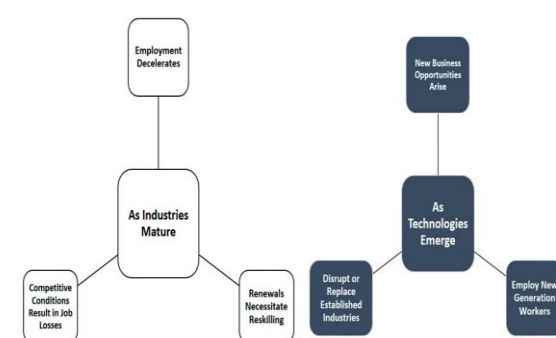


**Entrepreneurship- Perspectives of Business Strategy and Economic Development**  
**Course on Entrepreneurship**  
**Professor C. Bhaktavatsala Rao, Ph.D.**  
**Ajit Singhvi Chair Professor**  
**Department of Management Studies**  
**Indian Institute of Technology, Madras**  
**Week 11**

(Refer Slide Time: 0:14)

**Industrial Structure and Employment Market**

Industry structure is a critical determinant of formal and informal employment in an economy



Developments in technology and business influence recession and prosperity cycles in the economy

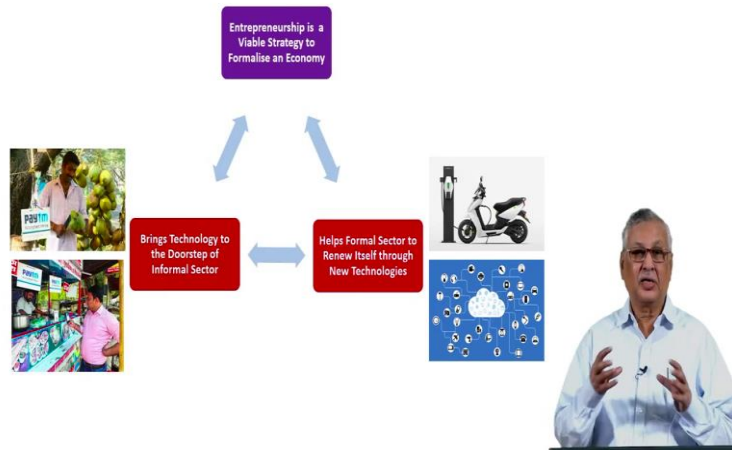


Industry Structure is a critical determinant of formal and informal employment in economy. When industries mature, employment decelerates the growth of employment is smaller. The rate of growth of employment in mature industries is lower than the rate of growth of employment in young industries. So, employment decelerates. And competitive conditions as industry maturity lead to job losses. And the need to renew skillsets, that also leads to job losses.

On the other hand, as new technologies emerge, new business opportunities arise. These new businesses disrupt or replaces established industries and they employ new generation of workers. So, developments in technology and business influence recession and prosperity cycles in the economy, is very important to realise these developments in technology and business influence recession and prosperity cycles in the economy.

(Refer Slide Time: 1:25)

### Entrepreneurship, Rural and Urban, is the Answer



So, to connect all this, entrepreneurship both rural and urban is the answer. Because there is the viable strategy to formalise an economy. There was a time when we pay cash to get coconut water, but today we do that through Paytm wallet. So, is the it cannot be a formal economy operating in the coconut water vending situation but the vendor of coconuts is exposed to Fintech.

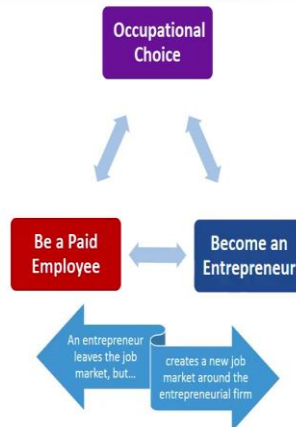
And that provides where withal to earn more money, more flexibly and also probably undertake certain instruments of saving and reinvestment in his or her own business. So, formality brings technology to the doorsteps of the informal sector and without doubt it helps the formal sector to renew itself through new technologies whether it could be electric vehicles, it could be cloud based internet of things or artificial intelligence and things like that.

So, without doubt industrial structure is benefitted by entrepreneurship but in informal sector, the rural sector, self-employed sector also get, gets benefitted by formality.

