

Make in India, Employment and Growth

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'Make in India'

- The Govt. launched 'Make in India' campaign to boost manufacturing sector in India.
- The aim is to transform India as a manufacturing power house by promoting employment, improve industrial productivity, promoting exports, encouraging FDI, lowering the barriers of doing business etc.
- There are several issues. But I focus on a few selected issues.
- Employment Challenge in India and links to manufacturing.
- How do we improve manufacturing growth (domestic as well as exports).
- Includes both organised and unorganised sectors.

Employment Challenge in India

- Absorption of surplus labour and new entrants to labour force (8 to 10 million jobs per year).
- **Most important challenge. Large percentage of working poor and under employed**
- They are engaged in low productive informal sector.
- Gradual formalization of employment which is indeed a long term process.
- **Simultaneously increasing the productivity and earnings in informal economy.**
- More of Arthur Lewis Structural shift: Agriculture to non-agriculture sector
- **Demographic dividend and challenges of Youth unemployment, skill and education**

Challenge of Employment: Absorbing Surplus Labor

- According to some projections, India's labour force in 2015-16 stands at 511 million.
- To ensure the economy reach Lewis turning point (that is point at which surplus labour falls to zero) in the next 15 years.
- This will require absorption of the incremental labour force of 8 million, a segment of surplus workers (7 million) and a segment of the unemployed (0.9 million) every year.
- The challenge then is one of absorbing around 16 million persons in new and better jobs at rising levels of productivity over year over the next 15 years (2030) (India Employment Report, 2016)

Sector Share in Emp: All India%

Sectors	Share in Employment (%)				Share in GDP %
	1983	1993-94	2004-05	2011-12	2011-12
Agricul	68.6	64.8	58.5	48.9	14.1
Manuf.	10.6	10.5	11.7	12.8	15.7
Constru	2.3	3.1	5.6	10.6	7.9
Second ary	13.8	14.7	18.1	24.4	27.5
Tertiary Sector	17.6	20.5	23.4	26.7	58.4
Total	100.0	100.0	100.0	100.0	100.0

Quality: Status of Employment: India (%)

	Year	Self Emp	Regular	Casual
All	1993-94	54.7	13.2	32.0
	2004-05	56.9	14.3	28.9
	2011-12	52.2	17.9	29.9
Male	1993-94	53.7	16.7	29.6
	2004-05	54.7	17.2	28.1
	2011-12	50.7	19.8	29.4
Female	1993-94	56.8	6.2	37.0
	2004-05	61.4	8.3	30.3
	2011-12	56.1	12.7	31.2

Informal sector

Sector	Share in output%	share of Informal sector in total employment (%)	share of Informal employ.in total employ (%)
	2011-12	2011-12	2011-12
Agriculture	87.2	99.8	99.9
Manufacturing	26.5	63.4	88.4
Construction	64.9	81.7	98.7
Other industry	9.9	26.4	57.5
Services	60.0	74.2	84.3
Non-agricultu.	52.9	72.0	87.7
Total economy	58.5	84.5	93.2

Non-agricultural establishments 2013-14

Size of Employment	No. (in lakhs)	Percentage to total
Own account workers	301.35	66.43
2-5	127.78	28.17
6-9	16.95	3.73
10-99	7.20	1.59
100 and above	0.35	0.08
All establishments	453.63	100.00

Note: Around 98.6% are below 10 workers (both manufacturing and services). Structure of manufacturing sector different in India (85% less than 50 workers) as compared to China which has large firms.

Small size of enterprises

- Within manufacturing in 2010-11, small firms employing less than 20 workers account for 72% of manufacturing enterprises with 12% output.
- firms in apparel sector in India are unusually small on average when compared to other countries
- In service sector, micro, small and medium firms employed 98% of workers with with 62% of output.
- It is known that 90% apparel workers in India were employed in the firms with less than 50 workers (The corresponding figure in China was 15%).

Recent Trends in Employment

	Survey 2010-11	Survey 2015-16	5 year growth (%)
No.of enterprises (cr.)	5.77	6.34	9.9
No.of workers (cr.)	10.8	11.13	3.1
Workers annual wage (Rs.)	47016	87544	86.2
GVA per enterprise (Rs.)	108951	181908	67.0
Fixed assets/enterprise (Rs.)	2,03,364	2,31,869	14

These are unicorporated non-agri enterprises (excluding construction). Covers 11.13 crore workers (one-fourth of the total). Employment grew only 3.1%. This is even before note ban.

Source : Financial Express, July 23, 2017

To conclude on Employment Challenge

- Generating quantity of jobs is not enough.
- Unemployment per se is not the problem (youth unemployment is high)
- Underemployment and quality of employment is the problem.
- Work force has to be shifted from agri to non-agri.
- Within non-agri, from informal to formal employment over time.
- Within informal productivity has to be improved.

Make in India

- Productivity of employment increases if workers are shifted from agri to manufacturing.
- In this context, “Make in India” campaign is in the right direction. The aim is to create 100 million jobs by 2022.
- Also increase share in of manufacturing in GDP to 25% from current 18%.
- Currently, the “Make in India” initiative is focused on sectors such as automobiles, automobile components, aviation, biotechnology, chemicals, defence manufacturing, electrical machinery, electronics, food processing, leather, pharmaceuticals and textiles and garments.

Make in India

- At our institute , we have estimated export created jobs and also domestic value added in different sectors.
- Our work shows exports are becoming an important creator of jobs.
- Next I concentrate on the following.
- 1. What are the inter-linkages between exports and employment?
- 2. What to make in India?
- 3. What type of linkages exist between manufacturing and service sectors?
- 4. What are the factors responsible for manufacturing growth in India?

