



Government of Karnataka
FISCAL POLICY INSTITUTE



Kengeri Post, Bangalore-Mysore Road, Bengaluru-560060

Phone: +91 80 26971000, Fax: +91 80 26971010,

e-Mail: director@fpibangalore.gov.in

Internship Report

On

**‘Karnataka's Preparedness to meet the Requirements for
Additional State Borrowings under the Central Government's
new Fiscal Policy’**

Poorva B Prabhu

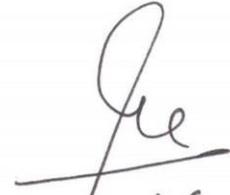
February, 2021

Certificate

This internship report titled "*Karnataka's Preparedness to meet the Requirements for Additional State Borrowings under the Central Government's new Fiscal Policy*" is a report on the study taken up at the Fiscal Policy Institute (FPI) in 2020-21.

The internship report is prepared by Poorva B Prabhu studying at London School of Economics, London, UK under the mentorship of Prof. M R Narayana, Consultant (A&R), Fiscal Policy Institute.

All opinion and conclusions expressed in the internship report are of the Intern and usual disclaimer applies.



Sujit Kumar Chowdhury

Director, FPI



Acknowledgements

I would like to thank my mentor, Dr M R Narayana for his continuous guidance, nuanced feedback and support throughout the duration of my research and this internship. I would like to specially thank Dr Anantharamu M R for his valuable guidance on the research, coding and study of the econometric analysis undertaken as a part of this report. His prompt response and insights have proven to be crucial for this research report. I would like to thank Ms Mitali Nikore, my guide in the world of economics and research for pushing me to explore fiscal theories and their dynamics in India as a part of this research report. I would like to thank my parents and Mr Rohan Moona, Ms Kavya Ravindranath, Ms Sai Pitre and Ms Varada Shrotri for their unwavering support and faith in my ability to complete this internship successfully. Lastly, I would like to thank the Fiscal Policy Institute, Bengaluru for giving me an opportunity to work on such an interesting project.

All materials reproduced in this Report are duly acknowledged by their sources without violation of copyrighted information. All opinion in this Report are of the author and the usual disclaimer applies.

Table of Contents

Sr No	Topic	Page Number
1	Introduction	6
2	Objective of Study	6
3	Methodology	7
4	Section I- Analysis of Karnataka's Budget	
4.1	Expenditure maintained at budgeted levels, an increase in borrowings under the new fiscal policy and reduced revenues	9
4.2	Expenditure maintained at budgeted levels, no additional borrowings and reduced revenues	11
4.3	Reduction in expenditure and lower revenues but additional borrowings available under the Central government's new fiscal policy	12
5	Section II- Karnataka's preparedness for required reforms	
5.1	Power Distribution reforms	14
5.2	One Nation, One Ration Card	19
5.3	Urban Local Bodies reforms	21
5.4	Ease of Doing Business reforms	26
6	Section III- Relationship between Karnataka's Fiscal Deficit and GDP growth	30
7	Conclusion	34
8	Note	35
9	References	37
10	Appendix	39

ABSTRACT

This paper reviews the latest fiscal policy constituted by the Indian government which raises the borrowing limits of states from 3% to 5% of the SGDP, in the context of Karnataka. The first section looks at Karnataka's budget statements for FY 2019-20 and 2020-21 and makes projections on how much extra borrowing the state will have to undertake. The second section looks at Karnataka's progress over the past five years (2015-2020) in four policy reforms in four areas as directed by the Central government. The last section is an econometric analysis to gauge the relationship between fiscal deficit and economic growth in Karnataka over the last 30 years. This is done to ascertain whether additional borrowing and consequently an inflated deficit will be beneficial for the state. The study reveals that Karnataka will have to reduce its expenditure if it wants to undertake additional borrowings under the new fiscal scheme. The state has achieved considerable progress in only two of the four requisite policy areas and hence will be eligible for only part of the additional borrowings made available to it. Lastly, Karnataka's fiscal deficit posits a positive relationship with economic growth in the state; so a higher fiscal deficit may not be entirely detrimental to the state's future growth.

Introduction

The Government of India imposed a nationwide lockdown on 25th March, 2020 to control the spread of the COVID-19 pandemic throughout the country. This resulted in a major disruption of economic and non-economic activities throughout the country. The Government of India and state governments implemented an economic package to help abate the economic and livelihood repercussions of this health crisis. In her speech on 17th May, Finance Minister Nirmala Sitharaman announced that the Government of India had raised the borrowing limits of the state governments from 3% to 5% of their Gross State Domestic Product. This additional borrowing limit was expected to provide the state governments with financial resources by about Rs 4.28 lakh crore (Economic Times, 2020).

The additional borrowings have been partially linked to specific reforms that the state governments (in brief, states) would have to undertake at the earliest in order to avail of funds within the fiscal year. The reform linkage is focused on four areas: Universalisation of 'One Nation One Ration card', Ease of Doing Business, power distribution and Urban Local Body revenues. States can avail of the extra 2% borrowings in the following manner (PIB, 2020).

- 1. Unconditional increase of 0.50%**
- 2. 1% in 4 tranches of 0.25%, with each tranche linked to clearly specified, measurable and feasible reform actions**
- 3. Further 0.50% if milestones are achieved in at least three out of four reform areas**

State Bank of India's (SBI's) research wing in their report EcoWrap stated that only 8 of the 20 states were in a position to fulfil all the conditions outlined and could avail the full 2% of GSDP as borrowing. They estimated that out of Rs 4.28 lakh crore, only Rs 3.13 lakh crore (73% of total additional resources from the increased limits to borrowings) might be actually borrowed by the state governments in FY21. Further, the above SBI report noted that eight states could meet all the requirements put forth by the Centre, viz., Maharashtra, Tamil Nadu, Gujarat, Karnataka, Uttar Pradesh, Andhra Pradesh, Madhya Pradesh, and Haryana (CMIE, 2020).

Objective of the Study

The main objective of this Internship Report is to analyse the capacity and prospects of Karnataka state to undertake the policy reforms in the midst of a pandemic and an impending recession. The report takes a detailed look at Karnataka's current progress in all four policy areas and comments on whether the government-mandated reforms are possible in a given financial year.

Many states like Kerala, Tamil Nadu and West Bengal opposed this move stating that this treads on some politically sensitive issues, especially in the power distribution sector, but above all, it

goes against India's federalist governance structure as it reduces the states' autonomy on their finances. Thus this study also tries to adopt a 'Cost-benefit' approach to this policy, specifically in the context of Karnataka.

Methodology

The report is divided into three sections. The first section of the report presents a detailed study of Karnataka government's state finances over the past two financial years to understand trends in the state's economic growth, fiscal deficit, etc. The base of the analyses are Revised estimates for the Fiscal Year 2019-20. Projections and budgeted estimates for the Fiscal Year (FY) 2020-21 have been obtained from the Budget statements and the Medium Term Fiscal Plan published by the government of Karnataka. The projections are created for the state's Gross State Domestic Product, total revenue receipts and the budgeted expenditure. Three scenarios have been created to see how borrowings would affect the state's fiscal conditions in the case of reduced revenues, reduced expenditure and the availability of extra borrowings.

The second section takes a detailed look at Karnataka's progress across four areas where policy reforms have been mandated by the Central government. This report pertains to the progress made in these specific policy areas over the last 5 years (2015-2020) in order to present the latest findings. It studies the state of power distribution companies in the state, followed by an understanding of the finances of the urban local bodies, evolution in the calculation and collection of property taxes in the state, the ranking of the state in the Ease of Doing Business and the steps taken to improve it. Finally, a look at the implementation of the One Nation, One Ration Card scheme in the state.

The last section is an econometric analysis of the relationship between a few fiscal variables and the state's economic growth. Data ranging from 1989 to 2018 has been obtained from various reports furnished by the government of Karnataka's finance department and the Handbook of Statistics on Indian States maintained by the Reserve Bank of India. This historic analysis is just to understand the current relationship between key fiscal variables and to make comments on how additional borrowings might affect this relationship.

Section I

Analysis of Karnataka's Budget

Karnataka is a state located in southern India with a population of 67 million with Bengaluru as its capital. The state's Gross Domestic Product was Rs 16,98,685 crore in 2019-20. Karnataka is the IT hub of India and home to the fourth largest technology cluster in the world. It has 23 operational IT/ ITeS SEZs, five software technology parks and dedicated IT

investment regions. More than 60 per cent of the biotechnology companies in India have a base in Bengaluru and the state drives 50 per cent of the total revenues in India's biotechnology sector (IBEF).

The state budget for the financial year 2020-21 was announced on 5th March, 2020, a few weeks before the nationwide COVID-19 lockdown was announced. This Annual Financial Statement for FY 2020-21 forms the basis of the study of Karnataka's finances. The total expenditure, total revenue, various revenue sources and allocations have been sourced from the budgeted numbers in the annual financial statement. Additionally, revised estimates from FY 2019-20 as well as projections from Karnataka's Medium Term Fiscal Plan (2020-24) for FY 2020-21 have been obtained for a comparative analysis. This analysis makes some assumptions on growth rates of Karnataka's GDP, the state's revenue collections, their ability to borrow under general as well as the special fiscal rules declared by the state government and the state's ability to maintain its fiscal deficit and the debt to GDP ratio prescribed under the FRBM Act as well as the KFRA act¹. This study makes certain assumptions while calculating growth rates and tax collections which have been specified below.

1. Growth Rates

The worldwide pandemic and the subsequent lockdowns brought the Indian economy to a standstill. This has had major repercussions on the growth rate in the economy. The International Monetary Fund has projected a contraction of 4.5% of India's GDP in 2020-21. The World Bank has estimated the rate of contraction to be 3.2%. The Asian Development Bank has pegged the rate of contraction of India's GDP to be 4%. Under such circumstances, this report projects a contraction of Karnataka's 2019-20 SGDP by 2%, 4% and 6%. The data on the SGDP in 2019-20 has been obtained from the revised estimates in the annual financial statement of 2020-21. The projections are made to understand the borrowing capacity of the state under multiple scenarios of falling economic growth.