(Refer Slide Time: 2:36)

### Entrepreneurs Play an Important Role in the Economy

According to the theory of economic choice, every individual can choose an economic activity that is a choice between being a paid worker and being an entrepreneur



In this as I said earlier, the opportunity entrepreneur versus the forced entrepreneur. The occupational choice theory in economy says that every individual has 2 options, be a paid employee or become an entrepreneur. The choice is available for everybody. And a person makes an economic choice based on what he thinks are the real earnings over a life cycle. He is or she is sees entrepreneurial activity also employment activity.

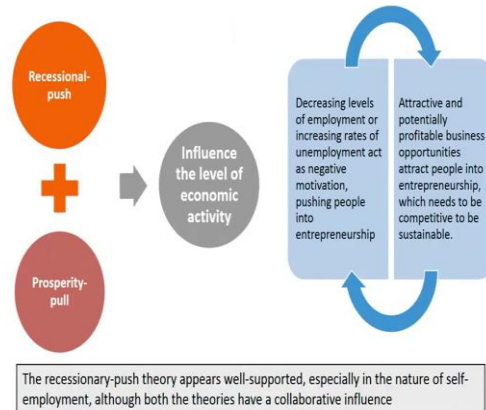
While it is seen as a social phenomenon of getting into a job or not getting into a job, there is also an undercurrent of economics, it operates in the social system that prompts this kind of decision. If an entrepreneur leaves the job market, chooses not to be an employee, he creates a new job market around the entrepreneurial firm.

This is an important concept, if a person opts not to be a paid employee, and opts not to be unemployed, and instead creates an entrepreneurial enterprise, he creates a job market. So, if the overall job markets can be seen to be a huge bubble, the bubble which does not blow up a bubble, then many small bubbles of entrepreneurial activity coalesce into given a larger bubble of employment. That is the magic of entrepreneurial employment.

(Refer Slide Time: 4:07)

## Two Theories Determine the Nature of Labour Market

The nature of economy expresses itself in two ways that jointly influence the level of entrepreneurship in the economy



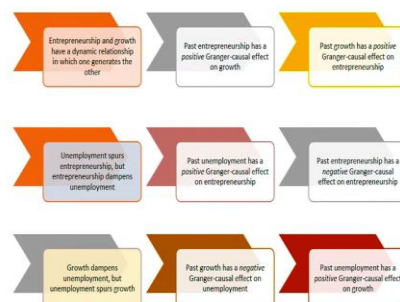
So, 2 theories dominate the nature of labour market. One, prosperity-pull and secondary, recessionary-push. These two together influence the levels of economic activity. If you have decrease in levels of employment or increase in rates of unemployment, it pushes people willingly into entrepreneurship. And mostly self-entrepreneurship. On the other hand, attractive and potentially profitable business opportunities, they attract people into entrepreneurship.

And they also need to be competitive to be sustainable. The recessionary-push appears well supported especially in the nature of self-employment and both the theories recessionary-push as well as prosperity-pull have collaborative influence over each other.

(Refer Slide Time: 4:55)

## Relationships between Entrepreneurship, Unemployment and Growth

Research by Jose M. Plehn-Dujowich explores, based on US data, the relationships between entrepreneurship and growth, unemployment and entrepreneurship, and growth and unemployment. Some conclusions, applicable in respect of certain sectors in each case as further detailed in the research paper, are as below.



Source: Jose M. Plehn-Dujowich, "The Dynamic Relationship between Entrepreneurship, Unemployment, and Growth: Evidence from U.S. Industries" - Research carried out for the United States Small Business Administration Office of Advocacy



There has been research by this researcher based on U.S data about the relationship between entrepreneurship growth and employment on one hand and entrepreneurship growth and unemployment on the other. Some conclusions which are applicable irrespective of certain sectors in each case as further detailed are as below.

The paper references cited below and you are encouraged to go through that of your convenience so there are the 3 fundamental areas of enquiry here. One was the relationship between entrepreneurship and growth. And the overall conclusion which is also intuitive that entrepreneurship and growth have a dynamic relationship in which one generates the other.

The second hypothesis proven is unemployment spurs entrepreneurship. But entrepreneurship more importantly dampens unemployment. You are forced to become an entrepreneur when unemployment exists, but entrepreneurship which is based on attraction of entrepreneurship dampens unemployment. And the third hypothesis validated is growth dampens unemployment but unemployment spurs growth.