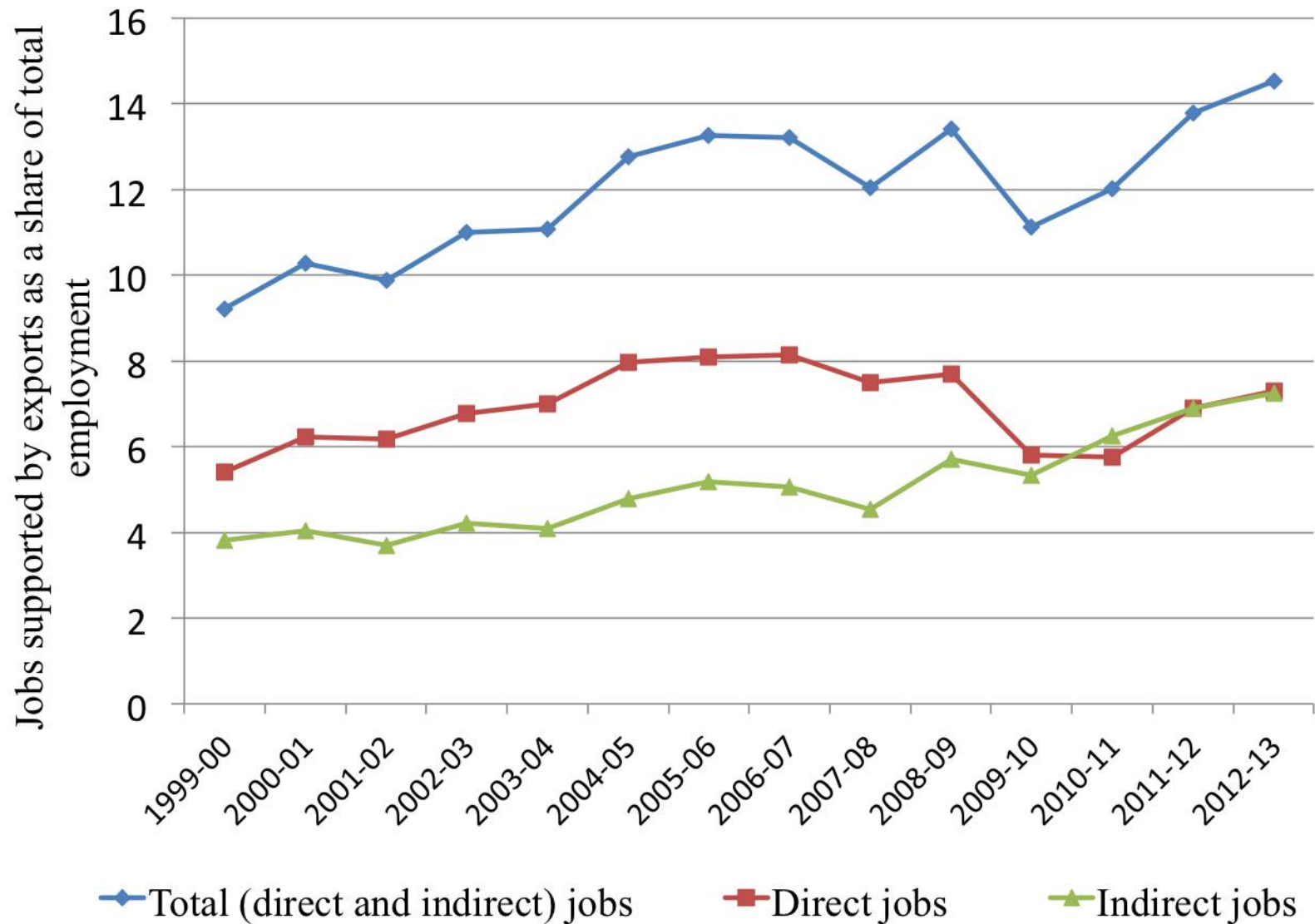
1. Inter-linkages between exports and employ.

- IGIDR has done a study presented recently to Ministry of Commerce. (policy implications are high)
- Provide time series estimates of:
 - (i) number of jobs supported by exports
 - (ii) domestic value added content of exports
 - official IOT are available only for selected years (latest official IOT for 2007-08)
 - Estimates for **112** sectors (covering agriculture, manufacturing and services) during 1999-2000 to 2012-13. Used Supply Use Tables (CSO)
 - Input-Output (I-O) framework: direct as well as indirect effects (backward linkage effects)
 - Estimates are based on **year-specific** I-O tables:

Jobs (Millions) Supported by India's Merchandise plus Services Exports

	Export Supported Jobs			Total Employment in India
	Total	Direct	Indirect	
1999-00	34.0	19.9	14.1	368.2
2000-01	37.9	23.0	14.9	369.1
2001-02	41.2	25.7	15.4	417.1
2002-03	43.5	26.8	16.7	396.1
2003-04	43.6	27.5	16.1	393.5
2004-05	52.1	32.6	19.6	408.3
2005-06	53.5	32.6	20.8	402.9
2006-07	53.5	33.0	20.5	405.2
2007-08	49.0	30.6	18.5	407.5
2008-09	54.1	31.1	23.0	403.8
2009-10	44.5	23.2	21.3	400.0
2010-11	49.3	23.6	25.7	410.2
2011-12	58.0	29.0	28.9	420.5
2012-13	62.6	31.4	31.2	430.7

Number of jobs supported by exports as a share of total employment in the country (%)