2. Revenue Collections

The state has tax and non-tax sources of revenue. For the state's own revenue collections, trends in tax collections were studied for the first quarter of the given fiscal year. Commercial tax collections in Karnataka were reported to be Rs 11,424 crore in Q1. Collections from stamps and registration duties as well as collections from a fuel tax hike and collection of excise from liquor sale also saw an improvement in June and July 2020. Overall, the tax collection was at 47% of the estimated tax collection in the first quarter of the fiscal year. The analysis assumes a tax collection at 80% of the estimated tax revenue given the gradual

¹ Fiscal Responsibility and Budget Management Act and the Karnataka Fiscal Responsibility Act

opening up of the economy and the measures adopted across the country to ensure greater tax compliance. Other non-tax sources of revenue as well as transfers from the Central government have been assumed to be at 90% of the estimated value. This has been assumed given the strain on the Centre's financial resources and the additional expenditure incurred in the healthcare sector and the natural calamities experienced in the country in the past few months.

3. Fiscal Parameters

The finances of the Government of Karnataka (GoK) are governed under the Karnataka Fiscal Responsibility Act, 2002 as well as the Fiscal Responsibility and Budget Management Act 2003. Under these Acts, the fiscal deficit of the state cannot exceed 3% of its GSDP. Additionally, the Debt to GDP ratio of the state cannot exceed 25%. The analysis checks if these conditions are fulfilled under various scenarios.

Scenario A: Expenditure maintained at budgeted levels, an increase in borrowings under the new fiscal policy and reduced revenues.

Under this scenario, the total expenditure for this fiscal year has been fixed at Rs 2,37,893 crore as per the 2020-21 budget. This scenario makes provision for an additional borrowing by the state government to the tune of 1.5% of the SGDP. Consequently, the total liabilities of this fiscal year go up directly by the same amount.

1. If the economy contracts at a rate of 4%, the SGDP of Karnataka would be Rs 16,30,738 crore. This is 10% reduction over the budgeted GDP of Rs 18,05,742 crore in normal times. The revenue receipts for the year based on budgeted estimates and the pre-specified assumptions amount to Rs 138,813 crore. The revised ceiling on borrowings would allow Karnataka to borrow up to 4.5% of its SGDP, which would be Rs 73,383 crore.

Assuming revenue expenditure to be 90% of the budgeted value, owing to lower collections, this would result in a revenue deficit of Rs 23,282 crore. Consequently, the fiscal deficit in the state would be at Rs 87,475 crore which would be close to 5.4% of the SGDP and hence beyond the targets prescribed under the FRBM Act.

Given lower revenues and no reduction in expenditure, Karnataka government would need Rs 99,080 crore to be able to meet its expenses. Under the new fiscal policy, it can raise 74-82% of this amount depending on how many conditions it can fulfil.

Table 1: Analysis of Karnataka's budget statements under scenario A

Budget Heads	2019-20	2020-21 (BE)	-4%	-2%	-6%	MTFP 2020-21
Gross State Domestic Product	16,98,685	18,05,742	16,30,738	16,64,711	15,96,764	18,05,742
Total Expenditure (incl Borrowings)	2,26,625	2,37,893	2,37,893	2,37,893	2,37,893	
Total Receipts	2,26,088	2,33,135	2,12,196	2,13,725	2,10,667	2,33,135
a. Revenue+Capital Receipts	1,77,598	1,80,217	1,38,813	1,38,813	1,38,813	1,80,217
b. Borrowings	48,490	52,918	73,383	74,912	71,854	52,918
Borrowing Limit	50,961	54,172	81,537	83,236	79,838	54,172
Borrowing Required	49,027	57,676	99,080	99,080	99,080	
Revenue Expenditure	1,76,970	1,79,776	1,61,799	1,61,799	1,61,799	1,79,776
Revenue Surplus	284	143	23,282	23,282	23,282	144
Total Expense-Public Debt	2,16,350	2,26,288	2,26,288	2,26,288	2,26,288	2,25,992
Revenue + Misc Receipts	1,77,598	1,80,217	1,38,813	1,38,813	1,38,813	1,79,920
Fiscal Deficit	38,752	46,071	87,475	87,475	87,475	46,072
Total Liabilities	3,08,411	3,51,759	3,76,220	3,76,729	3,75,710	3,68,692
Additional borrowing			25,697	24,168	27,226	

Source: author's calculations

- If the economy contracts at a rate of 2%, the SGDP of Karnataka would be Rs 16,64,711 crore. This is an 8% reduction over the budgeted GDP of Rs 18,05,742 crore in normal times. The revised ceiling on borrowings would allow Karnataka to borrow up to 4.5% of its SGDP, which would be Rs 74,912 crore. Under the new fiscal policy and the revised SGDP, the state could raise 76-84% of this amount if it can fulfil all the conditions put forth by the Central government.
- If the economy contracts at a rate of 6%, the SGDP of Karnataka would be Rs 15,96,764 crore. This is a 12% reduction over the budgeted GDP of Rs 18,05,742 crore in normal

times. The revised ceiling on borrowings would allow Karnataka to borrow up to 4.5% of its SGDP, which would be Rs 71,854 crore. Given lower revenues and no reduction in expenditure, Karnataka government would need Rs 99,080 crore to be able to meet its expenses. Under the new fiscal policy and the revised SGDP, it can raise 76-84% of this amount if it can fulfil all the conditions put forth by the Central government.

Scenario B: Expenditure maintained at budgeted levels, no additional borrowings and reduced revenues.

This scenario is created for a comparative analysis of how the state would cope if the Central government did not grant them the fiscal space to take on additional borrowings. The total expenditure has been fixed at Rs 2,37,893 crore as per the 2020-21 budget. The assumptions on revenue receipts and revenue expenditure are the same as in the previous scenario.

1. With the economy contracting at 4%, the state's GDP will amount to Rs 16,30,738 crore. Assuming the revenue receipts to contract at a mild 10% and keeping the expenses constant, the state would need Rs 99,080 crore to meet its expenses. But under usual conditions, states could only borrow up to 3% of its SGDP. This would amount to only Rs 48,922 crore, only half of the required amount. Assuming liabilities to be according to the budgeted amount at Rs 3,51,759 crore, the Debt to GDP ratio would be at 21.6% of the SGDP which would still be within the KFRA limits.

But the state government would not be able to meet its expenses for the fiscal year which would in turn result in reduced allocations across all sectors. This would be disastrous given how citizens are relying on governments to incur more expenditure and provide some support to the ailing economy. Additionally, sectors like healthcare and agriculture and other essential services would require higher-than-normal funding to tide over the losses caused in the first few months of the lockdown.

2. With the economy contracting at 2%, the state's GDP will amount to Rs 16,64,711 crore. The state's borrowing limit would be curbed at Rs 49,941 crore, a little more than 50% of the necessary amount. Assuming liabilities to be according to the budgeted amount at Rs 3,51,759 crore, the Debt to GDP ratio would be at 21.1% of the SGDP which would still be within the KFRA limits. The state government would again be unable to meet its expenses, leading to a dearth of state-backed resources in the economy.
3. With the economy contracting at 6%, the state's GDP will amount to Rs 15,96,764 crore. The state's borrowing limit would be curbed at Rs 47,902 crore, a meagre 48% of the necessary amount. Assuming liabilities to be according to the budgeted amount at Rs 3,51,759 crore, the Debt to GDP ratio would be at 22% of the SGDP which would still

be within the KFRA limits. This would be the steepest shortfall amongst all the three projections.

Table 2: Analysis of Karnataka’s budget statements under scenario B

Budget Heads	2019-20	2020-21 (BE)	-4%	-2%	-6%	MTFP 2020-21
SGDP	16,98,685	18,05,742	16,30,738	16,64,711	15,96,764	18,05,742
Total Expenditure (incl Borrowings)	2,26,625	2,37,893	2,37,893	2,37,893	2,37,893	
Total Receipts	2,26,088	2,33,135	1,87,735	1,88,754	1,86,716	2,33,135
a. Revenue+Capital Receipts	1,77,598	1,80,217	1,38,813	1,38,813	1,38,813	1,80,217
b. Borrowings	48,490	52,918	48,922	49,941	47,903	52,918
Borrowing Limit	50,961	54,172	48,922	49,941	47,903	54,172
Borrowing Required	49,027	57,676	99,080	99,080	99,080	
Revenue Expenditure	1,76,970	1,79,776	1,61,799	1,61,799	1,61,799	1,79,776
Revenue Surplus	284	143	23,282	23,282	23,282	144
Total Expense- Public Debt	2,16,350	2,26,288	2,26,288	2,26,288	2,26,288	2,25,992
Revenue + Misc Receipts	1,77,598	1,80,217	1,38,813	1,38,813	1,38,813	1,79,920
Fiscal Deficit	38,752	46,071	87,475	87,475	87,475	46,072
Total Liabilities	3,08,411	3,51,759	3,51,759	3,51,759	3,51,759	3,68,692
Additional borrowing			50,158	49,139	51,177	

Source: author’s calculations

Scenario C: Reduction in expenditure and lower revenues but additional borrowings available under the Central government’s new fiscal policy.

This scenario could be the more realistic one as the state government might slash expenditure on many non-essential sectors and maintain or slightly increase allocations for essential services like PDS, healthcare, etc. As such, the overall expenditure has been pegged at 90% of the budgeted expenditure without any analysis on sector-wise division of expenditure. Borrowing can be availed up to 4.5% of the SGDP or 5%, in case Karnataka can successfully implement three of the four conditional reforms. The revenue receipts have been reduced with the same assumptions as the previous two scenarios.

1. The economy contracting at a rate of 4% would result in Karnataka's SGDP to be Rs 16,30,738 crore. But the total expenditure in the state budget would also reduce to Rs 2,14,104 crore. Revenue and capital receipts pegged at Rs 1,38,813 crore would warrant funds to the tune of Rs 75,291 crore. The raised ceiling on market borrowings would enable Karnataka to borrow up to Rs 73,383 crore (~ 4.5% of SGDP). This would cover 97% of the funding gap created under this fiscal situation.