So, it is the question of the theories which we spoke about earlier, recession-push, prosperity-pull and these have been researched to get certain Granger-causal effect. Granger-causal effect is the use of one time series data to predict the likelihood of the other time series data behaving in a particular fashion. So, with reference to the first type hypothesis, cost and entrepreneurship has a positive Granger-causal effect on growth.

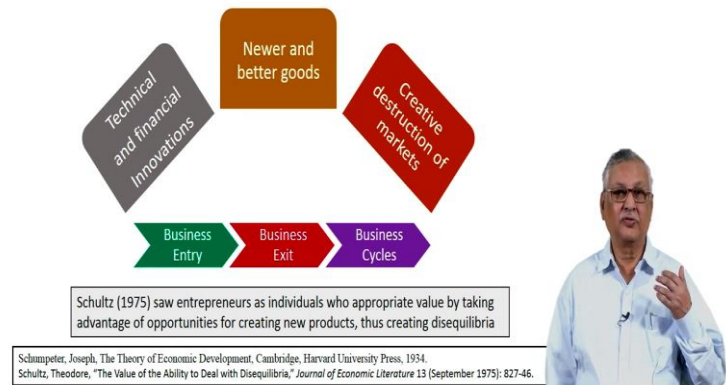
It also has got a past growth also has a positive Granger-causal relationship on entrepreneurship that is either entrepreneurship influencing positively growth and growth positively influencing entrepreneurship, as is established. Second, we talked about unemployment spurring entrepreneurship and entrepreneurship dampening unemployment. The validation of this comes through 2 parts one, past unemployment has a positive effect on entrepreneurship.

Past entrepreneurship has a negative effect on entrepreneurship. The third one, growth dampens unemployment but unemployment spurs growth. Past growth has a negative Granger-causal effect on unemployment and past unemployment has a positive Granger-causal effect on growth. So, this is also proven.

(Refer Slide Time: 7:44)

### Schumpeter on Entrepreneurship and Business Cycles

In the 20th century, Joseph Schumpeter (1934) argued that entrepreneurs created technical and financial innovations in the face of competition and falling profits. By developing new and better goods, entrepreneurs often destroyed the market for older and established goods, thus creating irregular spurts of economic activity which he termed as creative destruction. Schumpeter viewed this as the main reason for business cycles.



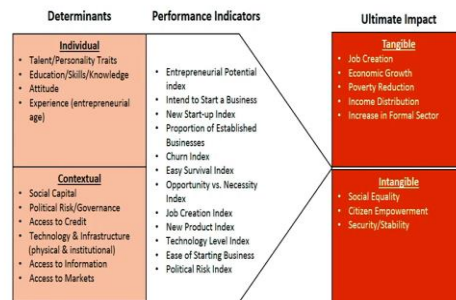
Students of economics know that Schumpeter has been phenomenal economist who spoke about entrepreneurship and business cycles. In the twentieth century to be exact 1934, he argued that entrepreneurs created technical and financial innovations in the face of competition and falling profits. By developing new and better goods, entrepreneurs often destroyed the market for older and established goods, thus creating irregular spurts of economic activity which he termed as creative destruction.

He spoke about persistence talking about disruptive technological innovation. It has its origins way back from 1934 when Joseph Schumpeter proposed this theory of economy. New theory of creative destruction in the economy. And he also viewed this as the main reason for business cycles. Technical and financial innovations come occur to fast click, they result in newer and better goods and they lead to creative destruction of markets.

Therefore, there is business entry, there is also business exit and those together constitute the business cycles. Another researcher saw entrepreneurs as individuals who appropriate value by taking advantage of opportunities for creating new products, thus creating disequilibria in the industrial structure.

(Refer Slide Time: 9:06)

#### Determinants, Performance Indicators, and Ultimate Impact of Entrepreneurial Activity



Source: Sangeeta Badal, "Entrepreneurship and Job Creation: Leveraging the Relationship", Gallup Study Paper, 2010.