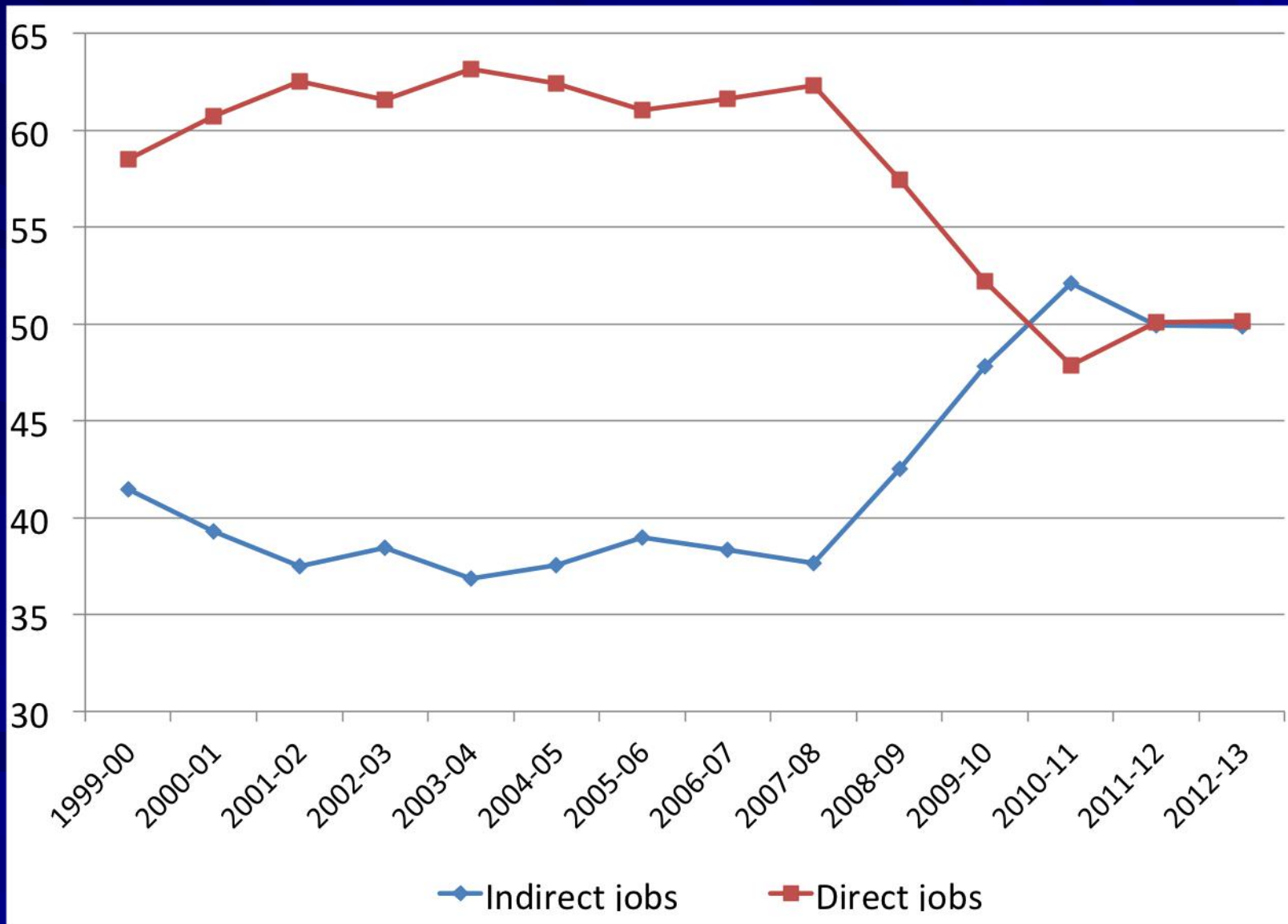
Export-supported jobs has been growing faster than total employment

Period	Jobs supported by exports (Growth Rates)			Total employment in the country (Growth Rates)	Dollar value of merchandise and services exports (Growth Rates)
	Total	Direct	Indirect		
1999-2000 to 2012-13	3.4	1.6	5.8	0.8	20.1
1999-00 to 2005-06	7.6	8.4	6.5	1.5	20.5
2006-07 to 2012-13	2.6	-1.9	8.4	0.9	14.5

Jobs Supported by Indian Exports (million)

	Agri, mining & allied			Manufacturing			Services		
	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect
1999-00	16.0	8.0	7.9	8.9	7.0	1.9	9.1	4.8	4.3
2000-01	16.9	8.8	8.1	11.2	9.0	2.2	9.8	5.3	4.6
2001-02	19.0	10.4	8.6	12.1	10.1	2.0	10.0	5.2	4.8
2002-03	19.6	10.6	9.0	12.7	10.4	2.3	11.3	5.8	5.4
2003-04	19.3	11.6	7.7	13.0	10.2	2.9	11.2	5.8	5.5
2004-05	23.6	13.3	10.2	14.0	11.3	2.7	14.6	7.9	6.7
2005-06	24.5	14.0	10.4	11.0	8.3	2.7	18.0	10.3	7.7
2006-07	23.0	13.2	9.9	10.1	7.4	2.7	20.4	12.5	8.0
2007-08	19.6	11.3	8.4	8.6	5.9	2.6	20.9	13.4	7.5
2008-09	22.7	10.9	11.8	10.6	7.8	2.7	20.9	12.4	8.5
2009-10	19.1	7.2	11.9	10.3	7.9	2.4	15.1	8.2	7.0
2010-11	22.2	5.8	16.4	13.9	11.2	2.7	13.2	6.5	6.6
2011-12	24.1	4.2	19.9	22.6	19.2	3.4	11.4	5.6	5.7
2012-13	26.6	5.4	21.2	24.1	20.3	3.9	11.9	5.7	6.1

Share of direct and indirect jobs in total number of jobs supported by exports (%)



Direct and Indirect Employment

- Interesting conclusions
- For manufacturing, direct empl. Accounts for 73% to 85% of total exports linked jobs.
- In contrast, for agriculture and services, indirect effects are high.
- For agriculture in 2012-13, direct empl. accounts only 20% and indirect empl. 80% of exports jobs which is attributable to manufacturing linkages.
- For services, direct employment accounted for 48% of export linked jobs while remaining 52% indirect emplo. Linkages with manufacturing.

