India-USA
Leveraging Synergies

Background Note

On the Occasion of visit of the
Hon'ble Minister of Finance, Corporate Affairs &
Information and Broadcasting,
Shri Arun Jaitley to United States

June 17-20, 2015



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Chapter 1

The State of Indian Economy

The current prognosis with regard to India's economic prospects is certainly optimistic. Some of the predominant risk factors in the past – on account of fiscal deficit, current account deficit and high inflation – stand alleviated to a great extent. The latest GDP numbers have been encouraging and the overall macro-economic situation is by and large stable supported by the confidence being lent by a strong and progressive Government at the Centre.

Since it has assumed office, the new Government has attempted to give a clear direction on reforms with an emphasis on long-term socio economic development. In addition, assuring a conducive environment for businesses remains a key priority for the Government. Some of the announcements made to address critical and long pending policy reforms in areas such as labour, taxation, power and infrastructure have been very encouraging.

In addition, the Union Budget 2015-16 was a balanced one and laid down the roadmap for taking India to double digit growth trajectory. The Budget not only indicated a clear direction in which the economy is going to be steered but also the key milestones that we need to cross on the way. The Budget announced several positives not just for the industry but for every section of society.

The budget also indicated clear national targets being set for the year 2022 that would mark 75 years of India's independence. Thus the announcements made by the Government both in the budget as well as outside of it provide for a concerted effort to move towards these socio-economic targets.

Gross Domestic Product (GDP): Shifting to Higher Growth Level

The GDP series has been revised recently to be aligned with the international system of accounts. The series based on a new methodology and a revised base



year puts the GDP growth for the fiscal year 2014-15 at 7.3%. This growth was supported by an improvement in industry and services sector performance, while the agriculture sector growth remained muted.

The deficient monsoon during July- September 2014 had an impact on Kharif crop and the more recent unseasonal rainfall during March 2015 has had a damaging effect on the Rabi production.

The Economic Survey 2014-15 projects an improvement in growth to between 8.1% and 8.5% in 2015-16. According to the Survey, the cumulative impact of reforms, lower oil prices, further monetary easing are expected to give a thrust to growth in 2015-16. However, uncertainty surrounding arrival of monsoon and unanticipated global developments are being cited as two major risks to baseline growth scenario.

For India to cross the 8.0% growth mark once again, it is most critical that the domestic capex cycle sees a turn around. The overall prospects seem to have improved, but India's economy will still take some time to completely come out of the woods.

Inflation Rate: Considerably Softened

Both Wholesale Price Index (WPI) and Consumer Price Index (CPI) have been on a downward trajectory since July last year. WPI has been in the negative terrain for six consecutive months ending April 2015. The WPI inflation rate was reported at (-) 2.7% for the month of April 2015. Further, CPI inflation rate has been in line with the target set by RBI and was reported at 4.9% in April 2015. By and large the situation on inflation front is expected to remain benign.

However, El Nino conditions can have a negative impact on rainfalls this fiscal year. Thus, there could be some pressure on agricultural performance and food prices going ahead. It remains increasingly critical to improve the supply side response to inflation and that is very much on Government's radar.

Also, risks can emanate from a probable increase in oil prices on the back of a change in the geo political situation and a possible spill over through exchange rate.

Index of Industrial Production: Gradual Improvement

The latest IIP data for the month of March2015 reported positive growth, albeit lower than the data reported in February 2015. The IIP growth was reported at 2.1



percent in March 2015, as against 4.9 percent in February 2015 and (-) 0.5 percent growth in March 2014.

The manufacturing sector reported a growth of 2.3 percent in March 2015. Out of the 22 manufacturing sub segments, 13 posted positive growth in March 2015. Some of the segments like 'furniture, manufacturing', 'electrical, machinery and apparatus', 'wood and wood products' recorded double digit growth.

The capital goods sector reported 7.6 percent growth in March 2015, this was about a percentage points lower than growth reported in February 2015. Both investment and consumption demand need to be further stimulated going ahead.

The Government is conscious that pushing investments will be imperative to move towards a sustainable growth path and is definitely taking measures to support the capex cycle.

Fiscal Deficit: Government Serious About Fiscal Prudence

The fiscal deficit target for the year 2014-15 has been maintained (at 4.1%) and the fiscal deficit to GDP ratio for 2015-16 has been pegged at 3.9%. The Government is committed towards moving back on the path of fiscal consolidation. Even though the target of achieving 3.0% deficit to GDP ratio has been rolled over by another year – now to be achieved by 2017-18; the additional fiscal space created is being utilized to give a thrust to public investments in the infrastructure sector.

The Government is making an earnest effort to ensure fiscal prudence by bringing greater efficacy in the expenditure management system and pruning down unnecessary expenses.

External Sector: Trade Numbers Muted

There are no significant upside risks to our external position at present and the current account deficit is expected to remain range bound this fiscal year. In fact, CAD to GDP ratio for Q1 2014-15 has been reported at 1.7%, 2.1% in Q2 2014-15 and 1.6% for Q3 2014-15. For the whole fiscal year, CAD to GDP ratio is expected to be less than 2.0%.

Export and import numbers reported continued deceleration for the fifth consecutive month. Exports declined by (-) 14.0 percent in April 2015 and imports by (-) 7.5 percent. As a result, the trade deficit in April 2015 stood at US$ 11.0 billion.



Export performance has been fragile and remains a concern. This has been primarily due to the prolonged weak demand conditions globally.

Nonetheless, the recently announced Foreign Trade Policy 2015-2020 is positive and is calibrated to attain closer integration with the global markets. It looks at simplifying export promotion schemes and forging effective linkage with important initiatives such as Make in India and Digital India emphasizing on ease of doing business and reflects the composite thinking and strengths of all government departments.

Way Ahead

The outlook is by and large sanguine. The stalled projects are expected to take off and the performance of industrial sector is likely to be on the course of improvement. In addition, Moody's has recently upgraded India's rating outlook to positive from stable. However, it remains critical that the asset quality of banks sees an improvement. Also, the US Federal Reserve is gradually moving towards normalization of its monetary policy and this might lend some uncertainty in the global markets. However, India is well placed to handle the anticipated increase in interest rates by US Fed. The Reserve Bank of India has been watchful of the situation and the country's foreign exchange position is quite comfortable.

Chapter 2

Major Policy Reforms Taken by the Government of India

Ease of Doing Business

Measures have been taken to cut down red tape, and to lay down the red carpet, diminish human interface and make the system efficient with technology. There has been considerable action on administrative and procedural reforms which will provide comfort for setting of new business and improve confidence of all investors. With simplified procedures and rules, industry will save much time and costs which will also improve competitiveness. Some of the key administrative reforms that have been introduced include:

A. Bureaucratic Overhaul for Effective Decision Making

- Decision making process restricted to four layers (no files will be signed by more than 4 officials)
- Two week deadline to answer queries

B. Simplification of Procedures

- Reduction in regulatory compliance returns
- Relaxation of environmental clearances
- No inspection to be undertaken without requisite approval
- Self-certification and Third Party Certification for Boilers Act
- De-licensing of many defence products
- Extended the 24x7 customs clearance facility to 13 more airports and 14 more sea- ports

C. Digitisation for E-governance (through e-Biz and Digital India)

- Online application for Industrial Licensing introduced with 24*7 basis accessibility
- Introduction of online returns for business through a single form
- Online tracking of environmental and forest clearances
- All registers required to be maintained by the business to be replaced with a single electronic register



Taxation

Goods and Services Tax

» The new Government has acknowledged that the introduction of a Goods and Services Tax (GST) will streamline tax administration, avoid harassment of the business and result in higher revenue collection for the Centre and the States.

» The Constitution Amendment Bill on GST has been passed by the Lok Sabha. In the Union Budget for 2015-16, the Government has reiterated that GST will be made operational from 1st April, 2016.

» GST is an extremely important reform measure which is needed to bring about efficiency and transparency in the indirect tax system and to enhance competitiveness of our industry. Once passed, the GST bill will help in establishing a unified common national market which will bring in long-term benefits to all – government, industry, traders as well as consumers.

Direction of Tax Reforms - Allowing for Ease of Doing Business

» Government has given a commitment in the Parliament that it will not ordinarily bring about any change retrospectively which creates a fresh liability. As regards the tax cases which have come up in various courts and other legal fora, these are at different stages of pendency and will be allowed to reach their logical conclusion.

» Government has also conveyed to the Parliament that it is committed to provide a stable and predictable taxation regime that would be investor friendly and spur growth.

» The Government has announced several measures for reform in the tax administration as a part of Union Budget 2015-16 presented in the Parliament in the last week of February 2015.

Foreign Direct Investment

» The composite cap of foreign exchange in defence manufacturing as well as insurance sector has been raised to 49% with full Indian management and control through the FIPB route.



» The revision of cap in the defence sector will enable setting up of a robust Defence Industrial Base (DIB) - allowing for indigenously designed & manufactured Defence & Aerospace products customised to the needs of Indian armed forces, while creating employment opportunities in the country. This will pave way for indigenous production of certain high technology products such as aircraft engines, advanced missile guidance systems, seekers, production of smart materials, high strength carbon fibre etc. In fact, companies are undertaking joint ventures with their international counterparts and a spurt in domestic manufacturing is on the anvil.

» The Insurance Bill has been cleared by the Parliament. With increased FDI limit in the insurance sector, the capital starved sector will now have access to foreign capital. At present millions of Indians are under-insured. The move is expected to improve life and health insurance coverage and provide long term savings vehicles.

» There has been a relaxation of FDI norms for the construction sector, to encourage development of Smart Cities.

» FDI is opened up in certain areas of railways infrastructure, including high speed rail, sub-urban corridors, and dedicated freight corridors.

» Further, manufacturing units (with FDI) will now be allowed to sell products through retail including e-commerce platforms.

Labour Reforms

» The Central Government has proposed amendments to Factories Act, Apprenticeship Act and Labour Laws (Exemption from Furnishing Returns and Maintaining Registers by Certain Establishment) Act. The Apprenticeship Amendment Bill has been passed in the Parliament.

Some of the salient features of the amendments proposed by Government include:

- 500 new trades to be included in the Apprenticeship Act. This will give a boost to skill development initiative of the Government.
- Companies employing less than 40 workers need not comply with some of the stringent labour regulations
- Removal of restriction on women working night shift (useful for textiles and IT)
- Overtime limit increased to 100 hours from 50 hours earlier – this will provide greater flexibility to employers



» Labour ministry has introduced a web portal where enterprises can file their compliance returns for 16 of the 44 central labour laws in the country. The Labour Ministry has also come up with a single return format for the 16 labour laws.

Passage of Other Key Legislations

» Two crucial economic bills have been cleared lately viz. The Mines and Minerals (Development and Regulation) Amendment Bill, 2015 and the Coal Mines (Special Provisions) Bill, 2015. The new legislations will herald a new regime of competition, efficiency, and transparency for key natural resources by fostering fair play through market forces.

» The Mines and Minerals (Development and Regulation) Amendment Bill 2015 provides that State Governments shall grant mining leases and prospecting license-cum-mining leases for both notified and other minerals. Prospecting license-cum-mining lease for notified minerals shall be granted with the approval of Central Government. All leases shall be granted through auction by competitive bidding, including e-auction.

» With the passage of the Coal Mines (Special Provisions) Bill, 2015, the sector can now be opened for commercial mining. The Bill will facilitate the auction of over 200 cancelled coal blocks.

Fiscal Measures

» In the first budget of the new government, Finance Minister had announced setting up of an Expenditure Management Commission to look into expenditure reforms. The Commission which is headed by Dr. Bimal Jalan (former RBI Governor) has submitted an initial report to the Government, providing a roadmap for rationalization of subsidies.

» The Government will revamp the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and make it more productive by linking it to agriculture activity and rural development.

» The Government recently deregulated diesel prices and formalized a price formula for domestic natural gas, which was a much awaited move. This is expected to ease the Government's huge subsidy burden.



Mitigating Food Inflation and Raising Agri-productivity

» Immediately after coming to power, various measures were adopted by the Government to mitigate inflation viz. the government outlined contingency plans for 500 districts; initiated crack down on hoarders, imposed minimum export price on onions and potatoes, announced line of credit for import of pulses & edible oil and issued advisory to states to delist fruits and vegetables from APMC Act. Also, in the Union Budget the Government announced creation of a Price Stabilisation Fund to mitigate farmers' woes due to price volatility.

» In the latest Union Budget 2015-16, the Government has announced creation of a Unified National Agriculture Market, which will help in reining food inflation.

» The Government has decided to set up a High Level Committee (HLC) of distinguished persons and experts to recommend restructuring of FCI after considering various aspects of present structure and functional areas of the organization and consulting various stakeholders.

» The government had also announced introduction of soil health cards, setting up of agri-tech infrastructure fund, launch of a technology driven second green revolution including 'protein revolution' and greater focus on irrigation. All these measures will help in improving agri-productivity and provide a permanent solution to the issue of food security.

» The Government has also planned to create a food road map to identify food clusters across the country. This will aid in identifying the strengths in terms of crop strength, production, processing and also help the ministry to ensure the desired intervention to expand the food export market.

Financial Sector Reforms

» To meet the requirement of banks to raise equity in lines with Basel III norms by 2018, the Government has allowed public sector banks to raise capital by increasing the shareholding of the people in a phased manner.

» The Government has launched financial inclusion scheme called 'Pradhan Mantri Jan-Dhan Yojana' (PMJDY), envisaged as a combination of savings, loans and insurance products. The scheme launch was hugely successful



with over 18 million bank accounts being opened on the first day. Linking financial literacy and direct cash transfer with this program is expected to increase awareness, induce demand and ensure sustainability of the model. Till February 2015, 136.8 million bank accounts have been opened under PMJDY.

» Several new initiatives have been introduced in the Union Budget 2015-16, including the move towards a nationwide social security system, setting up of Bank Board Bureau and establishing a Monetary Policy Committee.

Key Highlights of the Union Budget 2015-16

» **Unified National Agriculture Market:** The Government has announced creation of a Unified National Agriculture Market. Move towards a single national market for agri-produce will help rein in the inflationary pressure in case of food commodities as well as provide better prices to farmers for their produce.

» **Make in India:** There has been a reduction in rates of basic customs duty on certain inputs, raw materials, intermediates and components (in all 22 items) to minimize the impact of duty inversion and reduce manufacturing cost in several sectors. Government has allowed complete tax pass through for both category 1 and category 2 Alternative Investment Funds. The latter action will help mobilize higher resources for investments in manufacturing sector.

» **Infrastructure:** The Government announced an additional Rs. 70,000 crore spend on the infrastructure sector. This is expected to provide a huge impetus to overall growth and should help encourage private sector investments in due course. The setting of the National Investment and Infrastructure Fund in the form of a trust to raise debt funding in various forms and in turn invest as equity in infrastructure finance companies is a welcome move. This would be an additional avenue to support infrastructure financing and hopefully lessen some of the pressure on the public sector banking system. Further, the clarification on tax related matters on REITs and InvITs, which are the key instruments announced in the last budget for channeling funds into the real estate and infrastructure sectors, is also welcome.

In addition to the above, tax-free infrastructure bonds for rail, road and irrigation projects were reintroduced. Government has also indicated adoption of 'Plug and play' approach in case of UMPPs, plan for corporatization of ports and steps towards revitalizing Public Private Partnerships.



» **Micro Small and Medium Enterprise (MSMEs):** An electronic trade receivables discounting system (TReDS) has been established to tackle the problem of long receivables realization cycle of the MSMEs. The related move of setting up of the Micro Units Development Refinance Agency (MUDRA) bank will help meet the funding requirements of micro enterprises in the informal sector and provide a boost to entrepreneurship.

In addition, establishment of a Self-Employment and Talent Utilization (SETU) mechanism was announced to support start-up businesses and other self-employment activities.

» **Gold Monetization:** The Budget for the first time has announced several measures to monetize gold. FICCI had submitted a report on this subject and some of the suggestions contained therein such as developing an Indian Gold Coin, having a Sovereign Gold Bond and revamping the Gold Deposit and Gold Metal Loans scheme have been taken up by the Government. These measures should help in more effective utilization of domestic gold reserves through recycling and thus help reduce the imports of gold that have put pressure on the current account in the past.

» **Black Money:** The Government announced introduction of a new comprehensive law on black money held abroad in the current session of the Parliament along with a new and more comprehensive benami transactions (prohibition) bill to curb domestic black money. The issue of black money has been a grave concern for the Indian economy. The existing legal and administrative framework has been ineffective in dealing with this issue and thus there is an urgent need to put in place an efficient legal framework.

» **Bank Board Bureau:** The Government plans to set up a Bank Board Bureau with the objective of improving governance of Public Sector Banks. The Bureau will pick heads of Public Sector banks and help them device differentiated strategies and capital raising plans through innovative financial methods and instruments.

» **Monetary Policy Framework:** The Budget announced that the RBI Act will be amended this year to provide for a Monetary Policy Committee. The Monetary Policy Committee will be set up to reinforce the partnership between the Government and the Central Bank with the objective of managing inflation dynamics.



» **'Act East' Policy:** The Budget announced setting up of a Project Development Company, which through separate Special Purpose Vehicles (SPVs) will facilitate establishment of manufacturing hubs in CLMV countries -Cambodia, Laos, Myanmar, and Vietnam. This is to drive the interest of Indian private sector to undertake investments in these countries and deepen economic and strategic relations with the South East Asian region.

» **Ease of Doing Business:** Assuring ease of doing business has been a key priority for the Government. Some of the announcements in the Budget towards improving the business environment included –

- **Setting up Commercial Divisions in Various Courts -** The Government has proposed to set up exclusive commercial divisions in various courts in India based on the recommendations of the 253rd Report of the Law Commission. In this regard, the Government has proposed to introduce a Bill in the Parliament after consulting stakeholders. This would help curtail the overstretched litigation and ensure speedy disposal of monetary suits at reasonable cost to the litigant. This is definitely a stepping-stone to reform the civil justice system in India.

