Structural Change, Employment and Occupational Mobility
Some explorations from Indian labour market

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This presentation provides an exploratory understanding of the link between structural changes and the employment situation and inter-generational occupational mobility in India.

- The context - SDG.

SDG - Goal 8: Decent work and economic growth

- In developing countries, the middle class now makes up more than 34 percent of total employment – a number that has almost tripled between 1991 and 2015.
- However, with global recovery, though slow, there are not enough jobs to keep up with a growing labour force. According to the International Labour Organization, more than 204 million people were unemployed in 2015.

- The SDGs, in an endeavour to promote sustained economic growth, higher levels of productivity and technological innovation, focus on encouraging entrepreneurship and job creation as effective measures to eradicate forced labour, slavery and human trafficking. With these targets in mind, the goal is to achieve full and productive employment, and decent work, for all women and men by 2030.

The global targets are:

- Sustain per capita economic growth of at least 7 per cent gross domestic product growth per annum in the LDCs.
- Achieve higher levels of economic productivity through diversification, technological upgrading and innovation,

including a focus on **high-value added and labour-intensive sectors.**

- Promote policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of MSMEs, including through access to financial services
- By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.
- By 2020, substantially reduce the proportion of youth not in employment, education or training.
- Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking

and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and end child labour by 2025.

- Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants
- By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products.

In this presentation, I shall focus job creation and on decent jobs very subtly. Here I do not focus on informal employment, declining female labour force participation, wage gap between skilled and unskilled labour and/or between male and female labour.

Structural Changes

Significant changes in the structure of production, trade and employment with GDP growth.

Services growth picked up since 1978/79, and continued thereafter (Balakrishnan & Parameswaran, 2007).

Rakshit (2007) calls this as services led growth in India.

Like most developing countries, emerging markets in particular, the services sector has emerged to be the largest sector in India accounting for more than 50% of GDP.

Table 1: Average Share of Sectors in India's GDP (%)

Sector	**1950s**	**1960s**	**1970s**	**1980s**	**1990s**	**2000s**
Agriculture	55.3	47.6	42.8	37.3	30.9	21.8
Industry	14.8	19.6	21.3	22.3	23.3	24.5
Services	29.8	32.8	35.9	40.3	45.7	53.7

Source: Calculations from National Income Accounts

Within services, the subsectors that have emerged important are Trade, hotels & restaurants; Financing, insurance, real estate and business services; Community and personal services, Transport, storage and communication services.

Growth performance of the Indian service sector is on account of phenomenal growth in services trade. (Eichengreen and Gupta, 2010; Gordon and Gupta, 2004;

Nayyar, 2010; Rakshit, 2007, Ghose 2015). This is one of the many factors, which has driven service sector growth.

Services are traditionally classified as non-tradables. However, large number of services have become tradable services.

Along with sectoral growth, services trade has also witnessed rapid growth since early 1990s. India's service trade volume has increased by 16.09% per annum since 1991 (till 2010). Services exports from India grew at a CAGR of 12.98% during 1991-2000, and at a higher rate of 20.97% during 2001-10.

Such rates of growth are significantly higher in comparison to the corresponding world exports of services during these phases.

During post-2000, growth of computer & information services, personal, cultural & recreational services and financial services exports are high. Other commercial services exports including insurance grew along with traditional services such transport and travel.

Composition of India's services exports predominantly include computer & information services (approx. 46%), while traditional services like transport and travel account for around 22%. The process of diversification is slow.

Growth in services trade has been largely attributable to the advances in information and telecommunication technologies that have made a large array of services tradable across borders, and also the economic reforms that India has been pursuing since early 1990s (Raychaudhuri and De, 2012).

Fragmentation of the production processes in the developed nations and outsourcing of production activities to the developing world and growth and penetration of information and communication technologies is the prime driver of this services export boom in India.

However, comparative advantage in services is skewed.

