

Economic and Industrial Impact of Kerala Floods

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The incessant rains and floods that have ravaged Kerala since the beginning of August has led to widespread destruction of property and displacement, the extent of which is yet to unravel fully.

An assessment of the destruction, the economic costs and impact of reconstruction is a challenge given the scale and extent of the damages. The rebuilding and reconstruction of the 5 most affected districts and of the infrastructure destroyed is likely to be a long drawn out process, one which is likely to have a sizeable economic and financial costs attached to it.

We have attempted to analyse the likely impact of the disaster on the economy and the industries that are likely to be impacted.

Immediate impact on employment

The five worst-affected districts of the state's 14 districts i.e. Idduki, Ernakulam, Kollam, Kottayam and Pathanamthitta have an estimated population of 11.09 million¹ which accounts for nearly 30% of the state's total population.

We estimate that the employment of nearly 4.13 million² individuals of these districts have been affected on account of the deluge and the resultant disruptions. The table 1 below shows the occupation-wise number of individuals estimated to be affected in the above districts.

Table 1 : Estimate - Occupation wise individuals that are affected in the 5 most affected districts ('000)

Sectors	Idduki	Ernakulam	Kollam	Kottayam	Pathanamthitta	Total
Agriculture	268.0	132.4	161.8	122.8	105.3	790.5
House						89.1
Industry	7.4	26.1	23.4	20.1	12.0	
Other						3,258.1
workers	285.7	1,199.6	806.2	656.7	309.7	
Total	561.3	1,358.1	991.4	799.8	427.0	4,137.7

Source: CARE Ratings estimation based on 2011 census

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Of the total working age population in the 5 districts, around 19% comprise agriculture workers and household industry workers account

¹ Based on the 2011-12 census and an annual average growth of 1.2%

² Based on the 2011 Census data for the district wise and working age population which has been adjusted for incremental growth upto 2018

for only 2%. Labourers in the district of Ernakulam are estimated to be the most affected followed by Kollam and Kottayam.

For the 4.13 million affected working individuals in the five regions, it may be assumed that 20% are NRIs. Hence around 3.3 mn workers would have their employment in jeopardy. **We estimate a wage loss of around Rs. 4,000 crs for the month of Aug'18 (based on the average wage rate of Rs. 400/- per day for Kerala as per the data from the annual report for 2017-18 of the Ministry of Labour).** The wage loss is in addition to the property, vehicle and consumer durable losses would weigh on incomes and consumption of the population here.

Relief camps

The number of people in the relief camps has been estimated to be around 1 mn. **Sustaining these families on a consistent basis would involve a minimum sum of around Rs 10 crore a day or Rs 300 crore a month.** This would have to be financed from either relief grants from the central government or contributions by other states. The medical costs which go with the resulting disease control would be dependent on the extent to which there could be epidemics.

Rehabilitation led economy activity to increase

Following the temporary disruption in business and economic activity, the reconstruction and rehabilitation of the flood affected regions infrastructure and businesses would result in an increase in economic activity. The increased activity however is likely to be centred on rebuilding efforts and may not lead to an overall increase in economic activity given the huge loss to property and infrastructure, the reconstruction of which would be time consuming given the shortages of skilled manpower and financial resources in the state.

While some segments of the service sector are likely to be adversely affected in the coming quarters viz. tourism and hospitality, the increase in demand for services ranging from construction, repair and maintenance services (electricians, plumbers, painters etc), health care, public administration and financial services needed for the reconstruction purposes would witness an increase. Service sector is the driver of the state's economy (63% of GVA and has grown at an average 6.8% during 2012-17). Overall the service sector growth is unlikely to see a notable increase as the increase in reconstruction related services is unlikely to offset the losses witnessed in the tourism and hospitality segments (largest share in services GVA at over 40%).

Although the replacement demand for consumer goods is likely to increase, given that Kerala has a low industrial base (industry accounts for 26% of state's GVA and has been recording an average annual growth of 3.3% during 2012-17) this is unlikely to translate into higher manufacturing activity in the state.

