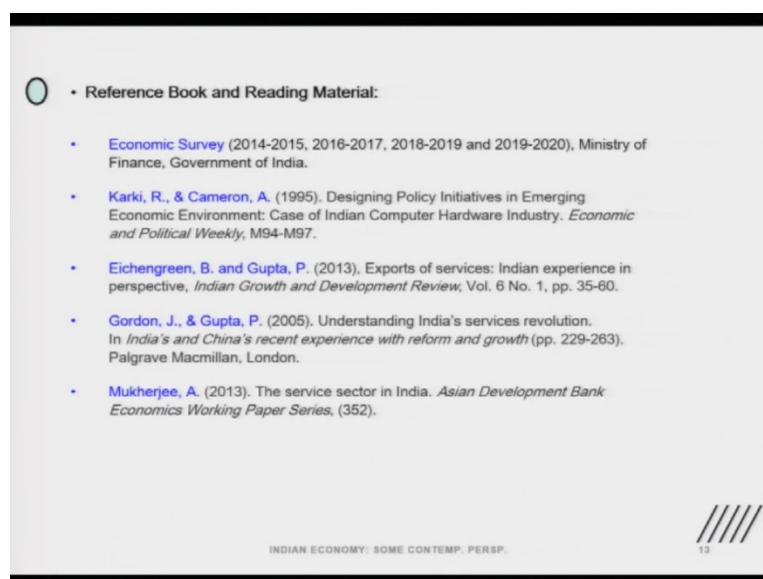


Indian Economy: Some Contemporary Perspectives
Professor Wasim Ahmad
Department of Economic Sciences
Indian Institute of Technology, Kanpur
Lecture 18
Indian Economy – Service Sector Policy 2

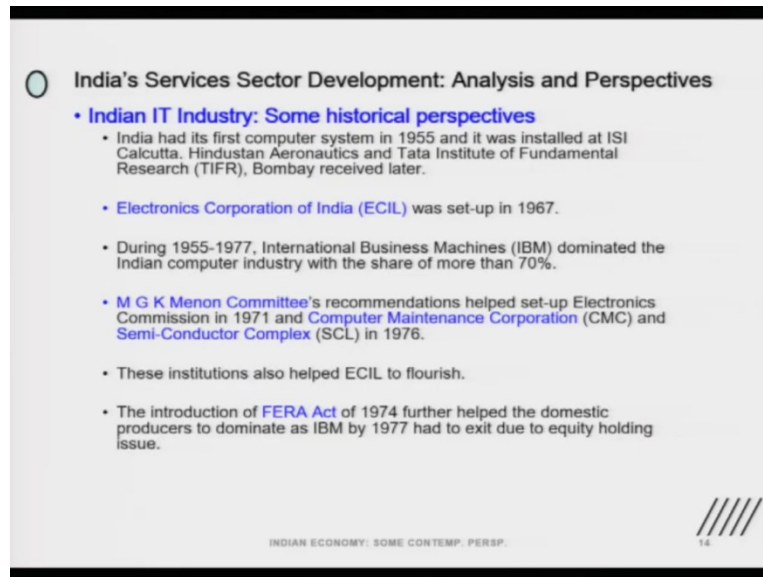
So, hi everyone. Now we are going to start the second session on the service sector and it is about how we are gone through, so in the last lecture we talked about, how we can think about Indian Economy in terms of service sector boost. How service sector provided different outlook. In this particular session, we will be having some historical background about services sector and the recent traits and issues that we should be discussing about. So, this is lecture 18 of the course Indian Economy: Some contemporary perspective and this is linked to the service sector 1 lecture. So, this particular lecture will give you a complete idea about the recent trends and the historical aspects.

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Reference, reading materials will remain the same like lecture 1, the previous lecture but for the sake of or for your reference I have just mentioned it here.

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India's Services Sector Development: Analysis and Perspectives

- **Indian IT Industry: Some historical perspectives**
 - India had its first computer system in 1955 and it was installed at ISI Calcutta. Hindustan Aeronautics and Tata Institute of Fundamental Research (TIFR), Bombay received later.
 - Electronics Corporation of India (ECIL) was set-up in 1967.
 - During 1955-1977, International Business Machines (IBM) dominated the Indian computer industry with the share of more than 70%.
 - M G K Menon Committee's recommendations helped set-up Electronics Commission in 1971 and Computer Maintenance Corporation (CMC) and Semi-Conductor Complex (SCL) in 1976.
 - These institutions also helped ECIL to flourish.
 - The introduction of FERA Act of 1974 further helped the domestic producers to dominate as IBM by 1977 had to exit due to equity holding issue.