Table: India's Comparative Advantage in Service Exports

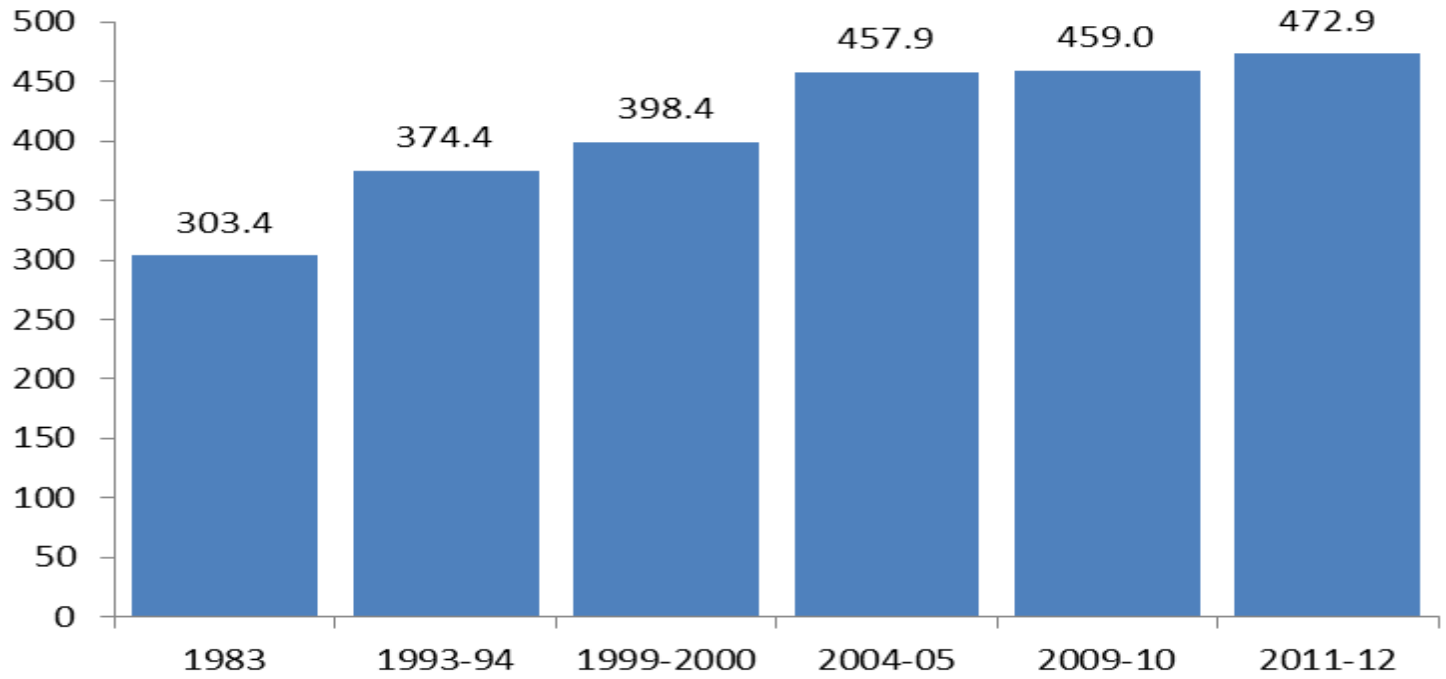
Sectors	**1980**	**1990**	**2000**	**2005**	**2008**	**2010**
Communicns	0.0	0.0	1.7	1.3	1.0	0.5
Computer, IT…	0.0	0.0	10.1	9.9	8.6	7.9
Construction	0.0	0.0	1.6	0.3	0.3	0.2
Financial	0.0	0.0	0.3	0.3	0.5	0.7
Public services	0.5	0.1	1.5	0.3	0.2	0.2
Insurance	0.7	1.4	0.9	1.0	0.7	0.7
Oth bus. serv	1.2	2.0	1.1	1.0	0.9	1.0
Personal, cultural, & recreational	0.0	0.0	0.0	0.2	0.6	0.3
Royalties etc.	0.0	0.0	0.1	0.1	0.0	0.0
Transport	0.5	0.8	0.5	0.5	0.5	0.5
Travel	2.0	1.1	0.7	0.5	0.5	0.5

Source: Raychaudhuri & De (2012).

Such a pattern of services growth, especially tradable services have important implications for employment and occupation.

Employment

Figure: Persons Employed (UPSS) (million)



However, growth of overall employment does not give a complete picture for India. It is all the more important because the rate of employment growth varies significantly across industries and over time reflecting a structural change.

Table: Growth Rate of Employed in Broad Sectors *(% per annum)*

Broad Sector	1980-93	1994-2002	2003-11	1980-11
Agriculture, etc.	1.44	0.52	-1.12	0.43
Mining etc.	4.27	-0.78	0.87	1.82
Manufacturing	2.18	2.24	1.23	1.92
Electricity, etc.	4.39	-1.63	2.84	2.19
Construction	5.79	6.60	9.08	6.98
Services	3.73	3.29	3.00	3.39
Total Economy	2.09	1.57	1.04	1.63

Services sector employment has been marked with low growth, and despite services sector growth, the sector accounts for only about 29% percent of total employment in India.

Krishna et al. (2016), based on the KLEMS database, provide detailed estimates of subsectoral employment growth within the services sector. Most services are found to have low to moderate growth (below 5%) till 2011 except financial services (including financial intermediation) and business services.

Krishna et al. (2016) classify services as market & non-market services and find the share of market services rising at a faster rate than that of non-market services.

