

**Entrepreneurship- Perspectives of Business Strategy and Economic Development**  
**Course on Entrepreneurship**  
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**Entrepreneurship and Employment - Part 1**  
**Week 11**

Hi Friends, welcome to the NPTEL course on Entrepreneurship. In this module we will discuss the very important topic of the linkage between entrepreneurship and employment. In our previous sessions we have considered that economist consider entrepreneurship as a very important facet of job creation in an economy. Entrepreneurship creates not only industrial activity and wealth but also creates employment.

So, in this session I would focus on the linkages between entrepreneurship and employment. In doing so, I will draw upon the vast data bases which are available through reports of the government of India in terms of micro and other industries, as well as the economics survey.

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**Different Types of Entrepreneurs**

Established industries increasingly resort to a mix of formal and informal employment. Even formal entrepreneurship need not necessarily start with formal employment.

ENTREPRENEURS

Innovative  
Entrepreneurs



Replicative  
Entrepreneurs

Opportunity  
Entrepreneurs

Necessity  
Entrepreneurs

Research distinguishes between two types of entrepreneurs: "**innovative entrepreneurs**," who bring new products and processes to the market and introduce new services, marketing techniques, or business structures, and "**replicative entrepreneurs**," who enter existing markets with offerings similar to existing products and services but with unique selling propositions. Another differentiation is between **opportunity entrepreneurs** and **necessity entrepreneurs**, the first engaging in entrepreneurial activity to become more independent or increase their income, and the second doing so to maintain their income when there are no other options for work. All entrepreneurs contribute to the advantages and disadvantages of economic development, including job growth, to differing degrees.

Adapted from: Baumol, W., and Schilling, M. "Entrepreneurship." In: The New Palgrave Dictionary of Economics. Basingstoke: Palgrave Macmillan, 2008.

Innovative entrepreneurs and opportunity entrepreneurs have the potential to accelerate economic development. The first priority should be to secure universal employment, formal or informal.

We considered earlier that there are different types of entrepreneurs, we have entrepreneurs who are innovative entrepreneurs and entrepreneurs who are replicative entrepreneurs. Who are innovative entrepreneurs? Innovative entrepreneurs are those who bring novel products and services to existing or create new markets. And therefore, they disrupt an industry structure and grow a new industry around their products and services.

Replicative entrepreneurs on the other hand, they bring products which are similar to the products that are existing, similarly services that are similar to those that are existing. But they offer certain unique selling propositions, so that they are able to enter the market, expand the market or take market share. We have generally a pyramidal structure where there are few innovative entrepreneurs and several replicative entrepreneurs.

We can also look at entrepreneurship in terms of 2 other ways. One is that many entrepreneurs are opportunity entrepreneurs and some others are necessity entrepreneurs.

Opportunity entrepreneurs are those who engage in the entrepreneurial activity with the particular objective in mind, that objective could be to be independent to serve in industrial purpose or a social purpose or they are passionate about creating entrepreneurial ventures.

Those are the opportunity entrepreneurs and obviously they are also attracted by the prospect of creating wealth, not only for the economy, but also for themselves. Necessity necessity entrepreneurs on the other hand do so to maintain their work options, they do so to earn some income and in that way they are kind of not attracted to do entrepreneurship by the attractiveness of the activity but by the necessity of doing entrepreneurship.

Both innovative entrepreneurs as well as replicative entrepreneurs have got the potential to kick start an economy to higher levels. And one is also requiring to have both the kinds of entrepreneurs in an economy so that the spread effect on entrepreneurship is quite wide and quite big.

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### Entrepreneurship is an important aspect of economic development

Although entrepreneurship is an important aspect of economic development, it has its pros and cons. It needs progressive and positive policy support to flourish.

#### PROS:

Entrepreneurs boost economic growth by introducing innovative technologies, products, and services.

Increased competition from entrepreneurs challenges existing firms to become more competitive.

Entrepreneurs provide new job opportunities in the short term and long term.

Entrepreneurial activity raises the productivity of firms and economies.

Entrepreneurs accelerate structural change by replacing established, sclerotic firms.

#### CONS:

Only a few people have the drive to become entrepreneurs.

Entrepreneurs face a substantial risk of failure, and the costs are sometimes borne by taxpayers.

In the medium term, entrepreneurial activities may lead to layoffs if existing firms close.

A high level of self-employment is not necessarily a good indicator of entrepreneurial activity.

Entrepreneurship cannot flourish in an overregulated economy.

Investor exuberance can lead to skewed growth

"Entrepreneurs, creators of new firms, are a rare species. Even in innovation-driven economies, only 1–2% of the work force starts a business in any given year. Yet entrepreneurs, more particularly innovative entrepreneurs, are vital to the competitiveness of the economy and may establish new jobs. The gains of entrepreneurship are only realized, however, if the business environment is receptive to innovation. In addition, policymakers need to prepare for the potential job losses that can occur in the medium term through "creative destruction" as entrepreneurs strive for increased productivity."

