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Fiscal Challenges in the Aftermath of Natural Disasters and Public Health Challenges in Kerala

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Abstract: Public spending on education, health and social security has been played an important role for achieving high social and human development in Kerala, indicating the importance of public spending on achieving quality of life. But, the fiscal deficit is posing a major threat to public spending. Natural disasters (flood, cyclone, torrential rains and landslides) and public health challenges like epidemic diseases (e.g. viral fever, chikungunya, dengue, Nipah virus and H1N1) are raising the severe threat to the fiscal stability of the state in the last few years. Despite all these challenges, Kerala had maintained reasonably a good fiscal stability in 2017 & 2018. The paper addressed two important questions. How did the government of Kerala manage the fiscal situations in the midst of unmatched challenges? How does lockdown affect the fiscal condition of the state? The government was followed revenue mobilization and expenditure compression measures to manage the fiscal conditions of the state during unprecedented challenges. The Novel coronavirus outbreak impacted the fiscal conditions of the state severely. The economic loss of Kerala by lockdown could amount to 15% of GSDP and revenue loss by lockdown could extent to 35% of the revenue receipts. Increase in the ceiling of public borrowings and other revenue mobilization measures will help the government to avert adverse effects of fiscal crises induced by lockdown in the state to a large extent. Kerala needs to have a confluence of a multi-pronged strategy to combat growing environmental degradation and public health challenges: conservation of nature, greening fiscal policies and fiscal ethics are some important strategies. Otherwise, fiscal impacts of unsustainable development will continue to disturb the state, especially poor and other vulnerable sections are at first to suffer from fiscal challenges of natural disasters and public health challenges.

1. Introduction

Kerala is well known for its remarkable achievements in social and human development. Apart from some historical factors such as intercultural linkages, a long tradition of international trade, social renaissance movements and struggle for education by socially weaker sections, public spending on education, health and social security has been played an important role for achieving high social and human development in Kerala, indicating the importance of public spending on achieving quality of life. But, the fiscal deficit is posing a major threat to public spending. Over the last three years, Kerala's fiscal condition is facing four critical challenges: a) fiscal impacts of natural disasters; b) fiscal impacts of public health challenges including, lockdown induced by COVID-19 pandemic; c) fiscal impacts of Centre-State relations; and lastly) fiscal impacts of policies including, fiscal policies by the government.

Natural disasters (flood, cyclone, torrential rains and landslides) and public health challenges like epidemic diseases (e.g. viral fever, chikungunya, dengue, Nipah virus and H1N1) are raising the severe threat to the fiscal conditions (public revenue and public spending) of the state in the last few years. Due to natural disasters and public health challenges, public spending is likely to increase. The decrease in public revenue in these emergencies leads to fiscal imbalances. However, the fiscal impact of natural disasters and public health challenges depends on two major factors: first, damages caused by natural disasters and second, the prevalence of epidemic diseases. The state is suffering from the Novel coronavirus outbreak since January. Till date, about 41300 positive cases of Novel coronavirus were reported including 140 deaths. Percentages of active cases, recovered cases and deaths in the state are 34.15 per cent, 65.39 per cent and 0.34 per cent, respectively [9]. Based on this trend, the number of COVID-19 positive cases could amount to 100,000 in the September 2020. Kerala has already been received about Rs.468 crore as relief fund and allotted Rs.512 core for preventing COVID-19 [7]. It shows that the fiscal impact of public health emergencies like COVID-19 pandemic is enormous. The Centre-State relations is still based on political-bias largely, affecting the central government's transfers for the states. Despite all these challenges, Kerala had maintained reasonably good fiscal conditions in 2017 and 2018. The question arises here how did the government of Kerala manage the fiscal situations in the midst of unparalleled challenges? How does the outbreak of novel coronavirus affect the fiscal conditions of the state? How can the government achieve the Medium Term Fiscal Policy (MTFP) targets?