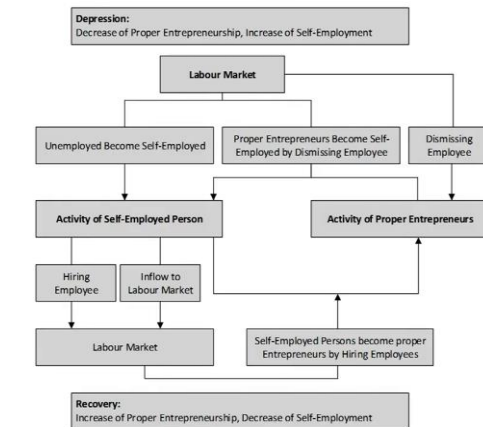
This chart gives you; this graphic gives you the determinants performance indicators and the ultimate impact on the economy of the entrepreneurial activity. At an individual level we have mix of personality based and attribute-based factors. At a contextual level, we have got several factors relating to social capital, political risk, governance parameters, etcetera and together these lead to performance indicators.

Entrepreneurial performance index, entrepreneurial potential index, proportion of established businesses, the churn index, early survival index, all of these indicators determine the level of entrepreneurship, the level of stability, the level of maturity of an industry in an economy. And what are the impacts, in terms of visible impact as well as invisible impact or tangible impact and intangible effect?

Tangible impact occurs through job creation, economic growth, poverty reduction, income distribution, increase in formal sector. Whereas, intangible benefits are in terms of social equality, and equity, citizen empowerment and security, stability. So, this is the overall model of how different value sets, different attitude sets, different attribute sets and different policy sets of a nation lead to certain entrepreneurial performance, industrial performance indicators and together have an impact in terms of socio-economic equity of a nation.

(Refer Slide Time: 10:38)

### Changes in Entrepreneurial Activity during the Business Cycle



Source: Aleksandra Gavril, "The Relationship between Entrepreneurship and Unemployment in the Business Cycle", Journal and International Studies, Vol: 3, No. 1, 2010, P67.



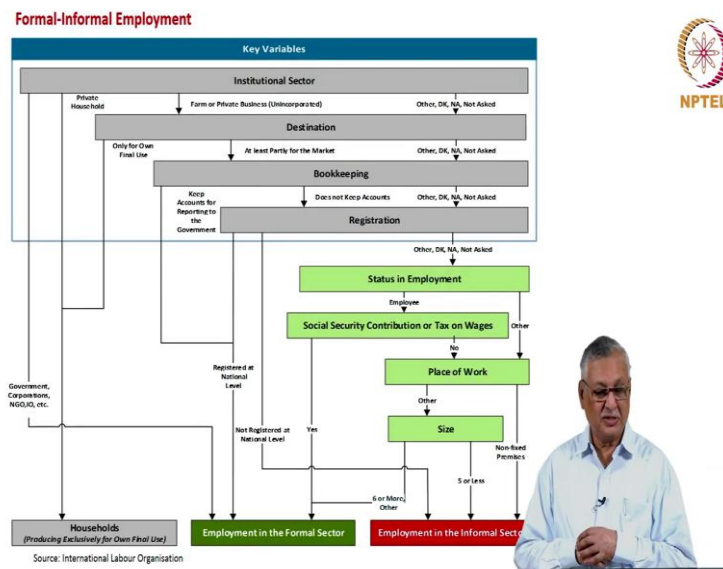
We spoke earlier about business cycles. Let's delve little deeper into business cycles, so at the top you have depression and at the bottom you have recovery. Business cycle is going through depression in demand and supply and recovering after a few years through entrepreneurship and increased employment. So, when you have depression, labour market gets affected. Leads to dismissal of employees but that leads to activity of proper entrepreneurs, so there is a kind of entrepreneurial element that comes up because the industry has shed some jobs.

From the labour market, who have become unemployed, they become self-employed and proper entrepreneurs who were creating jobs, creating enterprises, they become self-employed because they have also shedding jobs. So, there is a kind of churn that takes place in the industrial structure and the labour market. And when that happens, when self-employment happens, or proper entrepreneurship happens through industrial restructuring.

Again, the process of hiring people in flows into labour market. They take place and the market becomes virtuous again. Then the recovery takes place. Increase of proper entrepreneurship takes place, decrease of self-employment takes place, so this cycle which goes around is a cycle of depression and recovery happening with certain periodicity over the business evolution of an industry or industrial revolution of an economy.