Source: Alexander Kirilov, Entrepreneurs and their impact on jobs and economic growth, IZA World of Labor, May 2014



Although entrepreneurship is a very important aspect of economic development, it also has its pros and cons. It needs really progressive support and policy framework to grow. What are the pros of the entrepreneurship? Particularly with reference to the employment generation. They boost economic growth. They challenge existing firms from their ossified models of business. But more importantly they provide new job opportunities in the short term and long term.

The productivity of firms and economies improves through entrepreneurship. You can for example see how digitization has improved the productivity and connectivity of various business processes, business operations on one hand and also connected customers and suppliers on the other hand. Finally, they make structural change in the industry by replacing established, sclerotic firms. This is very important.

On the disadvantages, on the negative side, we have only a few who can really become entrepreneurs. Not everybody can become an entrepreneur. Therefore, although entrepreneurship is very important for enhancing economic growth, unfortunately we cannot have entrepreneurship, very defused across the employee base. That is number one.

Entrepreneurs face the substantial risk of failure therefore, there could be certain cause associated with failed enterprises which ultimately have to be borne by the tax payer. In the medium term, when the entrepreneurial firms come and challenge the existing firms, there could be layoffs and therefore there could be job losses as well. While on the other hand we said that entrepreneurship increases jobs, there is also this likelihood that in the short and medium term, there could be certain threats to the established businesses and the established ways of doing business.

Another thing we need to understand is what type of entrepreneurship is really required for an economy. Many times, we see self-employment as being equivalent to entrepreneurship. We also see self-driven entrepreneurship as being equal to formal entrepreneurship which is not necessarily true. Self-employment is not necessarily a good indicator of entrepreneurial activity.

More importantly, entrepreneurship cannot flourish in a overregulated economy. And we also are seeing that while entrepreneurship is good too much of exuberance on the part of investors in terms of gaining fit market share increasing footfalls, clicks or patronage of new ventures, that could lead to skewed growth.

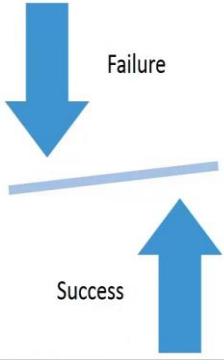
So, as the author who has been cited below says ‘Entrepreneurs, creators of new firms, are a rare species. But even in innovation-driven economies, only 1-2% of the work force starts a business in any given year. And that is the thing. It is a really a pyramidal structure where an overwhelming majority of population, talented population is willing to work for jobs whereas only very small percentage is willing to venture into the entrepreneurship field.

So, we need to prepare for an entrepreneurial system which comprises a good mix of all the 4 types of entrepreneurs: innovative entrepreneurs, replicative entrepreneurs, opportunity entrepreneurs and hopefully not forced entrepreneurs.

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**Failure versus Closure**



There is a well-merited concern that employment creation through entrepreneurship is not fully understood as such firms, especially start-ups, also face mortality



“Only a little more than half of new firms survive the first five years of operation. However, closure is not necessarily an indicator of an unsuccessful business outcome. A substantial number of businesses that close in the first five years are successful. These businesses close not because they have failed but because of successful execution of a planned exit strategy, a desire to close without incurring excess debt, the sale of a viable business, or retirement of the owners, among other reasons. The costs of failure extend beyond the entrepreneur. When a business fails or closes, employees lose their jobs and might have to turn to social security, generating additional burdens for society. There is often no safety net to absorb these losses except for the social welfare system. If a business fails and cannot pay its debts, lenders lose out as well. Finally, a high failure rate for new businesses can have a discouraging effect on potential future entrepreneurs.”

Entrepreneurial activity provides strong employment impact in the short term, and somewhat negative impact in the medium term. Scalable and sustainable entrepreneurial firms provide long term employment benefits.

Source: Alexander Kritikos, Entrepreneurs and their impact on jobs and economic growth, IZA World of Labor, May 2014



Failure versus closure. When we talk about the linkage between the entrepreneurship and employment, we have to see the balance between failure and success. There could be an entrepreneurial company which came into the market and created a few jobs, but there could be another entrepreneurial company which comes into the same market with superior products, superior technology which could lead to the failure of the first company and the success of the other company.

So, this could go on in an, in a kind of perpetual cycle, which is not good for the economy either. So, any entrepreneurial company which has setup its base must have in it the ability to sustain itself. Not only through good management but also through good upgradation of technology from time to time. So, the balance between failure and success where there is an equitable and unequivocal emphasis on success through sustainability.

That ensures higher job creation. As per the research available, only a little more than half of new firms survive the first years of operation. Though the first 5 years of operations are very critical to the success of entrepreneurial business. And the success is determined at times by even the exit of the promoters from one company to monetise their creation. So, that could also be success and those things cannot be seen as failures.

But in terms of job creation, if such acquisition has taken place, either to reduce the level of competition or to derive some synergies of operation, they could lead to some job losses. So, within the entrepreneurship space, this balance between failure and success, jobs creators versus job loss and overall equilibrium, whether it is going up on a continuous and consistent bases, these are all topics of interest and topics of research on which there is lot of scope for identifying newer databases and developing your thoughts of that.