- **Bankruptcy Code:** The budget announced introduction of the much needed comprehensive bankruptcy code in the fiscal year 2015-16. This will bring about legal certainty and speed and is an important measure in improving the ease of doing business in India.

- **Expert Committee on Regulatory Mechanism:** The Government indicated that it intends to appoint an Expert Committee to examine the possibility and prepare draft legislation where the need for multiple prior permissions can be replaced with a pre-existing regulatory mechanism. Implementation of such a mechanism would cut down time and cost spent for seeking regulatory approvals and will be a big boost to ease of doing business in India and establishing India as an Investment Destination.

Chapter 3

Mega Plans of Government and Investment Opportunities

Make in India

With a vision to develop India as a global manufacturing hub, Honourable Prime Minister of India unveiled 'Make in India' campaign in September 2014. The programme aims to create a robust manufacturing sector by facilitating investment, fostering innovation, protecting intellectual property, and building best-in-class manufacturing infrastructure.

Through the Make in India campaign, the Government plans to convert India's manufacturing sector into the engine of growth of the economy. It has announced several measures to improve the business environment in the country which will further strengthen India's position as an attractive investment destination. New processes have been introduced to cut down bureaucracy, reduce human interface and enhance ease of doing business in India.

Facilitating Investors: With a view to project India as a promising country for investment and as a strong business partner, the Department of Industrial Policy and Promotion (DIPP), Government of India has created a special team – Invest India, in association with FICCI, to attend to all investment queries and for providing handholding and liasoning services to domestic and global investors.

Ease of Doing Business: New de-licensing and deregulation measures have been announced to ensure reduction in complexity across all processes in obtaining clearances for starting and running businesses by following a transparent and efficient system.

Improving Infrastructure: Improvement of the manufacturing infrastructure has also been a key focus area for the Government. In order to boost manufacturing growth, creation of Industrial Corridors by integrating infrastructure and industry has been envisaged. The USD 90 billion Delhi-Mumbai Industrial Corridor (DMIC), which is being developed by the Indian Government in partnership and collaboration with the Government of Japan, is one such major project which was announced in

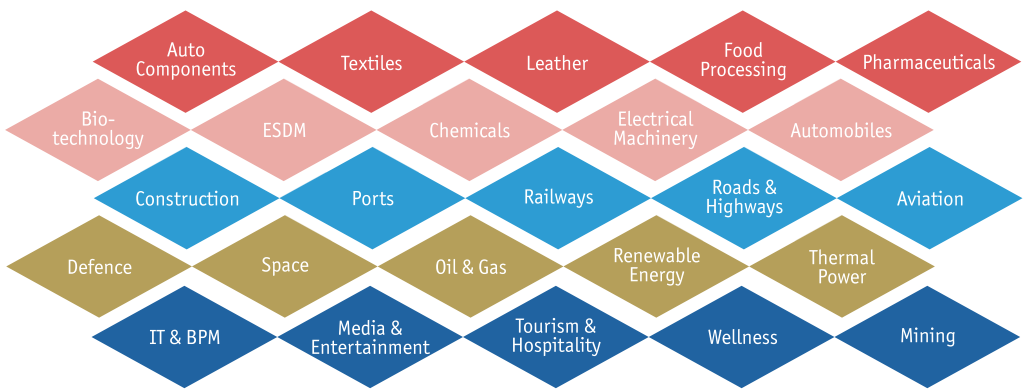


year 2006. Under this project, the Government is developing Industrial Corridors along the high capacity western Dedicated Freight Corridor (DFC) between Delhi and Mumbai, covering an overall length of 1483km, passing through the States of Uttar Pradesh, NCR of Delhi, Haryana, Rajasthan, Gujarat and Maharashtra.

The Government has also conceptualised four other corridors which are Bengaluru-Mumbai Economic Corridor (BMEC); Amritsar-Kolkata Industrial Development Corridor (AKIC); Chennai-Bengaluru Industrial Corridor (CBIC), and East Coast Economic Corridor (ECEC) with Chennai Vizag Industrial Corridor as the first phase of the project (CVIC). A new 'National Industrial Corridor Development Authority' has been created to coordinate, integrate, monitor and supervise development of these Industrial Corridors. Work on the following corridors is underway:

- Delhi-Mumbai Industrial Corridor: Work on 5 smart cities is in progress namely Dholera, Shendra-Bidkin, Greater Noida, Ujjain and Gurgaon.
- Chennai-Bengaluru Industrial Corridor: Master planning for 3 new Industrial Nodes [Ponneri (TN), Krishnapatnam (AP), Tumkur (Karnataka)] is under progress.
- The East Coast Economic Corridor (ECEC) with Chennai-Vizag Industrial Corridor: Feasibility Study has been commissioned by Asian Development Bank.
- Amritsar-Kolkata Industrial Corridor: Delhi-Mumbai Industrial Corridor Development Corporation Limited (DMICDC) which is selected as the Nodal Agency is conducting the feasibility study.

25 Sectors Identified for Development: To realise the goal of developing a strong manufacturing sector, dedicated efforts are required to boost growth of key industries present in the sector. The Government has identified 25 such sectors for providing special thrust, provided in the exhibit below:





Digital India

The flagship programme Digital India was launched in August 2014, with an aim to transform India into a digitally empowered society and knowledge economy. Through this programme, the Government would ensure that its services are available to citizens electronically. The objective of the programme is to bring public accountability through mandated delivery of Government's services electronically; a Unique ID and 'e-Pramaan' based on authentic and standard based interoperable and integrated Government applications and data basis.

The focus is on making technology central to enabling change. It is an Umbrella Programme with multiple Government ministries and departments joining the design and implementation of this programme. It pulls together many existing schemes. These schemes will be restructured and re-focused. They will be implemented in a synchronized manner. Many elements are only process improvements with minimal cost. The common branding of programmes as Digital India highlights their transformative impact.

The programme is coordinated by the Department of Electronics and Information Technology (DeitY), Government of India.

Key Goals to be Achieved: Digital India aims to provide the much needed thrust to the nine pillars of growth areas, namelyBroadband Highways; Universal Access to Mobile Connectivity; Public Internet Access Programme; e-Governance - Reforming Government through Technology; e-Kranti - Electronic Delivery of Services; Information for All; Electronics Manufacturing; IT for Jobs; and Early Harvest Programmes.

Targets by 2019:

- Broadband in 2.5 lakh villages
- Universal access to mobile connectivity
- Net Zero Imports by 2020
- 400,000 Public Internet Access Points
- Wi-fi in 2.5 lakh schools, all universities; Public wi-fi hotspots for citizens
- Digital Inclusion: 1.7 Cr trained for IT, Telecom and Electronics Jobs
- Job creation: Direct 1.7 Cr. and Indirect at least 8.5 Cr.
- e-Governance & e-Services: Across Government
- India to be leader in IT use in services – healthcare, education, financial inclusion, agriculture, security, justice, planning, etc.
- Digitally empowered citizens – public cloud, internet access



Investment Opportunities

The Digital India Programme promises a number of new possibilities for India, including a new level of engagement between the Government, private sector and citizens. Given that the goal of this project is to provide real-time services, it opens doors for a large number of ICT industry players to develop platforms which can help in providing Government services and information to all the citizens of the country. To enable this, data management and security solutions will have to be accounted for in the deployment plan. Thus, the role and scope of the technology and communications industry becomes critical at every stage of the Digital India Programme - project development, execution and management.

Government of India has proposed a PPP model to roll out this programme. Global and domestic companies can therefore hope to win contracts related to the Programme to develop the infrastructure which has a proposed outlay of USD 17 billion.

Open access to broadband highways across India will give a big push to trade across the country. This will result in amongst other benefits, a new surge in e-commerce.

Digital India Programme also provides an impetus to Indian manufacturing by opening up a massive demand for internet-related equipment – routers, switches and devices (most importantly affordable smartphones) – that will facilitate last mile connectivity. Manufacturing clusters for electronic goods have already been approved to be set up in Jharkhand, Maharashtra and Madhya Pradesh for products such as mobile handsets, microchip and chip-less designs and set-top boxes. The Government is working towards establishing the first manufacturing cluster by March next year. This will create jobs and will give a tremendous boost in the country's efforts in developing an eco-system of local manufacturing and R&D in India.

Recent Developments

The Digital India Programme has already generated huge interest nationally and internationally. The private sector is showing its keenness to partner with the Government in achieving the Digital India vision.

- Microsoft has already applied to roll out a pilot project to use "whitespace", the unused spectrum between two analogue TV channels, to provide free internet access. If successful, this can provide a fillip to the Digital India initiative.



- In September 2014, Google India announced the roll out of various initiatives to support the Digital India programme, making it one of the first companies to endorse the programme. The initiatives include running a number of campaigns as part of the programme.

- Facebook CEO Mark Zuckerberg, during his first trip to India met with the Prime Minister of India, Narendra Modi, and the Union Minister of Communications and IT, Ravi Shankar Prasad where he expressed his willingness to join India's National Optical Fibre Network as a partner and deploy out of the box alternative technologies to roll out the Digital India programme.

- Several network equipment manufacturers have shown a great level of interest in accessing the benefits of cluster manufacturing.

Smart Cities

India is experiencing rapid urbanization and growth in cities. As per the Census of India 2011, the urban population has increased to 377 million, registering annual growth of around 32%. According to recent estimates, by the year 2030, nearly 590 million people will live in Indian cities, which is nearly twice the population of the United States today. To accommodate this massive urbanization, India needs to fi¬nd smarter ways to manage complexities, reduce expenses, increase efficiency and improve the quality of life.

To meet the above challenges, the Government of India had allocated INR 70.6 billion (USD 1.2 billion) for Smart Cities in Union Budget 2014-15. India plans 100 new smart cities and will develop modern satellite towns around existing cities under the smart city programme.

To encourage development of "Smart Cities", which will also provide habitation for the neo-middle class, requirement of the built up area and capital conditions for FDI has been reduced from 50,000 sq. mts. to 20,000 sq. mts. and from USD 10 million to USD 5 million respectively. To further encourage this, projects which commit at least 30% of the total project cost for low cost affordable housing will be exempted from minimum built up area and capitalisation requirements.

A National Industrial Corridor Authority is being set up to coordinate the development of Industrial Corridors with emphasis on Smart Cities linked to transport connectivity to spur growth in manufacturing and urbanization.

Some of the cities that have been chosen for being developed as smart cities



are Delhi, Ajmer (Rajasthan), Allahabad (Uttar Pradesh), Visakhapatnam (Andhra Pradesh), Gurgaon (Haryana), Bengaluru (Karnataka), Mumbai (Maharashtra), Pune (Maharashtra), Ludhiana (Punjab), Indore (Madhya Pradesh), Amaravati (Andhra Pradesh), Badami (Karnataka), Dwarka (Gujarat), Gaya (Bihar), Mathura (Uttar Pradesh), Puri (Odisha), Warangal (Telangana)

Investment Opportunities

Rapid urbanization combined with the potential to develop cities presents a significant opportunity to global investors. Various state and local Governments are focused on developing and upgrading their cities. In addition, a massive agenda from the Central Government to develop 100 smart cities, redevelop heritage cities and renew around 500 cities have boosted industry sentiments.

For promoting economic activity in India, five new Industrial Corridors are being planned. Each Industrial Corridor will have several key nodes developed on Smart City principles. The private sector has to play an important role in developing the industrial corridors (including the smart cities) announced by the Government. The Government would provide the vision, direction and the initial capital to kick start the development process. However, major investments would have to come from the private sector not only in the form of funds but also in terms of technology, skills and expertise.

Private sector players may take up projects in PPP mode or they may also work as contractors, consultants, O&M operators, equipment suppliers and rolling stock suppliers apart from financing across the value chain.

Specific Areas for Potential Investments

Physical Infrastructure

1. **Housing**: For all socio-economic classes.

2. **Transport**: Improvements in public transport – Metro Rail, BRT, LRT, Monorail, Trams,etc; improvements in transport infrastructure of other motor vehicles – ring roads, bypasses, underpasses, elevated roads, improvements in the existing road ways; improvements in infrastructure for walking, cycling and waterways.



3. **Water Supply:** Smart cities will be designed with availability of 24x7 piped water supply that meet benchmarks of water quality, pressure, etc. across the city. The focus should be on recycling & conserving water and also adoption of new methods especially smart metering for reducing loss and energy consumption in water networks.

4. **Sanitation**: City wide sanitation plan will be implemented for all parts of the city based on the concept of Decentralized Sewerage System. There is need for encouraging technologies that result in 100% recycling in the sanitation system.

5. **Solid Waste Management:**
   - Segregation of recyclable and non-recyclable waste as well as wet and dry waste at the source so that there can be 100% recycling of solid waste
   - Appropriate technology should be adopted for treatment of waste at decentralized locations
   - Putting in place an effective collection and disposal system
   - Encouraging use of products based on recycling of solid waste especially – power, compost, building material (based on cycling of debris & construction materials)

6. **Storm Water Drainage:** Smart cities to adopt a storm water management approach which would include preserving and maintaining the natural hydrological cycle, ground water recharge, natural drainage system, etc. For this purpose appropriate technologies will be adopted that improve the quality of water from storm water flows.

7. **Electricity:** Smart cities need to have universal access to electricity 24x7 which in India's case is difficult with the existing supply and distribution system. Cities will therefore require smart metering at the household level and establishment of smart grids and their integration with renewable sources such as solar and wind energy to meet the demand.

8. **Internet & Telephone:** A 100 Mbps internet backbone coupled with 100% coverage of the area by cell phone towers and a high level of telephone penetration will be essential in a Smart City as most services will have to be offered online. Fibre Optic connectivity to each home, Wi-Fi in all public places and educational institutions would also be important features of a Smart City.



Social Infrastructure

1. **Education**: Quality educational facilities, both for schools and higher education in every neighbourhood will be required. This can be achieved with e-education and digital content.

2. **Healthcare**: High quality healthcare facilities are important factors in making a city liveable and attractive for people and businesses. This would necessitate creation of Electronic Health Record for every resident and adoption of telemedicine in every neighbourhood.

3. **Entertainment**: Theatres, concert calls, auditoriums, cultural centres, open spaces and plazas allow opportunities for recreation and are important for healthy and happy living.

4. **Good Sports Facilities:** Children parks, stadiums, swimming pools, neighbourhood sports complexes, golf courses, etc. in cities will be required.

Skill India Programme

Skills and knowledge are the driving forces of economic growth and social development of a country. In India, against 12 million potential new entrants to the workforce every year, the existing vocational training capacity is merely 3 million seats, which implies that nearly 75% of the entrants cannot benefit from formal skill development. A concerted action is required on supply side to ensure that Indian youth (wage and self-employed) gets the opportunity to equip themselves with relevant and upgraded skills and knowledge, enabling them obtain access to proper employment. It is also important to empower workforce with globally acclaimed education and skills to make them globally competitive. Thus, a critical task at hand is to extensively focus on skilling of workforce, in terms of both quantity and quality.

Transforming the skill development ecosystem and making it responsive to needs of both industry and citizens requires a scalable, efficient and comprehensive vocational training ecosystem to meet the future requirements. The skill development efforts need to be managed in a focused and coordinated manner. Currently, skill development efforts are spread across approximately 20 separate ministries, 35 State Governments and Union Territories and the private sector.

The Government has listed Skill Development as one of its priorities and is committed to address the issue in a holistic manner. It not only aims to enhance participation from youth but also seeks greater inclusion of women, disabled and other disadvantaged sections into the workforce. The Government proposes to

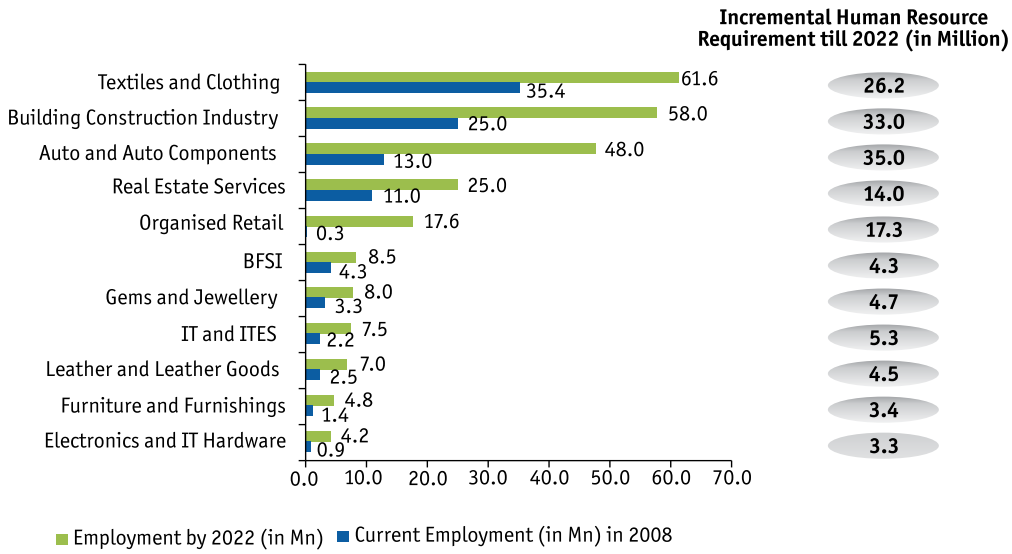


work along with various sectors and improve the capability of the present system, making it flexible to adapt to technological changes and demands emanating from the labour market.

With these objectives in mind, a new Ministry of Skills development, Entrepreneurship, Youth and Sports has been created. The newly created Department of Skills Development and Entrepreneurship has been entrusted with coordination of all stakeholders for evolving an appropriate skills development framework, removal of disconnect between demand and supply of skilled manpower, skills upgradation, building new skills, innovative thinking and talents not only for the existing jobs but also the jobs that are to be created.

