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Analysis of FDI and Its Impact on GDP and Indian railways before and after make in India initiative

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Abstract

This paper provides an overview of the Indian Railways and the FDI inflow in railway sector and its impact on GDP and Indian Railways before and after Make in India initiative. It shows that Indian railways need FDI in order to compete with the other modes of transport like airways, road and water ways. There is a huge difference in the growth of both overall GDP of the economy and the growth of Indian railways before and after Make in India initiative. Indian Railways (IR) is a great national asset. A single transport network that connects far flung areas of the country. It is one of the largest transportation and logistics networks of the world which runs 19,000 trains. It runs 12,000 trains to carry over 23 million passengers per day connecting about 8,000 stations spread across the sub-continent. The paper studies the investment inflows in railways pre and post Make in India campaign and the growth of Indian railways.

Keywords: Indian Railways, FDI, GDP, Indian economy, National asset, Make in India, National Asset, logistics networks, and Investment

1. Introduction

1.1 FDI

Foreign direct investment (*FDI*) is an investment in a business by an investor from another country for which the foreign investor has control over the company purchased. Global FDI inflows rose by 9 percent to USD 1.6 trillion in 2014, USD 1.75 trillion in 2015 and will raise to USD 1.8 trillion in 2016 (UNCTAD Report 2014). India's FDI inflows have increased 26 percent in 2014 reaching $35 billion which was $47bn in 2008 and $35.6 bn in 2009 with maximum growth in service sector, despite macroeconomic uncertainties and financial risks according to an UNCTAD Report. This growth is much faster than the rest of developing Asia, which saw a growth of about 15 percent across 40 economies.

FDI in services sector grew up by 46% in 2014-15. With the government taking steps to improve ease of doing business and attracting investments, FDI inflows into the services sector grew by over 46 percent to USD 3.25 billion in 2014-15. The services sector, which includes banking & insurance, railways, telecom, outsourcing, R&D, courier and technology testing, had received foreign direct investment (FDI) worth USD 2.22 billion in 2013-14. However, the total foreign inflow in 2014-15 in the services sector was low as compared to 2012-13 when it was USD 4.83 billion, according to the Department of Industrial Policy and Promotion (DIPP) data. So with the growth in FDI in important sectors like services, overall foreign inflows in the country too rose by 27 percent to USD 30.93 billion during the previous fiscal year. The amount was USD 24.29 billion in 2013-14. Services contribute about 60 percent to India's GDP and it receives high foreign inflows in this sector. The other sectors where inflows have recorded growth are telecommunications (USD 2.89 billion), automobiles (USD 2.57 billion) and computer software and hardware (USD 2.20 billion). To attract investment in the services sector, the government has raised the FDI cap in service sector and to attract FDI in manufacturing, government has started the Make In India campaign.

1.2 Introduction to Indian railways

Indian railways (IR) started its 53 km journey between Mumbai and Thane on April 16, 1853 and is today one of the largest Railways in the world. The railway network invariably referred to as 'the lifeline of the Indian economy". is spread over 117,996 Km. covering 6906 stations. And now India has the world's fourth largest rail network and also second largest under single management. Operates more than 19,000 trains every day. It has 2, 29,381 wagons, 59,713 coaches and 8,417 locomotives.

Indian Railways is carrying 22 million passengers every day and carrying 923 million tonnes of freight a year. Modernisation of Railway infrastructure is a priority. Rail Budget 2015-16 has projected an investment plan of Rs 8, 56,020 crore in the next five years, and in this FDI can play a very crucial role. Modernization of railways can be a significant engine of inclusive growth and development for the country and can potentially contribute an additional 1.5% to 2% to GDP.