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#### ILO Data on Unemployment

Global Unemployment and Unemployment Rates, Youth (15-24), Adult (25+) and Total (15+), 2008-18

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Youth Unemployment(millions)	73.6	76.7	74.9	75.0	73.7	72.9	70.5	70.3	70.7	70.9	71.1
Adult Unemployment(millions)	104.8	120.9	120.4	121.4	122.7	124.8	124.3	124.8	128.0	131.3	134.2
Total Unemployment(millions)	178.4	197.6	195.3	196.3	196.3	197.7	194.8	195.2	198.7	202.2	205.2
Youth Unemployment Rate(%)	12.3	13.0	12.9	13.1	13.1	12.9	12.9	12.9	13.0	13.1	13.1
Adult Unemployment Rate(%)	4.1	4.7	4.6	4.5	4.5	4.5	4.4	4.3	4.4	4.4	4.5
Total Unemployment Rate(%)	5.7	6.2	6.1	6.0	6.0	5.9	5.8	5.7	5.7	5.8	5.8
Rate of Youth-to-Adult Unemployment Rates	3.0	2.8	2.8	2.9	2.9	2.9	2.9	3.0	3.0	3.0	2.9

#### Regional Youth Unemployment Rates, 2008-18 (%)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	12.3	13.0	12.9	13.1	13.1	13.1	12.9	12.9	13.0	13.1	13.1
Northern Africa	24.4	24.5	23.5	26.3	29.7	29.3	29.1	29.0	29.0	28.8	28.6
Sub-Saharan Africa	11.6	11.9	11.9	11.8	11.4	11.2	10.7	10.7	11.0	11.1	11.2
Latin America and the Caribbean	16.0	16.8	16.0	15.2	14.5	14.5	14.8	16.1	18.7	19.6	19.5
North America	12.6	17.3	17.9	16.8	16.0	15.3	13.4	11.8	10.6	10.4	11.1
Arab States	26.4	25.3	26.7	29.0	28.9	29.1	29.3	29.9	30.4	30.0	29.7
Eastern Asia	10.0	10.0	9.7	10.0	10.3	10.4	10.5	10.6	10.4	10.4	10.5
South-East Asia and the Pacific	13.5	13.4	12.8	13.1	11.9	12.9	12.1	12.5	11.7	12.0	12.2
Southern Asia (includes India)	10.0	10.2	10.5	11.1	11.2	11.1	11.0	10.9	10.9	10.9	10.9
Northern, Southern and Western Europe	16.0	20.1	20.9	21.4	22.9	23.3	22.0	20.6	19.3	18.2	17.8
Eastern Europe	14.3	18.2	18.0	17.7	17.5	17.2	17.4	17.7	17.0	15.2	14.2
Central and Western Asia	16.6	18.6	17.3	15.9	15.3	15.7	16.2	16.4	16.9	17.5	17.4



This, so when we talk about entrepreneurship, we look at as I said the opportunity of creating a new business and also the necessity of creating something for oneself. So, the need to create something for oneself also comes from the unemployment rate that exists in an economy. This data from International Labour Organisation provides a broad spectrum of data on the rates of unemployment in different countries.

So, if you see the youth unemployment, it has been more or less static over the last ten years or so. We had 73.6 million youth unemployed in 2008 and in 2018, there has been marginal decline to 71.1. But adult unemployment but has reduced that has increased actually from 105 million in 2008 to 134.2 million in 2018. Does it mean that the increased entry of digital technologies the increased need for reskilling?

Is it impacting the job opportunities for adults or more people moving out of the established business space because newer skills are coming and newer ways of doing business are coming in. So, it's a question again, it needs to be researched on. So, if you look at the total unemployment from 2008 figure of 178.4 million, we have 205.2 in 2018. It means that young workforce plus adult workforce together, there is an increase in unemployment.

So, without doubt, so, without doubt there is a need to reduce the levels of unemployment even though there are at let's say 5.8 percent kind of rate, that is simply not acceptable for ensuring a stable and equitable growth pattern. So, how do we really do that? And what are the regions which are crying for attrition. If you look at the world overall, the youth unemployment rate, which is a important parameter of the stability of the society.

Because that is the most productive age group of workforces. That has risen from 12.3 percent to 13.1 percent. There are certain continents and countries where the unemployment rates are really high and probably are not acceptable even today. For example, Northern Africa, the rates at 24.4 percent, 28.6 six percent. Simply not acceptable in the modern situation.

Countries have to work towards reducing these levels of unemployment. Southern Asia which includes also India has relatively high unemployment rate as well, 10 percent in 2008 and 10.9 percent in 2018. So, how does one go about this level of unemployment and how do the governments handle these levels of activity?