2. Fiscal conditions in the aftermath of natural disasters and public health challenges

Fisheries and allied sectors play an important role in the Kerala economy. Because it provides the livelihood for thousands of people in Kerala and also it becomes a significant source of the foreign exchange earnings in the state [11]. The Ockhi cyclone was hit coastal Kerala and Tamil Nadu in November 2017, and this was the fourth biggest cyclone since 1891. Ockhi had shocking impacts on the marine fisheries sector and lives of fishermen in the Southern Kerala especially, in Thiruvananthapuram district. The economic loss by the Ockhi cyclone was not that significant considering the Kerala economy and its size. Thus, Ockhi cyclone made an insignificant impact on the fiscal conditions of the state. However, when we consider the standard of living of traditional fisherfolk, the economic loss due to Ockhi remained significant. Ockhi had damaged hundreds of kutcha and semi-kutcha houses on the coastline. Moreover, Ockhi had killed 365 fishers including, 163 in Kerala. This trend was just the opposite of the world-wide trend of less human causalities and high property damages [13]. However, this was not a new trend. Perhaps, this was an example of huge fishermen causalities due to lack of timely or early warnings of the cyclone by the concerned authorities.

In 2018, Kerala was hit by a major public health challenge – the outbreak of Nipah virus confirmed in the state. It was the third in the country. The first two were in West Bengal. A total of 18 cases were identified, of which, 17 died. Yet, Kerala's fight against Nipah virus was widely discussed and appreciated by international health communities, including the World Health Organization [14]. In 1999, there were 265 cases of Nipah virus identified, including 105 deaths in Malaysia [10]. Kerala's impressive achievements in containing Nipah virus was, by and large, the results of quality of public healthcare system and its coordinated works with other institutions such as local self-governments (LSGs), central government agencies, and the WHO [14]. Besides, people's awareness and cooperation were equally crucial in containing the Nipah outbreak. Since the outbreak of Nipah virus was limited to small areas of Kozhikode and Malappuram districts, government spending on the prevention of Nipah virus did no significant effect on the fiscal conditions of the state.

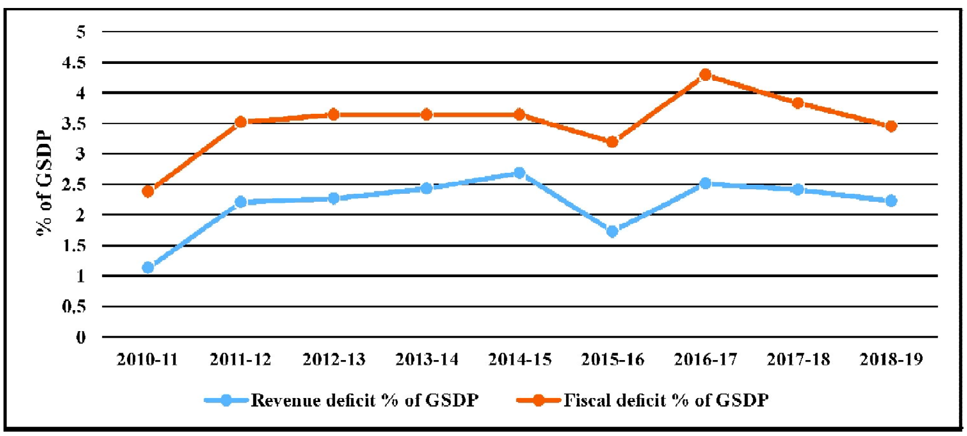
Analyzing the history of natural disasters in the state, the Flood 2018 was one of the biggest natural disasters. The flood 2018 had a devastating impact on various sections of society in general and economy in particular. The United Nations Development Programme (UNDP) in its post-disaster needs assessment said that the flood caused damage worth Rs.31,000 crore which comes 5.02 per cent of the Gross State Domestic Product (GSDP) (2016-17 at current prices) of the state (Economic Review Government of Kerala 2018). Undoubtedly, this flood had a massive impact on the fiscal conditions of Kerala through increased public spending and decreased revenue. To overcome this fiscal crisis, the government was taken expenditure compression and revenue mobilization measures. A vital revenue mobilization method was the Chief Minister's Distress Relief Fund (CMDRF). The government was collected Rs.4912 crore through CMDRF (Flood 2018 & 2019). Besides, central transfers increased noticeably in 2018-2019. Change in central transfers was Rs.5,066 crore between 2017-18 and 2018-19 compared to Rs.1,625 crore between 2016-17 and 2017-18 (Budget in Brief, Government of Kerala 2019; 2020). As a result, the annual growth rate (AGR) of revenue receipts (RR) has increased to 11.8 per cent in 2018-19 from 9.79 per cent in 2017-18. The AGR of revenue expenditures (RE) decreased to 21 per cent in 2018-19 from 27 per cent in 2017-18 whereas, development expenditures (DE) dropped to 51 per cent in 2018-19 from 53 per cent in 2017-18 (Table 1). The growth rate of Kerala's GSDP (at current prices) has increased from 10.3% in 2017-18 to 11.6% in 2018-19 [6]. The government could manage to control the fiscal situations in the aftermath of the flood 2018 through revenue mobilization, expenditures compression and economic growth measures. H1N1 influenza which hit the public healthcare system of Kerala immediately after the flood 2018. More than 500 cases of H1N1 influenza were identified, including, 24 deaths at the end of November 2018.

