

Innovation, Business Models and Entrepreneurship
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Lecture – 40
Future Markets and Innovation Needs for India

Hello again. Now, this is the culmination of what we have been talking in this within the section of social entrepreneurship, sustainability, innovation and entrepreneurship and enabling the environment of innovation or let us say, bringing in conducive conditions for innovation. So here, we are with how we can look at those things with the perspective of Future Market and Innovation Needs for India specifically.

We have to start with, I was working in the area of rural marketing quite a few years back, and wrote a chapter in the form of appendix in Principles of a Book called Principles of Marketing by Philip Kotler. And there in that chapter, I tried to propose that rural markets have to be seen differently. How differently, marketing is marketing efforts have to be made in terms of providing products at a precise place, where customers need them. We have to understand their needs and segment a segment, and target the customers accordingly, and position the products accordingly and so on. So, it is a whole lot of a process.

Why should we look at rural markets differently, and what is the context of that. It is a debate, but again the point is rural areas they have a different social fabric, and that has to be considered. So, as I was also referring to an aspect of culture, while propelling innovation, and looking at you know conducive environment for propelling innovations for societal cause. So, here we are India has to be seen with the fabric, India has as far as social structure, and future needs co. That that fabric has to be understood with precisely the you know even the element of multi ethnicity, or let us say diversity of cultures India has.

So, those have to be considered, but again it is it is a difficult task for analyzing those things with relevance to as far as future market needs, and innovation goes. And once, we tend to universalize the products in terms of the needs of the customers. And when then we try to develop a coherence of the products and services with reference to whatever going is whatever is going in global markets, we tend to lose the specific

element, which is it is required at our levels. I am not against any aspect of which is to you know, which part is to be introduced, and well it entirely depends upon the customers, how well they receive a particular kind of a product.

But, we have to have a cord of you know how future has to be looked upon and with what kind of a perspective. Should we look upon the future with reference to the needs, and then what sort of needs, how do we categorize as far as needs of this country, our country India goes, or should we look in terms of future with the perspective of available resources. And how do we categorize those resources, or how do we tend to divert those resources. So, it is a particular debate, which has to take place in terms of how should we look at the future of our country.

Now, briefly touching upon both the aspects, if we look at the levels of needs, you would appreciate at the end of the day that needs have multi-dimensionality. On one side, we have to attend to as far as educational growth goes, which I will address one by one later on. But, just to categorize, because until and unless we look at that part, future development definitely would not happen so much.

Then we have out of pocket expenses on health, and health care has a huge demand and supply gap as far as this country goes, which I have discussed in our earlier discussions as well. Then we have specific defense related needs, and we want to become self-reliant as far as our defense equipment manufacturing, and our forces to well equip our forces defense forces go. So, that is an important need also.

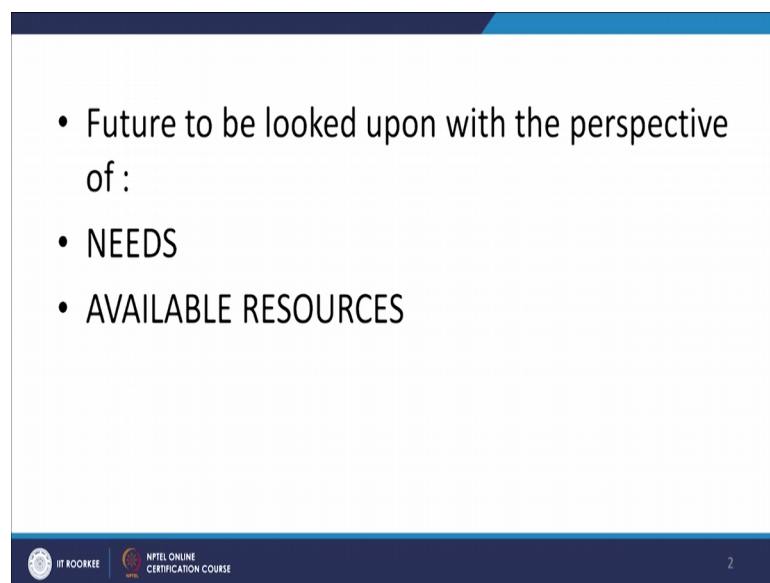
Then we have to have financial independence, wherein government is working quite a bit as far as you know, for universalizing tax norms, and bringing in advancements in tax norms, and you know innovating upon the procedures and processes. Then we have other elements to be catered too. And then there are so many things like sports also, there are there is a huge effort, which has to be made, and which is being made as far as manufacturing sector goes, then there is service sector and so on.