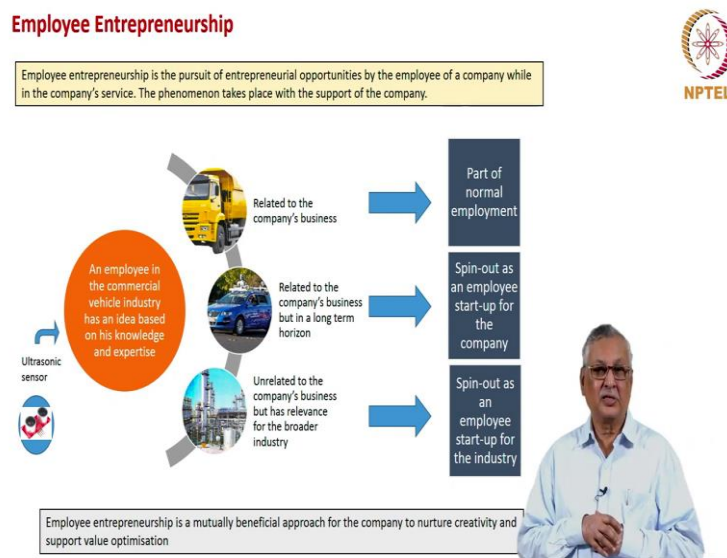


(Refer Slide Time: 12:10)



This is another interesting graphics which talks about formal-informal employment. Where, formal employment occurs better and where informal employment occurs better. So, we will just keep park it as a conceptual framework to look at formal and informal employment.

(Refer Slide Time: 12:30)



The topic which we can look at is employee entrepreneurship. What is employee entrepreneurship?

Employee entrepreneurship is one in which an employee pursues entrepreneurial opportunities with the support of the company in which he or she is employed, so that the entrepreneurial idea can be converted into a product or service and benefit the company.

Usually entrepreneurial employees are not quiet employees, they would like to be creative and they would like to work on their products.

There could be 2 ways companies can handle this, one, to say that no, you cannot do anything other than doing the job that has been assigned for today's requirement. The second option is to let the creative energy flow in the company and see how to handle the creative energy through appropriate entrepreneurship. Employee entrepreneurship is an excellent way to handle the creative energy that exists in the employee minds and which probably cannot be harnessed immediately.

So, to illustrate this, we have an example from an employee in the commercial vehicle industry let us say from the R and D division. He or she has an idea based on his knowledge and experience saying that, I have an ultrasonic sensor which will be very useful in autonomous driving or monitoring of the condition of the vehicle. That is the product. Now, that product is related to the company's business in one sense.

So, it could be part of normal employment. But imagine a situation, he has developed an ultrasonic sensor which has got more digital capability, more sensitive ability to understand the autonomous driving capability, then that product becomes useful for autonomous car revolution. The truck manufacturer may consider, consider that as a strategic adjunct in which case that becomes useful not immediately but several years later, in a long-term horizon.

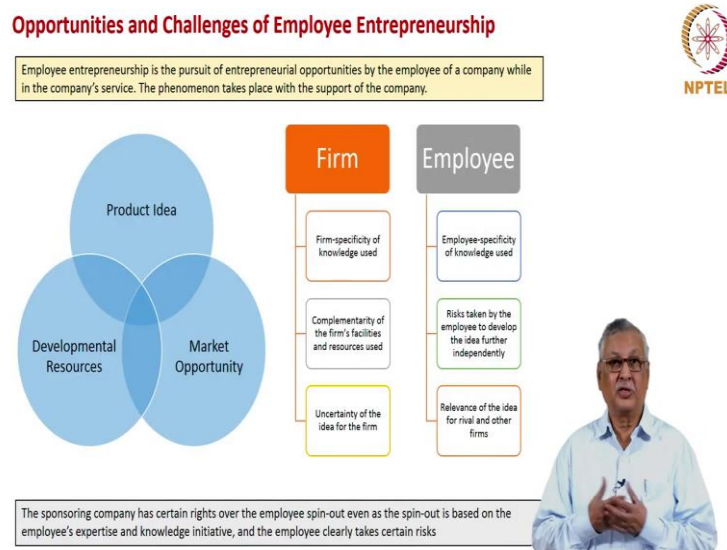
The third aspect is that this ultrasonic sensor could be completely unrelated to the automobile industry, but could be useful for oil and gas energy industry. And it could lead to several predictions of the thermal variations in the oil refinery business in the plant maintenance and as management of repairs in the complex oil refineries. Therefore, it is not related to these 2 industries.