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**Youth Unemployment Trends and Projections, by Region 2016-18**

	Unemployment Rates (%)			Unemployment (millions)		
	2016	2017	2018	2016	2017	2018
<b>World</b>	13.0	13.1	13.1	70.7	70.9	71.1
<b>Africa</b>						
Northern Africa	29.0	28.8	28.6	3.7	3.6	3.6
Sub-Saharan Africa	11.0	11.1	11.2	11.5	12.0	12.4
<b>Americas</b>						
Latin America and the Caribbean	18.7	19.6	19.5	10.3	10.7	10.7
North America	10.6	10.4	11.1	2.7	2.6	2.8
<b>Arab States</b>	30.4	30.0	29.7	2.7	2.7	2.7
<b>Asia and Pacific</b>						
Eastern Asia	10.4	10.4	10.5	10.9	10.5	10.2
South-East Asia and the Pacific	11.7	12.0	12.2	7.0	7.2	7.3
Southern Asia (includes India)	10.9	10.9	10.9	13.8	13.9	13.9
<b>Europe and Central Asia</b>						
Northern, Southern and Western Europe	19.3	18.2	17.8	4.2	4.0	3.9
Eastern Europe	17.0	15.2	14.2	1.9	1.6	1.4
Central and Western Asia	16.9	17.5	17.4	2.1	2.2	2.2

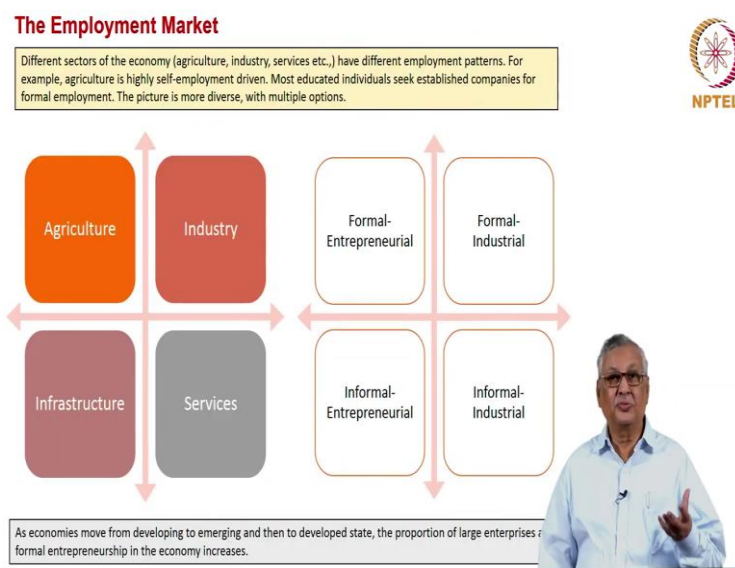
Source: Calculators based on ILO Trends Economics Models, April 2017.





When you look at the youth unemployment trends and projections by regions 2016-18. Overall, the unemployment rates have increased in terms of numbers marginally. And stayed almost same in terms of these rate percentages. But if you look at Southern Asia which includes India, we had unemployment rate around 10.9 percent and the overall unemployment rate about 13.9 million persons. So, the need to create millions of jobs is very evident

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And entrepreneurship as we thought, as we discussed leads to employment. So, when we look at different sectors of economy, there could be different types of employment. We know that in the economy we have 4 principle sectors. The first sector agriculture, the second sector is industry, then third sector is infrastructure and the fourth sector is services.

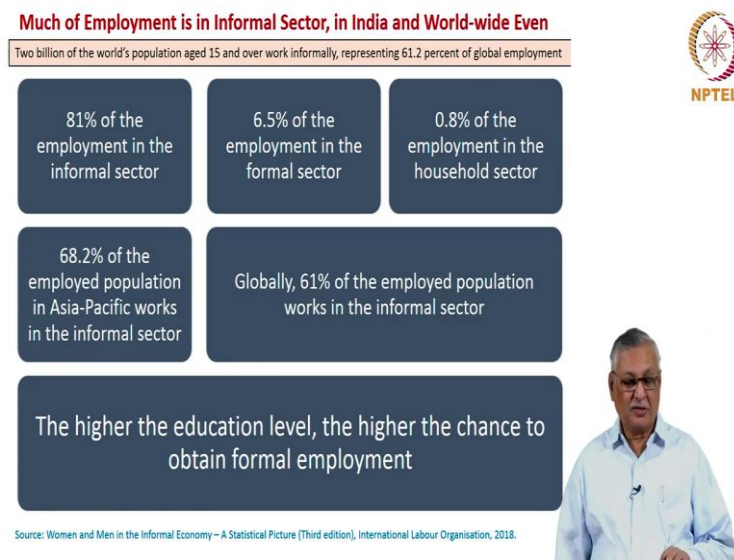
In all these sectors, we can have formal entrepreneurship and informal entrepreneurship and it could be formal industrial and informal industrial. So, when we say formal industrial, what I mean is that jobs and companies which are established, which have established business process and which can take employees on own roles. For example, BHEL taking employees on its role. L and T taking employees on its role and running the operations.

But the industries themselves can have informal employment that is when they outsource there is employment in certain areas to external agencies or when they adjust the workforce to meet the seasonality of demand. For example in sugar mills. It could be that company should choose a varying level of workforce depending upon the seasonality of crushing seasonality of extraction of sugar.