What Explains the Recent Growth ?

- Between 2010-11 and 2012-13, export supported jobs increased by 13.3 million (from 49.3 million to 62.6 million)
 - Manufacturing contributed to over 75% (10.2 million) of this increase, followed by agriculture (4.4 million); services sector jobs declined by 1.3 million.
 - Readymade garments & miscellaneous textile products (4.5 million)
 - Gems & jewelry' (2.4 million)
 - Cotton textiles (0.7 million)
 - Communication and electronic equipments (0.6 million)
 - Motor vehicles (0.5 million)
 - Miscellaneous food products (0.4 million)
 - Miscellaneous metal products (0.4 million)
 - Leather footwear (0.2 million)
 - Other non-metallic mineral products' (0.2 million)
 - Tobacco products (0.2 million)
 - Drugs and medicines (0.2 million).

Domestic Value Added in Exports

- Countries and (Sectors) with greater participation in global value chains tend to record relatively low share of Domestic Value added (DVA) in gross exports
- The DVA share of gross exports is a measure how much VA is generated per unit of exports.
- A lower ratio of DVA to exports implies that the foreign value added content of exports is higher.
- However, the absolute value of DVA would rise with participation global value chains due to scale effects.
- For example, iPod from a Chinese factory is \$144, only about \$4 of this constitute of Chinese VA.
- Rest is captured by US, Japan, Korea.

Domestic Value Added in Exports

- However, despite the low DVA per unit, the aggregate DVA in China from iPod assembly is very high due to scale effects.
- In the case of India, the share of DVA in exports declined from 0.86 in 1999-00 to 0.65 in 2012-13.
- But, absolute amount of DVA increased from \$46 in 1999-00 to \$295.4 in 2011-12 (Scale effects).
- Since 2007-08, DVA to export ratio declined much faster reaching 0.65 in 2012-13.
- This indicates import content in India's exports has increased over the years and are more integrated with Global production net works/global value chains.

DVA and Exports

Years	DVA (\$ billion)	Gross exports (\$ billion)	Ratio of DVA to exports%
1999-00	46.0	53.3	0.86
2005-06	132.5	162.9	0.81
2007-08	207.2	256.1	0.81
2012-13	295.4	452.1	0.65

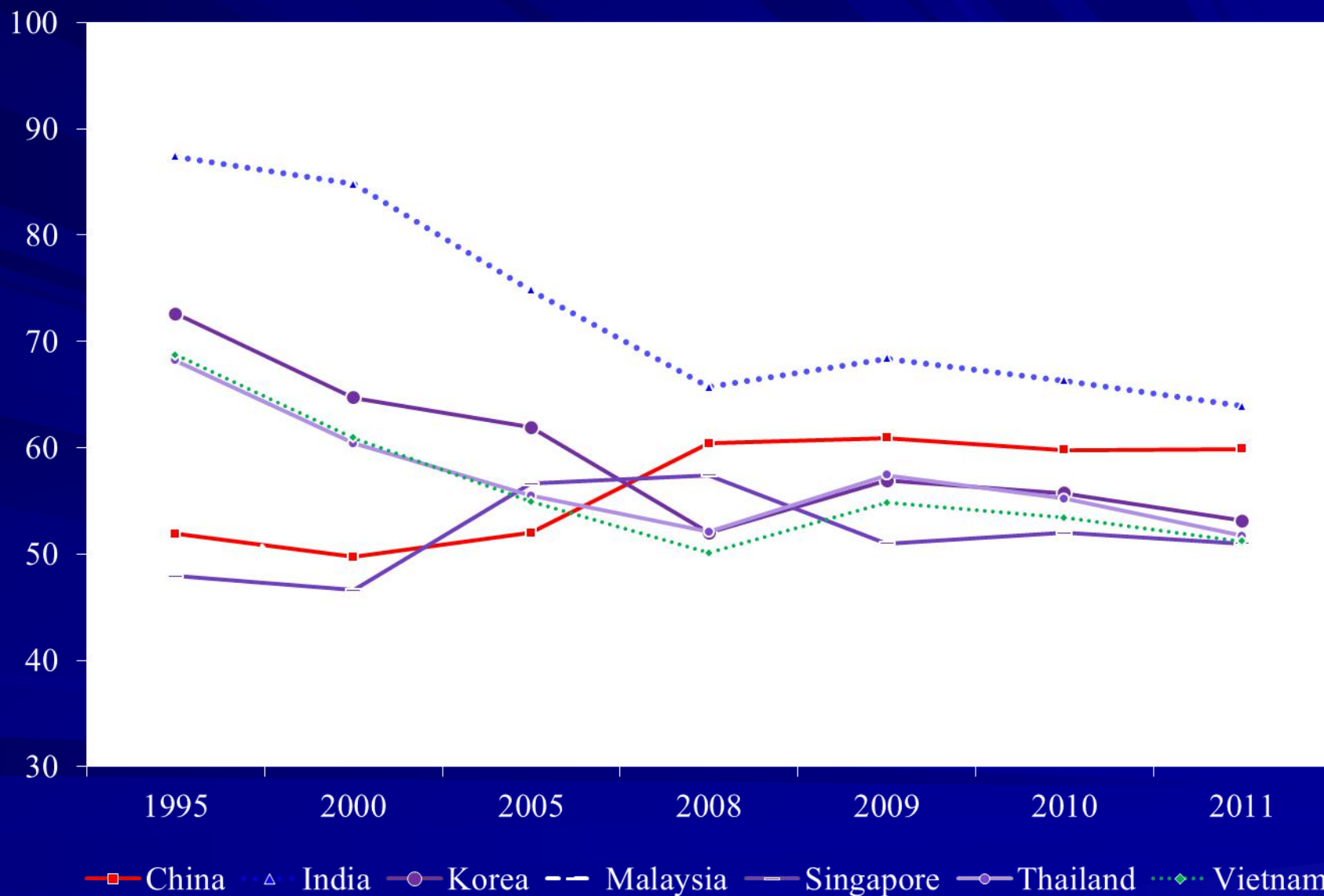
Ratio of Domestic Value Added (DVA) to Gross Exports