Agriculture (11% of GVA) has been adversely affected by the deluge and is likely to see a significant contraction in output. Moreover, the growth of this sector as it is has been prone to fluctuation (ranging between -6.3% to 2.9% during 2012-17)

Overall, the state economy is likely to seen a decline in growth rates in 2018-19 (as agriculture output will be impacted as also GVA from Ernakulam which is the highest contributor to state GVA) and could see a gradual recovery in the next fiscal year. The government has projected an improvement for the state's GDP for 2018-19. At current prices, state GDP is slated to grow by 12.6%, 1.3% higher than year ago. This could translate to a growth of 7.6% in real terms (taking inflation to be 5%). **In light of the recent development and the impact of the same we expect the state's economy could be affected by up to 1% depending on the time taken at rehabilitation/reconstruction especially for tourism/recreation activity. Agricultural output would definitely be affected and growth can be negative.**

State's financial position to be pressured further

Kerala's financial position has been strained over the years. The state has been sustaining a high revenue deficit and has been unable to maintain its fiscal deficit within the 3% target of GSDP. It also carries a high debt burden with outstanding debt at Rs.2.1 lakh crs (2017-18) or 31% of GSDP. The state has been unable to adhere to the fiscal consolidation guidelines stipulated by the Finance Commission. The revenue expenditure of the state has been accounting for over 80% of the state's total expenditure, constraining the state's ability to undertake expenditure for capital creation and thereby the future economic and revenue generation capability of the state.

The finances of the state are likely to be further pressured owing to the floods. While expenditure towards flood relief and reconstruction would increase, the government income could see some moderation. The revenue deficit would widen further (2018-19 budget has estimated it to be Rs. 12,860 crs) and the fiscal deficit too would increase from the budget estimate of 3.1% of GSDP (for 2018-19). The state debt too is likely to increase and may have to resort to increased market borrowings (from the budget estimate of Rs.1.6 lakh crores). **Every Rs 1000 cr spent over and beyond what has been budgeted as flood relief will widen the revenue deficit by 0.12% of GSDP.**

Remittances to increase

Remittances are mainstay of the state's economy and have been directly and indirectly affecting every aspect of life there. The sustenance of the state's economy and its 'model' development story can be credited to the flow of remittances. Over 10%³ of the state's population either lives or has lived abroad and remittances sent by non-resident Keralites (NoRK) is over 35% of the state's net domestic product⁴ or 2 times the state's own revenues.

Kerala accounts for the highest share of remittances into the country. As per the RBI⁵, Kerala share in total remittances for 2016-17 is 19%, which works out to \$ 10.7 bn (Kerala's estimated share in India's net remittances in 2016-17). Nearly 60% of remittances are usually towards the consumption and maintenance of the family, 20% is towards bank deposits and 8% is in investments in landed property /shares.

Although, remittance to the state have declined in recent years (from \$12.6 bn in 2014-15 to \$10.7 bn in 2016-17⁶) due to the global economic slowdown and the nationalisation policy in the Gulf nations, which accounts for around 60% of the migrants from Kerala, the flows of remittances to the state are expected to increase on the back of increased support; including donations coming from various regions for flood rehabilitation. The most affected districts (Kollam, Idduki, Ernakulam, Kottayam and Pathanamthitta) accounts for 27% of the emigrants from Kerala⁷.

We do not expect any substantial increase in remittances which can be of the order of \$ 0.15-0.2 bn (Rs.1,050 – 1,400 crs).

Increased likelihood of defaults

Kerala's outstanding bank credit stood at Rs 2.81 lakh crore as of Q4FY18 (3% share in the total bank credit). There has been an increase in credit growth in the region in recent quarters. The year-on-year credit growth was 14.2% in 2017-18. We believe that reconstruction activity would entail higher borrowings by the households and businesses, resulting in an

³ As per the Kerala government Kerala Migration Survey (KMS) 2014, the non-resident Keralites (NRK) are estimated at around 36.5 lakhs.

