education.
- To ensure greater inflow of finance in education, steps will be taken to enable sourcing external commercial borrowings and Foreign Direct Investment in India.
- About 150 higher educational institutions will start apprenticeship embedded degree and diploma courses by March 2021.
- As part of the 'Study in India' which focuses on bringing foreign students to study in Indian higher educational institutions, the government will hold Ind-SAT in Asian and African countries.

Department of School Education and Literacy

In 2020-21, the Department has been allocated Rs 59,845 crore, a 5.9% increase over the revised estimates of 2019-20.[1] Figure 1 shows the allocation of the Department of School Education and Literacy over the past 10 years (2010-20).

Figure 4: Allocation to Department of School Education and Literacy (2010-20) (in Rs crore)



Note: Revised estimates have been used for 2019-20 and Budget estimates for 2020-21.
Sources: Union Budgets, 2010-20; PRS.

Note that in 2015-16, the allocation was reduced by 9%. Since then, the allocation has been on an upward trajectory. Between 2010-11 and 2020-21, allocation to the Department has grown at an average annual rate of 5%. Table 3 compares actual allocation of the Department with the budget estimates. The utilisation in the last three years has been over 97% of the budget estimates.

Table 3: Comparison of budget estimates and the actual expenditure (2010-19) (in Rs crore)

Year	Budget estimate	Actuals	Actuals/BE (%)
2010-11	33,214	36,433	110%
2011-12	41,451	40,641	98%
2012-13	48,781	45,631	94%
2013-14	52,701	46,856	89%
2014-15	55,115	45,722	83%
2015-16	42,220	41,800	99%
2016-17	43,554	42,989	99%
2017-18	46,356	46,600	101%
2018-19	50,000	48,441	97%
2019-20	56,537	56,537*	*100%

Note: BE – Budget Estimate. *Revised Estimate
Sources: Union Budgets, 2012-20; PRS.

Table 4 presents the details of the Department's allocation in 2020-21. In July 2018, the Ministry launched the 'Samagra Shiksha' scheme, which subsumed three schemes, namely: (i) Sarva Shiksha Abhiyan (class 1-8), (ii) Rashtriya Madhyamik Shiksha Abhiyan (class 9-12), and (iii) Teacher Education.

In 2020-21, expenditure on centrally sponsored schemes (Samagra Shiksha and Mid-Day Meal Programme in Schools) constitute 87% of the estimated spending of the Department of School Education and Literacy.

Table 4: Allocation to the Department of School Education and Literacy in 2020-21 (in Rs crore)

Major Head	2018-19 Actuals	2019-20 RE	2020-21 BE	% change (RE to BE)
National Education Mission	29,437	36,292	38,861	7.1%
Samagra Shiksha		36,274	38,751	6.8%
Sarva Shiksha Abhiyan	25,616			
Rashtriya Madhyamik Shiksha Abhiyan	3,399			
Teachers Training and Adult Education	422	18	110	514.5%
National Programme of Mid-Day Meal in Schools	9,514	9,912	11,000	11.0%
Autonomous bodies	8,588	9,754	9,205	-5.6%
Scholarships	484	423	483	14.2%
Others	418	155	297	91.3%
Total	48,441	56,537	59,845	**5.9%**

Note: BE – Budget Estimate; RE – Revised Estimates.
Sources: Expenditure Budget, Ministry of Human Resource Development, Union Budget 2020-21; PRS.

- **Samagra Shiksha** has been allocated Rs 38,751 crore in 2020-21. This is an increase of 6.8% from the revised estimates of 2019-20. Note that, *Teacher Training and Adult Education* (subsumed under Samagra Shiksha) has been allocated Rs 110 crore in 2020-21. This is an increase of 515% from the revised estimates of 2019-20. However, the Department had budgeted to spend Rs 125 crore in 2019-20 which was revised down to Rs 18 crore.
- **Mid-Day Meal Scheme (MDMS):** Expenditure on Mid-Day Meal Scheme (MDMS) increased by about 11% in 2020-21 from the revised estimates of 2019-20. The MDMS targets children in the same age group

as covered by the SSA (6 to 14 years).

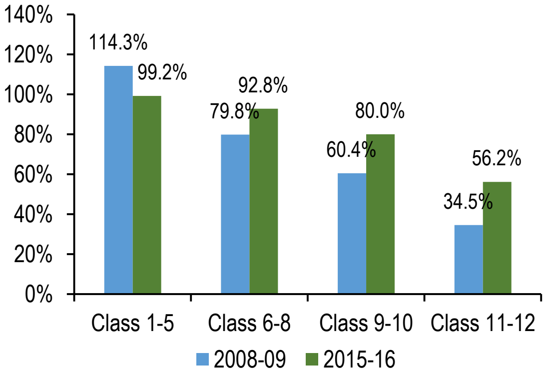
- **Autonomous bodies:** Autonomous bodies like the National Council of Educational Research and Training, and Kendriya Vidyalaya Sangathan saw a decrease in their allocation by 5.6% (from the revised estimates of last year) and were allocated Rs 9,205 crore in 2020-21.
- **Scholarships:** Scholarships saw an increase of 14.2% in its allocation in 2020-21. Scholarships provided by the Ministry include provisions of Rs 6,000 per year to one lakh meritorious students of economically weaker sections. The aim is to reduce drop-out of students in class eight and encourage them to continue schooling till class 12.

Issues in school education

Enrolment, transition and dropout rates

Enrolment: Gross Enrolment Ratio (GER) is the student enrolment as a proportion of the corresponding eligible age group in a given year. In 2015-16, enrolment in classes 1-5 was about 99.2%, which signals a more age appropriate (six to 10 years) class composition (see Figure 2).[2]

Figure 2: Changes in GER in school education



Sources: Education statistics at a glance, Ministry of Human Resource Development, 2018; PRS.

The GER at the upper primary (92.8%), secondary (80%) and senior secondary (56.2 %) levels have increased in the last few years. Note that, while enrolment has gone up at the secondary level, overall there is a decline in the number of children staying in school (See Figure 7).

Also, the amount of funds being spent on elementary education (class 1-8) has been significantly higher than the expenditure on secondary education (class 9-12). Table 5 captures the expenditure for Sarva Shiksha Abhiyan and Rashtriya Madhyamik Shiksha Abhiyan since 2014-15.

Table 5: Expenditure under school education schemes (in Rs crore)

Year	SSA	RMSA	Total
2014-15	24,123	3,398	27,521
2015-16	21,590	3,562	25,152
2016-17	21,678	3,699	25,377
2017-18	19,319	3,602	22,921
Year			Samagra Shiksha
2018-19			29,294
2019-20			25,404

Note: Numbers for 2019-20 are as of January 1, 2020. SSA and RMSA subsumed under Samagra Shiksha in 2018-19.
Source: Lok Sabha, Unstarred Question No. 205, Ministry of Human Resource Development, February 3, 2020; PRS.

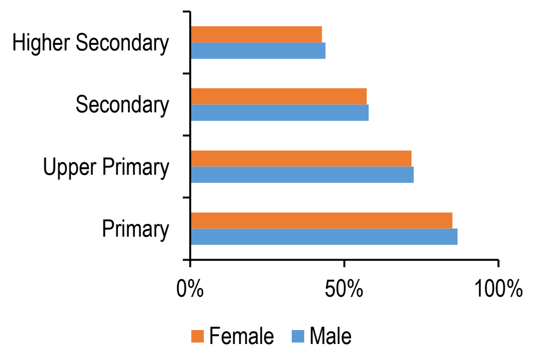
India's enrolment rate in primary education (class 1-5) is comparable to that of developed countries. However, it falls behind these countries after class 6 (see Figure 3).

Figure 3: International comparison of GER (2015) (in %)

Sources: Education statistics at a glance, Ministry of Human Resource Development, 2018; PRS.

Attendance: Attendance is the ratio of the number of persons in the official age group attending a particular class-group to the total number persons enrolled in school in that age-group. The attendance for both boys and girls falls as the level of education rises in school education. As Figure 4 indicates there is negligible difference between the attendance of boys and girls.

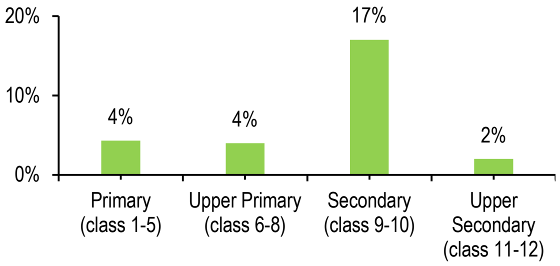
Figure 4: Attendance in school education (2018)



Sources: Key Indicators of Social Consumption in India: Education, NSSO, 2018; PRS.

Transition and dropouts: The dropout rate peaks at the secondary level (class 9-10) at 17% as compared to 4% in elementary school (class 1-8) and 2% in upper secondary school (class 11-12) (see Figure 5). This is also reflected in the transition rates in school education where the lowest transition rate is at the secondary level (class 10 to 11) at 66%. Note that a transition rate below 100% indicates that the students are held back or have dropped out of school.

Figure 5: Dropout rate in school education (2014-15) (%)



Sources: Education statistics at a glance, Ministry of Human Resource Development, 2016; PRS.

According to NSSO data (2018), the key reasons for females dropping out is to engage in domestic activities (30%), lack of interest in education (15%), and marriage (13%). On the other hand, the key reasons for males dropping out is to engage in economic activities (37%), financial constraints (24%), and lack of interest in education (19%).[3]

Till 2019, under the RTE Act, a child could not be expelled or detained until the completion of elementary education (until class 8). However, RTE Act was amended in 2019 to remove the provision related to no-detention to address low learning outcomes. Note that, the Draft National Education Policy (2019) recommends that the amendments to the RTE Act on continuous and comprehensive evaluation and the no detention policy must be reviewed. It states that there should be no detention of children till class eight. Instead, schools must ensure that children are achieving age appropriate learning levels.[4]

Quality of learning

Elementary education: Over the years, expert committees have made some adverse observations regarding the learning outcomes of children. The Central Advisory Board on Education (CABE, 2014), National Achievement Survey (2012 and 2017), and the Economic Survey (2016-17) observed declining learning levels in elementary education even after the implementation of the RTE Act.[5,6,7,8]

As per the Annual Status of Education Report, between 2014 to 2018, there has been a gradual improvement in both basic literacy and numeracy for class three students but still only 25% of them are at grade level (ability to read and do basic operations like subtraction of class two level). The report also shows that one out of four children leaving class eight are without basic reading skills (ability to read at least at class two level).[9]

Under the RTE Act, children are enrolled in the class that corresponds to their age, irrespective of their learning levels. This results in a situation where in the same class, depending on when they are enrolled in school, children may have different learning requirements. It has been recommended that special training be organised and is of flexible duration to enable the child to be at par with other children and to ensure his integration with the class.[10] Note that, the RTE Rules were amended in February 2017 to include class-wise, subject-wise learning outcomes till class eight.[11]

Secondary education: In the National Achievement Survey (2015) for class 10, in the English subject, 24% students were in the range of 0-35% score and 61% students were in the range of 36-50% score. Further, 35% students were in 0-35% scores, and 49% students were in the range of 36-50% scores in Mathematics.[12]

Nature of assessment: Under the RTE Act, the Continuous and Comprehensive Evaluation (CCE) method is used for evaluating learning levels in elementary education. It includes paper-pencil tests, drawing and reading pictures, and expressing orally, and is different than the traditional system of examinations. However, CCE has not been adequately implemented or monitored.[5] It has been recommended that proper design of assessment and using this information can help improve the quality and innovation in terms of teaching and learning.[13]

Note that the RTE Act 2009 has been amended state that a regular examination will be held in class 5 and class 8 at the end of every academic year. If a child fails the exam, he will be given additional instruction, and take a re-examination. If he fails in the re-examination, the relevant central or state government may decide to allow schools to detain the child.

The Draft National Education Policy (2019) noted that the current education system solely focuses on rote learning of facts and procedures. Hence, it recommends that the curriculum load in each subject should be reduced to its essential core content. This would make space for holistic, discussion and analysis-based learning.[4]

Other issues

Teachers related issues: Experts have identified various issues with regard to the role of teachers to address the challenges confronting elementary education.[4,14,10] These include: (i) low teacher accountability and appraisal, (ii) poor quality of the content of teacher-education and changes required in the curriculum of B. Ed and D. Ed courses, (iii) need for continuous in-service teacher training and upgradation of skill set, (iv) inadequate pupil teacher ratio and deployment of teachers for non-educational purposes, (v) teacher vacancies, and (vi) excessive recruitment of contract/para teachers.

In 2017, nine lakh posts of teachers were vacant in elementary schools.[15] Further, more than one lakh teacher posts were vacant in secondary schools. The draft National Education Policy (2019) recommends that teachers should be deployed with a particular school complex (comprising one secondary school and all the public schools in its neighbourhood) for at least five to seven years. Further, teachers should not be allowed to participate in any non-teaching activities (such as cooking mid-day meals or participating in vaccination campaigns) during school hours that could affect their teaching capacities.

For teacher training, the draft Policy recommends that existing B.Ed. programme be replaced by a four-year integrated B.Ed. programme that combines high-quality content, pedagogy, and practical training. An integrated continuous professional development will also be developed for all subjects. Teachers will be required to complete a minimum of 50 hours of continuous professional development training every year.

The Right to Education Act, 2009 (RTE Act): Currently, the RTE Act provides for free and compulsory education to all children from the age of six to 14 years. The draft National Education Policy (2019) recommended extending the ambit of the RTE Act to include early childhood education and secondary school education.

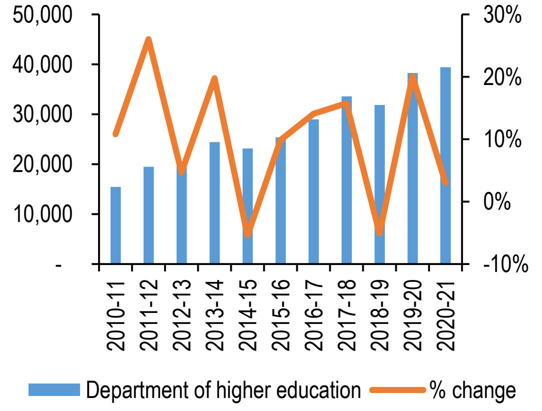
School accountability: In 2014, CABE recommended introducing a performance management system for all teachers, school leaders, and department officials, with performance measures linked with student learning outcomes.[5] Such measures of school accountability exist in other countries. For example, in the United States, under the No Child Left Behind Act, schools are required to do annual assessment of learning outcomes in reading and mathematics for students from classes 3 to 8. If the school fails to achieve minimum test scores then the consequences include removal of teachers or the headmaster from service, school restructuring or closure, and an option for students to transfer to another school.[16]

Department of Higher Education

The Department of Higher Education has been allocated Rs 39,467 crore in 2020-21, a 3% increase over the revised estimate of 2019-20. Figure 6 depicts the allocation to the Department of Higher Education since 2010-11.

Expenditure on education by the centre and the states as a proportion of the Gross Domestic Product (GDP) has been around 3% between 2014-15 to 2018-19.[17] Out of this figure, roughly 1% is spent on higher education in India.

Figure 6: Allocation to the Department of Higher Education (2010-20) (in Rs crore)



Note: Revised estimates have been used for 2019-20 and budget estimates for 2020-21.
Sources: Union Budgets, 2008-20; PRS.

Table 6 indicates the actual allocation of the Department compared to the budget estimates of that year. The utilisation has been over 90% of the budget estimates in the last three years as seen in the table. In 2016-17 and 2017-18, the Department exceeded its budget estimates, i.e., crossed 100% utilisation.

Table 6: Comparison of budget estimates and the actual expenditure (2010-19) (in Rs crore)

Year	Budget Estimate	Actuals	Actuals/BE (%)
2010-11	16,690	15,472	93%
2011-12	21,912	19,505	89%
2012-13	25,275	20,423	81%
2013-14	26,750	24,465	91%
2014-15	27,656	23,152	84%
2015-16	26,855	25,439	95%
2016-17	28,840	29,026	101%
2017-18	33,330	33,614	101%
2018-19	35,010	31,904	91%
2019-20	38,317	38,317*	100%

Note: BE – Budget Estimate. *Revised Estimate
Sources: Union Budgets, 2010-20 PRS.

Table 7 provides the major heads of financial allocation under the Department for 2020-21.

Table 7: Allocation to the Department of Higher Education in 2020-21 (in Rs crore)

Major Heads	2018-19 Actuals	2019-20 RE	2020-21 BE	% change (RE to BE)
Grants to Central Universities	6,599	8,287	7,643	-8%
IITs	5,590	6,560	7,332	12%
UGC and AICTE	5,114	4,857	5,109	5%
NITs	3,389	3,547	3,885	10%
Student Financial Aid	1,897	2,321	2,316	0%
Higher Education Financing Agency (HEFA)	2,263	2,100	2,200	5%
Improvement in salary of teachers	469	1,800	1,900	6%
IISERs	620	841	896	7%
IIMs	351	501	476	-5%
Digital India-e-learning	455	541	444	-18%
World Class Institutions	127	325	400	23%
IIITs	428	375	393	5%
Research and Innovation	205	340	307	-10%
Rashtriya Uchhatar Shiksha Abhiyan (RUSA)	1,393	1,380	300	-78%
Others	3,005	4,543	5,864	29%
Grand Total	**31,904**	**38,317**	**39,467**	**3%**

Sources: Expenditure Budget, Vol. 2, Ministry of Human Resource Development, Union Budget 2020-21; PRS.

Key allocation trends are as follows:

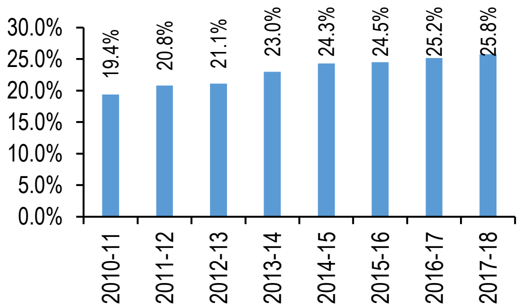
- About 51% of the Department's expenditure has been allocated to central universities (as grants), IITs, and statutory and regulatory bodies (University Grants Commission (UGC) and All India Council for Technical Education (AICTE)).
- The bulk of the enrolment in higher education is handled by state universities and their affiliated colleges. However, these state universities receive small amounts of grants from the Union Budget. Nearly 65% of the UGC's budget is utilised by the central universities and their colleges while state universities and their affiliated colleges get only the remaining 35%.[18] The Standing Committee on Human Resource Development (2016) recommended that the mobilisation of funds in state universities should be explored through other means such as endowments, and contributions from industry and alumni.[18]
- The Higher Education Financing Agency (HEFA) has been allocated Rs 2,200 crore for 2020-21, a 5% decrease over the revised estimates of 2019-20. HEFA is tasked with the creation of high quality infrastructure in premier educational institutions. All the centrally funded higher educational institutions are eligible for joining as members of the HEFA.[19] Note that HEFA is jointly promoted by Canara Bank and the Ministry of Human Resource Development with an authorised capital of Rs 10,000 crore. HEFA has been tasked to mobilise one lakh crore rupees to meet the infrastructure needs of higher educational institutions by 2022. So far, the HEFA has approved 75 projects of higher and medical educational institutions amounting to Rs 25,565 crore.[20]
- Allocation to World Class Institutions in 2020-21 is Rs 400 crore, an increase of 23% from the revised estimates of 2019-20. The government has selected ten private institutions and eight public institutions as institutes of eminence.[21] These institutions will have greater autonomy in admitting foreign students, fixing fees, and recruiting foreign faculty. Further, each public institution declared as an institute of eminence will get financial assistance of up to Rs 1,000 crore over the period of five years.
- The funding allocation for Rashtriya Uchchtar Shiksha Abhiyan (RUSA) has significantly decreased by 78% at Rs 300 crore (from the 2019-20 revised estimates). RUSA aims to improve the overall quality of existing state higher educational institutions by ensuring conformity to prescribed norms and standards. Note that, in 2018, the Union Cabinet approved the continuation of the scheme till March 31, 2020.

Issues in the higher education sector

Enrolment levels

In India, GER in higher education has almost tripled over a period of 15 years, going from 9% in 2002-03 to 26% in 2017-18 (see Figure 7).[22,23]

Figure 7: GER in higher education (2010-18)

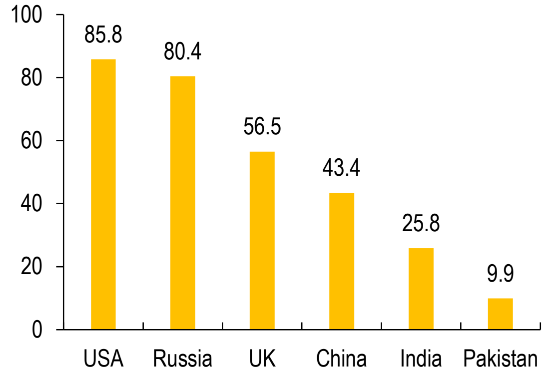


Sources: All India Survey on Higher Education, 2017-18; PRS.

A GER of 26% implies that 26% of people in the target age-group are enrolled in universities. The GER for higher education in India is fairly low compared to other countries such as the UK and USA (Figure 8). The Draft National Education

Policy (2019) states that it aims to increase GER to 50% by 2035.[4]

Figure 8: International comparison of GER in higher education (in %) (2018)



Sources: Education Statistics at a Glance, Ministry of Human Resource Development, 2018; PRS.

Student enrolment is highest at the UG level (79.2%) followed by PG (11.2%). The recent AISHE 2017-18 report reveals that student enrolment decreases as one goes further higher from the undergraduate level of education.[23]

Regulatory issues in higher education

Over the years, several expert bodies such as the National Knowledge Commission (2009), the Yashpal Committee (2010), and the Committee for Evolution of the New Education Policy (2016) have suggested measures to reform higher education to address issues related to access, quality, funding and governance.[24,25,26] Noting that the current system is overregulated but under governed, these bodies recommended consolidating all existing regulators under an independent regulator. This body was envisaged to perform its regulatory functions without interfering with the academic and institutional autonomy of higher educational institutions.[4]

The Draft National Education Policy (2019) proposed setting up of the National Higher Education Regulatory Authority (NHERA).[4] This independent authority would replace the existing individual regulators in higher education, including professional and vocational education. This implies that the role of all professional councils such as the Bar Council of India would be limited to setting standards for professional practice. UGC's role would be limited to providing grants to higher education institutions.

Note that the government had released the draft Higher Education Commission of India (Repeal of University Grants Commission Act) Bill, 2018 in June 2018. It seeks to replace the UGC and set up a Higher Education Commission.[27]

Quality standards in higher education

Currently, there are two accrediting institutions – (i) the National Board of Accreditation (NBA) established by AICTE, and (i) the National Assessment and Accreditation Council (NAAC) established by UGC. In terms of the quality of universities, out of 323 universities accredited by the NAAC in the most recent cycle, only 23 universities have been given an 'A+' grade.[28]

The Standing Committee on Human Resource Development (2016) noted that accreditation of higher educational institutions needs to be at core of the regulatory arrangement in higher education. It recommended that credit rating agencies, reputed industry associations, and professional bodies should be encouraged to rate Indian universities and educational institutions.[29]

The draft National Education Policy (2019) recommended separating NAAC from the UGC into an independent and autonomous body.[4] In its new role, NAAC will function as the top level accreditor, and will issue licenses to different accreditation institutions, who will assess higher educational institutions once every five to seven years. All existing higher education institutions should be accredited by 2030.

Private sector and profit motive in higher education

A UGC report in 2012 noted that the distribution of public and private institutions in India is skewed. This is because enrolment in public universities is largely concentrated in conventional disciplines (arts and sciences) whereas in private institutions, more students are enrolled in market-driven disciplines (engineering, management, etc.).[30] Thus, with a rise in private universities, there is a mismatch of the demand and supply of subject disciplines in the private sector education.

The National Knowledge Commission noted that while private investment is high in the disciplines of engineering, medicine and management; majority of enrolment is still taking place in the traditional disciplines like arts.[25] The Yashpal Committee further noted that the private sector should not confine itself to the commercially viable sectors such as management, accountancy, and medicine as this leads to the responsibility of the government to maximise enrolment in general subjects.[24]

Fee Structure

The Standing Committee on Human Resource Development has been observed that many private institutions of higher education charge exorbitant fees. [31] In the absence of well-defined norms, fees charged by such universities have remained high. UGC regulates fees for courses offered in deemed universities, to an extent. They state that the fees charged shall be directly linked to the cost of running the course and the institution shall ensure non-commercialisation of education. In 2002, the Supreme Court ruled that the fees charged by private unaided educational institutes could be regulated.[32] Also, while banning capitation fee (fees exceeding the tuition fee), it allowed institutes to charge a reasonable surplus.

AICTE had constituted a Committee in 2014 under Justice Srikrishna to recommend the fee to be charged by the private technical educational institutes in the country.[33] The Committee recommended the maximum tuition and development fee to be charged.

Teacher related issues

According to UGC, out of the total teaching posts of 17,425 in various UGC funded Central Universities, 6,141 (35%) teaching posts are lying vacant.[34] Further, in 20 Indian Institute of Management (IIMs), out of the 1,004 total sanctioned teaching posts, 253 posts are lying vacant;[35] and in 7 IISERs and IISc, Bangalore, the total number of sanctioned teaching posts is 1,117 and 153 are lying vacant.[36]

The Standing Committee on Human Resource Development (2017) reasoned that this could be due to two reasons: (i) young students not finding the profession of teaching attractive; or (ii) the recruitment process is long and involves too many procedural formalities.[18]

The Draft National Educational Policy (2019) observed that poor service conditions and heavy teaching loads at higher education institutions have resulted in low faculty motivation.[4] Further, lack of autonomy and no clear career progression system are also major impediments to faculty motivation. It recommended development of a Continuous Professional Development programme and introduction of a permanent employment (tenure) track system for faculty in all higher education institutions by 2030. Further, a desirable student-teacher ratio of not more than 30:1 must be ensured.

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Annexure

Union Budget, 2020-21

Table 1: Allocations to the Ministry of Human Resource Development for 2020-21 (in Rs crore)

Major Heads	2018-19 Actuals	2019-20 Budgeted	2019-20 Revised	Change between BE 2019-20 and RE 2019-20	2020-21 Budgeted	Change between RE 2019-20 and BE 2020-21
Department of School Education and Literacy	48,441	56,537	56,537	16.7%	59,845	**5.9%**
Scholarships	484	468	423	-12.6%	483	**14.2%**
Autonomous bodies	8,588	8,440	9,754	13.6%	9,205	**-5.6%**
National Education Mission	29,437	36,447	36,292	23.3%	38,861	**7.1%**
Samagra Shiksha		36,322	36,274		38,751	**6.8%**
Sarva Shiksha Abhiyan	25,616			-100.0%		
Rashtriya Madhyamik Shiksha Abhiyan	3,399			-100.0%		
Teachers Training and Adult Education	422	125	18	-95.8%	110	**514.5%**
National Programme of Mid-Day Meal in Schools	9,514	11,000	9,912	4.2%	11,000	**11.0%**
Others	418	181	155	-62.8%	297	**91.3%**
Department of Higher Education	**31,904**	**38,317**	**38,317**	**20.1%**	**39,467**	**3.0%**
Higher Education Financing Agency (HEFA)	2,263	2,100	2,100	-7.2%	2,200	**4.8%**
Student Financial Aid	1,897	2,306	2,321	22.4%	2,316	**-0.2%**
Digital India-e-learning	336	456	511	52.1%	579	**13.3%**
Research and Innovation	205	609	340	65.7%	307	**-9.5%**
Statutory and regulatory bodies (UGC and AICTE)	5,114	5,059	4,857	-5.0%	5,109	**5.2%**
Grants to Central Universities	6,599	6,843	8,287	25.6%	7,643	**-7.8%**
Indian Institutes of Technology	5,590	6,410	6,560	17.4%	7,332	**11.8%**
Indian Institutes of Management	351	446	501	42.8%	476	**-4.9%**
National Institutes of Technology	3,389	3,787	3,547	4.7%	3,885	**9.5%**
Indian Institute of Science, Education and Research (IISERs)	620	899	841	35.6%	896	**6.5%**
Indian Institutes of Information Technology(IIITs)	428	375	375	-12.5%	393	**5.0%**
Rashtriya Uchhatar Shiksha Abhiyan (RUSA)	1,393	2,100	1,380	-0.9%	300	**-78.3%**
Improvement in Salary Scale of University and College Teachers	469.17	2000	1800	283.7%	1,900	**5.6%**
World Class Institutions	127	400	325	-18.0%	400	**23.0%**
Others	3,005	4,405	4,543	3.1%	5,864	**29.1%**
Total	**80,345**	**94,854**	**94,854**	**18.1%**	**99,312**	**4.7%**

Sources: Demand for Grants, Ministry of Human Resource Development, Union Budget, 2020-21; PRS.

Indicators on school and higher education

Table 2: Enrolment in education in 2016-17 (as a percentage of respective population)

State/ UT	GER in Elementary Education (Classes 1-8)			GER in Secondary Education (Classes 9-12)		GER in Higher Education (Beyond class 12)
	Primary	Upper Primary	Total Elementary	Secondary	Higher Secondary	
Andhra Pradesh	82.8	82.1	82.5	76.3	60.6	32.4
Arunachal Pradesh	106.2	119.9	110.4	85.9	51.2	29.7
Assam	107.4	96.7	103.7	78.6	39.7	18.7
Bihar	98.1	103.9	99.9	76.7	28.8	13.6
Chhattisgarh	97.1	100.8	98.5	87.7	54.5	18.6
Goa	101.3	97.1	99.7	99.3	78.7	30.1
Gujarat	95.0	97.2	95.8	74.5	43.2	20.4
Haryana	93.9	94.4	94.1	86.3	60.8	29.2
Himachal Pradesh	97.9	103.0	99.8	103.9	92.0	39.6
Jammu & Kashmir	77.1	66.2	73.0	61.7	52.9	30.9
Jharkhand	96.6	91.8	95.0	63.5	37.1	19.1
Karnataka	103.7	2.9	99.7	84.4	41.9	28.8
Kerala	95.1	93.6	94.6	99.4	79.4	37.0
Madhya Pradesh	92.1	89.7	91.3	80.2	47.1	21.5
Manipur	120.6	119.3	120.2	86.5	64.4	33.7
Maharashtra	97.5	98.7	97.9	91.7	70.7	32.0
Meghalaya	129.1	128.0	128.8	83.3	40.6	25.8
Mizoram	115.7	127.5	119.3	95.9	54.6	25.7
Nagaland	81.7	90.4	84.4	61.8	36.3	18.7
Odisha	100.2	94.6	98.1	79.9	40.1	22.1
Punjab	99.3	97.7	98.7	87.1	72.2	29.5
Rajasthan	97.8	92.0	95.8	76.6	60.3	23.0
Sikkim	92.0	136.8	106.9	112.0	64.2	53.9
Tamil Nadu	102.0	93.4	98.6	93.9	83.7	49.0
Telangana	98.6	86.9	94.1	81.8	50.6	36.2
Tripura	102.4	126.4	110.0	112.3	41.9	19.2
Uttar Pradesh	87.2	72.7	82.1	67.8	59.0	25.8
Uttarakhand	96.4	86.7	92.7	84.4	77.1	39.1
West Bengal	96.3	96.3	96.3	78.6	50.9	19.3
Andaman & Nicobar Islands	86.9	83.1	85.4	84.1	72.8	23.2
Chandigarh	80.1	95.6	85.8	89.7	83.2	50.6
Dadra & Nagar Haveli	82.9	91.6	86.0	91.2	51.8	9.3
Daman & Diu	84.0	81.1	82.9	73.3	34.6	5.5
Delhi	109.2	129.0	115.9	114.4	74.2	46.3
Lakshadweep	70.0	81.4	79.8	105.7	97.9	7.4
Puducherry	85.6	84.8	85.3	87.5	74.2	46.4
India	**95.1**	**90.7**	**93.6**	**79.4**	**55.4**	**26.3**

Note: Enrolment rate can exceed 100% due to early or late school entrance and grade repetition, or for example, children not in the 6-14 age group still being enrolled in elementary school. Data for higher education is of 2018.
Sources: Flash Statistics, DISE 2016-17; AISHE 2018-19, Ministry of Human Resource Development; PRS.