3. Results

The fiscal deficit is always a matter of concern. Because it increases pressure on revenue mobilization and causes expenditure compression. Kerala's major deficit indicators, such as revenue deficits and fiscal deficits between 2010/11 and 2018/19 is given below (Graph 1). The revenue deficits as a ratio to the Gross State Domestic Product has increased to 2.51 per cent in 2016-17 from 1.13 per cent in 2010-2011 and then decreased to 2.23 per cent in 2018-2019. The fiscal deficit as a ratio to the GSDP has increased to 4.29 per cent in 2016-17 from 2.38 per cent in 2010-11 and then decreased to 3.45 per cent in 2018-19.

Fiscal deficit and revenue deficit were increased unprecedentedly. It was against targets set in the Kerala Fiscal Responsibility and Budget Management (Amendment) Act (FRBMA), 2011. The FRBMA recommended that fiscal deficit (FD) is to be 3 per cent of the Gross State Domestic Product (GSDP) and revenue deficit (RD) must be zero. According to the Medium Term Fiscal Policy (MTFP), FD and RD are 3.09 per cent and 1.26 per cent, respectively [5]. In 2016-17, Kerala's fiscal deficit and revenue deficits were 4.29 per cent and 2.51 per cent, respectively. This was the result of the implementation of the 10th State Pay Commission Award. As a result, the non-plan revenue expenditure (NPRE) shot up in 2016-17 [5]. In addition to this, problems in Goods and Services Tax (GST), restrictions on public borrowings and demonetization were major setbacks for higher mobilization of revenues in 2016-17 [4]. It is interesting to notice that both revenue deficit and fiscal deficit are decreasing since the 2016-17. Two ways can reduce deficits: first, increasing public revenue and second, compressing expenditures (reducing the spending). The fiscal disciplinary measures are also playing an essential role in reducing the fiscal and revenue deficits. For instance, total revenue increased to Rs.83020 crore in 2017-18 from Rs.75611 crore in 2016-17. Change in revenue is Rs.7400 crore. In 2018-19, total revenue increased to Rs.92854 crore from Rs.83020 crore in 2017-18. Change in revenue is Rs.9830 crore [6]. Besides, the fiscal ethics (i.e. the right or wrong of public spending and public revenue) would contribute much to stabilize the fiscal conditions of the state.