This would reduce the revenue deficit to Rs 23,282 crore and drastically reduce the fiscal deficit to Rs 64,846 crore. This would peg the fiscal deficit at 3.98% of the GDP. This would still be above the KFRA limits but the deviation would not be very large. The reduction in expenditure would also reduce the government's liabilities. Consequently, total liabilities would amount to Rs 3,38,597 crore which comes to 20.8% of the SGDP, again way within the stipulated ratio.

2. The economy contracting at a rate of 2% would result in Karnataka's SGDP to be Rs 16,64,711 crore. The reduced total expenditure in the state budget would be Rs 2,14,104 crore. Revenue and capital receipts pegged at Rs 1,38,813 crore would warrant funds to the tune of Rs 75,291 crore. The raised ceiling on market borrowings would enable Karnataka to borrow up to Rs 74,912 crore (~ 4.5% of SGDP). This would cover 99% of the funding gap created under this fiscal situation.

This would reduce the revenue deficit to Rs 23,282 crore and drastically reduce the fiscal deficit to Rs 64,846 crore. For the estimated GDP levels, the fiscal deficit would be at 3.9%. This would still be above the KFRA limits but the deviation would not be very large. The reduction in expenditure would also reduce the government's liabilities. Consequently, total liabilities would amount to Rs 3,39,056 crore which comes to 20.3% of the SGDP, again way within the stipulated ratio.

3. The economy contracting at a rate of 6% would result in Karnataka's SGDP to be Rs 15,96,764 crore. The reduced total expenditure in the state budget would be Rs 2,14,104 crore. Revenue and capital receipts pegged at Rs 1,38,813 crore would warrant funds to the tune of Rs 75,587 crore. The raised ceiling on market borrowings would enable Karnataka to borrow up to Rs 71,854 crore (~ 4.5% of SGDP). This would cover 95% of the funding gap created under this fiscal situation.

For the estimated GDP levels, the fiscal deficit would be at 4.1%. This would still be above the KFRA limits. The reduction in expenditure would also reduce the government's liabilities. Consequently, total liabilities would amount to Rs 3,38,139 crore which comes to 21.1% of the SGDP, again way within the stipulated ratio.

Table 3: Analysis of Karnataka's budget statements under scenario C

Budget Heads	2019-20	2020-21 (BE)	-4%	-2%	-6%	MTFP 2020-21
SGDP	16,98,685	18,05,742	16,30,738	16,64,711	15,96,764	18,05,742
Total Expenditure (incl Borrowings)	2,26,625	2,37,893	2,14,104	2,14,104	2,14,104	
Total Receipts	2,26,088	2,33,135	2,12,196	2,13,725	2,10,371	2,33,135
a. Revenue+Capital Receipts	1,77,598	1,80,217	1,38,813	1,38,813	1,38,517	1,80,217
b. Borrowings	48,490	52,918	73,383	74,912	71,854	52,918
Borrowing Limit	50,961	54,172	81,537	83,236	79,838	54,172
Borrowing Required	49,027	57,676	75,291	75,291	75,587	
Revenue Expenditure	1,76,970	1,79,776	1,61,799	1,61,799	1,61,799	1,79,776
Revenue Surplus	284	143	23,282	23,282	23,282	144
Total Expense- Public Debt	2,16,350	2,26,288	2,03,659	2,03,659	2,03,659	2,25,992
Revenue + Misc Receipts	1,77,598	1,80,217	1,38,813	1,38,813	1,38,813	1,79,920
Fiscal Deficit	38,752	46,071	64,846	64,846	64,846	46,072
Total Liabilities	3,08,411	3,51,759	3,38,598	3,39,056	3,38,139	3,68,692
Additional borrowing			1,908	379	3,732	

Source: author's calculations

Karnataka government will have to avail of the new fiscal policy and undertake additional borrowings in order to meet its expenses given the likely fall in state revenues. Reducing expenditure would definitely improve the state's fiscal situation if and when it undertakes higher borrowings. But the current economic crisis is primarily demand-side induced and the only entity who can spend right now is the government (Indian Express, 2020). Thus the state government would also not be able to cut its spending drastically. It could reallocate its funds, slashing expenditure in some areas and diverting those funds towards healthcare, agriculture, essential services and the wages of essential workers.

Section II

Karnataka's preparedness for the required reforms

This section looks at the condition of the power distribution sector in Karnataka, the state of finances of its Urban Local Bodies and the potential of these reforms to generate consistent revenue streams in the near future. Additionally, there will be a scrutiny of the state's business reforms and extent of ease of doing business in the state. The state's implementation of the One Nation, One Ration Card scheme will also be studied.

Power Distribution Sector

Many states in India, including Karnataka, offer free electricity to their farmers to run their irrigation pump-sets and access water for their farms. According to the 15th Finance Commission, the states' bill on power subsidies in 2015-16 came up to Rs 90,000 crore. The state power distribution companies provide power to the agricultural lands and the bill they incur is then reimbursed by the state government under power subsidies. The Central government, under its new fiscal policy, has directed states to start a direct benefit transfer of this electricity subsidy in the bank accounts of the farmers.

This policy stems from the recommendations of the 15th Finance Commission which pointed out that this subsidy has led to rapidly depleting groundwater resources in the country. It also noted that electricity consumption in Indian agriculture is far greater than in any comparable large country. Direct benefits transfer together with the separation of agricultural feeders and metering supplies are immediate policy imperatives. Unlike other subsidies that need to target direct benefits using some criteria such as land ownership, power subsidies have the advantage that they can be restructured to direct benefits on the basis of power connections (15th Finance Commission, 2019). Thus the exercise of DBT of power subsidy can only be undertaken when feeder segregation and appropriate metering have been done along with accurate bank details of all beneficiaries.

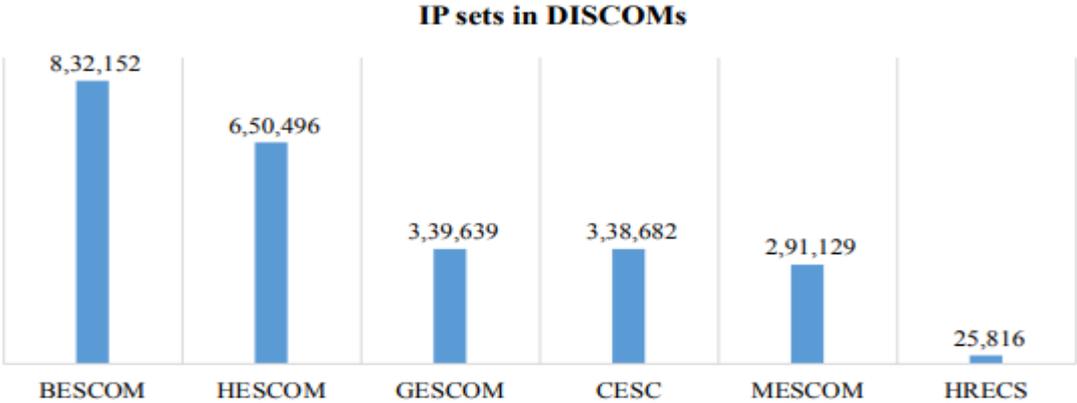
The government of Karnataka spent Rs 9,295 crore on power subsidy bills to its power distribution companies in 2019-20, and this allocation has increased to Rs 11,250 crore for the following financial year. This amounts to approximately 1% of Karnataka's GDP. If the state is successful in implementing DBT, this expenditure could be reduced drastically because the Centre and the FC committee believe that it would urge farmers to use electricity in a more conscientious manner.

As per a Centre for Study of Science, Technology and Policy report, in 2017, there were 2.47 million IP sets in Karnataka that were essentially given free power supply. In Karnataka, there are six state-owned power distribution companies whose power distribution coverage extends to all areas in the state. The study also reported that the agricultural sector accounts for 39% of the state’s electricity and most of the supply in this sector is unmetered. The distribution companies are also estimated to face a revenue loss of Rs 50/ day from each of these IP sets.

1. Affordability

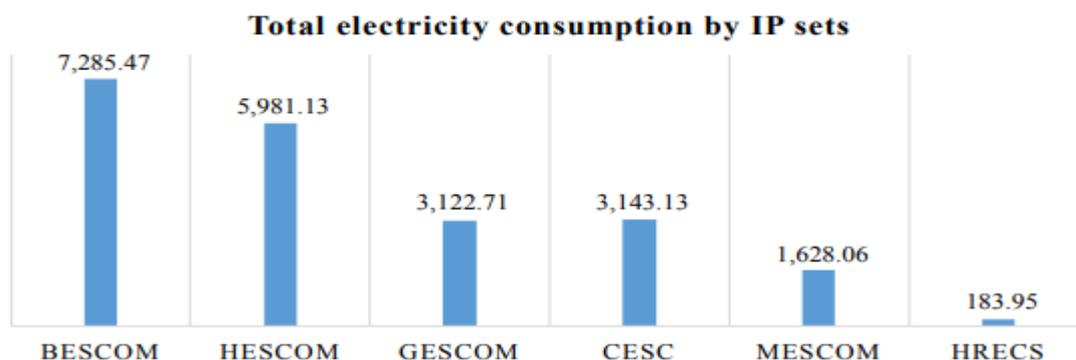
The chart furbishes the distribution of IP sets under each distribution company. Under the new system, farms would be expected to pay their monthly bill and the subsidy would then get transferred to them at a later date. As per records, on average, each farmer claims a subsidy of Rs 37,000 from the state government. This calculates to approximately Rs 3,000 per month. Farmers who on average have lower incomes will not be able to afford such a high electricity bill. Additionally, the state government does not have the best track record for timely payments. A payment of approximately Rs 8,500 crore is still pending to the power distribution companies for the fiscal year 2018-19 as per their annual reports. Thus it is highly unlikely that the state government would be able to transfer subsidies in a timely manner in 2.47 million different beneficiary accounts. If the farmers are made to pay the bills and don’t get the subsidy on time, it could lead to them taking on higher debts.