Table 3: Pupil Teacher Ratio (2015-16)

State/UT	Management Type (in %) (2016-17)			Pupil Teacher Ratio (2015-16)				
	Private schools	Government schools	Others	Primary (Classes 1-5)	Upper Primary (Classes 6-8)	Secondary (Classes 9-10)	Higher secondary (Classes 11-12)	Higher (Beyond class 12)
Andhra Pradesh	26.4	72.6	0.89	21	16	20	71	18
Arunachal Pradesh	13.6	85.2	1.08	12	7	22	37	31
Assam	13.7	74.2	12.07	21	13	14	20	31
Bihar	5.4	88.1	6.38	36	24	66	59	61
Chhattisgarh	12.5	57.7	2.49	20	17	33	27	28
Goa	34.7	56.2	-	20	16	13	18	16
Gujarat	34.9	65.9	0.01	19	13	34	29	26
Haryana	32.3	63.5	4.12	20	13	15	15	26
Himachal Pradesh	14.9	85.07	0.01	12	10	18	14	27
Jammu & Kashmir	18.3	81.6	0.01	9	6	15	29	35
Jharkhand	5.4	83.8	10.75	27	19	62	78	60
Karnataka	34.3	65.5	0.07	19	13	16	30	15
Kerala	61.1	29.5	9.28	18	14	17	21	18
Madhya Pradesh	18.4	80.4	1.11	20	18	39	38	33
Maharashtra	37.5	61.7	0.64	24	17	23	44	27
Manipur	30.8	66.7	2.43	12	8	12	19	22
Meghalaya	44.8	53.6	1.52	21	13	12	21	26
Mizoram	31.8	66.7	1.44	14	6	9	15	18
Nagaland	25.9	74.0	-	10	6	15	21	19
Odisha	14.2	82.3	3.61	17	14	20	45	27
Punjab	25.9	71.0	3.07	18	12	16	26	18
Rajasthan	32.3	63.8	2.52	17	10	21	32	29
Sikkim	33.6	66.3	-	5	5	17	15	27
Tamil Nadu	33.2	66.0	0.7	18	15	21	25	17
Telangana	30.9	68.2	0.88	23	15	22	47	18
Tripura	7.08	88.8	4.07	10	8	28	11	33
Uttar Pradesh	34.4	66.4	4.03	39	31	56	97	46
Uttarakhand	10.1	86.2	3.56	18	17	16	25	27
West Bengal	10.7	86.0	3.14	25	27	39	57	35
Andaman & Nicobar Islands	17.1	83.0	-	8	6	14	16	25
Chandigarh	39.8	57.7	2.49	13	9	13	28	28
Dadra & Nagar Haveli	12.3	86.7	0.86	17	13	30	30	29
Daman & Diu	17.1	82.0	-	26	14	17	13	14
Delhi	51.3	48.7	-	24	17	30	21	52
Lakshadweep	-	100.0	-	7	7	7	12	12
Puducherry	42.4	57.5	-	14	9	11	17	13
India	**25.2**	**71.7**	**3.04**	**23**	**17**	**27**	**37**	**26**

Note: Government schools consist of schools run by department of education, tribal/social welfare department, local body, other government and central government. Private schools consist of private aided and private unaided schools, 'Others' comprises Madrasas and unrecognised schools. Type of management of schools is for 2016-17. Pupil teacher ratio is for 2015-16, except for higher education which is for 2018-19.

Sources: Flash Statistics, U-DISE 2016-17; AISHE 2018-19, Educational Statistics at a Glance 2018; Ministry of Human Resource Development; PRS

Demand for Grants: Road Transport and Highways

The Ministry of Road Transport and Highways formulates and administers policies for road transport, and transport research. It is also involved with the construction and maintenance of the National Highways (NHs) through the National Highways Authority of India (NHAI), and the National Highways and Infrastructure Development Corporation Limited (NHIDCL). It also deals with matters relating to road transport such as implementation of central legislation such as the Motor Vehicles Act, 1988.

This note looks at the proposed expenditure of the Ministry for the year 2020-21, its finances over the last few years, and issues with the same.

Allocations in Union Budget 2020-21

Fund allocation[1]

The total expenditure on the Ministry of Road Transport and Highways for 2020-21 is estimated at Rs 91,823 crore. This is 11% higher than the revised estimates for 2019-20.

In 2020-21, capital expenditure is estimated at Rs 81,975 crore while revenue expenditure is estimated at Rs 9,849 crore. Note that in 2014-15, the ratio between revenue and capital expenditure was 50:50. In 2015-16, this ratio changed, with the Ministry spending more funds on capital expenditure. Since then, the Ministry has increased its capital expenditure significantly, while revenue expenditure has gradually declined. In 2020-21, 89% of the Ministry's spending is estimated to be on capital expenditure.

Table 4: Budget allocations for the Ministry of Road Transport and Highways (in Rs crore)

	2018-19 Actual	2019-20 Revised	2020-21 Budget	% Change BE 2020-21/ RE 2019-20
Revenue	9,655	10,854	9,849	-9%
Capital	67,646	72,162	81,975	14%
Total	**77,301**	**83,016**	**91,823**	**11%**

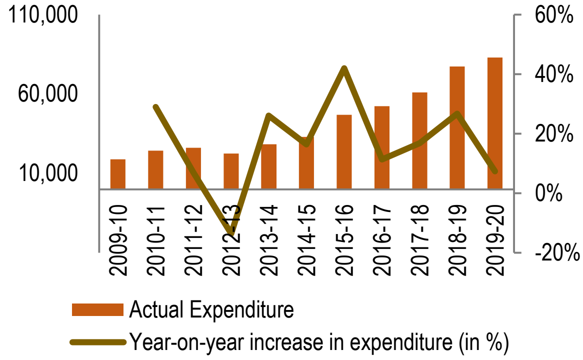
Notes: BE – Budget Estimate; RE – Revised Estimate.
Sources: Demands for Grants 2020-21, Ministry of Road Transport and Highways; PRS.

Overview of Finances

Utilisation of funds

In the past few years, the expenditure of the Ministry has seen a significant increase, with the maximum year-on-year increase at 42% seen in 2015-16.

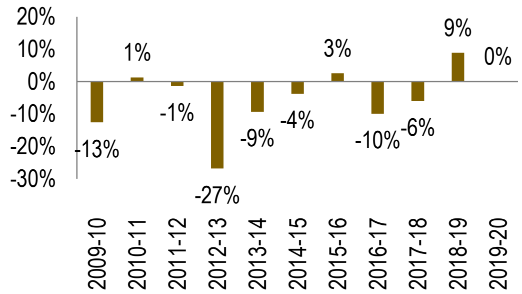
Figure 5: Actual expenditure by the Ministry (in Rs crore)



Notes: Figures for 2019-20 are revised estimates.
Sources: Ministry of Road Transport and Highways budget documents 2009-20; PRS.

However, usually the actual expenditure by the Ministry has been lower than the budget estimates (see **Figure 2**). In 2018-19, the Ministry exceeded its budgeted expenditure for that year by 9%.

Figure 2: % change between Actual and Budgeted expenditure



Note: The number for 2019-20 compares the budget estimates with the revised estimates.
Sources: Ministry of Road Transport and Highways budget documents 2009-20; PRS.

***Policy announcements in the Budget Speech*[2]**

In her budget speech, the Finance Minister made the following announcements regarding the roads sector:

- Rs 100 lakh crore will be invested on infrastructure over the next five years.
- Accelerated development of highways will be undertaken. This will include development of 2,500 km access control highways, 9,000 km of economic corridors, 2,000 km of coastal and land port roads and 2,000 km of strategic highways.
- The Delhi-Mumbai Expressway and two other packages would be completed by 2023. The Chennai-Bengaluru Expressway will be started.
- At least 12 lots of highway bundles of over 6,000 km will be monetised before 2024.

Expenditure of the central government

In 2020-21, of the total expenditure, the highest allocation is towards roads and bridges at Rs 48,777 crore(53%).[1] This is followed by allocation towards NHAI at Rs 42,500 crore (46%).[1]

Table 5: Expenditure heads for the Ministry of Road Transport and Highways

Major head	2018-19 Actual	2019-20 Revised	2020-21 Budget	% Change BE 2020-21/ RE 2019-20
Roads and bridges	37,825	45,897	48,777	6%
NHAI	39,287	36,691	42,500	16%
Road transport and safety	166	273	379	39%
Others	117	155	167	8%
Total	**77,301**	**83,016**	**91,823**	**11%**

Notes: BE – Budget Estimate; RE – Revised Estimate.
Sources: Demands for Grants 2020-21, Ministry of Road Transport and Highways; PRS.

Roads and bridges: In 2020-21, the allocation towards roads and bridges is Rs 48,777 crore. This is 6% more than the revised estimates of 2019-20 (Rs 45,897 crore).[1] Note that in 2018-19, the actual allocation towards roads and bridges (Rs 37,825 crore) was 8% lower than the budget estimate for that year. Expenditure under roads and bridges includes development of NHs, projects related to expressways, increasing the number of lanes under various projects, and development of road connectivity in left wing extremism affected areas.

NHAI: The central government develops and maintains NHs through the NHAI. NHAI has been allocated Rs 42,500 crore in 2020-21, which is 16% more than the revised estimates for 2019-20 (Rs 36,691 crore).[1] Of the budgeted amount, 49% (Rs 20,750 crore) will be provided from the Central Road and Infrastructure Fund , 27% (Rs 11,500 crore) will be provided from the Permanent Bridge Fees Fund, and the remaining 24% (Rs 10,250 crore) will come from the monetisation of the National Highways Fund.[1]

Expenditure on the NHAI includes funding towards the umbrella highway scheme, Bharatmala Pariyojana. This scheme seeks to optimise efficiency of freight and passenger movement by bridging critical infrastructure gaps. It also aims to increase the number districts with NH linkages from 300 to 550.[3] Under Phase I of Bharatmala Pariyojana, 34,800 km of roads will be developed over a period of five years. Phase I will also subsume 10,000 km of balance roadworks under the National Highway Development Programme. The estimated cost of Phase I is Rs 5,35,000 crore, spread over five years.

Till October 2019, 255 road projects with an aggregate length of about 10,699 km, and costing Rs 2,64,916 crore have been approved under Bharatmala Pariyojana Phase-I.[4] Out of the 255 approved projects, 225 projects with an aggregate length of about 9,561 km have already been awarded for construction.[5]

For the current financial year (2019-20), the target of highway construction under Bharatmala Pariyojana is 4,462 km and target of award is 7,800 km, subject to pre-construction clearance, land availability and project viability.[6]

Funds managed by the Ministry

The Ministry manages its expenditure through various funds. Their details are provided below.

Central Road and Infrastructure Fund (CRIF): A majority of the Ministry's expenditure is managed through transfers from the CRIF. A portion of the cess collected on motor spirit and high speed diesel is earmarked for the development of NHs and SHs, and the amount is transferred to the non-lapsable CRIF. This amount is eventually released to the NHAI, and to the state/UT governments for development of road infrastructure (and other infrastructure projects such as railways) in the country.[7]

For 2020-21, the transfer from CRIF towards the Ministry is estimated at Rs 59,622 crore.[1] This is a 9% increase from the revised estimates of 2019-20 (Rs 54,539 crore).

Permanent Bridge Fees Fund (PBFF): Funds transferred to the PBFF relate to the revenue collected by the government by way of: (i) fees levied for the use of certain permanent bridges on NHs by motor vehicles, (ii) toll on NHs, and (iii) revenue share received on some PPP projects. These funds are then released to the NHAI for the development of NHs entrusted to it.[1]

For 2020-21, the transfer to PBFF is estimated at Rs 11,518 crore.[1] This is a 9% increase from the revised estimates of 2019-20 (Rs 10,610 crore).

National Investment Fund (NIF): The NIF was created in 2005, and is credited with proceeds from disinvestments of public sector enterprises. The Ministry finances the Special Accelerated Road Development Programme in North East (SARDP-NE) with funds from the NIF.

For 2020-21, the transfer to NIF is estimated at Rs 6,780 crore.[1] This is 12% higher than the revised estimates of 2019-20 (Rs 6,070 crore).

National Highways Fund: In August 2016, the Union Cabinet had authorised NHAI to monetise certain public funded NH projects.[8] Such monetisation includes transferring operations and maintenance of stretches of NHs to private contractors on a long-term basis. In 2020-21, Rs 10,250 crore is estimated to be generated through such monetisation. This is marginally higher than the revised estimate of 2019-20 (Rs 10,000 crore).

Table 3: Summary of transfers from funds (in Rs crore)

Funds	2018-19 Actual	2019-20 Revised	2020-21 Budget	% Change BE 2020-21/ RE 2019-20
CRIF	50,762	54,539	59,622	9%
PBFF	9,584	10,610	11,518	9%
National Highways Fund	9,682	10,000	10,250	2%
National Investment Fund	5,980	6,070	6,780	12%

Notes: BE – Budget Estimate; RE – Revised Estimate.
Sources: Demands for Grants 2020-21, Ministry of Road Transport and Highways; PRS.

Issues to consider

India has one of the largest road networks in the world with about 59 lakh km of road length.[9] This road length includes National Highways (NHs), Expressways, State Highways (SHs), district roads, PWD roads, and project roads. In India, road infrastructure is used to transport over 60% of total goods and 85% of total passenger traffic.[9] NHs comprise about 2% of the road network but carry about 40% of the total road traffic.[10]

However, the roads sector has been facing several constraints such as: (i) lack of equity with developers, (ii) higher cost of financing, (iii) shortfall in funds for maintenance, (iv) unavailability of land for the expansion of NHs, (v) significant increase in land acquisition cost, and (vi) bottlenecks and checkpoints on NHs which could adversely impact benefits of GST.[11] Further, the value of NPAs in the infrastructure sector (including roads and highways) has been increasing, with NPAs at around Rs 2.6 lakh crore as of August 2016.[12] We discuss some of these issues below.

Issues with financing

The table below highlights the total investment in roads sector, as highlighted by the Economic Survey 2019-20.[13]

Table 4: Investment in road sector (in Rs thousand crore)

	Budgetary Support	Borrowings	Private Sector investment
2014-15	29	19	3
2015-16	46	30	23
2016-17	49	16	33
2017-18	60	17	51
2018-19	76	22	61
2019-20	43	12	26

Sources: Economic Survey 2019-20; PRS.

Role of central government in financing: The Standing Committee on Transport (2016) had observed that while the Ministry of Road Transport and Highways invests in the construction of roads, it does not have its own source of revenue other than budgetary support from the central government.[14] It recommended that the RBI and Ministry of Finance may help the Ministry of Road Transport to set up its own dedicated financial institutions to generate funds for development of the road sector. It also recommended that Ministry should monitor toll collection and channel any surplus funds towards stressed projects.

The Committee (2016) had also noted that while the central government has allocated a huge budget for the road sector, this will not be sustainable over the long term.[14] It suggested that the government should devise ways and establish appropriate financial institutions and models to encourage the return of private investment to the road sector. More recently, the Standing Committee on Transport (2018) noted that road development needs concerted efforts in the form of mobilisation of funds from other sources along with increasing budgetary allocation as private sector involvement has been depleting in recent years.[15]

In November 2019, the Union Cabinet approved certain changes in existing contract methods to allow NHAI to monetise existing NHs.[16]

Borrowings: In 2020-21, NHAI estimates to borrow Rs 65,000 crore towards capital outlay. This amount is 13% lower than the revised estimates for borrowings (Rs 75,000 crore). Note that this borrowing is in addition to the Rs 42,500 crore of budgetary support discussed earlier.

In 2018-19, about 68% of the funding for capital outlay towards roads and highways was estimated to come from borrowings, and the remaining from budgetary support. However, as per the actual figures, 63% of the funding came from borrowings. In 2017-18 also, the actual capital outlay funding from borrowings was marginally lower than what was estimated. In 2018-19, the budgetary support was 21% higher than the budget estimates for that year. This could imply that NHAI has been unable to raise the required level of borrowing, and the central government has to step in to bridge the funding gap. The Standing Committee on Transport (2018) had questioned the ability of the government to complete projects in the absence of the required funding.

Private financing and contracts:

It has been noted that private financing for the roads sector is a challenge.[10,17] Several PPP road projects have not been able to attract bids.17 The major highway developers in the country are also facing financial capacity constraints. Further, there is a lack of debt products that are aligned with the revenue stream profile of highway projects (long-term projects where toll collection can begin only after the entire project is completed). This makes financing of such projects difficult, and has resulted in some projects getting stalled at the construction stage. This also discourages prospective bidders.17

The Committee on Revisiting & Revitalizing the PPP model of Infrastructure Development (Chair: Dr. Vijay Kelkar) had looked at issues with PPP projects in India, in November 2015.[18] It had recommended setting up an independent regulator for the roads sector to help bring in and regulate private players in the sector. It had also noted that service delivery (such as constructing roads) to citizens is the government's responsibility and should not be evaded through PPPs.

The Kelkar Committee (2015) had also observed that since infrastructure projects span over 20-30 years, a private developer may lose bargaining power because of abrupt changes in the economic or policy environment.[18] It recommended that the private sector must be protected against such loss of bargaining power. This could be ensured by amending the terms of the concession agreement to allow for renegotiations.

Non-performing assets: The Standing Committee on Transport (2016) had observed that several of the long-term loans disbursed for the road sector are turning into non-performing assets (NPAs).[14] Project bids are often made without proper study, and projects are awarded in a hurry. This results in stalling of projects, and concessionaires leave mid-way. Concessionaires had also anticipated higher revenue realisation but achieved less due to the economic downturn.[14]

Banks and other infrastructure lending institutions have also been reluctant to finance the highways sector.[14] This has led to difficulties in debt servicing, putting additional stress on the road infrastructure portfolios. Besides increasing the cost of the project, delays also make it difficult to obtain additional debt.[14]

The Standing Committee (2016) recommended that banks should take due diligence while disbursing loans to concessionaires. It also suggested that the bank NPAs may be supported by government allocation. Banks could be empowered to recover the bad debts. Further, in light of huge NPAs lying with a single bank, the Standing Committee (2019) recommended that guidelines prescribing a limit up to which a bank can lend to a single borrower be framed to minimise the risk involved in lending.[19]

The Standing Committee on Transport (2019) also suggested that NHAI should revisit the financial requirements for bidders to ensure their eligibility for bidding process.[20] While the onus of the feasibility of the bids made by the concessionaire lies mainly with the banks, NHAI should exercise due diligence while awarding projects to concessionaire with poor performance history.

Performance of NHAI

The Comptroller and Auditor General of India (2016) had noted several procedural inefficiencies with NHAI.[19] For example, NHAI could not realise toll on certain projects due to delays in approvals, toll operations, and other procedural lapses. NHAI did not adhere to the Ministry's guidelines on maintenance of project wise balance sheet and cash flow.19 Loss of revenue was also noted due to inefficient bidding process for engagement of toll collecting agencies.19

The Committee on Public Undertakings (2017) had also noted several issues in the financial performance of NHAI such as: (i) insufficiency of funds, (ii) gap between the funds allocated to the Ministry, and released to NHAI, and (iii) under-utilisation of funds.[24] For example, funds that are left unspent at the end of a financial year is shown as 'opening balance' at the beginning of the next financial year. This opening balance was Rs 2,672 crore and Rs 6,740 crore for the years 2015-16 and 2016-17 respectively.[24] This shows NHAI's inability to optimally utilise available funds.

Committees have also suggested more due diligence on the part of NHAI. The Standing Committee on Transport (2019) recommended that NHAI should compare its project cost estimates with the actual costs incurred on road projects. If there is a substantial difference between the bid price offered by the concessionaire and the project cost estimates made by the government, NHAI should review its cost estimation methodologies.

Investment in maintenance of roads

In 2020-21 the Ministry has allocated Rs 2,618 crore towards maintenance of roads and highways (including toll bridges). This is Rs 492 crore (16%) lower than the revised estimates of 2019-20.

The Ministry has allocated about 3% of its budget towards maintenance of NHs. This is for a total NH length of 1.14 lakh km. In comparison, in 2020-21 the US government seeks to allocate $23.74 billion (51% of its total budget on highways) towards its National Highway Performance Program, to improve the condition and performance of their National Highway System (roughly 2.2 lakh miles of length).[21]

The National Transport Development Policy Committee (2014) had noted that the amount spent on maintenance of roads is low.[22] This results in roads with potholes, weak bridges, and poor pavements, and has safety consequences. Further, maintenance is carried out only when required, as opposed to being a part of preventive measures.[22]

The Standing Committee on Transport (2017) had observed that the entire length of NHs in the country cannot be maintained with this amount. It had recommended that the budget for maintenance of NHs should be increased. Maintenance of roads should be given top priority as it increases the life span of roads. An effective monitoring mechanism for repair and maintenance of roads should be put in place.17 Further, there should be penalties for contractors and engineers in case of poor quality repair, maintenance, and construction. The Standing Committee on Transport (2018) had also noted issues of under-utilisation under maintenance and repairs works.

Investment in road safety

In 2020-21, the Ministry has allocated Rs 379 crore towards road transport and safety. This is 39% higher than the revised estimates of 2019-20. This would provide for various things such as road safety programmes, setting up of facilities on NHs, for extending relief to accident victims, strengthening of public transport, research and development, and training.

This amount is about 0.4% of the Ministry's total budget. In comparison, the US federal government spends about $2.7 billion on its Highway Safety Improvement Programme (6% of its total expenditure on highways).21

In 2017, there were 4,64,910 road accidents in India, which killed about 1.5 lakh people and injured about 4.7 lakh people.[23] In 2019, Parliament passed the Motor Vehicles (Amendment) Bill, 2019 which seeks to address various issues around road safety. It increases the penalties for various offences under the Act, and provides for a Motor Vehicle Accident Fund which would be used for treatment of persons injured in road accidents. It also provides for a National Road Safety Board, which would advise the central and state governments on all aspects of road safety and traffic management.

Targets vs performance

Road construction: The rate of road construction has improved in the last few years. Achievement of construction targets (for NHs) has ranged between 55% to 70% in the last five years.

The Standing Committee on Transport (2018) noted that of the total length to be constructed under NHDP i.e., 56,323 km, 33,820 km (60%) has been completed.[15] The balance work has been transferred under the Bharatmala Pariyojana.

The Standing Committee on Transport (2017) had noted that the targets could not be met due to shortage of funds. Reasons for incomplete projects include delays in obtaining clearances, poor financial and technical performance of the contractors, and law and order issues. The Economic Survey 2018-19 also highlighted issues such as time and cost overruns due to delays in project implementation, procedural delays, and lesser traffic growth than expected which increased the risk factor of the projects resulting in stalling of projects. Table 5 below shows the road length constructed per year.

Table 5: Targets vs achievements for road construction (National Highways)

Year	Target (km)	Constructed (km)	% achievement (constructed/ target)
2014-15	6,300	4,410	70%
2015-16	10,950	6,061	55%
2016-17	15,000	8,231	55%
2017-18	15,000	9,829	66%
2018-19	15,000	10,855	72%
2019-20	15,000	4,622	31%

Note: Construction figures for 2019-20 are till September 30, 2019.
Sources: Economic Survey 2019-20; PRS.

Connectivity in remote areas

The Ministry also allocates funds towards the development of highways in areas with poor connectivity. Some of these projects include the Special Accelerated Road Development Programme in North East (SARDP-NE), Externally Aided Projects and Roads Projects in Left-Wing Extremism Affected Areas.

In 2020-21, Rs 6,780 crore has been allocated towards the SARDP-NE project, which is 12% higher than the revised estimates of 2019-20. The Standing Committee (2018) had noted underutilisation of funds and under-achievement of targets in SARDP-NE.15

Project delays and increase in project costs

The Committee on Public Undertakings (2017) had noted that from 1995, till June 2016, out of the total 388 projects completed, only 55 projects were completed on or before time.[24] Delays in the completion of the projects were mainly attributed to: (i) the long time taken in land acquisition, and obtaining environment and forest clearances, (ii) poor performance of concessionaires due to economic slowdown, (iii) cash flow problems, and (iv) law and order issues.[25]

Such delays increase project costs, eventually making certain projects unviable. As of December 2018, 435 infrastructure and road projects were pending, and the Ministry expects to complete them by October 2020.[26]

The Standing Committee on Transport (2015) had recommended that a coordination mechanism at the central level with the Ministries of Finance, Environment and Forest and Defence will help speed up the process of clearances.17 The Standing Committee (2016) had also suggested that the Ministry of Road Transport and Highways should obtain all these clearances before awarding the projects to concessionaires.

Increase in land acquisition costs

From January 1, 2015, the compensation for land acquired by NHAI is determined as per the Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act, 2013. The Committee on Public Undertakings (2017) had noted that due to higher compensation under the 2013 Act, the expenditure by the Ministry of Road Transport on land acquisition increased from Rs 9,097 crore in 2014-15 to Rs 21,933 crore in 2015-16.[24]

The Committee also observed that farmers who were entitled to lesser compensation under the older law, have been approaching courts for increased compensation.[24] This has further delayed the land acquisition process and added to the cost of projects. In 2017-18, NHAI spent more funds on land acquisition (41% of the expenses) as compared to project expenditure (39%).[10]

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[5] Rajya Sabha Unstarred Question No. 1563, Ministry of Road Transport and Highways, December 2, 2019.

[6] Lok Sabha Unstarred Question No. 1688, Ministry of Road Transport and Highways, November 28, 2019.

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Demand for Grants: Telecommunications

The Department of Telecommunications under the Ministry of Communications is responsible for making policies, licensing, monitoring, regulation, research and international co-operation in the field of telecommunications. The Department operates several Public Sector Undertakings involved in providing telecommunication services, consultancy, and equipment manufacturing. This note presents the trends in expenditure and discusses some of the issues in the sector.

Overview of Finances

Expenditure[1,2]

In 2020-21, the Department has been allocated Rs 66,432 crore, a 184% increase over the revised estimates of 2019-20. 61% of the allocation is towards revenue expenditure and the remaining 39% is towards capital expenditure. As shown in Table 1, in 2020-21, capital expenditure and revenue expenditure have increased by 422% and 121% over the revised estimates of 2019-20, respectively.

The significant increase in allocation is to provide for the revival plan for BSNL and MTNL, which was approved by the Union Cabinet in October, 2019.[3] A total of Rs 37,268 crore has been allocated for this purpose (56% of total allocation). The revival plan provides for: (i) capital infusion for allotment of the 4G spectrum (capital expenditure), and (ii) costs to be incurred towards voluntary retirement scheme.[3] Excluding the revival plan, total expenditure is budgeted to grow at 25% over the revised estimates of 2019-20, with growth in revenue expenditure at 30% and that in capital expenditure at 7%.

Table 1: Allocation to the Department of Telecommunications (in Rs crore) (2020-21)

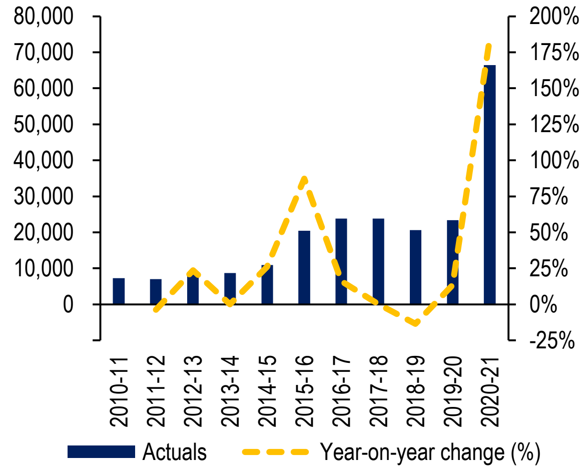
	2018-19 Actuals	2019-20 RE	2020-21 BE	% change (RE 2019-20 to BE 2020-21)
Revenue	18,492	18,435	40,757	121%
Capital	2,114	4,915	25,675	422%
Total	**20,606**	**23,350**	**66,432**	**184%**

Note: RE: Revised Estimates; BE: Budget Estimates.
Sources: Demand No. 13, Department of Telecom, 2020-21, PRS.

Figure 1 shows the trend in actual expenditure during the 2010-21 period. During the 2010-20 period, actual expenditure has increased at an annual average growth rate of 13.8%. The higher increase in expenditure since 2015-16 as compared to previous years is due to allocation towards BharatNet (a scheme to connect all gram panchayats by broadband), and Optical Fibre Network for Defence Services scheme.

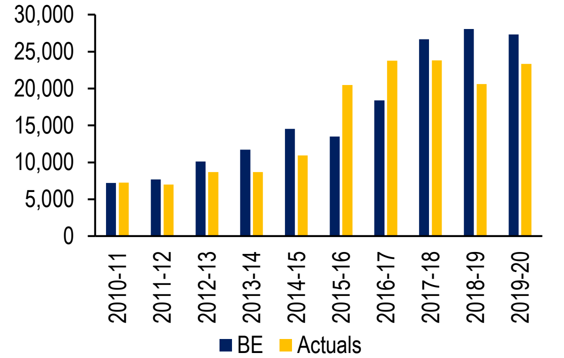
As seen in Figure 2, funds allocated to the Department have been underutilised in general, except in 2015-16 and 2016-17, where actual expenditure exceeded budget estimates by 52% and 29% respectively. In 2015-16, the increased expenditure was mainly due to allocation for a refund of upfront charges to BSNL and MTNL towards surrender of certain spectrum. In 2016-17, it was due to increased allocation towards BharatNet at the revised stage. In 2018-19, actual expenditure was 27% less than the budgeted expenditure. As per the revised estimates of 2019-20, 85% of the allotted funds will be utilised.

