

# KP @85 Festschrift Conference- Session 2

On Saturday, 19 September 2020 (19:00 - 21:20 IST)

## Delegates



**Dr. Ashima Goyal**  
Professor, IGIDR



**Dr. Suman K. Bery**  
Non-Resident Fellow, Bruegel Former Global  
Economist, Royal Dutch Shell



**Dr. Ram Ramanathan**  
University of BedfordshireCEA



**Dr. Probal Ghosh**  
Assistant Director, IRADe



**Dr. Ashutosh Sharma**  
Area Convenor, IRADe



**Mr. Abhishek Kumar**  
Research Scholar, IGIDR

## Agenda KP @85 Freshchrift Conference

19:00 - 19:30 IST	Presentation on “ <b>What determines Indian inflation, supply or demand?</b> ”	<b>Dr. Ashima Goyal</b> , Professor, IGIDR <b>Mr. Abhishek Kumar</b> , Research Scholar, IGIDR
19:30 - 20:00 IST	Presentation on “ <b>Macroeconomic Impact of Diesel subsidy reforms and factors that impeded its benefits to the economy.</b> ”	<b>Dr. Probal Ghosh</b> , Assistant Director, IRADe
20:00 - 20:30 IST	Presentation on “ <b>Climate change implications of reducing food waste using new digital technologies.</b> ”	<b>Dr. Ram Ramanathan</b> , University of Bedfordshire
20:30 - 21:00 IST	Presentation on “ <b>Assessment of food security and livelihood due to climate change in Uttar Pradesh, Himachal Pradesh and Odisha.</b> ”	<b>Dr. Ashutosh Sharma</b> , Area Convenor, IRADe
21:00 – 21:15 IST	Discussants	<b>Dr. Suman K. Bery</b> , Non-Resident Fellow, Bruegel, Former Global Economist, Royal Dutch Shell <b>Dr. Kirit Parikh</b> , Chairman, IRADe <b>Dr. Jyoti K Parikh</b> , Executive Director, IRADe
21:15 – 21:20 IST	Closing Address & Vote of Thanks	<b>Dr. Jyoti K Parikh</b> , Executive Director, IRADe

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## About the Webinar

The webinar provides an opportunity to facilitate a broad discussion and engagement on four interconnected issues of economy, energy, climate change, and Agriculture. The presentation by Dr Ashima Goyal and her student Mr Abhishek Kumar would dwell on the question of whether supply or demand determines inflation in India. This is also relevant to energy sector researchers as energy prices through petrol and diesel prices are often the reason for spiralling inflation during International oil price spikes. This, in turn connects with the presentation by Dr Probal Ghosh, IRADe which deals with the impact of diesel price and subsidy reforms on the Indian economy and factors that hindered the economy from benefiting from it. Diesel subsidy reforms were considered necessary to bring in energy efficiency in vehicular use to combat climate change. Dr. Ram Ramanathan from the University of Bedfordshire would present on addressing climate change by reducing food waste using digital technologies, and Dr Ashutosh Sharma, IRADe will present on Climate change and Agriculture.

## Abstracts

### **“What determines Indian inflation, supply or demand?”**

Prof. Ashima Goyal and Abhishek Kumar, IGIDR, Mumbai

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In this paper, we estimate a structural shock (inflation shock) that explains the maximum forecast error variance of inflation using a structural vector autoregression (SVAR) framework. Our identification is agnostic and not based on sign and zero restrictions commonly used in SVAR literature. Estimated shock explains more than 80 percent of forecast error variance of inflation up-to 40 quarters. This shock increases inflation and decreases output; implying that it is a supply shock. It also increases interest rates and decreases credit and investment. The shock also explains more than 40 percent of the variance of credit, output, investment, and interest rate over the same time period; suggesting that this shock is a significant driver of the Indian business cycle. We then identify food and non-food inflation shock and show that the response of the model variables due to inflation shock is similar to the responses due to food inflation shock. Non-food inflation shock does not affect credit, output, investment, and interest significantly. Using the shocks obtained from a medium-scale new Keynesian model, we provide additional evidence that most of the variance of estimated inflation shock is explained by supply shocks.