The new Government is planning to launch a special mission on Skill Development, called 'Skill India'. It is envisaged as a multi-skill development programme for nationwide job creation and entrepreneurship. It would skill the youth with an emphasis on employability and entrepreneur skills. It will also provide training and support for traditional professions like welders, carpenters, cobblers, masons, blacksmiths, weavers etc. Convergence of various schemes to attain this objective is also proposed.

Opportunities in Skill Development



Note: The chart depicts the Skill shortage in few high performance sectors as identified by NSDC in 2010.



Swachh Bharat Abhiyaan

With an overarching aim to make India a clean country, Honourable Prime Minister of India launched one of the most important flagship programmes of the Government - the Clean India Mission or the Swachh Bharat Abhiyan on October 2, 2014- the birth anniversary of Mahatma Gandhi.

Cleanliness is an important prerequisite for developing a healthy and strong nation. A clean country can only ensure that its citizens remain healthy, and only healthy citizens can contribute positively towards the growth of an economy. However, the scenario in India with respect to cleanliness is not very encouraging. At present, about 600 million people in India defecate in open every day due to lack of availability of toilets. This is 60% of the total open defecation in the world and also the highest. According to Census 2011, only 32.7% people in rural areas had access to toilet facilities. In fact, in rural India the percentage of households having access to television and telephones exceeds the percentage of households with access to toilet facilities.

Moreover, as fallout of economic development, we are today generating a large amount of non-biodegradable waste products, which has a direct bearing on our health. Unless an efficient waste management system is put in place, it will continue to have negative impact on our lives. Lack of cleanliness and hygiene has also adversely affected the growth of tourism in the country. It is important to project and present India as a as a clean country to the rest of the world. As per a WHO report, about INR 6500 per person gets lost on an average in India due to lack of cleanliness and hygiene. It is thus imperative to allocate some serious time and investments in assuring a clean environment. This would have a positive externality in terms of public health and also in terms of the overall impact on national productivity.

In the past, cleanliness drives have taken various forms in India; however the Government's attempt to convert Swachh Bharat Abhiyan into a mass movement is a laudable attempt. The Clean Indian Mission intends to extend assistance to all 4041 statutory towns/cities as per the 2011 census. In addition, the cantonment boards in these towns and the towns that subsequently acquire statutory status will also be eligible for assistance under this mission.

Objectives of Clean India Mission:

(i) Eliminate open defecation.
(ii) Conversion of insanitary toilets to pour flush toilets



(iii) Eradication of manual scavenging.
(iv) 100% collection and scientific processing/disposal/reuse/recycle of Municipal Solid Waste.
(v) To bring about a behavioural change in people regarding healthy sanitation practices.
(vi) Generate awareness among the citizens about sanitation and its linkages with public health.
(vii) Strengthening of urban local bodies to design, execute and operate systems.
(viii) To create enabling environment for private sector participation in Capital expenditure and Operation and Maintenance expenditure (O&M).

Investment Opportunities

Attaining the objective of a cleaner India over the next five years would entail a well-planned and a cohesive approach. The mission requires huge investments towards creation of key assets - household toilets/community toilets/public toilets/solid waste management facilities - to attain the goal of eliminating open defecation. Also, spreading public awareness through information-education-communication campaigns will be one of the most important components.

The total cost of the Swachh Bharat Abhiyan is estimated at INR 620 billion. While a large portion of this will come from the Government funds, the gap in financing in components for household toilets, community toilets, public toilets and solid waste management projects is expected to bemet by the beneficiary contribution, private funding, funds with private companies under Corporate Social Responsibility (CSR) and the 'Swachh Bharat Kosh' of the Ministry of Finance.

The interest expressed by companies (both public and private) towards the mission has been very encouraging. Some companies have already pledged good amounts of money towards constructing toilets, cleaning slums or spreading awareness about hygiene and sanitation. These companies are undertaking this expenditure over and above their mandatory corporate social responsibility obligation. For instance, Hindustan Unilever is in talks to take a piece of land on lease in Mumbai and has proposed to construct a Hygiene Centre for a slum. The centre would have toilets, bathrooms, laundry facility and water recycling facilities.

There are plenty of other examples as well. Oil & Natural Gas Company has volunteered to adopt some historical monuments and keep them clean. Bharti Foundation has pledged an amount of INR 100 crore for constructing girls' toilets in Ludhiana in the next three years. Reckitt Benckiser in association with NDTV and Facebook has come forward to spread awareness about sanitation and hygiene.



However, at present we are just at the tip of the iceberg and this campaign requires continuous support both in terms of investments and action to transform it into a sustainable movement with visible results.

Clean Ganga Mission

The Ganges or river Ganga holds immense significance for the people of India. It is the longest river in India having a length of 2,510 km. River Ganga is worshipped as the goddess Ganga in Hinduism and is regarded as the most sacred of all rivers present in India. Besides religious significance, Ganga has social and economic importance as well. The Ganga Basin is the largest river basin in India in terms of catchment area, constituting 26% of the country's land mass (8,61,404 Sq. km) and supporting about 43% of its population (448.3 million as per 2001 census) spread across 11 states - Uttarakhand, Uttar Pradesh, Madhya Pradesh, Rajasthan, Haryana, Himachal Pradesh, Chhattisgarh, Jharkhand, Bihar, West Bengal and Delhi. The Ganga Basin is one of the most fertile regions for agriculture and has played an instrumental role towards the growth of the agriculture sector in the country. Some of the crops that are grown in the region include rice, sugarcane, lentils, oil seeds, potatoes, and wheat. The river also provides business opportunities like fishing to many and promotes tourism owing to pilgrimages and festivities that are organised near the banks of the river. Moreover, holy towns of Haridwar, Allahabad and Varansi also attract foreign tourists in large numbers.

However, substantial growth in population in the cities situated in the Ganga Basin coupled with rapid industrialisation in these areas has taken a toll on the state of the river. The quality of Ganga water has deteriorated substantially over the years due to dumping of industrial and domestic wastes into the river, posing problems for the people dependent on the river for their livelihood and basic needs. Given this scenario, the National Ganga River Basin Authority (constituted in the year 2009) has decided to initiate 'Mission Clean Ganga' to bring back the old glory of the National River of India - Ganga.

Namami Gange Programme: In the Union budget 2014-15, an Integrated Ganga Conservation Mission called "Namami Gange" was proposed and a sum of INR 2,037 crores was allocated for the same. In addition, a corpus of INR 100 crore was announced for development of Ghats and beautification of River fronts at Kedarnath, Haridwar, Kanpur, Varanasi, Allahabad, Patna and Delhi.



The Namami Gange project aims to take cognizance of the existing programmes for Ganga rejuvenation and integrate it into a new comprehensive plan for the future. Given the broad arena of the project, an action plan is already being worked in consultation with various ministries. In fact a Group of Secretaries was formed to work out a plan and involved ministries such as water resources, environment, forests and climate change, shipping, tourism, urban development, drinking water and sanitation and rural development. The Group of Secretaries submitted their final report in August 2014.

Investment Opportunities: Ganga Rejuvenation is one of the most challenging projects. In the Ganga basin approximately 12,000 million litres per day (mld) sewage is generated, for which presently there is a treatment capacity of only around 4,000 mld. Approximately 3000 mld of sewage is discharged into the main stream of the river Ganga from the Class I & II towns located along the banks, against which treatment capacity of about 1000 mld has been created till date. The contribution of industrial pollution, volume-wise, is about 20 per cent but due to its toxic and non- biodegradable nature, this has much greater significance.

It is apparent that cleaning the river would entail setting up of latest water and solid waste management facilities in these cities. Also, the small and medium sized manufacturing units will have to be sensitized and those without effluent treatment facilities will have to be encouraged to install these facilities. This calls for huge investments in technology as well infrastructure. Given the enormous investments required the Government is largely looking at PPP mode. Already several countries –including Germany, Japan, Australia, Israel, Denmark - have expressed interest in sharing their expertise in water management and recycling and conducting impact studies. A consortium of Danish companies is already conducting a pilot project for water management in Rajkot, Gujarat. Also, a dozen of Israeli desalination plants have come up in Tamil Nadu and Hyderabad.

The project represents massive opportunity for companies involved in sectors such as infrastructure, clean technology, solid waste management, waste water management, sanitation and urban planning.

Chapter 4

Ease of Doing Business



Government of India is focusing on improving the business environment in the country. Policy and regulatory framework related to investments is being simplified. Stability in policy promulgation and focus on the safeguarding of existing foreign investments are resonating well with business community, global rating agencies and financial institutions. To enhance ease of doing business, the government has taken multiple steps to simplify procedures, rationalise rules and increase the use of technology for efficient and effective governance. We highlight some of the initiatives:

- Department of Industrial Policy and Promotion (DIPP) is functioning as the nodal agency for making investment related procedures easier. Advisory has also been sent to all Departments/ State Governments to simplify and rationalize regulatory environment.

- One of the most significant steps taken by the new government is to initiate the labour reforms to provide employers greater flexibility in management of their workforce. Besides the legislative changes, the government has also introduced a web portal for filing compliance returns for 16 of the 44 labour laws.

- The Investor Facilitation Cell (IFC), an 8 member specialized team set up at Invest India (the national investment facilitation and promotion agency) acts as primary support for all investment queries and for providing handholding and liaisoning services to investors. The IFC team is responsible for answering all investment queries within 72 hours of receipt, and has so far handled over 8,500 unique investor enquiries.

- The initial validity period of Industrial License has been increased to three years from two years. A maximum timeline of 12 weeks has been finalised for grant of security clearance on Industrial Licence Applications.



- The Law commission is working towards updating and modernising existing laws, particularly those dealing with business and commerce. The commission has recommended complete repeal of 88 laws and partial repeal of 25 laws in their latest report and are further examining 167 old laws.

- Goods and Services Tax (GST) is scheduled to be rolled out from April 1, 2016.

- A checklist with specific time-lines has been developed for processing all applications filed by foreign investors in cases relating to Retail/NRI/EoU foreign investments and placed on the DIPP website.

- The ministry has engaged with the World Bank Group to identify areas of improvement in line with World Bank's "doing business" methodology. A 2 day workshop and several follow up meetings were held with the related stakeholders to formulate framework which could boost India's ranking.

- Government plans to roll out a revised policy on Intellectual Property regime (IPRs), which will focus on boosting innovation and toning up the overall administration, besides setting up a think tank to strengthen the country's patent regime.

- A workshop titled "Make in India - Sectorial perspectives & initiatives" was conducted on 29th December 2014.
  - » A total of 18 sessions were held on the 25 sectors including chemicals, oil & gas, petrochemicals, capital goods, pharmaceuticals, food processing, tourism, aviation, automobiles, aerospace, defence production and skill development
  - » A session on ease of doing business was conducted with the Chief Secretaries of the State Governments
  - » Action plans for 1 year and 3 years were prepared at the sessions and then presented to the Hon'ble Prime Minister

- Communication has been sent to all Indian embassies and consulates to disseminate information on the potential for investment in identified sectors. The embassies have been requested to provide a link to the "Make in India" portal. Further, the embassies have been informed that investors can seek guidance on specific issues by posting their queries in the portal which will be promptly responded by experts of Make in India.

- An inter-ministerial committee to fast track investment proposals from USA in India has been created under DIPP with representation of various ministries to address issues related to implementation. Two meetings of this committee have already been held.



eBiz Portal

- In the pilot phase of DIPP's eBiz G2B portal, 50 (26 central + 24 state) services are being implemented across ten pilot states viz., Andhra Pradesh, Delhi, Haryana, Maharashtra, Tamil Nadu, Odisha, Punjab, Rajasthan, Uttar Pradesh and West Bengal. It is envisaged that during the next few years, more than 200 services related to investors and businesses will be rolled-out across the country.

- Services which have been integrated with the eBiz portal are Industrial Entrepreneur Memorandum & Industrial License of DIPP (January 2014) and ESIC Filing of Ministry of Labour and Employment (December 2014).

- On 19th February 2015, 11 new services were launched. These include Name Availability, Director Identification Number, Certificate of Incorporation, Commencement of Business (Ministry of Corporate Affairs); Issue of Permanent Account Number (PAN) and Issue of Tax Deduction Account Number (TAN) (Central Board of Direct Taxes); (Advanced Foreign Remittance (AFR) and Foreign Collaboration-General Permission Route (FC-GPR) (Reserve Bank of India); Employer Registration (Employees' Provident Fund Organization); Issue of Explosive License Petroleum and Explosives Safety Organization; Importer Exporter Code License (Directorate General of Foreign Trade)

- The state government of Andhra Pradesh will soon be the first state to provide 26 services through eBiz portal.



Examples of Cutting Edge Manufacturing Being Done in India

General Electric (GE) Smart Factory in Chakan, Maharashtra – Example of Smart Manufacturing	• General Electric (GE) factory being set up at an investment of USD 200 million in Chakan, Maharashtra is planned as a smart factory. • At the shop floor, seven 'multipurpose machining centres' are being set up and the plant will be 'multi-modal' where products from different industries will be made on the same shop floor. • The computer-controlled machines, imported from Germany and Japan, make metallic parts. Steel, alloys and titanium are fed into the machines that churn out components with an accuracy of 0.005 millimetres for use in power equipment, oil and gas drilling, and the aviation industry. The factory will be using three-dimensional (3D) printers. • The Chakan factory has centres of excellence like fabrication and high-end welding as opposed to product lines. • This is GE's only multi-modal factory in India, though it has similar - but smaller - facilities in some other countries including Vietnam, China and Hungary. • The factory is planned as one of India's smartest factories that bring together automation, the Industrial Internet where machines communicate with each other, and Big Data - large data sets derived from sensors installed in machines. Link - http://businesstoday.intoday.in/story/mncs-indian-companies-started-investing-in-smart-factories/1/207247.html



Production units in India are best in the World, say Car Manufacturers (Hyundai, Toyota and Suzuki)	• Multinational automotive plants in India rank among the top across the world in terms of their productivity and quality. Top auto MNCs like Hyundai, Toyota and Suzuki rank their Indian production facilities right on top of their global pecking order. • Hyundai Motor India (HMI) which has two plants in its Sriperumbudur facility near Chennai. The newer, second plant actually ranks number one in terms of productivity and quality according to Bo Shin Seo, CEO & MD, Hyundai Motor India (HMI). "Hyundai has plants in China, Russia, Brazil, the US (Alabama), Turkey and Czech Republic and in terms of operational average productivity ratio we are number one," he added. HMI's second plant makes two models and routinely hits average productivity ratio of upwards of 99.7%. • Toyota Kirloskar Motor (TKM) has invested around Rs 4700 crore to build two plants at its facility near Bangalore. TKM's plants too rank right up there among Toyota's global pecking order. "In the last three years we have had an internal shipping quality audit wherein a global team comes and checks vehicles randomly at the shipping yard for defects. On that basis, they have come to conclusion that TKM plants are the number one alongside Toyota's China and Thailand facilities," stated ShekarVishwanathan, vice chairman, TKM. The TKM factories run at 98-99% efficiency. • Maruti hogs the lion's share of parent Suzuki's global production. With its 1.5 million unit a year current manufacturing capacity, Maruti is Suzuki International's largest production centre worldwide. India comprises just short of half of Suzuki's global sales volumes and commands around 25% of its total sales revenue. Maruti's India sales are more than what the Japanese company sells in its home market in Japan. Link - http://timesofindia.indiatimes.com/business/india-business/Production-units-in-India-are-best-in-the-world-say-car-manufacturers/articleshow/19370521.cms



Tetra Pak Inaugurates State-of-the-Art Factory in India	• Tetra Pak has set up its latest world-class factory at Chakan, near Pune, in India. Spread over 45 acres, the new Tetra Pak plant employs the most advanced packaging material production technologies and equipment in the world. The new plant doubles production capacity of Tetra Pak packaging material to 8.5 billion packages per year, with the potential of scaling it up to 16 billion packages. • The facility has been awarded Platinum certification by the Indian Green Building Council (IGBC). This is the highest recognition for sustainable building design, equivalent to the Leadership in Energy and Environmental Design (LEED) certification awarded by the US Green Building Council (USGBC). Specific initiatives include: » Initiatives to conserve energy such as using heat from our generators to power air-conditioning and usage of Light Emitting Diodes (LEDs) which also reduce costs. » Soil erosion prevention and control including the implementation of mulching, preservation of existing trees onsite and the post-construction erosion and sediment control (ESC) measures. » Access to public transport with shuttle services provided for all employees. » Natural topography and landscape which is in line with the open space requirement of 10%. Additionally, 41% of the site area is landscaped and will be conserved. Link - http://www.tetrapak.com/about-tetra-pak/press-room/news/platinum-certification-for-environment-initiatives http://www.tetrapak.com/about-tetra-pak/press-room/news/new-factory-india



Tata Nano- World's Cheapest Car	• Advertised as "the world's cheapest car", the Nano is a no-frills automobile designed by Tata to be affordable to millions who commute on 2-wheelers!! Tata Nano – the no-fuss, fuel-efficient energy car that has fueled every Indian's dream to own a car. • The cost was reduced dramatically not by compromising on safety or quality but through design innovation. The car is the culmination of about five years of research and input from designers across the world. But it is definitely a step ahead in innovation, right from using aerospace adhesives instead of welding, a clean and efficient fuel-burning technology to the concept, distribution strategy and marketing, and has succeeded in catching the attention of the world. • The four-door Nano is a little over 10 feet long and nearly 5 feet wide. It is powered by a 623cc two-cylinder engine at the back of the car. With 33 horsepower, the Nano is capable of 65 miles an hour. Its four small wheels are at the absolute corners of the car to improve handling. There is a small trunk, big enough for a duffel bag. • The main secret of the Nano's unique low price is low-cost Indian labour. Tata Motors said that assembly line workers at the Nano plant earn on average £171 per month – fair by Indian standards but a fraction of their European colleagues' salaries. Link - http://nanocar.wordpress.com/



