



Subir Gokarn: Rainfall and the economy

A number of significant linkages between rainfall and economic outcomes have policy implications

Subir Gokarn May 03, 2015 Last Updated at 22:50 IST



The first forecast for the south-west monsoon this year caused concern. It projected aggregate rainfall during the June-September period to be 93 per cent of normal, somewhat below the conventional range of 96-104 per cent. This projection would not have attracted much attention, but it comes after a succession of rain-related problems. First, the 2014 south-west monsoon was severely deficient during the first half of the season. Second, there has been significant and widespread abnormal rainfall during the *rabi* season, with attendant crop losses and distress amongst rural communities. Further, this is going to be an El Niño year, increasing the probability of rainfall deficiency. Should we be worried?

The answer to that question needs to be based on our understanding of a number of macroeconomic linkages with rainfall. Let me lay out some of these. First, there is the obvious relationship between rainfall and food production and prices. However, this is hardly as simple as a straightforward low rainfall-high food inflation correlation. The monsoon needs to be significantly below normal for the entire season for food prices to accelerate across the board. This happened in 2002 and 2009. In other recent years of deficient rainfall, such as 2014, the aggregate deficiency was not large enough to have a similar impact. Significantly, notwithstanding the shortfall last year, food inflation has been on a steady decline since and the disruptions in recent months have not, at least so far, had any adverse impact.

This suggests that many other factors are at work. If the early forecast turns out to be accurate, the shortfall will not have a significant impact on food inflation. But, then, as is being constantly being pointed out by observers, it is really the timing and geographic spread - the spatio-temporal patterns - of rainfall that is the critical determinant of outcomes. We don't yet have a forecast for this, but this leads into the second linkage.

In the western and the eastern parts of the country, the normal rainfall is far in excess of what the agricultural systems need to produce a normal crop. A moderate shortfall, therefore, is not disruptive. In the northern region, snowmelt and irrigation systems offset rainfall shortages. It is really in the central part of the country, where the normal rainfall is just about enough to support predominantly rain-fed activity, that a deficient monsoon has the most impact. A deficient monsoon puts major crops like pulses, oilseeds, cotton and cattle fodder at risk. In 2009, below-normal rainfall had a significant impact on the prices of pulses. Fodder shortages directly impact milk prices, which have been under pressure for a number of years now.

As regards timing, as was demonstrated last year, a first-half deficiency, say, until the middle or end of July, affects sowing of the long-cycle crops like cereals and the others mentioned above. If rainfall recovers in the second half, it facilitates more widespread sowing of short-cycle crops, mainly vegetables. Prices of vegetables, which have exerted so much pressure on food inflation for a few years, have actually been quite moderate over the past several months.

In short, it would be premature to revise forecasts of food production and prices based on any aggregate monsoon forecast, let alone an early one. If the aggregate projection is 93 per cent of normal, baseline macroeconomic forecasts should be based on the assumption of a normal monsoon.

The third linkage to consider is the impact of a deficient monsoon on rural demand. There have been indications of flagging rural consumption, based on both stagnating wages and sub-normal production. However, here again, geography is critical. Remember that the least affluent parts of the country are broadly those in which agriculture is most rain-dependent. The other parts, as I suggested above, have both natural and man-made buffers against monsoon failure. From an expenditure perspective, if the already relatively low-spending regions of the country see some attrition in their purchasing power, the impact on aggregate consumption demand is going to be muted. It would take a massive shock to the relatively more affluent rural regions to cause demand to decline significantly. Yes, there may be other factors at work currently, but a moderately below-normal monsoon is not going to be too much of an aggravation.

This brings me to the fourth linkage, which is macroeconomic and beyond. This is about the human distress that deficient rainfall can cause in precisely those parts of the country that have no buffers. Even if the inflationary and demand implications of a mildly deficient monsoon are moderate, its impact on quality of life of households can be dramatic. The major policy implication of this linkage is the necessity of safety nets, in whatever form.

When the monsoon failed in 2002, the National Highway Development Programme (NHDP) was gaining momentum and, fortuitously, there was significant activity in the worst affected areas. I recall driving through Rajasthan on the National Highway 8 in November 2002; the stretch was being converted into four lanes at the time and I was amazed at the large numbers of people who were at work doing this. Large rural construction programmes are, I believe, an integral part of any sustainable safety net. It depends, of course, on what is being built.

During the 2009 season, the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) was in force. Impact assessments of this have highlighted inefficiencies and leakages and also significant differences across states in effectiveness. While these insights are important inputs into re-design and refinement of the scheme - direct transfers into bank accounts, dovetailing the work programmes with ongoing rural construction projects and so on are all valid ideas - the key test of a safety net is how much it helped to alleviate distress in a crisis situation. I think that somewhere in the intersection between the NHDP and the MGNREGS lies a feasible solution.

It should be a policy objective to monsoon-proof the economy, not so much because of the share of agriculture in gross domestic product (GDP), which is below 15 per cent, but because of the high proportion of people who are potentially vulnerable to monsoon failure. An effective approach will comprise several components, a critical one being a reliable safety net. Aligning safety nets with rural investment could be the most productive way of addressing the problem.

The writer is director of research, Brookings India, and former deputy governor, RBI. These views are his own