Year	Total	Agriculture	Manufacturing	Services
1999-00	0.86	0.96	0.81	0.92
2000-01	0.86	0.96	0.80	0.92
2001-02	0.86	0.96	0.80	0.93
2002-03	0.85	0.96	0.79	0.93
2003-04	0.85	0.96	0.78	0.93
2004-05	0.83	0.95	0.74	0.91
2005-06	0.81	0.95	0.71	0.90
2006-07	0.81	0.95	0.69	0.89
2007-08	0.81	0.95	0.68	0.90
2008-09	0.77	0.92	0.65	0.88
2009-10	0.77	0.91	0.66	0.89
2010-11	0.73	0.91	0.62	0.88
2011-12	0.67	0.89	0.57	0.87
2012-13	0.65	0.91	0.53	0.86
<i>r</i>	-1.97	-0.57	-2.98	-0.62

Fast Growing Sectors in the Export Basket

	Share in Exports		Ratio of DVA to Exports	
	2003-04	2012-13	2003-04	2012-13
Business Services	1.4	12.5	0.91	0.83
Petroleum	3.4	13.6	0.45	0.24
Gems & Jewelry	8.5	10.2	0.65	0.14
Misc. Food Prod.	2.5	4.2	0.91	0.93
Water Transport	0.1	1.5	0.86	0.62
Banking	0.3	1.4	0.98	0.92
Motor Vehicles	1.3	2.2	0.83	0.64
Forestry & Logging	0.3	1.0	0.99	0.92
Ships & Boats	0.1	0.8	0.57	0.84
Misc. Manufacturing	0.7	1.3	0.78	0.60
Computer Services	14.3	14.9	0.96	0.91
Air Transport	0.3	0.8	0.80	0.70
Drugs & Medicines	1.7	2.2	0.85	0.79
Chemicals	3.1	3.6	0.79	0.56

Domestic value added share of manufactured exports (%)



Findings of the Study

- Thus, the findings of the study shows
- (i) Exports are increasingly important for job creation
 - Increasing share of export supported jobs in total employment
- (ii) Backward linkages play an important role in generating export related employment
 - Large number of jobs have been created in service sectors through their linkages with manufacturing (“servicification”) and in agriculture.
 - While manufacturing exports create jobs in service sectors, the reverse effect is not strong
 - Exports of textiles, clothing, food processing etc create large number of direct jobs as well as indirect jobs in agriculture.
 - Per unit domestic value added component (DVA) has declined. Scale economies of less DVA will be good for employment.