Figure 1: Trends in expenditure (in Rs crore)



Note: Revised Estimates used for 2019-20. Budget Estimates used for 2020-21.
Sources: Demands of Department of Telecom, 2010-21; PRS.

Figure 2: Fund utilisation (in Rs crore) (2010-20)

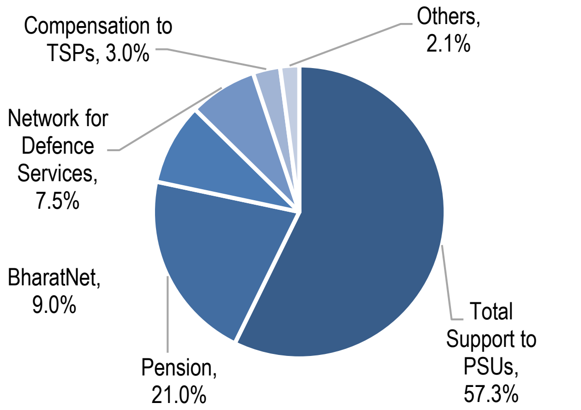


Note: BE: Budget Estimates; Revised Estimates used for 2019-20.
Sources: Demands of Department of Telecom, 2010-20; PRS.

Major Expenditure Heads

In 2020-21, 57% of the total allocation is towards support to PSUs (Rs 38,045 crore). This is mainly to provide for the revival plan of BSNL and MTNL (Table 3). Expenditure on pensions continues to be a high proportion of the Department's expenditure (Figure 3). In 2020-21, 21% of the total allocation is towards pension (Rs 13,982 crore). Rs 6,000 crore has been allocated towards the BharatNet scheme (9% of the total allocation). Under the expenditure head "Compensation to Telecom Service Providers", funds are being provided to finance various schemes for the creation and augmentation of telecom infrastructure and services in rural and remote areas.

Figure 3: Composition of expenditure in 2020-21



Sources: Demand No. 13, Department of Telecom, 2020-21, PRS.

Table 2: Major expenditure heads (in Rs crore)

Expenditure Head	2018-19 Actuals	2019-20 RE	2020-21 BE	% Change (RE 2019-20 to BE 2020-21)
Total support to PSUs	437	1,284	38,045	2863%
Pension	11,991	13,190	13,982	6%
BharatNet	4,316	2,000	6,000	200%
Network for defence services	1,927	4,725	5,000	6%
Compensation to TSPs	473	1,000	2,000	100%
Others	1,056	1,211	1,265	4%
Total	**20,606**	**23,350**	**66,432**	**184%**

Note: TSP: Telecom Service Provider. RE: Revised Estimates; BE: Budget Estimates.
Sources: Demand No. 13, Department of Telecom, 2020-21, PRS.

Table 3: Total support to PSUs (in Rs crore)

Expenditure Head	2020-21 BE	% of the total allocation
Capital infusion in BSNL for 4G spectrum	14,115	21%
Capital infusion in MTNL for 4G spectrum	6,295	9%
Ex-gratia for retiring employees of BSNL/MTNL	9,890	15%
Implementation of VRS (BSNL/MTNL)	3,295	5%
Grants-in-aid to BSNL for payment of GST	2,541	4%
Grants-in-aid to MTNL for payment of GST	1,133	2%
Financial Infusion to ITIL	405	1%
Others	372	1%
Total	**38,045**	**57%**

Note: ITIL: Indian Telephone Industries Limited.
Sources: Demand No. 13, Department of Telecom, 2020-21, PRS.

Universal Service Obligation Fund

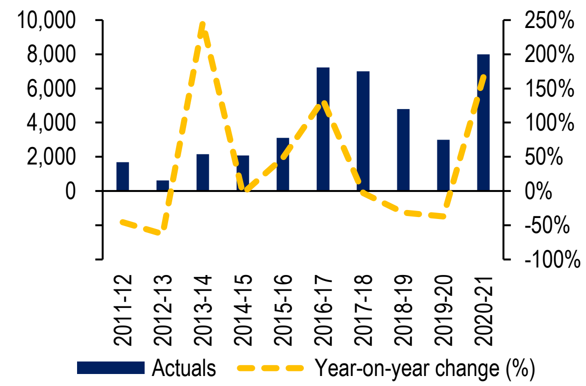
The Universal Service Obligation Fund (USOF) was established to provide widespread, non-discriminatory, and affordable access to quality information and communication technology services to people in rural and remote areas.

Resources for this fund are raised through a Universal Access Levy (UAL) which is 5% of the Adjusted Gross Revenue (AGR) earned by all the operators under various licenses currently.[4] Adjusted Gross Revenue is the value of gross revenue after deduction of taxes and roaming/PSTN charges from Gross Revenue. UAL is first credited to the Consolidated Fund of India and then disbursed to the USOF.

The ongoing schemes funded through USOF include: (i) BharatNet, (ii) setting up of towers in left-wing extremism affected areas, and (iii) comprehensive telecom development plan for the north-east region.

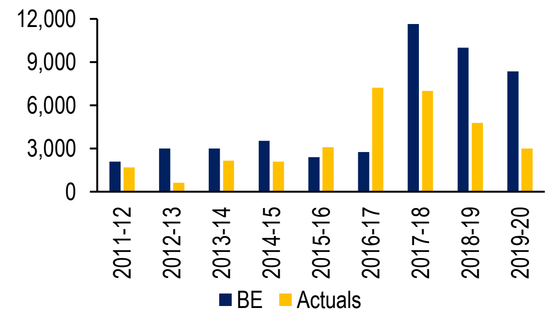
A total expenditure of Rs 8,000 crore from this fund has been planned for 2020-21. This is an increase of 167% over the revised estimates of 2019-20. However, note that in 2019-20, only 36% (Rs 3,000 crore) of the budgeted allocation (Rs 8,350 crore) is estimated to be utilised (revised estimates). During the 2011-21 period, expenditure from the USOF has grown at an annual average growth rate of 18.9%.

Figure 4: Expenditure from USOF (in Rs crore)



Note: Revised Estimates used for 2019-20. Budget Estimates used for 2020-21.
Sources: Demands of Department of Telecom, 2011-21; PRS.

Figure 5: Fund Utilisation-USOF (in Rs crore)



Note: Revised Estimates used for 2019-20.
Sources: Demands of Department of Telecom, 2011-20; PRS.

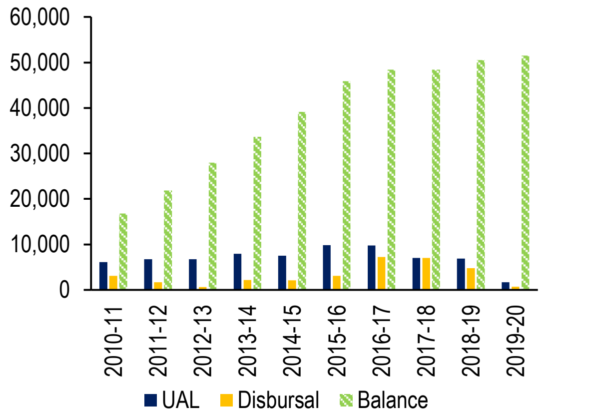
Figure 5 depicts the trend in fund utilisation under the USOF during the 2011-20 period. The fund utilisation has been low in the last three years. In the years 2017-

18 and 2018-19, only 60% and 48% of the allocation was utilised respectively. As per the revised estimates, in 2019-20, only 36% of the allocation from USOF will be utilised.

Balance of Funds under USOF: In its audit report of the Ministry of Communications for the FY 2017-18, the Comptroller and Auditor General of India (CAG) observed that a large amount earned as Universal Access Levy (UAL) is yet to be transferred to the Universal Service Obligation Fund (USOF).[5] By the end of 2019-20, a total of Rs 51,552 crore remains to be transferred to the USOF by the central government.[6] The disbursal to the USOF has been only a small fraction of UAL over the years. A total of Rs 70,198 crore has been earned as UAL during the 2010-20 period, out of which only Rs 32,465 crore has been disbursed (46%).[6]

As shown in Figure 6, the gap between disbursal and UAL has been high over the years, which has led to a rise in balance. In January 2015, the Telecom Regulatory Authority of India (TRAI) had observed that the Department has not been able to devise enough schemes to utilise the earnings of UAL.[7] It also recommended reducing UAL from 5% to 3%.[7]

Figure 6: UAL vs Disbursal vs Balance of USOF (in Rs crore)



Note: UAL: Universal Access Levy; Disbursal: Amount transferred to USOF; Balance: Balance at the end of that Financial Year.
Sources: USOF Website as accessed on February 7, 2020; PRS.

In March 2018, the Standing Committee on Information Technology noted that with increasing outlay on schemes including BharatNet, Mobile Towers in Left Wing Extremism Affected Areas and Comprehensive Telecom Development Plan for the North-East, utilisation of USOF funds will improve.[4]

Progress of comprehensive telecom development plan for the north-east region: The comprehensive development plan for the north-east region was approved in September 2014 to: (i) install 6,673 mobile towers at 8,621 identified uncovered villages, (ii) install 321 mobile towers along the national highways, and (iii) strengthen the transmission network in the region.[8] The Standing Committee on Information Technology (2019) made following observations regarding the plan:

- In 2018-19, no amount was utilised from the budget allocation of Rs 400 crore. Similarly, in 2019-20, no amount has been proposed by the Department at the revised estimates stage as compared to Rs 1,100 crore at the budget stage.
- A total of 2004 towers were to be set up by October 2019, however, only 878 towers (44%) were installed as of October 22, 2019.
- The Committee recommended forming an inquiry committee to establish responsibility for the implementation failure of the plan so far.[8]

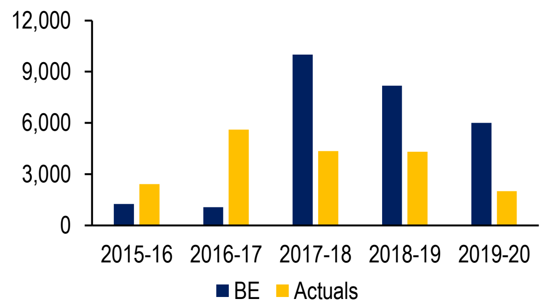
BharatNet

BharatNet aims to create a network to connect all the Gram Panchayats (approximately 2.5 lakh) by broadband by laying around 6.5 lakh km of optical fibre. It seeks to provide non-discriminatory access to the network to all the telecom service providers. These service providers include mobile operators, Internet Service Providers (ISPs), Cable TV operators, content providers. Bharat Broadband Network Limited (BBNL) is a special purpose vehicle to create, operate, maintain and manage the BharatNet infrastructure. The project is financed through the USOF. The estimated total cost of the project is Rs 42,068 crore.[4]

BharatNet is divided into three phases. Phase-I to connect 1.2 lakh panchayats was completed in December 2017. Phase-II to connect the remaining panchayats is underway, and phase-III is earmarked for future purposes. The scheme also aims to provide last-mile connectivity through Wi-Fi by creating five access points per GP (12.5 lakh Wi-Fi hotspots).[9]

As seen in Table 2, In 2020-21, the budget allocation of the scheme has increased by 200% over the revised estimates of the previous year. Note that, as per the revised estimates, only 33% of the allotted funds were utilised in 2019-20 (**Figure 7**). The corresponding figures for 2017-18 and 2018-19 were 44% and 53% of the allotment respectively.

Figure 7: Fund Utilisation-BharatNet (in Rs crore)



Note: BE: Budget Estimates; Revised Estimates used for 2019-20.
Sources: Demands of Department of Telecom, 2015-20; PRS.

Delay in Completion: In March 2018, the Standing Committee on Information Technology noted that although approved in 2011, the initial target of BharatNet had to be revised in 2014 due to inadequate planning and design, and unpreparedness to address the issues.[10]

Under the revised deadline, phase-I was due by March 2017 but could be completed by December 2017.[10] Phase-II, which was to be completed by March 2019, is not near completion and the target was revised to March 2020.10,[11] Table 4 shows the status of BharatNet as of February 2020.[12,13]

Table 4: Status of BharatNet (February 2020)

Parameter	Target	Achievement	In %
Length of OFC laid*	6.5 lakh km	4.14 lakh km	64%
Number of panchayats where OFC laid*	2.5 lakh	1.48 lakh	59%
Number of panchayats which are service-ready*	2.5 lakh	1.35 lakh	54%
Number of panchayats where Wi-Fi installed#	2.5 lakh	0.45 lakh	18%
Number of panchayats where Wi-Fi operational#	2.5 lakh	0.18 lakh	7%

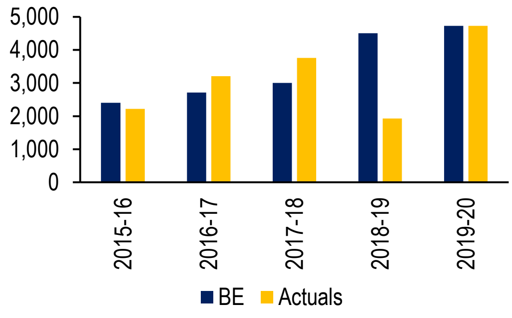
Note: *as of February 7, 2020, #as of February 10, 2020.
Sources: Website of BBNL as accessed on February 10, 2020; PRS.

Under-utilisation of BharatNet network: The Standing Committee on Information Technology (2019) observed that efforts are required towards improving the uptime and utilisation of network infrastructure created under BharatNet.[8] As on February 10, 2020, BharatNet had 12,91,780 users and total data used per month was 89,224 GB.[13] This implies that average data consumption per user per month was around 71 MB.

Network for Defence Services

This project aims to provide a dedicated pan-India optical fibre cable-based network for use by defence services. The original total sanctioned cost of the project is Rs 13,334 crore.[4] In May 2018, the central government announced that the budget of the project has been increased to Rs 24,664 crore.[14] BSNL is the implementing agency for this project. A combined total of 60,000 km of the optical fibre network is to be laid under this project.

Figure 8: Fund Utilisation-Network for Defence Services (2015-20)



Note: Revised Estimates used for 2019-20.
Sources: Demands of Department of Telecom, 2015-20; PRS.

In 2020-21, the allocation to the scheme (Rs 5,000 crore) has increased by 6% over the revised estimates of the previous year (Table 2). The revised estimates of 2019-20 for the scheme was the same as the budget estimates of that year. Figure 8 shows the trend in fund utilisation under this scheme during 2015-20. In 2018-19, only 43% of the budgeted fund was utilised.

Delay in completion: The project was to be completed by July 2015.[4] As of December 2019, 94% of the 60,000 km of optical fibre network has been laid.[8] The revised deadline for completion was set for May 2020, however, the project is now estimated to be completed by December 2020.[14]14 The Standing Committee on Information Technology (2018) observed that the delay has resulted in huge cost overruns from the initial estimation of Rs 8,098 crore in 2009 to Rs.24,664 crore in 2018.[4]

Receipts[15, 16]

Communication services are one of the major sources of non-tax revenue of the central government. In 2016-17, the non-tax revenue from communication services was the largest contributor to the non-tax revenue of the central government, accounting for 26% of the total non-tax revenue.[17] This includes receipts from spectrum auctions, one-time fee from new operators and recurring license fees and spectrum charges from telecom service providers which is a percentage share of the Adjusted Gross Revenue (AGR) of the operators.

Non-Tax Revenue

The projected non-tax revenue for 2020-21 from communication services is Rs 1,33,027 crore, 126% higher than the revised estimates of 2019-20 (Rs 58,990 crore). Although budget documents do not provide clarity, this increase may be due to anticipated recovery of past dues from the service providers as per a recent Supreme Court decision on the definition of gross revenue. It could also come from spectrum auction in the coming financial year. In 2019-20, the non-tax revenue from communication services is estimated to be 17% higher than the budget estimates. Note that the actual revenue in 2018-19 was 16% less than the budget estimates of that year.

Table 5: Non-tax revenue-communication services (in Rs crore)

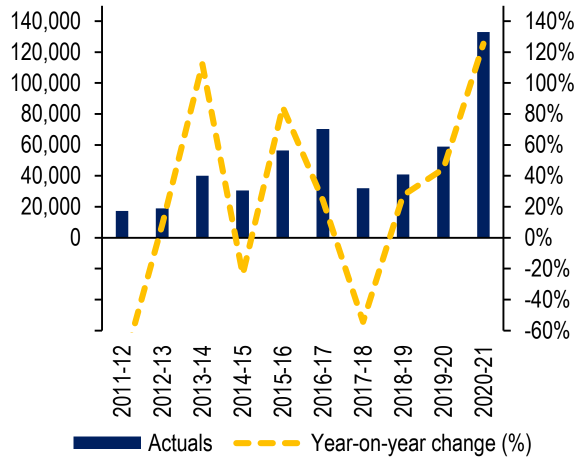
	2018-19 Actuals	2019-20 RE	2020-21 BE	% Change
Total	40,816	58,990	1,33,027	126%

Source: Union Budget 2020-21; PRS.
Note: RE: Revised Estimates; BE: Budget Estimates.

As shown in **Figure 9** (on the next page), during the 2017-2020 period, non-tax revenue from communication services was lower as compared to earlier years in absolute terms. There was a decrease in the revenue of the telecom sector owing to stiff competition and aggressive pricing war.4 As per the budget estimates of 2020-21, the revenue is expected to show an upward trend.

At the end of 2018-19, the arrears of non-tax revenue from communication services is 30% of the total arrears of non-tax revenue of the central government (Table 6). Of the arrears of non-tax revenue overdue by less than a year, the arrears of communication services comprise of a major portion of the total arrears (80%).

Figure 9: Non-tax revenue-communication services (in Rs crore) (2011-21)



Sources: Union Budget Documents, 2011-21; PRS.

Table 6: Arrears of non-tax revenue from communication services (in Rs crore) (at the end of reporting the year 2018-19)

Duration (Year)	Arrears-Communications	Arrears of non-tax revenue Total	% share*
0-1	66,832	83,196	80%
1-2	4,533	19,729	23%
2-3	8,660	23,788	36%
43-5	520	25,966	2%
>5	985	115,029	1%
Total	**81,530**	**267,709**	**30%**

Note: * % share indicates the share of non-tax revenue from communication services in the total arrears of non-tax revenue of the central government.
Sources: Union Budget Documents, 2020-21; PRS.

Issues for Consideration

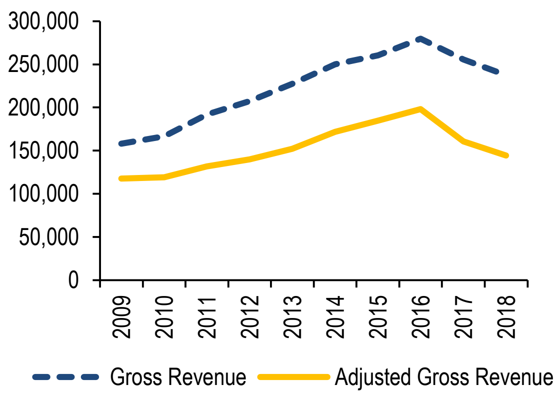
State of Finances of Telecom Sector

In March 2018, the Standing Committee on Information Technology observed that after entry of a new private player in 2016, the sector has seen a stiff competition and aggressive pricing war.[4] This has led to reduced tariffs and a notable decline in revenue. In the aftermath, the weaker players have exited the market and consolidation among other companies is ensuing. The telecom sector has large capital expenditure requirements. The near-term implication has been a serious drop in profitability and a problem of high debt.

Trends in subscriber base: With the introduction of 4G, the telecom sector has shifted from the 'voice-centric' to 'data-centric' market.[18] Between the fourth quarter of 2016 and the third quarter of 2019, the total number of internet subscribers has increased from 39.1 crore to 68.7 crore.[19, 20] Between the fourth quarter of 2016 and the third quarter of 2019, the price of per GB data has gone down from Rs 163.8 to seven rupees.[19,20] The data consumption per user per month during the same period has grown from 878.6 MB to 10.4 GB.[19,20] At the end of the third quarter of 2019, the total internet subscribers per 100 population are 52.1 in India.20 The total urban internet subscribers per 100 population are 104.[3] whereas the total rural internet subscribers per 100 population are 27.6.20 As per the International Telecommunications Union Report, in 2019, the number of internet users per 100 inhabitants was 53.6 in the world, 82.5 in Europe, 77.2 in Americas and 48.4 in Asia-Pacific.[21]

Trends in revenue: Even though consumption has increased manifold and the subscriber base continues to grow, due to a steep reduction in tariffs, the gross revenue of the telecom sector has seen an adverse effect (Figure 10).[4] The Adjusted Gross Revenue fell by 18.9% between 2016 and 2017 and by 10.2% between 2017 and 2018. Adjusted Gross Revenue is the value after deduction of taxes and roaming/PSTN charges from Gross Revenue. During the first three quarters of 2019, the Adjusted Gross Revenue has seen a 3.7% increase as compared to the first three quarters of the previous year.

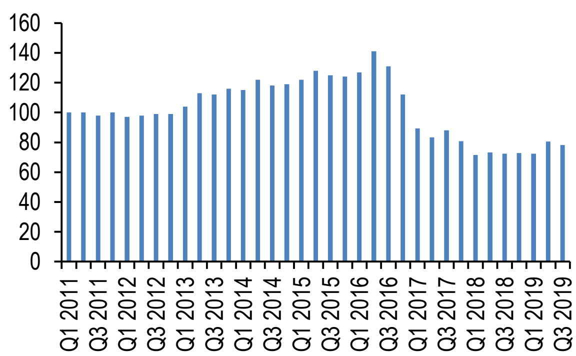
Figure 10: Gross Revenue and Adjusted Gross Revenue of Telecom Sector (in Rs crore) (2009-18)



Sources: TRAI Performance Indicator Reports, 2009-18; PRS.

Figure 11 shows the trend in Average Revenue Per User (ARPU) between 2011 and 2019. ARPU has dropped from Rs 110-140 levels seen between 2013 and 2016 to Rs 70-80 levels between 2018 and 2019.[22]

Figure 11: Average Revenue Per User (in Rs)



Sources: TRAI Performance Indicator Reports, 2011-19; PRS.

Trends in debt: As of October 2017, the total debt of the telecom sector stood at Rs 7.9 lakh crore.[4] This is more than three times the gross revenue of the sector in 2018. This included Rs 2.6 lakh crore of total borrowings out of which Rs 1.8 lakh crore was domestic borrowing.[4] This also included deferred liability worth Rs 3.0 lakh crore to the Department of Telecommunications on account of spectrum fees.[4] In July 2017, the Inter-Ministerial Group on Stressed Assets noted that some operators are facing financial stress due to low operating cash flows, inadequate equity infusion and unsustainable debt.[4] As of December 2019, gross domestic bank credit to the telecom sector stood at 1.34 lakh crore, an increase of 16% as compared to 1.20 lakh crore at the end of 2018-19.[23]

Impact of a recent Supreme Court judgement: Since 2003, there has been a dispute between telecom service providers and the Department regarding what constitutes gross revenue.[4] Over these years, service providers have paid a lower license fee and spectrum usage charges as compared to the demands raised by the Department. In October 2019, the Supreme Court in its judgement upheld the demands of the Department.[24] The Court also held that the service providers are liable to pay the interest, penalty, and penalty on interest on these dues.24

As a result, the service providers are required to pay an additional amount of Rs 92,642 crore as license fee and Rs 55,055 crore as spectrum usage charges on account of dues for years between 2003 and 2019.[24] This amount is provisional and subject to revision for updation of interest and penalty. As per the judgement, the service providers have been given three months to pay these dues from the date of the judgement.[24] This is likely to increase the financial burden of the service providers. They will also be required to pay a higher license fee and spectrum usage charges going forward as compared to what they have been paying so far. This will further impact their profit margins.

Note that in November 2019, the Union Cabinet approved deferred payment of spectrum auction instalments due for years 2020-21 and 2021-22.[25] This measure is expected to ease the cash outflow of financially stressed service providers and facilitate payment of statutory liabilities and interest on bank loans.25 The telecom service providers will have the option to defer payments due for the years 2020-21 and 2021-22, for one or both years. The deferred payment will be spread equally in the remaining instalments to be paid by the service providers. Interest charges will be applicable as per the provisions under the terms and conditions of the spectrum allotment.

Trends in foreign investment: During 2010-2019, the telecom sector has been the third-largest recipient sector of FDI equity inflow.[26] The FDI equity inflow in the Financial Year 2017-18 was Rs 39,748 crore whereas the FDI equity inflow in the Financial Year 2018-19 was Rs 18,337 crore, a decrease of 54%.26[, 27]

Spectrum Fees and Taxes

The Economic Survey of India (2017-18) noted that the telecom sector is facing an issue of higher spectrum charges.[28] It observed that lower spectrum charges will augment the spread of telecommunication services and will help in socio-economic transformation.28

In January 2015, Telecom Regulatory Authority of India (TRAI) in its report observed that the total effective rate of the license-related levy has gone up significantly in the recent past and that spectrum prices in the country are amongst the highest in the world.7 The total taxes and levies are as high as 30% of the revenue of an operator.7 This adversely impacts the need to continue a low tariff regime in the country. It had recommended that the license fee should be reduced from 8% to 6% by reducing Universal Access Levy from 5% to 3%.[7] As of December 2019, the license fee is 8%.[19] In 2017, TRAI, as well as the Department of Telecommunications, had recommended lowering Goods and Services Tax (GST) from 18% to 5% and 12% respectively for the telecom sector.[29]

Spectrum Management

One of the key functions of the Department of Telecommunications is to allocate, monitor and manage spectrum. The Comptroller and Auditor General of India (CAG) in its audit report for FY 2017-18 had noted that the National Frequency Register was not being properly maintained and was not the correct reflection of spectrum assignments.[7] National Frequency Register (NFR) is the basic record for all frequency assignments and is referred to identify assignable frequency for any new applicant.[30]
A substantial amount of spectrum identified for commercial use was allotted to Railways and Defence. However, due to limited use by these departments, such spectrum was left unused and its commercial potential remained unutilised.[5]

There were serious deficiencies in the effective monitoring of the spectrum.[5] The updated database of wireless licenses was not being provided to monitoring stations thereby reducing the whole monitoring process in an ineffective exercise. There was inattention towards maintenance of monitoring equipment.[5] Ineffective monitoring could lead to unauthorised uses or misuse of the spectrum by undesirable entities.[5]

5G Readiness

5G is the next technology frontier in the telecom sector. According to the High-Level Forum of the Department on 5G, 5G is predicted to create a cumulative economic impact of USD one trillion in India by 2035.[31] As of December 2019, 5G services are being rolled out on a commercial basis in countries like South Korea, USA, Spain and Italy, although on a limited scale.

TRAI has observed that spectrum availability is one of the most important issues in full realization of the potential of 5G.18 In August 2018, the High-Level Forum of the Department on 5G recommended that fresh spectrum should be allocated for 5G services.31 As of January 2020, the auction of spectrum for 5G is yet to be completed.

As per TRAI's white paper on 5G, an additional investment of 4.0-4.5 lakh crore rupees will be required by the telecom sector to seamlessly implement 5G networks.18 3.5 GHz spectrum band is likely to be the first band to be globally used for 5G deployment.18 The Department is yet to auction spectrum in that band. The telecom service providers are likely to incur an additional investment initially while launching 5G services on account of spectrum cost.18

Promotion of domestic manufacturing of telecom equipment

The Standing Committee on Information Technology (2019) observed that India is highly dependent on the import of telecom equipment.[8] During 2017-18 and 2018-19, India imported telecom equipment worth Rs 1.4 lakh crore and 1.2 lakh crore, respectively.[8] The Committee observed that this indicates a lack of requisite ecosystem for the promotion of domestic manufacturing.[8] The Committee noted that some of the reasons for the dependence on import are: (i) import of telecom equipment at zero duty as agreed in international treaties, (ii) low investment in research and development and creation of intellectual property rights, and (iii) lack of market access for indigenous manufacturers.[8] The Committee noted that imports are likely to increase substantially with the introduction of newer technology such as 5G.[8]

State of PSUs

Telecom Service Providers

BSNL and MTNL are the public sector undertakings (PSUs) engaged in providing telecommunication services in the country. BSNL and MTNL have been incurring losses continuously since FY 2009-10.[32] As per the Department of Public Enterprises guidelines, both these PSUs have been declared as 'Incipient Sick'.[32] A PSU is considered 'Incipient Sick' if its net worth is less than 50% of its paid-up capital in any financial year, or if it had incurred losses for three consecutive years.[33] In 2018-19, as against the revenue target of Rs 26,000 crore, actual revenue of the two PSU operators was Rs 17,761 crore.[8] In 2018-19, BSNL and MTNL posted a net loss of Rs 14,904 crore and Rs 3,390 crore respectively (Table 7).[8]

Table 7: Financial performance of BSNL and MTNL in 2018-19 (in Rs crore)

Parameter	BSNL	MTNL
Income Target	23,150	2,850
Actual Income	19,321	2,607
Total Expenditure	34,225	5,997
Net Profit/Loss	-14,904	-3,390
Total asset*	135,482	14,677
Total liability*	35,729	24,412
Net worth*	74,734	-9,735
Outstanding debt*	-15,983	19,750

Note: * as of March 31, 2019. Outstanding debt of BSNL does not include overdraft. That of MTNL does not include bonds worth Rs 4,533 crore.
Sources: First Report of the Standing Committee on Information Technology (2019); PRS.

The Standing Committee on Information Technology (2019) noted that challenges for the PSU operators in earning revenue include: (i) absence of 4G services (except in few places for BSNL) in data-centric telecom market, (ii) lack of cash flows hindering capital outlay and expansion, (iii) sharp decline in average revenue per user across all services due to competition in the sector, and (iv) rapid decline in landline business due to changing market needs.[8]

The market share of PSU operators in the number of total subscribers as well as revenue share has seen a decline. The share of PSU operators in total subscribers declined from around 13%-14% during 2012-13 to 10%-11% levels during 2017-19. The share of PSU operators in Adjusted Gross Revenue of the sector declined from around 12%-13% during 2012-13 to 9%-10% levels between 2017-19.

