ECONOMIC ANALYSIS: PROGRAM LOAN

A. Introduction

1. The analytical framework for determining efficient and sustainable use of resources is based on relevant ADB publications, including *Guidelines for the Economic Analysis of Projects* (1997), *Cost−Benefit Analysis for Development: A Practical Guide (2013),* and *Assessing Aid for a Sector Investment Plan: Economic Analysis of a Sector Loan (* David Dole)*.*

B. Economic Analysis of Program Loan Component of the Rajasthan Urban Sector Development Program (SDP)

2. Economic evaluation reveals that the Government of Rajasthan (GOR) suffers from fiscal constraints due to the following reasons:

(i) **Revenue.** Rajasthan is a general category state (GCS)[1] with a rather moderate revenue base and an increasing dependence of the state on grants from the central government. From the available state budget figures[2], the state has witnessed a moderate decline in the share of own-tax revenue (OTR) in its total revenue receipts from 46.4% in fiscal year (FY) 2010 to 44.6% in FY2014. The average OTR to gross state domestic product (GSDP) ratio of the state for FY2010–FY2013 is at 6.2% (6.6% in revised budget estimate FY2014), whereas the average for all general category states for FY2010-FY2013 is a higher figure of 7.4% with Karnataka leading at 9.9%. While the GOR has undertaken a few measures to improve tax administration in the recent years, there exists scope to further strengthen its strategies including rationalizing value-added tax and property tax, and limiting tax leakages.

(ii) **Expenditure.** Committed expenditures, including salary, interest payments, and pension, as percentage of the state's total revenue receipts has declined from 95.6% in FY2010 to 88.8% in FY2014. Even with this improvement, the non-plan revenue expenditure in the state remains high thereby limiting the state's capacity for development financing, which, measured as a percentage of GSDP, remains at 12.6%, while this ratio for Madhya Pradesh, a similarly-sized state, is 15.7% for FY2014. The capital outlay of the state as percentage of its GSDP is at 2.7% in FY2014, which is slightly above the average capital outlay of GCSs at 2.5%. This ratio has improved from 1.7% in FY 2012 to 2.7% in FY 2014 for Rajasthan, and reflects continued efforts of the state to enhance capital investment.

(iii) **Deficit.** The debt to GSDP ratio of the state is 24.3% as of March 2013, which is similar to all the general category states (24.4%).[3] While the state has shown fiscal consolidation in accordance with the requirements of Fiscal Responsibility and Budget Management Act and its revenue balance as a percentage of GSDP has improved from (-) 1.8% in FY2010 to 0.7% in FY2013, the state is still relying on borrowings for financing current expenditure.

3. **Need for investments and reforms**. Rajasthan, with a population of 68.6 million and an area of 342,239 square kilometers, is the largest state in the country. While the current

[1] In 1969, the Gadgil formula for sharing plan assistance among states was devised, and three states were categorized as special-category states eligible for higher resource allocation from the central government. All other remaining states, including Rajasthan, fall under general category states (GCS). At present, there are 11 special category and 17 general category states.

[2] Budget At a Glance 2011–12, 2012–13 and 2013–14, Finance Department, Government of Rajasthan, http://www.finance.rajasthan.gov.in/speech.shtm.

[3] Reserve Bank of India. *State Finances, A Study of Budgets of 2013-2014*. January 2014. New Delhi.

urbanization is around 25%, the state is rapidly urbanizing at a high growth rate of 2.9% per annum. The GOR has successfully implemented two multi-sector urban investment projects in the past decade, which benefitted more than 5.0 million residents of six major cities under the first project and more than 2.0 million residents of 15 secondary cities under the second project. Important lessons from the past projects, which have been incorporated in the design of the SDP. The proposed SDP will support the GOR's reform agenda, and if implemented successfully, may play a demonstrative role for urban sector operations in India.