As Rangarajan et al. (2007) show, the employment elasticity in the services sector has persistently remained low and the sector accounted for only 23.4% of total employment in the economy in 2004-05.

On the face of it, the Indian experience is quite in contrast to the US experience. Jensen & Kletzer (2005) little evidence that tradable service industries or occupations having lower employment growth than nontradable industries or occupations overall. Only at the low end of the skill distribution, employment growth is negative for tradable services. High-skill service activities have the highest employment growth rates.

Nayyar (2010), carrying an econometric analysis based on NSSO household survey data for the years 1993-94 and 2004-05, nuance his results showing that employment has been generated more in the sub-sectors with low educational requirement and the

employment generated in the sub-sectors characterized by high educational requirements is not large.

Gordon and Gupta (2004) give an intuitive explanation that growth of the services sector has been concentrated in sub-sectors which are more dependent on skilled labour and labour productivity in these sectors have increased due to technological advancements and efficiency gains from liberalization, thus leading to a 'jobless' growth in the services sector.

As regards export related jobs in the services sector, Veeramani (2016) finds a similar pattern. Between 2010-11 and 2012-13, export supported jobs increased by 13.3 million. Manufacturing sector contributed 75%, agriculture contributed 4.4% and services contributed negatively. Number of export supported jobs in services sector declined by 1.3 million.

Veeramani (2016) further show that within the services sector, share of jobs attributable to exports increased from less than 10% in 1999-2000 to 16.7% in 2006-07 and 2007-08 and then declined sharply to 7.2% in 2012-13. For services, the total number of export-linked jobs increased from 9.2 million in 1999-2000 to 21 million in 2007-08 and then declined to about 12 million in 2012-13.

The major drivers are business services and computer-related services where the export-linked jobs are mainly generated through direct effect. The other important sectors are construction, 'other commercial, social and personal services' banking, 'land transport', 'insurance' 'hotel and restaurants' and 'communication' where employment has been generated primarily through indirect linkage effects.

Regarding share of direct employment in total export supported jobs, direct employment accounts for 73 to 85% of total export supported jobs in manufacturing sector, whereas, in agriculture and services a significant share of employment is generated through indirect effects. These findings are similar to RIS (2006) study.

Occupational Mobility

In this section, I broadly base my presentation from a PhD level paper by my scholar Suparna Ganguly.

Using National Sample Survey Organization (NSSO) of India conducted household 'employment-unemployment' survey, the study delves into intergenerational occupational mobility since 1999-2000.

Three of the large sample rounds of survey viz. are considered for the current study. To arrive at intergenerational occupational mobility, the working sample consists of urban men in the age group of 16 to 35 in three large sample rounds, viz. the 55th Round (1999-2000), the 61st Round (2004-05) and the 66th Round (2009-10), who are a part of the workforce and are not attending any educational institution. The working sample includes only those father-son pairs who report their principal industry as well as their principal occupation.

First of all, only urban people are considered.

Secondly, following Hnatkovska et al., (2013) and Ahsan et al., (2016), we have considered co-resident household for our study. As NSSO does not ask for information about the fathers of the individuals surveyed, therefore paired up data on father-son duo can only be generated for the household where father and son co-

reside in the same family. Again, we had to restrict ourselves to the families where the father is the head of the household. This is so, because, households where the son is the head of the household, NSSO does not distinguish between the father or the father-in-law who is co-residing in the same household and put them under the same code. So we have to drop these sons from our dataset.

Thirdly, like Hnatkovska et al., (2013) and Ahsan et al., (2016), we stick to the male population only. The logic behind this being that after marriage, the daughter leaves the family and becomes a member of another household. So it would be difficult to pair up daughters with their fathers to carry out any effective analysis. Also, we dropped the households with female household heads who can be matched up with their sons as they comprise of merely 1% of the population under consideration.

Lastly, we have kept the upper age limit of the son to 35 in order to ensure that his father remains within the working population.

Number of individuals in the working samples in the three rounds is as follows:

	55^{th} Round	61^{st} Round	66^{th} Round
Urban Population	225500	204808	178457
Population reporting Principal Industry and Occupation	72550	68906	58838
Father-Son Pairs	9134	8586	7345

The exercise on intergenerational occupational mobility shows that more than 55 per cent of the sons are employed in the same industry as their fathers for the period 1999-2000 to 2009-10, indicating persistence in occupational choice.

Econometric estimation on intergenerational occupational persistence, controlling for individual characteristics such as age, religion, social group and marital status, household level characteristics like household size and household type, educational attainment of both son and father, occupation category and status of both son and father, show that services trade growth has significant but negative impact on intergenerational occupational persistence.

By way of conclusions…

The above results on services exports related employment and inter-generational occupational mobility have significant implications for India's labour market including job creation, skill requirements, returns on labour and decent jobs.

Thank you