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Indian IT sector if you go back in the article of, as I mentioned the Karki and Cameron, then this particular article mentions that India had first computer in 1955 and it was installed at ISI Calcutta, Indian Statistical Institute and then the second round of the computer system, and it was supplied by USSR at that point of time.

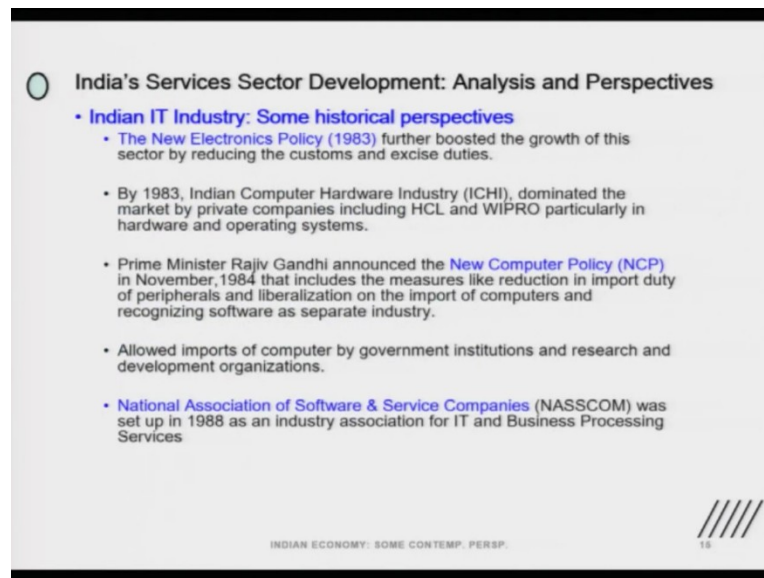
And ISI Calcutta is called Indian Statistical Institute and then the second round we had, two more computer systems given to Hindustan Aeronautics and the Tata Institute of Fundamental Research. And then in 1967, the government of India took step in terms of firing the electronics giving a particular shape to the electronic sector.

So they have set up Electronics Corporation of India (ECIL) in 1967 and once we have the computer system in 1955, it was by the firm International Business Machines (IBM) and it has supplied its version of computers to Indian Institute and in the beginning computer was mostly used by government organisations and the RND organisations that is the Research and Development Organisation.

And during 1955, 1977, IBM had the market share of computers in India by 70 percent then in 1971, government of India set up a committee headed by M.G.K Menon Committee and this committee had recommended, it is also called as Electronics Commission and it had recommended setting up of two institutions Computer Maintenance Corporation (EMC and Semi-conductor Complex that we have SCL in 1976. So, this commission which is called as Electronics commission, this commission also gave birth to these institutions.

And these institutions had given a lot of advantages to the growth and development of ECIL and then in 1977 we had introduced a law on Foreign Exchange Regulation Act came in and then it was the issue of declaring the equities and IBM did not declare the equities which was about 40 percent. That is why any foreign firm will have to have some kind of collaboration. And then IBM had to leave by 1977.

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From that onwards, our own domestic policies were more in line with the support of the growth of the particular sector. And in 1983, we had a new electronic policy and this particular policy also gave rise to the growth and development of this particular sector. So, by 1983, Indian Computer Hardware industry that we call it as ICHI dominated by the private companies and it was HCL and then we had Wipro particularly in the sphere of hardware and operating system.

Then in 1984, Rajiv Gandhi became Prime Minister and then he introduced the new computer policies and he took a lot of measures because these were the 1980's era. So, he was taking liberalisation measures and then he took measures on rationalisation of import duty, of peripherals and whatever the computer parts that you want to import from outside, liberalisation on import of computers and recognizing software as a separate industry.

So, for the first time in 1984, we had gone for introduction of these new computer policies. At that time there was a lot of euphemise about this particular policy because there are some kind of understand that, if you have computers then this will replace the humans and humans

will have no job and that is why, at that time that government had to face resistance from different labour union at that point of time.