Godrej's Chhotu cool	• Electricity is unavailable or unreliable in many rural parts of India, where families earning under $5 per day can't afford major appliances. To address the basic refrigeration needs of rural families in India,ChotuKool, or "little cool" was introduced by Godrej. It's a perfect example of disruptive innovation for the base of the economic pyramid. • Instead of traditional compressors, ChotuKool is based on a thermoelectric chip that maintains a cool temperature on a 12-volt DC current or an external battery. The unconventional opening ensures cold air settles down in the cabinet to minimize heat loss and power consumption. The unit is highly portable, with 45 liters of volume inside a fully plastic body weighing less than 10 pounds. • Priced at $69, about half of an entry level refrigerator, Chotukool creates a new product category, with a targeted value proposition that serves a new segment of customers. • ChotuKool was also awarded the 2012 Edison Award Gold prize for the Social Impact category.' The fridge does away with conventional compressor technology replaced with nonlinear microchips and a turbine comparable to PC control system in place of more costly. Link - http://www.innosight.com/impact-stories/chotokool-case-study.cfm
General Electric – Ultra Low Cost ECG Machine	• General Electric (GE) developed an ultralow-cost electrocardiogram (ECG), an $800 ECG machine for rural India that is portable, battery-operated, easy-to-use, and easy-to-repair. • Normal GE ECG machine costs about $5,000 and $20 for a scan and the equipment is highly complex, heavy, bulky, and needs a skilled technician to operate it, as well as highly technical service support. GE built the machine using commodity components, realizing huge cost advantages and produced millions of units that reduced cost further with economies of scale and for the sake of reducing the power consumption and increase battery life eliminated monitor and used printers found on public buses and in movie theaters. Link - http://analysiscasestudy.blogspot.in/2013/02/frugal-innovations-ge-healthcare- low.html



Tata Sikorsky India	• In June 2009, Sikorsky (a subsidiary of United Technologies Corp.) and Tata Advanced Systems Ltd (TASL) entered into an agreement for production of S-92 helicopter cabins in India, and in November 2009, Sikorsky and TASL entered into a joint-venture for production of more than 5,000 detailed aerospace components in India, thereby establishing two manufacturing facilities in Hyderabad. • Both facilities commenced production within two years of signing the agreements and today constitute an important part of Sikorsky's global supply chain. • S-92 helicopter cabin production in India has become 100 percent indigenous. The India operation is not only assembling cabins but also producing all parts needed for the assembly, before shipping the cabins to the US for aircraft completion and customer delivery. • The TASL facility has the capacity to produce up to four cabins a month and is responsible for future design modifications. Link - http://www.utcindia.co.in/news.html?view=detail&id=61
Mangalyaan – the Cheapest Interplanetary Missions Ever Undertaken	• The success of Mars Orbiter Mission (MOM) has made India the first nation to reach Mars orbit on its first attempt. • The MOM, also known as Mangalyaan mission is one of the cheapest interplanetary missions ever undertaken. • The cost of India's Mangalyaan mission has been budgeted at 4.5bn rupees ($74m) where the cost of Nasa's Maven Mars mission was $671m. • The Mangalyaan mission had lower worker costs, home-grown technologies, simpler design, and significantly less complicated payload than NASA's MAVEN. Link - http://www.bbc.com/news/science-environment-29341850



Ashok Leyland Launched 'JanBus'- the World's First Fully Flat Flow Front Engine Bus	• Ashok Leyland - an Indian automobile manufacturing company based in Chennai, is the market leader in the bus segment in India. • It is the 2nd largest commercial vehicle manufacturer in India, 4th largest manufacturer of buses in the world and 16th largest manufacturer of trucks globally. Operating six plants, Ashok Leyland also makes spare parts and engines for industrial and marine applications. • Ashok Leyland has recently launched 'JanBus' - the world's 'first', fully-flat floor, front-engine bus with single-step entry and air suspension in Kolkata Link -http://www.ashokleyland.com/node/1591
Larsen &Tourbo – Worldwide Achievements	Larsen & Toubro - a US$14 billion technology, engineering, construction and manufacturing company, with global operations L&T is ranked 4th by Newsweek in the "global list of green companies" in the industrial sector. L&T's significant contributions include: • World's largest coal gasifier, for a petrochemical complex • in China • Longest product splitter for Saudi Arabia • Largest ammonia converter for Australia • Biggest FCC regenerator, for world's largest refinery in India • Largest tubular reactor for Kuwait petrochemical complex • Heavy hydro-cracker & hydro-treator reactors • High pressure heat exchangers • World's single largest order for reactors on a single supplier (22 Nos., valued USD 421mn), from KNPC Kuwait. Link - http://larsentoubro.vizualize.com/media/28790/ppe-brochure26082014-web.pdf



Paharpur Cooling Towers Ltd – Largest Cooling Tower Manufacturers in the World	• Paharpur Cooling Towers Ltd is involved in designing and manufacturing of evaporative water cooling towers and other products related to water processing. It has sold cooling towers valued at over US$ 1 billion up till now. • Paharpur has pioneered several innovative improvements in cooling tower design and operation in the past 40 years and has emerged as one of the largest cooling tower manufacturers in the world, with cooling towers conforming to the best international standards and service to match Link-http://www.paharpur.com/experience.html
Biocon's Custom Manufacturing Services	• Biocon leverages its India cost-base together with its extensive expertise and technology platforms to offer competitive, high quality, custom manufacturing services to a global clientele. • Biocon's full set of customer manufacturing capabilities, include mammalian cell culture fermentation, microbial cell culture fermentation, synthetic chemistry. The facility has been inspected by various international regulators including the USFDA, EU Inspectors, BfArM and Anvisa Link - http://www.biocon.com/biocon_services_contract.asp

Chapter 5

India – US Economic Relations

With two back-to-back heads of the State visit in less than a year after the formation of the new government, it is a "very momentous" phase of India-US relationship. The relationship between India and United States is unprecedented which is evident from the positive trajectory of growth and cooperation in key areas, in trade and economics, in climate and clean energy, in science, space and health and so many different areas.

The emphasis placed by the two governments is on development and good governance, has created new opportunity to reinvigorate bilateral ties and enhance cooperation under the new motto — ***"Chalein Saath Saath: Forward Together We Go",*** which was adopted following Prime Minister Narendra Modi's first summit with President Barack Obama on September 30 , 2014 in Washington DC.

Noting that the multifaceted partnership between the United States and India is rooted in shared values of democracy and strong economic and people-to-people ties, the leaders have elevated the bilateral relationship through their endorsement of a new India-US Delhi Declaration of Friendship ***"Shared Effort; Progress for All",*** which builds on their Joint Strategic Vision January 2015 by articulating tangible principles to guide ongoing efforts to advance mutual prosperity, a clean and healthy environment, greater economic cooperation, regional peace, security and stability for the larger benefit of humankind.

The India-US bilateral cooperation is today broad-based and multi-sectoral, covering trade and investment, defence and security, education, science and technology, cyber security, high-technology, civil nuclear energy, space technology and applications, clean energy, environment, agriculture and health.

Bilateral Trade and Investments

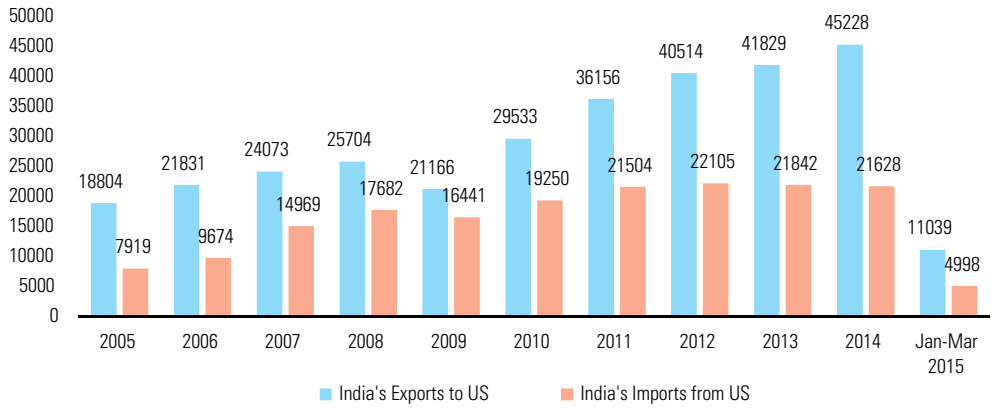
Trade and commerce form a crucial component of the rapidly expanding and multi-faceted relations between India and US From a modest $ 5.6 billion in 1990,



the bilateral trade in merchandise goods has increased to $ 66.9 billion in 2014 representing an impressive 1094.6% growth in a span of 24 years.

India's merchandise exports to the US grew by 4.13% from $ 10.60 billion during the period January - March 2014 to $ 11.04 billion during the period January - March 2015. US exports of merchandise to India grew by 7.17% from $ 4.66 billion during the period January - March 2014 to $ 5.00 billion during the period January - March 2015. India - US bilateral merchandise trade during the period January - March 2015 was $ 16.04 billion.

Fig 5.1: India's Trade with United States

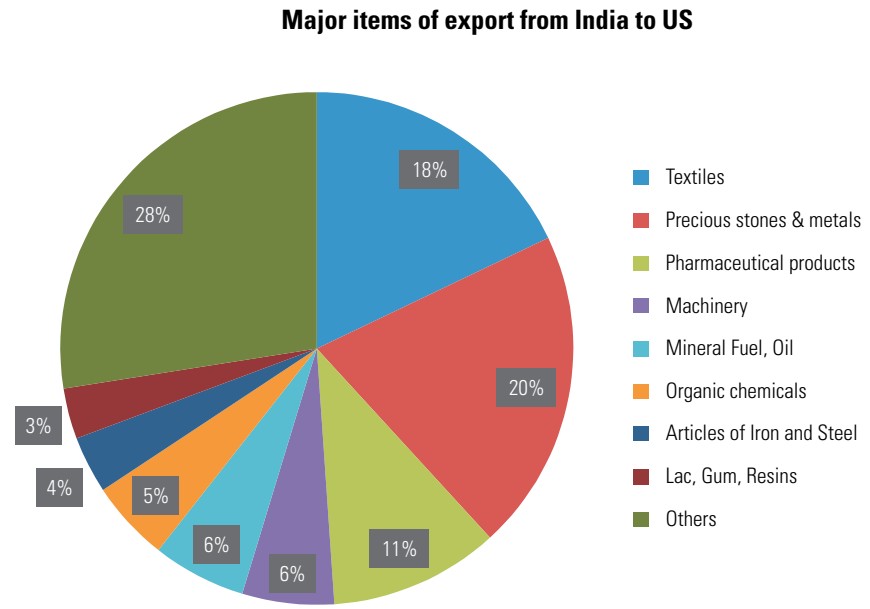


	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Jan-Mar 2015
India's Exports to US	18804	21831	24073	25704	21166	29533	36156	40514	41829	45228	11039
India's Imports from US	7919	9674	14969	17682	16441	19250	21504	22105	21842	21628	4998

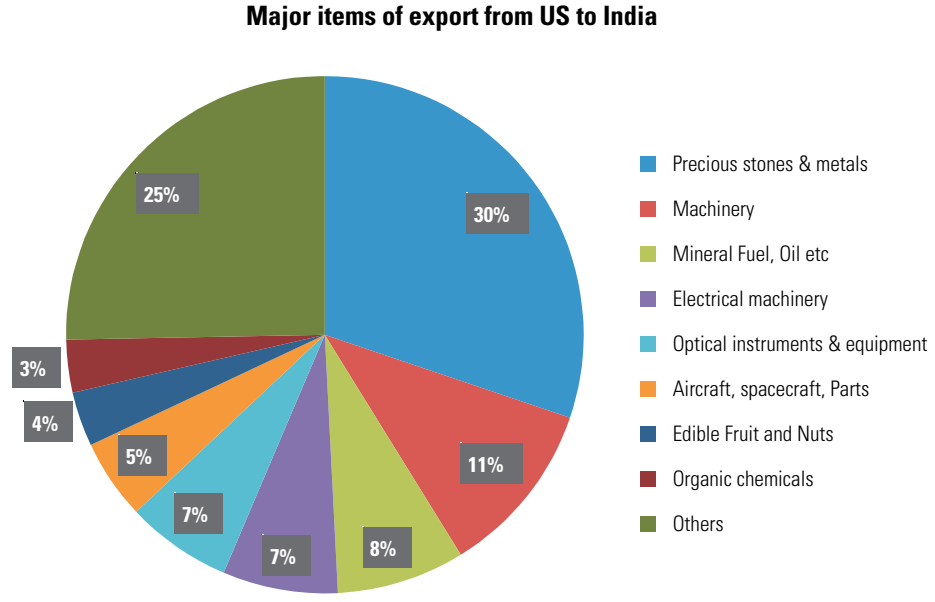
Source: Indian embassy in Washington DC



Fig 5.2: Trade During the Year the Period January - March 2015



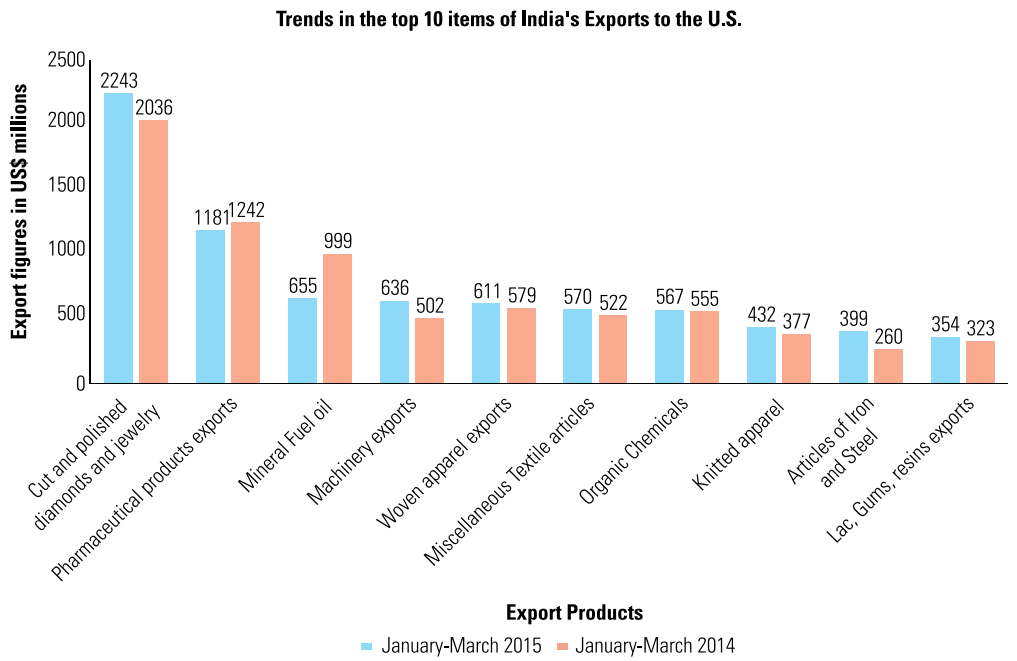
Source: Indian embassy in Washington DC



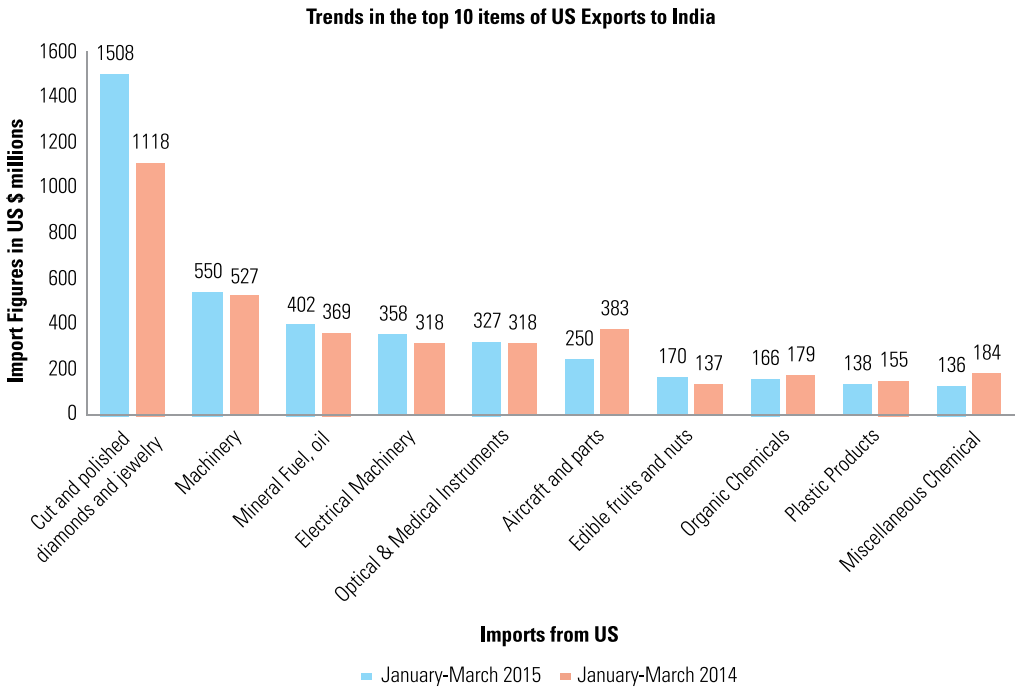
Source: Indian embassy in Washington DC



Trends with respect to the major items of bilateral trade during the past two years are as follows.