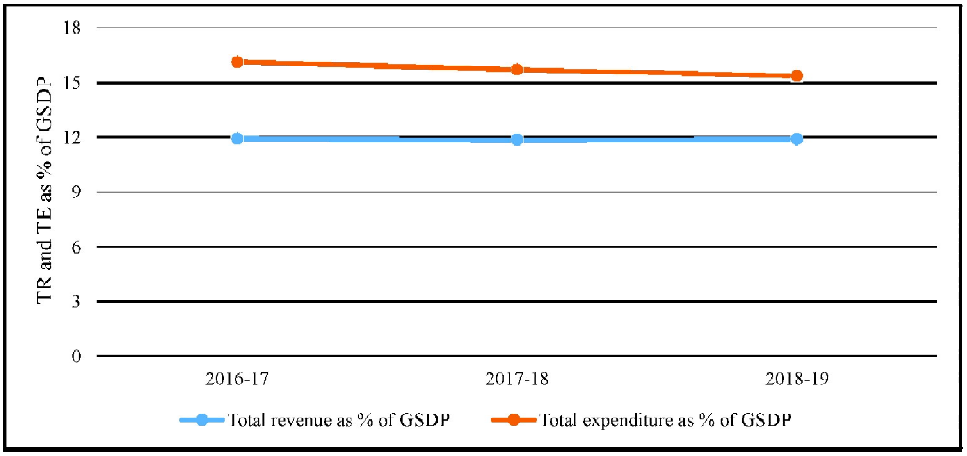
Graph 1: Revenue Deficit and Gross Fiscal Deficit in Kerala (%)



Source: various issues of Economic Review and Budget in Brief 2020-21, Government of Kerala 2020

It is evident from Graph 2 that total public expenditure decreased to 15.36 per cent in 2018-19 from 16.13 per cent in 2016-17 whereas the percentage of total revenue is more or less the same during this period. It indicates that the growth rate of revenue is more than that of expenditure. Table 1 and Graph 2 will give us a similar conclusion that the percentage change in revenue is more than that of spending in the state. It has helped to reduce major deficit indicators such as fiscal deficit and revenue deficit.

Graph 2: Total revenue and total expenditure as % of GSDP



Source: Budget in Brief 2020-21, Government of Kerala

Note: TR means total revenue and TE means total expenditure.

From Table 1, it is evident that the annual growth rate of the total revenue receipts increased to 11.8 per cent in 2018-19 from 9.8 per cent 2017-18. Because of the annual growth rate of state's share in central taxes and grants has risen sharply from 6.85 per cent to 19.98 per cent between 2017-18 and 2018-19, though the annual growth rates of state's tax revenue and state's non-tax revenue have declined. Revenue deficit was decreased to 2.2 per cent in 2018-19 from 2.4 per cent in 2017-18, due to annual growth rate of the revenue expenditure (RE) was decreased but, the annual growth rate of the receipts was increased.

Table 1
Revenue Receipts and Revenue Expenditures

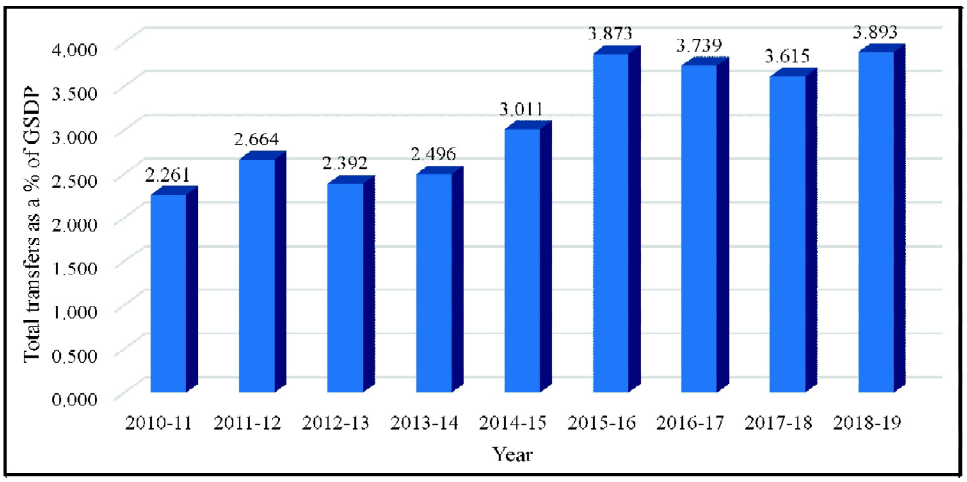
Year	*Annual Growth Rate (AGR)*		*Annual Growth Rate of Main Sources of Revenue Receipts*			*Share of Revenue Expenditures*	
	RR (%)	*RE (%)*	*SOTR (%)*	*SNTR (%)*	*SCTG (%)*	*DE (%)*	*NDE (%)*
2017-18	9.79	27.02	10.15	15.46	6.85	53.01	46.99
2018-19	11.84	21.01	9.00	5.21	19.98	51.48	48.52

Source: various issues of Economic Review and Budget in Brief, Government of Kerala, 2020.