Allowed import of computers by government institutions and research and development organizations, then government allowed these things. And these were the major regions why even at that time private companies took the help or took the advantage of these measures and they started importing technologies, the technological transformation and there were dissemination of information at every level. In the beginning one good thing that government had done is that, it had used this for research and development so that we can go for setting of our org or go for having some kind of import substitution policy.

So, in 1984, this was the case, the new computer policy was known for that and it also led to the development of wide spread development of different networks. In 1988 we had National Association of Software and Service Companies (NASSCOM) and this company became one of the lobbying group of IT sector and this IT sector of business processing.

And we still have this particular sector or dynamic sector to support this. So, this particular NASSCOM is considered as one of the big case studies which we consider for the expansion of one particular activities. So, in case of India, if the service sector is leading specially the IT and business processing, then NASSCOM is considered one of the major or important institutions.

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○ India's Services Sector Development: Analysis and Perspectives

- Indian IT Industry: Some historical perspectives
 - During mid-1980s, the computer industry had registered an impressive growth.
 - Graphics Indian Script Terminal (GIST) was developed by IIT Kanpur.

Year	Industry Turnover (Rs. in Crore)	Percent Growth
1983-84	125	--
1984-85	138	10.4
1985-86	234	69.4
1986-87	347	48.3
1987-88	510	47.0
1988-89	674	32.2
1989-90	900	33.5
1990-91	1094	21.6

Source: Karki, R., & Cameron, A. (1995). Designing Policy Initiatives in Emerging Economic Environment: Case of Indian Computer Hardware Industry. *Economic and Political Weekly*, M94-M97.

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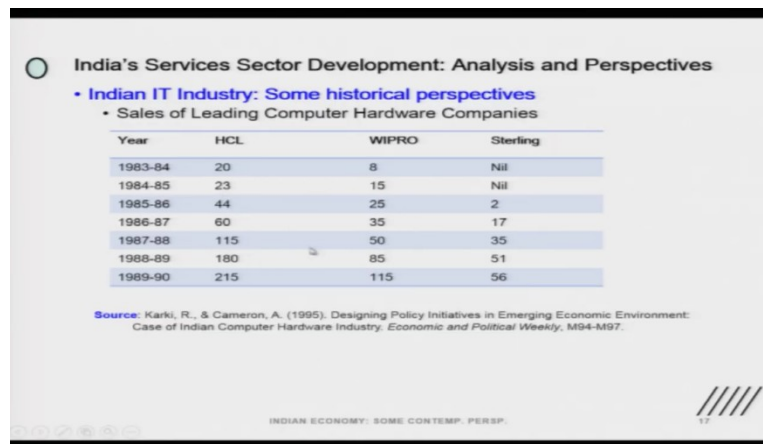
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Then we also emphasis on the localisation of computer services in terms of having language advantages, at that time graphics Indian Script Terminal was developed by IIT Kanpur and then after that this particular computer industry registered an impressive growth so if you see the industry turn over, the computer industry turn over in the year 1983, it has the turnover of 125 crore. And in 1984, 1985, 86, 87 so 85, 86, 87 we can see that the growth has reached 59 percent.

It was recorded during 1985-86 and then there was a decline but still it was high. So, 1985-86, 1986-87, 1987-88 is considered as the major contributor of India's software industry. But after that sterilization face and then in terms of growth, it was not reflected but in terms of the world space coverage of activities, backward and forward linkage has started giving benefits to the economy.

So, you can see that from 1982-83 we have the turnover of only 125 crore. By 1990-91 we had 1000 crore turnover so that shows that in a less than 10 years how much we have given importance to this particular sector and how much it has grown over a period of time. So, 1985-86, 1986-87, 1987-88 it is called as the era of the IT sector or especially the computer industry.

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India's Services Sector Development: Analysis and Perspectives

- Indian IT Industry: Some historical perspectives
 - Sales of Leading Computer Hardware Companies

Year	HCL	WIPRO	Sterling
1983-84	20	8	Nil
1984-85	23	15	Nil
1985-86	44	25	2
1986-87	60	35	17
1987-88	115	50	35
1988-89	180	85	51
1989-90	215	115	56

Source: Karki, R., & Cameron, A. (1995). Designing Policy Initiatives in Emerging Economic Environment: Case of Indian Computer Hardware Industry. *Economic and Political Weekly*, M94-M97.