Source: Indian embassy in Washington DC



Source: Indian embassy in Washington DC



According to the US Bureau of Economic Analysis, U.S direct investments in India is estimated at $24 billion. As per Indian official statistics, the ***cumulative FDI inflows from the US from April 2000 to March 2015 amounted to about US$ 13.75 billion constituting nearly 6 % of the total FDI into India, making the US the sixth largest source of foreign direct investments into India***. In recent years, growing Indian investments into the US, has been a novel feature of bilateral ties. More than 65 large Indian corporations, including Reliance Industries Limited, Essar America, Tata Consultancy Services, Wipro and Piramal, have together invested about US$ 17 billion in the US

There are several dialogue mechanisms to strengthen bilateral engagement on economic and trade issues, including a Ministerial level Economic and Financial Partnership (last met in Washington in October 2013) and a Ministerial Trade Policy Forum (last met in New Delhi in November 2014). India and US are negotiating a Bilateral Investment Treaty (BIT). Both countries have committed to work through Trade Policy Forum to promote mutually attractive business/investment environment. A highlevel IP Working Group has been established as part of Trade Policy Forum to foster innovation led economic growth. There exists a Commercial Dialogue (with tenure until March 2016) which provides the framework for both Governments and the private sector to collaborate on trade and commercial issues of mutual interest with a view to facilitating trade and investment opportunities across various sectors. For greater involvement of private sector in discussion on issues involving trade and investment, the bilateral India-US CEO's Forum was reconstituted in 2009 and had its last round of meeting in July 2013 in Washington D.C.

During Prime Minister Modi's visit in September 2014, it was decided to establish an India-US Investment initiative, with a special focus on facilitating FDI, portfolio investment, capital market development and financing of infrastructure. The newly established US-India Infrastructure Collaboration Platform seeks to deploy cutting edge U.S technologies to meet India's infrastructure needs. US firms will be lead partners in developing Allahabad, Ajmer and Vishakhapatnam as Smart Cities. USAID will serve as knowledge partner for the Urban India Water, Sanitation and Hygiene (WASH) alliance with to help leverage business and civil society (Gates Foundation) to facilitate access to clean water, hygiene and sanitation in 500 Indian cities.

Chapter 6

India-US Collaborative Agenda

FICCI would like to spell out a few policy recommendations for the overall strengthening of bilateral economic relations, that are important to the prospects of each country. There is a need to strike a balance between pragmatism and ambition, and mindful that much of India's growth path will depend on continuing internal reforms, and continued stress on 'ease of doing business'.

The India-US collaborative agenda

- Need to strategize on Defense & Homeland Security Collaboration
- Collaboration to strengthen Energy and Environmental Cooperation
- Partnership in the area of agricultural technology especially biotechnology and IT
- Need to resolve issues of IT/ITES Sector
- Need to exploit synergies in the Biotech and Pharmaceutical Sector and collaboration on medical technologies
- Collaboration on regulatory best practices, standards, processes eg. capacity building projects with US regulatory agencies
- Enhance the Education and Skill Partnership to create a Positive-Sum Action for expansion of the global talent pool and enhance Science and Technology Cooperation
- Signing of a Bilateral Investment Treaty (BIT)
- Incorporation of India into Global Governance Structures and membership of India in different multilateral regimes as Missile Technology Control Regime (MTCR), Australia Group, Wassennar Agreement
- Reinvigorate the US-India Economic Dialogue & Financial Partership
- Fully Implement the Civil Nuclear Agreement
- Sign a Free Trade Agreement focused on the innovation economy
- Foster Hollywood-Bollywood connections



- **Need to strategize on a Defense and Homeland Security Collaboration**

Strategic Relationship between the world's oldest democracy and the largest democracy have moved from an era of sanctions to a "deeper engagement" in Defence Cooperation and hi-technology trade. India has now moved up the ladder to a hierarchy equivalent to its NATO allies. This is evident from the high profile visits of Secretary Chuck Hagel his successor Secretary Ashton Carter and Under Secretary of Defense for Acquisition, Technology, and Logistics (OUSD(AT&L) Frank Kendall to India in the last two years. US has emerged as the largest defence exporter with defence exports of $ 1.9 bn in 2014.The Defence Cooperation Agreement has been extended for a period of 10 years till 2025, with Defence Technology & Trade Initiative (DTTI) being the centerpiece of the cooperation under the route of **Co-production & Co-development**. With India aspiring to achieve self-reliance, greater indigenisation and aiming to export defence products to friendly nations under **'Make in India'** program, it will be pertinent for Indian industry to look for a reliable partner for critical technology and capacity building. However there is an information gap faced by the private sector as MoD is not sharing details of the technologies other than the four already announced during President Obama's visit in January 2015.There is a need to engage the private sector more deeply rather to be a G2G led engagement.

One of the potentially most interesting developments to emerge from President Obama's recent trip to India was news that the United States and India have decided to embark on cooperative efforts with respect to naval aviation. Of course, India and the United States already enjoy some degree of collaboration, as the US has assisted the Indian Navy with pilot training and deck management for several years.

- **Collaboration to Strengthen Energy and Environmental Cooperation**

Along with renewable energy, there is a need to relook at Coal Gasification technologies, experience sharing in Shale Gas exploration, and development of Oil field and allied services related to exploration. The partnership for energy security would need to include securing unfettered Indian access to the US fossil fuel reserves including a waiver on non-FTA countries. The US-India Energy Dialogue needs revitalization and a need to accentuate focus across both conventional and unconventional including Renewable energy and energy efficiency.



- **Partnership in the Area of Agricultural Technology Especially Biotechnology and IT**

Partnership in the area of agricultural technology is one of the most significant items on the bilateral agenda. Food Security can be a crucial area of collaboration. Indian agriculture productivity is stagnating and with shrinking land area for agriculture, it is important for India to work on a new trajectory.

A renewed Agricultural Knowledge Initiative can be re-launched between the two countries to explore how to increase the linkages between American land-grant institutions, which have valuable experience in agricultural research, training and extension. There is a need to increase their collaboration in the area of crop biotechnology and storage technology.

Initiatives on strengthening cooperation in agriculture and global food security should have active involvement of the private sector from both countries.

FICCI has identified initiatives that can be undertaken which could help Indian agriculture in the following areas:

- **Cooperation in Agriculture biotechnology**, including joint ventures and joint R&D projects
- **Cooperation in Agriculture extension** to launch crop/region specific initiatives through a consortium of U.S experts/USDA and private sector from India.
- **Agri-Marketin**g - Collaboration and cooperation in market News/ Price Information Dissemination, Development of Agri-Marketing Infrastructure, Development of modern abattoirs for meat processing and development of cold storages and refrigeration infrastructure
- **Risk Management in Agriculture** through cooperation in better climate forecasting, dissemination of climate information, early warning systems, mapping of agricultural losses through remote sensing technology, as well as Agriculture Insurance

- **Resolve issues of IT/ITES Sector**

One of the many strong and mutually beneficial areas of commerce between India and the US has been in the realm of information technology. As per USTR, US exports of non-military commercial services to India grew 14% from 2013 to 2014 and 354% since 2000. Ten of the top 15 technology companies operating in India are American. The IT industry has been an ambassador of this commercial relationship and has been deeply entrenched in each other's economy. However from time to time there are bogeys of protectionism and



fears of job loss raised. The IT industry help US businesses to transform, be more competitive, build innovative products and solutions for global markets and these global IT services companies are unsung heroes of US economic recovery.

The Indian IT industry support more than 280,000 jobs in the US, with three out of four of those jobs (200,000+) held by US citizens – a number that has doubled in the past five years. Therefore efforts to stifle their business model through a series of measures may only hurt the bilateral relationship. Therefore the suggestions are to take a nuanced approach and look for pragmatic solutions.

- **Need to exploit Synergies in the Biotech and Pharmaceutical Sector and Collaboration on Medical Technologies**

India's movement up the value-added chain extends beyond the widely-touted IT services sector. The highly-entrepreneurial pharmaceutical sector is the country's most innovation intensive and one of the fastest growing segments of the national economy. It is also one of the emerging world's largest and most sophisticated and has gone to become the global supplier of pharmaceuticals. However there are also growing conflicts as issues are being raised about safety and efficacy of the Indian generic industry and conflicts around IP. With Obamacare setting in United States, there is a need to find a balance between **"Safe and Affordable Healthcare".** There is need for collaboration to find the right balance and the governments in both sides need to be referees guiding the discourse.

American and Indian firms are increasingly teaming up to discover and develop new chemical entities while sharing costs and risks. These growing collaborations call for US and India to accelerate their harmonization of pharmaceutical testing protocols and product standards and create synergies for implementation of a strong regime for intellectual property protection.

- **Collaboration on Regulatory Best Practices, Standards, Processes eg. Capacity Building Projects with US Regulaltory Agencies**

Indian government and United States regulatory agencies can collaborate on programs aimed at training representatives from industry, agriculture and commerce in agricultural and manufacturing standards and practices used in the United States. It is a very proactive way to ensure products imported to the United States are safe and meet their standards for quality.



- **Enhance the Education and Skill Partnership to Create a Positive-Sum Action for Expansion of the Global Talent pool and enhance Science and Technology Cooperation**

  With India a major source of high-skill professionals and the US science and engineering workforce dependent upon the influx of foreign talent, both countries must have a keen mutual interest in cooperating in the area of human capital, the most critical resource in the global innovation economy. It will also help to enhance the collaboration in Science & Technology.

- **Signing of Bilateral Investment Treaty**

  Both governments have strong interests in the rapid conclusion of a global standard-setting investment regime, especially India, whose economic future hinges, in large part, on attracting greater infusions of foreign capital. An accord would also rationalize US investment flows into India by eliminating the need to route funds surreptitiously through tax-haven countries. Also Indian companies have invested over Us$ 30 billion in United States and hence investment protection is a necessity from both sides. Given American concerns about the Indian regime for protecting intellectual property, a BIT can afford additional safeguards for US companies wanting to expand operations in India, as well as provide further protections to Indian investors in the United States.

- **Incorporation of India into Global Governance Structures and membership of India in different multilateral regimes as Missile Technology Control Regime (MTCR), Australia Group, Wassennar Agreement**

  In view of India's growing economic capacity and the important role it will play in addressing global challenges, it deserves a permanent seat at the United Nations Security Council and G-8 table. The US support to incorporate India in the global high table and inclusion in the different international settings as Nuclear Supplier Group, Australia Group and Wassenar Agreement would greatly enhance the esteem of the United States as strategic partner for India.

- **Reinvigorate the Economic Dialogue and Financial Partnership**

  Top-level leadership will be the key in driving the US-India economic relationship forward. Despite an elaborate array of institutions managing bilateral economic relations, there had been a loss of momentum during the last regime. With the Indian economy again on the upsurge and investment flows and business cycles being activated once again, FICCI strongly advocates for B2B mechanisms supplementing the government exchanges and dialogues.



There is a need to strengthen the financial services regulatory infrastructure. India and US can collaborate in developing a robust regulatory framework by engaging the regulatory bodies of the two countries i.e. central banks, insurance, pensions and securities regulators. In cooperation with each other India and US can consider setting up an International Institute for Regulatory Development which could work in the areas of skill development, knowledge sharing and research on complex financial products.

- **Fully Implement the Civil Nuclear Agreement**

The signing of the India-US Civil Nuclear deal has opened up new business opportunities for high technology sharing from the US With the creation of Nuclear Insurance pool and clarification on the CLNDA Act, there is a tangible headway on operationalizing the deal. The future business potential for Indian companies as suppliers to the nuclear power producers in India is estimated to be over $ 80 billion by 2030. There is continued requirement to work together on issues related to Civil Nuclear Liability, Nuclear Safety and Future of Fuel Supply.

- **Sign a Free Trade Agreement Focused on the Innovation Economy**

The prospects for a broad-based US-India free trade agreement are not strong in the foreseeable future. Policy makers in US and India should focus instead on a trade arrangement sharply focused on strengthening the global innovation economy.

Unlike a more comprehensive arrangement – which would entail prolonged negotiations, unwieldy bargaining trade-offs and protracted coalition-building at home – an initiative with a limited but sharp focus on the innovation economy could likely be formulated quickly, with its self-evident "win-win" features overriding domestic opposition.

- **Foster Hollywood-Bollywood Connections**

The United States and India possess the world's largest entertainment and media industries, both in terms of sheer output and global popularity. Given this, the two countries have a shared interest in keeping world markets open for their entertainment and media products. There is a need to craft a common approach on cultural market access. People to People connect are important and with so many commonalities between India and United States, the two largest film industries can forge connectivity and foster collaborations around the creative and innovation economy.

Chapter 7

India – US: Possible Sectors for Collaboration

Aerospace



India is currently the ninth largest civil aviation market in the world and projected to be 3rd largest aviation market by 2020. The objective of the Indian government is to propel India among the top five civil aviation markets in the world by providing access to safe, secure and affordable air services to everyone through an appropriate regulatory framework and by developing world class infrastructure facilities. In order to facilitate this significant growth potential, India will need more airports, higher capacity, supporting infrastructure, access to finance, augmentation of capacity to develop and nurture next generation aviation personnel and appropriate regulatory framework to impart certainty to the investor current and potential.

Collaboration in Civil Aviation sector

- The partnership in this sector would revolve around areas such as ***aviation safety, security, airport infrastructure, air traffic management, environmental and manpower training,*** which would greatly help in transformation of the Indian civil aviation industry and supporting the modernisation requirements of the sector.
- United States has the maximum experience and the largest fleet of general aviation aircrafts in the world. This segment is just about poised for growth in India. Therefore there could be potential for specialized financing companies in the USA with long track records in this particular customer segment to expand into Indian markets or enter into JVs with Indian entities.
- India has a large number of un-utilized or under-utilized airports that would be ideal for general aviation operations, and could decongest India's busy hub airports. The main challenge is to provide the ground-based infrastructure to enable all weather operations at these airports. The USA has decades of experience in managing this problem, and could share its low-cost / automated ATC systems and procedures to open up India's under-developed airports to general aviation operations.
- The Indian MRO industry is estimated to be around Rs 2,200 crores per annum. Buoyed by the Indian aviation growth, several strategic alliances for MRO facilities set up were announced, e.g., Air-India JVs with Boeing and Airbus, GMR-MAE, HALTIMCO, Air France KLM-Max Aerospace, etc. ***The government needs to incentivize airlines to set up their dedicated MRO hubs in India through three-way joint ventures with MRO service providers and airport companies.***

Agriculture



Agriculture remains a dominant sector of the Indian economy both in terms of contribution to gross domestic product (GDP) as well as a source of employment to millions across the country. This sector which contributes 14 percent to the gross domestic product and employs 55 per cent of the population, got priority in the first Budget of the Narendra Modi government. Over 70 per cent of the rural households depend on agriculture as their principal means of livelihood. Agriculture, along with fisheries and forestry, accounts for one-third of the nation's GDP and is its single largest contributor.

Collaboration in Agriculture

- **Enhanced Weather and Climate Forecasting for Agriculture:** India- US collaboration will give farmers reliable information and tools to enhance agricultural production and manage the risks of weather-related crop loss in the context of changing climatic conditions and shifts in the global agricultural market.

- **Improved Food Processing and Farm-to-Market Links:** India and US collaboration can help to foster an improved food value chain, reduce losses and also focus upon: (1) marketing, cold chain logistics, and sharing of market knowledge by introducing Indian private entrepreneurs and public sector officials to US best practices, standards and technologies in cold chain infrastructure; replicating IT models to create smart food supply chains in (2) technology transfer, such as in packaging or water recycling; and (3) programs to improve quality, safety, and professional certification

- **Collaboration in area of Application of Non-Conventional Energy Sources in Agriculture:** Prime Minister Narendra Modi stated that tremendous energy needs cannot be met solely with conventional method of electricity generation in India . More than 540 million tons of crop and plantation residues produced every year in India is either wasted, or used inefficiently. Therefore, India must harness huge potential of non-conventional source of energy.

- **Partnering for Global Food Security in Africa:** India-US partnership can leverage unique Indian capabilities to collaborate with US, African, and other international partners to improve food security. Specific activities include: (1) harnessing frontier technologies for food security and climate-resistant agriculture; (2) promoting conservation agriculture and natural resource management; and (3) linking US, Indian, and African universities to improve the knowledge base for agricultural extension and innovation.

- Indian government and United States Food and Drug Administration to collaborate on programs aimed at training representatives from industry, agriculture and commerce in agricultural and manufacturing standards and practices used in the United States. It's a very proactive way to ensure products imported to the United States are safe and meet their standards for quality.

Defense



India-US Strategic dialogue started with the initiation of NSSP-Next Steps in Strategic Partnership (2004) where the United States and India agreed to expand cooperation in three specific areas: civilian nuclear activities, civilian space programs, and high-technology trade. In addition, it is agreed to expand the dialogue on missile defense. Cooperation in these areas are intended to deepen the ties of commerce and friendship between the two countries.

In January 2015,Prime Minister Modi and President Obama welcomed the efforts made by both sides to expand bilateral defense cooperation in areas of mutual interest and reaffirmed their commitment to continue to work towards deepening the bilateral defense relationship. The Leaders acknowledged bilateral military ties as the foundation of the defense relationship and encouraged their respective militaries to pursue additional opportunities for engagement through exercises, military personnel exchanges, and defense dialogues.

Collaboration in Defense

- **Co-Development and Co-production:** India and US realizes the importance of the Defence Technology and Trade Initiative (DTTI) in developing new areas of technology cooperation in the defence sector including through co-development and co-production and the US Defense Department's has established a dedicated rapid reaction team focused exclusively on advancing DTTI. The continued DTTI collaboration will yield additional joint projects in the near future. FICCI has welcomed the renewal of DTTI due to its intent to make the DTTI more operational so that it becomes result-oriented.