Two industry verticals, the automobile industry but it is related to the entirely unrelated oil and gas industry. So, in this case when the option is number 1, then it becomes part of normal employment, there is no misalignment between employee's creativity, the result and product and the company's line of activity. On the other hand, if the product that is discovered and worked on by the employee is related to the long-term business of the company, not immediately.

The company may choose to spin out the employee as their start-up, so that he or she could work for the company as an entrepreneur at a later date. And that kind of spin out would be supported by the company. When the discovery and development is completely unrelated to the company's business, it could be spun out as an employee start-up for the industry as a whole. And the company may support or may not support.

So, there could be 3 types of employee entrepreneurship that could happen, and that is a mutually beneficial approach for the company to nurture creativity and support value optimisation. Progressive companies are willing to invest in creative entrepreneur oriented employees who could discover develop products, not only the current line of business but also future lines of business as well as for other industries.

(Refer Slide Time: 16:40)



There are of course opportunities and challenges in employee entrepreneurship because such employee entrepreneurship can be pursued only when the firm blesses it. And when it can take place with the support of the company. For the entrepreneurship to succeed, for employee entrepreneurship or any other entrepreneurship 3 things are vital.

One, product idea, second, developmental resources which includes finance, infrastructure development, laboratories, manufacturing laboratories, testing methodologies and third market opportunity. So, from the point of view of firm, obviously there is a firm specificity of knowledge, when an employee discover something, it is not that he has discovered it in a vacuum, he has discovered it because the firm provided the particular technical ambience which helped the person discover the product, develop the product.

He or she has also used the firm's facilities and resources therefore there has been a complementarity of the firm's specificities and resources. And thirdly, from the firm's point of view, while these 2 have been used, the firm may not have any immediate use for the product and it has, there is an uncertain future in the firm's mind about the product. Therefore, the firm is willing to consider employee entrepreneurship for such a product.

Even though, firm's resources have been used, even though firm's complementarities have been used. From the employee point of view, it is the employee centric thinking, the knowledge that has been used to develop the product. If the employee were not there, the firm would not have this idea, so, while firm's resources have helped the employee to discover and develop the idea.

Further, the employee himself or herself is the key to development of this idea. Second, the employee takes risks when he spins-out as a employee entrepreneurial firm, there is a risk taken by the employ to develop the idea independently even when company provides certain grant or certain financial support. And from the attractiveness point of view, the relevance of this idea for rival and other firms is another determinant of why and how the employee chooses employee entrepreneurship as an option.

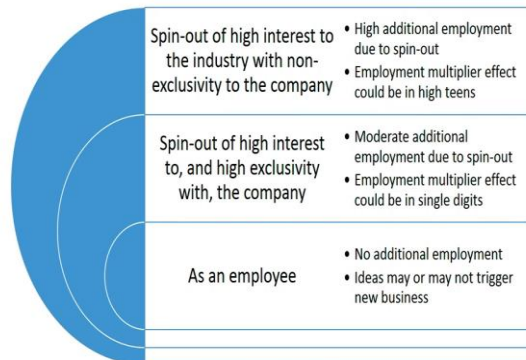
Obviously, this sponsoring company should have certain rights over the employee's spin-out. Even as the spin-out is based on the employee's expertise and knowledge initiative. And even though the employee clearly takes certain risks in pursuing the path of employee entrepreneurship, because the first 2 factors which I have discussed which is the firm's specificity of knowledge and firm complementarity of resources.

These 2 have been great enablers. Therefore, the firm is entitled to seek certain rights. And an employee is also entitled to seek a greater share of rights because the idea is his and the risk is his. And the opportunity that would come about is much larger where the company has no locus standi but his idea has a locus standi. So, these are the fine balance parameters in discussing and analysing an employee entrepreneurship proposal.