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The sales of the leading computer hardware companies, if you compare then we have HCL, Wipro and Sterling, one company at that point in time and we can see that how it has gone up in terms of the sales also. So, these are in terms of course, so this was the turnover at that point of time.

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India's Services Sector Development: Analysis and Perspectives

• Sector wise employment trends

Sectors	Absolute number (in millions) Share in percent given in parentheses				
	1993-94	1999-00	2004-05	2009-10	2011-12
Agriculture	204.3 (61.1)	214.7 (58.5)	226.8 (54.5)	220.5 (51.6)	204.4 (47.1)
Industry	53.5 (16.0)	61.7 (16.8)	81.0 (19.5)	93.1 (21.8)	106.1 (24.4)
Services	76.6 (22.9)	90.6 (24.7)	108.0 (26.0)	113.7 (26.6)	123.9 (28.5)
Trade, hotels and restaurants	26.8 (8.0)	34.1 (9.3)	46.5 (11.2)	48.4 (11.3)	50.5 (11.6)
Transport, storage and communications	11.0 (3.3)	15.0 (4.1)	18.7 (4.5)	19.9 (4.6)	22.8 (5.2)
Financial services and insurance, Real estate and Business services	3.7 (1.1)	4.8 (1.3)	7.5 (1.8)	9.4 (2.2)	10.7 (2.5)
Community, social and personal services	35.1 (10.5)	36.7 (10.0)	35.3 (8.5)	36.1 (8.4)	39.9 (9.2)

Source: Economic Survey, 2014-2015, Volume 1

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And then in terms of employment if you compare then we have the agriculture industry so employment in terms of share if you find, then we have in 1993, it was almost 61 percent and it came down to 47.1 in 2011-12, industry again 16 to increase to just 24.4. Services, it remained more or less stagnant so it is 22.9 it is just 28.5 and this is considered as the major cause of concern but in terms of income generation this particular sector has generated more income for the economy.

Trade and hotels, this also contributed a lot. Transport, storage and communication, this also has a quite reasonable amount of contribution and growth. But all others, we didn't not see that much coming. Especially in financial services, insurance and real estate and business services, their income contribution might be higher but in terms of sector wise employment claims, we did not see that much change. And that is why it shows us that there are... and that is why these are the concerns of the service sector growth but in terms of income generation, this sector generates more than that.

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India's Services Sector Development: Analysis and Perspectives

• Services sector trade performance by sector

Share (in %)

Exports	2008-09	2018-2019	Imports	2008-09	2018-2019
Travel	10	14	Travel	18	17
Transportation	11	9	Transportation	25	16
Insurance	1	1	Insurance	2	1
GNIE	0.4	0.3	GNIE	2	1
Software services	44	40	Software services	5	5
Business services	18	19	Business services	29	32
Financial services	4	2	Financial services	6	3
Communication	2	1	Communication	2	1

Source: Economic Survey, 2019-20, Volume 2, GNIE = Government not included elsewhere

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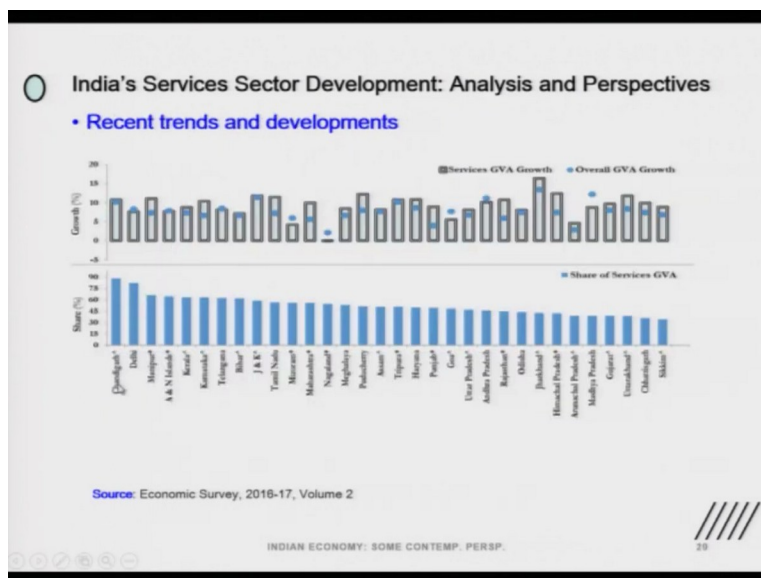
Then we have the sector wise trade performance, if you see in terms of percentage so the trade share, if you see 2008-9, 2018-19, this is the export, this is import, if you see in terms of export and import, then we find that software services, business services, software services has the largest share. In terms of export business services also has largest sale.