- **Collaboration under "Make in India":** Government of India as a policy has clearly indicated that the referred route for defense capital acquisition are "1. Buy-Indian, 2. Buy and Make – Indian and 3. Make" as envisaged in DPP 2013. The relaxation of FDI limit in defense from 26% to 49% with relaxed defense licencing norms augurs well with the vison on Hon'ble Prime Minister of India's, 'Make in India' program.

- There is need for direct offer of technology to Indian industry for co-development and co-production. **Some of these technologies can go under 'Buy and Make (Indian)'** category and it would be prudent for MoD, India to act expeditiously in this direction to progress with the DTTI Programme. In order to strengthen defense ties, US government need to further address Indian industry's pressing concerns regarding the **lack of credible technology transfers from the US side and opaqueness on clearances from US government on licenses** despite India being upgraded at the level of Australia.

Education



India and the United States understand the role of education and skills development in the people-to-people relationships between the United States and India. The commitment by both governments to promote greater collaboration in higher education and skills development will drive future economic growth in both countries and fuel the innovation and entrepreneurship needed to address the common challenges of 21st century.

The ongoing higher education dialogue to promote opportunities for student and scholar mobility and faculty collaboration between the United States and India, including ongoing collaboration on community colleges, improvement of workforce training, expansion of research and teaching exchanges, collaboration on education technology and innovation, and industry-academia linkages in higher education. This dialogue has served as a significant platform to share best practices on linking industry needs to curriculum development to ensure better employability.

Collaboration in Education

- There is immense scope for collaboration between Indian and US Universities including student and faculty exchanges and capacity building of Indian higher education institutions. To fulfill our stated goal of 20% gross enrolment in higher education by 2020, India will need an estimated 800 more Universities and 35,000 more colleges in the next 10 years. The Obama-Singh 21st century knowledge initiative started by the last government needs to be revitalized along with need to look at the concept of community colleges in the US to see how we can adapt them for our needs.

- **Funding:** Globally, public funding for higher education is shrinking. To meet the need for expansion and quality up-gradation, the Indian higher education sector would need up to INR 8, 00,000 cr of investment by 2030. The increased sophistication of financial markets throws open various innovative funding models for creation and sustenance of higher education institutions. India can replicate strategies/models of the United States to adopt private funding models.

- **Teaching quality:** As we look at rapid expansion of universities and colleges in India, one needs to be mindful of the severe shortage of quality faculty. There is a need to look at innovative ways of attracting top talent, while providing effective motivation to retain existing resources at the macro level as well as at the Institutional level. This calls for innovative strategies and transformation of recruitment norms. This is an area where India can learn from the vast positive experience of the United States.

- **Research:** Good quality research is the hallmark of any global university. It actively feeds into pedagogy through cutting edge curriculum, forms the basis for business development in the corporate sector, and can be the anchor for government policy making. Except for a handful of stand-alone research institutes, India lacks the culture of independent academic research and here again it can learn from the experience of the US higher education system.

Renewable Energy



India-US Energy Cooperation has expanded over time, as concerns over energy security and the climate impact of carbon emissions and sustainable development pushed energy to the top of the India-US agenda. Energy access is a priority for India and there is vast potential for advanced clean energy technologies which, when combined with innovative financing models, market-based solutions, and appropriate policies, can become an engine for economic development.

Increased focus on renewable energy and GOI's provisional long term plans to increase the renewable energy mix in India's generation make the renewable energy sector a very attractive investment in India. Broad estimates indicate that the investment requirement by 2022 would be around US $ 200 billion. India is strategically placed with both the demand and supply of renewable energy co-existing in the country.

Collaboration in Renewable Energy

- **Support for Clean Energy Finance:** India needs the support of US agencies on a range of finance-related initiatives to boost the clean energy market in India. These initiatives include long-term financing, grants, insurance, guarantees, and credit enhancements that aim to help technically-and financially-sound projects obtain the required financial assistance at different stages of the project lifecycle, and unblock new sources of capital for clean energy.

- India and US to collaborate in the RE sector **leveraging India's capabilities and rich human resource in high-tech R&D** for customized developmental work (in collaborative mode with academia and Indian Industry), leveraging India's prowess in software sector for Intelligent Grid Solutions for evacuation of power from RE sources and tapping into the high competence of Indian companies in Wind & Solar-Thermal sectors.

- **Identify joint R&D projects** to make e.g. solar technology more economical and commercially viable. Increased solar power targets provide a huge investment potential for solar manufacturing in India. Most power producers are importing cells/ modules due to various factors including cost. Higher investment and R&D in solar manufacturing will help India in developing solar modules which are both cost effective and technologically advanced in the long run. Solar manufacturing in India is at a nascent stage and requires a nurturing environment and support of US companies for the evolution of this sector.

Homeland Security



Homeland Security has definitely emerged as a priority sector for collaboration as the two countries need to deliberate upon the evolving security challenges of the 21st century. India now conducts more military exercises with the United States than with any other nation and the two countries have invested billions of dollars in each other's economies. Extending this partnership to homeland security would be a natural evolution of the countries' shared interests and can draw on each nation's experience countering internal threats and working within a federal system. The two governments should maintain a regular dialogue to share information and assessment on equipment, technologies and systems for homeland security and counter-terrorism. Technology Transfer Programs should be promoted for research partnerships to facilitate bilateral technology transfer and trade in internal security products and solutions.

Key areas for increased cooperation and coordination on homeland security matters not only exist between the governments of the United States and India, but also with the private sector, which plays an important role in building India's critical infrastructure and is a major actor in ensuring the country's safety and security.

Collaboration in Homeland Security

- **Conceptual Idea Sharing:** US has worked on multiple projects when they have secured selected critical zones. One such project about Lower Manhattan Security Initiative was developed much before any other country in the world. The conceptual ideas once shared with Indian experts will help Indian experts to develop similar safe zones. Some of the areas requiring such safe zones include Delhi's Lutyens, Mumbai financial hubs, IT hubs across country etc.

- **Equipment/ technology:** The weapons issued and equipments used vary from state to state and agency to agency in India. While equipments do not help solve crime, technology can definitely help in providing data for better decision making and in mitigating law enforcement and citizen injuries. The comparison in the equipment usage in US and India reflects a difference in terms of technology. US can help India in bridging this gap in technology usage in India in the areas of Surveillance ,Intelligence analysis software and application , Mobility equipments ,Technical solutions for CBRN threats and Technological up-gradation in communication with security agencies for mass transit system.

- **Training:** Some of the topics that US agencies can be engaged to get training may include: Emergency Response, Disaster Preparedness, Electronic Surveillance Network, Intelligence collation and analysis and Urban area warfare.

- **Joint Exercises:** India and US regularly conduct joint military exercises similar exercises for law enforcement and intelligence agencies can be good benefit for both the sides.

- **Intelligence Sharing:** Strategic intelligence sharing from both the sides will assist countries in common agenda of tackling terrorism.

Life Sciences



The Indian Life Sciences industry has been growing at a fast pace. All domains including pharmaceutical, biotechnology, clinical research and health care are contributing significantly to drive an all-round development and growth in the sector. A large population, evolving patient demographics, increasing healthcare expenditure, growing urbanization, rising life expectancy, increasing disposable income and active private-sector participation have augmented the growth of the country's healthcare sector in recent years.

The United States is battling with huge healthcare costs and seeking to implement healthcare reforms. India on the other hand has a well-recognised pharmaceuticals sector and highly cost saving capability in research and development, which means significant opportunities for cooperation and collaboration in this field.

India is one of the major suppliers of medicines to USA today. The pharmaceutical industry has acquired a commendable position in the global pharma market as a supplier of high-quality, low-cost generic drugs. Since the year 2000-01, USA has been the largest exporting partner of India's pharmaceuticals year after year. India holds approximately 5% market share of USA's generic market by value and can be estimated 15% share by volume. India's exports to USA have increased from USD 105 million in 2001-02 to USD 3,963 million in 2013-14 with a compound annual growth rate of 35%.

Collaboration in Life Sciences

- Leverage the benefits of Tele-presence (Tele-medicine, tele-radiology, tele-referrals, tele-pathology and remote monitoring) between India and USA in emerging healthcare scenarios.
- Knowledge transfer and support to strategize implementation of health IT standards in India, making use of the enormous experience US has gained over the years.
- Explore collaboration between US and Indian Health IT application developers for products with global applications developed in India.
- According to BCG, current size of Indian industry is USD 6 billion and has the potential to reach USD 50 billion+ by 2025. This potential consists of domestic demand as well as export opportunities along with Make in India component. Industries to collaborate in driving patient awareness and engaging to clearly communicate the value of medical technology.
- A formal and consistent process from the government that ensures stakeholder involvement and consultation for policy decisions and guidance documents. Together government and industry can identify safety concerns while ensuring the foundations for a robust clinical research industry in India.



ICT & Telecom

India and the United States have agreed to jointly explore opportunities for collaboration on implementing India's ambitious Rs 1.13 lakh crore Digital India initiative. The two sides also agreed to hold the US-India Information and Communications Technology (ICT) Working Group in India later this year. The aim of the working group is to enhance digital infrastructure, help in deploying e-governance and e-services, and expanding the diffusion and use of ICT in India as a tool to expand economic opportunity and boost productivity among others.

Collaboration in ICT & Telecom

- Flagship programmes of the Indian government–'Digital India' and 'Make in India' – offer exciting opportunities for both sides. Both the programmes promises new business opportunities for the tech industry in the US On the other hand, involvement of the technology companies in the US in these programmes, would provide necessary assistance to the Indian government in making these programmes successful.

  More bilateral or multilateral engagements need to be established for better synergy for pursuing global opportunities or working towards resolution of global issues such as cyber security, internet governance and cross-border data flows, amongst others.

  - Restrictions imposed by governments on cross-border data flows are bound to negatively impact business prospects of ICT industries of both sides, particularly in the light of emerging technologies such as Cloud Computing, Internet of Things and Machine to Machine (M2M).

  - There is an eminent need for resolution of issues related to difficulties faced by the Indian law enforcement authorities in getting lawful access to data stored in the 'cloud', considering the fact that many of cloud providers are US based companies and their data is stored in the United States.

Science & Technology

The United States and India and enjoy robust bilateral science and technology cooperation. This collaboration has been vital in achieving a broad range of shared goals, including sustaining economic growth and job creation; allowing our citizens to live longer, healthier lives; developing clean sources of energy; and protecting our environment for future generations. The US-India Science and Technology Cooperation Agreement, signed in 2005, marked the beginning of a new era in the S&T partnership between the two countries. Since 2005, several joint initiatives have been launched and which have demonstrated considerable success today.

India and United States are collaborating in joint projects, joint workshops, exchange visits of scientists, and establishment of virtual networking in various disciplines such as basic and applied sciences; atmospheric, environmental and earth sciences; health and medical sciences; data sharing; science, technology, engineering, and mathematics education; innovation; and women in science.

Collaboration in Science & Technology

- Setting up **high-tech Cooperation Groups to catalyze the Hon'ble PM's vision** of Clean India, Digital India, Make in India, and Healthy India. These Groups can, inter alia, suggest technology enablers and introduce global best practices to facilitate the implementation of these flagship initiatives.

- Offices of Technology Transfers (OTTs) are an integral part of many academic and research institutes in the US. Indian universities are still to match up to the scale and demographic presence that these OTTs have across university campuses in the US. **Collaborations and 'Knowledge Partnerships' to create such OTTs** at select premier institutes in India can be explored.

- The start-up ecosystem in India is on an exponential trajectory. This is an ecosystem that the US has built and replicated many times over. Indian start-ups have a lot to learn from their US counterparts. A possible area of collaboration is the **establishment of a Silicon Valley like physical and infrastructure set-up in India** that is conducive to the growth and development of Indian start-ups. India and the US can work jointly to co-create such a microcosm of entrepreneurs and an enabling ecosystem to create a replicable model.

- 'Incubation' as a concept is largely restricted to academic institutes in India. US have some of the best incubation centres, both within and outside academic campuses. The scale and impact of incubation centres like the Austin Technology Incubator offers a potential area of partnership to share resources and knowledge to **create similar 'Incubation Centres of Excellence' in India**.

- Both governments need to improve the bilateral visa process for scientific researchers. The current US visa system imposes significant barriers for foreign researchers who wish to attend conferences, participate in collaborative research or interact with peers in the United States. US regulations adopted after the September 11th terrorist attacks also mandate special review of visa applicants from 25 countries, including India. The new process requires affirmative clearance from as many as six different agencies, and foreign researchers routinely encounter months-long delays. The Obama administration should move to streamline the visa process for credentialed short-term visitors in science and technology fields.

Intellectual Property Rights



The new Government is fully conscious of the important role that IP will play in accelerating India`s growth and competitiveness as well as strengthening its economic relations with trading partners. It also regards the matter of effective IP and copyright enforcement very seriously, and the efforts to further streamlining are continuing. Indian IPR policy in the area of public health is predicated by the overarching objective of providing accessibility and affordability of medicines to the vast multitude of patients in India and across the world.

Overview on Intellectual Property Rights

- **IPR Policy:** The Government is in the process of formulating a comprehensive and integrated IP Policy and, the Think Tank set up for this purpose has submitted its IPR Policy recommendations to the Government. The focus is to help protect India's interest on matters related to IPR, while adequately dealing with issues raised by developed countries. The Government has made it clear that the IPR policy would not be restrictive or regressive, but would only give clarity and consistency without any overlap or contradictions. It would also protect, at an international level, India's IPR interests, its heritage, its achievements in pharma, especially generics, the advances the country made in science and technology, as well as the patents filed. In the "Make in India" campaign too, a strong and vibrant IPR regime will be complementary as many global companies have said that they would set up manufacturing and R&D facilities in India provided the IPR regime was strengthened.

- **USTR Special 301:** The Office of the United States Trade Representative (USTR) released its annual "Special 301" Report on the adequacy and effectiveness of US trading partners' protection and enforcement of intellectual property rights (IPR) on 30th April 2015. The document drew attention to the increased bilateral engagement between the US and India on IPR concerns in 2015, following the 2014 Out-of-Cycle Review of India on this issue. It also commends India on the recent paced developments like the constitution of the National IPR Think Tank to solicit the policy interaction between the government and industry stakeholders, the first Draft of the National IP Policy and the market relaxations and clarifications made by the government. The Report further foresees transparency in administration, predictability and certainty in IPR policies ensued from the meaningful dialog between the Government and the relevant stakeholders.

  India, however, continues to be the Priority Watch List in 2015, with the full expectation that the new channels for engagement created in the past year will bring about substantive and measurable improvements in India's IPR regime for the benefit of a broad range of innovative and creative industries. ***The United States has offered to work with India to achieve these goals and a joint committee has also been set up between the two countries to discuss and resolve key IPR issues***.

Transport Infrastructure



Indian Government has liberalized FDI norms for promoting private investments in the infrastructure sector, and undertaken major activities such as National Highway Development Projects (NHDP), National Maritime Development Program (NMDP) and Delhi-Mumbai Industrial Corridor (DMIC) for building world class infrastructure facilities in the country.

Infrastructure investment has increased manifold over time with increased private-sector participation in the country. India has emerged as one of the largest PPP markets in the world with over 900 projects in various stages of development. PPPs have delivered some of the iconic infrastructure like airports, ports and highways which are seen as models for development globally.

India requires a large amount of infrastructure across many sectors such as transportation, telecommunications, power, education, and urban services. It is clear that the government cannot finance all of this based on tax revenue alone. More importantly, the central, state, and local governments do not have the capacity, both in terms of quantity and quality of manpower, to deliver this vast amount of infrastructure. PPPs therefore certainly have a greater role to play.

Collaboration in Infrastructure

- There are substantial prospects of cooperation between India and US in the field of infrastructure development. US companies can share their expertise in the areas of engineering, and project management skills.
- US companies can share their best practices & experience in construction work; building road & highways, bridges & tunnels, etc. US companies can help India in building transport infrastructure, from planning, design and project management stage, to construction, operation and maintenance of infrastructure projects.
- US consultancy firms can extend infrastructure consultancy including activities like design, tender preparation and construction supervision, for infrastructure projects. India is planning to build number of highways/ expressways, airports, ports, multimodal transport connectivity, etc.
- US can help Indian Railways in raising speed of trains on its existing routes, building high speed rail corridors in the country, modernisation

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- US can help Indian Railways in raising speed of trains on its existing routes, building high speed rail corridors in the country, modernisation and redevelopment of railway stations, training in heavy haul freight transportation, and setting up of railway university.

- Recognizing that financing is crucial for infrastructure development, India is looking for collaboration with private/ foreign players for financing the infrastructure projects. It offers huge opportunities for US companies to partner with Indian firms for building infrastructure. There are ample opportunities for US to make investments in PPP based infrastructure projects including road & highways, ports, airports, setting up manufacturing facilities for rail locomotives, etc.

- Opportunities for strengthening partnership: Transportation, Road & Highways, Bridge & Tunnel Construction, Intelligent Transport Systems, Railways, Ports, Airport modernization, etc. are the areas where both the countries can work together.

- Maritime sector offers huge investment opportunities for US as India is expeditiously working out the ambitious 'Sagarmala Project' by integrating various components viz. port facilities, coastal ferry services, tourism infrastructure, and inland water transportation.

- There is substantial scope for US and India cooperation in expanding transportation capacity by improving multimodal connectivity, port connectivity by improving road & rail connections, construction of container terminals/ berths, inland water transport, etc.

- In the railways sector, private investments are currently required in the field of producing railway coaches, railway locomotives, wagons and various ancillary components. There are ample opportunities for the US/Canada companies to make investments and facilitate development & expansion of Indian Railways.

- US companies can provide technical assistance for building high speed rail, modernisation of rolling stock, railway operations, modernisation of signalling, construction & maintenance technologies and in development of logistics parks & cargo terminals.