1.3 Make in India

The Prime Minister Narendra Modi, prior to the commencement of his maiden US visit, launched 'Make in India', a major national initiative which focuses on making India a global manufacturing hub. The 'Make in India' campaign seems to have come at perfect time. Many giant foreign companies have already expressed their interest in setting up manufacturing facility in India. Aiming to make India as its export hub, home appliances manufacturer Bosch and Siemens announced company's first manufacturing plant in the country, to be set up at a cost of Rs. 350 crore soon after the Make in India Campaign. Barry Callebaut is looking at setting up a manufacturing unit in India as part of its global expansion plans to cash in on the Rs. 3,000 crore domestic markets. India is ranked 132nd out of 185 economies in Doing Business 2013 by the World Bank. The most importance of the programme would be on cutting down in delays in manufacturing projects clearance, develop adequate infrastructure and make it easier for companies to do business in India. The major sectors identified under the programme include automobiles, auto components, bio-technology, chemicals, defence manufacturing which includes components of Indian railways also, electronic systems, food processing, leather, mining, oil & gas, ports, ports and textile.

The main objective of the mega programme is to ensure that manufacturing sector in India which contributes around 15% of the country's Gross Domestic Products is increased to 25% in next few years.

1.4 Literature review

Mandal Pankaj Kumar (2016) [7] in his research paper Make in India and Recent Trend of FDI Inflow says Indian government has taken different initiatives to attract FDI inflow in which one is Make in India initiative. But still investors prefer service sector. He has studies the inflow of FDI in India. Rastogi Ankit (2012) [9] according to him Indian railways is Spanning with 64,456 km and more than 7,133 railway stations, India's rail network is the largest in Asia and the second largest in the world (behind the US). However India's rail infrastructure suffers from chronic under-investment, due to which its potential for freight movement remains largely untapped. Rail freight has grown at around 7 % over the past five years. According to him there is a huge opportunity of FDI in Indian railways. Mukherjee Arpita (2012) [6] according to her FDI inflow in services sector is allowed through two routes – the automatic route and the government route34. For sub-sectors such as services related to agriculture and allied sector, services incidental to mining, services incidental to energy distribution and construction, FDI is allowed through the automatic route while for single-brand retail, test marketing, courier services, and natural gas or liquefied natural gas pipeline transportation services, government approval is needed. At present, FDI is allowed in most of the services sectors except some such as the postal services and railways. She says there is a huge requirement of FDI in Indian railways. Dwivedi Priya *et al.* (2013) [2] in their paper say that in India FDI is allowed almost in all sectors expect a few like arms and ammunition, atomic energy, railway transport, coal and lignite, mining of iron, manganese, chrome, gypsum, sulphur, gold, diamond, copper, and zinc. According to them FDI should be allowed in all these sectors especially Indian railways because it is not able to meet the current demand of passenger and freight. According to Bhati Sonam *et al.* (2014) [1] FDI is allowed in almost all the sectors, FDI has finally found its way into Railway sector as well. The sector which was Public is on way to work on a Public Private Partnership model. Railway sector will have new technology and development in railways would also help in increasing the rate of growth of India. Given the approval of high speed trains and better facilities for people using railway as mode of transportation, would definitely increase number of people using trains and that will increase revenue. Beck Arne *et al.*, (2013) says some railways have managed to achieve a high level of efficiency while others, for reasons controlled by management or government, can be classified as relatively inefficient in which Indian railways is also counted. They also have brought evidence for why these efficiency gaps exist. Regulations and infrastructure constraints, such as regulations that impact freight train length, have a major impact on efficiency. Freight traffic moves on tracks around the schedules of passenger trains. Dedicated freight rail should allow for more on-time transport of goods by freight rail and should improve IR efficiency from a financial perspective, given the railway reliance on freight as a revenue drivers that improve public mobility. Mukherjee in (2012) [6] has studied that Indian economy grew faster than China in 2010 according to IMF report 2010 where India's GDP grew at 10.6% compared to China whose GDP grew at 10.4%. The growth of India's services sector, its contribution to GDP, and its increasing share in trade and investment has drawn global attention. In 1950-60, the share of Indian railways to service sector was 4.7% and the share in GDP was 1.4%. It has drastically decreased and in 2000-10, the share of Indian railways to services is 2.1% and share in GDP is 1.1%. According to her there should be FDI in arms, coal, and railways too where the demand in increasing very rapidly. Rastogi in (2012) [9] says we are 2nd largest country by population and next big economic power in the world. These all big achievements just give few minutes' satisfaction but not the permanent solution of this particular issue. Every time when people think to travel from one destination to another, they become horrified by just thinking of that. Government has increased the scope of PPP, to beyond providing maintenance and other such supporting roles. Government is providing new lines, increasing the rolling stock to build up capacity and the growing demand in passenger and freight and hence there is a great need of FDI in Indian railways in order to meet all these requirements.