BSNL and MTNL spend a significant share of their income on staff salaries. As of June 2019, the employee cost for BSNL and MTNL was 75% and 87% of their total income respectively.[34] In comparison, the employee cost for private telecom service providers varied between 5%-7% of their total income.[8]

In March 2018, the Standing Committee on Information Technology noted that there has been continuous underperformance by telecom PSUs in meeting Internal and External Budgetary Resources (IEBR) targets.[4] IEBR is an important revenue source for implementing various schemes of the PSUs and it constitutes the resources raised by PSUs through profits, loans and equity.[35] The shrinking revenue has hampered its capabilities to generate resources.[4] Only 26.6%, 39.0% and 24.1% of the IEBR target was met in 2014-15, 2015-16 and 2016-17 respectively.[4]

Revival plan for BSNL and MTNL: In October 2019, the Union Cabinet approved a revival plan for BSNL and MTNL.[3] The plan also provided in-principle approval for the merger of both PSUs. Key features of the plan are as follows: (i) allotment of 4G spectrum with funding from central government of Rs 23,814 crore, (ii) sovereign guarantee for raising long-term bonds of Rs 15,000 crore for restructuring debt and meeting expenditure requirements, (iii) funding of Rs 17,169 crore for offering voluntary retirement scheme to employees aged 50 years and above, along with coverage of cost towards pension and gratuity.[3]

Indian Telephone Industries Limited (ITIL)

Indian Telephone Industries Limited is involved in telecom equipment manufacturing. A package worth Rs 4,157 crore was approved for ITIL as part of a revival plan in 2014.[17] ITIL has seen a consistent increase in its turnover since 2015-16.[4] Its total income has increased from Rs 620 crore in 2014-15 to Rs 2,005 crore in 2018-19.[8] The company posted a net profit of Rs 93 crore in 2018-19.[8] The Standing Committee on Information Technology (2018) observed that ITIL's turnover is mainly coming from government business and recommended that it should work toward increasing its share in private business.[4]

Funds allocated to ITIL for capital upgradation have not been in line with demand.[8] For instance, against a request of Rs 405 crore in 2019-20, ITIL received only Rs 105 crore.[8] This affected the projects undertaken by ITIL under the revival plan.[8] Out of Rs 2,264 crore for capital expenditure under the revival plan, ITIL received only Rs 769 crore as of December 2019.[8]

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Demand for Grants: Railways

The Railways finances were presented on February 1, 2020 by the Finance Minister Ms. Nirmala Sitharaman along with the Union Budget 2020-21. The Ministry of Railways manages the administration of Indian Railways and policy formation through the Railway Board. Indian Railways is a commercial undertaking of the government.[1] This note looks at the proposed expenditure of the Ministry of Railways for the year 2020-21, its finances over the last few years, and issues with the same.

Key highlights

- **Revenue**: Railways' revenue for 2020-21 is estimated at Rs 2,25,913 crore which is a 10% increase from the revised estimates of 2019-20.
- **Traffic revenue**: Total revenue from traffic for 2020-21 is estimated at Rs 2,25,613 crore, which is a 10% increase from the revised estimates of 2019-20. In 2020-21, revenue from both freight and passenger traffic is expected to grow by 9%. As per the revised estimates of 2019-20, revenue from freight traffic is estimated to be 6% lower than the budget estimate.
- **Expenditure**: The total revenue expenditure by Railways for 2020-21 is projected at Rs 2,19,413 crore which is an 8% increase from the revised estimates of 2019-20. In 2019-20 (revised estimates), total revenue expenditure is estimated to be 3% lower than the budget estimate.
- **Operating Ratio**: In 2020-21, the Railways' Operating Ratio is estimated to be 96.2%. This is marginally better than the revised estimates of 2019-20 at 97.4%.

2020-21 Budget announcements[2]

Key announcements and proposals related to Railways made in Budget 2020-21 include:

- Railways will set up a Kisan Rail to build a national cold supply chain for perishables, including milk, meat and fish. This will be set up through PPP arrangements. Express and freight trains will have refrigerated coaches.
- Rs 100 lakh crore will be invested on infrastructure over the next five years. This will include projects on modernising railway stations, metro and railway transportation, and logistics and warehousing.
- Large solar power capacity will be set up alongside the rail tracks, on the land owned by the Railways.
- Four station re-development projects and operation of 150 passenger trains will be implemented through PPP mode.
- More Tejas type trains will be introduced to connect iconic tourist destinations.
- A 148 km long suburban transport project will be set up in Bangalore at a cost of Rs 18,600 crore. The central government will provide 20% of equity and facilitate external assistance of up to 60% of the project cost.

Overview of Finances[3,4]

In the last few years, Railways has been struggling to generate its own revenue. Railways' operating ratio has consistently been higher than 90% in the past several years, which indicates that its capability to generate operational surplus is low. The growth rate of Railways' earnings from its core business of running freight and passenger trains has been declining (see **Figure 3**). This is due to a decline in the growth of both freight and passenger traffic. Railways is also steadily losing traffic share to other modes of transport. The share of Railways in total freight traffic has declined from 89% in 1950-51 to 30% in 2011-12.[5] During the same period, share of roads on total freight traffic increased from 11% to 61%.

On the other hand, Railways' expenditure on salaries has been gradually increasing with a significant jump every few years due to Pay Commission revisions. Between 2015 and 2020 (budget estimate), Railways' expenditure on salary has grown at an average annual rate of 13%. There is an increasing expenditure on pension too, which is unproductive, as this does not generate any revenue for the Railways. The pension bill may increase further in the next few years, as about 40% of the Railways staff was above the age of 50 years in 2016-17.[6]

A decline in the growth of internal revenue generation has meant that Railways has been funding its capital expenditure through budgetary support from the central government and borrowings. While the support from central government has mostly remained consistent, Railways' borrowings have been increasing. An increased reliance on borrowings could further exacerbate the financial situation of Railways.[7,8] In the following section we discuss each of these components.

Railways' Revenue

Indian Railways is financed through: (i) its own internal resources (freight and passenger revenue, and leasing of railway land), (ii) budgetary support from the central government, and (iii) extra budgetary resources (primarily borrowings but also includes institutional financing, public private partnerships, and foreign direct investment). Railways' working expenses (salaries, staff amenities, pension, asset maintenance) are met through its internal resources. Capital expenditure (procurement of wagons, station redevelopment) is financed through extra budgetary resources, the budgetary support from central government, and Railways' internal resources.

Budgetary support from central government

The central government supports Railways in order to expand its network and invest in capital expenditure. Until recently, this budgetary support from the central government used to be the primary source of funds for capital expenditure for Railways. However, since 2015-16, an increasingly higher proportion of the capital expenditure is being met through extra budgetary resources. In 2017-18, 54% of the capital expenditure was met through extra budgetary resources.

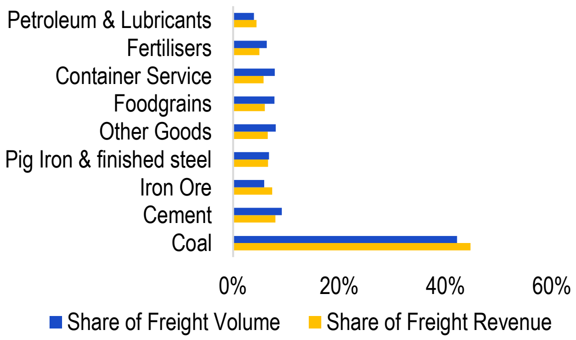
In 2020-21, the gross budgetary support from central government is proposed at Rs 70,250 crore. This is 3% higher than the revised estimates of 2019-20 (Rs 68,105 crore). The central government also reimburses Railways for the operating losses made on strategic lines, and for the operational cost of e-ticketing to IRCTC (Rs 2,216 crore as per budget estimates of 2020-21).

Internal Resources

Railways earns its internal revenue primarily from passenger and freight traffic. In 2018-19 (latest actuals), freight and passenger traffic contributed to about 67% and 27% of the internal revenue respectively. In 2020-21, Railways expects to earn 65% of its internal revenue from freight and 27% from passenger traffic. The remaining 8% will be earned from other miscellaneous sources such as parcel service, coaching receipts, and sale of platform tickets.

Freight traffic: In 2018-19, Railways generated most of its freight revenue from the transportation of coal (45%), followed by cement (8%), iron ore (7%), and pig iron/ finished steel (7%) (see **Figure 1**). It mostly transports bulk freight, and the freight basket has mostly been limited to include raw materials for certain industries such as power plants, and the iron and steel plants. In 2020-21, Railways expects to earn Rs 1,47,000 crore from goods traffic, an increase of 9% over the revised estimates of 2019-20.

Figure 1: Share of freight volume and revenue in 2018-19 (in %)



Sources: Expenditure Profile, Union Budget 2020-21; PRS.

Passenger traffic and revenue: Passenger traffic is broadly divided into two categories: suburban and non-suburban traffic. Suburban trains are passenger trains that cover short distances of up to 150 km, and help move passengers within cities and suburbs. Majority of the passenger revenue (94% in 2018-19) comes from the non-suburban traffic (or the long-distance trains).

In 2020-21, Railways expects to earn Rs 61,000 crore from passenger traffic, an increase of 9% over the revised estimates of 2019-20. However, note that in 2020-21, passenger traffic is estimated to grow at 1%. In 2019-20 (revised estimates), a 2% decline is estimated in passenger traffic, while no change is estimated in passenger revenue.

Extra Budgetary Resources (EBR)

Extra Budgetary Resources (EBR) include market borrowings such as financing from banks, institutional financing, and external investments. External investments in Railways could be in the form of public private partnerships (PPPs), joint ventures, or market financing by attracting private investors to potentially buy bonds or equity shares in Railways. Railways mostly borrows funds through the Indian Railways Finance Corporation (IRFC). IRFC borrows funds from the market (through taxable and tax-free bond issuances, term loans from banks and financial institutions), and then follows a leasing model to finance the rolling stock assets and project assets of Indian Railways.

In the past few years, borrowings have increased sharply to bridge the gap between the available resources and expenditure. As mentioned earlier, majority of the Railways' capital expenditure used to be met from the budgetary support from central government. In 2015-16, this trend changed with majority of Railways' capital expenditure being met through EBR. In 2020-21, Rs 83,292 crore is estimated to be raised through EBR, which is marginally higher than the revised estimates of 2019-20 (Rs 83,247 crore).

Capital outlay

The total proposed capital outlay (amount spent on asset creation) for 2020-21 is Rs 1,61,042 crore. This is 3% higher than the revised capital outlay for 2019-20 (Rs 1,56,352 crore).

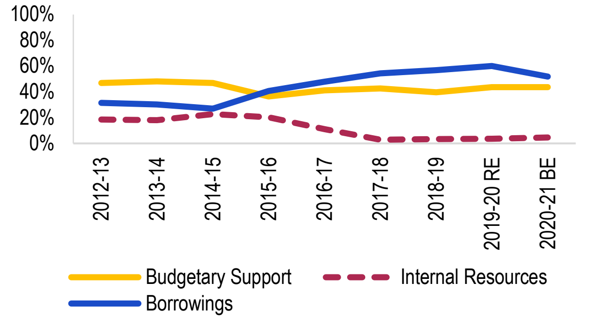
Table 1: Capital outlay (in Rs crore)

	2018-19 Actuals	2019-20 Revised	2020-21 Budget	% Change (2020-21 BE/ 2019-20 BE)
Gross Budgetary Support	52,838	68,105	70,250	3%
Internal Resources	4,663	5,000	7,500	50%
Extra Budgetary Resources	75,876	83,247	83,292	0%
Total	**1,33,377**	**1,56,352**	**1,61,042**	**3%**

Note: RE – Revised Estimates; BE – Budget Estimates.
Sources: Expenditure Profile, Union Budget 2020-21; PRS.

Majority of this capital expenditure will be financed through extra budgetary resources (52%), followed by the budgetary support from the central government (44%). Railways will fund only 5% of this capital expenditure from its own internal resources. **Figure 2** shows the trends in capital outlay over the last few years. This implies that Railways' capability to fund its capital outlay from its own revenue stream has been declining.

Figure 2: Components of capital outlay



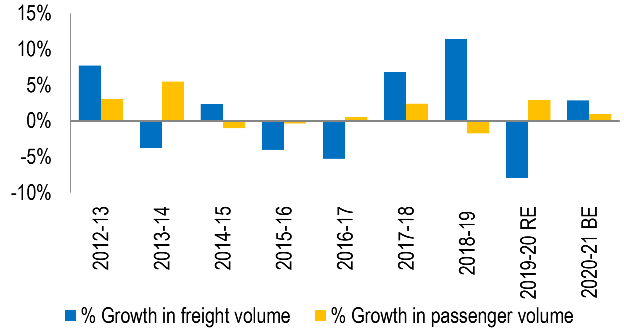
Note: RE – Revised Estimates, BE – Budget Estimates.
Sources: Expenditure Profile, Union Budget 2020-21; PRS.

Challenges in raising revenue

Over the last few years, there has been a decline in the growth of both rail based freight and passenger traffic (see Figure 3). This affects Railways' earnings from its core business of running freight and passenger trains. In 2019-20, Railways estimates a decline in some of its key revenue earning traffic. For example, coal traffic is estimated to decline by 6% from the budget estimates, and food grains transport by 11%. Overall freight traffic is estimated to decline by 5% in 2019-20. Similarly, in 2019-20 (revised estimate), passenger traffic is estimated to decline by 2% from the budget estimates.

The National Transport Development Policy Committee (NTDPC), in 2014, had noted that freight services are run with a focus on efficiency instead of customer satisfaction.5 The rail network's capacity is severely constrained due to which trains tend to slow down, affecting the quality of services. Further, Indian Railways does not have an institutional arrangement to attract and aggregate traffic of smaller parcel size.5 Therefore, it has been losing out on high potential markets such as FMCGs, hazardous materials, or automobiles and containerised cargo. Most of this traffic is transported by roads.

Figure 3: Volume growth for freight and passenger (year-on-year)



Note: RE – Revised Estimates; BE – Budget Estimates.
Sources: Expenditure Profile, Union Budget 2020-21; PRS.

The freight basket is also limited to a few commodities, most of which are bulk in nature (see **Figure 1**). For example, in 2018-19, coal contributed to about 45% of freight revenue and 30% of the total internal revenue. Therefore, any shift in transport patterns of any of these bulk commodities (coal, cement, iron ore) could affect Railways' finances significantly.

Freight cross-subsidises passenger traffic

In 2017-18, passenger and other coaching services incurred losses of Rs 37,937 crore, whereas freight operations made a profit of Rs 39,956 crore.[9] Almost 95% of profit earned from freight operations was utilised to compensate for the loss from passenger and other coaching services. The total passenger revenue during this period was Rs 46,280 crore. This implies that losses in the passenger business are about 82% of its revenue. Therefore, in 2017-18, for every one rupee earned in its passenger business, Indian Railways ended up spending Rs 1.82. These losses are primarily caused due to: (i) passenger fares being lower than the costs, and (ii) concessions to various categories of passengers.[10]

The NITI Aayog (2016) had noted that Railways ends up using profits from its freight business to provide for such losses in the passenger segment, and also to manage its overall financial situation.[10] Such cross-subsidisation has resulted in high freight tariffs. The NTDPC report (2014) had noted that, in India, the average freight revenue per Net Tonne Kilometre is one of the highest in the world, second only to Germany (one NTKM is the net weight of goods carried for a kilometre). In comparison, the average realisation per Passenger Kilometre is one of the lowest in the world (one PKM is when a passenger is carried for a kilometre).

Various experts have recommended rationalising both freight and passenger fares. One of the ways could be to price passenger fares closer to cost, thereby increasing these fares. However, in a competitive market where the demand for transport is elastic, Railways can only increase fares up to a certain limit depending on the competition from other transport modes like roads and airways.[10] Note that in January 2020, Railways marginally increased the passenger fares for the non-suburban traffic.[11]

Social service obligations of the Railways

In 2016-17, passenger and other coaching services incurred losses of Rs 37,937 crore.[9] Railways classifies these losses as the social service obligations of its passenger business. As mentioned earlier, these obligations include: (i) pricing tickets at fares lower than costs, and (ii) passenger concessions (such as cheaper tickets for senior citizens, army veterans).[10]

Three issues arise from such classification. First, it is not clear whether this figure hides any operational inefficiencies. The Committee on Restructuring Railways (2015) had noted that the methods of calculating the cost of running passenger business are not scientific and accurate.[7] Therefore, it is difficult to compute accurately the levels of under-recoveries.

Second, inefficiency in Railways' fare structure may also be a factor contributing to the losses in the passenger service business.[10] The NITI Aayog had suggested that Railways can price passenger fares as per the prevalent market rates in corresponding transport modes.[10] The CAG (2018) had noted that there is no justification for the Railways for not fully recovering the cost of passenger services in case of AC and First Class travel.[12]

Third, this raises the question whether Railways should bear these social obligations, when it works as a commercial department under the government. The NITI Aayog (2016) had noted that there is lack of clarity on the social and commercial objectives of Railways. The Committee on Restructuring Railways (2015) had noted that several decisions on the Indian Railways such as increase in fares, introduction of new trains, and provision of halts are not taken on the basis of commercial considerations.[7]

The Standing Committee on Railways (2017) had recommended that the Ministry of Finance should reimburse the Ministry of Railways on losses made on all strategically important lines.[6] In 2020-21, Rs 2,216 crore has been allocated towards reimbursement for losses on strategic lines.

Railways' Expenditure

In 2018-19 (latest actuals available), Indian Railways spent most of its money on staff (42% of its working expenditure), followed by expenses on pension fund (24%), and fuel (18%). In 2020-21, the total revenue expenditure by Railways is estimated at Rs 2,19,413 crore which is an 8% increase over the revised estimates of 2019-20.

Staff wages and pension

Staff wages and pension together comprise two-thirds of the Railways' expenditure. For 2020-21, the expenditure on staff is estimated at Rs 92,993 crore, which is 7% higher than the revised estimates of 2019-20. Allocation to the Pension Fund is estimated at Rs 53,260 crore, which is 10% higher than the revised estimates of 2019-20. Together, these constitute about 66% of the Railways' estimated revenue expenditure in 2020-21.

The Committee on Restructuring Railways (2015) had observed that the expenditure on staff is extremely high and unmanageable. This expense is not under the control of Railways and keeps increasing with each Pay Commission revision. Further, employee costs (including pensions) is one of the key components that reduces Railways' ability to generate surplus, and allocate resources towards operations. The Committee had recommended unifying and streamlining the recruitment process, and rationalising the manpower. It also recommended making the organisation more business oriented, amenable to private participation while retaining an optimal level of functional specialisation within it.

In December 2019, the Union Cabinet approved organisational restructuring of Indian Railways.[13] This restructuring includes merging various Group A services into a single service called Indian Railways Management Service. The proposed restructuring will also include reorganising the Railways Board on functional lines. It will have four members responsible for (i) infrastructure, (ii) operations & business development, (iii) rolling stock, and (iv) finance, respectively. Currently, the Board has several directorates to assist in its work, mostly on departmental lines (such as infrastructure, land, coaching, economics, finance, finance (budget).

Fuel and electricity

In 2020-21, the expense on fuel and electricity is estimated to be Rs 32,435 crore, an increase of 4% from the revised estimates of 2019-20. The expense on fuel and electricity is estimated to decrease by 5%, from Rs 32,810 crore in 2018-19 to Rs 31,043 crore in 2019-20 (revised estimates).

Lease Charges

Railways also pays lease charges to the Indian Railways Finance Corporation (IRFC). IRFC borrows funds from the market (through taxable and tax-free bond issuances, term loans from banks and financial institutions), and then follows a leasing model to finance the rolling stock assets and project assets of Indian Railways.

In 2020-21, Rs 14,224 crore is estimated to be spent on lease charges, which is an increase of 16% from the revised estimates of 2019-20. These lease charges are estimated to increase from Rs 9,977 crore in 2018-19 to Rs 11,566 crore in 2019-20 (revised estimate).

Depreciation Reserve Fund (DRF)

Appropriation to the DRF is intended to finance the costs of new assets replacing old ones.[8] In 2020-21, appropriation to DRF is estimated at Rs 800 crore. In the last few years, appropriation to the DRF has decreased significantly. In 2014-15, appropriation to the DRF was Rs 7,775 crore. In 2018-19, this appropriation to the DRF was reduced to Rs 300 crore.

Under-provisioning for the DRF has been observed as one of the reasons behind the decline in track renewals, and procurement of wagons and coaches.[8] The Standing Committee on Railways (2015) had observed that appropriation to the DRF is obtained as a residual after payment of the dividend and appropriation to the Pension Fund, instead of the actual requirement for the replacement of assets.[8] CAG (2019) noted that at the end of 2017-18, the value of over-aged assets pending for replacement using this fund was estimated at Rs 1,01,194 crore.

Further, in 2017-18, the Railways' contribution towards its new safety fund, the Rashtriya Rail Sanraksha Kosh was advanced entirely from the DRF. The Standing Committee on Railways (2018) had noted that transferring funds from DRF to the Rail Sanraksha Kosh, does not allow for replacement and repair of depreciating assets. It shows a lack of vision and poor way of utilising and appropriating valuable resources.[14]

Safety

The expenditure on safety includes revenue expenditure such as repairs and maintenance of tracks and wagons. It also includes capital expenditure such as track renewals, bridge works, creating level crossings, and road over bridges and under bridges (see **Table 2**).

Table 2: Expenditure on Safety (in Rs crore)

	2018-19 Actuals	2019-20 Revised	2020-21 Budget	% Change (2020-21 BE/ 2019-20 RE)
Revenue	45,342	47,707	51,326	8%
Capital	21,615	23,266	26,522	14%
Total	66,957	70,973	77,848	10%

Note: RE – Revised Estimates, BE – Budget Estimates.
Sources: Expenditure Profile, Union Budget 2020-21; PRS.

Rashtriya Rail Sanraksha Kosh: The Rashtriya Rail Sanraksha Kosh (RRSK) was created in 2017-18 to finance critical safety related works of renewal, replacement and augmentation of assets. The fund has a corpus of one lakh crore rupees over a period of five years (partially funded by the central government).

In 2020-21, Railways has allocated Rs 5,000 crore towards the RRSK. The remaining Rs 15,000 crore will be provided from the general revenues of the central government. As per the revised estimates of 2019-20, Railways is estimated to allocate Rs 2,500 crore towards the fund, which is 50% less than the proposed allocation for that year (Rs 5,000 crore). In 2018-19, the actual allocation towards the fund was Rs 3,024 crore, which is 40% less than the proposed allocation of Rs 5,000 crore.

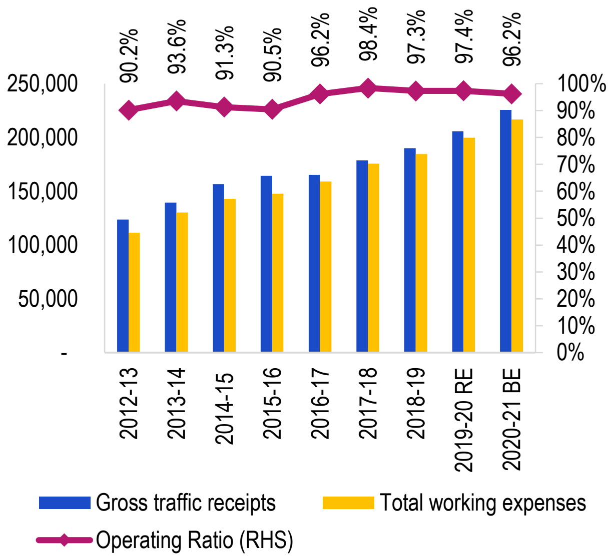
With Railways struggling to meet its expenditure and declining internal revenues, it is unclear how Railways will continue to fund the RRSK. As discussed earlier, in 2017-18, the RRSK was credited through funds from the DRF. The Ministry of Railways mentioned that the adverse resource position of the transporter during 2018-19 did not permit the desired level of funds to be transferred to the fund.[15] The Standing Committee on Railways (2018) also noted that if funds from the fund cannot be utilised well, then the purpose of having a dedicated safety fund becomes futile.[14]

Revenue Surplus and Operating Ratio

Railways' surplus is calculated as the difference between its total internal revenue and its revenue expenditure (this includes working expenses and appropriation to pension and depreciation funds). Operating Ratio is the ratio of the working expenditure (expenses arising from day-to-day operations of Railways) to the revenue earned from traffic. Therefore, a higher ratio indicates a poorer ability to generate surplus that can be used for capital investments such as laying new lines, or deploying more coaches. The CAG (2019) noted that in 2017-18, the decline in revenue surplus led to a decline in appropriation to the various funds managed by Railways from its internal resources.[9]

In the last decade, Railways has been struggling to generate higher surplus. Consequently, the Operating Ratio has consistently been higher than 90% for more than a decade. In 2020-21, Railways expects to generate a surplus of Rs 6,500 crore. This is a 71% higher than the revised estimates of 2019-20 (Rs 3,811 crore). In 2018-19, the ratio worsened to 97.3% as compared to the estimated ratio of 92.8%. The CAG (2019) had noted that if advances for 2018-19 were not included in receipts, the operating ratio for 2017-18 would have been 102.66%.[9]

Figure 4: Operating Ratio



Note: RE – Revised Estimates, BE – Budget Estimates.
Sources: Expenditure Profile, Union Budget 2020-21; PRS.

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Annexure

Appendix I: Railways Budget 2020-21 Summary

Table 6: Railways Receipts and Expenditure for 2020-21 (in Rs crore)

		2018-19 Actuals	2019-20 Budget	2019-20 Revised	% Change (2019-20 RE/ 2019-20 BE)	2020-21 Budget	% Change (2020-21 BE/ 2019-20 RE)
	Receipts						
1	Passenger	51,067	56,000	56,000	0%	61,000	9%
2	Freight	127,433	143,000	134,733	-6%	147,000	9%
3	Other traffic sources	11,407	17,675	15,100	-15%	17,613	17%
4	**Gross Traffic Receipts (1+2+3)**	**189,907**	**216,675**	**205,833**	**-5%**	**225,613**	**10%**
5	Miscellaneous	601	260	436	68%	300	-31%
6	**Total Internal Revenue (4+5)**	**190,507**	**216,935**	**206,269**	**-5%**	**225,913**	**10%**
	Expenditure						
7	Ordinary Working Expenses	140,200	155,000	151,208	-2%	162,753	8%
8	Appropriation to Pension Fund	44,280	50,000	48,350	-3%	53,160	10%
9	Appropriation to Depreciation Reserve Fund	300	500	400	-20%	800	100%
10	**Total Working Expenditure (7+8+9)**	**184,780**	**205,500**	**199,958**	**-3%**	**216,713**	**8%**
11	Miscellaneous	1,953	2,400	2,500	4%	2,700	8%
12	**Total Revenue Expenditure (10+11)**	**186,734**	**207,900**	**202,458**	**-3%**	**219,413**	**8%**
13	**Net Surplus (6-12)**	**3,774**	**9,035**	**3,811**	**-58%**	**6,500**	**71%**
14	Appropriation to Rashtriya Rail Sanraksha Kosh	3,024	5,000	2,500	-50%	5,000	100%
15	Appropriation to Development Fund	750	1,000	1,311	31%	1,500	14%
16	Appropriation to Capital Fund	-	3,035	-	-100%	-	-
17	**Operating Ratio**	**97.3%**	**95.0%**	**97.4%**		**96.2%**	

Note: RE – Revised Estimate, BE – Budget Estimate.
Sources: Expenditure Profile 2020-21; PRS.

Explanatory Notes

Performance parameters

1. ‘Net Surplus’ represents excess of revenue receipts over revenue expenditure (Railways’ internal revenue and expenditure).
2. ‘Operating Ratio’ is the ratio of operating expenses to receipts. A lower ratio indicates higher surplus availability for investments.

Railway Funds

3. Depreciation Reserve Fund – Finances the cost of new assets replacing old assets including the cost of any improved features. Appropriation to this fund are made on the recommendations of the Railway Convention Committee (RCC).
4. Pension Fund – Finances all pension payments to retired Railway staff.
5. Rashtriya Rail Sanraksha Kosh - Finances critical safety related works of renewal, replacement and augmentation of assets.

Appendix II: Details of freight and passenger traffic

Table 7: Freight traffic details (NTKM in millions; Earnings in Rs crore)

	2018-19 Actuals		2019-20 Revised		2020-21 Budgeted		% Change (2020-21 BE/ 2019-20 RE)	
Commodity	**NTKM**	**Earnings**	**NTKM**	**Earnings**	**NTKM**	**Earnings**	**NTKM**	**Earnings**
Coal	3,11,487	56,964	2,84,907	61,482	2,93,940	67,355	3%	10%
Raw materials for steel plants except iron	15,141	2,359	14,387	2,350	14,715	2,779	2%	18%
Pig Iron & finished steel	49,926	8,422	42,369	7,582	44,625	9,238	5%	22%
Iron Ore	43,322	9,377	45,744	14,342	47,230	12,345	3%	-14%
Cement	67,818	10,166	59,916	9,240	61,832	11,022	3%	19%
Foodgrains	57,575	7,616	53,254	6,951	53,820	8,119	1%	17%
Fertilisers	46,835	6,348	44,899	6,391	44,460	7,314	-1%	14%
Petroleum & Lubricants	29,333	5,632	29,104	5,935	29,166	6,874	0%	16%
Container Service	57,882	7,369	53,900	5,770	56,040	4,669	4%	-19%
Other Goods	59,204	8,328	51,532	7,723	53,728	9,307	4%	21%
Miscellaneous earnings		4,852		6,967		7,979		15%
Total	**7,38,523**	**127,433**	**6,80,012**	**134,733**	**6,99,556**	**147,000**	**3%**	**9%**

Notes: NTKM – Net Tonne Kilometre (One NTKM is the net weight of goods carried for a kilometre); RE – Revised Estimates; BE – Budget Estimates.
Sources: Expenditure Profile 2020-21; PRS.

Table 8: Passenger traffic details (PKM in millions; Earnings in Rs crore)

	2018-19 Actuals		2019-20 Revised		2020-21 Budgeted		% Change 2020-21 BE/ 2019-20 RE	
	PKM	**Earnings**	**PKM**	**Earnings**	**PKM**	**Earnings**	**PKM**	**Earnings**
Suburban								
Total Suburban	1,46,678	2,813	1,57,952	2,998	1,63,008	3,095	3%	3%
Non Suburban								
AC First class	1,871	518	1,997	596	2,010	651	1%	9%
AC Sleeper	23,252	3,864	25,176	4,512	25,334	4,930	1%	9%
First Class (M&E)	87,207	11,223	84,479	11,726	85,009	12,810	1%	9%
First Class (ordinary)	623	178	521	160	524	175	1%	9%
AC 3 Tier	13,291	1,893	12,752	1,958	12,832	2,140	1%	9%
Sleeper Class (M&E)	115	15	65	9	65	10	0%	9%
Second Class (M&E)	282	13	386	18	388	20	1%	9%
Sleeper Class (ordinary)	2,91,144	14,321	3,22,820	17,126	3,24,844	18,710	1%	9%
Second Class (Ordinary)	3,523	146	3,934	176	3,959	192	1%	9%
AC Chair Car	3,69,835	11,418	3,27,300	10,898	3,29,352	11,906	1%	9%
Executive Class	2,19,353	4,666	2,53,784	5,822	2,55,376	6,360	1%	9%
Total Non-Suburban	**10,10,496**	**48,254**	**10,33,214**	**53,002**	**10,39,693**	**57,905**	1%	9%
Total Passenger	**11,57,174**	**51,067**	**11,91,166**	**56,000**	**12,02,701**	**61,000**	1%	9%

Notes: PKM – Passenger Kilometre (One PKM is when a passenger is carried for a kilometre); RE – Revised Estimates; BE – Budget Estimates.
Sources: Expenditure Profile 2020-21; PRS.