Chapter 8

Scope for Financial Services Collaboration between India and the United States



India's financial services sector has witnessed massive transformation over the last decade and continues to contribute significantly to the Indian economy. The sector is intrinsically strong, operationally diverse and exhibits competence and flexibility besides being sensitive to India's long term growth and development plans. The sector presently provides employment to over 4 million people, which is likely to grow to around 10-11 million by 2020. It represents around 5% of the GDP and is expected to touch 15% by 2020. To provide impetus to the development of this crucial sector, India and US can come together to work in multiple areas in the financial services space. The recent meetings between the Indian Prime Minister and US President have culminated into the formation of a road map for financial services collaboration between the two countries.

Some of the areas which can be considered for joint collaboration include:

- **Infrastructure Financing**

  Financing of infrastructure projects has been a major bottleneck towards the development of a robust infrastructure network in India. As per the estimates, India needs investment worth around US$ 1 trillion in infrastructure including roads, ports, airports and power plants, in the current Five-Year Plan (2012-17). Also the mega infrastructure development plans announced by the new government entail huge investment. Keeping in view the high financing requirements of these projects, there is scope for India and US to collaborate and develop an understanding about innovative models for financing such projects in India. The leaders of both the countries have already taken a pledge to establish an Indo-US Investment Initiative with special focus on capital market development and financing of infrastructure. India and US have also agreed to establish an Infrastructure Collaboration Platform to enhance participation of US companies in infrastructure projects in India.



- **Partnership to Advance Digital Financial Ecosystems in India**

The US President during his visit to India in January 2015, has pledged to extend support towards the financial inclusion goal of the Indian government under the Pradhan Mantri Jan-Dhan Yojana (PMJDY). This national mission for financial inclusion in India envisages introduction of a transparent and efficient system of subsidy disbursal as direct cash transfers into the accounts of the end beneficiaries, via JAM trinity (JanDhan-AADHAR, Mobile) thereby plugging leakages and helping the government to better assess and implement social welfare schemes. In this regard, US assistance is sought to create a digital payment infrastructure to ensure effective usage of electronic payments process in context of disbursal of aide to people.

A critical missing link in realizing the "transactions" phase of the digital financial inclusion journey is the lack of a widespread merchant acceptance network for digital payments. It is estimated that only about 6% of retail establishments in India accept digital payments, thereby restricting the consumers' from meaningfully utilizing their bank accounts and new digital payment tools. Thus there is a need to build a widespread digital payments acceptance network in India. In this regard, the USAID and GOI Partnership is a welcome move that plans to bring together a coalition of organizations operating in India to seek solutions for expanding the retail digital payments acceptance network in India and addressing related challenges. FICCI is a partner organization of this alliance.

- **India-US Cooperation on Foreign Account Tax Compliance Act (FATCA)**

FATCA is a US anti-tax avoidance law that would have a bearing on financial institutions. FATCA rules require all Financial Institutions (FI) such as banks, custodians, depository participants, funds (including mutual funds & private equity funds) as well as insurance companies to identify their US accounts and report them periodically, such that the US Revenue can get the relevant information. FATCA has paved the way for a multi-country tax information sharing initiative of the Organization of Economic Co-operation and Development (OECD) and the G-20 countries, including India, in the form of a Common Reporting Standard or the CRS. Under CRS, tax administrations would seek foreign tax resident related information from local FIs, which is available to share with other tax administrations through existing bilateral tax treaty networks. India has agreed in substance to sign an inter-governmental agreement with the US government for co-operation on FATCA. It has also committed itself as an early adopter of CRS.



- **Corporate Bond Market Development**

  It is essential to address impeding constraints in India's capital markets and to encourage development of the same. India's corporate bond market is not fully developed. Developing a strong and vibrant corporate bond market (CBM) in India is imperative for access to non-traditional funding sources apart from bank financing. US has a well-functioning corporate bond market and its experience can come in handy as India takes steps for developing its corporate bond market.

- **Learnings from New York and other major International Financial Centers (IFCs) of US for Developing IFCs in India (GIFT City)**

  India's domestic financial sector is growing considerably, however, its role in global financial system is still limited and needs to be re-looked at. India (Mumbai) was ranked 61st in the Global Financial Centre Index (GFCI) in October, 2014, as per Z/Yen group. Thus for India to become globally significant in terms of financial systems, it is imperative that it develops the best in class IFCs like the US, which has four IFCs among the top 10. India can greatly benefit from the US by leveraging its technical know-how and expertise in addressing the key bottlenecks in the Development of an IFC.

- **Internationalization of Rupee**

  In the recent past, India has emerged as one of the fastest growing economies in the world. In PPP terms, India is now the third largest economy. India is now increasingly integrated with the global economy with its exports and imports accounting for more than 50 per cent of the GDP. India has a growing role in Asia as an engine of economic growth and is increasingly getting integrated with East Asian Countries. India is also one of the largest source of outbound investments in the region. All these factors make the Indian Rupee a natural candidate for being considered for greater internationalization. Support from US will be critical to ensure the internationalization of Rupee.

- **SME Financing (Including Development Finance)**

  Financing of medium and small scale companies present a number of challenges/risks to banks. Given that this sector forms the backbone of the industrial economy in India, it is important that adequate and timely finance is available for these enterprises so that their growth is not hindered. US can share its experience and expertise in this field.



- **India-US Higher Education Collaboration- Skill Development**

  The financial sector in India needs to address the skill gap issues. According to National Skill Development Corporation (NSDC) report in India, based on the growth expected in Banking & Financial Services Industry (BFSI), it is expected that incremental human resource requirement between 2013 and 2022 is about 1.6 million. Greater emphasis on skill development will not only raise productivity but also enable employees to use technology effectively. As US has an extensive network of institutions and universities providing specialized courses for the financial services industry, its academic institutions can further collaborate with Indian universities to develop training programs and certifications necessary for the financial services sector.

- **Green Financing**

  It is worth noting that the global green bond market touched $37 billion in 2014. As India sets ambitious vision of scaling up its clean energy targets, planning 100 smart cities, setting strong energy efficiency measures, it is imperative that emphasis is laid on clean and renewable energy for ensuring energy security and its access. Meeting the needs would mean ensuring massive funding flows into the renewable sector. As US is one of the prominent countries dominating the global market share for issuance of green bonds, there is tremendous scope for collaboration in developing a market for these innovative products and allowing long term finance into sustainable development priorities. Certification of what is 'green' and awareness creation on the benefit from green bonds for individual investors is also needed.

- **Insurance and Pensions Sector**

  A robust insurance and pensions sector plays an important role in the country's economic development as it is the source for channelizing domestic savings into capital markets. The Indian insurance industry is estimated to achieve a market size of around US$ 350-400 billion by 2020. Also the investment corpus in India's pension sector is estimated to cross US$ 1 trillion by 2025, following the new regulatory changes and thrust on retirement planning.

Some of the recent developments which make the Insurance and Pensions sector in India even more attractive for US companies are given below:-



- **Rise in FDI Cap from 26% to 49%**

  With the recent passage of the Insurance Laws Amendment Bill by the Indian Parliament, the FDI cap has been raised to 49% in Insurance and Pensions sector. The new regulation offers huge opportunity for the US-based insurance companies already having presence in the Indian insurance sector, as it allows them to further scale up investment in the sector and thereby strengthen their market position. Apart from this it unleashes a host of positive regulatory changes for the Industry to make it more attractive.

- **Expanding Growth Opportunities**

  A growing middle class, expanding working age population and increasing disposable income levels are some of the factors that are likely to drive the future demand for insurance products in India. Moreover, the insurance penetration level is still very low in India. The general insurance penetration in the country is only 0.8% while life insurance penetration is about 3.2% of GDP. Investment opportunities exist in both Life as well as General Insurance space. Hence, there is huge scope for global players to enhance their share through offering innovative products, adopting better technology for product distribution and implementing novel customer servicing mechanisms.

- **Outreach Programme of Government**

  With the aim of creating awareness about insurance and pensions products and bringing a greater number of people within the ambit of formal financial system, the government has launched mega schemes like the Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), Pradhan Mantri Suraksha Bima Yojana (PMSBY) and Atal Pension Yojana (APY) throughout the country. This initiative is likely to generate more demand for insurance products and would enhance the level of insurance penetration in the country.

- **Forward looking Regulatory Changes**

  The government has also proposed to adopt an open architecture for distribution of insurance products through corporate agents. This will allow distribution companies to have multiple tie-ups with insurance companies and thereby offer consumers greater choice of products suiting their requirements. This would eventually lead to increase in purchase of insurance products.



➢ **Underpenetrated Sub-segments in Insurance**

The Universal Health Insurance programme launched by the government aims to provide basic minimum health services to all citizens of India. Presently only about 25% of the total population is reported to have health insurance coverage, indicating towards the huge untapped potential that the segment possess. Another area with significant investment scope is the micro-insurance sector where the penetration level is extremely low. It is estimated that only around 5 million policy holders are present in this segment as compared to about a potential target group of about 300 million people.

- **Indo-US Collaboration to Strengthen Regulatory Framework**

There is a need to strengthen the financial services regulatory infrastructure. India and US can collaborate in developing a robust regulatory framework by engaging the regulatory bodies of the two countries i.e. central banks, insurance, pensions and securities regulators. In cooperation with each other India and US can consider setting up an International Institute for Regulatory Development which could work in the areas of skill development, knowledge sharing and research on complex financial products.

Annexure I

Focus Actions and Accomplishments since Prime Minister Narendra Modi's first summit with President Barack Obama on September 30, 2014

- The 30 September 2014 signing of an implementing agreement between the National Aeronautics and Space Administration (NASA) and Indian Space Research Organisation (ISRO) to conduct the ***joint NASA-ISRO Synthetic Aperture Radar (NISAR) mission***.

- The ***convening of the Defence Policy Group and its subgroups on 28-29 October 2014*** to pursue stronger and expanded bilateral defence cooperation.

- ***India's ongoing facilitation of US Department of Defense humanitarian missions in India***, including a mission in October and November 2014, to recover the remains of fallen US soldiers who served in World War II.

- The signing of the ***India-US Statement of Guiding Principles on Triangular Cooperation for Global Development on 3 November 2014***, in furtherance of bilateral efforts to advance sustainable development in cooperation with partner countries around the world.

- The breakthrough between India and the United States on issues relating to the ***implementation of the Bali Ministerial Decisions regarding public stockholding for food security purposes, the WTO Trade Facilitation Agreement, and post Bali work***.

- Convening of the ***US-India Joint Commission Meeting on Science and Technology Cooperation in New Delhi on 17 November 2014*** to review, exchange views, and advance cooperation in diverse areas of science and technology and foster engagement in techno-entrepreneurship and innovation partnership for mutual benefit.

- Convening of the ***India-US Higher Education Dialogue in New Delhi on 17 November 2014*** to further bilateral cooperation in this field, strengthen partnerships between Indian and US universities and community colleges, improve student and scholar mobility, and promote faculty collaboration.

- The signing of the ***MoU on 18 November 2014 between Indian Renewable Energy Development Agency Ltd. and the Export-Import Bank of the United States***, which would make available up to $1 billion in financing to facilitate expanded cooperation and enhance US private sector investment in Indian clean energy projects.

- Successful hosting of the bilateral ***India-US Technology Summit on 18-19 November 2014*** with the US as a partner country for the first time.

- Convening of the ***High Technology Cooperation Group on 20-21 November 2014*** to shape a cooperative agenda on high technology goods, including export control-related trade in homeland security technologies, high technology manufacturing equipment including machine tools, defence trade, and fostering collaboration in biotechnology, pharmaceuticals, medical devices, and health-related information technology.

- Convening of the ***Smart Cities Conclave on 22 November 2014*** organised by the US-India Business Council in cooperation with the Ministry of Urban Development and the Mayors and Commissioners of Ajmer (Rajasthan), Allahabad (Uttar Pradesh) and Vishakhapatnam (Andhra Pradesh) and the decision by the Government of India to constitute a high-level committee for each of the three Smart Cities comprising different departments of the Central Government, the state governments, local governments, and representatives of the US industry.

- Signing of three MoUs between the State Governments of Andhra Pradesh, Uttar Pradesh, and Rajasthan and the US Trade and Development Agency on 25 January 2015 to ***develop Vishakhapatnam, Allahabad, and Ajmer as Smart Cities with the participation of US industry***, in furtherance of the commitment made by the Leaders in September 2014.

- ***The convening of the Trade Policy Forum at the Ministerial level on 24-25 November 2014***, in which India and the United States agreed to work towards resolving commercial impediments in both markets, to help realize the potential of bilateral trade in goods and services, and to promote investment and manufacturing.

- Convening of the ***India-US Political Military Dialogue on 4 December 2014*** to exchange perspectives on bilateral strategic and regional issues.

- Convening **the sixth round of the India-US-Japan trilateral discussions on 20 December 2014** to deepen regional engagement and to discuss ways to implement projects on the ground.

- The ***launch of the Infrastructure Collaboration Platform in New Delhi on 13 January 2015*** to promote enhanced market access and financing to increase US industry participation in the growth and development of sectors that support Indian infrastructure.

- The ***12-15 January 2015 expert exchange on Counter-Improvised Explosive Device (C-IED)*** strategies and technologies and completion of a Joint Statement of Intent and a work plan for a programme of bilateral C-IED cooperation.

- The signing of a framework on and i***nauguration of the India-US Investment Initiative in Washington on 12-15 January 2015*** to jointly cooperate on facilitating capital market development conducive to financing investment; creating an environment that encourages investment in various sectors in India; and working to overcome any obstacles to such investment.

- ***The convening of the Information and Communications Technology (ICT) Working Group in Washington on 14-15 January 2015*** and the 23 January signing of the Joint Declaration of Intent to advance implementation of the Digital India programme and further bilateral commercial ICT cooperation.

- ***Launching of a Knowledge Partnership in defence studies*** expressing a shared desire to pursue collaborative activities between the United States and Indian National Defence Universities.

- ***Signing of the Statement of Cooperation for Supervisory Cooperation and Exchange of Supervisory Information*** between the Reserve Bank of India and Federal Deposit Insurance Corporation (FDIC), Federal Reserve System, and Office of the Comptroller of Currency (OCC).

- ***Convening of Indian and US CEOs*** who are committed to deepening bilateral economic ties by identifying current impediments to trade and investment and working with the two government to find solutions; and identifying emerging sectors where public-private partnership can unlock new collaborations between our two peoples.

- The 13 January 2015 signing of the ***MoU between the United States Agency for International Development (USAID) and the Ministry of Urban Development*** to enable USAID to share expertise, best practices, innovation and technologies in support of India's efforts to strengthen water, sanitation and hygiene (WASH) in urban areas.

- India's recent introduction of ***visa-on-arrival for US citizens and the convening of the first technical discussions to advance India's membership in the United States' Global Entry Program***, initiatives aimed at easing travel between India and the United States to further strengthen people-to-people ties.

- Cooperation on ***scientific research collaboration on the Indian Monsoon Rainfall*** currently underway aboard the US research vessel JOIDES Resolution in the Bay of Bengal.

- The ***conclusion of the first of two project annexes between the Indian Department of Atomic Energy–Department of Science and Technology and the US Department of Energy***, which will enable discovery science cooperation in particle accelerator and high energy physics.

- The 22 January signing of ***the MoU between the US Department of Treasury and India's Ministry of Finance*** to enhance cooperation to combat money laundering and the financing of terrorism.

- The Completion of an ***MoU between the Indian Ministry of Health and Family Welfare, Department of Biotechnology, Indian Council of Medical Research, All Indian Institute of Medical Sciences, and the U.S National Institute of Health and National Cancer Institute***.

- The ***23 January signing of the Joint Declaration of Intent between USAID and the Ministry of Human Resource Development*** for technical support to the Indian Institutes of Technology (IITs), starting with IIT Gandhinagar, to strengthen research and entrepreneurship capabilities.

- The ***recent finalization of the 2015 Framework for the US-India Defense Relationship***, which will guide and expand the bilateral defence and strategic partnership over the next ten years.

- The 22 January ***signing of the India-US Research, Development, Testing and Evaluation (RDT&E) Agreement*** to facilitate cooperation in defence research and development.

- Continuing ***bilateral engagement on the Defence Technology and Trade Initiative (DTTI), including the 22 January 2015 agreement in principle to pursue co-production and co-development*** of four pathfinder projects, form a working group to explore aircraft carrier technology sharing and design, and explore possible cooperation on development of jet engine technology.

Annexure II

Indian Investments in United States

The following table details the five largest outbound deals entered by Indian companies in the US from October 2012 to December 2014, either directly or through their overseas subsidiaries.

Acquirer	Target	Sector	Date	Deal Value US$ millions
Gulf Oil Corp. Ltd.	Houghton International Inc.	Chemicals	November 2012	1,045
Mallika Srinivasan	AGCO Corp	Diversified Industrial Products	April 2014	427
Tech Mahindra Ltd	Lightbridge Communications Corp	Telecommuni-cations	November 2014	240
Jindal Poly Films Ltd	ExxonMobil Chemical Co-Global BOPP Films	Diversified Industrial Products	October 2012	235
Sun Pharmaceuticals Ltd	DUSA Pharmaceuticals Inc	Pharmaceuticals	November 2012	212.5

Technology

The table below details the value of the top five deals entered by Indian companies in the technology sector (either directly or through their overseas subsidiaries).

Acquirer	Target	Sector	Date	Deal Value US$ millions
MphasiS Ltd.	Digital Risk LLC	Technology	December 2012	175
Rolta India Ltd	AT Solutions Group LLC	Technology	November 2012	32
Wipro Ltd.	Opera Solutions LLC	Technology	May 2013	30
OnMobile Global Ltd	LiveWire Mobile Inc	Technology	June 2013	17.8
Prime Focus Ltd	DAX LLC	Technology	March 2014	9.1

Pharmaceuticals and Healthcare

The table below details the value of the top five deals by Indian companies in the pharmaceuticals and health care sectors, either directly or through their overseas subsidiaries.

