

Innovation must for keeping industry thriving!

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Despite feel good factors and optimism, Indian innovation ranks globally are sliding down. It was visible when in July, 2014, the annual rankings of Global Innovation Indicator ranked us at 76th position, a good 10 places down than what it was in previous year. The results are jointly published by Cornell University, INSEAD, and the World Intellectual Property Organisation. It surveys 143 economies around the world, using 81 indicators to gauge innovation capabilities and results.

Except for few genuine cases, India has been known for its 'Jugaad Innovation' which means taking the easiest possible route for establishing a short-term order until the next one is found. Few will argue that with a huge population and lesser resources, this is the best we can do. But that doesn't stop one from asking why is the real innovation reaching us? Well the reason necessarily is not that there is lack of ideas but possibly of enough translation. The Thompson Reuters 'State of Innovation in India- 2013' states that the pharmaceuticals on basis of the patent activity hold close to 23 percent of overall innovative stuff done in India while agriculture with mere 5 percent is the only next in bioscience domain. Besides that the academia scores higher than industry as the government departments such as department of biotechnology (DBT), Council for Scientific and Industrial Research (CSIR), Defence Research and Development Organization (DRDO) find their places in the list while the number of companies is significantly much lesser than expected.

Defining Innovation!

There can be different ways to introduce new things and improve the existing ones. However, is that so simple? One of the easiest definitions ever heard of the word 'Innovation' is the desire to overcome existing challenges to establish new order.

Giving his own version, Mr Sam Piroda, former chairman, National Innovation Council said, "Although the word innovation might be defined in many ways, I think it should bring about change not just in terms of new products but the processes and delivery too. It cannot be limited only to outcome but the entire process that is part of it. In plain words, it is thinking just outside of box."

Dr RA Mashelkar, former director general, CSIR and president, Global Research Alliance and National Innovation Foundation defines it. "In a simple language, innovation is creating ideas and then turning them into something that benefits large

sections of society. India being a capital-starved country faces challenges apart from sustainable growth. Therefore, given the scarcity of funds in the present context, I would say "less from less" is not the answer but "more from less" is the solution. Unfortunately, we don't have those extra millions to spend on various initiatives of importance. There is need for the work flow changes to adapt to new requirements. One may ask what is common between selling a burger or an eye-care treatment. It is the sharing of expertise that matters and that make the industries grow. Moreover, the essence of education is to mix multidisciplinary aspects to create something new and useful."

Obstacles can damage innovative spirit to a great extent. During one of his talks, Dr MK Bhan, former secretary, DBT identified several of them in India. The reluctance to experiment, talent pool not being diverse enough for product innovation (don't require only scientists); poor flow of knowledge (not enough bi-directional flows); fragmentation in government policies as separate departments for biotech and pharma; and more importantly the lack of cross talk.

Therefore novel idea surely is a single brain thing but can it thrive without right kind of environment and partnerships. Agreed Dr Neeraj Sharma, head-technology development and transfer (TDT) and policy research, department of science and technology (DST) when he said, "People of this country are the key stakeholders in this innovation. We need to sow the seeds as early as possible. Government is trying to invoke multi-disciplinary research. There are steps being taken to establish National Innovation System in India. It marks a major shift in the policy. How an innovation based economy can be built, is a question can be answered through various ways."

But can it be forced?

The DBT has been doing its bid to promote the innovation. Its 'Tata Innovation Fellowship' is, a highly competitive scheme instituted to recognize and reward scientists with outstanding track record in biological sciences and a deep commitment to find innovative solutions to major problems in health care, agriculture. Apart from that the other government institutions and agencies are trying to promote it in their way. Programmes like the Stanford India Biodesign are structured to train professionals in identifying indigenous needs, coming with feasible solutions within various constraints and making their invention affordable, sustainable and scalable. Dr Balram Bhargava, executive director of the programme says that "We are trying to change the milieu of innovation in India through this initiative. The structure of the programme has rapidly caught on with a lot of institutes across the country, which are now following the model in order to develop the medical device innovation ecosystem."

The government proposes to launch an innovation fund exclusively for Micro, Small and Medium Enterprises (MSMEs) to encourage and promote new knowledge-driven ventures and programs, revealed Mr Kalraj Mishra, minister of micro, small and medium enterprises, while inaugurating the two-day 'Global R&D Summit 2014' at New Delhi recently.

However, is it really translating into something is the big question to ponder upon. Most will agree that the right nurturing and facilities surely can help deliver innovation. However, can it be forced? "For some innovations, we need only environment not always infrastructure. We cannot force innovation. 'Patents' should not be looked from the prism of experience or academic credentials." says Mr Shailendra Porwal, co chairman, FICCI's science and innovation committee.

Innovation drives knowledge feels Ms Nabanita Radhakrishnan, director, Directorate of Planning and Coordination, DRDO headquarters, as she too agrees that it surely cannot be forced. "Need to promote innovation culture for schools. It means having gem of an idea and translating it into a product. Innovation cannot happen without liberalization. Procedures and hiccups cannot help flourish the innovation," she opines.

From Lab to field

The best thing for an industry is its capability to produce more innovative products. It can be either through acquiring of technologies developed by a partner in research or may be by companies themselves. What matters is that at the end of the day there is a product that everybody could appreciate as unique and safe.

"It is important to gain from what exists already", says Mr Vinayak Marathe, senior vice president, Reliance Industries who feels that there is lot of innovation in existing processes and from innovation in lab, there is need to talk about innovation in field.

Calling the Jugad innovation as temporary one, Dr Anil Wali, managing director, Foundation for Innovation and Technology Transfer, IIT Delhi feels that it should be left at a point and time whereas the real innovation is something different. "The real

one is long term effective innovation," he says.

Talking about the funding in the name of innovation, Prof Anil K Gupta, director, Wadia Institute of Himalayan Geology, believes that if we need to be knowledge based innovative economy, we have to segregate the expenditure into verticals: R&D or manufacturing. "There is lot of confusion on what is for the innovation and what is meant for meeting the expenditure for the team driving it," he says.

The scientific community needs to support the Prime Minister's ambitious vision of 'Make in India' says Dr Sarjerao Bhaurao Nimse, general president, Indian Science Congress Association, who adding further, "Earlier, not much importance was given to R&D but now the stress is on developing innovative technologies. There was an immediate need to invest in research to develop knowledge and this knowledge must be converted into patents so that the investment is able to generate revenue." Industry, he said, must support laboratories and fund the R&D programs.

Are the policies alone really going to help the real innovation or not, will eventually get reflected in next ten years. Although one can argue and come up with hundreds of definitions suiting the respective needs, it goes without saying that the real innovation impacts the generations through affordable yet effective implications. So is our industry ready for it?