1.5 Problem statement

The biggest challenge facing Indian Railways today is its inability to meet the demands of its customers, both freight and passenger. Apart from the quantum of investment, quality of delivery is also an issue. Cleanliness, punctuality of services, safety, quality of terminals, capacity of trains, quality of food, security of passengers and ease of booking tickets are issues that need urgent attention. Indian Railways has suffered from chronic and significant under-investment as a result of which the network expansion and modernization has not happened at the requisite pace leading to an erosion of the share in national freight and passenger traffic. There is a clear recognition of the fact that for serving as the lifeline of the nation and making a contribution to the country's growth, the organization needs to become operationally and financially sound.

2. Objectives

1. To study the role of Make in India scheme as a driver for growth in different sectors especially railway sector.
2. To study the share of Indian Railways in the transportation sector.
3. To study the growth of FDI pre and post Make In India Initiative.

2.1 Research design and data collection

The study will incorporate an exploratory approach in the phenomenon because it aims to determine the present facts as well as facts that are not yet explored about the phenomenon. Exploratory research will enable the study to look at the problem in both descriptive and exploratory manner. For this study the data is collected from the secondary sources. The secondary sources will be reports of RBI Reports, Publications from Ministry of Commerce and, Government of India, Different financial websites and various Newspaper, Journals, articles, official web site of AICMA (www.acma.in), ICRA (www.icraindia.com), Ministry of Heavy Industries and Public Enterprises (www.india.gov.in), Ministry of Statistics & Programme Implementation, SIAM (www.siamindia.com). CRISL ratings. (www.crisl.com). For this study the quantitative research will be used.

2.2 Data Analysis & Interpretation

Table 1: Sector-wise FDI of few sectors in India

Sector-wise Foreign Direct Investment (FDI) Equity Inflows in India (2012-13 to 2015-16-upto September, 2015) (FDI in US $ Million)					
Sector	**2012-13**	**2013-14**	**2014-15**	**2015-16E**	**Total**
Telecommunications	303.87	1306.95	2894.94	659.15	5164.91
Information and Broadcasting (Including Print Media)	404.04	428.52	254.96	309.21	1396.73
Automobile Industry	1537.28	1517.28	2725.64	1464.28	7244.48
Air Transport (Including Air Freight)	15.89	45.95	74.56	34.16	170.56
Sea Transport	64.62	20.49	333.22	278.16	696.49
Ports	0.00	0.31	1.90	0.00	2.22
Railway Related Components	29.85	236.93	129.73	215.21	611.73
Agricultural Machinery	95.41	48.78	72.35	5.41	221.95
Photographic Raw Film and Paper	0.00	0.00	0.75	0.00	0.75
Dye-Stuffs	0.00	0.00	54.89	3.32	58.21
Sugar	12.26	3.08	27.77	98.16	141.27
Consultancy Services	142.32	285.85	458.13	374.28	1260.58
SERVICES SECTOR (Fin., Banking, Insurance, Non Fin/Business, Outsourcing, R and D, Courier, Tech. Testing and Analysis, Other)	4832.98	2225.10	4443.26	1463.74	12965.08
Hospital and Diagnostic Centres	256.86	684.58	567.85	357.09	1866.38
Education	172.20	262.09	78.86	117.40	630.55
Hotel and Tourism	3259.05	486.38	777.01	563.96	5086.41
Total	11,126.63	7552.29	12,895.82	5743.53	37,318.34