⁴ 36.5% of state net domestic product – Economic Review 2016

⁵ Inward Remittances Survey 2016-17

⁶ CARE's estimate based on RBI's BoP data and inward remittance survey (share of Kerala in total remittances)

⁷ Economic Review 2016

increase in bank credit off take /growth in the region. **Credit growth could grow by 17-21% (year-on-year) in Kerala this year assuming all average rebuilding expenditure by households of the order of Rs 50000-Rs 1 lakh per unit is financed by banks. It is however likely that a large part could be from NBFCs too.**

At the same time, given the physical and economic disruptions caused, the debt servicing ability of borrowers is likely to be impacted in the next 3-5 quarters. This would be in the areas of agriculture and services in particular which have been affected by the floods. The old private banks which are dominant in this region would be challenged more due to their higher exposures.

We have also attempted to analyse the impact on certain key industries in Kerala that have been affected by the flood.

Plantations

Apart from having affected the normal course of life, the floods in Kerala have also negatively impacted the state plantations industry. Agriculture and allied sectors is one of the key sectors for Kerala economy as many people in the state directly or indirectly depend on plantation and agriculture for their livelihood. Thus, Kerala economy to an extent relies on the vagaries of nature. The state is the largest producer of rubber in the country. Other crops include coconuts, rubber, tea and coffee, cardamom and pepper, cashew, arecanut, nutmeg, ginger, cinnamon and cloves. Floods in the state therefore have disrupted the output of these crops which, in turn, will impact the revenues or earnings from this industry.

As per our calculations, the rubber and tea industry is estimated to witness a loss of around Rs.420-430 crore and Rs.35-40 crore, respectively, for the period August-September 2018 reflecting the impact of floods in the five most affected districts of Kerala that include Ernakulam, Idukki, Kottayam, Kollam and Pathanamthitta. The period for August-September is considered as the floods that started in August are expected to have its impact in the next month as well. The impact could even extend beyond September.

The supply side disturbance in rubber industry would significantly increase the cost for tyres industry as rubber is the major input used for making of tyres. In addition to rubber and tea industry, the other plantations like coffee and spices like cardamom are also expected to face the impact of floods which, in turn, would disrupt supply for these commodities. As per the table below, India's coffee production from Kerala accounts for around 20% of the total output and supply of small cardamom from Kerala amounts to a share of about 85% of all-India small cardamom production.

Table 2: Coffee and small cardamom production for 2016-17

	All-India production	Output from Kerala
Coffee (in metric tonnes)	3,12,000	63,265
Cardamom small (in tonnes)	17,990	15,650

Source: Coffee Board of India, Spices Board of India

Airport disruption: CIAL

- Operations at Cochin Airport have been closed till August 26th due to the flooding.
- Almost 55% of the passenger traffic at the airport is International passengers.
- Passenger traffic of around 3.5-4.5 lakh is expected to be affected over a period of 12-15 days, **causing revenue loss of Rs. 22-27 crore to the airport.**
- **An additional loss of business and revenue for other operations and services at the airport is expected to the extent of Rs. 8-12 crore.**

- The extent of damage to the airport and the runway is not yet known. The runway and the entire airport facility are submerged under water due to flooding from a distributary of Periyar River.