Note: RR = Revenue receipts, RE = Revenue expenditure, SOTR = State's own tax revenue, SNTR = State's own non-tax revenue, SCTG = Share of central taxes and grants, DE and NDE = Development and non-development expenditures; and AGR = Annual Growth Rate

Graph 3 shows the central government's total transfers as a ratio to the GSDP increased to 3.89 per cent in 2018-19 from 2.26 per cent in 2010-11. The annual growth rate (AGR) of Grant-in-aid and other receipts from Centre for plan and non-plan was increased sharply from 0.21 per cent in 2017-18 to 33.55 per cent in 2018-19. It has played a vital role in adjusting fiscal and revenue deficits in the state.

Graph 3: Central total transfers as a ratio to the GSDP (%)



Source: Economic Review 2017; 2019 and Budget in Brief 2020-2021, Government of Kerala 2020.

Note: GSDP 2017-18 (P) and GSDP 2018-19 (Q) at current prices.

4. Fiscal conditions in the aftermath of lockdown induced by Novel coronavirus

The world is suffering from a severe COVID-19 pandemic, followed by lockdown in many countries. It is likely to affect the world not only economically, but also ecologically and socio-culturally. Kerala economy is not an exception. The COVID-19 outbreak and lockdown have been impacting almost all sections of society and all sectors of the economy. Gulati Institute of Finance and Taxation (2020) in its study estimated that the economic loss of Kerala by lockdown is Rs.1,25,650 crore which equals to 15 per cent of Kerala's Gross State Domestic Product (GSDP) (2019-20). Revenue loss is about Rs.35,000 crore which forms 35% of total revenue receipts. We can expect even negative growth rates in almost all sectors such as agriculture, industry, and services sector in the first quarter (April-June months) of the financial year (2020-21) compared to the last quarter (January-March) of the financial year 2019-20.

However, the economic loss of the state due to lockdown induced by novel coronavirus depends on the number of factors such as the duration of lockdown, the prevalence of COVID-19 outbreak, the extent of the economic slowdown triggered by COVID-19, and COVID-19 impacts on migration and remittances, agriculture, industry and services sectors at the national, regional, and global levels. It is logical to argue that lockdown undercuts fiscal conditions and reduces economic growth because lockdown impacts the income and expenditure of households, the public and private sectors adversely.

5. Containing fiscal crisis

It seems Kerala government will manage the financial consequences of lockdown induced by Novel coronavirus. Following measures will help the state in future fiscal management: 1) ceiling of public borrowings is increased by the central government. It helps Kerala to seek loan up to Rs.43,000 crore, 2) Kerala will have to get GST share, 3) other central grants and taxes, 4) revenue mobilization measures such as salary-cut, 35% of the increase in the price of alcohol, etc. 5) relief funds, including novel coronavirus relief fund, and 6) expenditure compression measures. These measures will help Kerala for limiting fiscal deficit around 3.5% of the GSDP in 2020-21. However, the primary deficit is likely to increase due to the increase in public borrowings.