Acquirer	Target	Sector	Date	Deal Value US$ millions
Sun Pharmaceutical Industries Ltd.	DUSA Pharmaceuticals Inc.	Pharmaceuticals and Healthcare	November 2012	212.5
Aurobindo Pharma Ltd	Natrol Inc	Pharmaceuticals and Healthcare	June 2014	132.5
Cipla Ltd	Chase Pharmaceuticals Corp Inc	Pharmaceuticals and Healthcare	May 2014	1.5
Sun Pharmaceutical Industries Ltd.	Pharmalucene Inc	Pharmaceuticals and Healthcare	July 2014	-
GVK Group Ltd	Aragen Bioscience Inc	Pharmaceuticals and Healthcare	January 2014	-

Annexure III

Details of Indian acquisitions in the US from October 2012 to December 2014

S.no.	Acquirer	Target	Sector	Date	Deal Value US$ millions
1	Gulf Oil Corp Ltd	Houghton International Inc	Chemicals	7 November 2012	1.045.0
2	Mallika Srinivasan	AGCO Corp	Diversified industrial products	2 April2014	427.0
3	Tech Mahindra Ltd	Lightbridge Communications Corp	Telecommunications	20 November 2014	240.0
4	Jindal Poly Films Ltd	ExxonMobil ChemicalCo-Global BOPP Films Business	Diversified industrial products	26 October 2012	235.0
5	Sun Pharmaceutical Industries Ltd	DUSA Pharmaceuticals Inc	Pharmaceuticals	8 November 2012	212.5
6	MphasiS Ltd	Digital Risk LLC	Technology	2 December 2012	175.0
7	Aurobindo Pharma USA Inc	Natrol Inc	Pharmaceuticals	11June 2014	132.5
8	Jindal Tubular USA LLC	PSL-North Amer ica LLC	Metals and mining	20 August 2014	104.0
9	Wipro Ltd	Opus Capital Markets Consultants LLC	Capital markets	2 December 2013	75.0
10	Motherson Sumi Systems Ltd	Stoneridge Inc-Wiring Harness Business	Automotives	26 May 2014	71.4
11	Homeland Uranium Inc	Pinon Ridge Mining LLC	Metals and mining	20 November 2014	33.0
12	Tata Technologies Ltd	Cambric Corp	Engineering services	26 April 2013	32.5
13	Rolta International Inc	AT Solutions Group LLC	Technology	6 November 2012	32.0
14	Wipro Ltd	Opera Solutions LLC	Technology	7 May 2013	30.0
15	OnMobile Global Ltd	LiveWire Mobile Inc	Technology	4 June 2013	17.8
16	Prime Focus Technologies Ltd	DAX LLC	Technology	10 March 2014	9.1
17	LGB USA Inc	GFM Corp	Diversified industrial products	19 November 2012	5.5
18	Wipro Ltd	Axeda Corp	Technology	3 June 2013	5.0
19	Bihca Precision,Gieterij Nunspeet,NDI,Achiles Ijmuiden, Thibo Dra, 1 0th	NitroHeat LLC	Chemicals	10 October 2013	2.4
20	Prism Informatics Ltd	Idhasoft Ltd	Technology	24 April 2013	2.0
21	MPS Ltd	Element LLC	Media and entertainment	11 May 2013	1.8
22	Cipla Ltd	Chase Pharmaceuticals Corp Inc	Pharmaceuticals	12 May 2014	1.5

23	Majesco Software Inc	Cover-All Technologies Inc	Technology	15 December 2014	NA
24	Majesco Software Inc	Agile Technologies LLC	Technology	12 December 2014	NA
25	GVK Biosciences Pvt Ltd	Vanta Bioscience LC	Pharmaceuticals	6 November 2014	NA
26	Kellton Tech Solutions Ltd	Vivos Professional Services LLC	Professional services	22 October 2014	NA
27	L&T Technology Services Ltd	Dell Product & Process Innovation Services	Engineering services	8 October 2014	NA
28	Nihilent Technologies Pvt Ltd	GNet Group Inc	Technology	8 October 2014	NA
29	MPS North America LLC	Electronic Publishing Services Inc	Media and entertainment	2 October 2014	NA
30	Wingify	Concept Feedback LLC	Technology	23 September 2014	NA
31	Zoomin Online (India) Pvt Ltd	Photojojo	Retail and consumer products	27 August 2014	NA
32	Sonata Software North Amer ica Inc	Rezopia Inc	Technology	22 August 2014	NA
33	Zensar Technologies Ltd	Professional Access Inc	Technology	14 August 2014	NA
34	Ozonetel Systems Pvt Ltd	YantraSoft Inc-Speech Recognition Vertical Division	Technology	12 August 2014	NA
35	Sun Pharmaceutical Industries Ltd	Pharmalucence Inc	Pharmaceuticals	16 July 2014	NA
36	Strides Arcolab Ltd	Oncobiologics Inc	Pharmaceuticals	16 July 2014	NA
37	Elgi Rubber Co Ltd	Western States Manufacturing	Paper and forest products	23 June 2014	NA
38	KPIT Technologies Ltd	Integrated Industrial Information Inc	Technology	12 June 2014	NA
39	Svads Holdings SA	SCOLR Pharma Inc-Nuprin Brand	Pharmaceuticals	5 May 2014	NA
40	eVantage Solutions Inc	eVantage Technologies Inc	Technology	21 April 2014	NA
41	Suzlon Energy Ltd	Edison Mission Energy Co - Big Sky Wind Park, Illinois	Cleantech / renewable	2 April 2014	NA
42	Infotech Enterprises America Inc	Softential Inc	Technology	7 March 2014	NA
43	SPP Pumps LP	SyncroFlo Inc	Diversified industrial products	5 March 2014	NA
44	ESI International	IPS Learning LLC	Education	12 February 2014	NA
45	Artek Surfin Chemicals Ltd	Galata Chemicals LLC	Chemicals	10 February 2014	NA
46	Persistent Systems Ltd	Cloudsquads Inc	Technology	5 February 2014	NA

47	GVK Biosciences Pvt Ltd	Aragen Bioscience Inc	Pharmaceuticals	29 January 2014	NA
48	Shasun Pharmaceuticals Ltd	Shasun NBILLC	Pharmaceuticals	25 January 2014	NA
49	Tri-K Industries Inc	Surfactants International LLC	Chemicals	16 January 2014	NA
50	Birlasoft Ltd	EnablePath LLC	Technology	13 January 2014	NA
51	Decision Resources Group	Relay Technology Management Inc	Technology	7 January 2014	NA
52	Indegene Healthcare	Total Therapeutic Management Inc	Pharmaceuticals	2 January 2014	NA
53	Bharat Enterprises	Gifts of Arkansas	Retail and consumer products	23 December 2013	NA
54	Kellton Tech Solutions Ltd	Supremesoft Corp	Technology	21October 2013	NA
55	Ecuhold NV	Econocaribe Consolidators Inc	Logistics	27 September 2013	NA
56	Kemwell Biopharma Pvt Ltd	Cirrus Pharmaceuticals Inc	Pharmaceuticals	26 July 2013	NA
57	QuantM Net Technologies Ltd	TEQBAY	Technology	25 June 2013	NA
58	Cigniti Technologies Ltd	Gallop Solutions Inc	Technology	29 May 2013	NA
59	Pramati Technologies Pvt Ltd	WaveMake r Software Inc-Certain Assets	Technology	2 May 2013	NA
60	ABI Showatech India Ltd	Ross Casting & Innovation LLC	Automotives	22 April 2013	NA
61	Vector E-commerce Pvt Ltd	Fitiquette	Retail and consumer products	5 April 2013	NA
62	AGC Networks Ltd	Transcend United Technologies Inc-Technology Integration Business	Technology	15 March 2013	NA
63	Aditya Birla Nuvo Ltd	Undisclosed Fertiliser Plant	Agricultural inputs	6 March 2013	NA
64	TVS Logistics Investment USA	Wainwright Industries Inc	Automotives	30 January 2013	NA
65	Persistent Systems Ltd	NovaQuest LLC	Technology	31 December 2012	NA
66	Saksoft Inc	Electronic Data Professionals	Technology	31 December 2012	NA
67	Caraco Pharmaceutical Laboratories Ltd	URL Pharma Inc	Pharmaceuticals	17 December 2012	NA
68	Bartronics Asia Pte Ltd	Systems America Inc	Technology	11 December 2012	NA
69	Elgi Equipments Ltd	Patton's Inc	Diversified Industrial products	29 November 2012	NA
70	Reliance Globalcom Ltd	CIENA Corp-Optical Network Gear Assets	Telecommunications	23 October 2012	NA
71	Persistent Systems Ltd	Doyenz Inc-rCloud Business	Technology	12 October 2012	NA

Annexure IV

US Investment in India

Year-Wise FDI Inflows received from USA. companies, since April 2000, as compared to total inflows are given below:

Financial Year (April-March)	FDI equity inflows From USA.		FDI equity inflows from all Countries *		Total FDI inflows (including equity, re-invested earnings & other capital) **
	Rs. in crores	US$ in million	Rs. in crores	US$ in million\	(US$ in million)
2000-01	1,544.44	355.59	10,733	2,463	4,029
2001-02	1,747.76	382.28	18,654	4,065	6,130
2002-03	1,503.80	318.61	12,871	2,705	5,035
2003-04	1,658.34	360.51	10,064	2,188	4,322
2004-05	3,055.31	668.82	14,653	3,219	6,051
2005-06	2,209.83	502.22	24,584	5,540	8,961
2006-07	3,861.29	855.78	56,390	12,492	22,826
2007-08	4,376.59	1,089.10	98,642	24,575	34,843
2008-09	8,001.78	1,801.98	142,829	31,396	41,873
2009-10	9,230.43	1,943.46	123,120	25,834	37,745
2010-11	5,352.67	1,170.27	97,320	21,383	34,847
2011-12 ^	5,346.97	1,115.27	165,146	35,121	46,556
2012-13	3,033.46	557.23	121,907	22,423	34,298
2013-14	4,807.43	806.35	147,518	24,299	36,046
2014-15 (up to March, 2015)	11,149.66	1,823.60	189,107	30,931	44,877
Cumulative Total (April 2000-March 2015)	**66,879.76**	**13,751.06**	**1,233,538**	**248,634**	**368,439**

Note:

i. *These amounts include the inflows received through FIPB/SIA route, acquisition of existing shares, RBI's automatic route and RBI's – NRI schemes.

ii. The amount of FDI equity inflows, in respect of country/sector specific data was not provided by RBI, Mumbai, prior to April 2000.

iii. ^Inflows for the month of March, '12 are as reported by RBI, consequent to the adjustment made in the figures of March,'11, August, '11 and October, '11.

iv. **Country & sector specific details on 're-invested earnings' and 'other capital' are, however, not centrally maintained by the Reserve Bank of India.

v. **Data in respect of 'Re-invested earnings' & 'Other capital' for the years 2009-10, 2010-11, 2011-12, 2012-13 & 2013-14 are on an estimated basis. It is estimated by RBI as an average of the previous two years.

Sector-Wise Distribution of FDI Inflows from USA

Rank	Sector	Amount of FDI equity inflows		% age of FDI equity inflows from USA.
		Rs. in crores	US$ in million	
1	Services Sector*	14,643.30	3,006.42	21.86
2	Computer Software & Hardware	8,060.99	1,703.89	12.39
3	Automobile Industry	8,788.19	1,650.10	12.00
4	Metallurgical Industries	2,307.16	533.08	3.88
5	Construction Development: Townships, Housing, Built-Up Infrastructure And Construction-Development Projects	2,162.27	472.54	3.44
Total of Above		**35,961.91**	**7,366.03**	**53.57**

**Services sector includes Financial, Banking, Insurance, Non-Financial / Business, Outsourcing, R&D, Courier, Tech. Testing and Analysis*

Sl. No	Name of Indian Company	FDI Route	Name of Foreign Collaborator	RBI Regional Office	Item of Manufacture	Amount of FDI Inflows	
						(In Rs crore)	(In US$ million)
1	FORD INDIA LIMITED	RBI	FORD MOTOR COMPANY	CHENNAI	MANUFACTURE OF MOTOR CARS & OTHER MOTOR VEHICLES PRINCIPALLY DESIGNED FOR THE TRANSPORT OF LESS THAN	2,666.54	438.11
2	ESSAR STEEL LTD	RBI	ESSAR LOGIISTICS HOLDINGS LTD	AHMEDABAD	STEEL MFR..	1,903.93	451.97
3	FORD INDIA LIMITED	RBI	FORD INTERNATIONAL SERVICES LTD	CHENNAI	MANUFACTURE OF MOTOR CARS & OTHER MOTOR VEHICLES PRINCIPALLY DESIGNED FOR THE TRANSPORT OF LESS THAN	1,443.46	237.16
4	CAIRN INDIA LTD	RBI	PETRONAS INTL CORPN LTD	MUMBAI	BUSINESS SERVICES NOT ELSEWHERE CLASSIFIED	1,419.82	297.21
5	GMR INFRASTRUCTURE LTD	RBI	26 VARIOUS FIIS	BANGALORE	MISCELLANEOUS	1,200.34	256.28
6	CAIRN INDIA LTD	RBI	ORIENT GLOBAL TAMARIND FUND PVT LTD	MUMBAI	BUSINESS SERVICES NOT ELSEWHERE CLASSIFIED	1,114.77	233.36
7	ANANT RAJ INDUSTRIES LTD.	RBI	DEUTSCHE BANK TRUST CO.	NEW DELHI	MISCELLANEOUS	608.07	132.30
8	FORD INDIA LTD	RBI	FORD MOTOR COMPANY	CHENNAI	MANUFACTURE OF MOTOR CARS & OTHER MOTOR VEHICLES	546.77	111.96
9	FEDEX EXPRESS TRANSPORTATION AND SUPPLY	RBI	FEDERAL EXPRESS EUROPE INC	MUMBAI	STORAGE AND WAREHOUSING SERVICES NOT ELSEWHERE CLASSIFIED (INCLUDES WAREHOUSING OF FURNITURE, AUTOMO	536.19	105.43
10	E-SERVE INTERNATIONAL LTD	FIPB	CITIBANK OVERSEAS INVESTMENT CORP.	REGION NOT INDICATED	LESING HIRE PURCHASE	518.91	112.81

11	PTC INDIA LTD.	RBI	AS PER ANNEXURE	NEW DELHI	ELECTRICITY GENERATION, TRANSMISSION & DISTRIBUTION	499.99	103.22
12	KOTAK MAHINDRA BANK LTD.	RBI	BK OF NEWYORK	MUMBAI	BANKING ACTIVITIES INCLUDING FINANCIAL SERVICES	450.00	102.21
13	JSW ENERGY LTD	RBI	VARIOUS INVESTORS	MUMBAI	GENERATION AND TRANSMISSION OF ELECTRIC ENERGY PRODUCED IN HYDRO-ELECTRIC POWER PLANTS	431.39	97.14
14	RELIGARE ENTERPRISES LTD	RBI	INDUSTRIAL FINANCE CORPORATION	NEW DELHI	OTHER FINANCIAL SERVICES N.E.C	404.84	67.41
15	CITICORP FINANCE (I) LTD	FIPB		MUMBAI	MGT CONSULTANCY/ CALL CENTRES	400.88	87.15
16	GMR INFRASTRUCTURE LTD.	RBI	FII	BANGALORE	MISCELLANEOUS	397.31	88.48
16	GMR INFRASTRUCTURE LTD.	RBI	FII	BANGALORE	MISCELLANEOUS	397.31	88.48
18	CORNING TECHNOLOGIES INDIA PVT LTD	RBI	CORNING SINGAPORE HOLDINGS PTE LTD	NEW DELHI	MARKET RESEARCH SERVICES	326.12	51.59
19	DLF PRAMERICA LIFE INSURANCE CO. LTD.	RBI	PRUDENTIAL INTERNATIONAL INSURANCE HOLDI	NEW DELHI	INSURANCE CARRIERS, LIFE	324.85	53.37
20	J P MORGAN SECURITIES INDIA PVT.LTD.	FIPB	J P MORGAN INTL FINANCE LTD.	MUMBAI	BANKING ACTIVITIES,INCLUDING FINANCIAL SERVICES	324.00	75.46
21	MAYTAS INFRA LTD	RBI	SBG PROJECT INVESTMENT LTD	HYDERABAD	CONSTRUCTION AND MAINTENANCE OF ROADS, RAILWAYS, BRIDGES, TUNNELS, PIPELINES, ROPEWAYS, PORTS.	301.92	66.86
22	KOHLER INDIA CORP PVT LTD(KOHLER POWER S	RBI	KOHLER CO	BANGALORE	MANUFACTURE OF CERAMIC SINKS,BATHS,WATER-CLOSET PANS, FLUSHING CISTERNS & SIMILAR SANITARY FIXTURES	300.00	51.37
23	GENERAL MOTORS INDIA LTD	RBI	GENERAL MOTORS ASIA PACIFIC HOLDINGS LLC	AHMEDABAD	MANUFACTURE OF MOTOR CARS & OTHER MOTOR VEHICLES PRINCIPALLY DESIGNED FOR THE TRANSPORT OF LESS THAN	250.50	51.30
24	MAX HEALTHCARE INSTITUTE LTD.	RBI	INTERNATIONAL FINANCE CORP.	NEW DELHI	HEALTH AND MECIAL SERVICES	250.00	63.39
25	CRISIL LTD	FIPB	S & P INDIA LLC	REGION NOT INDICATED		241.87	55.62
Grand Total						**3,477.37**	**3,477.37**

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