So, it is 18 and 19, it is almost like during 2018-19 it has come down 44 and 40 but these are the margin variations but in terms of overall share, what we find that the transportation, software services, then business services and in terms of inputs we find that business services have more so 29 and 32.

But service sector is having more in terms of the percentage share, so 44 percent now we have export basket in terms of service sector export basket, consist of 44 percent from software services, then we have business services 18 percent and then we have travel 10 percent, transportation 11 percent and financial services 4, 2 percent. So, these are the numbers that we have. Travel we have 2008-09 18 and in 2018-19 we have 17.

And here we have transportation again imports you can see now the numbers are going down more or less. And here also it is going down more or less, the only thing is that in terms of begin in services, it has gone up. So, that could be because of the type of service requirement that we need that is why it is having such type of trend.

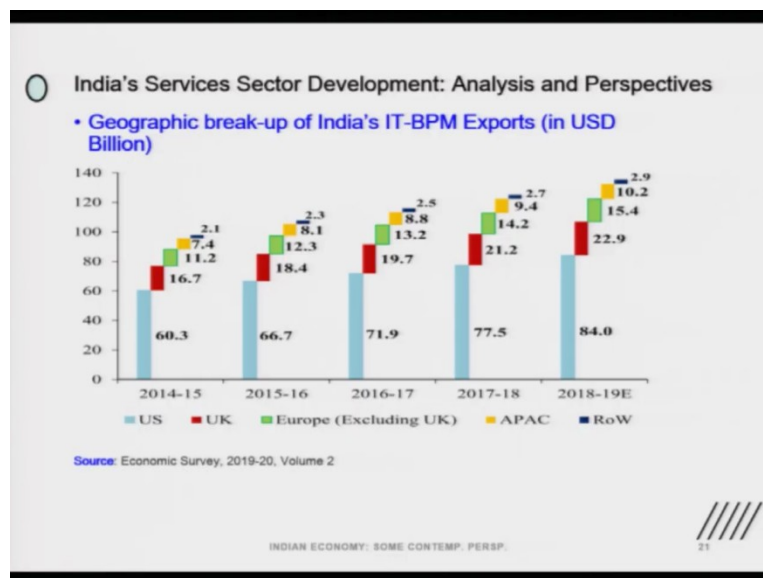
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Recent trends and development if you see, then even state wise the service sector has more share, so that is why this particular sector requires a different type of treatment so in terms of services this is the GVA growth that we have, the gross value added, this is the overall GVA growth, gross value added. And in terms of this, you will find that everywhere we have the services sectors GVA growth higher than the overall GVA growth.

And even the states that we have more reliant on the services are Chandigarh, Delhi, and Manipur and then we have Andaman and Nicobar Islands, Kerala, Karnataka. So this is the trend that we have so even as per the economic survey, more than 18 states are having more than 55 percent share of services in their activities, even though the states which are not of IT hub, still their share is also higher. So, that is why it could be public administration and defence services that we have.

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This is the break up that I have got for the IT and BPM exports, so if you compare IT and BPM export, then we find that we have... still the market is more market oriented and this is one of the reason why we are more concerned about the growth outlook of this country. Because if these countries will do well then our service sector is expected to do well because we receive major income from these countries, so if you see the market of the service sector, then what we find that UK is still leading, in 2018-19 as per economic survey 2019-20 84 percent of the IT or BPM industry export is concentrated in US. And here you have the UK, Europe and the Asian Pacific.