6. Emerging threats

There is a high probability of heavy rains, followed by a flood-like situation in Kerala. Following four reasons can trigger this situation 1) it seems nature recaptures its natural rhythm during the lockdown or in other words, the lockdown impacts climate positively. 2) The availability of water in the reservoirs of the state is higher than that of last year due to low electricity use of agriculture, industry, and services sector during the lockdown. Furthermore, the use of electricity has decreased due to monsoon. It increases the water levels in the reservoirs again. Understanding the seriousness of the problem, the Central Water Commission has already been taken measures to reduce the water levels in the reservoirs in Kerala. 3) The cyclical process of climate (Kerala had recorded a hat-trick of heavy rains in 1922, 1923 and 1924); and lastly) change in the land use pattern in Kerala over the years due to conversion of wetlands, loss of traditional water bodies, increasing encroachment on forests for agricultural expansion, development of infrastructure, etc. Land use likely to disrupt natural surface runoff. Thus, heavy rains may cause to flood like situation.

Thus, there is a high probability for intensifying COVID-19 pandemic and related deaths in the months of June-September due to the following reasons: a) monsoon diseases such as viral fever, dengue, chikungunya and HIN1 can add fuel to Covid 19 pandemic, b) heavy rain leads to flood like situation, which causes epidemic and affects public health, c) high prevalence of multimorbidity, d) apathy towards personnel hygiene such as washing hands using sanitizer, wearing masks and social distancing, e) return of migrants with COVID-19 infection, f) lack of proper preparedness in relaxation of lockdown, g) delay in identification of cases, h) under reporting, i) unidentified cases, j) asymptomatic cases, k) lag in increase of COVID-19 tests, l) politicizing COVID-19 and eyeing on vote bank, m) allowing private health sector in containing COVID-19, which leads to exploitation and exclusion of poor, n) poverty and financial problems induced by lockdown will force people to break the self-quarantine, social distancing and lockdown, o) temporary hiding of COVID-19 symptoms by self-medication like using paracetamol to suppress fever for time being or travelling time, p) behavioural problems like disrespecting precautions of COVID-19; and q) anti-social interventions likely to increase spreading COVID 19; . This situation can potentially emerge as a big challenge not only to the public healthcare system but also for the fiscal conditions of the state. Moreover, it reinstates lockdown again in the state. However, lockdown, people's awareness of COVID-19 and adaptiveness will help to reduce COVID-19 outbreak to a large extent. As of now, the government has received COVID-19 relief fund Rs. 468.47 crore but, allotments for containing COVID-19 is Rs. 511.32 crore (Government of Kerala Dashboard on 13th August 2020). Considering Kerala's public spending on health (Rs. 6847 crores in 2018-19), Rs. 90 crore is not a substantial amount. The most important thing is that COVID-19 must be seen as a public health challenge.

7. The way forward

Kerala could able to manage the number of small and big natural calamities and public health challenges such as cyclone, floods, heavy rains, dengue, chikungunya, Nipah virus, H1N1 influenza, and novel corona pandemic incredibly, by using its quality of social and human capital, power of decentralization, quality of public healthcare system, and convergence of various government departments /institutions. It gives a lot of lessons: first of all, market approach to natural disasters and public health challenges does not work capably; meaning that complete privatization approach does not work effectively in providing basic human needs including, food, shelter, education and health in a context in which natural and public challenges happen; and second) it is a judicious approach rather than a populist approach that delivers the stability for fiscal conditions of the state. Fiscal policy management skill is also equally important.

8. Conclusion

This paper addressed two important questions. How did the government of Kerala manage the fiscal situations in the midst of unmatched challenges? How does lockdown affect the fiscal condition of the state? The government was followed revenue mobilization and expenditure compression measures to manage the fiscal conditions of the state during unprecedented challenges. The Novel coronavirus outbreak impacted the fiscal conditions of the state severely. The economic loss of Kerala by lockdown could amount to 15% of GSDP and revenue loss by lockdown could extent to 35% of the revenue receipts. Increase in the ceiling of public borrowings and other revenue mobilization measures will help the government to avert adverse effects of fiscal crises induced by lockdown in the state to a large extent. But, Kerala needs to have a confluence of a multi-pronged strategy to combat growing environmental degradation and public health challenges: conservation of nature, greening fiscal policies and fiscal ethics are some important strategies. Otherwise, fiscal impacts of unsustainable development will continue to disturb the state, especially poor and other vulnerable sections are at first to suffer from fiscal challenges of natural disasters and public health challenges.

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