Fig 1: IP Sets Distribution across Distribution Companies in Karnataka



Source: CSTEP Report, 2017

Fig 2: Electricity Consumption by IP Sets across Distribution Companies in Karnataka



Source: CSTEP Report, 2017

2. Feeder Segregation

Implementing a DBT for power subsidies also requires the distribution companies to have in place a robust infrastructure to correctly calculate electricity usage under each IP set. This can be undertaken primarily by the segregation of domestic and agricultural feeders. This enables regulating power supply to agriculture and providing 24x7 power to domestic consumers (CSTEP, 2018).

The government of Karnataka undertook an extensive feeder segregation exercise of the state-wide 11kV feeder segregation under the Niranthara Jyothi scheme in 2009. The idea was to enable all day-long power supply to domestic households and regulated supply for agricultural sector. Karnataka implemented this scheme at a cost of Rs 2,672 crore with 40% equity from the state government and 60% of the cost was filled by the distribution companies through external borrowings. This scheme was completed in 2019. It took a decade for the state to complete the segregation of 6,078 feeders in two stages. Thus the implementation was very slow but the state is adequately prepared on the feeder segregation front in case it decides to implement DBT of the scheme. But the distribution companies, who already have very fragile balance sheets, already have the financial burden of repaying the loans that were undertaken for the Niranthara Jyothi scheme.

3. DISCOM efficiency

The launch of Ujwal DISCOM Assurance Yojana (UDAY) in November 2015 gave new hope to the ailing distribution companies (DISCOMs) in India. Karnataka signed up for UDAY with a view to improve its operational efficiency. The DISCOMs under the scheme have to reduce Aggregate Technical and Commercial (AT&C) losses to 14.2% and bring

down the gap between average cost of supply (ACS) and Average Revenue Realisation (ARR) to zero by 2019 (CSTEP, 2018).

The latest annual reports of five of the six state-owned power distribution companies were studied to understand their metered connections and their distribution losses. While the bifurcation of metered and unmetered connections was not available in all the reports, the data from the HESCOM report noted that 83% of its connections were unmetered. In 2019, distribution losses across all distribution companies was on average at 14% of their total expenses.

An audit of the UDAY scheme undertaken in 2018 noted that though AT&C losses had reduced, the gap between the cost and revenue from providing one unit of electricity had actually increased during the implementation of the scheme in Karnataka. Metering of supply connections is an arduous task that has not received priority from the distribution companies. Additionally, the rising cost of procuring power and an absence of localised power supply is increasing the cost of supplying power for all distribution companies. Distribution companies have also seen a decline in their supply to the industrial sector from 2012 to 2017. As per the analysis in KERC's tariff orders, open access procurement by industries and commercial consumers appears to be one of the major reasons for reduced industrial sales in the last few years. This increases the burden of cross-subsidisation on existing customers and leads to a decline in revenues for the distribution companies.

Recommendations

GoK through the Niranthara Jyothi scheme has laid a robust groundwork to achieve feeder segregation and if it is successful in getting all connections metered in the state, it can accurately map the IP set's electricity consumption. But this work in addition to creating a thorough database with each beneficiary's bank details will take more than a year and a higher degree of efficiency would be required to implement DBT which will increase the human capital and technological cost of this venture.

- a. The government, alternatively, could focus on reducing its distribution losses and achieving full metering of all IP sets and ensure there is no pilferage or illegal connections. This itself will help reduce the power subsidy amount.
- b. Karnataka government in 2014 implemented a Surya Raitha scheme which emphasises on clean energy as well as uninterrupted supply of electricity during the daytime to the farmers. Under this scheme, farmers can install solar panels at a subsidised cost. Their

IP sets will have a net metering facility. This will enable farmers to generate their own power for their IP sets. Additionally, any extra power generated can be sold to the distribution companies at a pre-decided tariff rate. Karnataka not only has a good solar radiation profile but is also a leading state in solar installations with a commissioned capacity of ~5.1 GW (CSTEP, 2018). Though it was announced in 2014, the pilot for this scheme began only in 2018. But the government must focus its efforts on cultivating this renewable energy source of power for its farmers as it will help them reduce their subsidy bills and the extra solar energy generated can also work as a cash crop for farmers and boost their incomes.

A study by Kannan (2013) found that many farmers did not want free electricity owing to its poor service delivery and would actually prefer to pay for their electricity use. Thus, the government must focus on increasing the efficiency of its distribution companies by making policy design for localised power procurements and help fund infrastructural improvement projects.

The state has managed to carry out feeder segregation across all its feeders but has not completed the exercise of metering all its connections. Given the timelines and the hurdles presented due to the novel coronavirus, it is not going to be feasible for the state government to complete metering all its connections by the end of the fiscal year. Additionally, accurately linking all beneficiary bank accounts and consolidating this data in one place is also going to be an arduous task. Thus even if the state government can implement a Direct-Benefit Transfer in this fiscal year, it could potentially create a lot of bureaucratic delays and not necessarily lead to a reduction in the state's power subsidy bill. As such, it could end up being more expensive than the current process of providing subsidy. Instead, the government could focus on instituting sustainable agricultural practices by increasing the use of solar power and micro-irrigation. Thus the state's cost of implementing this reform is more than the benefit of the 0.25% additional borrowing it will receive.

One Nation, One Ration Card

The Indian government constituted the National Food Security Act in 2013. This act, also referred to as the 'Right to Food' Act is targeted for the provision of subsidised foodgrains to a bulk of the Indian population. This Act is carried forward through the Public Distribution System, wherein households with requisite ration cards can purchase rice, wheat and other essential food items at a subsidised cost from their designated Fair Price shops. To augment the

utility of the ration cards, the government launched a 'One Nation One Ration Card' scheme in 2019, on a pilot basis in four Indian states. The main aim of the Act was to allow portability of the ration cards and enable its holder to purchase foodgrains from any fair-price shop, regardless of their domicile state.

The onset of the COVID-19 crisis and the subsequent lockdown created a major crisis for migrant workers who were stuck in their workplaces, without any jobs or income and no means to actually purchase food. The second tranche of the Pradhan Mantri Gareeb Kalyan Yojana also directed that free foodgrains would be provided to poor households till November 2020. This situation highlighted the need and the importance of the One Nation, One Ration Card scheme which would help migrants avail of the benefits under NFSA anywhere in the nation.

The project was launched on a pilot basis between Telangana and Andhra Pradesh and between Maharashtra and Gujarat in 2019. At present, 20 states have implemented this scheme. Karnataka rolled out this scheme in the state on January 1st, 2020. Technology plays a crucial role in the implementation of this scheme. All beneficiaries will be verified through biometric identification and electronic Point-of-Sale machines which will be installed across all Fair Price Shops in a state. All the data on identification and transactions undertaken through the numerous ePOS systems will be collated and enumerated using the Annavitran website while the Integrated Management of Public Distribution System forms the technological backbone of this scheme.

As per the government records available on websites, as of August 2020, 19,861 out of 19,974 Fair Price Shops in the state have an ePOS system in place in Karnataka. Thus the state has not achieved full coverage under this Act. Additionally, there is no data available on how many Aadhaar cards have been seeded with the ration cards in the state. But the government has extended the deadline for the implementation of this scheme till March 1, 2021. Given the current efforts undertaken by Karnataka, it will be able to achieve full coverage under this scheme by the end of this fiscal year.

Rather than in Karnataka, residents have made use of this system in other states, particularly Goa as per the NFSA dashboard. The state government has done a thorough job with implementing this scheme and if it can seed all the beneficiary ration cards with their UIDAI cards, it can fulfil the Centre's condition in this area of reform and avail of the additional 0.25% borrowing.

Urban Local Bodies

Economic development is followed closely by urbanisation. Economic Census of India reveals that urban agglomerations in India comprising of metropolitan cities, their peripheries and suburban villages, are witnessing a phenomenal concentration of population and non-agricultural economic activities.

These are governed by Urban Local Bodies in India of different categories based on their population. Over the years, various reforms have been suggested to make ULBs more efficient and improve the quality of their service delivery but none have brought about any significant changes. This can be attributed to inadequate autonomy and finances available with the ULBs. The two main sources of funds for ULBs are the grants they get from the Central or State Finance Commissions and their own sources of revenue. A study of 37 large Municipal Corporations in India showed that their share in India's total municipal revenues declined from 46.4 per cent in 2012-13 to 44.7 per cent in 2017-18. The decline in own revenues of the 37 Municipal Corporations was sharper. Their own revenues as per cent of GDP declined from 0.33 in 2012-13 to 0.23 in 2017-18 (Khare et al, 2019).

Karnataka's ULBs do not deviate from the national trend. As of 2018, there are 277 ULBs in Karnataka. A study of ULBs finances from the 4th State Finance Commission report shows a rising trend in Own revenues of the ULBs but the revenue expenditure incurred by the ULBs has increased sharply when compared with receipts.

1. Water & Sewerage

The Central government has proposed that the states must notify water and sanitation charges across all ULBs, at least adequate to cover the cost of Operation and Maintenance of these services.

In urban infrastructure, the drinking water sector has been accorded the highest priority as it is one of the basic living needs of the citizens. The Central Public Health and Environmental Engineering Organization (CPHEEO) specifies the norm of 135 litres per capita per day.

Table 4: Number of ULBs and their water supply range in LPCD in Karnataka (2017)

Supplies Range >	< 50	50 to 70	70 to 100	100 to 135	> 135	Total
No. of ULBs	109	38	30	60	38	275

Source: 4th Karnataka State Finance Commission Report

From the data as seen above, only 38 ULBs have the resources and capacity to deliver 135+ LPCD of water to its citizens. Among MCs, only Belagavi, Mysuru and Shivamogga have 100 per cent coverage of piped water supply whereas 109 ULBs supply less than 50 LPCD water. According to a Karnataka Urban Water Supply and Drainage Board analysis, 41 ULBs do not have surface source of water and still depend on sub surface source of water (borewells, tube wells etc.) while the rest of the ULBs do have surface source of water (river, canal, tank dam etc).