(Refer Slide Time: 19:57)

### Employee Spin-out Generates Greater Employment with Greater Security

Employee entrepreneurship can take place only when the company has a policy that expressly provides for it



The more product and/or business verticals exist in an industry, the more will be the opportunities for an employee spin-out with independence



Employee spin-out generally creates greater employment with greater security than a completely independent entrepreneurship would provide. And as I said earlier, employee entrepreneurship can succeed can flourish only when the company has a policy that expressly provides for it. So, as an employee, at the bottom of the period, there is no additional employment that gets generated if the product remains within the employee and within the company.

And those ideas may or may not trigger new business so it is almost like business as is, nothing new. When you spin it out has high interest, high exclusivity product. Entrepreneurially developed outside the company, it creates moderate additional employment because of the spin-out. And there could be employment multiplier effect surely but in single digits.

On the other hand, when high interest product which is of generic use to the industries spun-out and with non-exclusivity to the company will have high additional employment due to such spin out and the employment multiplier effect could be in high teens. Theoretically, and even practically, the more industry verticals that exist in economy and the more manufacturing or product verticals that exist in an, in a particular form, there would be greater scope for employee entrepreneurship.

So, an industry like automobile industry which is at one level monolithic but at another level kind of dispersed in terms of a product characteristics, 2 wheelers, 3 wheelers, trucks, buses, light commercial vehicles, heavy commercial vehicles, defence vehicles, special application

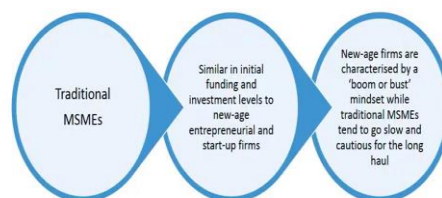
vehicles, earth moving equipment. When industry verticals are many, the potential for employee entrepreneurship to work in these 3 phases of development.

That is normal immediate transaction development as an employee, high interest spin-out for the company in the long term and spin-out of high interest for the entire industry or broad groups of industries and with more attractive opportunities and with non-exclusive to any industry that provides different level of employment and economic development.

(Refer Slide Time: 22:20)

#### Data Limitations on Employment Potential of Entrepreneurship

While there are certain limitations of data in quantifying the employment potential of entrepreneurship, the data set on traditional micro, small, and medium enterprise (MSME) sector serves as a good proxy



In terms of employment potential, the new-age firms have the potential to both disrupt and modernise the MSME sector. If the MSME firms emulate the scalability approaches of the new firms and the new firms emulate the sustainability approaches of the MSMEs, it would be a win-win in terms of scalable and sustainable entrepreneurship in the country



While the employment generation out of entrepreneurial activity is very well established. We also have severe limitations of data in understanding the employment potential of entrepreneurship. Part of the reason is due to the churn that takes place in the entrepreneurial space, the relative rates of success and failure. So, what we collect as the initial set of data need not necessarily be the final set of data, couple of years later with reference to that enterprise.

So, what I have try to do is to simulate the employment potential of entrepreneurship. So, some kind of pointers as to what entrepreneurship could hold for the country by looking at the dataset which is available with reference to traditional micro small and medium enterprise sector, MSME sector because I think that this serves as a good proxy.

The traditional MSMEs or similar in initial funding and investment levels to new-age entrepreneurial and start-up firms. In the initial stage, a few lakhs of rupees, 1 or 2 crores of rupees after couple of years. But the big difference occurs with next stage. New age forms are

characterised by boom or bust mindset, whereas traditional MSMEs would like to stay on and move on for long haul.

Even when the pressure is there in terms of lack of business success on a relative basis, MSME sector heads to stay on in business. They last through business cycles, they absorb losses. They hold on to whatever they have and see how far they can grow and go with the MSME infrastructure, they have developed and they are also supported by the policy framework that provides concessional credit is more tolerant of the MSME sector performance or non-performance.

And also, is willing to provide certain procurement dispensation benefits and other benefit to the MSME sector, which we have considered in one of the earliest modules we went through. In terms of employment potential, the new-age firms have the ability and potential to disrupt not only the large industries but even the MSME sector. That is both good news and bad news.

The real success for India's employment policy would occur when MSME firm simulate and emulate the scalability approaches of the new-age entrepreneurial firms. And the new-age entrepreneurial firms adopt the sustainability and longevity approaches of the MSMEs. Then it could be a win-win for the economy and for the overall entrepreneurship model in terms of scalable and sustainable entrepreneurship in the country.