So, there could be formality and informality in employment in industrial space. Similarly, entrepreneurship can be formal as also informal. So, as economies move from a developing state to a developed state the proportion of large enterprises must increase because this spill over effect as well as the cascading effect of large scale entrepreneurship, large scale industrialisation are significant.

And there should also be a move from informal entrepreneurship to formal entrepreneurship. This is not to say that informal entrepreneurship will not have any role but the ratio between formal entrepreneurship and informal entrepreneurship should be more skewed in terms of formal entrepreneurship, if the economy has to develop itself.

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Some of this is on employment indicate even today the informal employment is the most dominant aspect of overall employment situation, not only in India but over worldwide. 81 percent of the employment is in the informal sector on a global basis. And only 6.5 percent of the employment is in the formal sector and 0.8 percent of the employment is in the household sector.

68, 68.2 percent of the employed population in Asia-Pacific works in the informal sector. Globally, 61 percent of the employed population works in the informal sector. So, these statistics do indicate that informal employment is the bedrock of overall employment. This is not to say that is the way things have to be perpetuated. We will see in a few slides later.

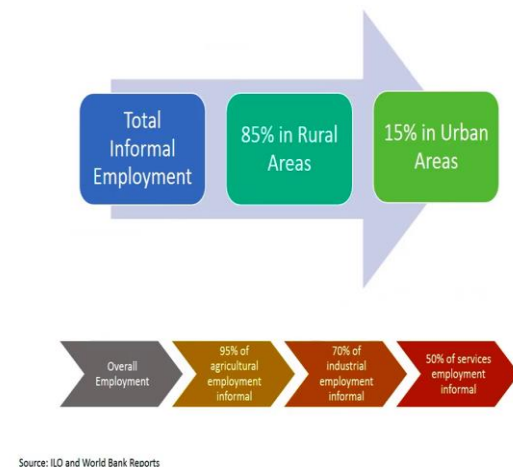
That if informal employment, informal entrepreneurship gets perpetuated, the incentive to stay small gets perpetuated. It will not be possible to give large scale benefits to an economy.



On the other hand, the higher the educational level, the higher is the chance to obtain formal employment. So, this data is drawn again from the publication of international labour organisation.

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#### Informal Jobs are Predominant in Rural Areas



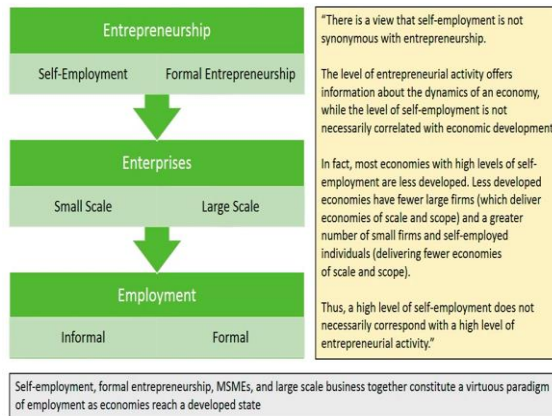
We also know that informal jobs are predominant in rural areas. Out of the total informal employment, it has been estimated that 85 percent is in rural areas and 15 percent is in urban areas. So, when, when we have within the overall employment, 95 percent of agricultural employment turn turns out to be informal. And when 70 percent of industrial employment turns out to be informal and 50 percent of service employment turns out to be informal.

There is obviously a need for an entrepreneurship model which targets formal entrepreneurship as well as formal employment. So that the employment potential of a country is stabilised and put on a growth path.

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### The level of Self-employment is Not Necessarily an Indicator of Entrepreneurial Activity

Self-employment is a common form of entrepreneurship though not in the framework of formal entrepreneurship



Source: Alexander Kritikos, Entrepreneurs and their impact on jobs and economic growth, IZA World of Labor, May 2014



We also need to think of self-employment as a necessary step in the progress of employment pyramid but it is not the indicator of entrepreneurship. So, when you look at entrepreneurship, there will be self-employment, there will be formal entrepreneurship. We discussed in one of the earlier sessions that we can have a concept of nano-entrepreneurship as well where let us say there is a gated community and a person is working as a house care provider.

He is a nano-entrepreneur. But the question is that, such nano-entrepreneurs are self-employed people, they provide sustenance to themselves and to the families. And they lack the ability to become enterprises in their own right unless something works in their favour in terms of ability to move from a nano-entrepreneurship to micro and then to small scale entrepreneurship. Therefore, we have to be very clear that self-employment is essential but self-employment is not same as formal entrepreneurship.

Similarly, enterprises can be small scale including micro enterprises. And we have large scale enterprises and employment can be informal and formal. Less developed economies have fewer large firms and many more small-scale firms. Whereas developed economies have higher share of large-scale firms and lower scale of small-scale firms. So, high level of self-employment is indicative more of less developed state of economy than of a highly developed state of economy.

That said, none of the 4 aspects can be ignored. Self-employment, formal entrepreneurship, MSMEs and large-scale business together constitute a virtuous paradigm of employment as economies move on to reach a developed state.