What to Make in India

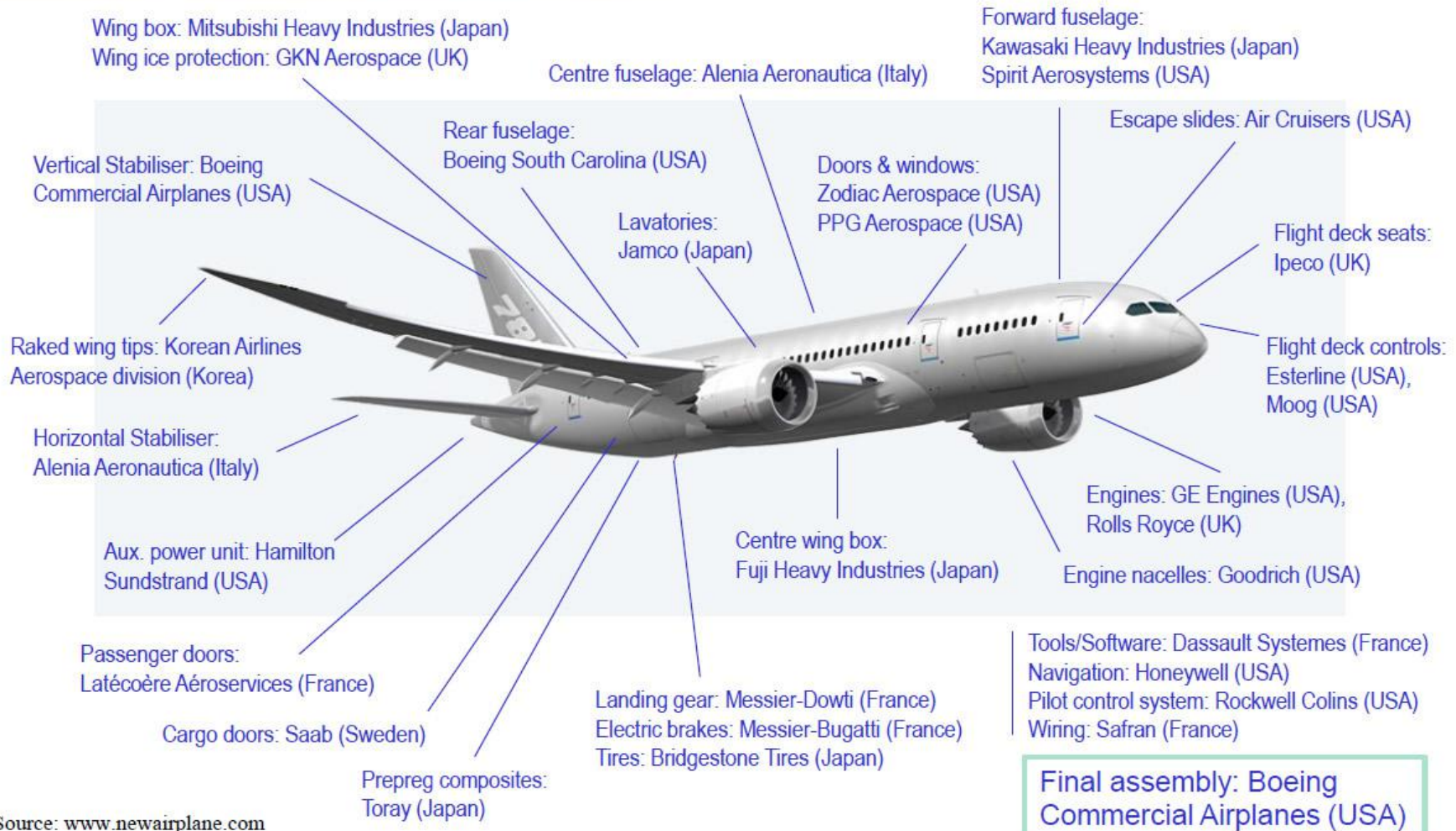
- A study by Veeramani and Garima at IGIDR (forthcoming in India Development Report) argues that there are two groups of industries that hold the greatest potential for export growth and employment generation.
- 1. Huge unexploited potential in traditional unskilled labour intensive products such as textiles, clothing, footwear, toys etc.
- Economic Survey 2016-17 also indicates the potential of textiles and leather for employment
- 2. Second, greater integration of domestic industries with global production networks (GPN) is needed.(this was missing in Economic Survey)

Global Production Net Works

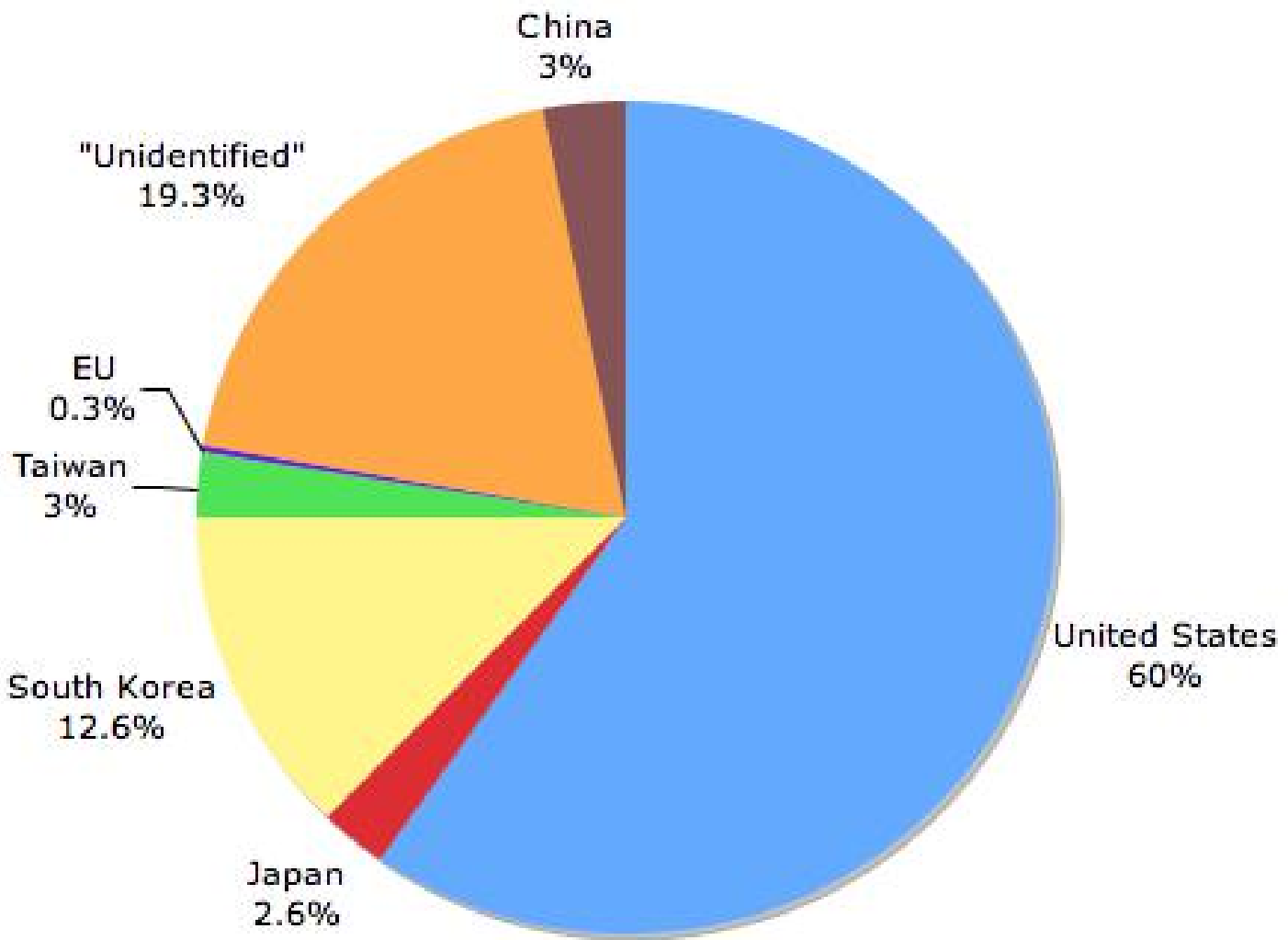
- Although GPN is widespread, their growth in East Asia and China has been impressive
- However, India has been locked out of the vertically integrated and regional supply chains in manufacturing
- Chinese firms under pressure. Can India become the next workshop of the world.
- Veeramani and Garima (2017) at IGIDR identify a number of specific product categories for which India can emerge as a major hub for final assembly related activities.
- At the same time, India has the potential to export a diversified set of parts and components.
- Greater integration of domestic industries with GPN must form an essential part of 'Make in India' .