Only 40 per cent of the urban population (68 ULBs including BBMP) has the provision of underground drainage facilities with sewerage network and effluent treatment plants. The remaining 151+ ULBs do not have underground (UGD) drainage systems (Karnataka 4th State Finance Commission). Slow or hindered progress in land acquisition, frequent changes in the location of a Sewage Treatment Plant, citizens' opposition and a lack of technical expertise along with inadequate water supply are the main reasons cited for the inadequacy of sewerage facilities.

According to the 4th SFC, in 2016, the ULBs had a requirement of Rs 4754 crore for enabling adequate water supply to all ULBs in the state and Rs 7580 crore to establish proper sanitation and waste segregation facilities. The key challenge of determining water supply and sewerage user charges linked to O&M cost is that most ULBs, which use a general budget to fund various municipal services, do not even know what the actual cost of providing each service is (The Wire, 2020). The other reasons are the issues of cross-subsidisation, illegal connections, pilferage, distribution and transmission losses, unmetered connection, etc., that have contributed to problems in operation and maintenance (Karnataka 4th State Finance Commission).

The user charge structure is not properly designed and the problem is aggravated by poor recovery. Further, O and M is not accorded high priority. The ULBs need huge investments to improve their piped connections. The frequency of supply of water is not uniform across ULBs although 24×7 service is the ideal reform to be achieved in the long run for all ULBs.

ULBs in Karnataka and India, in general, are stuck in a vicious circle where the growing urbanisation creates an increased pressure to widen their coverage but a lack of funds results in a substandard service delivery. This reduces citizens' willingness to pay for them. Thus ULBs are always starved of funds and functions like implementing fees and user charge collection also take a backseat.

2. Property Tax

The Central government also mandated that property tax rates must be revised and must be linked to circle rates, as opposed to Annual Rateable Value or Capital Value or Unit area assessment. Property rate is a tax on buildings and vacant land. It is the single most important own revenue source in the ULBs.

The ULBs are empowered to levy property tax every year under section 103/108a of the Karnataka Municipal Corporation Act, 1976 and section 94 read with section 108 of Karnataka Municipalities Act, 1964. The method of assessment, enhancement, revision, exemptions and remission of property tax is vested with the ULBs whereas the authority to decide the rate of tax is the government. The ULBs have the flexibility to operate within the range of tax slab rates to be levied for each class of property.

From 2003 onwards, the capital value system with self assessment (SAS) has been adopted in most ULBs. In this method, the taxable value of the building together with the land occupied by it is assessed for determining the tax payable. The market value guidelines under section 45 (B) of Karnataka Stamp Act 1957, for land (50 per cent of land value only) and building value is considered for valuation of the property. From 2005-06 onwards, the tax shall stand enhanced by 15 per cent once in every three years in the case of municipalities and town panchayats and may be enhanced up to 30 per cent in the case of MCs and different rates of enhancement may be made to different areas and different classes of properties (Karnataka 4th State Finance Commission). The Finance Commission observed that no rate revision had taken place in any ULB.

In 2012, ULBs in Karnataka were able to realise 81% of their property tax potential. But this proportion went down to 67% in 2016-17. Municipal Corporations have been consistently the most efficient ULBs to collect property tax, with an average of 80% collection.

Table 5: Details on Property Tax Collections in Karnataka – Position of Demand, Collection and Balance of property tax in ULBs, Karnataka (2011-2016)

Year	Opening balance	Current Year demand	Total demand	Collection	Balance	% of collection to total demand
2011-12	65.31	290.97	356.28	288.72	67.56	81
2012-13	67.56	342.20	409.76	295.30	114.46	72
2013-14	114.46	384.03	498.49	362.26	136.23	73
2014-15	136.23	446.56	582.79	416.32	166.47	71
2015-16	166.47	499.94	666.41	430.83	235.58	65
*2016-17	110.28	601.43	711.71	592.73	128.23	67

Source: Details furnished by CAG report, 2016/DMA. * Only 254 ULBs are taken into account as 17 newly upgraded ULBs (in Belagavi district) are implementing SAS from next financial year.

Source: 4th Karnataka State Finance Commission Report

As per the Geographic Information System-GIS survey done between 2005-2011, under the aegis of DMA, there are 2.2 million assessed and 1.6 million unassessed properties in ULBs across in the state, excluding the newly added 58 ULBs. This is almost 40 per cent of the total properties in urban areas. Some of these properties have been brought into the tax net. If all these properties are covered in the tax net, the collection can go up by three times. Around Rs 2400 crore can be collected in ULBs (excluding BBMP). The present coverage ratio is around 60 per cent (Karnataka 4th State Finance Commission). Some additional properties were brought under the tax net from 2011-2016, but the average increase in tax collection across 4 MCs was only 11.57%.

Property tax collection efforts are focused only in Municipal Corporations. Along with revision of taxes, focus should actually be on getting all properties assessed and bringing them in the tax net. Additionally, linking property tax rates to circle rate – as against Annual Rateable Value (ARV), Capital Value or Unit Area Assessment usually practiced in India – could be effective provided circles rates were updated more regularly, which happens only in a few large cities such as Mumbai and Bengaluru.

Recommendations

There are various measures that ULBs can undertake rather than focusing on just rate and fee hikes in the midst of a slowing economy. The ULBs need to focus on getting more people under the payment net. Additionally, the governments both at the Central and state levels must also delegate more powers to the ULBs.

- a. While the function of collection comes under the purview of the ULBs, they do not have the authority to set the tax rates. Under the Jal Jeevan Mission, the government finally

granted rural local bodies the freedom to set their own user fees. Similar steps must also be taken for ULBs.

- b. If any part of the additional borrowings is diverted to ULBs, they should undertake a comprehensive mapping exercise to review the extent of the coverage and bring more piped connections and properties under the payment purview. The government could hire some contract workers which would also become a good avenue of job creation.
- c. ULBs must involve the citizens to a certain extent in their projects. In 2004-05, the Government of Karnataka (GoK) implemented a new piped water supply scheme through the Jal Nirmal Project. This World Bank assisted rural drinking water supply project introduced a new participatory approach to planning and implementation of the scheme, making it mandatory for the Village Water and Sanitation Committee (VWSC) under the Gram Panchayat (GP) to assume responsibility for its operations. User involvement brought about a vast change: from being passive recipients of water supply services provided by the state, the villagers became owners and providers of services (World Bank, 2015). These initiatives might also help increase willingness to pay amongst the citizens for the services provided by the ULBs.
- d. The ULBs have represented to the Commission during its visits to them that the loan adjustment takes away a large portion of their allocations, leaving very little for development. The present practice is to distribute the debt serving on all ULBs whether they have availed the loan or not. This amounts to cross subsidisation putting undue pressure on ULBs which have not been benefitted (Karnataka 4th State Finance Commission). This rule should be amended to put the burden of debt servicing on only those ULBs who have a loan.
- e. When GST got introduced in 2017, eight state taxes got subsumed in the GST, leaving only six tax sources available for the state. Also, GST devolutions got divided only between the Centre and the states, leaving ULBs to incur most of the losses from those potential eight tax revenue streams.
- f. There has been no attempt to revise user charges. The only revision has been through the BWSSB², in 2014 and 2020. This makes up a very small part of the ULB system. Bengaluru has always been adept at maintaining its services. A report conducted by TERI in 2010 found that Bengaluru is an important case study in understanding tariff fixing and cost recovery. As per the Bangalore Water and Sewerage Act of 1964, the board is allowed full cost recovery. The city also has a high level of metering (100%) and a collection efficiency of 99% and it charges volumetric tariff. Its responsible for

² Bangalore Water Supply and Sewerage Board

both O&M and capital works. Consumption is metered at both supply and consumer end. Yet their losses are at about 50%.

Thus the government's narrow focus on two rate revisions is not going to enable ULBs in Karnataka to increase their own revenues. The whole exercise of rate hike reforms, establishing/improving existing collection methods and actually undertaking collection amidst current times, might prove to be a bit difficult and dangerous. Additionally, it seems unlikely that this whole exercise can be completed before the end of this fiscal year to be able to avail of additional borrowings under the government's fiscal scheme. There is also the possibility of a public backlash due to rate increases in a period where everyone is facing job cuts and shrinking incomes.

But the ULBs can take this time to overhaul their structures, collaborate with various think tanks and research organisations to devise technologically-savvy yet local projects to improve service delivery, map existing services and focus on increasing the proportion of tax and fee collections from its citizens at existing rates.

Ease of Doing Business

The fourth and final condition bestowed by the Central government is that states have to undertake on-ground reforms to help improve the 'Ease of Doing Business' (EoDB) in their states. Under this initiative, the states will have to commence a district-wise examination of the EoDB reforms and relook some state laws related to the establishment of new business as well as labour. There is a special emphasis on moving licence renewal and payment systems online by the end of 2020 (The Print, 2020).

The Department for Promotion of Industry and Internal Trade (DPIIT) has spearheaded a dynamic national level exercise that commenced in 2014 to rank all the States/UTs in the country on the reforms undertaken by them on designated parameters. The aim of this exercise is to create a conducive business environment by streamlining regulatory structures and creating an investor-friendly business climate by cutting down red tape. India being a federally structured nation, States/UTs play a vital role in promoting investor confidence. In 2014, the representatives of the state government identified reforms to be undertaken by them and a new measure of competitiveness was initiated.

The State Business Reform Action Plan was formulated in 2015. It is a comprehensive mechanism for states to provide feedback and publish evidence on 12 parameters that would

help enhance their business environments. These feedback forms are studied and states are given performance reviews. They are awarded percentages to show their level of progress. The 2017-18 round of surveys ranked Karnataka 8th among all states and UTs and it was ranked amongst the ‘Top Achievers’.