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#### Formal Education and Formal Entrepreneurship Characterise Developed Economies

Informal employment spans all kinds of employment, agricultural and non-agricultural as well as proper organizational and proper entrepreneurial employment, besides self-employment



The higher the native or acquired skill levels (independent of formal education) the higher the potential for self-employment, and hence, the higher the potential of informal employment. Formal education (without losing the native skill pools) is a foundational step towards proper entrepreneurship that generates additional jobs.

Source: Women and Men in the Informal Economy – A Statistical Picture (Third edition), International Labour Organisation, 2018.



Formal education and formal entrepreneurship characterise developed economies. While informal employment spans all kinds of employment, it is the proper organisational, proper industrial employment which is generated through proper entrepreneurship that helps the economy to develop better. So, the level of socio-economic development is positively correlated with formality of an economy and entrepreneurship.

Second, emerging and developing countries represent 82 percent of world employment, but 93 percent of the world's informal employment. So, we need to change that mix. More than two thirds of the employed population in emerging and developing countries are in informal employment, while less than one-fifth of the employed population are in developed countries.

Regions with countries at a higher level of socio-economic development, for example, the Americas, Asia and the Pacific and Europe and central Asia have lower shares of informal employment. The higher the level of native skills and the lower the level of education, there tends to be a greater emphasis on informal employment as well as informal entrepreneurship. So, the emphasis must be to enhance the level of formal education.

Without of course losing the native skillsets so that the overall entrepreneurial index in the country goes higher and the ability to generate the jobs is also taken higher.

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**Digital Entrepreneurship**

The promotion of digital start-ups – new Internet-enabled businesses – is a promising area for budding young entrepreneurs

In emerging and developing countries, basic infrastructure often remains a major obstacle, including limited internet access. Nevertheless, a number of promising initiatives are thriving, with policy support.

In Kenya, for example, a digital skills training programme has been launched with the intention of enabling one million young people to obtain freelance online work within a year. A similar emphasis is visible in developed countries.

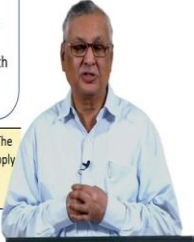

**Digital Entrepreneurship**

For instance, the UK Government currently offers loans and other support services to young tech entrepreneurs through Innovate UK, Tech City UK and other initiatives.

Young people are also increasingly expressing an interest in developing social businesses using internet and platform technology, promoting both individual and social development

ILO Observes: It is also important to ensure access to credit to young entrepreneurs and small and microenterprises. The ILO approach to enhancing finance for small enterprises focuses on building capacity on both the demand and the supply sides. A major activity is providing financial education to prepare young people for financial responsibilities related to their integration into the labour market.

Source: Women and Men in the Informal Economy – A Statistical Picture (Third edition), International Labour Organisation, 2018.



When you look at this kind of situation where informal entrepreneurship is very high and native skills are the ones which are, which are defining the rates of self-employment, we have this digital entrepreneurship taking routes in many countries. In emerging and developing countries, basic infrastructure has been a major obstacle. But in number of promising initiatives are thriving with policy support.

We have seen in India how a burgeoning telecommunication infrastructure has led to a explosion in digital entrepreneurship. Even in Kenya, we have digital skills training programs that have been launched because the governments rightly so found out that sparking digital entrepreneurship is the great to take the economy forward at a faster climb and provide much more employment potential for the economy as a whole.

Even developed countries follow this rule. In the UK we have the government offering loans and other support services to young tech entrepreneurs through innovative UK, Tech City UK and other initiatives. Similarly, young people are also increasingly expressing an interest in developing social businesses using the internet and platform technologies, promoting both individual and social development.

So, looked at holistically, the digital entrepreneurship, it is taking many hues and helping nations leap frog from one level of development to another level of development. It is also helping developed nations to stay ahead in the game through digital initiatives and in the situation where STEM education is not so popular. Incentives to increase STEM education and therefore increase the digitalisation that also is an important aspect of strategy.

As ILO observes: It's important to ensure access to credit to young entrepreneurs and small and micro enterprises and doing that builds capacity and once the capacity is built, they will be able to cater to a bigger demand level, higher demand scope. And once that happens then the enterprises can expand and they can come out of the cocoon of being small.

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**Fintech Start-ups are Expanding Finance and Job Opportunities for Young People**

**ILO Observes:**

FinTech firms can take advantage of sizeable untapped customer bases in developing and emerging countries. However, such markets also face significant obstacles, including limited cloud infrastructure, and lack of connectivity among users who largely operate in informal settings (1).

The Nigerian FinTech firm Moneywave is creating payment interfaces to facilitate multiple-form transactions in Africa's fragmented payment systems, for instance allowing money transfers between mPesa accounts and bank accounts (2).

In India, Fingpay and S2Pay allow businesses to accept payments from customers without cards or cash – the first does so through biometrics, while the latter is based on a mobile application that can be used without an internet or network connection.

Technology is also facilitating lending transactions, for both individuals and businesses. Barriers to credit for young people are being increasingly lifted through FinTech solutions. For instance, the Indian start-up LendingKart offers finance to small and medium enterprises, while Kueski in Mexico offers immediate short-term personal loans within 30 minutes to be repaid within 30 days. In Brazil, Geru connects borrowers and investors as lenders online.