Demand for Grants: Health and Family Welfare

The Ministry of Health and Family Welfare has two departments: (i) the Department of Health and Family Welfare, and (ii) the Department of Health Research. The Department of Health and Family Welfare is responsible for functions including: (i) implementing health schemes, and (ii) regulating medical education and training. The Department of Health Research is broadly responsible for conducting medical research.

This note analyses the financial allocation trends and key issues concerning the health sector.

Overview of finances

Overall, India's public health expenditure (sum of central and state spending) has remained between 1.2% to 1.6% of GDP between 2008-09 and 2019-20.[1,2,3] This expenditure is relatively low as compared to other countries such as China (3.2%), USA (8.5%), and Germany (9.4%).

In 2020-21, the Ministry received an allocation of Rs 67,112 crore. This is an increase of 3.9% over the revised estimates of 2019-20 (Rs 64,609 crore).[4] Under the Ministry, the Department of Health and Family Welfare accounts for 97% of the Ministry's allocation, at Rs 65,012 crore. Whereas, the **Dep**artment of Health Research is allocated Rs 2,100 crore (3% of the allocation).

Table 1: Budget allocation for the Ministry of Health and Family Welfare (in Rs crore)

Item	Actuals 2018-19	RE 2019-20	BE 2020-21	% Change (RE to BE)
Health & Family Welfare	52,954	62,659	65,012	3.8%
Health Research	1,728	1,950	2,100	7.7%
Total	**54,682**	**64,609**	**67,112**	**3.9%**

Note: BE – Budget Estimate; RE – Revised Estimates.
Sources: Demand Nos. 42 & 43, Ministry of Health and Family Welfare, Union Budget 2020-21, PRS.

The revised estimate in 2019-20 for the Department of Health and Family Welfare matched the budget estimate of Rs 62,659 crore. Whereas, the Department of Health Research slightly overshot its budget estimate by Rs 50 crore.

Table 2 contains the allocation to major expenditure heads under the Ministry for the year 2020-21.

Table 2: Allocation to major expenditure heads under the Ministry (in Rs crore)

Major Heads	Actuals 2018-19	RE 2019-20	BE 2020-21	% Change (RE to BE)
NHM (total)	31,045	33,790	33,400	-1%
-NRHM	25,495	27,834	27,039	-3%
-NUHM	868	950	950	0%
-Others	4,682	5,006	5,411	8%
Autonomous Bodies (AIIMS, PGIMER, ICMR)	8,718	10,095	9,616	-5%
Ayushman Bharat: Pradhan Mantri Jan Arogya	1,998	3,200	6,400	100%
PMSSY	3,797	4,733	6,020	27%
National AIDS & STD Control Programme	1,803	2,956	2,900	-2%
Family Welfare Schemes	598	776	831	7%
Rashtriya Swasthya Bima Yojana	227	114	29	-75%
Others	6,497	8,946	7,916	-12%
Total	**54,682**	**64,609**	**67,112**	**4%**

Note: BE - Budget Estimate; RE - Revised Estimates; NHM- National Health Mission; NRHM- National Rural Health Mission; NUHM- National Urban Health Mission; PMSSY- Pradhan Mantri Swasthya Suraksha Yojana.
Autonomous Bodies include the All India Institute of Medical Science, Post Graduate Institute of Medical Education and Research, Chandigarh, and the Indian Council of Medical Research, New Delhi
Sources: Demand No. 42 & 43, Ministry of Health and Family Welfare, Union Budget 2020-21, PRS.

- The National Health Mission (NHM) receives about 50% of the Ministry's allocation, which amounts to Rs 33,400 crore in 2020-21. Under the NHM, the rural component, i.e., the National Rural Health Mission (NRHM) has been allocated Rs 27,039 crore, a 3% decrease over the revised estimates of 2019-20. The allocation for National Urban Health Mission (NUHM) at Rs 950 crore remained the same over the revised estimates of 2019-20.
- Other items under NHM include funds for health and medical education amounting to Rs 4,686 crore in 2020-21.
- Allocation to autonomous institutes like the AIIMS and the Indian Council of Medical Research saw a decrease of 5% at Rs 9,616 crore from the revised estimates of 2019-20.

- Pradhan Mantri Jan Arogya Yojana has seen the highest increase in allocation at 100% (Rs 6,400 crore) over the revised estimates of 2019-20 (Rs 3,200 crore). The scheme provides a cover of Rs five lakh per family per year to about 10.7 crore families belonging to the poor and vulnerable population.
- Higher allocation has been made for Pradhan Mantri Swasthya Suraksha Yojana at Rs 6,020 crore (27% increase). It focuses on correcting regional imbalances in the availability of affordable tertiary healthcare services.

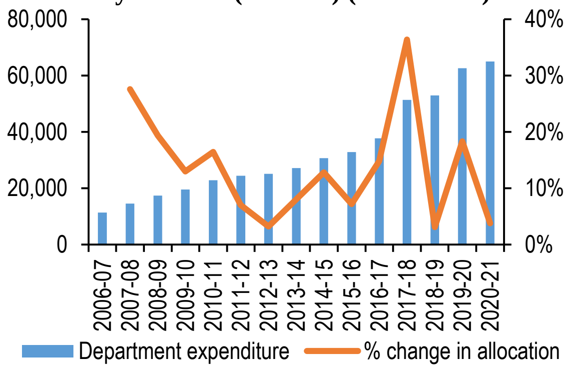
Budget speech highlights 2020-21

- A health cess of 5% will be levied (in addition to customs duty) on certain medical devices, such as X-ray machines, imported into India. This cess may be utilised for the financing of health infrastructure and services.
- Viability gap funding window has been proposed for setting up hospitals in the public-private partnership mode. Proceeds from taxes on medical devices would be used to support this health infrastructure.
- Jan Aushadhi Kendra Scheme will be expanded to all districts offering 2,000 medicines and 300 surgicals by 2024.

Trends in allocation and expenditure

In the last 15 years, the allocation to the Department of Health and Family Welfare has increased from Rs 11,366 crore in 2006-07 to Rs 65,012 crore in 2020-21. Over the period 2006-20, the Compound Annual Growth Rate (CAGR) has been 13%. CAGR is the annual growth rate over a certain period of time.

Figure 1: Allocation to the Department of Health and Family Welfare (2006-20) (in Rs crore)



Note: % change in allocation is BE (2020-21) over RE (2019-20) for 2020-21.
Sources: Union Budgets, 2006-07 to 2020-21; PRS.

Table 3 indicates the actual expenditure of the Department of Health and Family Welfare compared with the budget estimates of that year (2010-20). The utilisation has been over 100% in the last three years, i.e., the Department exceeded its budget estimates. As per the revised estimates of 2019-20, the Department has already reached 100% of utilisation.

Table 3: Comparison of budget estimates and the actual expenditure (2010-20) (in Rs crore)

Year	BE	Actuals	Actuals/BE
2010-11	23,530	22,765	97%
2011-12	26,897	24,355	91%
2012-13	30,702	25,133	82%
2013-14	33,278	27,145	82%
2014-15	35,163	30,626	87%
2015-16	29,653	30,626	103%
2016-17	37,066	37,671	102%
2017-18	48,853	51,382	105%
2018-19	52,800	52,954	103%
2019-20	62,659	62,659*	100%

Note: BE – Budget Estimates; *Revised Estimates.
Sources: Union Budgets, 2010-20; PRS.

Financial allocations to outcomes

National Health Mission

The National Health Mission (NHM) consists of two sub missions, the National Rural Health Mission (focused on rural areas) and the National Urban Health Mission (focused on urban areas). NHM aims at strengthening public health systems and healthcare delivery.

The various components under NHM include: (i) reproductive, maternal, new born and child health services (RCH Flexi Pool), (ii) NRHM Mission Flexi Pool for strengthening health resource systems, innovations and information, (iii) immunisation including the Pulse Polio Programme, (iv) infrastructure maintenance, and (v) National Disease Control Programme.

Note that, funding for NHM is done through flexible pools, such as RCH flexible pool, and flexible pool for communicable diseases. The rationale for creating of the flexible pool is to allow more financial flexibility and efficient distribution of funds in order to obtain desired health outcomes.

The allocation for NHM in 2020-21 (Rs 33,400 crore) saw a 1% decrease over the revised estimates of 2019-20. NHM's percentage share in the total budget has decreased from 73% in 2006-07 to 50% in 2020-21.

In 2020-21, there has been no change in allocation towards all the flexible pools. The funding for the flexible pools are: (i) Rs 5,703 crore for the immunisation pool, (ii) Rs 2,178 crore towards the flexible pool for communicable diseases, and (iii) Rs 717 crore towards the flexible pool for non-communicable diseases.

Table 4 shows the key targets achieved under the NHM framework.

Table 4: Targets as per NHM framework

Targets (2012-17)	Status (as on Dec 2019)
Reduce IMR to 25	IMR has reduced to 35 in 2017.
Reduce MMR to 100/1,00,000 live births	MMR has reduced to 122 in 2017.
Reduce TFR to 2.1	TFR has reduced to 2.3 in 2016.
Annual Malaria Incidence to be < .001	Annual Malaria Incidence is 0.02 in 2019.
Less than 1 % microfilaria prevalence in all districts	Out of 256 endemic districts, 99 have reported incidence less than 1% till 2018.
Kala-Azar elimination by 2015, <1 case per 10,000 population in all blocks	92% endemic blocks have achieved the elimination target in 2019,
Reduce annual prevalence and mortality from Tuberculosis by half	Incidence reduced from 300 per lakh in 1990 to 204 per lakh in 2017. Mortality reduced from 76 per lakh in 1990 to 31 per lakh in 2017.

Source: Health and Family Welfare Statistics 2017; Unstarred Question No. 4335, Ministry of Health and Family Welfare, Lok Sabha, December 13, 2019; PRS.
Note: IMR-Infant Mortality Rate; MMR-Maternal Mortality Rate; TFR-Total Fertility Rate.

The objective of NHM is to ensure universal access to equitable, affordable, and quality health care services. This is done through improving health infrastructure and enhancing service delivery by training human resources in healthcare. Healthcare infrastructure in India can be categorised into physical infrastructure and the human resources who provide medical services.

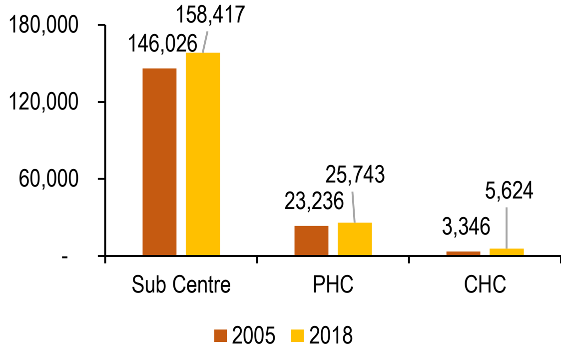
Physical infrastructure

Depending on the level of care required, healthcare in India is broadly classified into three types. This classification includes primary care (provided at primary health centres), secondary care (provided at district hospitals), and tertiary care institutions (provided at specialised hospitals like AIIMS). Primary health care infrastructure provides the first level of contact between health professionals and the general population.[5]

Broadly, based on the population served and the type of services provided, primary health infrastructure in rural areas consists of a three tier system. This includes Sub-Centres (SCs), Primary Health Centres (PHCs), and Community Health Centres (CHCs).[6] A similar set up is maintained in urban areas.[7]

The number of SCs, PHCs, and CHCs in 2005 and 2018 respectively across rural and urban areas are given in **Figure 2**.

Figure 2: Number of Sub Centres, PHCs, and CHCs (2005 and 2018)



Source: Comparative Statement, Health Management Information System; PRS.

A shortfall has been observed at different levels of the healthcare delivery system. As of 2018, there is a shortage of 2,188 CHCs, 6,430 PHCs and 32,900 SCs.[8] The Ministry has noted that the existing ones are also poorly equipped and have inadequate infrastructure with many PHC's functioning in erstwhile single room SCs and many SCs in thatched accommodation.[9] Note that under NRHM, states were permitted to establish facilities as per need. However, not many states did so due to lack of funds and the inability to close down even existing facilities (not in use) because of administrative bottlenecks.[9]

Under NHM, support is provided to states to strengthen existing public health facilities. As of 2018, there are 25,778 government hospitals (including community health centres) in India.[10] Further, states have constructed 268 new district hospitals and upgraded 3,288 hospitals.[3] With regard to secondary and tertiary care, the HLEG (2011) recommended that in order to guarantee secondary and tertiary care, equitable access to functional beds must also be provided.[11] According to the World Health Statistics, India ranks among the lowest in this regard, with 0.7 beds per 1,000 people, far below the global average of 3.4 beds.[12] It recommended functional bed capacity should be expanded to 2 beds per 1000 population by 2022.

Human resources in health

Between 2014 and 2018, the number of registered doctors increased by 24% from 7,47,109 to 9,23,749.[8] Note that despite the increase, there has been a steady increase in the shortfall of doctors, specialists and surgeons. For example, as of 2018, there is a shortfall of 46% of doctors, and 82% of specialists including surgeons, obstetricians, gynaecologists, physicians, and paediatricians in Primary Health Centres across India.[8]

Certain reasons identified for the shortage of personnel in government facilities include: (i) poor working environment, (ii) poor remuneration making migration to foreign countries and to the private sector more attractive, and (iii) procedural delays in recruitment and poor forward planning for timely filling up of positions. It has been estimated that the filling up of human resource gaps in 16 states would require an expenditure equivalent to 0.6% of GDP.[11]

Table 5 displays the number of health professionals in India.

Table 5: Number of public health professionals in India (2014-18)

Profession	2014	2018	% increase
Allopathic Doctors	7,47,109	9,23,749	24%
AYUSH Doctors**	7,36,538	7,99,879	9%
Nurses and Pharmacists	32,86,157	40,91,597	25%

Notes: **includes Ayurveda Unani Siddha Naturopathy Homeopathy.
Source: Economic Survey 2019-20; PRS.

Pradhan Mantri Jan Arogya Yojana (PMJAY)

Launched in September 2018 under the Ayushman Bharat programme, PMJAY aims to provide a cover of Rs five lakh per family per year to 10.7 crore families (no cap on family size and age) belonging to poor and vulnerable population.[13] The scheme subsumed two centrally sponsored schemes, namely, Rashtriya Swasthya Bima Yojana (RSBY) and the Senior Citizen Health Insurance Scheme.

Benefits: The scheme provides insurance coverage for secondary and tertiary healthcare. At present, 1,393 procedures across different specialties such as general medicine, oncology, cardiology, and orthopaedics are covered. In addition, the scheme provides for pre and post hospitalisation expenses.

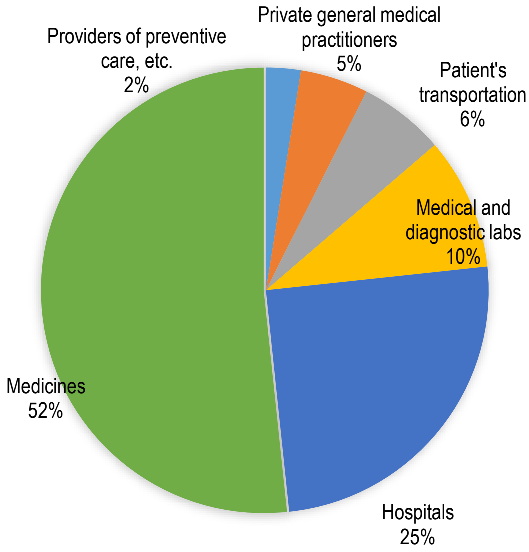
In 2020-21, PMJAY has been allocated Rs 6,400 crore, an increase of 100% over the revised estimates of 2019-20. In 2019-20, the scheme was allocated Rs 6,400 crore which was revised downward to Rs 3,200 crore.

A study report by the 15th Finance Commission estimated the demand and expenditure on the PMJAY for the next five years. It stated that the total costs (centre and states) of PMJAY for 2019 could range from Rs 28,000 crore to Rs 74,000 crore.[14] This estimate takes into account: (i) the assumption that all targeted beneficiaries will be covered (approximately 50 crore people), (ii) hospitalisation rates over time, and (iii) average expenditure on hospitalisation. Further, it noted that these costs could go up to between Rs 66,000 crore and Rs 1,60,089 crore in 2023 (accounting for inflation).

Note that, the Standing Committee on Health (2018) and a study report of the 15th Finance Commission (2019) have noted that PMJAY is just an extension of RSBY which provided for coverage of up to Rs 30,000 per family per annum.[14,15] Hence, to ensure proper implementation of the scheme, an analysis of the failures and inadequacies of RSBY should be done. This would look at whether: (i) RSBY covered all potential beneficiaries, (ii) hospitalisation rates increased under the scheme, and (iii) insurance companies were profitable under the scheme.

While PMJAY provides coverage for secondary and tertiary levels of healthcare, most of the out-of-the-pocket expenditure made by the consumers is actually on buying medicines (52%), and towards public hospitals (22%) (See Figure 3).[16] Out-of-the-pocket expenditure are the payments made directly by individuals at the point of service where the entire cost of the health service is not covered under any financial protection scheme.

Figure 3: Major heads for which out-of-pocket expenditure is made (2014)



Sources: Household Health Expenditures in India (2013-14), December 2016, Ministry of Health and Family Welfare; PRS.

Several expert bodies including the High Level Expert Group (HLEG) set up by the Planning Commission (2011) and the High Level Group of Health Sector (2019) have observed that focus on prevention and early management of health problems can reduce the need for complicated specialist care provided at the tertiary level.[11,17] It recommended that the focus of healthcare provision should be towards providing primary healthcare for the country.

In this context, as part of the Ayushman Bharat programme, 1,50,000 existing Sub Health Centres (first contact between health system and population) and Primary Health Centres (referral unit for Sub Centres) will be upgraded to Health and Wellness Centres by December 2022. These centres will provide comprehensive primary health care, free essential drugs and diagnostic services.

The table below shows details regarding the implementation of the Ayushman Bharat programme which includes PMJAY and Health and Wellness Centres.

Table 6: Status of implementation of Ayushman Bharat (as of January 2020)

Indicators	All India
Beneficiary families covered (in lakhs)	1,363
% claims paid	63%
Number of empanelled hospitals	19,752
Health and Wellness Centres	29,572

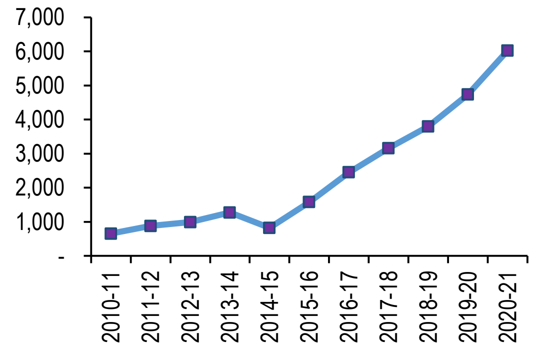
Sources: Lok Sabha Unstarred Question No. 1,066, Ministry of Health and Family Welfare, answered on November 22, 2019; HWC Portal, Ayushman Bharat; PRS.

Pradhan Mantri Swasthya Suraksha Yojana

Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) has been implemented since 2003 with objective of: (i) correcting regional imbalances in the availability of affordable and reliable tertiary healthcare services, and (ii) augmenting facilities for quality medical education in the country. This includes establishing AIIMS like institutions and upgrading certain state government hospitals. Over the years, the scheme has been expanded to cover 20 new AIIMS and 71 state government hospitals.

In 2018, the Comptroller and Auditor General (CAG) noted that all new AIIMs overshot their completion time by almost five years.[18] There were similar delays observed in the upgradation of state government hospitals. Further, it was found that the Ministry had estimated the capital cost for setting up six new AIIMS in Phase 1 to be Rs 332 crore per institute. After four years, this cost was revised to Rs 820 crore per institute, on account of shortcomings in planning and assessment of requirements. The Standing Committee on Health and Family Welfare (2017 and 2018) noted that this indicates poor assessment of time and cost which have left the allocated funds unused.[15,19]

Figure 4: Yearly allocation to PMSSY (2010-20) (in Rs crore)



Notes: Values for 2019-20 and 2020-21 are revised estimates and budget estimates respectively
Sources: Union Budget 2008-09 to 2020-21; PRS.

In 2020-21, the allocation to PMSSY increased by 27% over the revised estimates of 2019-20 (see Figure 6) at Rs 6,020 crore. Allocation towards PMSSY increased from Rs 654 crore in 2010-11 to Rs 6,020 crore in 2020-21.

Health research

The Standing Committee on Health and Family Welfare (2018) noted that there is a huge, persistent, and recurring mismatch between the projected demand for funds and actual allocation to the Department of Health Research.[20,21] In 2020-21, its allocation has seen an increase of 7.7% over the revised estimates of 2019-20 at Rs 2,100 crore. The Committee also noted that the Department had reported shortfall of funds for implementation of projects and on the other hand, there was underutilisation of funds released.

This mismatch between the demanded and allocated funds has led to impact in terms of restrictions in the sanctioning of new labs, providing recurring grants to the ongoing projects, and upgradation of health research infrastructure.[20] This also led to repercussions in the medical research output. For example, in two years i.e. 2015 and 2016, only 1,685 research papers have been published by the Indian Council of Medical Research and 3 patents have been granted against the 45 patents filed.[20]

The National Medical Commission Act, 2019

A legislation regarding the medical regulatory authority was passed by Parliament to oversee medical education and practice. The National Medical Commission Act, 2019 replaced the current Medical Council of India (MCI). The MCI was established under the 1956 Act to establish uniform standards of medical education and regulate its practice.

The Act provides for a medical education system which ensures: (i) availability of adequate and high quality medical professionals, (ii) adoption of the latest medical research by medical professionals, (iii) periodic assessment of medical institutions, and (iv) an effective grievance redressal mechanism.

Drug regulation

The central and state agencies for drug regulation are governed by the Drugs and Cosmetics Act, 1940 (DCA). The DCA provides for the regulation of import, manufacture, sale, and distribution of drugs. Although the DCA is a central legislation, it is implemented by the states.

Over the years, various Committees have examined the issues relating to the regulation of drugs.

The Mashelkar Committee Report (2003) highlighted the following challenges of the drug regulatory system: (i) inadequacy of trained and skilled personnel at the central and state levels, (ii) lack of uniformity in the implementation of regulatory requirements and variations in regulatory enforcement, and (iii) inadequate or weak drug control infrastructure at the state and central level.[22]

Expert committees have recommended many steps to address these concerns regarding drug regulation in the country.[22,23,24] They include: (i) a new independent and professionally run regulatory body, Central Drug Administration reporting directly to MoHFW, (ii) categorising the states in terms of scale of industry (manufacturing and sale) and investment in their regulation accordingly, (iii) the revision and imposition of higher fees for drug applications, clinical trials, and registration of imported drugs and foreign manufacturers, and (iv) establishment of technical expert committees for new drug approvals.

Quality of drugs

The Standing Committee Report (2013) found that the prevalence of poor quality drugs to be around 7-8 %, where non-standard drugs outnumber spurious drugs.[25]

The extent of 'non-standard quality' drugs in the National Drug Survey between 2014 and 2016 was 3.2%.[26] The extent of 'spurious' drugs during the same time period was 0.02%.[26] A drug is deemed to be 'spurious' if: (i) it is manufactured under a name which belongs to another drug, (ii) if it is an imitation of another drug, (iii) if it has been substituted wholly or partly by another drug, and (iv) if it wrongly claims to be another manufacturer's product.[27]

With regard to quality of drugs, the Mashelkar Committee recommended that: (i) states should take more samples to check the quality of drugs manufactured and sold in the market, (ii) states should also monitor the source of purchase and quality of drugs stocked by registered medical practitioners, and (iii) number of drug inspectors and their skills must be upgraded according to the load of work of inspections and monitoring.[22]

Drug pricing

The National Pharmaceutical Pricing Authority (NPPA) monitors the availability and pricing of drugs in the country. NPPA fixes the prices of drugs/devices included in Schedule I of Drugs (Prices Control) Order (DPCO), 2013 after their notification under National List of Essential Medicines (NLEM). NLEM, 2015 consists of 3,754 medicines in total. Wherever instances of manufacturers/ importers charging prices higher than the prices fixed by the NPPA are reported, these cases are examined in detail. Since the inception of NPPA in 1995 till 2019, 2,038 demand notices have been issued to pharmaceutical companies for having overcharged patients on the sale of formulations at prices above the ceiling prices notified by NPPA.[28] An amount of Rs 5,477 crore is still remaining to be paid and an amount of Rs 4,033 is under litigation.[28]

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Annexure

Union Budget, 2020-21

Table 1: Allocations to the Ministry of Health and Family Welfare for 2020-21 (in Rs crore)

Major Heads	2018-19 Actuals	2019-20 BE	2019-20 RE	2020-21 BE	% Change RE (2019-20)/Actuals (2018-19)	Change between RE 2019-20 and BE 2020-21
Department of Health Research	**1,728**	**1,900**	**1,950**	**2,100**	**13%**	**7.7%**
Department of Health and Family Welfare	**52,954**	**62,659**	**62659**	**65,012**	**18%**	**3.8%**
Pradhan Mantri Swasthya Suraksha Yojana	3,797	4,000	4,733	6,020	**25%**	**27%**
Family Welfare Schemes	598	950	776	831	**30%**	**7%**
National AIDS and STD Control Programme	1,803	2,500	2,956	2,900	**64%**	**-2%**
National Health Mission	**31,045**	**32,995**	**33,790**	**33,400**	**9%**	**-1%**
-National Rural Health Mission	25,495	27,039	27,834	27,039	**9%**	**-3%**
-National Urban Health Mission	868	950	950	950	**9%**	**0%**
-Tertiary Care Programs	289	550	300	550	**4%**	**83%**
-Strengthening of State Drug Regulatory System	*179*	*206*	*206*	175	**15%**	**-15%**
-Human Resources for Health and Medical Education	4,214	4,250	4,500	4,686	**7%**	**4%**
Infrastructure Development for Health Research	103	160	153	170	**48%**	**11%**
Rashtriya Swasthya Bima Yojna	227	156	114	29	**-50%**	**-75%**
Pradhan Mantri Jan Arogya Yojana	1,998	6,400	3,200	6,400	**60%**	**100%**
Autonomous Bodies	8,718	9,920	10,095	9,616	**16%**	**-5%**
Others	6,394	7,478	8,793	7,745	**38%**	**-12%**
Total	**54,682**	**64,559**	**64,609**	**67,112**	**18%**	**3.9%**

Sources: Demand for Grants, Ministry of Health and Family Welfare, Union Budget, 2020-21; PRS.

State-wise numbers on the health sector

Table 2: Average health expenditure (2012-13) (urban and rural, in Rs)

State	Average health expenditure (rural)	Average health expenditure (urban)
Andhra Pradesh	13,227	31,242
Arunachal Pradesh	5,678	8,926
Assam	6,966	47,064
Bihar	11,432	25,004
Chhattisgarh	12,149	22,647
Delhi	30,613	34,730
Goa	29,954	23,165
Gujarat	14,298	20,155
Haryana	18,341	32,370
Himachal Pradesh	18,860	28,590
Jammu & Kashmir	8,442	13,948
Jharkhand	10,351	13,151
Karnataka	14,091	22,190
Kerala	17,642	15,465
Madhya Pradesh	13,090	23,993
Maharashtra	20,475	29,493
Manipur	6,061	10,215
Meghalaya	2,075	18,786
Mizoram	8,744	13,461
Nagaland	5,628	15,788
Odisha	10,240	19,750
Punjab	27,718	29,971
Rajasthan	12,855	16,731
Sikkim	8,035	9,939
Tamil Nadu	11,842	23,757
Telangana	19,664	20,617
Tripura	5,694	11,638
Uttar Pradesh	18,693	31,653
Uttarakhand	9,162	25,703
West Bengal	11,327	24,875
Andaman & Nicobar Islands	3,373	8,389
Chandigarh	16,389	35,158
Dadra & Nagar Haveli	4,219	7,749
Daman & Diu	10,223	6,930
Lakshadweep	10,418	8,604
Puducherry	7,965	14,076
All India	**14,935**	**24,436**

Sources: District Level Household and Facility Survey -4 (2012-13); PRS.

Table 3: Comparison of key health indicators across states

State	Population (Million) 2011	Crude Birth Rate 2016	Total Fertility Rate, 2016	Under 5 mortality rate, 2016	Infant Mortality Rate (per 1000 live Births) 2016	Underweight children (%) 2015	Life Expectancy at Birth (Years) 2012-16	Maternal Mortality Ratio 2015-17
		Number of live births per 1,000 in a population.	Number of children born to a woman in her life time	Death between 0-5 years, per 1,000 live births	Number of infants who die before reaching one, per 1,000 live births	Composite index of stunting and wasting	How long a new born can expect to live, on existing death rate	Number of maternal deaths, per 1,00,000 live births
Andhra Pradesh	49	16	1.7	37	34	32%	70	74
Assam	31	22	2.3	52	44	30%	66	229
Bihar	104	27	3.3	43	38	44%	69	165*
Chhattisgarh	26	23	2.5	49	39	38%	65	141
Gujarat	60	20	2.2	33	30	39%	70	87
Haryana	25	21	2.3	37	33	29%	69	98
Jharkhand	33	23	2.6	33	29	48%	68	76
Karnataka	61	18	1.8	29	24	35%	69	97
Kerala	33	14	1.8	11	10	16%	75	42
Madhya Pradesh	73	25	2.8	55	47	43%	65	188
Maharashtra	112	16	1.8	21	19	36%	72	55
Odisha	42	19	2.0	50	44	34%	68	168
Punjab	28	15	1.7	24	21	22%	73	122
Rajasthan	69	24	2.7	45	41	37%	68	186
Tamil Nadu	72	15	1.6	19	17	24%	71	63
Telangana	35	18	1.7	34	31	29%		76
Uttar Pradesh	200	26	3.1	47	43	40%	65	216
West Bengal	91	15	1.6	27	25	32%	71	96
Arunachal Pradesh	1	19	2.7	..	36	20%		..
Delhi	17	16	1.6	22	18	27%	74	..
Goa	1	13	1.6	..	8	24%		..
Himachal Pradesh	7	16	1.7	27	25	21%	72	..
Jammu & Kashmir	13	16	1.7	26	24	17%	74	..
Manipur	3	13	1.5	..	11	14%		..
Meghalaya	3	24	3.1	..	39	29%		..
Mizoram	1	16	2.0	..	27	12%		..
Nagaland	2	14	2.0	..	12	17%		..
Sikkim	1	17	2.1	..	16	14%		..
Tripura	4	14	1.7	..	24	24%		..
Uttarakhand	10	17	1.9	41	38	27%	72	89
Andaman & Nicobar Islands	0	12	1.5	..	16	22%		..
Chandigarh	1	14	1.8	..	14	25%		..
Dadra & Nagar Haveli	0	25	3.3	..	17	39%		..
Daman & Diu	0	24	1.9	..	19	27%		..
Lakshadweep	0	19	2.1	..	19	23%		..
Puducherry	1	14	1.6	..	10	22%		..
All India	**1,211**	**19**	**2.3**	**43**	**35**	**36%**	**69**	**130**

Sources: Census Data 2011; Sample Registration System 2019; Health and Family Welfare Statistics 2017; PRS.