So, rational categorization of needs, if we go, we have lots of multi-dimensionality associated with such kind of needs. But, then again those needs have to be categorized and catered too. For example, as I suggest suggested in the earlier discussions that we urgently have to look at gangues with the perspective of you know, cleaning the river goes. And for that even if we have to pay a partial cost in terms of you know

industrialization besides the river, those steps are being taken with the lots of zeal now. And those are the life of the river is being prioritized against those things.

So, needs have to be categorized that way. But, when needs they occur with the pressing kind of a demand that is a different kind of a situation. But, how to look at future needs that is where our analysis lots of intelligence, and lots of coherence in the thought process, and looking at the complete population with a with the a potential and possibility has to be a method.

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- Future to be looked upon with the perspective of:
- NEEDS
- AVAILABLE RESOURCES

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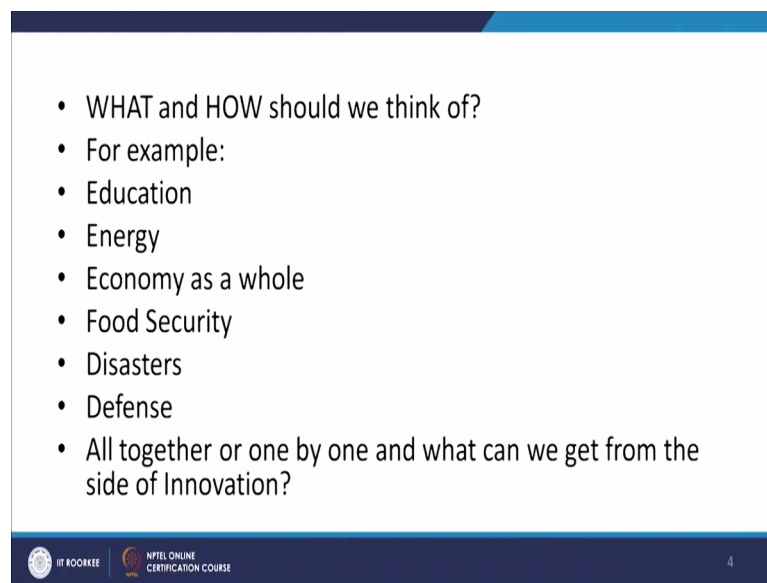
So, then available resources we have to think in terms of our agricultural resources, we have to think in terms of our technological resources, we have to think in terms of our natural resources and so on. So, are we going to exploit our resources, or maintain our resources. For example, you know coal has been a major resource, but now it is depleting, and we are thinking in terms of going for alternative measures, and lot of the lot of effort is being made in terms of solar energy and so on.

But, because we are losing on coal that is why or you know, we want to conserve that resource now, so that that has to be a call, and then I would not categorically comment upon that kind of a thing, because it is beyond the domain of the discussion of this subject. But, ultimately we have to think in terms of future needs with the perspective of or future with the perspective of a look you know available resources as such.

Now, where stands innovation in this process. Innovation has an integrative role to play in everything. To start with innovation has a role to play in categorization of needs as such also. Wherein, we you know look upon let us say, dissemination of education, not with reference to qualification or degrees or diplomas only, but with utilization of that particular education for the development of the society. So and here comes in, if we look at this process with the perspective of innovation, we would realize that ultimately education has to be utilized for the development of our economy, our country, our society.

So, now associating these elements, we come up with innovative courses. Now, we are hugely into you know open courses, which can which can be attended by several people from all works of life, and they can learn. We now, have so much of support for schoolchildren, who can learn from many sources. And, but still we have to go a long way.

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- WHAT and HOW should we think of?
- For example:
- Education
- Energy
- Economy as a whole
- Food Security
- Disasters
- Defense
- All together or one by one and what can we get from the side of Innovation?

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Now, what and how should we think of? As I said that as I am trying to build up the case, as I said. That ultimately you know, we should be thinking in terms of for example, should be categorized in terms of education, then housing, then energy, and then food security, and disasters, and defense, should we take all these things together.