1) Facilitation of Investments through Online Portals

Karnataka has a website ‘Ebiz’ dedicated to improving EoDB in the state. The website has all details available for potential investors, from licence applications to FAQs explaining investment processes. The state also has an initiative called the ‘Karnataka Udyog Mitra’, a single point of contact for investors with projects worth more than Rs 15 crore. There are also two dedicated single window clearance systems based on the worth of the investment projects.

The website also displays the projects that have applied for approvals under the single window clearance mechanism. A study of the applications points out that there are approximately 300 applications pending with the single window clearance committees for approval. The earliest application dates for some these businesses date back to 2015-16.

2) Developing Bengaluru as a business hub

The World Bank’s flagship report, ‘Doing Business 2019’ which studies business regulations in 190 countries decided to include Bengaluru and Kolkata while studying India’s Ease of Doing Business initiatives, along with Mumbai and Delhi. It claimed that the inclusion would help provide a better picture of establishing and running a business in India. Inclusion of Bengaluru in the World Bank’s calculations is a welcome step as the city has been successful in creating a very efficient and business-friendly environment for investors over the past decade.

Bengaluru is the world’s 4th largest tech cluster according to the local government. It is the hub for India’s \$150 billion tech sector, which accounts for nearly 10% of the country’s GDP. It is also home to the largest number of tech start-ups in the country, and the third largest globally, earning it the designation Silicon Plateau – India’s Silicon Valley (Open for Business). Additionally, it provides an excellent juncture for exports and imports. A comparative study conducted in the Economic Survey 2020 found Bengaluru’s airport facilitation of goods to be on par with global standards (Economic Survey, 2019-20). Businesses that have an AEO³ registration can process shipments faster at the Bengaluru

³ An Authorised Economic Operator status

airport when compared to Hong Kong airport, considered to be one of the most efficient trading hubs across the globe.

To further improve businesses and investments, the Karnataka government organised a Knowledge Transfer Programme, a five-day workshop with a delegation of government officials from New Zealand. The objective of this collaboration with the New Zealand High Commission was to establish a G2G to impart learnings from the country that ranked first on a global study comparing EoDB rankings (Economic Times, 2019). This initiative will also facilitate concerned government officials to travel to New Zealand to understand business processes at the government level.

3) *Schemes adopted to improve EoDB in Karnataka*

3.1 The Karnataka government introduced a slew of measures from June 2020 in a bid to create jobs and kickstart its economy amidst the easing of lockdown restrictions. In lieu of easing business norms, the state government passed an amendment to the Karnataka Land Reforms Act, 1961 which revised the ceiling on the amount of agricultural land that can be purchased by a single individual or entity. The Karnataka Land Reforms (Amendment) Ordinance, 2020 (Karnataka Ordinance No 13 of 2020) dated 13 July 2020 (Ordinance) furthers the objective of easing and opening-up agricultural lands for greater investments, without any limitations that were imposed earlier by sections⁴.

3.2 It also approved an amendment to the Karnataka Industries (Facilitation) Act, 2002, that now allows industries to begin setting up without obtaining clearances from multiple departments. The industry just needs an approval from a nodal agency to set up its facilities until the level of beginning commercial operations. The ordinance passed by the cabinet will allow industries to apply and get clearances from various departments within three years of receiving an acknowledgement certificate, or until the set-up has reached commercial operation stages.

Recommendations

The state government in Karnataka has taken various steps ever since the onset of COVID-19 to ensure Karnataka's economic revival and it should focus on its current efforts and make sure they are implemented effectively. Though they have made land acquisition easier and have

⁴ Note on Land Ordinance Amendment

established lenient permit requirements, they must also safeguard the interests of their farmers as well as conserve the environment.

- a. The state relies heavily on Bengaluru and its economic advancement which has created evident regional imbalances in the state. The state cabinet approved the New Industrial Policy 2020-25 in July 2020. This policy aims to create business and job opportunities in Tier 2 and Tier 3 cities and bring about inclusive development within the state. The state hopes that the land and industrial reforms as well as easing labour laws will provide a fillip to businesses and ultimately result in economic growth in the state.
- b. MSMEs are also a crucial driver of the economy. The Central government recently announced a slew of fiscal measures to ensure some level of liquidity in the MSMEs. The state government must ensure effective implementation of those measures on the ground. The Global Alliance for Mass Entrepreneurship came out with a report dedicated to reviving and helping the MSME sector which is facing an economic crisis. The Chief Minister of Karnataka who was present at the launch of this report also stated that the state's new industrial policy will have special emphasis on MSMEs. The state government should follow up on this mandate.
- c. India's Ease of Doing Business report in 2020 ranked it low on registration of property index (Inc 42). Much of the registration process in India does not result in valid ownership titles. Hence, more than 70 per cent of legal disputes are land based (Manasi & Smitha, 2018).

Karnataka's revenue department undertook the creation of Urban Property Ownership Records in 2009 on a Public Private Partnership model. The pilot was undertaken in four cities in Karnataka. The aim was to create a robust system of Urban Property Ownership Records for every property which accurately records both the spatial details of the property as well as non-spatial record of rights data. This would help digitise land registration and records and would make the process more transparent and efficient.

An audit of the pilot exercises uncovered operational inefficiencies, high implementation expenditure and low awareness among citizens as the main hurdles in the UPOR process. But it also recommended making Property Cards legally mandatory once these issues were resolved. But the current government discontinued this initiative in 2019, despite its effectiveness demonstrated in two pilot cities by the revenue department. If implemented properly, it could go a long way in reducing inefficiencies in property registration.

The Government of Karnataka has undertaken various reforms to help improve its EoDB rankings and may qualify for an additional borrowings of 0.25% under the Central government’s latest mandate.

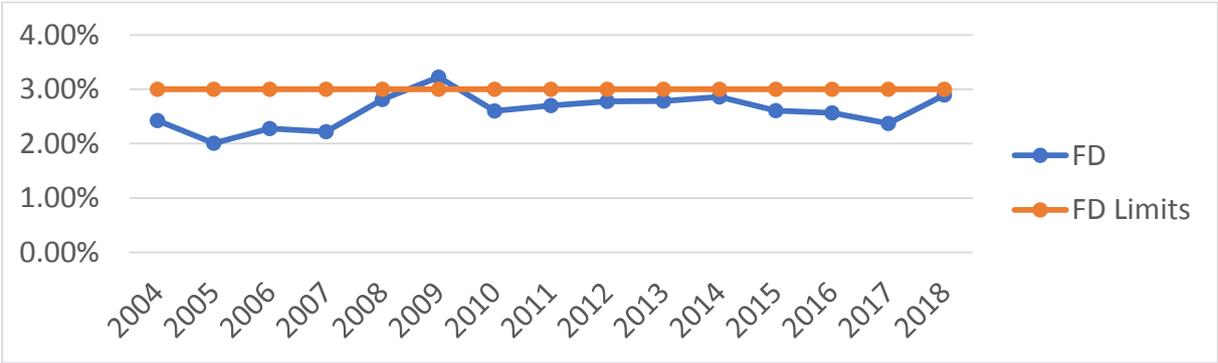
Section III

Relationship between Karnataka’s Fiscal Deficit and GDP growth

The relationship between fiscal deficit and economic growth is one of the highly debated issues in economic literature. But there is still no clear conclusion on this relationship (Anantha Ramu & K Gayithri, 2016). The administrative measure to assimilate fiscal consolidation of Indian state’s finances, the Fiscal Responsibility and Budget Management Act came into force in April 2004. This Act mandates that the fiscal deficit of a state should not exceed 3% of its SGDP for the given fiscal year. Karnataka had its own Karnataka Fiscal Responsibility Act, 2002 which sought to introduce greater transparency in its fiscal operations and aligning budgetary objectives with the fiscal plan.

Under these fiscal rules, Karnataka has maintained its fiscal deficit below 3% of the SGDP consistently since 2004, even during the period of the financial crisis of 2008. But the current economic crisis is unprecedented and under the provisions of these Acts, Karnataka can exceed the fiscal limits. If the state decides to undertake extra borrowing, its fiscal deficit will go beyond the stipulated 3% levels.

Fig 3: Fiscal Deficit as % of Karnataka’s GDP from 2004-2018



Source: Medium Term Fiscal Policy Reports

This analysis is undertaken to understand the empirical relationship between Karnataka’s fiscal deficit and GDP. This is a time series analysis based on the model by Anantha Ramu and Gayithri (2016) which focused on the long-term relationship between India’s fiscal deficit and economic growth using a Vector Error Correction model. The adaptation of this VEC in this report is subject to data limitations.

The empirical framework

The current empirical analysis is carried out over the period from 1989 to 2018. Real accounted estimates were available only up to 2018; hence 2019 has been excluded from the period of study. An Error Correction model has been used to estimate the long-term relationship between the state's fiscal deficit and economic growth. The variables adopted in the model are as follows.

1. Real SGDP at current prices: This analysis uses real SGDP at current prices so that inflation is factored out in the estimation and analysis of economic growth.
2. Tax Revenue: Tax revenue receipts of the state government from various tax sources in the form of 'Own Tax Revenue'
3. Gross Fiscal Deficit: Fiscal deficit is the difference between total expenditure and revenue receipts and non-debt capital receipts.
4. Gross Capital Formation: Gross capital formation by private and public sector, which includes private corporate, household sectors and government investment. As per neo-classical theory, a higher capital formation promotes growth and its expected sign condition is positive.

For estimation purposes, the estimable equation is as follows.

$$\ln \text{GDP} = \alpha_1 + b_1 \ln \text{GFD}_t + b_2 \ln \text{TaxRev}_t + b_3 \ln \text{GCF}_t + \varepsilon_1$$

Two dummies, namely dummy 2005 and dummy 2008 have been used in the analysis exogenously to control for any structural effects, if they exist. The FRBM Act was legitimately implemented in 2004 but the year 2005 has been appointed to capture its effect. The year 2009 dummy is used to capture the effect of the recent global financial crisis. However, these dummies will be included in the model if they are found to be significant.

