

Highlights of a webinar on “The Black Box-Innovation and Public Policy in India”

Date: 8th October 2021

Time: 3 pm onwards

Organized by

DST-Centre for Policy Research (DST-CPR) at Panjab University, Chandigarh

Speaker: Prof. Rakesh Basant, JSW Chair Professor of Innovation and Public Policy and Professor of Economics at IIM, Ahmedabad

A webinar on the theme of “The Black Box-Innovation and public policy in India” was organized by DST-Centre for Policy Research, Panjab University, Chandigarh on 8th October 2021. The webinar aimed to demonstrate the complexity of the linkages between the black box of innovations and public policies with their effect on the implementation of policies. Prof. Rakesh Basant discussed the complete paradigm approach and key arguments of his published book “The BLACK BOX: Innovation and Public Policy of India” originally released on 23rd August 2021.

Prof. C. Nirmala (Coordinator, DST-CPR) officially welcomed the resource person, all the participants and the special addressee, Prof. Manmohan Gupta, Coordinator Chandigarh Region Innovation and Knowledge Cluster (CRIKC) and Co-Coordinator, DST-CPR, Panjab University, Chandigarh for integrating his inputs in this webinar. Prof. Manmohan Gupta briefly highlighted the basic paradigm for constructing CRIKC and the role of innovation clusters in the global development of a country. According to him, innovation in science, public policy and industry is an imperative system. Around 40 innovation clusters are contributing $\approx 60\%$ of Gross Domestic Product (GDP) across the globe. Prof. Gupta further added, there is a need to have a quantum jump in innovation by creating innovative ideas resulting in a huge impact on GDP and other economic fields in the country. Currently, India needs to work in the domain of job creators by working on innovation and knowledge. Connecting passionate experts can lead to good projects and disruptive and incremental innovations.

Prof. Rakesh Basant is currently the JSW Chair Professor of Innovation and Public Policy and Professor of Economics at IIM, Ahmedabad. His academic and research expertise inculcates firm strategy, innovation, entrepreneurial business models, public policy & regulation, capability building processes in industrial clusters, Foreign Direct Investment (FDI) in Research and Development (R&D), innovation-internalization linkages, competition policy, inter-organizational linkages for technology development (especially academia-industry relationships), strategic and policy aspects of intellectual property rights (IPR), linkages between public policy and technological change, economics of strategy, the small scale sector in India and policy issues in higher education, pharmaceuticals, IT, electronics and auto-component industries. He was a member of the Indian Prime Minister's High-Level Committee (also known as Sachar Committee) that wrote a report on the Social, Economic and Educational Conditions of Muslims in India.



Prof. Rakesh Basant mentioned that his book intended to reach the general readers to make them understand the significance of the ‘black box of innovation’ and its linkages complexity with public policies. His talk was based on the book authored by him. The highlights of the talk are as follows:

- To develop an appropriate policy of innovation, policy-makers should understand the broad view of innovation policy, instead of narrow views, that is, it should club all policy instruments that are imperative for implementation. Once these policy instruments are recognized and managed, innovation can be strengthened.
- All policy instruments should be correlated and integrated for a positive overall impact on innovation.
- The aim of policy-makers should be to focus on creating innovation capabilities like managing competition and other challenging situations. This is because innovation gets supported by the nature of competition. If innovation is not taken to the market, it is simply an invention.
- We need to reconstruct our higher education system in which in apart from the amendment of teaching skills, research skills should also be tapped upon. The role and expected impact of National Education Policy (NEP) 2020 is too early to discuss at the present stage.
- New policy initiatives should be in the direction of growing the entrepreneurial ecosystem. Exploration of mission-driven approaches for certain technologies, sectors, nature of innovation, innovation activities should be done before devising the policy instruments.
- An articulate survey of private firms should be analysed to determine the actual private firms working in R&D, products and processed innovations. It will enable effective analysis of

incremental and disruptive innovations and identify areas of innovation like local markets, international coverage or high scale technology transfer.

- Policies that curtail specific sources likely to harm innovations. Therefore, policy-makers should make restrictions on technology flow imports not beneficial in long run.
- A complete paradigm understanding of innovation methodology is very critical to contribute to the economy.
- Various policies affecting innovations are trade policies, industrial policies, small size policies, R&D policies, entrepreneurship policies, etc., which further affects the demand and supply, learning opportunities and linkages with the markets and innovators. For example; public procurements going to private companies for knowledge and tech-transfer will enable the effective supply of R&D to society.
- Multi-National Companies (MNCs) when come in also bring new technologies, which opens up more opportunities for learning and increased networking with local markets.
- If idea is to encourage R&D in a specific area, proper coherence and consistencies in the ideas are required. Therefore, a lot of complexities need to be overcome to develop effective policy instruments. Firms should have good innovation capability to develop and utilize policy instruments wisely.
- An economy created should be open to having effective networking and enabling feedback.
- Total Factor Productivity (TFP) of an economy can be increased if trade barriers are not restricted.
- The policy challenge is to identify a policy package to create incentives for private firms for facilitating a competitive environment to develop enhanced capability. For example, a policy package for 'AatmaNirbhar Bharat Abhiyaan' that restricts trade and hampers competition may not foster innovation. Therefore, appropriate incentives and policy instruments should be designed for strengthening innovation.
- Role of higher education and innovation ecosystem:
 - (i) Higher Education Institutes (HEIs) build innovation and product capabilities that help in imparting relevant education and skills in labour market networks.
 - (ii) Current HEIs in India lacks conducting research development programs for the students, which are imperative to develop research skills among students during their education stages. It will further strengthen the flow of research from the lab to market and effective tech-transfer.
 - (iii) NEP 2020 will help only if sufficient autonomy is provided to HEIs. Academic institutes should promote both teaching and research to promote innovation and competition.
 - (iv) Incubators, accelerators and innovation-driven start-ups set up with government support will tend to bring ample innovation spurring behaviour among academicians. One should have a business model, where incubators should take funding from both public and private agencies.
 - (v) Instead of institute specific, an incubator should be cluster-based. This is because it will include expertise from different fields which will add value to the incubator.
 - (vi) The cluster may also transfer incubators into early venture funds by creating an appropriate management team.

➤ Significance of Financing Innovation in India

- (i) Funds are needed at all stages of innovation as R&D subsidies may not compensate for the high cost of capital and infrastructure in India.
- (ii) If the cost of imported products is high, innovations will suffer. Consumer-focused firms do not suffer funding issues, but innovation-driven firms do face funding issues.
- (iii) An appropriate Public-Private Partnership (PPP) model will be more beneficial for funding high tech and high social impact areas. This is because, PPP model reduces risks, transaction costs and other uncertainties of a particular project.
- (iv) Investment decisions should be made by well-equipped and experienced people to enable the smooth functioning of projects.

Prof. Rakesh Basant concluded his talk while emphasizing the role of public policies, their implementation and the role of their stakeholders in enabling effective innovation as per the demand of the market. He also suggested DST-CPR team to work on creating a multidisciplinary course on the innovation ecosystem.



After the Question/ Answer session, Prof. C. Nirmala officially presented a vote of thanks to the resource person, Prof. Rakesh Basant, Prof. Manmohan Gupta and all the participants for making this webinar successful. She also mentioned that HEI's need to be strengthened because current students lack the passion for research and just move up for taking degrees. Modern technology has distracted students, therefore students need to be trained at the appropriate time. Funding is also the biggest challenge to conducting such small research programs.