In the developing world, FinTech is going further and generating new data on "digitally invisible" people who would otherwise have been unable to access traditional financial services. Start-ups such as Creditfix in Pakistan use income data generated from rickshaw hailing services such as Oddjobber or Rixi to verify and generate credit scores and extend lending services to a majority of the population excluded from formal traditional credit systems.

1. I. Kendill: "Fintech companies could give billions of people more banking options", in Harvard Business Review, 20 Jan. 2017 (<https://hbr.org/2017/01/fintech-companies-could-give-billions-of-people-more-banking-options/>) [23 June 2017].

2. D. Coldewey: "Flutterwave aims to unify Africa's fragmented systems and empower small businesses" in TechCrunch, 5 Dec. 2016 (<https://techcrunch.com/2016/12/05/flutterwave-aims-to-unify-africa-fragmented-payment-systems-and-empower-small-businesses/>) [23 June 2017]. 3. I. Kendill, op. cit.

Source: Global Employment Trends for Youth 2017, International Labour Organisation, 2017



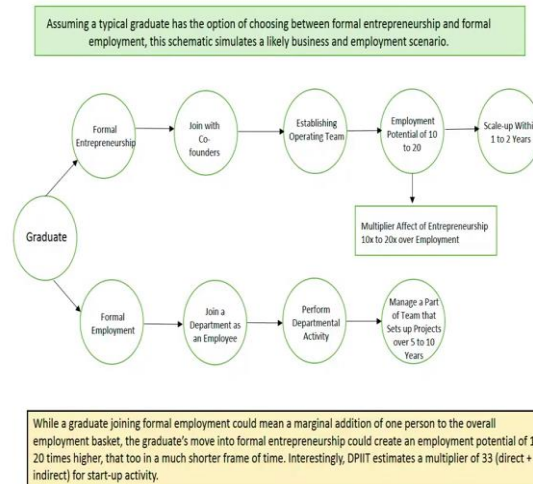
Incidentally, Fintech, which is technology applied in financial applications is a start-up activity but by itself is helping propel finance and job opportunities in thus developed economies by offering credit, offering access to finance for micro enterprises and for aspirant entrepreneurs. In Nigeria, Fintech from Moneywave is creating payment interfaces to facilitate multiple form transactions in Africa's fragmented payment systems.

And there are platforms in India too which are called as S2Pay, Fingpay which allows businesses to accept payments from customers without cards or cash. In the earlier sessions we have discussed payment wallets, Paytm for example. And various other Fintech platforms which have enabled businesses to undertake financial operations very easily and very seamlessly.

And also connecting individuals who are not even educated with mainstream companies and make possible wallet transfers of money for the transactions they have provided. So, we are creating a huge population base which may not be having huge levels of educational accomplishment but they are digitally served. Those who are digitally accomplished to be able to participate in the new digital fintech economy.

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### Employment Multiplier of Formal Employment vs Formal Entrepreneurship



Now, let's look at the employment multiplier of formal employment versus formal entrepreneurship. This is not a model which is based on research of huge number of people but it is observation-based research, I would say. When a graduate typically comes out of a college, he has 2 options to choose between a formal employment in a large established company and have entrepreneurship as the basic activity going forward.

So, you have the choice for graduate between formal entrepreneurship and formal employment. This schematic simulates what would happen. Let us say the graduate ready to take formal employment as most graduates are wanting to do. He would join typically a department as an employee. He would perform departmental activity, manage a team at after few years until then be a part of a team that manages certain activities.

And this kind of participation on the part of the graduate happens over a period of 5 to 10 years. Without doubt in many cases, such teams could be contributing to supply expansion, could be contributing to demand expansion, in some cases even setting a project but the real impact of a person in an organisation which is already established to create jobs directly is very limited.

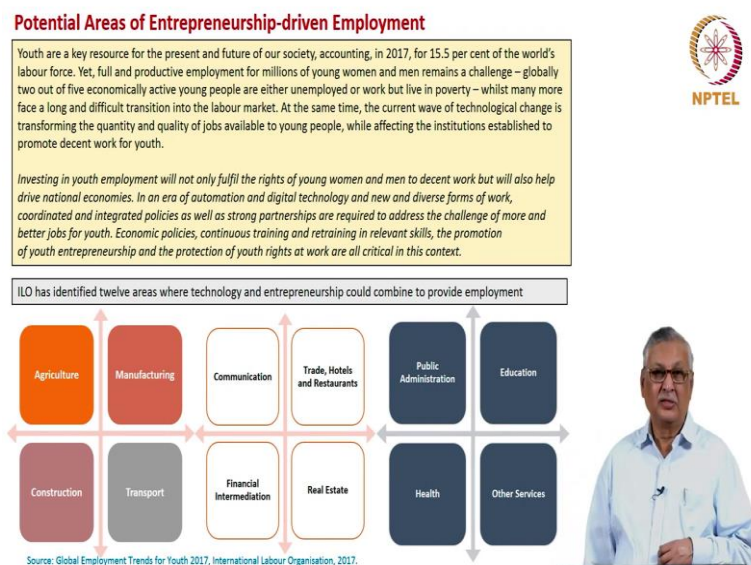
He will be part of the huge wheel that the organisation is in. It is not correct to say that, that person is cog at the wheel because each cog is extreme important but from an overall employment generation, what it means is an addition of one person to the employment market. On the other hand, if the graduate takes up formal entrepreneurship, typically he sets a cofounder team. So, he will have 2 or 3 co-founders, he establishes an operating team.