Global Production Networks

Fragmentation of production: the example of the Boeing 787 Dreamliner



Apple iPad – Value Added Shares



Manufacturing and services

- Whether we can increase employment under manufacturing?
- Historical experience on manufacturing employment shows the following.
- Early industrializing countries like Japan, Taiwan, Korea could improve the share in employment.
- But in late industrialized countries like China, Indonesia and Thailand the share of manufacturing in GDP rose but not employment
- Earlier, manufacturing used to employ directly for a variety of services but now they outsource them for service enterprises.
- Thus, manufacturing today generates more indirect employment in services.

Manufacturing in GDP and Employment

Country	Period	Peak share (%) of manufacturing in	
		GDP	Employment
Japan	1970	36.0	27.0
South Korea	2000	29.0	23.3
Taiwan	1990	33.3	32.0
China	2005	32.5	15.9
Indoneasia	2004	28.1	11.8
Thailand	2007	35.6	15.1
India	2011-12	18.0	12.8

Source: NSS for India; Ajit Ghose, 2015 for rest of the countries

Services in GDP and Employment: 2013

Country	% Share in GDP	% Share in Employment
USA	78.6	81.2
Germany	68.4	70.2
France	78.5	74.9
UK	79.2	78.9
Brazil	69.4	62.7
China	46.1	35.7
Japan	72.4	69.7
South Korea	59.1	76.4
India	58.4	26.7

Source: Economic Survey, 2014-15

India is an outlier in terms of the difference between share of services in GDP and employment (32 percentage points difference)

Manufacturing and service sector Linkages

- A paper by Rupa Chanda (2017) forthcoming in IGIDR India Development Report 2017 examines the linkages between manufacturing and services.
- Services constitute an integral part of the production and delivery process in the manufacturing sector
- Value added contribution of services in manufacturing output and exports not adequately recognized or valued
- This study examines sub-sector analysis of linkages between manufacturing and services. Conclusions of the study are the following.
- As India embarks on a range of initiatives to boost its manufacturing sector, singular focus on manufacturing alone would not be appropriate

Manufacturing and Services

- To move into higher value added manufacturing for the global market, government must pay attention to developing capacity across two broad clusters of services
- Those services such as transport and logistics which directly enhance connectivity and efficiency in trade
 - Require investment in transport and digital infrastructure, reduction in regulatory restrictions that affect services both at the border and behind- the-border
- Those services such as R&D and business support activities which add value to manufacturing and enable product differentiation and internationalization
 - Strengthen and sustain India's advantage in knowledge and skill-intensive business and professional services where India's competitiveness declined in recent years

Manufacturing and services

- India's development strategy should adopt a services-cum-manufacturing rather than a services- versus-manufacturing approach
- Need to strengthen the two-way linkages between these sectors and identify bottlenecks to the same.
- But twin pillar approach not evident in the current policy discourse on Indian manufacturing and Make in India, sectors seen as silos. Need to change this.
- A growing, competitive and vibrant manufacturing sector would create demand for a wide range of services and would strengthen that sector
- Such a philosophy should underpin any initiative to bolster Indian manufacturing

Growth in Manufacturing%

Sector	2012-13	2013-14	2014-15	2015-16	2016-17
GDP manufact.	6.0	5.6	5.5	10.8	7.9
IIP manufact.	4.8	3.6	3.9	3.0	4.9
Use-Based					
Primary goods	0.5	2.3	3.8	5.0	4.9
Capital goods	0.4	-3.6	-0.8	2.1	1.9
Intermediat e goods	5.1	4.5	6.2	1.5	3.0
Infra/constr. Goods	5.4	5.7	5.0	2.8	3.8
Consumer durables	5.0	5.7	4.0	4.2	6.2
Consumer non-dura.	6.1	3.7	4.1	2.7	9.0

Policies for high growth and emp. in manufact.