Demand for Grants: Housing and Urban Affairs

The Ministry of Housing and Urban Affairs formulates policies, coordinates activities of various agencies (at the state and municipal level), and monitors programmes in the area of urban development. It also provides states and urban local bodies (ULBs) with financial assistance through various centrally supported schemes. In 2017, the Ministry of Housing and Poverty Alleviation, and the Ministry of Urban Development were combined to form the Ministry of Housing and Urban Affairs.

This note looks at the expenditure incurred by the Ministry, the status of the various schemes implemented, and the issues faced with investment required for urban planning.

Overview of Finances

Allocation in Budget 2020-21[1]

The total expenditure on the Ministry of Housing and Urban Affairs for 2020-21 is estimated at Rs 50,040 crore. This is 18% higher than the revised estimates for 2019-20. In 2020-21, while revenue expenditure of the Ministry is estimated at Rs 28,891 crore (58%), capital expenditure is estimated at Rs 21,149 crore (42%). Since 2014-15, the Ministry's revenue expenditure has been higher than its capital expenditure.

Table 1: Budget allocations for the Ministry of Housing and Urban Affairs (in Rs crore)

	2018-19 Actuals	2019-20 RE	2020-21 BE	% change 2020-21 BE/ 2019-20 RE
Revenue	24,838	23,069	28,891	25%
Capital	15,773	19,197	21,149	10%
Total	**40,062**	**42,267**	**50,040**	**18%**

Notes: BE – Budget Estimate; RE – Revised Estimate.
Sources: Notes on Demands for Grants, 2019-20, Ministry of Housing and Urban Affairs; PRS.

Policy proposals in the 2020-21 Budget[2]

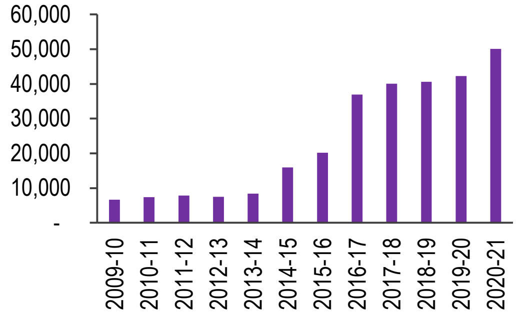
In her budget speech, the Finance Minister made the following announcements regarding the housing and urban development sector:

- **Extension of tax exemption for affordable housing**: Currently, an exemption is provided on profits or gains arising out of building affordable houses if the project was approved by March 31, 2020. Further, an additional tax deduction of up to Rs 1,50,000 is provided on interest paid on loans for self-occupied house owners if the loan was sanctioned by March 31, 2020. The deadline in both cases has been extended to March 31, 2021.
- **Concession to real estate sector:** Currently, for transactions involving immovable property where the consideration is less than the circle rate by more than 5%, the difference is counted as income both in the hands of the purchaser and the seller. The Budget proposes to increase this limit to 10%.
- **New smart cities:** Five new smart cities will be developed in collaboration with states through the PPP mode.

Expenditure trends

Between 2009 and 2020, the expenditure of the Ministry has increased at an average annual rate of 20%. The maximum year-on-year increase (91%) was seen in 2014-15, followed by 2016-17 (83%). This increase could be attributed to the introduction of the new schemes – Smart Cities Mission and AMRUT in 2014-15, and Pradhan Mantri Awas Yojana in 2016-17.

Figure 1: Trend in expenditure (Rs crore)



Note: For the years 2009-10 till 2018-19, the figures are a combination of the erstwhile Ministry of Housing and Urban Poverty Alleviation, and the Ministry of Urban Development. Values for 2019-20 and 2020-21 are revised and budget estimates respectively.
Sources: Ministry of Housing and Urban Affairs budget documents 2009-10 to 2020-21; PRS.

The Standing Committee on Urban Development, (2017) had noted that the budgetary allocations to the Ministry were lower than the Ministry's demand.[3] Although there was a 36% increase in the budget estimate for 2018-19 over the budget estimate for 2016-17, it was short of what the Ministry had projected. Fox example, in 2017-18, while the erstwhile Ministry of Urban Development projected an expenditure of Rs 68,410 crore, it was allocated Rs 34,212 crore in that year's budget.3 The Standing Committee on Urban Development (2018) had also noted that with the schemes picking up momentum, the allocation towards them should be increased for better implementation.

The Standing Committee on Urban Development (2019) noted that since 2017 this gap between the demand and the budgetary allocations has progressively reduced.[4] This gap has been reduced through Extra Budgetary Resources (EBR). However, the actual expenditure by the Ministry has been consistently lower than the budget estimates (see **Figure 2**).

Figure 2: Deviation in actual expenditure from budgeted expenditure (2009-19)

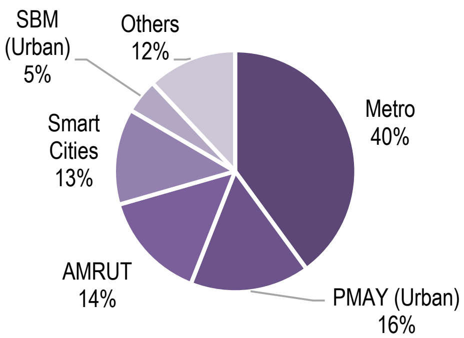
Note: For the years 2009-10 till 2019-20, the figures are a combination of the erstwhile Ministry of Housing and Urban Poverty Alleviation, and Ministry of Urban Development. Values for 2019-20 are revised estimates.
Sources: Ministry of Housing and Urban Affairs budget documents 2009-10 to 2020-21; PRS.

Major schemes and issues

The Ministry implements several centrally sponsored schemes, and few central sector schemes. These include: (i) Atal Mission for Rejuvenation and Urban Transformation (AMRUT), (ii) 100 Smart Cities Mission, (iii) Pradhan mantra Awas Yojana – Urban (PMAY-U), (iv) Swachh Bharat Mission – Urban (SBM-U), and (v) Deendayal Antyodaya Yojana-National Urban Livelihood Mission (DAY-NULM). The Ministry also develops and manages metro rail projects across the country.

Of the expenditure allocated to the Ministry in 2020-21, the highest allocation is towards metro projects at 40% of the total budget. The allocation towards the key schemes is shown in Table 2 and Figure 3.

Figure 3: Budgetary allocation for Ministry of Housing and Urban Affairs (2020-21)



Sources: Notes on Demand for Grants 2020-21, Ministry of Housing and Urban Affairs; PRS.

Table 2: Allocations in the Ministry (Rs crore)

	2018-19 Actual	2019-20 RE	2020-21 BE	% change 2020-21 BE/ 2019-20 RE
Metro	14,470	18,890	20,000	6%
PMAY (Urban)	6,135	6,853	8,000	17%
AMRUT	6,183	6,392	7,300	14%
Smart Cities	5,902	3,450	6,450	87%
SBM (Urban)	2,462	1,300	2,300	77%
DAY-NULM	498	750	795	6%
Projects in North-Eastern Region	369	371	150	-60%
Others	4,594	4,260	5,045	18%
Total	**40,612**	**42,267**	**50,040**	**18%**

Notes: BE – Budget Estimate; RE – Revised Estimate.
Sources: Notes on Demand for Grants 2020-21, Ministry of Housing and Urban Affairs; PRS.

Metro Projects

Fund allocation: The Ministry of Housing and Urban Affairs is responsible for urban transport which includes metro projects. Investments in these projects are made in various forms including grants, equity investments, debt, and pass-through assistance for externally aided projects.

As of December 20, 2018, there are 27 ongoing metro rail that have been set up as a 50:50 joint venture between the central government and respective state governments. These have a total approximate completion cost of Rs 3,36,954 crore. 534 km of metro line are operational, while 677 km are under implementation.[5]

In 2020-21, Rs 20,000 crore has been allocated towards metro projects. This is a 6% increase over the revised estimates of 2019-20. Allocation towards metro projects includes allocation towards the National Capital Region Transport Corporation. The table below shows the trends in allocations and expenditure towards metro projects.

Table 3: Allocation towards metro projects (in Rs crore)

Year	Budgeted	Actuals	% utilised
2014-15	8,026	5,998	75%
2015-16	8,260	9,300	113%
2016-17	10,000	15,327	153%
2017-18	18,000	13,978	78%
2018-19	15,000	14,470	96%
2019-20	19,152	18,890	99%
2020-21	20,000		

*Revised estimates.
Sources: Ministry of Housing and Urban Affairs Budget documents 2014-15 to 2020-21; PRS.

In 2020-21, the capital expenditure on metro projects is estimated to be 93% of the Ministry's total capital expenditure. The Standing Committee on Urban Development (2017) noted that a high allocation towards metro projects leads to inadequate funds for other projects.3 It recommended financing metro projects through other options such as international cooperation. The Standing Committee on Urban Development (2019) had recommended that state/UT governments must be consulted to find ways to reduce the huge outlay on metro works to enable other schemes to receive adequate funding.4

The Committee also noted that the investment on metro projects has almost doubled from Rs 10,000 crore in 2016-17 to Rs 19,152 crore in 2019-20.4 However, it had also acknowledged that measures had been taken to bring down costs. These include offering consultancy services to metro projects in Dhaka and Istanbul, as well as exporting 'Make in India' products to projects in Brisbane and Johannesburg. It suggested adopting similar steps to reduce the dependency of metro projects on the union budget.4

Planning of metro systems: The National Transport Development Policy Committee (NTDPC) report had observed that high speed mass transit systems such as metro rail do not always reduce door-to-door travel time, which is the most relevant indicator for users.[6] Underground or elevated transport systems do not save time as compared to cars/ two-wheelers, when trip distances are short, because time is lost in walking from ground level to the platform level. Metro rail systems are efficient only when the average trip distance is greater than 12 km. Indian cities, because of their mixed land use patterns and higher density development, have shorter trip lengths, and hence are better suited for non-motorized travel.

The NTDPC had recommended that the decision to implement metro rail projects should also consider the high cost factor. Rail-based metro systems should be considered after examining the opportunity cost of investing in expensive fixed infrastructure. For example, Phase I of Delhi metro cost Rs 191 billion for 65 km, whereas the Golden Quadrilateral highway project connecting four major cities in India through highways cost Rs 300 billion for 5,846 km. Further, the Delhi metro, including its three phases, will cater to 15% of the total commuter trips within the city.6

The NTDPC had recommended that metro rail projects should initially be limited to cities with population more than five million. Further, the cities should be able to cover all costs through user charges or fiscal costs. The NTDPC had also recommended that Indian cities should focus on improving their existing bus systems, adding bus rapid transit (BRT) systems, and improving non-motorised transport.

Last mile connectivity: The Standing Committee on Urban Development (2019) highlighted the need to promote door to door connectivity of the Delhi Metro. It had suggested that cab aggregator services could employ auto rickshaws and cycle rickshaws to remedy this.4

Urban Rejuvenation Mission: AMRUT and Smart Cities Mission

The AMRUT Mission was launched in June 2015.[7] The Mission seeks to provide basic services (such as water supply, sewerage, and urban transport) in cities, especially to the poorer households. It is a Centrally Sponsored Scheme with a total central assistance of Rs 50,000 crore for five years (2015-20).

In 2020-21, the AMRUT Mission has been allocated Rs 7,300 crore. This is 14% more than the revised estimates of 2019-20.

The Ministry seeks to spend Rs 50,000 crore on AMRUT by 2019-20. As per the government's proposal, the Ministry should have spent the entire amount by this year. However, so far the Ministry has allocated Rs 33,599 crore (67% of the proposed amount), and spent Rs 25,077 crore (50% of the proposed amount). The following table (**Table 4**) compares the actual expenditure against the proposed allocation towards AMRUT.

Table 4: Allocation compared to actual expenditure (Rs crore)

Year	Proposed Allocation	Budget	Actual	% change (actuals/ budget)
2015-16	5,000	3,919	2,702	69%
2016-17	15,000	4,080	4,864	119%
2017-18	15,000	5,000	4,936	99%
2018-19	9,000	6,000	6,183	103%
2019-20	6,000	7,300	6,392*	88%
2020-21	-	7,300		
Total	**50,000**	**33,599**	**25,077**	

*Revised Estimate.
Sources: Standing Committee on Urban Development (2017); Ministry of Housing and Urban Affairs Demand for Grants for the years 2015-16 to 2020-21; PRS.

The Smart Cities Mission aims to develop cities that provide core infrastructure and apply 'smart' solutions to give its citizens a decent quality of life to its citizens, and a sustainable environment.[8] 100 cities have been selected under the Mission, which were selected based on a Smart City challenge. The cities were evaluated based on their Smart City Plans which consisted of a pan city development strategy and an area based development strategy.

The mission is being operated as a Centrally Sponsored Scheme. The central government was to provide financial of up to Rs 48,000 crore over five years (2015-20), that is, an average of Rs. 100 crore per city per year.[8] The states and ULBs will have to contribute an equal amount, and generate the additional amount as required through other sources such as borrowings, municipal bonds.[8]

The Smart Cities Mission has been allocated Rs 6,450 crore in 2020-21, which is 87% higher than the revised estimates of 2018-19.

Table 5: Allocation towards Smart Cities Mission (in Rs crore)

Year	Budgeted	Actuals	% utilised
2015-16	2,020	1,484	73%
2016-17	3,215	4,412	137%
2017-18	4,000	4,526	113%
2018-19	6,169	5,902	96%
2019-20	6,450	3,450*	53%
2020-21	6,450		

*Revised estimates.
Sources: Budget documents 2015-16 to 2020-21; PRS.

Till 2018, the actual allocation towards this scheme has been equal to or higher than the budget estimate, indicating over-spending. In 2019-20 the revised expenditure is almost half of the budgetary allocation. While the Ministry sought to allocate Rs 48,000 crore towards the scheme by 2019-20, so far Rs 21,150 crore has been allocated (44% of the planned expenditure).

So far, all the 100 selected Smart cities have formed their Special Purpose Vehicles (SPVs) and appointed Project Management Consultants (PMCs).[9] **Table 6** provides the status of the smart city projects.[10]

Table 6: Status of smart city projects (as on November, 2019)

Project status	Number of projects	Cost of projects (in Rs crore)
Total Proposed	5,151	2,05,018
Tendered	4,178	1,49,512
Work orders issued	3,376	1,05,458
Completed	1,296	23,170

Sources: Lok Sabha questions; PRS.

Pradhan Mantri Awas Yojana - Urban (PMAY-U)

The housing shortage is expected to reach 200 lakh by 2022.[11] It was estimated that about 56% of this shortage falls in the Economically Weaker Sections (EWS), 40% in the Lower Income Group (LIG) category, and the rest 4% in the middle and higher income groups. The Ministry estimates the demand for housing at around 100 lakh.[12]

PMAY-U is an affordable housing scheme being implemented from 2015 to 2022. It seeks to help the central government achieve its target of 'housing for all target' by 2022. So far 4,424 cities have been covered under PMAY-U.13

The scheme comprises four components: (i) in situ rehabilitation of existing slum dwellers (using the existing land under slums to provide houses to slum dwellers) through private participation, (ii) credit linked subsidy scheme (CLSS) for EWS, LIG, and middle income group (MIG), (iii) affordable housing in partnership, and (iv) subsidy for beneficiary-led individual house construction. The Ministry provides central assistance to ULBs for the implementation of the scheme through the respective state governments.

Allocation: The budgetary allocation towards the scheme for 2020-21 is Rs 8,000 crore. This is a 17% increase over the revised estimates for 2019-20. The funding towards the scheme comes from the Central Road and Infrastructure Fund.

From the total allocation for PMAY-U in 2020-21, the maximum (63%) will go towards interest payment against loans raised through extra budgetary sources (EBR) for the scheme. The credit linked subsidy scheme component received 17% of the total allocation for PMAY-U, while 16% was allocated for central assistance to states.

Table 7: PMAY-U – Key components

	2018-19 Actual	2019-20 RE	2020-21 BE	% change 2020-21 BE/ 2019-20 RE
Interest Payment against loan raised through EBR	-	3,000	5,000	67%
Central assistance to states/ UTs	4,192	2,681	1,301	-51%
CLSS-I for EWS/LIG	1,300	600	900	50%
CLSS-II for MIG	600	400	500	25%
Others	43	172	299	74%
Total	**6,135**	**6,853**	**8,000**	**17%**

Notes: BE – Budget Estimate; RE – Revised Estimate.
Sources: Notes on Demand for Grants 2020-21, Ministry of Housing and Urban Affairs; PRS.

House construction: Till December 27, 2019, 103 lakh houses have been approved.[13] Of this, 31% houses have been constructed. Note that these numbers also include some houses sanctioned under the earlier scheme - Jawaharlal Nehru National Urban Renewal Mission.

With the target of the scheme at 100 lakh houses by 2022, and 32 lakh houses been constructed so far, it is unclear how the central government will construct the remaining houses (almost 69% of the target) in two years.

The Standing Committee on Urban Development (2019) noted that the estimated demand for housing projects under PMAY-U was Rs 1,80,000 crore, as on October 28, 2019.[4] The total central assistance sanctioned was Rs 1,42,000 crore, out of which Rs 57,896 crore had been released. It recommended the unhindered availability of funds be ensured to achieve the goal of 'Housing for All' by 2022.

Table 8: Progress under PMAY-U

House construction		
Houses sanctioned	103.32 lakh	
Of which, under construction	61.55 lakh	60% of the approved houses
Of which completed	32.16 lakh	31% of the approved houses
Central assistance (in Rs crore)		
Central assistance sanctioned	1,60,000	
Of which central assistance released	63,709	40% of the sanctioned assistance

Note: The total houses approved includes some houses that were sanctioned under the earlier Jawaharlal Nehru National Urban Renewal Mission.
Sources: PMAY-U MIS; PRS.

Rental housing: As per the 2011 census, 27.5% of urban residents lived in rented houses. According to the Report of the Group of Secretaries (2017), a rental housing scheme could further complement PMAY-U in achieving the housing target.[14] The Ministry proposed a Draft National Urban Housing Policy in October 2015.[15] It seeks to promote the sustainable development of house ownership with a view to ensuring an equitable supply of rental housing at affordable prices. The Ministry also released the Draft Model Tenancy Act, 2019 in July 2019 to provide for the regulation and speedy adjudication of matters related to rental housing, and repeal the existing state rent control laws.[16]

Lending by housing finance companies- Both housing finance companies (HFCs), and public sector banks offer low cost funding for housing. HFCs have an 80% share in the implementation of CLSS component of PMAY-U.[14] However, they face constraints such as inability to access long term funds.14

The Union Cabinet had approved the creation of a National Urban Housing Fund (NUHF) worth Rs 60,000 crore in February 2018.[17] The NUHF aims to raise funds in the next four years (till 2022) to ensure a sustained flow of central release under PMAY-U to enable construction of houses. As of July 17, 2019, Rs 28,000 crore has been released to States\UTs under the NUHF.[18]

Swachh Bharat Mission – Urban (SBM-U)

Swachh Bharat Mission (SBM), launched in October 2014, aims to eliminate open defecation and achieve 100% scientific management of municipal solid waste in all 4,041 statutory towns by October 2, 2019.[19,20]

In 2020-21, Rs 2,300 crore has been allocated towards the scheme. This is 77% higher than the revised estimates of 2019-20. In 2019-20, the expenditure is estimated to fall short of the budget estimate by 51%.

The total estimated cost of implementation of SBM-U is Rs 62,009 crore. Of this, the share of the central government is Rs 14,623 crore, and states' assistance will amount to Rs 4,874 crore. The remainder is to be financed via various sources such as the private sector, Swachh Bharat Kosh, market borrowing, and external assistance. As on February 11 2020, the central government has released Rs 5,641 crore.[21]

Toilet construction: Table 9 shows the number of toilets constructed as on February 11, 2020, as compared to the targets set for October 2019.[22]

Table 9: Achievements under SBM- Urban (as on February 11, 2020)

	Target	Completed	% Achieved
Individual Household Latrines	66,42,222	61,31,239	92%
Community and Public Toilets	5,07,589	5,79,819	114%

Sources: Swachh Bharat Mission Urban - Dashboard; PRS.

Other issues to consider

Additional investment required

The pace of urbanisation is increasing in the country. As per the 2011 census, around 31% of the country's population resided in urban areas.[23] By 2031, around 600 million (43%) people is expected to live in urban areas, an increase of over 200 million in 20 years. Given the pace of urbanisation, large capital investments are needed for infrastructure projects which includes support from central and state governments in the form of capital grants.

With the current rate of urbanisation, the High Powered Expert Committee (HPEC) for Estimating the Investment Requirements for Urban Infrastructure Services (2011) had estimated a requirement of Rs 39 lakh crore (at 2009-10) prices for the period from 2012-2031.[24] As per their framework, the investment in urban infrastructure should increase from 0.7% of GDP in 2011-12 to 1.1% of GDP by 2031-32. In 2020-21, the estimated expenditure by the Ministry of Housing and Urban Affairs is 0.22% of the GDP.

The Ministry of Finance had noted that budgetary outlays alone will not be enough to service the growing demands on local governments for improving their infrastructure.[25] Alternate sources of financing are required to meet the funding gap.[25] The flagship schemes of the Ministry (such as

Smart Cities Mission, Swachh Bharat Mission) seek to meet their financing requirements through a mix of sources such as borrowings, municipal bond financing, and PPPs.

The Standing Committee on Urban Development (2019) noted an urgent need for huge resource mobilisation in a phased by 2024 and afterwards by 2030. This was needed to ensure that Housing and Urban Affairs schemes have adequate funding, as well as to realise the goal of successfully strengthening the country's economy.4

Financial capacity of cities

The Constitution (74th Amendment) Act, 1992 devolved certain functions relating to urban development to ULBs, including the power to collect certain taxes. These function include urban planning, planning for economic and social development, and urban poverty alleviation. The new schemes under the Ministry, seek to decentralise the planning process to the city and state level, by giving them more decision making powers. This implies that a significant share of the funding needs to be raised by the cities themselves.

However, there is an imbalance between the functions and finances of ULBs.[26] The ULBs in India are amongst the weakest in the world both in terms of capacity to raise resources and financial autonomy.24 The share of own revenue for ULBs has declined from 63% in 2002-03 to 53% in 2007-08, and to 44% in 2015-16.[27,28] Several states have not devolved enough taxation powers to local bodies. Further, local governments collect only a small fraction of their potential tax revenue.

While the central and state governments provide the ULBs with funds, these devolved funds are largely tied in nature, to either specific sectors or schemes. This constrains the spending flexibility of ULBs.

Such a situation may pose problems when implementing the new schemes, where the ULBs have to raise a significant share of the revenue. For example, the Bhubaneswar Smart City Plan has a total project cost of Rs 4,537 crore (over five years), while the city's annual budget for 2014-15 was Rs 469 crore.[29,30]

PPPs have been an important instrument to finance and develop infrastructure projects. However, projects in many sectors require support from ULBs in the form of additional financial resources. Inability to service such funding requirements constrains project implementation.[25]

In such cases, ULBs can access capital markets through issuance of municipal bonds. Municipal bonds are marketable debt instruments issued by ULBs, the funds raised may be used for capital projects, refinancing of existing loans, and meeting working capital requirements. The Securities and Exchange Board of India regulations (2015) regarding municipal bonds provide that, to issue such bonds, municipalities must: (i) not have negative net worth in any of the three preceding financial years, and (ii) not have defaulted in any loan repayments in the last one year.[31] Therefore, a city's performance in the bond market depends on its fiscal performance. Some financing mechanisms, such as municipal bonds, have been around in India for the last two decades, but cities haven't been able to make much use of them.

In order to improve the finances of the ULBs, the HPEC had recommended that state governments should share a pre-specified percentage of their revenues from all taxes on goods and services with ULBs, and this should be mandated constitutionally.24 Further, ULBs should be provided with formula-based transfers, and grants-in-aid.24 The ULBs could raise their own revenue by tapping into land-based financing sources, and improving non-tax revenues (such as water and sewerage charges, and parking fee).24

Technical capacity of the ULBs

Until recently, it has been observed in the urban sector that while the central government allocated funds, it did not play a role in the implementation of the projects. On the other hand, while ULBs and states implemented the projects, they did not raise the funds. The new schemes seek to empower ULBs to raise their own revenue. Both the national missions, AMRUT and Smart Cities, have a component for capacity building of ULBs.

The HPEC had observed that municipal administration has suffered due to (i) presence of untrained and unskilled manpower, and (ii) shortage of qualified technical staff and managerial supervisors.24 It had recommended improving the technical capacity of ULBs. This can be achieved by providing technical assistance to state governments, and ULBs in planning, financing, monitoring, and operation of urban programm

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[10] Unstarred Question No. 1644, Ministry of Housing and Urban Affairs, Lok Sabha, November 11, 2019, http://loksabhaph.nic.in/Questions/QResult15.aspx?qref=8112&lsno=17.

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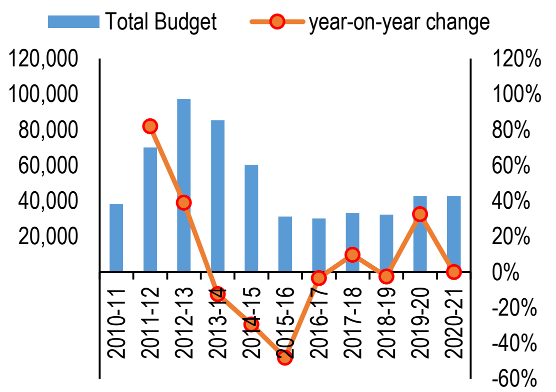
Demand for Grants: Petroleum and Natural Gas

The Ministry of Petroleum and Natural Gas is concerned with exploration and production of oil and natural gas, refining, distribution and marketing, import and export, and conservation of petroleum products. The Ministry has been allocated Rs 42,901 crore for 2020-21. The allocation for the ministry has remained unchanged from the allocation from the revised estimates for the year 2019-20.

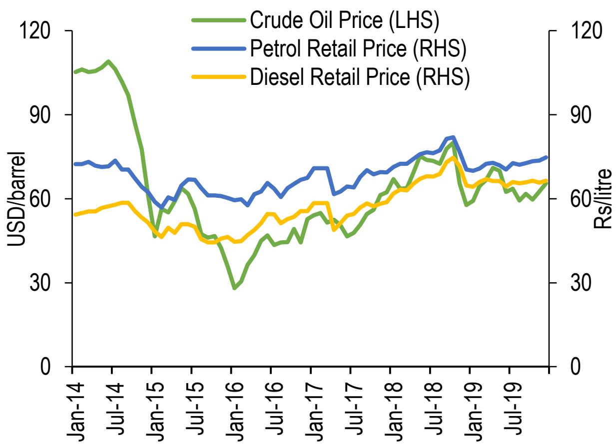
Figure 1: Expenditure of Ministry (Rs Crore)



Note: Figures for 2019-20 are Revised Estimates and for 2020-21 are Budget Estimates.
Sources: Union Budget 2020-21; PRS.

The Ministry's expenditure, historically, has been following the trend in global crude oil prices. The crude oil prices have risen steadily from 28 USD/barrel in January 2016 to 80 USD/barrel in October 2018, before showing a volatile trend thereafter. The global crude oil price was 66 USD/barrel in December 2019.

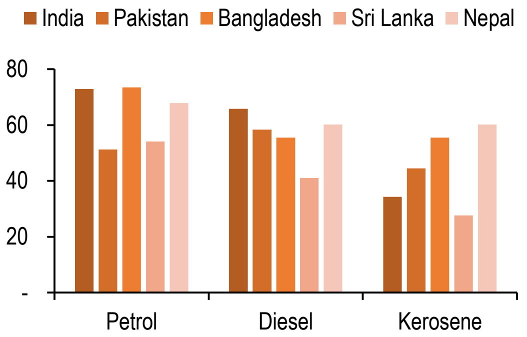
Figure 2: Trend of Global Crude Oil Price with respect to Petrol and Diesel Retail Price



Sources: Petroleum Planning and Analysis Cell; PRS.

Note that the price of petrol and diesel in India is higher compared to neighbouring nations, such as Pakistan, Sri Lanka and Nepal. On the other hand, the price of Kerosene is lower in India, compared to these nations.

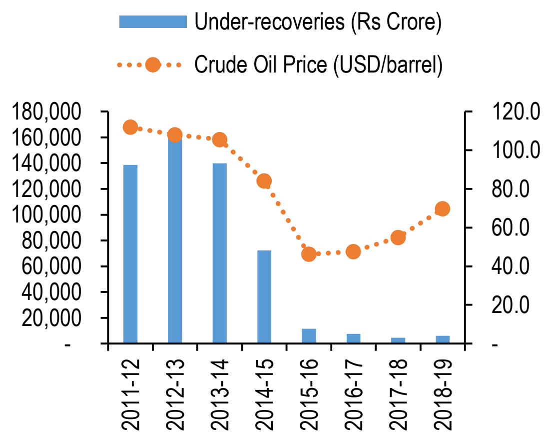
Figure 3: Price of Petrol, Diesel and Kerosene with respect to neighbouring nations (Rs/litre)



Note: Price as on November 1, 2019. Petrol, Diesel price is the price at Delhi, whereas price for Kerosene is the price at Mumbai.
Sources: Oil Industry Information at a Glance, Petroleum Planning and Analysis Cell, November 2019; PRS.

Rise in crude oil prices usually also leads to rise in under-recoveries. Under-recovery refers to the difference in the cost of producing petroleum products, and the price at which they are delivered to consumers. It indicates the loss incurred by oil marketing companies while supplying these products. Central government compensates the oil marketing companies by sharing some of this incurred loss through a burden sharing mechanism. **Figure 4** shows the trend of under-recoveries with the price of global crude oil.

Figure 4: Trend in under-recoveries of oil companies and global crude oil prices



Sources: Petroleum Planning and Analysis Cell; PRS.

Overview of finances

Table 1: Allocation for the Ministry of Petroleum and Natural Gas (in Rs Crore)

Major Head	Actual 18-19	Revised 19-20	Budgeted 20-21	% change (RE to BE)
LPG subsidy	20,268	34,086	37,256	9.3%
Kerosene subsidy	4,569	4,483	3,659	-18.4%
PDH pipeline	1,207	1,552	728	-53.1%
NSP	1,300	575	207	-64.0%
Others	5,027	2,206	1,051	-52.4%
Total	**32,371**	**42,901**	**42,901**	**0.0%**

Note: NSP = National Seismic Programme.
Sources: Union Budget Documents 2020-21; PRS.