And there would be an employment potential of 10 to 20 people depending upon the nature of platform taken up for entrepreneurial development. And the multiplier effect of the entrepreneurship in terms of the dependent industries, the downstream industries could be even 10x to 20x more employment. And if the entrepreneurial idea is successful, there could be further scale of within 1 to 2 years.

So, the hypothesis here is that, while a graduate joining formal employment could mean a marginal addition of one person to the overall employment basket, the graduate's move into formal entrepreneurship could create an employment potential of 10 to 20 times higher, that too in a much shorter frame of time. Interestingly, DPIIT of the government of India establishes a multiplier of 33 that is direct plus indirect for start-up activity. That is, if a person generates 10 direct jobs the multiplier effect is 3.3 times of that.

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So, the hypothesis gets validated if this model is accepted. So, what are the potential areas of entrepreneurship development-based employment? There are 4 sectors again as I said, agriculture, industry, infrastructure and services. If you further subdivide into important areas, ILO has identified twelve areas where there is huge potential for employment growth.

Agriculture, manufacturing which corresponds to industry, construction part of infrastructure, transport, again part of infrastructure, communication, trade, hotels and restaurants, part of services, financial intermediation, services, real estate, services, public administration, services, education, services, health services and other services.

So, we have hot aspects of industrial development, enabling industrial operations like communication, hospitality and financial services, banking, real estate and we have got pure services. So, these 12 together are areas where technologies and entrepreneurship could combine to provide employment.

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**The Advantage of Formalising Employment**

The diagram illustrates the advantages of formalising employment through a three-step process:

- Improves operational efficiency
- Improves job security and working conditions
- Facilitates reinvestment and growth

Below the diagram, there is a video of a speaker and two text boxes:

Informality in developing and emerging economies is not a cause of the underdevelopment of the economy; rather, economic conditions influence informality. A forced shift from the informal to the formal sector can lead to job losses. But labour reforms and safety net can smoothen the transition.

There are three important objectives to be attained by promoting formalisation: to increase workers' welfare and the opportunities for decent jobs; to reduce unfair competition between formal and informal enterprises arising from tax or regulatory arbitrage; and to expand tax revenues that can support social safety nets.

For further reading: A 2014 paper, "Informality and Development", by Rafael La Porta and Andrei Shleifer (academicians affiliated respectively to the Tuck School of Business and Harvard University)

So, the advantage of formalising employment, A it improves operational efficiency, it improves job security and working conditions and it facilitates reinvestment and growth. So, only when an idea is converted into a product, an entrepreneurial company is born, only when entrepreneurial company scales up an industry gets formed around the entrepreneurial company.

And only when the entrepreneurial company and the industry around the company becomes sustainable, profitable, enough resource will be generated to reinvest and grow adjunct industries or expand this main industry itself. There is of course a theory that informality in developing and emerging economies is not a cause of underdevelopment of economy rather economic conditions influence informality.

If the policy structure in the economy is such that informality in the economy is encouraged or even perpetuated, then there is going to be an issue in terms of overall economic development. On the other hand, for the same reason if you push informal employment to formal employment without supportive infrastructure or if you try to convert informal sectors of economy into formal sectors of economy without providing the necessary infrastructure or support to a financial structure, there could be job losses as well.

So, for example, if you feel that food delivery system is disorganised in terms of individuals running the food delivery system, therefore I would have a corporation undertaking food delivery, yes this is a good idea. But that would not have the level of agility and adaptiveness of service and the cost competitiveness which informal sector would have but if this is mandated as a necessary policy prescription, it would create job losses in the informal sector because the formal sector have got its own attraction.

People might adopt to that; therefore, labour reforms and safety net are important aspects of moving from an informal sector driven economy to a formal sector driven economy. And the 3 objectives of moving from informality to formality cannot be lost sight of either. These 3 objectives are any move from informality to formality should increase workers welfare and the opportunities for decent jobs.

It should reduce unfair competition between formal employment and informal employment. Increased formal enterprises should not see themselves perpetuating formality by destroying or limiting the ability of informal companies to survive and grow. So, there should be a kind of collaborative synergy between the two things. And such arbitrage of formality over informality should not be in terms of tax arbitrage or regulatory arbitrage.

Thirdly, any formality should increase the tax space of the country only when formality is accompanied by higher level of tax revenues can the economy really prosper because such tax revenues would help the government support many social activities where enterprises may not be able to enter and support. There is a good paper on informality and development by 2 professors affiliated to Tuck School of Business and Harvard University. I would encourage you to read this at your convenience.