- India's manufacturing share in GDP is around 18% (new series) and share in employment about 13%.
- Manufacturing growth depends on several factors: FDI policies, Ease of doing business, infrastructure, land acquisition, labour policies (factor market distortions), basic education and skills
- Sub-sector policies are also important. For example, India has to enter the garment sector vacated by China. But other countries like Bangladesh and Vietnam are taking advantage.
- Economic Survey says there are challenges like logistics, labour regulations and tax and tariff policies.
- For example, India's policies favour cotton fabrics compared to man-made fabrics

Policies

- Policies for organised manufacturing.
- Trade and growth of org. manufacturing
- Can India hope to achieve rapid export-oriented growth of org. manufacturing, the kind of growth that the Republic of Korea or PRC achieved in the recent past? The answer is no.
- The growth of world trade is much slower than it had been in the last 4 decades.
- It is true global value chains declining but regional value chains are increasing (e.g. East Asia).
- There are important technological innovations (3d printing, robotics). The impact is unknown.

Policies

- It does not mean exports do not have role. Exports will have to remain an important source of growth for org.manufacturing.
- Trade and exchange rate policies serious review and reform.
- Trade policies will need to ensure that imported inputs are used basically in export oriented industries and that dumping does not undermine domestic production.
- Exchange rate policies will need to focus on maintaining stable exchange rate. Over valued exchange rate will not help manufacturing.
- Coastal Employment Zones (NITI Ayog)

Policies

- Expanding Domestic Market: Demand
- Rapid growth of org.manufacturing will require rapid expansion of the domestic market for manufactures.
- Two objectives: (a) Achieving rapid growth of agriculture; (b) creation of integrated national market.
- Rapid growth of agriculture that can bring rapid expansion of domestic demand for manufact.
- Storage, food processing, post-harvest losses
- Integration of India's currently fragmented markets (in both agri. Industrial products).
- Reforms in APMC and now GST can help.

Policies

- **Removing supply side constraints**
- The factors that constrain from growth of manufacturing from the supply side are well known.
- Inadequate and poor quality infrastructure is important constraint (entrepreneurs perceive).
- **Business regulatory environment**
- Earlier domestic tax regime has been discriminating against manufacturing in favour of services. GST regime should correct this.
- **Inadequate availability of skilled manpower. Basic education is also important. Education and skill are important for shifting workers from agriculture.**

Policies

- Ensuring High Employment Elasticity
- It is not growth alone but high employment elasticity is important.
- NITI Ayog in their three year plan, discusses policies needed for accelerating job growth in specific manufacturing sectors.
- Successful sectors in India have either capital or skill labour intensive sectors.
- These include auto parts, automobiles, two wheelers, engineering goods, gems and jewelry, petroleum refining, pharmaceuticals, financial services, IT and IT enabled services.

Policies

- Labour intensive sectors such as apparel, footwear, food processing, electronic goods, light consumer manufactures, tourism and construction have performed either poorly or moderately well.
- One study says that we should create **4 million jobs** unskilled or low skilled (upto primary)
- **7 million for medium skilled** (upto higher secondary school)
- **5 million** will be highly skilled (with tertiary education)
- Thus the country needs to create for 11 million jobs to low and medium skilled.

SMEs

- Policies on Small and Medium Enterprises (SMEs) is important for India to improve both growth and empl. In manufacturing.
- SMEs account for 95% of establishments and 80% of jobs in manufacturing in India.
- World Bank studies show that it is growing in urban areas and tradables.
- The problems of SMEs are well known. Access to credit, technology, infrastructure, marketing services.

Macroeconomic Situation

- In 2016-17, GVA growth 6.6% lower due to demonetisation and other factors
- Last quarter Q4 (FY17) GVA only 5.6%
- Current account deficit, fiscal deficit (central), Inflation seem to be under control. FDI \$60 billion
- Fiscal deficit at state level is a concern. Investment rate declined to around 28%.
- Revival of Private investment is the key. 'Twin Balance Sheet' problem. NPA's of banks and corporate debt.
- Recent reforms: GST, Bankruptcy code, RERA etc. will help. But it may take some time (more than a year) for pick up in investment.
- Revival of private investment will help 'Make in India'

Elephant and Dragon

Indicator	Elephant (India)	Dragon (China)
GDP \$	2.1 trillion	11.2 trillion
GDP per capita (\$)	1,600	8,000
GDP per capita (ppp)	6,100	14,450
Share in world trade	2.0%	12.3%
Life Expectancy	66	75
Infant mortality	42	7
Maternal mortality	190	32
Female literacy	65.5	92.7

Conclusion

- Employment Challenge: quality of employment. Need for shifting workers from agri to non-agri
- 1. What are the inter-linkages between exports and employment?
 - --Estimates of 112 sectors during 1999-00 to 2012-13 show that exports are increasingly important for job creation (higher growth for export jobs)
 - --Backward linkages are important for job creation
 - We can't imitate China na East Asia but still scope.
- 2. What to make in India?
 - --Huge unexploited potential in traditional unskilled like textiles, clothing, footwear, toys
 - --Second, grater integration of domestic industries with global production networks (GPN)

Conclusions

- This is missing in 'Make in India' initiative
- 3. What type of linkages exist between manufacturing and service sectors?
- India's development strategy should adopt a services-cum-manufacturing rather than a services- versus-manufacturing approach. A twin pillar strategy.
- But twin pillar approach not evident in the current policy discourse on Indian manufacturing and Make in India, sectors seen as silos. Need to change this
- 4. What are the factors responsible for manufacturing growth in India? Sector specific policies important but
- Global economic situation and revival of domestic economy particularly revival of banking and financial sector will help manufacturing sector also.

THANK YOU