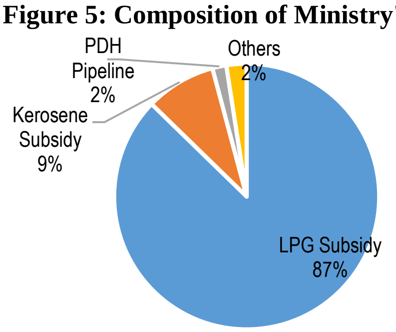
LPG Subsidy: The Ministry provides subsidy on LPG cylinders to beneficiaries. Prior to 2013, this subsidy was provided in the form of subsidized cylinders. Following the launch of the PAHAL scheme in 2013, this subsidy is directly credited to the bank accounts of the beneficiary.[1] In 2020-21, the Ministry is estimated to spend Rs 37,256 crore on LPG subsidy, which is 9.3% higher than the revised estimates of 2019-20.

Kerosene Subsidy: The Ministry provides subsidized kerosene through the Public Distribution System (PDS). In 2020-21, the Ministry has allocated Rs 3,659 crore for Kerosene subsidy, which is 18.4% lower than the revised estimates of 2019-20.

PDH Pipeline: The Phulpur-Dhamra-Haldia (PDH) Pipeline is being developed by GAIL India to transport natural gas.[2] The project will connect five states to the National Gas Grid. In 2020-21, Rs 728 crore has been allocated for the project.

National Seismic Programme: The Ministry is conducting a seismic survey of all sedimentary basins of India, where such data is available. The Programme was launched in October 2016 with an estimated expenditure of Rs 5,000 crore.[3] The Programme has been allocated Rs 207 crore for 2020-21. This is 64% lower than the revised estimates of 2019-20.

Figure 5: Composition of Ministry's budget



Sources: Union Budget 2020-21; PRS.

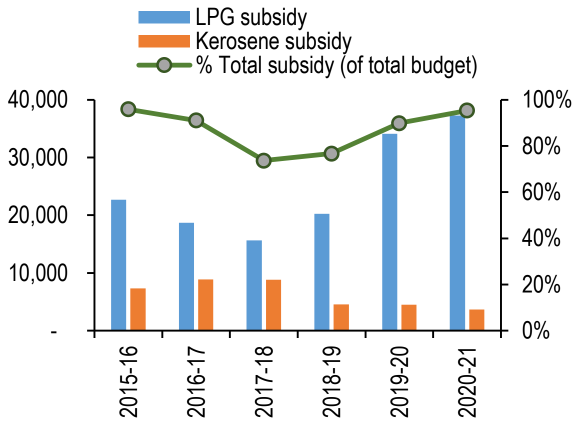
Key issues and analysis

Subsidy on LPG and Kerosene

The subsidy on LPG is the largest component of the Ministry's expenditure, with approximately 87% of its total budget allocated to it. For 2020-21, the budget allocation for LPG subsidy has increased by 9.3% from the revised estimate for the same in 2019-20. Further, the revised estimate for 2019-20 also marked a 3.3% increase from the budgeted estimates of 2019-20.

The total amount allocated for subsidies in 2020-21 is Rs 40,915 crore which is a 6% increase from the revised estimates of 2019-20 and constitutes 95% of the total allocation to the ministry.

Figure 6: Trend of expenditure on subsidies



Sources: Union Budget Documents; PRS.

The expenditure on subsidies can be divided in three major heads: (i) Direct Benefit Transfer (DBT-PAHAL scheme) for LPG and (ii) Pradhan Mantri Ujjwala Yojana (PMUY) scheme for LPG, and (iii) Kerosene subsidy.

Table 2 highlights the expenditure for subsidies in the above three heads for 2018-19, revised estimate of expenditure for 2019-20 and the budgeted allocation for 2020-21.

Table 2: Allocation for subsidy on LPG and Kerosene (in Rs Crore)

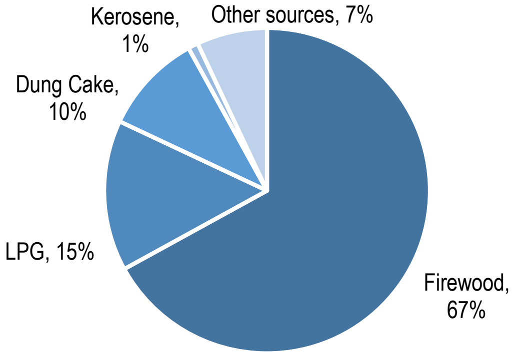
Major Head	Actual 18-19	Revised 19-20	Budgeted 20-21	% change (RE to BE)
DBT-PAHAL	16,478	29,628	35,605	20.2%
PMUY	3,200	3,724	1,118	-70.0%
Kerosene subsidy	4,569	4,483	3,659	-18.4%
Total	**24,247**	**37,835**	**40,382**	**6.7%**

Sources: Union Budget 2020-21; PRS.

Pradhan Mantri Ujjwala Yojana scheme

According to the National Sample Survey (2011-12), more than 67% of the rural households in the country used firewood as the primary source of energy for cooking.[4] This is shown in **Figure 7**.

Figure 7: Primary source of energy for cooking in rural areas (2011-12)



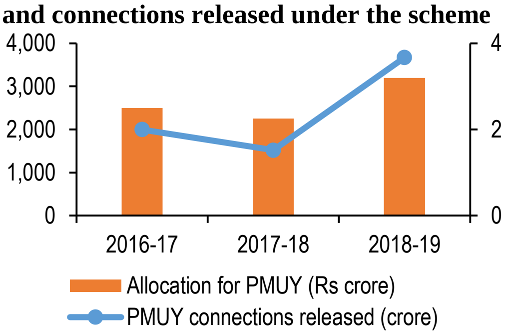
Sources: Energy Sources of Indian Households for Cooking and Lighting, 2011-12, NSS 68th Round; PRS.

The PMUY scheme was launched in May 2016 with the objective of providing LPG connections to women from below poverty line households with a support of Rs.1,600 per connection.[5] The scheme aimed to target five crore households, which was later (February 2018) revised to target eight crore households by 2020.[6] The ambit of the scheme was also expanded to cover all SC/ST households, beneficiaries of Pradhan Mantri Awas Yojana (Gramin), forest dwellers, backward classes, in addition to households identified under the Socio Economic and Caste Census (SECC).[6]

According to the Ministry, as of September 2019, a total of 8.03 crore PMUY connections were released across 715 districts in the country. Of these, the maximum connections were released in Uttar Pradesh (1.48 crore), followed by West Bengal (89 lakh) and Bihar (86 lakh).[7] State-wise details on number of connections released under the scheme (as of September 2019 and December 2017) are provided in Table 6 in the Annexure. Nearly all states have seen a rapid increase in connections released under the scheme.

The Comptroller and Auditor General (CAG) submitted a performance audit report on the PMUY scheme in December 2019. In its Report, CAG found that as of March 31, 2019, 7.2 crore connections were released under the scheme.[8]

Figure 8: Amount allocated for PMUY scheme and connections released under the scheme

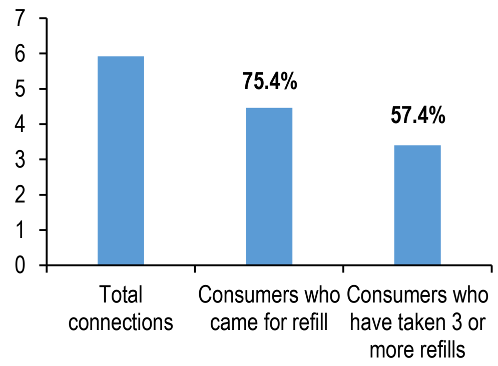


Sources: CAG Performance Audit, December 2019; Union Budget Documents; PRS.

The CAG also raised concerns related to lack of sustained usage of cylinders released under the scheme. As per Ministry data, till December 2018, there were nearly 5.9 crore beneficiaries under the scheme and the total number of refills under the scheme was nearly 28.8 crore.[9] **Figure 9** highlights the proportion of consumers who opted for refill under the scheme.

75% of consumers opted for a refill under the scheme and 57% opted for 3 or more refills (from date of getting the connection till December 2018). State-wise details (including UTs) on the proportion of consumers who opted for refill under the scheme are noted in **Table 7** in the Annexure. The refill proportion was highest in Delhi (97%), Haryana (94%), Uttarakhand (88%). The proportion was lowest in Chhattisgarh (48%), Jharkhand (56%), Assam and Odisha (64%).

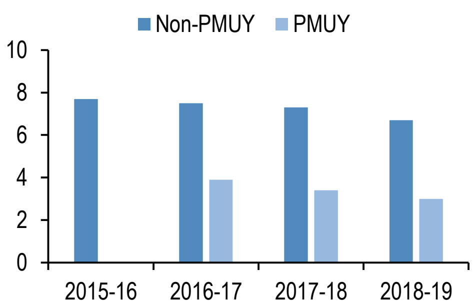
Figure 9: Refill of cylinders under the PMUY scheme (in crore) (till December 31, 2018)



Sources: Refill data, PMUY website, Ministry of Petroleum & Natural Gas; PRS.

The CAG performance audit report noted that the average annual refill rate for PMUY beneficiaries is low compared to the refill rate for non-PMUY beneficiaries (shown in **Figure 10**).[8] The CAG recommended that since the target of releasing connections has broadly been achieved, the scheme should now be focused towards sustained usage of LPG cylinders.

Figure 10: Average annual refill consumption for PMUY and non-PMUY consumers



Sources: CAG Performance Audit, December 2019; PRS.

The Standing Committee on Petroleum and Natural Gas (2019) also noted disparity in the average refill of domestic cylinders (6.3 cylinders during last year) and the average refill of LPG cylinders by PMUY beneficiaries (3.1 cylinders).[10] It recommended a scheme to incentivise PMUY beneficiaries to increase refills of LPG cylinders. Further, it recommended that the government should broaden the scope of the scheme to cover poor families residing in urban and semi-urban areas, with eventually aiming to provide LPG connections to all eligible households.[10]

An assessment report by the Petroleum Planning and Analysis Cell (2016) pointed out the key barriers for not applying for LPG connection are: (i) high initial cost, including security deposit / price of gas stove and, (ii) high recurring cost of the cylinder.[11] The Report also identified easy availability of firewood in the vicinity of forests as another primary barrier to adoption of LPG. The top five states where over 40% of the households procure firewood for free are Gujarat, Madhya Pradesh, Jharkhand, Uttar Pradesh and Nagaland.

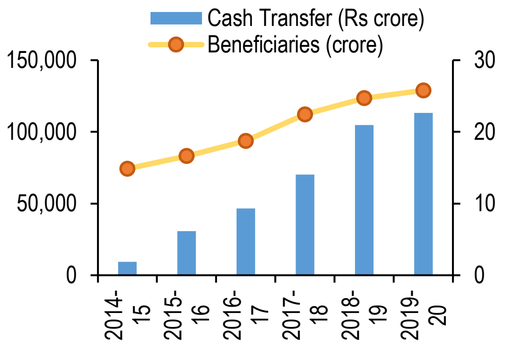
The CAG also highlighted issues related to implementation of the scheme. It noted that there were various cases of: (i) discrepancies in identification of beneficiaries, (ii) delay in installation of connections, (iii) diversion of cylinders for commercial purposes, and (iv) non-compliance with safety standards.[8] Further, the CAG noted that there are no parameters under the scheme to assess outcomes related to performance of the scheme (such as improvement in health of women and reduction in air pollution). It recommended that the Ministry should develop a roadmap to assess these outcomes.

Pratyaksha Hastaantarit Laabh (PAHAL)

PAHAL Scheme was launched in 2014 (54 districts in first phase) and launched in rest of the country in 2015.[12] Under the scheme, a consumer (with annual income up to Rs 10 lakh) can avail Direct Benefit Transfer (DBT) cash-subsidy for a LPG cylinder. The beneficiaries buy LPG cylinders at market rate and subsequently receive subsidy directly in their bank accounts. The average subsidy per cylinder on domestic LPG during the year 2016-17, 2017-18 and 2018-19 (up to 1st half) was Rs 108.8, Rs 173.4 and Rs 219.1, respectively.[13] The effective cost of a domestic LPG cylinder (14.24 kg) after DBT subsidy, as of November 2019, was Rs 546.6.[14]

As of September 2019, nearly 25.7 crore LPG consumers had joined the scheme (state wise details in Annexure).[15] Figure 11 below shows cumulative cash transfer and beneficiaries under the scheme for 2014-15 to 2019-20.

Figure 11: Cumulative cash transfer and number of beneficiaries under the scheme



Sources: Direct Benefit Transfer website, accessed on February 8, 2020; PRS.
Note: Numbers for a year are cumulative transfers till that year.

The CAG (in 2019) noted that the coverage of LPG in the country has increased from 62% in May 2016 to 94.3% in March 2019.[8] **Table 3** details the coverage of LPG in the country.

Table 3: Coverage of LPG in the country

As on	Total connections (in crore)	Households (in crore)	Coverage (in %)
May-16	16.7	26.9	62.0%
Mar-17	19.7	27.3	72.8%
Mar-18	22.4	27.7	80.9%
Mar-19	26.5	28.2	94.3%

Sources: CAG Performance Audit, December 2019; PRS.

As per Direct Benefit Transfer web portal, the implementation of PAHAL scheme has resulted in an estimated savings of Rs 65,661 crore (up to December 2019).[16] 4.54 crore duplicate, fake, non-existent and inactive LPG connections have been eliminated under the scheme. The 'GiveItUp' campaign was started by the Ministry with the aim to motivate consumers who can afford to pay the market price for LPG to voluntarily surrender their subsidy.[17] 1.03 crore consumers have opted out of the scheme under the 'GiveItUp' campaign (as of December 2018).[13]

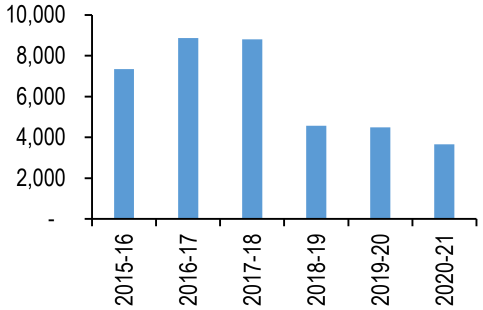
The CAG report on 'Implementation of PAHAL Scheme' (2016) noted that the scheme appears to have addressed the concern regarding diversion of subsidised LPG cylinders to commercial consumers.[18] However, the risk of diversion of nonsubsidised domestic LPG to commercial consumers still remains as there is a significant difference in the cost of non-subsidised domestic LPG and commercial LPG.

There have also been complaints of supply of underweight cylinders and non-transfer of subsidy due to deseeding of Aadhaar from payments databases.[19,20] The consumer has now been given the option of receiving subsidy through bank account transfer without the use of Aadhaar.

Kerosene Subsidy

Over the last few years, the Ministry's expenditure on providing subsidy for kerosene has reduced from Rs 7,339 crore in 2015-16 to an estimated Rs 3,659 crore in 2020-21 (see Figure below).

Figure 12: Kerosene subsidy (in Rs crore)



Sources: Union Budget Documents; PRS.
Note: Figures for 2019-20 are Revised Estimates and Figures for 2020-21 are Budget Estimates.

Note that the government has stated that with the increase in LPG coverage and electrification in villages, the allocation for kerosene has been rationalised.[21] The Standing Committee on Petroleum and Natural Gas (2017) had recommended that the Ministry should reduce the expenditure on this subsidy and work towards the eventual withdrawal of the subsidy.[22]

The Committee noted that an increase in the coverage of LPG beneficiaries is necessary to reduce dependence on kerosene.[22] This will result in the usage of cleaner fuel, promote the health of users, and address the problem of adulteration. The Committee also recommended that states should be encouraged to move towards the direct cash transfer of kerosene subsidy to reduce inefficiencies in the delivery.

Dependence on imports

India's import of crude oil has increased from 1,63,775 TMT (Thousand Metric Tons) in 2010-11 to 2,26,498 TMT in 2018-19. Crude oil is refined in oil refineries to transform oil into useful petroleum products such as high speed diesel, LPG and kerosene. These petroleum products are used as raw materials in various sectors and industries such as transport (fuel) and petrochemicals. Further, they may also be used in factories to operate machinery or fuel generator sets. In 2018-19, India's total export of petroleum products was 61,096 TMT.

Table 4 shows the total import of crude oil and petroleum products, consumption of petroleum products in the country and India's exports of petroleum products for the last 10 years.

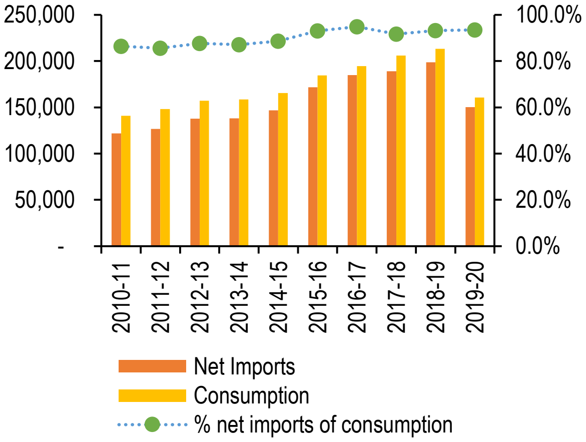
Table 4: Import, export and consumption of petroleum products in the country (in TMT)

Year	Crude Oil imports	Petroleum products import	Petroleum products export	Petroleum products consumption
2010-11	1,63,595	17,379	59,077	1,41,040
2011-12	1,71,729	15,849	60,837	1,48,132
2012-13	1,84,795	16,354	63,408	1,57,057
2013-14	1,89,238	16,697	67,864	1,58,407
2014-15	1,89,435	21,301	63,932	1,65,520
2015-16	2,02,850	29,456	60,539	1,84,674
2016-17	2,13,932	36,287	65,513	1,94,597
2017-18	2,20,433	35,461	66,833	2,06,166
2018-19	2,26,498	33,348	61,096	2,13,216
2019-20	1,68,589	31,619	50,055	1,60,603

Note: Data for 2019-20 is till December 2019.
Sources: Petroleum Planning and Analysis Cell; PRS.

Note that the India's net import (total imports - exports) as a fraction of consumption has risen from 86.4% in 2010-11 to 93.5% in 2019-20. **Figure 13** shows the variation of net imports of petroleum products as a percentage of total consumption in the country.

Figure 13: Net imports of Petroleum Products as percentage of total consumption (in TMT)

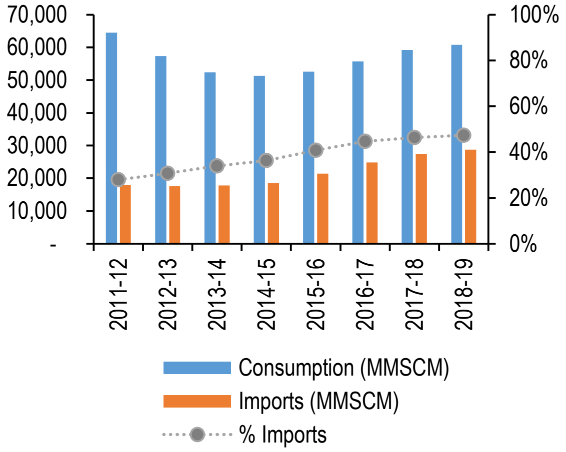


Sources: Petroleum Planning and Analysis Cell; PRS.

The Standing Committee on Petroleum and Natural Gas (2019) noted that the Middle East accounts for more than two-thirds of India's crude oil imports, and urged the government to continue its crude oil import diversification efforts.[10]

For Natural Gas, the total imports as a fraction of consumption has risen from 28% in 2011-12 to 47% in 2018-19. **Figure 14** shows the variation of net imports of Natural Gas as a percentage of total consumption of Natural Gas.

Figure 14: Imports of Natural Gas as percentage of total consumption



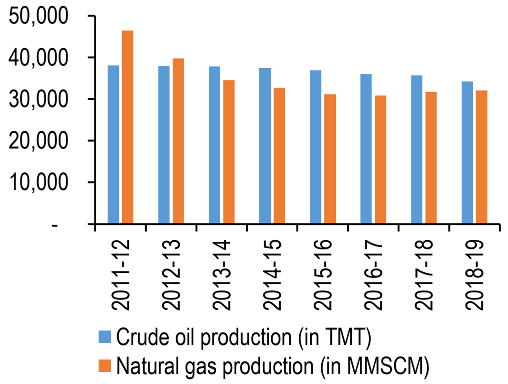
Sources: Petroleum Planning and Analysis Cell; PRS.
Note: MMSCM = Million Metric Standard Cubic Meters.

The Standing Committee on Petroleum and Natural Gas (2018) had noted that it does not find any concrete action taken by the ministry and a clear strategy with stipulated timelines to achieve the target of reduction in import dependence by 10% by 2022.[23]

Production and Exploration

India's Crude Oil and Condensate production has fallen from 38,082 TMT in 2011-12 to 34,203 TMT in 2018-19. Similarly, the production of Natural Gas has fallen from 46,453 MMSCM (Million Metric Standard Cubic Meters) in 2011-12 to 32,058 MMSCM in 2018-19. The Standing Committee on Petroleum and Natural Gas (2018) also noted that crude oil production has been stagnant for the last few years, which is a matter of serious concern.[23]

Figure 15: Crude Oil and Natural Gas production in India



Sources: Petroleum Planning and Analysis Cell; PRS.

Oil and Natural Gas

The Cabinet approved a policy framework for reforms in the exploration and licensing policy for oil and gas fields in February 2019.[24] The reforms aimed to enhance domestic exploration and production of oil and gas. Previously, Cabinet had approved policy framework for exploration and exploitation of unconventional hydrocarbons such as shale oil and gas, and coal bed methane (CBM). Note that CBM production in India has shown an upward trend. (Figures in **Table 5**).

Table 5: Coal Bed Methane production

Year	Production (in MMSCM)
2015-16	1.07
2016-17	1.54
2017-18	2.23
2018-19 (P*)	4.93
2019-20 (P*)	6.24
2020-21 (P*)	7.29

Sources: Standing Committee on Petroleum and Natural Gas, Lok Sabha, Twenty-fifth Report, August 2018; PRS.
Note: P* = Provisional.

Mergers and disinvestment of Oil PSUs

The government has stated that it proposes to create an integrated public sector oil company to match the performance of international and domestic private sector oil and gas companies.[25]

In January 2018, the government entered into an agreement with the Oil and Natural Gas Corporation (ONGC) for the sale of its 51% equity share-holding in Hindustan Petroleum Corporation Ltd (for Rs 36,915 crore).[26] Through this acquisition, ONGC became the country's first vertically integrated 'oil major' company, with presence across entire value chain.

Further, in November 2019, the Union Cabinet approved disinvestment of its 53.3% share in Bharat Petroleum Corporation Ltd along with transfer of management control to a strategic buyer.[27] The Ministry of Petroleum and Natural Gas has held that mergers and acquisitions of PSUs will result in synergies and optimisation of logistics costs and refinery operations.[28]

The Standing Committee on Petroleum and Natural Gas (2017) noted that the creation of a 'oil major' will be helpful to strengthen balance sheet of PSUs.[29] Further, it would lead to sharing of skills and research and development, and improve overall competitiveness of oil PSUs on global stage. However, the Committee recommended that the government needs to proceed with caution as there are several challenges such as integration of human resources and creating synergies in companies having diverse operations.

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Annexure

Table 6: Number of connections released under PMUY scheme

Sr. No.	State/UT	PMUY connections (as of December 2017)	PMUY connections (as of September 2019)	Total LPG consumers
1	Andaman & Nicobar Islands	1,697	13,103	1,07,101
2	Andhra Pradesh	79,743	3,90,998	1,34,65,372
3	Arunachal Pradesh	3,985	44,668	2,59,205
4	Assam	5,78,494	34,93,730	70,29,230
5	Bihar	44,81,284	85,71,668	1,73,25,775
6	Chandigarh	NA	88	2,75,875
7	Chhattisgarh	17,35,640	29,98,629	51,45,256
8	Dadra and Nagar Haveli	11,437	14,438	88,164
9	Daman and Diu	201	427	61,314
10	Delhi	519	77,051	48,61,826
11	Goa	978	1,082	4,87,619
12	Gujarat	12,32,009	29,07,682	1,03,71,353
13	Haryana	3,44,195	7,30,702	67,31,527
14	Himachal Pradesh	23,074	1,36,084	18,25,405
15	Jammu and Kashmir	3,57,855	12,03,246	31,54,279
16	Jharkhand	9,98,804	32,93,035	55,80,576
17	Karnataka	7,86,370	31,51,238	1,57,49,694
18	Kerala	28,676	2,56,303	86,92,507
19	Lakshadweep	108	292	7,981
20	Madhya Pradesh	30,16,371	71,79,224	1,48,30,583
21	Maharashtra	16,87,784	44,37,624	2,71,42,633
22	Manipur	20,415	1,56,195	5,39,943
23	Meghalaya	21,756	1,50,664	3,14,088
24	Mizoram	579	28,123	2,93,998
25	Nagaland	7,021	55,143	2,58,493
26	Odisha	18,59,230	47,50,478	85,09,322
27	Puducherry	2,116	13,566	3,70,292
28	Punjab	3,63,372	12,25,067	83,65,306
29	Rajasthan	24,48,313	63,92,482	1,60,92,755
30	Sikkim	545	8,747	1,40,838
31	Tamil Nadu	8,52,810	32,43,190	2,08,73,136
32	Telangana	41	10,75,202	1,07,35,477
33	Tripura	27,555	2,72,323	7,30,963
34	Uttar Pradesh	63,27,936	1,47,86,745	3,96,08,333
35	Uttarakhand	1,32,729	4,04,703	25,83,171
36	West Bengal	48,05,919	88,76,053	2,18,07,612
	Total	**3,22,39,561**	**8,03,39,993**	**27,44,17,002**

Sources: State-wise PMUY connections released, Pradhan Mantri Ujjwala Yojana, Ministry of Petroleum and Natural Gas, as accessed on February 10, 2020; Unstarred Question No. 1093, answered on December 27, 2017, Ministry of Petroleum and Natural Gas, Rajya Sabha; Unstarred Question No. 182, answered on November 18, 2019, Ministry of Petroleum and Natural Gas, Rajya Sabha; PRS.

Table 7: Number of consumers who opted for refill under the PMUY scheme (in Crore)

State/UT	Total connections till 2018	No. of consumers who came for refill	No. of consumers who have taken 3 or more refills	% of consumers who came for refill	% of consumers who came for 3 or more refill
Andaman and Nicobar	7,294	5,935	4,770	81.4%	65.4%
Andhra Pradesh	1,93,104	1,57,171	1,14,878	81.4%	59.5%
Arunachal Pradesh	36,818	29,155	21,875	79.2%	59.4%
Assam	23,68,650	15,15,196	10,19,589	64.0%	43.0%
Bihar	69,98,869	56,48,273	45,10,597	80.7%	64.4%
Chandigarh	46	33	28	71.7%	60.9%
Chhattisgarh	26,53,521	12,66,113	8,17,612	47.7%	30.8%
Dadra and Nagar Haveli	13,012	12,522	9,125	96.2%	70.1%
Daman and Diu	412	400	330	97.1%	80.1%
Delhi	63,894	61,698	58,568	96.6%	91.7%
Goa	1,052	1,019	949	96.9%	90.2%
Gujarat	19,07,333	16,05,729	13,44,138	84.2%	70.5%
Haryana	6,16,511	5,82,233	5,24,923	94.4%	85.1%
Himachal Pradesh	91,071	78,287	60,100	86.0%	66.0%
Jammu and Kashmir	8,46,553	6,03,958	3,92,480	71.3%	46.4%
Jharkhand	24,68,589	13,89,968	9,11,168	56.3%	36.9%
Karnataka	18,35,054	14,77,278	11,07,696	80.5%	60.4%
Kerala	1,56,533	1,32,512	96,271	84.7%	61.5%
Lakshadweep	287	243	196	84.7%	68.3%
Madhya Pradesh	52,98,247	35,65,379	24,98,803	67.3%	47.2%
Maharashtra	34,80,922	27,32,926	20,01,046	78.5%	57.5%
Manipur	1,03,903	90,939	77,413	87.5%	74.5%
Meghalaya	1,32,965	81,010	53,192	60.9%	40.0%
Mizoram	25,080	21,522	17,111	85.8%	68.2%
Nagaland	46,555	34,979	24,103	75.1%	51.8%
Odisha	35,51,904	22,82,374	16,33,126	64.3%	46.0%
Puducherry	12,814	11,786	9,949	92.0%	77.6%
Punjab	11,44,478	9,49,338	7,47,130	82.9%	65.3%
Rajasthan	44,08,608	36,00,336	28,05,270	81.7%	63.6%
Sikkim	5,442	4,458	3,393	81.9%	62.3%
Tamil Nadu	28,07,171	22,18,648	15,96,572	79.0%	56.9%
Telangana	5,22,787	3,67,634	2,01,789	70.3%	38.6%
Tripura	1,89,895	1,05,446	71,150	55.5%	37.5%
Uttar Pradesh	1,00,96,085	86,30,768	71,13,651	85.5%	70.5%
Uttarakhand	2,74,256	2,41,597	2,03,801	88.1%	74.3%
West Bengal	68,94,558	51,57,709	39,85,937	74.8%	57.8%
Total	**5,92,54,273**	**4,46,64,572**	**3,40,38,729**	**75.4%**	**57.4%**

Sources: Refill data, PMUY website, Ministry of Petroleum & Natural Gas, accessed on February 6, 2020; PRS.

Table 8: Number of consumers who have joined the PAHAL scheme

Sr. No.	State/UT	PAHAL scheme consumers (as on September 20, 2019)
1	Andaman and Nicobar Islands	87,115
2	Andhra Pradesh	1,27,51,343
3	Arunachal Pradesh	2,00,666
4	Assam	68,46,061
5	Bihar	1,66,81,327
6	Chandigarh	2,48,310
7	Chhattisgarh	49,22,045
8	Dadra and Nagar Haveli	81,859
9	Daman and Diu	57,618
10	Delhi	41,08,419
11	Goa	4,18,565
12	Gujarat	94,86,981
13	Haryana	62,14,026
14	Himachal Pradesh	15,92,392
15	Jammu and Kashmir	29,81,157
16	Jharkhand	53,13,783
17	Karnataka	1,44,91,085
18	Kerala	81,00,093
19	Lakshadweep	7,000
20	Madhya Pradesh	1,41,89,879
21	Maharashtra	2,45,85,778
22	Manipur	5,11,234
23	Meghalaya	3,01,176
24	Mizoram	2,33,001
25	Nagaland	1,82,130
26	Odisha	81,53,094
27	Puducherry	3,50,098
28	Punjab	77,56,468
29	Rajasthan	1,51,52,931
30	Sikkim	1,28,853
31	Tamil Nadu	1,94,85,501
32	Telangana	1,00,06,967
33	Tripura	7,16,146
34	Uttar Pradesh	3,74,25,995
35	Uttarakhand	23,33,244
36	West Bengal	2,08,75,314
	Total	**25,69,77,654**

Sources: "Pahal Scheme", Unstarred Question No. 2016, answered on December 6, 2019, Ministry of Petroleum and Natural Gas, Lok Sabha; PRS.