### **“Macroeconomic Impact of Diesel subsidy reforms and factors that impeded its benefits to the economy”**

Presenter: Dr. Probal Ghosh, IRADe, New Delhi

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To cushion the economy from the adverse impact of oil price rise, Government of India adopted a policy of subsidising consumption of petroleum products by controlling consumer price. The difference between cost of supply and sales revenue was to be borne by the public sector oil marketing companies (OMCs), the upstream public sector companies that produce crude oil and the government. The strategy initially was successful in cushioning the Indian economy against the adverse impacts of oil price increase during the period 2000-2014. However, with increases in International oil prices the subsidy burden also increased significantly. The increasing fiscal deficit also led to higher inflation constraining growth. In this background the Government of India decided to deregulate the prices of petroleum products and make them market determined. The prices of petrol were deregulated on 2010 to make it market determined however diesel continued to be subsidised. In September 13, 2012, the government of India increased the price of diesel by Rs. 5 per litre (Press Information Bureau 2012) and adopted the policy to gradually increase the prices of diesel by Rs 0.5 per month from January 2013 to slowly eliminate the burden of subsidies and make diesel prices market determined. In 2014 diesel prices were declared to be fully deregulated. This improved the fiscal position of the government and the resources of the OMCs but it did not result in any significant upturn of economic growth as one would have expected. This paper tries to assess the economic impact of the diesel price reforms policy that the government adopted and the factors that constrained the economy from benefitting from diesel price reforms.

**“Digital technologies for combating climate change – some case studies in agrifood supply chains.”**

Presenter: Professor Ram Ramanathan, University of Bedfordshire

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Contributions of Professor Kirit Parikh to the field of climate change are immense. Guided by his research, the talk will use some case studies to explore how new digital technologies will help reduce food waste in agrifood supply chains and hence to combat climate change. The research is based on a large European project on the use of digital technologies, data analytics, artificial intelligence and decision support tools in reducing food waste in agribusiness supply chains in Europe. The talk will briefly discuss the project and some case studies being developed in supporting agribusiness companies in Europe. The impact of the project is illustrated by showcasing the on-going technology demonstrations in various parts of North-West Europe in reducing food waste, which is then linked to compute avoided CO<sub>2</sub> emissions.

**“Assessment of food security and livelihood due to climate change in Uttar Pradesh, Himachal Pradesh and Odisha.”**

Presenters: Jyoti Parikh, Chandrashekhar Singh, Ashutosh Sharma

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It is widely accepted that climate change will alter the pattern of temperature and precipitation, which will adversely affect the agriculture sector. In India, there is a huge dependence on agriculture for livelihood, and an adverse impact on it will affect food security, poverty and economic well-being. The study assesses the impact of climate parameters on major crops yield in Odisha, Uttar Pradesh and Himachal Pradesh in the short-term, medium-term and long-term. The projected future climate data available up to 2100 from CORDEX model experiment SMHI-ECHAC (CSIRO) for RCP 4.5 emission scenario at a spatial grid of 1° X 1° on a daily scale was considered for future as well as for the baseline period. The study utilized BIRTHAL et al. 2014 crops yield sensitivity coefficients with average maximum and minimum temperatures and precipitation to estimate the district wise impact on the yields of major crops.

The projection carried out in this study for three States at district level suggests that the yield of wheat and rice will be adversely affected over short, medium and long-term period due to changes in climate parameters. The projected changes in these parameters vary across districts within the state. Therefore, the required adaptation measures will vary across districts/regions. The adaptation strategies will largely depend upon potential climate impacts in the particular agro-climatic zone, and socio-economic conditions. The study outcome at the district level will help us to develop the strategy at the micro level to reduce the projected loss to the farmers.

The development schemes and programmes aimed for agricultural development and rural economic growth, need to be seen under the policy umbrella of food security and rural livelihood. Therefore, a coherent climate adaptation plan should work for convergence of the on-going schemes and programme to combat climate change. Government schemes should cater to the large agriculture-dependent rural population for achieving an effective outcome. This also indicates that for an inclusive adaptation, adequate funds will be required for enhancing the ambit of the existing programmes substantially to cater more intensively to the large section population dependant on agriculture.