Source: Ministry of Commerce & Industry, Govt. of India

Table 2: FDI and GDP growth before Make in India

FDI and GDP growth before Make in India		
Year	**FDI inflow(Cr)**	**GDP Growth**
2010	123,120	8.40
2011	97,320	10.26
2012	165,146	6.64
2013	121,907	6.60
2014	147,518	7.20
CAGR	4.62	-3.78

Looking at the FDI and the GDP growth before the Make in India initiative. FDI has a CAGR of 4.62 % where as GDP has CAGR of -3.78. GDP growth is not increasing with the increase in FDI growth.

Table 3: FDI and GDP growth after Make in India

FDI and GDP growth after Make in India		
Year	**FDI Inflow (Cr)**	**GDP growth**
2015	209475	7.30
2016	300341	7.90
CAGR	43.37	8.21

Looking at the FDI growth the CAGR is 43.37 and the GDP CAGR is 8.21 which means increase in FDI has an impact on the increase in the GDP growth.

Table 4: Forecasted Values for FDI and GD

Forcasted values for FDI and GDP		
Year	**FDI(Cr)**	**GDP**
2017	271882	9.99
2018	313605	10.02
2019	346860	10.71
2020	397290	11.85
2021	432046	12.65
2022	458298	13.27
2023	491747	14.07
2024	525197	13.35
2025	554162	13.66
CAGR	9.30	3.99

After using the forecasting technique the FDI will have a CAGR of 9.3% while as GDP will have a CAGR of 3.99 which is very effective for the economy.

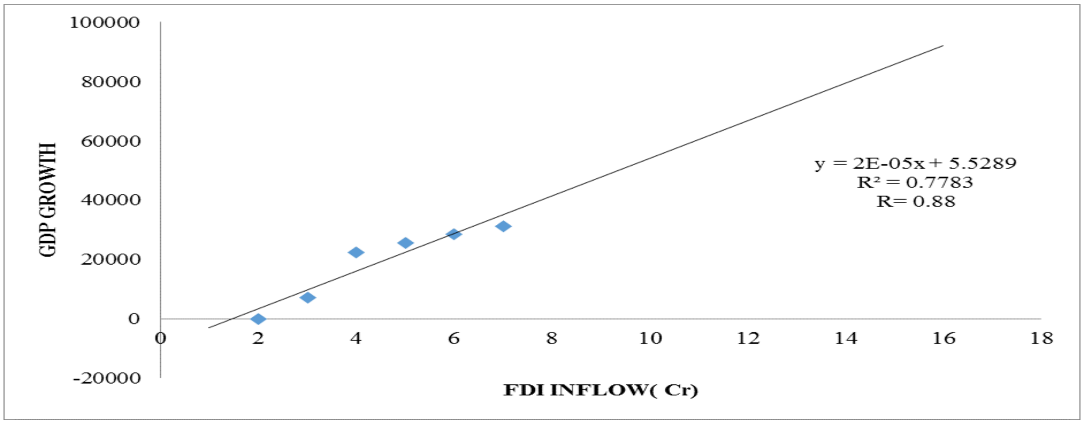
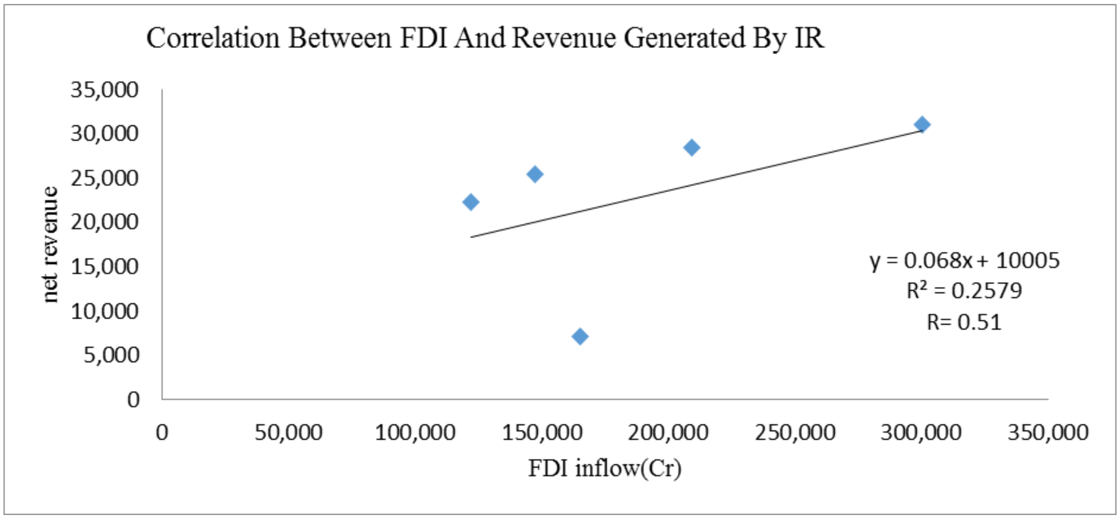