Diagnostic tests

To test for stationarity of variables, the familiar ADF Unit root test is conducted. The ADF unit root test results are presented in Table 1. All the variables contain unit root and become stationary in the first difference, except Log (Gross Capital Formation). Hence, the variables Log (GDP), Log (Gross Fiscal Deficit) and Log (Tax Revenue) are included in the estimations are I(1) in nature and Log (Gross Capital Formation is I(0) in nature.

Since the variables have different unit roots, the Autoregressive Distributed Lag model has been used to study the relationship between these variables. This model takes sufficient numbers of lags to capture the data generating process in a general-to-specific modelling framework (Shrestha & Bhatta, 2018).

Estimation results of ARDL model

The ARDL model was implemented and the lags were chosen using the Akaike Information Criterion. The model adopted 1 lag for Log (GDP), 2 lags for Log (Tax Revenue), 0 Lag for Log (Gross Fiscal Deficit) and Log (Gross Capital Formation). As the data indicated most variables to be of I(1) in nature, a check for cointegration was undertaken. Since an ARDL model was already used to study the relationship between the variables, the Bounds Cointegration test was carried out.

The result indicated that there exists a cointegration relationship in the model. Once cointegration among the variables was confirmed, an Error Correction model was implemented to study the long run and short run relationships between the variables. The model equations have been presented below.

1. $\Delta \ln \text{GDP}_t = \alpha_{10} + \alpha_{11}[\ln \text{GDP}_{t-1} - b_{11} \ln \text{GFD}_{t-1} - b_{12} \ln \text{TaxRev}_{t-1} - b_{13} \ln \text{GCF}_{t-1}] + \gamma_{11} \Delta \ln \text{GDP}_{t-i} + \gamma_{12} \Delta \ln \text{GFD}_{t-i} + \gamma_{13} \Delta \ln \text{TaxRev}_{t-i} + \gamma_{14} \Delta \ln \text{GCF}_{t-i} + \varepsilon_{1t}$
2. $\Delta \ln \text{GFD}_t = \alpha_{20} + \alpha_{21}[\ln \text{GDP}_{t-1} - b_{21} \ln \text{GFD}_{t-1} - b_{22} \ln \text{TaxRev}_{t-1} - b_{23} \ln \text{GCF}_{t-1}] + \gamma_{21} \Delta \ln \text{GDP}_{t-i} + \gamma_{22} \Delta \ln \text{GFD}_{t-i} + \gamma_{23} \Delta \ln \text{TaxRev}_{t-i} + \gamma_{24} \Delta \ln \text{GCF}_{t-i} + \varepsilon_{2t}$
3. $\Delta \ln \text{TaxRev}_t = \alpha_{30} + \alpha_{31}[\ln \text{GDP}_{t-1} - b_{31} \ln \text{GFD}_{t-1} - b_{32} \ln \text{TaxRev}_{t-1} - b_{33} \ln \text{GCF}_{t-1}] + \gamma_{31} \Delta \ln \text{GDP}_{t-i} + \gamma_{32} \Delta \ln \text{GFD}_{t-i} + \gamma_{33} \Delta \ln \text{TaxRev}_{t-i} + \gamma_{34} \Delta \ln \text{GCF}_{t-i} + \varepsilon_{3t}$
4. $\Delta \text{PriInv}_t = \alpha_{40} + \alpha_{41}[\ln \text{GDP}_{t-1} - b_{41} \ln \text{GFD}_{t-1} - b_{42} \ln \text{TaxRev}_{t-1} - b_{44} \text{Excht}_{t-1}] + \gamma_{41} \Delta \ln \text{GDP}_{t-i} + \gamma_{42} \Delta \ln \text{GFD}_{t-i} + \gamma_{43} \Delta \ln \text{TaxRev}_{t-i} + \gamma_{44} \Delta \ln \text{GCF}_{t-i} + \varepsilon_{4t}$

The coefficient α_{11} , α_{21} , α_{31} , α_{41} indicates the speed of adjustment to equilibrium and the value in the brackets points to the error correction term. The γ coefficients indicate the short-term relation.

Results

The long-term and short-term estimates of the model are stated below. The long-term results show that fiscal deficit actually has a positive relationship with economic growth, even though this term is insignificant. Karnataka's deficit is used for capital expenditure; hence, it explains

the positive relation between the two variables. The state's own tax revenue has a significantly positive impact on the state's GDP. This goes against the economic reasoning that higher taxes will have a negative impact on GDP through the private investment channel. For the given dataset, a 1% increase in tax revenue increases the GDP by 0.85%. The relationship between Gross Capital Formation and GSDP is also positive but insignificant.

The co-efficient of adjustment here is negative and significant. It affirms the existence of cointegration among the variables and states that 80% of the disequilibrium is corrected in a year. Tax revenue is the only variable showing any relationship with GDP in the short term. Here, tax revenue has a negative co-efficient with GDP in lag 1 as well as lag 2. This fits with the aforementioned economic theory of higher taxes adversely impacting the GDP.

Table 6: Results from the Error Correction model

ARDL (1,0,2,0)					Number of Observations	26
					R-squared	0.643
					Adjusted R-squared	0.5303
					Root MSE	0.0521
Log likelihood= 43.997076						
D.logGDP	Coefficient	Standard Error	t	P> t	95% Confidence Interval	
Adj						
logGSDP						
L1	-0.8424998	0.1660039	-5.08	0.000	-1.18995	-0.4950497
Long-Run						
logGFD	0.0717115	0.0681953	1.05	0.306	-0.0710229	0.214446
logTR	0.8578514	0.0728647	11.77	0.000	0.7053438	1.010359
logGCF	0.0441809	0.0305448	1.45	0.164	-0.0197502	0.108112
Short-Run						
LogTR						
D1	-0.6860015	0.2017585	-3.4	0.003	-1.108287	-0.2637162
LD	-0.6535659	0.2092001	-3.12	0.006	-1.091427	-0.215705
_cons	2.508701	0.478015	5.25	0.000	1.508204	3.509197

Source: author's calculations

The model was treated to some diagnostic tests to check for its validity. The Durbin-Watson and the Breusch-Pagan-Godfrey test showed no serial correlation between the error terms and the White test noted that they were homoscedastic. Two dummies accounting for structural

changes created by the adoption of the FRB Act in 2005 and the financial crisis in 2008 were also studied, but were found to be insignificant and hence not included in the model.

It is argued that excess fiscal deficit can hinder economic growth, but the deficit at a comfortable level facilitates economic growth (Sethi et al, 2020). The results prompted from this econometric framework follow this axiom. Karnataka has managed to control its fiscal deficit at less than 3% of the GSDP consistently for over a decade. Additionally, utilising this deficit for capital building rather than revenue-related expenses has impacted the state's economic growth positively.

However, the model does suffer from drawbacks. A limited number of observations result in the model being less rigorous than anticipated. Additionally, this model just provides an insight into the empirical relationship between fiscal deficit and economic growth. It points out that a higher fiscal deficit will not be detrimental to economic growth if it is being used for generating capital, a practice followed by Karnataka. But to understand the implications of a higher fiscal deficit in an economic downturn would require the use of a General Equilibrium model which will account for the interactive effects between the two variables as well and could be a valid quantitative extension of this stream of research.

Major Conclusions and Implications

A study by Mohanty (2017) observed that the implementation of FRBM Act has weakened the negative impact of fiscal deficit on growth. This note is also reaffirmed by the results from this model. But given the current economic scenario, the state's fiscal deficit is likely to extend beyond the government-mandated limits. In order to avoid a negative impact on GSDP, the state must ensure that these funds are utilised towards the creation of infrastructural assets rather than revenue-related expenses.

The state has various avenues where it can use this money – in improving its service delivery of water and sanitation facilities, especially in ULBs outside Bengaluru so that these urban areas develop into efficient drivers of economic growth. These funds can also be used to create robust frameworks for the delivery of essential services. As of August 2020, Karnataka was one of the top five states recording high daily spikes in COVID-19 cases. Hence, the state will have to incur expenses on public healthcare services as well as food availability and distribution.

The state government can access additional loans to 0.5% of its GSDP by meeting the conditions put forth under improving Ease of Doing Business and One Nation, One Ration Card initiatives. This would be in addition to the unconditional transfer of 0.5% offered by the Central government.

The econometric analysis also showed a positive long run relationship between tax revenue and economic growth. Hence, the state should focus on widening its tax net and exploiting different taxation avenues like advertisement tax as suggested in the state's 4th Finance Commission report to boost its revenue streams as they will have a positive impact in the long run. Additionally, the state should also explore sustainable energy supply sources like the Surya Raitha Scheme to support its agricultural sector.

If not the entire 2%, the state of Karnataka could be eligible to borrow an additional 1% of its GSDP. This additional borrowing can be fiscally justified if the state is able to reduce its total expenditure. Additionally, if it can ensure that the increased fiscal deficit is used to generate public capital, it may also contribute positively to economic growth.

Future Extensions of Study

The assumptions on GDP growth rate in the first section of the report have been very mild as compared to the official statistics published in September 2020. The GDP in the first quarter of FY21 contracted by 23.9% (National Estimates, 2020). Though many researchers believe that the first quarter might report bad numbers, the situation will improve in the consequent three quarters. As such, lower growth will seriously hamper the governments' (both state and Centre) efforts to take up their budgeted expenditure and would ultimately lead to higher borrowings.

As this report was in the final stages of completion, the government of Karnataka decided to opt for a direct loan from the government which would be linked to the GST compensation cess provided by the Central government. There has been a delay by the Central government to pay the GST compensation cess that is due to the state governments since April. Initially, the government had stated that it would only compensate states for the losses due to GST implementation (Deccan Herald, 2020). The state government issued a statement that Karnataka would be eligible for total compensation of ₹18,289 crore. Out of this, ₹6,965 crore would come from the cess collected. For the remaining amount of ₹11,324 crore, Karnataka would be able

to borrow through a special window with the entire burden of principal and interest repayment being met out of the compensation cess fund in the future (Mint, 2020).