Demand for Grants: Jal Shakti

The Ministry of Jal Shakti is responsible for the development, maintenance and efficient use of water resources in the country and coordination of drinking water and sanitation programs in rural areas. The Ministry was created in 2019 by integrating the Ministries of: (i) water resources, river development, and Ganga rejuvenation, and (ii) drinking water and sanitation.

This note presents budgetary allocations to the Ministry of Jal Shakti, and analyses various issues related to water resources in the country and the schemes implemented by the Ministry.

Allocations in Union Budget 2020-21

In 2020-21, the Ministry of Jal Shakti received an allocation of Rs 30,478 crore. This is an increase of Rs 4,600 crore (18%) over the revised estimates of 2019-20. **Table 1** provides details on allocations to the two departments under the Ministry.

Table 1: Budgetary allocation to the Ministry of Jal Shakti (in Rs crore)

Department	Actuals (18-19)	Revised (19-20)	Budgeted (20-21)	% change (RE to BE)
Drinking Water and Sanitation	18,412	18,360	21,518	17%
Water Resources	7,422	7,518	8,960	19%
Total	**25,834**	**25,878**	**30,478**	**18%**

Note: BE is budget estimate and RE is revised estimate.
Sources: Demands for Grants 2020-21, Ministry of Jal Shakti; PRS.

Policy proposals for Jal Shakti in Union Budget 2020-21

- Cities with over a million population will be encouraged to provide piped water supply to all households in 2020.
- The government will focus on solid waste collection, source segregation, and processing.

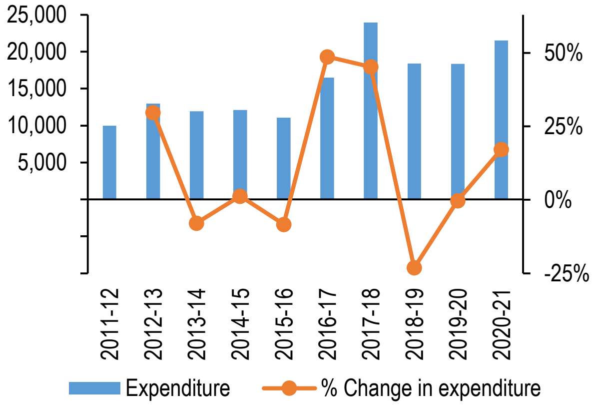
Department of Drinking Water and Sanitation

The **Department of Drinking Water and Sanitation** administers programs for safe drinking water and sanitation in rural areas. It is responsible for the monitoring and implementation of Swachh Bharat Mission-Gramin and the Jal Jeevan Mission (the National Rural Drinking Water Programme).[1]

The Department has an allocation of Rs 21,518 crore, accounting for 71% of the Ministry's allocation. This was a 17% increase in allocation over the revised estimates of 2019-20.

Over the past 10 years, the expenditure by the Department of Drinking Water and Sanitation increased at an annual growth rate of 9%. In the last ten years, the Department saw the highest increase in expenditure (49%) in 2016-17, over the previous year. **Figure 1** below shows the trends in expenditure by the Department in the last decade.

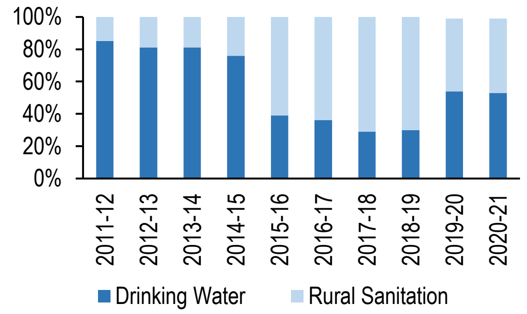
Figure 1: Expenditure by the Department of Drinking Water and Sanitation (in Rs crore)



Note: Values for 2019-20 are revised estimates and 2020-21 are budget estimates. Allocations before 2019-20 were towards the erstwhile Ministry of Drinking Water and Sanitation.
Sources: Union Budgets 2010-11 to 2020-21; PRS.

From 2011-12 (when the Department of drinking water and sanitation was created) to 2014-15, the Department's expenditure was focused on drinking water. From 2015 to 2019, the focus of expenditure shifted on rural sanitation. However, since 2019-20 the allocation towards both the schemes has been approximately equal.

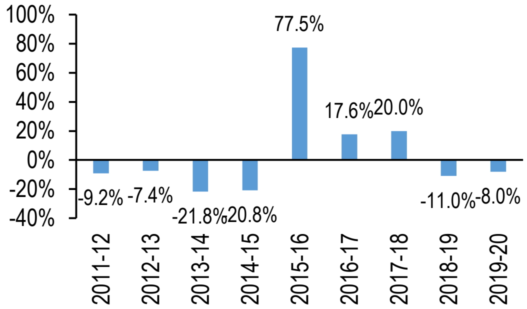
Figure 2: Expenditure on drinking water and rural sanitation over the years (as a % of Department's expenditure)



Note: Values for 2019-20 are revised estimates and 2020-21 are budget estimates.
Sources: Union Budgets 2011-12 to 2020-21; PRS.

Figure 3 shows the expenditure utilisation by the Department over the last nine years (% change between actual expenditure and budgeted expenditure). Between 2011-15, the actual expenditure was lower than the budgeted expenditure. During 2015-18, the Department spent more than the allocated amount. The actual expenditure in 2015-16 was 78% higher than the budgeted expenditure for the year. However, in 2018-19 and 2019-20 (revised estimate), the expenditure was again less than the budget estimate for these years.

Figure 3: % change between actual and budgeted expenditure



Note: The expenditure figure for 2019-20 is revised estimate.
Sources: Union Budgets 2011-12 to 2020-21; PRS.

Schemes under the Department of Drinking Water and Sanitation

Expenditure by the Department is primarily towards the two major schemes, the Jal Jeevan Mission (JJM) and the Swachh Bharat Mission-Gramin (SBM-G). **Table 2** provides details on allocation to the Department over the past three years.

Table 2: Budgetary allocation to the Department of Drinking Water and Sanitation (in Rs crore)

Major head	Actual 18-19	Revised 19-20	Budgeted 20-21	% change (20-21 BE/ 19-20 RE)
JJM	5,484	10,001	11,500	15.0%
SBM-G	12,913	8,338	9,994	19.9%
Others	15	21	24	13.6%
Total	**18,412**	**18,360**	**21,518**	**17.2%**

Note: RE is Revised Estimates, BE is Budget Estimates.
Sources: Demands for Grants 2020-21, Department of Drinking Water and Sanitation; PRS.

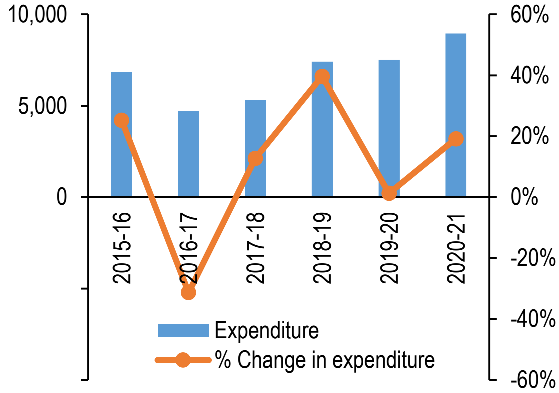
JJM aims to provide adequate and safe drinking water to the rural population in the country. It has been allocated Rs 11,500 crore in 2020-21, which is a 15% increase over the revised estimates of 2019-20. SBM-G aims to achieve universal sanitation coverage and improve cleanliness in the country. It has been allocated Rs 9,994 crore in 2020-21, which is a 20% increase over the revised estimates of 2019-20.

Department of Water Resources

The Department of Water Resources, River Development, and Ganga Rejuvenation is responsible for: (i) planning, policy formation, and coordination of water resources in the country, (ii) scrutiny and monitoring of irrigation and flood control projects, (iii) supporting state level activities for ground water development, and (iv) reduction of pollution and rejuvenation of rivers.[2]

In 2020-21, the Department has an allocation of Rs 8,960 crore, accounting for 29% of the Ministry's allocation. This is 19% higher than the revised estimates of 2019-20. In the past six years, expenditure by the Department of Water Resources has increased at an annual growth rate of 5%.

Figure 4: Expenditure by the Department of Water Resources over the years (Rs crore)



Note: Values for 2019-20 and 2020-21 are revised estimates and budget estimates respectively.
Sources: Union Budgets 2015-16 to 2020-21; PRS.

Major schemes under the Department of Water Resources

In 2020-21, 57% of the Department's expenditure is estimated to be on the Pradhan Mantri Krishi Sinchai Yojna. This is followed by the National River Conservation Plan (9.4%), Namami Gange (8.9%), and Water Resources Management (8.6%).

Table 3: Allocation to the Department of Water Resources (in Rs crore)

Major Head	Actuals (18-19)	Revised (19-20)	Budgeted (20-21)	% change (RE to BE)
PM Krishi Sinchai Yojna	3,439	4,026	5,127	27%
National River Conservation	1,620	1,200	840	-30%
Namami Gange	688	353	800	127%
Water Resources Management	569	636	775	22%
Central Water Commission	362	403	403	0%
Central Ground Water Board	227	243	245	0%
Others	1,106	1,303	1,418	9%
Total	7,422	7,518	8,960	19%

Note: BE is budget estimate and RE is revised estimate. Others include central sector projects like river basin management, and major irrigation projects.
Sources: Demands for Grants 2020-21, Department of Water Resources, River Development, and Ganga Rejuvenation, Ministry of Jal Shakti; PRS.

Issues to consider

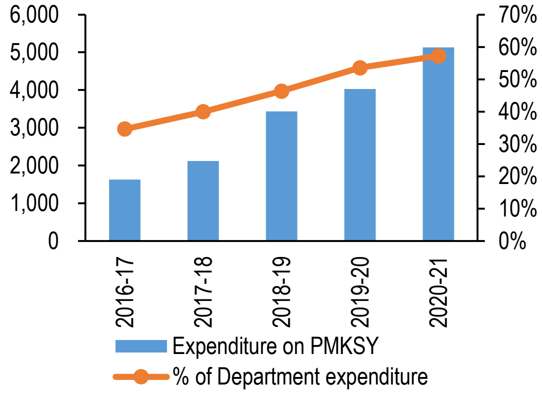
Irrigation

The Economic Survey (2016-17) highlighted that 52% of the total net sown area in India is unirrigated and depends on rainfall for agriculture.[3] It noted that when rainfall is significantly less than usual, the unirrigated areas have higher adverse effects compared to the irrigated areas. Therefore, it argued that India needs to branch out its irrigation cover.

The Pradhan Mantri Krishi Sinchai Yojana (PMKSY) was launched during 2015-16.[4] The scheme seeks to: (i) expand coverage of irrigation, (ii) improve water use efficiency on farms, and (iii) introduce sustainable water conservation practices.[5] The Jal Shakti Ministry implements certain components of the scheme, such as PMKSY – Har Khet Ko Pani and Flood Management and Borders Area Programme.[4] The other components of the scheme are implemented by the Ministry of Agriculture and Farmers Welfare and the Ministry of Rural Development.

Utilisation: Figure 5 shows the expenditure on the scheme from 2016-17 to 2020-21. The scheme has been allocated Rs 5,127 crore in 2020-21. Its share in the Department's expenditure increased from 35% in 2016-17 to 57% in 2020-21.

Figure 5: Expenditure on PMKSY over the years (in Rs crore)



Sources: Union Budgets 2016-17 to 2020-21; PRS.

Har Khet ko Pani: This scheme's objectives include: (i) creation of new water sources, (ii) restoration and repair of traditional water bodies, (iii) command area development, and (iv) strengthening of distribution network from irrigation sources to the farm.[6,7]

Some components of the scheme are:

- **Accelerated Irrigation Benefit Programme (AIBP):** Under this scheme, financial assistance is being provided for faster completion of irrigation projects. From June to December 2019, of the target 43 lakh hectare, projects in 29 lakh hectare (69%) were completed.[8]

  Of the 106 projects selected under the scheme, 21 (20%) projects are facing constraints such as land acquisition, legal, and contractual issues.[8]

- **Command Area Development and Water Management Programme:** The objective of the programme is to enhance utilisation of irrigation potential created. This is achieved through activities such as construction of field channels, land levelling, and reclamation of waterlogged area.[9] Currently, there are 88 projects under the programme, of which only 12 (14%) have achieved more than 50% physical progress.[10]

Flood Management

The National Water Policy (2012) identifies that the climate change has deepened incidences of water related disasters like floods, increased erosion and increased frequency of droughts.[11] The centre supports states by providing financial assistance for undertaking flood management works in critical areas through the Flood Management and Border Areas Programme (under PMKSY). From 2016-17 to November 2019, central assistance of Rs 1,429 crore has been released under the scheme.[12]

The Standing Committee on Water Resources (2017-18) notes that out of 522 flood management works approved under the programme during 2007-17, only 298 (57%) were completed up to March 31 2017.[13] Further, in most of the projects, the financial progress was in the range of 10% to 30%, due to less release of funds because of inadequate budget allocation.[13]

Conservation and Rejuvenation of rivers

The Ministry of Jal Shakti implements the Namami Gange Mission with the objective of rejuvenation of river Ganga and its tributaries through activities such as treatment of municipal sewage and industrial effluents, river surface cleaning, rural sanitation, and afforestation.[14] Currently, 114 (37%) of the 310 projects sanctioned under the Mission have been completed.[15]

The scheme was launched with a budget outlay of Rs 20,000 crore for the period 2015-2020.[16] During the period 2014-15 to 2018-19, Rs 6,106 crore (31%) has been spent on the programme.[16] In 2020-21, the scheme has been allocated Rs 800 crore, which is 126% more than the revised estimates for 2019-20.

Table 4 shows the trends in budget allocation and actual expenditure on Namami Gange from 2015-16. Note that the utilisation under the scheme has always been under 50% of its allocation.

Table 4: Budgeted versus actual expenditure on Namami Gange (in Rs crore)

Year	Budgeted	Actuals	% of Budgeted
2015-16	-	100	-
2016-17	-	1,675	-
2017-18	2,300	700	30%
2018-19	2,300	688	30%
2019-20	750	353	47%

Note: The 'actuals' figure for 2019-20 is the revised estimate.
Sources: Union Budgets 2015-16 to 2019-20; PRS.

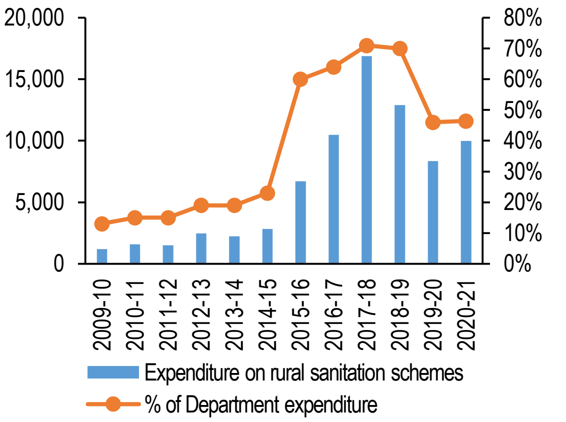
The Standing Committee on Water Resources (2017-18) notes that the physical progress under the scheme has not been satisfactory.[17] In response to the Committee's observations, the Ministry responded that the following bottlenecks affect the implementation of projects: (i) delay in tendering process, (ii) non-availability of land for sewage treatment plants leading to delay in execution of projects, (iii) underutilisation of sewage treatment plants' capacities due to inadequate house sewer connections in cities, and (iv) non-effective implementation of public outreach programmes and community consultation, among others.[17]

Swachh Bharat Mission - Gramin

In 2014, the Swachh Bharat Mission (Gramin) was launched by restructuring the Nirmal Bharat Abhiyan.[18] The Mission aimed to achieve universal sanitation coverage, improve cleanliness and eliminate open defecation in the country by October 2, 2019.[19]

In 2020-21, the Mission has been allocated Rs 9,994 crore, which is an increase of 20% from the revised estimate of 2019-20. The expenditure on towards rural sanitation schemes has increased from Rs 1,580 crore in 2010-11 to Rs 12,913 crore in 2018-19.

Figure 6: Expenditure on rural sanitation scheme (in Rs crore)



Note: Values for 2019-20 and 2020-21 are revised estimates and budget estimates respectively.
Sources: Union Budgets 2009-10 to 2020-21; PRS.

Figure 6 shows the expenditure on the scheme from 2009-10 to 2020-21. Expenditure on rural sanitation has increased at an annual growth rate of 21% from 2009-10 to 2020-21. A significant part of this increase was seen from 2015-16 onwards, after the launch of SBM-G.

Table 5 shows the trends in budget allocation and actual expenditure on rural sanitation over the past 11 years. Note that between 2015-16 to 2017-18, actual expenditure on SBM-G exceeded the budgetary estimates.

Table 5: Budgeted versus actual expenditure on SBM-G (in Rs crore)

Year	Budgeted	Actuals	% of Budgeted
2009-10	1,080	1,200	111%
2010-11	1,580	1,580	100%
2011-12	1,650	1,500	91%
2012-13	3,500	2,474	71%
2013-14	3,834	2,244	59%
2014-15	4,260	2,841	67%
2015-16	3,625	6,703	185%
2016-17	9,000	10,484	116%
2017-18	13,948	16,888	121%
2018-19	15,343	12,913	84%
2019-20	9,994	8,338	83%

Note: The 'utilised' figure for 2019-20 is the revised estimate.
Sources: Union Budgets 2009-10 to 2019-20; PRS.

Construction of Individual Household Latrines (IHHLs): The cost for constructing a household toilet was increased from Rs 10,000 to Rs 12,000 in September 2014 when the Nirmal Bharat Abhiyan was restructured into SBM-G.[20] This cost for constructing toilets is shared between the centre and the state in the ratio of 60:40. **Table 6** gives the number of household toilets constructed since the inception of the scheme.

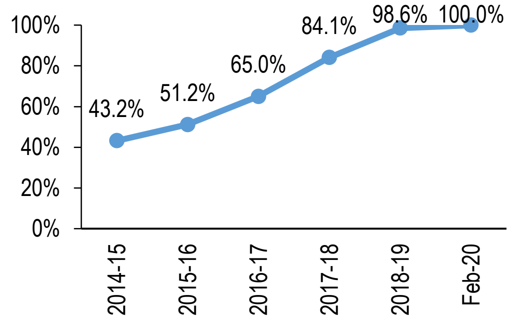
Table 6: Toilets constructed since 2014-15

Year	Toilets Constructed
2014-15	48,51,153
2015-16	1,24,48,886
2016-17	2,16,32,580
2017-18	2,96,01,619
2018-19	2,24,49,812
2019-20	1,18,83,221
Total	**10,28,67,271**

Sources: SBM Dashboard, Ministry of Jal Shakti; PRS.

As per the Department, 43.2% of the rural households had access to toilets in in 2014-15, which has increased to 100% in February 2020.[21] Figure 7 illustrates the total coverage of household toilets since the inception of the SBM programme.

Figure 7: Percentage of households with toilets (2014-2019)



Sources: Management Information System Reports of SBM, Ministry of Jal Shakti; PRS.

Open Defecation Free (ODF) villages: Under SBM-G, a village is declared as ODF when: (i) there are no visible faeces in the village, and (ii) every household as well as public institution uses safe technology options for faecal disposal.[22]

After a village declares itself as ODF, states are required to verify the ODF status of such a village. Since sanitation is a state subject, the department has set some broad guidelines for ODF verification. This includes indicators that are in accordance with the ODF verification definition, such as access to a toilet facility and its usage, and safe disposal of faecal matter through septic tanks.

The guidelines for ODF state that since it is not a one-time process, at least two verifications must be carried out.[23] The first verification must be carried out within three months of the declaration to verify the ODF status. Further, to ensure sustainability of ODF, a second verification must be carried out around six months after the first verification.

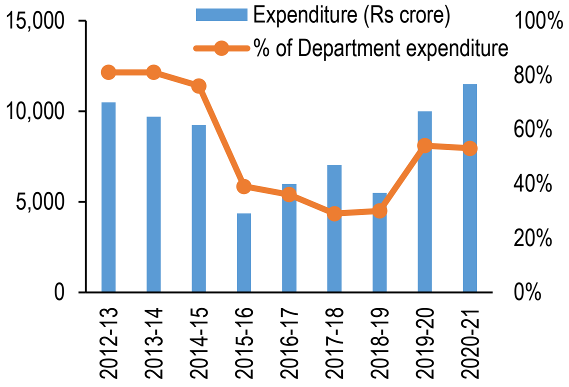
As per the Management Information System of SBM-G, a total of 6,03,175 villages across 706 districts and 36 states and union territories have been declared as ODF as of February 2020. Of these, 5,99,266 villages (99.4%) have been verified as ODF under the first level verification.[24] 1,66,047 (28%) of these villages have been verified ODF under the second level verification.[25] State-wise details on the number of villages declared and verified ODF are presented in the annexure.

Jal Jeevan Mission

The Jal Jeevan Mission was launched in 2019 with the aim to provide functional household tap connection to every rural household by 2024.[26] It subsumed the National Rural Drinking Water Programme. The total estimated cost of JJM is Rs 3.6 lakh crore.[26]

In 2020-21 it has been allocated Rs 11,500 crore, which is an increase of 15% from the revised estimates of 2019-20. In 2019-20, the scheme was allocated Rs 10,001 crore which remained the same in the revised estimate stage. **Figure 8** shows the expenditure on drinking water schemes over the last nine years.

Figure 8: Expenditure on Drinking Water schemes (in Rs crore)



Values for 2019-20 and 2020-21 are revised estimates and budget estimates respectively.
Sources: Union Budgets 2009-10 to 2018-19; PRS.

After a reduction in expenditure on the scheme from 2015-16 to 2018-19, the expenditure on the scheme increased from 2019-20 onwards. Note that expenditure on the scheme from 2019-20 is similar to the expenditure on it before 2015-16.

Target versus achievements: JJM aims to provide functional household tap connections to every household at the rate of 55 Litres Per Capita Per Day (LPCD).

The coverage of the National Rural Drinking Water Programme (NRDWP) was monitored in terms of habitations having provision of minimum 40 LPCD of potable drinking water sources at a reasonable distance. **Table 7** gives details on rural habitations and population covered under NRDWP. State details of coverage of rural habitations under the scheme are provided in the Annexure.[27]

Table 7: Rural habitations covered under NRDWP

Drinking water sources	% Rural habitation covered	% Population covered
More than 40 LPCD	81%	77%
Less than 40 LPCD	16%	19%
Water with quality issues	3%	4%

Note: The data is as reported by states as of December 2019.
Source: Starred Question No. 351, Department of Drinking Water and Sanitation, Ministry of Jal Shakti, Lok Sabha; PRS.

Note that the coverage of piped-water-supply remains low. As of December 2019, only 18.4% of rural households have piped-water supply connections.[28]

Contamination of drinking water: The Estimates Committee in its report on 'Evaluation of Rural Drinking Water Programmes' (2015) had noted that

NRDWP is over-dependant on ground water.[29] It also noted that ground water is affected by arsenic and other contaminants in several districts of the country.

Table 8 shows the number of habitations affected due to the presence of Flouride, Arsenic, Iron, Nitrate and other contaminants. As of January 2019, 3.6% (61,551) of the total habitations (17,24,423) were affected by contamination of ground water.[30]

Table 8: Habitations affected by contamination of groundwater (as of January 1, 2019)

Contaminants	Number of affected habitations	% of affected habitations
Arsenic	15,795	0.9%
Fluoride	9,655	0.6%
Heavy Metal	2,106	0.1%
Iron	18,939	1.1%
Nitrate	1,562	0.1%
Salinity	13,494	0.8%
Total	**61,551**	**3.6%**

Sources: Unstarred Question No. 2738, Ministry of Drinking Water and Sanitation, Rajya Sabha, PRS.

The National Water Quality Sub-Mission (NWQSM) was launched in March 2017 to provide safe drinking water to 27,544 Arsenic/Fluoride affected rural habitations in the country, over a span of four years.[31]

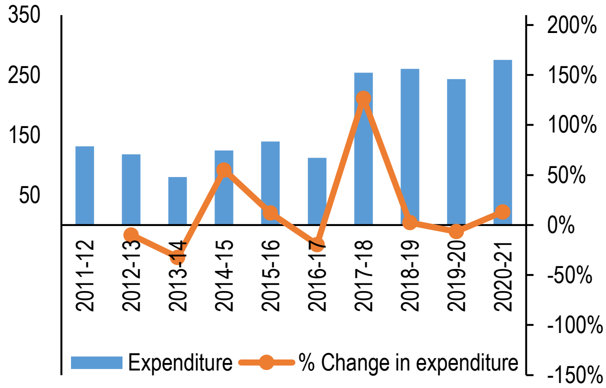
The Standing Committee on Drinking Water and Sanitation (2019-20) observed that out of these, 11,884 habitations (43%) have been covered under the scheme. 4,100 habitations (15%) have been found with quality improved on retesting or have been covered under state plan schemes.[31]

Ground water depletion

Currently, 245 Billion Cubic Meter (BCM) of the 398 BCM of net annual ground water availability (62%) is being utilised.[32] However, note that ground water development is not uniform across states in India. It has exceeded 100% in some states such as Haryana (133%), Delhi (137%), and Punjab (172%). This implies that the annual ground water utilisation in these states is higher than the net annual ground water availability.

The Ground Water Management and Regulation scheme was launched in 2008 with the aim to regulate and control the development of ground water resources of the country.[33]

Figure 9: Expenditure on Ground Water Management Scheme (in Rs crore)



Note: Values for 2019-20 are revised estimates and 2020-21 are budget estimates.
Sources: Union Budgets 2011-12 to 2020-21; PRS.

Over the past ten years, the expenditure on the scheme increased at an annual growth rate of 9%. In 2020-21, the estimated expenditure is 13% more than the revised expenditure estimates of 2019-20. These trends are illustrated in **Figure 9**.

The Standing Committee on Water Resources (2019-20) recommended the Ministry to increase the budgetary support for the scheme and formulate short term and long term policies and programmes in consultation with states. The Committee also recommended the Ministry to constitute an Expert Committee for identifying specific regions with rapidly depleting groundwater levels.

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Annexure

Table 9: State-wise ODF declared and verified villages (as of June 2019)

State	Total Villages	Total declared	Total Verified	Total Verified (2nd level)	% Verified 2nd level
Andaman and Nicobar Islands	192	192	192	192	100%
Andhra Pradesh	18,841	18,841	18,841	18,819	100%
Arunachal Pradesh	5,389	5,389	5,389	5,389	100%
Assam	25,503	25,503	25,503	8,416	33%
Bihar	38,691	38,691	36,760	-	-
Chandigarh	13	13	13	-	-
Chhattisgarh	18,769	18,769	18,769	18,769	100%
Dadar and Nagar Haveli	69	69	69	69	100%
Daman and Diu	26	26	26	26	100%
Goa	365	365	18	-	-
Gujarat	18,261	18,261	18,261	18,261	100%
Haryana	6,908	6,908	6,908	6,908	100%
Himachal Pradesh	15,921	15,921	15,921	9,295	58%
Jammu and Kashmir	7,263	7,263	7,191	-	-
Jharkhand	29,564	29,564	29,333	164	1%
Karnataka	27,044	27,044	26,900	-	-
Kerala	2,027	2,027	2,027	2,027	100%
Ladakh	302	302	302	5	2%
Lakshadweep	9	9	9	-	-
Madhya Pradesh	50,228	50,228	50,228	2	-
Maharashtra	40,505	40,505	40,505	-	-
Manipur	2,556	2,556	2,556	-	-
Meghalaya	6,028	6,028	6,028	2,101	35%
Mizoram	696	696	696	537	77%
Nagaland	1,451	1,451	1,142	-	-
Odisha	46,785	46,785	46,785	-	-
Puducherry	265	265	265	265	100%
Punjab	13,726	13,726	13,700	13,700	100%
Rajasthan	42,860	42,860	42,860	-	-
Sikkim	442	442	442	429	97%
Tamil Nadu	12,524	12,524	12,524	-	-
Telangana	14,200	14,200	14,001	5,252	37%
Tripura	1,178	1,178	629	32	3%
Uttar Pradesh	97,640	97,640	97,623	20,227	21%
Uttarakhand	15,473	15,473	15,473	12,800	83%
West Bengal	41,461	41,461	41,377	22,362	54%
Total	**6,03,175**	**6,03,175**	**5,99,266**	**1,66,047**	**28%**

Sources: Management Information System Reports of SBM; PRS.
Note: The total number of villages is taken from Census 2011.

Table 10: State-wise details on number of habitations covered under National Rural Drinking Water Programme (NRDWP) – as on December 9, 2019

State	Total habitations	Fully covered habitations	Partially covered habitations	Habitations with water quality issues
Andaman & Nicobar Islands	400	324	76	-
Andhra Pradesh	48,663	34,578	13,805	280
Arunachal Pradesh	7,525	3,303	4,195	27
Assam	88,076	55,767	23,663	8,646
Bihar	1,10,218	70,988	35,422	3,808
Chhattisgarh	74,753	72,792	1,455	506
Goa	347	345	2	-
Gujarat	35,996	35,996	-	-
Haryana	7,655	7,305	263	87
Himachal Pradesh	54,469	42,631	11,838	-
Jammu & Kashmir (including Ladakh)	14,625	8,750	5,864	11
Jharkhand	1,20,591	1,19,729	334	528
Karnataka	59,774	34,345	24,979	450
Kerala	21,520	6,165	15,031	324
Madhya Pradesh	1,28,231	1,28,080	2	149
Maharashtra	99,641	84,835	14,636	170
Manipur	2,976	2,050	926	-
Meghalaya	10,470	4,124	6,339	7
Mizoram	720	490	230	-
Nagaland	1,450	742	708	-
Odisha	1,57,013	1,54,477	127	2,409
Puducherry	266	153	113	-
Punjab	15,190	10,485	1,500	3,205
Rajasthan	1,21,526	62,783	41,918	16,825
Sikkim	2,337	861	1,476	-
Tamil Nadu	1,00,014	96,876	3,138	-
Telangana	24,597	15,405	8,848	344
Tripura	8,723	5,020	1,326	2,377
Uttar Pradesh	2,60,018	2,56,913	1,950	1,155
Uttarakhand	39,311	23,202	16,100	9
West Bengal	1,07,328	61,905	32,100	13,323
Total	**17,24,423**	**14,01,419**	**2,68,364**	**54,640**

Sources: Starred Question No. 351, Ministry of Jal Shakti, Lok Sabha; PRS.

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