Fig 1: Correlation between FDI growth and GDP growth

From the above graph about the correlation between FDI growth and GDP growth, the coefficient of co-relation (r) is 0.88 which is very strong and clarifies a strong relationship between FDI growth and GDP growth.



The correlation between FDI growth from 2011-12 to 2015-16 shows a positive correlation which is favourable for the Indian Railways.

Table 5: Indian Railway's Financial Position Overview **(**In Rs crores at current price)

Description	2011-12	2012-13	2013-14	2014-15	2015-16
Gross traffic receipts	1,03,917	1,32,552	1,45,230	1,50,151	1,65,001
Net ordinary working expenses	75,650	84,400	89,1254	92,112	1,01,4521
Appropriation to pension fund	16,800	18,500	21,005	24,510	29,001
Appropriation to depreciation reserve fund	6,160	9,500	12,421	15,221	19,215
Total working expenses	98,610	1,12,400	1,32,541	1,36,221	1,40,211
Net revenue	7,144	22,233	25,421	28,412	31,021
Total dividends payable	5,652	6,676	7,814	9,541	11,241
Excess/shortfall	1,492	1,557	2,145	2,514	2,811
Operating ratio (%)	71.1	85	93.6	92.5	90
Ratio of net revenue to capital at charge and investment from capital fund (%)	4.43	12.10	13.25	14.21	13.11

Source: 12th Five year Plan Report

Table 6: Share of Transport Sector in Overall GDP (%) pre Make in India initiative

Year Overall Transport of which	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**
	6.9	7.9	8.2	8.6	9.7
Railways	0.9	1.5	1.8	1.9	2.1
Road transport	4.7	4.9	5.1	5.3	5.8
Water transport	0.3	0.5	0.2	0.2	0.2
Air transport	0.7	0.6	0.6	0.7	0.9
Service incidental to transport	0.3	0.4	0.5	0.5	0.7

Table 7: Share of Transport Sector in Overall GDP (%) post Make in India initiative

Year Overall Transport of which	2013-14	2014-15	2015-16
	8.9	8.8	11.9
Railways	2.2	2.3	2.6
Road transport	5.6	5.8	5.9
Water transport	0.3	0.2	0.6
Air transport	1.2	1.5	1.6
Service incidental to transport	0.7	0.9	1.2