How what should we do, and how should we take things up, what should we prioritize. So, there is lots of a economic crunching, which has to go into this. But, to start with,

what I have realized as an academician as well as playing a particular role with industry also. That ultimately, there are some fundamentals, which have to be catered to as far as India goes. And those fundamentals are to be seen with the perspective of per capita energy consumption.

For example, through a renewable resources, and that is the complete picture actually, if we say that per capita energy consumption, then the picture is half. We have to acknowledge that India must raise the levels of per capita energy consumption with the help of renewable resources, and that makes the picture complete, because renewable resources are definitely going to be supportive for as far as sustainability of our future generation goes. It has a long way to go for as far as the smart city element, or let us say making the lives of people wonderful in terms of developing new cities, and rejuvenating existing cities, and rejuvenating the rural areas with lots of amenities and support.

So, that can be done with the help of modern short, and long distance transportation as such, which will ease the weight of population on bigger cities. And then, in the meanwhile the smart city element, or let us say rejuvenating the city element would be flown in, and then subsequently some you know other cities or supportive cities would be developed and so on. This has to go in a very larger way as far as the whole scenario goes.

So, development of public transport, high speed public transport with lots of innovation in the present transportation system, as well as infrastructure has to come up. Wherein, people from distances of 3 to 400 kilometers can move fast within a time span of 2 hours to reach to the destinations, and so you know some urban aspect should be spread of in due course of time.

And while looking at energy needs, and renewable energy needs, it has to be a parallelly coupled up with the development of not only energy entrepreneurs. From all works of life, as I mentioned earlier also, people are people are working on printable solar cells, up and down motion of the sea waves, geothermal energy, and several other sugar and yeast to come up with you know a form of fuel, and so many other efforts are now commercially viable.

But, unfortunately I have not heard of such kind of efforts being made for commercial usage in India. Although a waste utilizing utilization for energy development or energy

generation is now a big reality, as I mentioned earlier also. Rice husk is being utilized, and other waste material is also being utilized for energy generation, and some efforts we are also making in terms of forest by residue and so on; so, but not structured efforts are being made for as far.

So, entrepreneurial and innovative concentration has to be made in that direction, number one. And then, other industrial efforts, or other manufacturing efforts, or other value other efforts in whole the value chain and supply chain has to be associated with such kind of energy development efforts or energy generation efforts. So, that complete scenario gets woven into one single large picture.

Then comes in educational sector; as I said August the foundation is playing a particular role, Veenavadini School, which I demonstrated with several contexts. And sometimes I wonder that why ambidexterity, which was utilized by Veenavadini to propel charm towards education for poor children to divert their attention, from alcoholism towards better role in the society. Why this kind of effort is not being propelled by other schools. I have not witnessed at all, any such kind of an effort being made for enhancing the capacity, and charm of children towards such kind of effort.

Although, although on the other side, I have witnessed that school children are being. Now, you know taken towards more sort of a specialization with lots of pressing need to appear for competitive examinations, so that they can enter into big universities and colleges, and to focus more upon specialization. And once, they go for that there also, they are pushed for a larger specific specialization in their 4 years of study or so. So, and so much so that they argue upon that they have a very specific thought process to be associated with their future, which is not good at all.

As far as you know when we think in terms of the larger role, which people have to play in terms of, I am not against specialization, but again the point is that education has to be broadened up to a certain limit, and then specialization has to be brought in at the stage of masters or so. For we have been eager to rope in people in you know, economic process at an early stage after their bachelors degree, and we required that kind of workflow, a workforce influx also.

But, we need not to go for excessive push on specialization with that work force requirement at that stage. Particularly, we must categorically suggest the students that

they have to have a wide context of whatever they are learning in terms of, that is one part. The other part is that they must have an idea of that what kind of role they would be playing in, what part of their lives, and how would they be supporting that role with further enhancement in their capacities and knowledge, and from where they would be enhancing that capacity and there that kind of a capability.

And then, how would they further propel, or let us say support the people who are coming from behind. Everyone knows that there is a huge shortage of teachers at school level, and a quality of teachers also is questionable, which is being catered to by several kinds of agencies, including government and several other organizations.

But, what kind of a role individuals are playing, there was a movement, or let us say an effort made by a newspaper called teach India. So, that is these kind of efforts are being definitely made, and individuals are playing specific roles, and that kind of those kind of efforts. But, those kind of efforts are to be made in more structured kind of a fashion. Wherein, you know, education has to be catered to with lots of innovation and perspective. And India needs that kind of any impetus as for it is education system goes, and the quality of output, which is required for future needs of India.