4. **Need for sector development program**. Given the current backdrop of fiscal deficiencies, investments, and on-going fiscal initiatives, the proposed loan will help the GOR in adjusting its policies, prioritizing investment plans, and ensuring adequate capacity building of institutions for augmenting and sustaining improved finances to facilitate investment in economic and social infrastructure (development financing). The SDP modality will support both the infrastructure needs and the GOR's reform program, which focuses on strengthening institutions and adjustments in policy, institutional, legal, financial, and regulatory framework. The policy-based loan will provide financial support to the GOR to implement these reforms that will unlock the potential of various stakeholders, including municipal bodies, individual households, and private sector investors. The amount of the program loan is based on the development financing needs[4] and the costs of reforms, which, among others, would include support for (i) capitalization of the corporatized state-level institution for urban development and the corporatized water and sewerage utility for Jaipur –about $25 million; (ii) implementation of urban development policy and human resource development plan, including setting up a training institute of urban governance–about $25 million; (iii) delegation of water supply operations to municipal bodies with adequate personnel and O&M budget –about $75 million; (iv) implementation of nonrevenue water assessment and reduction and operationalization of 24-hour supply in the state – about $50 million; (v) implementation of other items in the urban water and sanitation policy, which include: (a) sewerage and septage management, (b) provision of individual water supply and sewerage connections to households in slums and poor settlements, (c) development of water supply and sewerage GIS and computerized gender-disaggregated customers' database, (d) guidelines to set water tariffs, (e) water and wastewater quality monitoring systems, (f) system to monitor billing and collection efficiency, (g) waste and wastewater recycle and reuse, (h) bridging gaps between sanitation and health outcomes, and (i) water and sanitation linkages with economic growth and competitiveness of cities –about $75 million.

5. **Conditions attached to the loan.** All identified economic issues are adequately and appropriately included in the policy matrix agreed with GOR[5], which includes several actions as loan conditions for benefits in terms of increased tax/tariff revenue, some of which include:

- Municipal bodies will have collected property tax (urban development tax or equivalent) from at least 50% of all eligible properties in all municipalities in the State. This will be a substantial improvement from the existing tax system.
- GOR will have implemented the roadmap and rationalized water tariff to recover full costs in a phased manner including recovering 50% of the O&M costs in six project cities by 2017.

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[4] Details of the development financing needs are included in the Sector Assessment (Summary): Water and Other Urban Infrastructure and Services and Economic Analysis (accessible from the list of linked documents in Appendix 2).

[5] Policy matrix included in the proposed Report and Recommendation of the President to the Board of Directors: Proposed Loans and Technical Assistance Grant to India for the Rajasthan Urban Sector Development Program.

- GOR will have improved billing and collection efficiency to at least 90% in cities with a population of more than 100,000 (there are 29 cities with more than 100,000 population per Census 2011)
- Each tranche of the program loan will be disbursed on satisfactory compliance with the respective tranche conditions.

6. **Government capacity.** Government capacity to implement the program is low to medium at the moment, which has necessitated the proposal for a technical assistance grant to support the implementation of the program activities and capacity building of the GOR officials.

7. **Program beneficiaries.** The beneficiaries of this program will be the residents of the state, who will directly benefit from the improved urban infrastructure in the state. The general population will also benefit from improved targeting of public expenditure, especially in water and sanitation sectors. In addition, the GOR officials will benefit from the implementation, as the work processes will get simplified and they will be able to work more efficiently and able to devote time on important activities like NRW reduction, water quality, sanitation benchmarks rather than mundane repetitive manual tasks. The greater ability of the GOR to invest in urban infrastructure in the state, resulting from enhanced fiscal space, in turn, will help the population in having greater economic opportunities.

8. **Impact, Outcome, and Outputs of the program.** The impact of the SDP will be sustainable urban development in Rajasthan. The outcome will be improved urban service delivery in Rajasthan. The SDP will have five outputs: Outputs 1 and 2 will be supported by the policy-based loan, while Outputs 3, 4, and 5 will be supported by the project loan. The outputs corresponding to the program loan will be: (i) urban institutions strengthened, and (ii) urban governance improved. The program loan is projected as beneficial to the state as it will support strengthening the urban institutions and improving the urban governance.