Table 8: Plan Outlay for Transport and Indian Railway

Plan Outlay for Transport and Indian Railway (1950-1978 and 1980-1985 to 2012-2017) (Rs. in Crore)								
Sectors/Units	**Upto Fifth Plan* 1950-78**	**Sixth Plan 1980-85**	**Seventh Plan 1985-90**	**Eighth Plan 1992-97**	**Ninth Plan 1997-02**	**Tenth Plan 2002-07**	**Tenth 2007-12**	**Twelth 2012-17**
Railways	4723	6585	16549	32306	45725	84003	189838	419221
Transport Sector	10117	13962	29548	65173	117563	259777	613185	1204172
Total Plan Outlay	59979	109292	218729	485457	813998	1525639#	3676936	7669807
Transport Sector as %age of Total Plan	16.9	12.8	13.5	13.4	14.4	17	16.7	15.7
Railways as %age of Total Plan	7.9	6	7.6	6.7	5.6	5.5	5.2	5.5

Source: Ministry of Commerce & Industry, Govt. of India.

Table 9: following table shows the financing pattern of the Plan investment over the last few years before Make in India initiative

	2009-10	**2010-11**	**2011-12**	**% share**	**2012-13**	**%share**
Budgetary support	**16911**	**18385**	**20013**	**44**	**24132**	**48**
Railway safety fund	805	1100	1323	3	1578	3
Internal resources	12196	11528	8935	20	9531	19
Extra-budgetary resources	9760	9780	14790	33	15142	30
Total	39672	40793	45061	100	50383	100

Source: 12th Five year Plan Report

Table 10: Following table shows the financing pattern of the Plan investment over the last few years after Make in India initiative

	2013-14	**%share**	**2014-15**	**%share**	**2015-16E**	**%share**
Budgetary support	**27,033**	**50**	**30,150**	**46**	**45,214**	**45**
Railway safety fund	1,983	4	2,220	3	2,891	3
Internal resources	9,681	18	15,360	23	26,251	26.29
Extra-budgetary resources	15,085	28	18,980	28	25,487	25.52
Total	53,782	100	66,710	100	99,843	

3. Findings

- FDI in India is showing positive growth before Make in India initiative but GDP has negative CAGR of – 3.78.
- After make in India initiative FDI and GDP both have a positive growth of 43.37% and 8.21% respectively.
- Both forecasted FDI growth and GDP growth have positive CAGR of 9.3% 3.99% respectively.
- The correlation coefficient (r) between FDI growth and GDP growth is 0.88 which is very strong and clarifies a strong relationship between FDI growth and GDP growth.
- Financial position of the railways is improving.
- Operating ratio is coming down which is a green signal for Indian railways.
- Revenue is also growing.
- Share of transport sector to total GDP of the nation is also increasing.

3.1 Suggestions

Initiatives like Make in India have been very successful as since then the FDI inflows have increased at a tremendous rate. Railways components are being manufactured now in India where different investors are willing to invest. It is a positive signal for the nation to take different initiatives like make in India which proved fruitful for the nation. FDI policy should be made investor friendly.

4. Conclusion

Indian Railways has a glorious past and a bright future. It is a giant emerging out of a deep slumber. An awake, alive and kicking Indian Railways can lead the country to greater heights of accomplishment. Its network is congested and finances are not easy to come by. Resources for development and replacement are stressed. It is finding it difficult to even meet its operational expenses. But, the spirit is still alive. To make an attempt at resurrecting itself, Indian Railways has drawn up an ambitious five year action plan. The next five years should change the face of Indian Railways. Faster trains, modern trains, swanky stations, skilled staff, should be the Railways of tomorrow.

IR looks forward to becoming the nation's carrier and a multi-modal integrator; making travel affordable, happy, convenient and reliable – a world class experience! IR also looks forward to becoming self-sustainable! By 2020, IR would make all efforts towards delivering safe and punctual services, increase average speed by 50% and increase loading to 1.5 billion tones. Indian Railways, like the mythical Phoenix, will rise again to scale new heights.

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