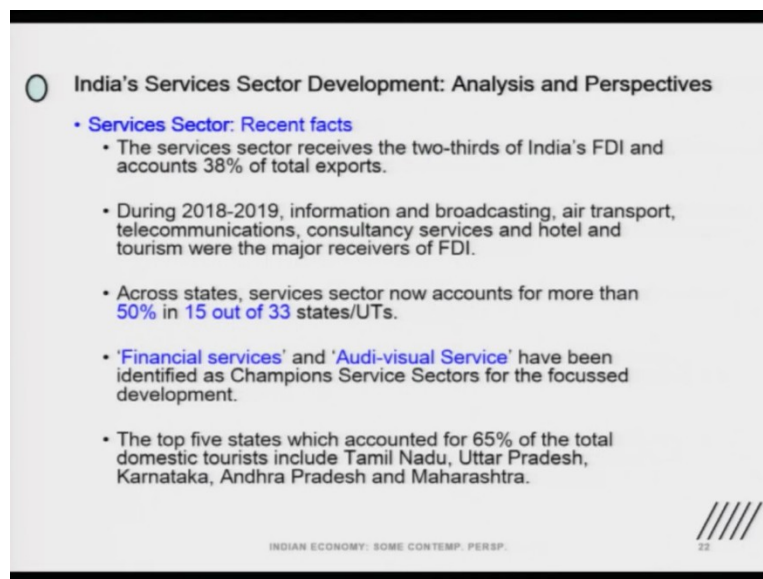
Now here one thing to note, why I mentioned here because when we read in newspaper that why our service sector is not been good though it has mentioned that this year has a growth rate of 7.7 percent, but still this service sector requires immediate attention from the outlook of the other countries because if the outlook is not good then the income generation for these activities will not be more because they rely on the product.

That is why the major role of US is going to impact, it was anticipated that, this will impact badly because service sector rely more on the activities so the spread of computer services, the network system and different business processing activities, IT or information technology enabled services, in these countries helps, the service sector growth in our country, because we have the back officers of major companies operating in these companies located in Bangalore, Chennai, Hyderabad and all other places.

And that is why, the government is now more focusing on the manufacturing because manufacturing gives you boost in terms of not just exports but also domestic activities. So, there is more likely that industrial output will be consumed better than this services and activities. But in domestic sphere also this service sector has contributed a lot, not just from the perspective of... now a days we have the digitisation process, under that we have undertaken different majors to... just to make sure that our service sector is not dependent on outside services only. So, automation of railway ticketing system from the banking, then there are financial services automated.

Now we are going for digitisation of records and we have also gone for setting of tax license system wherein we have the computerised records and maintenance and these developments are further added in future. And this will further create extra market for the services sector.

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○ India's Services Sector Development: Analysis and Perspectives

- **Services Sector: Recent facts**
 - The services sector receives the two-thirds of India's FDI and accounts 38% of total exports.
 - During 2018-2019, information and broadcasting, air transport, telecommunications, consultancy services and hotel and tourism were the major receivers of FDI.
 - Across states, services sector now accounts for more than 50% in 15 out of 33 states/UTs.
 - 'Financial services' and 'Audi-visual Service' have been identified as Champions Service Sectors for the focussed development.
 - The top five states which accounted for 65% of the total domestic tourists include Tamil Nadu, Uttar Pradesh, Karnataka, Andhra Pradesh and Maharashtra.

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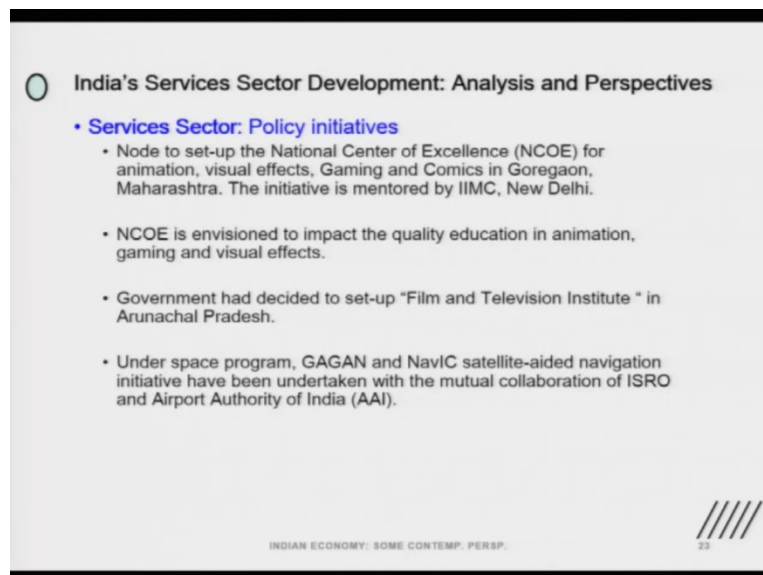
So, just to give you the recent facts, I have already mentioned in the beginning, the first slide was about this, just to recap everything on the services sector so service sector receive the 2/3rds of India's FDI, 38 percent of total exports, in 2018-19, information broadcasting, air transport, telecommunication, consultancy services, hotel and tourism where the major receivers of FDI, across state service sector is having more than 50 percent share in 15 out of 33 states which means that these states are now more sensitive to the service sector growth.