Road network

- The state has a highway network of over 2 lakh km out of which almost 60% is surfaced.
- Close to 10,000-12,000 km of roads under the PWD is estimated to be damaged or destroyed, which would require roughly Rs. 7,000-8,000 crore of expenditure for restoration.
- Rural roads which make up for almost 60% of the total surfaced road network in the state would require an additional Rs. 2,000-3,000 crore for reconstruction and restoration.
- Together, **roughly Rs. 10,000-12,000 crore would be required to repair and restore the damaged road network in Kerala immediately.**

Housing

- Approximately 22,000 houses (NDMA estimates) have been reported as destroyed/ damaged by the State Government and few other sources.
- The Central Government has announced rehabilitation and reconstruction of “Kutcha houses” in rural areas under “PMAY-Rural” scheme on a priority basis.
- The Central Government is expected to bear most of the costs related to reconstruction of houses and restoration of damaged houses. **These costs would be in the form of loan interest subsidy for affordable housing etc which would be around Rs. 100-120 crore for the current year.**

Tourism

- Kerala has always been a sought after tourist spot and has also been a destination for MICE activities. With the seasonal nature of the demand, the state witnesses huge demand for MICE activities during the April-June (Q1) and October- March (Q3 and Q4) for tourism and social activities. Kerala’s state festival Onam, which is a 10 day festival, falls in Q2 of the financial year leading to a high influx of tourists in the state. As per the Ministry of Tourism, during FY17 Kerala ranked 8th and 17th for foreign tourist visits (FTV) and domestic tourist visits (DTV), respectively. There were around 1.09 million FTVs and 14.67 million DTVs of which Ernakulam (highest) accounted for 41.6% of FTV and 22.4% of DTV, Idukki accounted for 3.9% of FTV and 7.4% of DTV, Kollam accounted for 0.6% of FTV and 2.6% of DTV, Kottayam accounted for 3.0% of FTV and 3.2% of DTV and Pathanamthitta accounted for 0.2% of FTV and 1.1% of DTV.
- The state had witnessed a fall in MICE tourism due to the liquor ban imposed in FY18 as this led to a shift from Kerala to Sri Lanka and Thailand. In FY19, tourism has already been affected due the Nipah virus, now with the floods; a further fall in tourism is expected for around 6-7 months as the state recovers during the peak tourism season.

Gold

- According to a National Sample Survey Office (NSSO)’s survey on household consumption of various goods and services in India, 2011-12, amongst all the states, Kerala accounts for the largest share in the purchase of gold ornaments. The survey indicated that the monthly per capita consumption of gold in Kerala was approximately 3-4 times higher than the second largest state.

- Onam and the days before the same witness significant purchase of gold ornaments. However, due to the floods, buying has been muted and is not expected to pick up in the near future as people who have suffered damaged in the floods would rather spend on repairs than buy gold. **Consequently, gold consumption is expected to be subdued in FY19.**

Consumer Durables

- The consumer durables market in Kerala usually experiences high demand during Onam festival. Almost 50%-60% of the entire sales happens during Onam. We can expect a drop in the total spending of consumer durables by Rs 1,000 crores due to the lack of spending during the festive season due to flood situation.
- Going forward a significant replacement demand of consumer goods such as televisions, refrigerators, air conditioners and washing machines is anticipated once the floods recede and rehabilitation efforts are under taken and house are repaired/ reconstructed.

Concluding remarks

- The impact of the floods on Kerala is quite sharp and the economic consequences significant. This is beyond the suffering caused to the families affected by the flood.
- The plantation sector and tourist segment would be impacted the most in terms of contribution to the GSDP. Lower spending levels during the festival of Onam will impact the consumer goods industry (including auto) and gold. Growth in GSDP can be affected by up to 1%.
- Bank NPAs will be pressurized though the impact is difficult to conjecture at this time. The old private banks which have a strong presence would be the ones affected the most.
- Growth in credit of Kerala Business i.e. in state of Kerala will increase from an average of 14% to 17-21% as households and small units borrow more for rebuilding their homes/business. However, this growth will be shared with NBFCs.
- Infrastructure losses would be high for roads (Rs10-12,000 cr), airports (Rs30-40 cr) and housing.
- The government's deficit would be under pressure if there is spending on relief which is not compensated by cuts elsewhere. Growth in revenue will also be affected when production levels become subdued. Given the rather unchanged nature of overall remittances to the country, we do not believe there will be any significant incremental inflows from NRIs housed overseas.

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