9. **Fiscal impact of the program.** Fiscal impact of the program is assessed by comparing revenue balance (surplus and/or deficit), fiscal deficit, and debt stock as a percentage of the GSDP between a baseline scenario (without the program) and a reform scenario (with the program). For the fiscal impact analysis both the components of SDP (program and project loans) with US$ 500 million ADB support are considered, However the loan interest and additional O&M payments, if any, are not considered as they will reflect only beyond the projection period. The fiscal parameters[6] are expected to improve over the short-run under the reform scenario primarily due to the following factors:

(i) Increased OTR due to rationalized urban property tax in the state including establishing computerized data base on property tax payers in urban local bodies;
(ii) Rationalized water tariff to recover full costs in a phased manner with recovery of at least 50% of the O&M costs by 2017 and 100% of O&M costs in project cities by 2019 in six project cities;
(iii) Improved billing and collection efficiency to at least 90% in cities with population of more than 100,000; and

[6] Some key fiscal identities include:
(i) Gross fiscal deficit (GFD) = (total revenue receipts + recovery of loans and advances + other capital receipts) - (capital outlay + disbursements of loans and advances + total revenue expenditure),[6]
(ii) Revenue balance = total revenue receipts - total revenue expenditure, and
(iii) Outstanding debt as on 31 March in period t = outstanding debt as on 31 March in period t-1 + GFD in current period t.

(iv) Budgetary savings through increased efficiency in human resources, capital investment and reduction in subsidy burden through reforms and private sector participation.

10. **Projection methodology.** To arrive at the projections from FY2015 to FY2019, average annual compound growth rate was used after verifying various methods including trend analysis using trend regressions (linear, logarithmic and exponential) on actual data from FY2010–FY2014. Also the Thirteenth Central Finance Commission recommendations, and Reserve Bank of India (RBI) FRBM norms,[7] have been used wherever required. Revenue balance, gross fiscal deficit (GFD), and debt stock have been calculated using the projection. It is assumed that the state would receive $500 million ($250 million in two equal tranches of $125 million each in the years FY2015 and FY2017 as program loan and $250 million as project loan) during the period FY2015–2019 for the fiscal impact analysis.

11. In general, the revenue balance as a percentage of GSDP is expected to improve over the years. As evident from Table 1, the projection of revenue balance shows an improving trend in both 'with' and 'without' reform scenarios, which will further be accentuated from FY 2020 as the projected additional revenue stream due to the program loan is expected mainly from FY2020. The GFD, as a percentage of GSDP, is improving under both scenarios during the projection period; however, the deficit level is higher under the reform scenario than base scenario, which is exclusively on account of higher capital outlay assumed under the reform scenario. The debt stock, however, will reach 30.62% of GSDP in FY2019.[8] The capital outlay as percentage of GSDP, created under the program, is projected to increase from 0.01% of GSDP in FY2015 to 0.05% in FY2019, based on the loan disbursement phasing. This additional capital outlay through the SDP consisting of both project and program loan components will facilitate revenue augmentation in terms of additional property tax, tariff, etc. and also expenditure optimization measures for the state urban sector and this will be felt more on completion of the proposed SDP program. This is the reason the revenue balance during the SDP implementation period will remain unchanged.

12. **Economic risks.** Some of the perceived economic risks include: (i) inability of the GOR to carry out the proposed reforms to the full extent, and (ii) average to medium response from the relevant government personnel for capacity enhancement which would be critical to ensure sustainability of the operations and the reform process. The rapid urbanization in the state will ensure sufficient demand for improved water supply and sanitation services at the urban centers and more program loan investment related benefits in the future.

13. **Development Coordination.** There is little potential for conflict among the foreign aid agencies in executing and implementing the program as ADB is the dominant partner in urban water sector in the state, and the GOR has effective measures in place to ensure coordination among the development partners.

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[7] Debt Targets Set in Rajasthan Fiscal Responsibility and Budget Management (FRBM) Second Amendment Act 2011, Law Department Notification dated 14 September 2011 in consultation with Reserve Bank of India (RBI).

[8] Debt stock restriction was envisaged to 36.5% for FY 2015 under the Rajasthan Fiscal Responsibility and the Budget Management Act, as indicated by GOR (The Rajasthan FRBM Second Amendment Act 2011, Law Department Notification dated 14 September 2011). For Rajasthan the debt stock is projected within the limit and also has provisions to accommodate additional loans to increase the capital outlay for positive impacts on growth and development.