Financial services as per the economic sector 2018-19, it was mentioned that financial services in audio visual service have been identified as the champion service sector and there will be special focus on the development of this, because champions sectors are having the focused strategy to expand the sector. Top 5 states, so since tourism is also one sub-sector of this service sector and in tourism the government has given more emphasis on going for promotion of foreign tourism, foreign tourists coming to India. And even the domestic tourism for the local people, it is one area where the government is now focusing on.

There is also a controversy about that tourism is neither part of the union list nor part of the state list. So, centre and state are not very clear about prioritising the tourism sector so now the tourism industry is lobbying with the government that this tourism should be the part of the concurrent list, not the state and not the centre. And that is why, it looks like going ahead, this particular sector is going to be... so the top 5 sectors which accounted 65 percent of total domestic tourist includes Tamil Nadu, Uttar Pradesh, Karnataka, Andhra Pradesh and Maharashtra.

So, if you think in terms of the overall tourism sector outlook, so this particular sector needs special attention because now, during the pandemic, this sector is badly in but overall as per the economic survey 2019-20, 65 percent total domestic tourists include Tamil Nadu and this.

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India's Services Sector Development: Analysis and Perspectives

- **Services Sector: Policy initiatives**
 - Node to set-up the National Center of Excellence (NCOE) for animation, visual effects, Gaming and Comics in Goregaon, Maharashtra. The initiative is mentored by IIMC, New Delhi.
 - NCOE is envisioned to impact the quality education in animation, gaming and visual effects.
 - Government had decided to set-up "Film and Television Institute " in Arunachal Pradesh.
 - Under space program, GAGAN and NavIC satellite-aided navigation initiative have been undertaken with the mutual collaboration of ISRO and Airport Authority of India (AAI).

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There is also a special emphasis to set up National Centre of Excellence for animation, visual effects, gaming and comics in Mumbai, Goregoan. It is mentioned and it is monitored by an institute of mass communication in New Delhi and this is just to make sure that the audio

visual service sector is expanding, so now the government has given incentive for shooting foreign movies in India, Indian movies can go outside. So, there is a whole lot of effort to revive the industry.

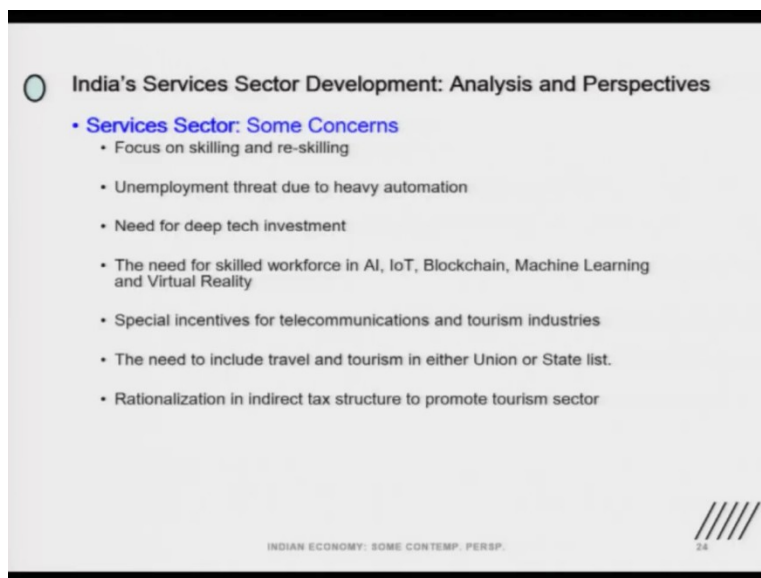
So, the NCOE impart the quality education in animation, gaming, visual affect and there is a whole lot of effort to create the role of education and animation and other activities. Government has decided to set up film and television institute, so in North-east part of India, we hardly have that much infrastructure on the film and television, so the government has sanctioned a institute there and this particular institute will be set up. Now on the sub-sector, the space programs are also added.

So, now the ISRO and the airport authority of India, have come up and they are going for the satellite added navigation and these 2 schemes are under the GAGAN and the navigation IC and these 2 are going to be the game changer in terms of air traffic control and how we can help.