Many states are against this move as they believe that the government should be compensating them for the entire amount. The opposition stated that they would urge the activation of the dispute resolution mechanism in the GST Council so that states have legal recourse to this issue. If the Central government agrees to this proposal, Karnataka will get additional funds which could lead to a significant reduction in the state's borrowings.

This move will allow the state to bypass the conditions imposed by the Centre on extra borrowings. This move allows the state to undertake higher borrowings without having to undertake reforms in the power sector or improve finances of the state's ULBs. The state government has taken various measures and amended various land, labour and industries laws to bring in revenues to the state and make up for the shortfall.

On October 11th, the Finance Minister announced a devolution of 50-year interest-free loans to states to the tune of Rs 12,000 crore (Financial Express, 2020). The funds from this loan can only be used for infrastructure financing. Karnataka's share of total loans will be as per the share decided by the 15th Finance Commission. Half of the loan amount is unconditional and states would be eligible for the rest only if they fulfil three of the four policy reforms discussed in this report.

A lot of these policy developments point to the inability of states to fulfil the conditions put forth by the first fiscal scheme. But the pandemic has affected the revenue generating capacity of all private and public machinery and the states do need additional funds to maintain public spending levels. The disruption of economic activity has granted all states the unique opportunity to improve allocations and adopt sustainable and innovative processes across different sectors ranging from health, education and even agriculture. Thus, tying grants and loans to certain conditions might not be the best way to increase state borrowings. The Central government's recent approach of clearing the dues of the states and announcing special loans for capital expenditure will certainly enable states to make effective investment decisions.

References

1. About Karnataka (2019) : Information On Tourism Industry, Exports, Economy & Geography. India Brand Equity Foundation Retrieved at <https://www.ibef.org/states/karnataka.aspx>
2. Accounts at a Glance for 1960-2015 (2016). Finance Department, Government of Karnataka.
3. Anantha Ramu, M. R. & Gayithri, K. (2016). Relationship Between Fiscal Deficit Composition and Economic Growth in India: A Time Series Econometric Analysis. Institute for Social and Economic Change, Working Paper 367.
4. Bangalore. *Open for Business*, accessed at [https://open-for-business.org/Bangalore#:~:text=Bangalore%20\(or%20Bengaluru%2C%20as%20it,10%25%20of%20the%20country's%20GDP.](https://open-for-business.org/Bangalore#:~:text=Bangalore%20(or%20Bengaluru%2C%20as%20it,10%25%20of%20the%20country's%20GDP.)
5. Bhalla (2020). Focus Turns To Kolkata, Bengaluru For ‘Ease of Doing Business’ Boost. *Inc 42*. Retrieved at <https://inc42.com/buzz/india-turns-focus-to-kolkata-bengaluru-for-ease-of-doing-business-boost/>
6. Chinnaswamy, C.G.(2018). Fourth State Finance Commission, Karnataka- report. Government of Karnataka.
7. Construction Week Online (2020). Karnataka Unveils new Industrial Policy 2020-25 (July 24).Retrieved at <https://www.constructionweekonline.in/business/14407-karnataka-unveils-new-industrial-policy-2020-25>
8. Damodaran, H. (2020). A Crisis without Villains. *The Indian Express* accessed at <https://indianexpress.com/article/opinion/columns/a-crisis-without-villains-6557602/>
9. Dedicated Feeders for IPs Using Solar-based Generation (2018) Center for Study of Science, Technology and Policy
10. Economic Outlook (2020) Only 8 States qualify to avail additional Borrowings. *Centre for Monitoring Indian Economy*. Retrieved at <https://www.cmie.com/kommon/bin/sr.php?kall=warticle&dt=2020-05-19%2017:45:19&msec=546#:~:text=Fullfill%20conditions%20set%20by%20Centre&text=Only%20eight%20states%20including%20Maharashtra,Economic%20Advisor%20Soumya%20Kanti%20Ghosh.>
11. Economic Survey (2019-20). *Targeting Ease of Doing Business in India*. Volume I, Chapter 6, Government of India
12. Economic Times (2019). Ease of Doing Business: Karnataka to pick lessons from New Zealand (December 9). . Retrieved at https://economictimes.indiatimes.com/news/economy/policy/ease-of-doing-business-karnataka-to-pick-lessons-from-new-zealand/articleshow/72443665.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst
13. Economic Times(2020). Centre raises borrowing limit of states from 3pc of GSDP to 5pc in FY21. (May 17). , Retrieved from <https://economictimes.indiatimes.com/news/economy/policy/centre-raises-borrowing-limit-of-states-from-3-pc-of-gsdp-to-5-pc-in-fy21/articleshow/75785946.cms?from=mdr>
14. Fifteenth Finance Commission Report (2019). President of India’ office

15. Financial Express (2020) Government to give Rs.12,000 cr interest-free 50-year loan to states for capital projects. . Accessed at <https://www.financialexpress.com/economy/govt-to-give-rs-12000-cr-interest-free-50-year-loan-to-states-for-capital-projects/2103639/>
16. Garg, R. & Sundararagavan, S. (2018) Karnataka Distribution Sector Landscape. Center for Study of Science, Technology and Policy (CSTEP)
17. Kannan, E. (2013). Do Farmers need free electricity? Implications for Groundwater use in South India. *Journal of Social and Economic Development* 15(2), 16-28.
18. Key Highlights of Aatma Nirbhar Bharat Abhiyaan. (2020). Press Bureau of India (Release ID: 1624661), retrieved from <https://pib.gov.in/PressReleasePage.aspx?PRID=1624661>
19. Khare, A., Roy, D., Mangla, S. (2019). Finances of Municipal Corporations in Metropolitan Cities in India: A study prepared for the 15th Finance Commission. Indian Council for Research on International Economic Relations.
20. Madamaiah, S, Thammaiah P, Patil B & Amruthavarshini (2020, July 27) The Karnataka Land Reforms (Amendment) Ordinance, 2020: A Brief Note. Khaitan & Co. Accessed at <https://www.mondaq.com/india/corporate-and-company-law/969618/the-karnataka-land-reforms-amendment-ordinance-2020-a-brief-note>
21. Manasi, S. & Smitha, K.C. (2018). Digitalised Land Registration System in Karnataka: Implementation of Urban Property Ownership Records (UPOR). Institute for Social and Economic Change, Policy brief 22.
22. Medium Term Fiscal Plans (2004-2020). Department of Statistics, Government of Karnataka.
23. Mohanty, Ranjan Kumar (2017) Fiscal Deficit and Economic Growth Linkage in India: Impact of FRBM Act. *Challenges and Issues in Indian Fiscal Federalism (ISBN 978-981-10-6217-9)*. Springer Singapore Publication
24. Nair, R. & Das Gupta, M. (2020). Link Aadhaar to ration cards, hike property tax — how states can increase borrowing limit. *The Print*; Accessed at <https://theprint.in/economy/link-aadhaar-to-ration-cards-hike-property-tax-how-states-can-increase-borrowing-limit/425826/>
25. Noronha, G. (2020) India's economy to contract by 3.2 per cent in fiscal year 2020-21: World Bank. *Economic Times*. Retrieved at https://economictimes.indiatimes.com/news/economy/indicators/indias-economy-to-contract-by-3-2-per-cent-in-fiscal-year-2020-21-world-bank/articleshow/76266999.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst
26. Pathak, P. (2020). Can Enhanced State Borrowing Be the Catalyst for Overdue Municipal Revenue Reforms? *The Wire*. Accessed at <https://thewire.in/urban/urban-local-bodies-municipal-revenue-reforms>
27. Poovanna, S. (2020). Karnataka accepts Centre's GST compensation proposal. *Mint*. Retrieved at <https://www.livemint.com/politics/policy/karnataka-accepts-centre-s-gst-compensation-proposal-11599049266170.html>
28. SBI EcoWrap (2020) Will Supply Create its Own Demand?: Over to RBI Now! Issue No 12, FY21 accessed at https://www.sbi.co.in/documents/13958/3312806/Ecowrap_20200518.pdf/32f07d05-b0bf-c232-7d44-68ceb7309fbf?t=1589783303647
29. Sethi, D., Rao, V., Mohanty, A. (2020). Threshold level of fiscal deficit: revisiting FRBMA limit in Indian states. *Journal of Social and Economic Development*.
30. Shrestha, M. & Bhatta, G. (2018). Selecting appropriate methodological framework for time series data analysis. *The Journal of Finance and Data Science*, 4(2), 71-89

31. Singh, Annapurna. (2020). Government may give States GST Relief. *Deccan Herald*
Retrieved at <https://www.deccanherald.com/national/government-may-give-states-gst-relief-886715.html>
32. The Hindu (2020). IMF projects sharp contraction of 4.5% in Indian economy in 2020. Retrieved from <https://www.thehindu.com/business/Economy/imf-projects-sharp-contraction-of-45-in-indian-economy-in-2020/article31907715.ece>
33. The Hindu (2020). Indian Economy to contract by 4% in 2020-21, forecasts ADB (June 18)
Retrieved from <https://www.thehindu.com/business/Economy/indian-economy-to-contract-by-4-in-2020-21-forecasts-adb/article31863511.ece#:~:text=Growth%20prospects%20for%202021%20are,6%20per%20cent%2C%20ADB%20said.&text=International%20rating%20agencies%20like%20Moody's,2020%20to%20March%202021%20fiscal>.
34. The New Indian Express (2020). Karnataka Cabinet passes ordinance for more ease of doing business. Accessed at <https://www.newindianexpress.com/states/karnataka/2020/jun/26/karnataka-cabinet-passes-ordinance-for-more-ease-of-doing-business-2161511.html>
35. Water and Sanitation Program, World Bank & Government of India (2015). *Taking on New Challenges: A Compendium of Good Practices in Rural Water Supply Schemes*.

Appendix

Unit Root Test Results

Variable	Test-Statistic	McKinnon Approximate p-value
Log GDP	0.043	0.5170
Log GFD	-0.39	0.3496
Log EFD	-0.493	0.3132
Revenue S/D	-2.124	0.0215
Log TR	0.214	0.5841
Log GCF	-2.183	0.0190
Exchange Rate	-1.005	0.1619