Table 1: Details of Revenue and Expenditure for Rajasthan State
(as % of GSDP)

	Receipts			Expenditure			Balance			Performance Indicators				
Year	**Revenue Receipts**	**Capital Receipts**	**Total Receipts**	**Revenue Expenditure**	**Capital Expenditure**	**Total Expenditure**	**Revenue Balance (Surplus/Deficit)**	**Fiscal Balance (Surplus/Deficit)**	**Primary Deficit**	**Debt Stock**	**Capital Outlay**	**Total Own Revenue**	**Additional Capital Outlay**	**GSDP in INR Billion**
A. OBSERVED														
2009-10	13.3%	5.0%	18.3%	15.1%	3.2%	18.3%	-1.8%	-3.9%	-1.3%	34.5%	2.0%	7.9%		2,658
2010-11	13.4%	2.4%	15.9%	13.1%	2.6%	15.7%	0.3%	-1.2%	0.9%	29.1%	1.5%	7.9%		3,419
2011-12	13.7%	2.0%	15.7%	12.9%	2.8%	15.7%	0.8%	0-.9%	1.0%	25.6%	1.7%	8.3%		4,168
2012-13	14.0%	3.0%	17.0%	13.3%	3.7%	17.0%	0.7%	-1.8%	0.0%	24.3%	2.2%	8.9%		4,782
2013-14(RBE)	14.9%	4.2%	19.1%	17.5%	4.3%	21.8%	-2.6%	-5.9%	-4.1%	24.5%	3.3%	9.3%		5,181
CAGR (%)	*22%*	*14%*	*20%*	*23%*	*27%*	*23%*	*30%*	*31%*	*57%*	-8%				
B. PROJECTIONS (Without Reform Scenario)														
2014-15	15.1%	4.2%	19.2%	17.4%	4.3%	21.7%	-2.4%	-5.7%	-3.8%	26.4%	3.3%	9.4%		6,122
2015-16	15.2%	4.1%	19.3%	17.3%	4.3%	21.6%	-2.1%	-5.5%	-3.5%	27.9%	3.3%	9.5%		7,233
2016-17	15.4%	4.1%	19.4%	17.3%	4.3%	21.6%	-1.9%	-5.3%	-3.2%	28.9%	3.4%	9.6%		8,547
2017-18	15.5%	4.1%	19.6%	17.2%	4.3%	21.5%	-1.7%	-5.2%	-3.0%	29.6%	3.4%	9.7%		10,099
2018-19	15.7%	4.0%	19.7%	17.2%	4.3%	21.5%	-1.5%	-5.0%	-2.8%	30.1%	3.5%	9.8%		11,932
C. PROJECTIONS (With Reform Scenario)														
2014-15	15.1%	4.2%	19.2%	17.4%	4.3%	21.7%	-2.4%	-5.7%	-3.8%	26.5%	3.3%	9.4%	0.01%	6,122
2015-16	15.2%	4.3%	19.5%	17.3%	4.4%	21.8%	-2.1%	-5.7%	-3.5%	28.2%	3.5%	9.5%	0.15%	7,233
2016-17	15.4%	4.1%	19.5%	17.3%	4.3%	21.6%	-1.9%	-5.4%	-3.2%	29.3%	3.5%	9.6%	0.07%	8,547
2017-18	15.5%	4.2%	19.7%	17.2%	4.4%	21.6%	-1.7%	-5.3%	-3.0%	30.2%	3.6%	9.7%	0.14%	10,099
2018-19	15.7%	4.1%	19.7%	17.2%	4.3%	21.5%	-1.5%	-5.0%	-2.8%	30.6%	3.5%	9.8%	0.05%	11,932

RBE - revised budget estimate; CAGR - compound annual growth rate; GSDP – gross state domestic product.
Source: Budget At a Glance 2011–12, 2012–13 and 2013–14, Finance Department, Government of Rajasthan, http://www.finance.rajasthan.gov.in/speech.shtm.
Notes:
1. The income and expenditure are projected based on compounded annual growth rate.
2. The standard growth rate is assumed based on CAGR with minimum as 5% and maximum as 20% growth.
3. Budget figures of GOR (Finance Department) compiled for the period FY 2010 – 2014 and GSDP for Rajasthan State was based on the RBI data for the period FY 2010 – FY 2013 (Hand Book of Indian Statistics 2013) were used for projection.
4. Total own revenue includes only revenue receipts (tax and non-tax revenues).
Source: Asian Development Bank Estimates.