So, under service sector, one more thing if you read the service sector chapter in the economic survey, then you find that there is a whole lot of mentioning about the space program, how government has gone for increase the investment because this is one of the exciting areas to look for and India is one of the confessed missile launch, the maximum number of satellites and there is also emphasis to link it with different programs in India running through or different in terms of Jio tagging and also in terms of the expansion of the market for different activities so space program is going to be helpful in this.

Now just for the sack of telecommunication, since in this particular session I have not covered telecommunication that much because telecommunication is already well covered in the industrialisation process when we discussed. And that is why, it is better to focus mostly on the...

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Now coming to the recent developments that we have, so in the modern or I would say in the contemporary context, in the last 5 years, what we have seen in that, service sector has reached to a stage where, they due to change in the business operation environment, there is a whole lot of need to train the populous, the existing workforce so there is a whole lot of need to think about skilling and re-skilling which means that, we have to skill the younger generation, those who are going to enter in the job market, but those who are already employed, there is a need to go for re-skilling.

Under the start-up India program, skill India program, there is a whole lot of effort to generate or go for grooming of the young generation so that this IT industry or the IT enable services industry may be able to continue the same set of energy and the strength that they have been. Also, some kind of threat of automation and loss of job, that people are anticipating because now, most of the IT industries are emphasising on automation and there is likelihood that around 30 percent workforce will be losing the job due to automation.

This is also one of the important need to focus on how we can think about. And since we are into the era where even the budget of last 2 years have highlighted the role of artificial intelligence and internet of things, Blockchain, machine learning and virtual reality and even in terms of technological advancement, there is a need to train or have the skilled training of these new modern developments in the era of technology that we are seeing. And India, since we have already taken major and we already have institute of excellence arose the country, even IIT so it is expected that this shortage will be fulfilled very soon.

There is also a need to give a special focus on the telecommunications and tourism industry because in case of India, tourism is still not considered as important sub-sectors of the service sectors. There is a whole lot of effort and there is a whole around... rearrange the policy according to the new changes that we are observing, in case of service sector, for instance after covid-19 there is an industry which is walking for this particular tourism industry.

They have requested the government that there should be some kind of relaxation, given under 18 GST norms because most of the tourism industry rely on the hotel and restaurant industry and that is why, if these 2 sub-sector will be given incentives then of course this will further helping, boosting the tourism industry, so also the class 4 sector. So, now there is a whole lot of effort to enrich those areas where there is a whole lot of scope for going for the tourism.

The need to include travel and tourism either in Union or state list, as I mentioned tourism is so far not added either in the union list or in the state list. So, there is a need to emphasis on that. Rationalisation in indirect tax structure to go for the tourism sector. So, this is the main findings that we found.

So, overall what it looks like, that what we have mentioned so far, that this service sector, if you tie a line, so service sector has done well in terms of IT processing and then we also have the service sector exports. Now we can see that the business services and the IT software exports are leading but there is also a concerned coming from the global economic perspective that as long as the share of service sector will be higher in GDP, will be having more reliant on the external sector outlook.

And also there is a whole lot of need to focus more on the development of the sector, not just for the perspective of going for the sector and the development but also from the perspective of, how we can go and make India as service sector and in the same way, we have gone for the make in India policy, we should org new manufacturing policy that we had in 2011, under that we have gone for having a special package for a small economic zones.

Special economic zones are added to the services sector and service sector also get the benefit of this. So, that is what, we will find that in Hyderabad, Bangalore and all other places we have a special economic zones of the services sector also but there is a need to come up separately for the service sector, road map, in consultation with NASSCOM so that this particular service sector will grow up. Apart from this, in service sector, I would recommend

that you should focus and one should read this service sector chapter of economic survey, because that gives us the revealed comparative advantage of India, then you will find that how India economy is leading with other countries and in what all activities and how are we dealing with.

The service sector chapter is also important to focus on the other emerging areas for example, insurance, real estate is also one major service provider that we have a major sub-sector in India especially in services sub-sectors. So, those things I would recommend the audience to please refer that chapter and whatever difference things which I have mentioned, is very useful and you should always... it is good if you can go through.

Now, since I have already done the service sector, in the next session we will be having more about the financial sector, reforms and how banking and financial services has gone up. Thank you, thank you so much.