Then terms in food security, and that is a very big issue. Food security has to be catered to through 2, 3 dimensions, one is further growth, as far as our you know food grain school. And further cultivable land, and further techniques in cultivation for their output, which is required in terms of quantum of cultivation, or let us say quantum of food grains, which are which are produced.

And that is catered to by scientific inputs also, that is catered to by several other you know inputs, which are given by the people who are associated with this field, farmers, and microfinance industry, or let us say banking industrials also trying to play a particular kind of a role. Government is definitely playing a very very large role in this, and things are going on well.

But, again the other element is that how to rationally utilize food, how to you know nutritionally utilize food for people, who have less access to food as far as their you know everyone's food requirement goes. And how to reduce the waste as far as food goes, how to use the unused food for people, to reach them any time before it gets

depleted. So, those kind of things are to be addressed, and that too very very structurally as far as innovation perspective goes.

The other important element is disasters. Now, as I referred to you know a few of the events, which occurred earlier. Here, I wish to draw an important attention from your side that there are several categories of disasters, one category is which is beyond our control, so we cannot do much about it. But, definitely we can think in terms of that how we can avoid those you know we can avoid those disasters in future, if somehow we can intervene scientifically with the processes. But, we very well understand that what kind of a situation we are going through, or we are developing in terms of generating several disasters go.

For example, we are interfering a lot as far as rivers go, we are interfering lot as far as our urban planning and structures go, we have been interfering with the hills, and the mountain areas we have been cutting down trees, like anything basically. We have sort of created policy frameworks, and the intention was good, which had to be a guide for us that how we can work within that certain framework. But, instead of taking those policy frameworks as guides, we have taken those policy frameworks as thresholds. And we everyone, every organization, every individual, tends to play just under that threshold, and the cumulative effect as far as generating the causes for future disasters is very very high.

For example, we say that these kind of dams have to be constructed. So, we play with the norms, and that suggests that we are going by the rules. But, we very well understand that if so many people would play with those norms, within that threshold limit, the cumulative effect would be disastrous. So, that has to be seen, and that has to be understood.

And so many avoidable disasters you know they occur they happen, and we can avoid those disasters. For example, Kashmir floods they brought in huge effect as far as the economy of that place goes, and the quantum is very very high. We wrote a paper, and presented that paper in human development capability association conference, in Japan, in 2017. And the point is sorry 2016. And the point is that you know, in that that people justifiably suggest that what kind of a depleting effect the Kashmir floods brought in, and

how those floods or such kind of floods can be awarded, if a long term perspective can be seen and witnessed.

Now, then comes in for example, defense sector. India is focusing quite a bit on as far as their defense capability goes by manufacturing defense equipment, which is required. We have been a defense importer up till now, now we tend to become defense equipment exporter also. But, to what extent we should go about it that is an important thing. This is a sensitive issue, we cannot say that hair draws the line, because so many things depend upon depends upon how other countries would think of our freedom, and our you know defense goes, how they look upon themselves, how our mutual relations would develop in due course of time.

But, everyone understands that ultimately, earth has to be a peaceful place to live, and for that peace to be you know kind of mutual understanding and relations are more important. So, but definitely different sector requires lot of impetus as far as this particular future situation goes.

So, but the question is that is it going to be all together or one by one, and what can we get from the side of innovation. The answer to this is that innovation has to be woven into the complete system and value chain, and we have to visualize this complete system all together.

So, on the one hand, we have to visualize that India should be 100 percent educated. And a larger portion of that education should be utilize for the societal development, and cultural development, introducing voluntary unemployment as such. And making it a better place as far as our transportation systems go, reducing the pollution goes, and then maintaining the purity of the water in the rivers go, and maintaining the health of people go and so on.

So, on one side, we have to focus on that. Then we have to focus on future energy needs, which is a pressing need at this moment. And then, food security and overseeing the disaster and so on. And then, we can think in terms of you know the categorization of our industries for producing future products. First we should be focused upon the fundamental products, which are to be required for our immediate future needs.

And then, mid midterm future needs, and then the long term future needs as such. So, this is where I rest the case as far as the future needs. And you know future needs in terms of market and innovation with reference to India.

Thank you.