

# A STUDY ON INCLUSIVE GROWTH IN THE INDIAN ECONOMY

M.Madhavan<sup>1</sup>, M. Tamizharasan<sup>2</sup> and MU.Nithyashree<sup>3</sup>

<sup>1</sup> Assistant Professor  
PG & Research Department of Economics  
Arignar Anna Government Arts College,  
Namakkal, Tamil Nadu

<sup>2</sup> Ph.D., Research Scholar  
Department of Econometrics,  
Madurai Kamaraj University,  
Madurai-625 021, Tamil Nadu.

<sup>3</sup> Guest Lecturer  
PG Department of Economics  
NKR Government Arts College for Women,  
Namakkal, Tamil Nadu

## ABSTRACT

*Inclusive growth stands for the equitable development of all sectors in a nation and the growth trajectory of the Indian economy since 1991 liberalisation period. The inclusive growth on agriculture, industry and service sectors are not stable in the Indian economy. The potential of capital accumulation is not utilised in the Indian economy properly. Foreign and Domestic Investments are responsible for the critical patterns of economic growth. The study evaluates the impact of investment growth on the inclusive growth of the economy. The objective of this analysis is to study the effects of domestic and foreign investment in the inclusive growth of the Indian economy. The study attempted to analyse the growth and share of agriculture, industry and service sectors in the Indian economy. The study identifies the following variables viz., the annual growth rate of agriculture, industry and services sectors and gross fixed capital formation, gross capital formation and foreign direct investment. The study obtained data from the Department of Industrial Policy and Promotion, Handbook of Statistics on Indian economy for various issues. For analyse, the study also uses the index numbers, annual growth rate, averages, percentages, unit root test, co-integration and Granger causality test.*

**Key Words:** Inclusive Growth, FDI, GFCF, GCF and Indian Economy

**JEL Code:** E01, P45, O16, E22,

## I. INTRODUCTION:

Investment and growth are like the two sides of a coin in an economy. The post-liberalisation period witnessed a widening and deepening the process of economic growth and the free flow of investment from domestic as well as from across the borders. India is treated as one of the significant emerging economies in the world. The neo-liberal economic reform policies of India attract positive as well as negative feedback from the economists in India and around the world. Amartya Sen and Jean Dreze (2013) stated that the policies of the government of India are not sufficient to improve the conditions of the poor. Smit K Majumdar<sup>7</sup>, in his study, indicates that India's GDP growth rate is highest in the world. Still, it does not appear to reflect in another critical indicator of the economy. Both India and China in their economic planning in the early 50's has been to step up their growth target in the GDP and to achieve equal distribution of benefits from growth<sup>8</sup>. And both countries can make in reducing their poverty level. But when compared with the GDP growth, it is not reflecting in all the sectors of the economy. The growth must be inclusive. The term 'inclusive growth' is trendy in recent economic discussions. The capitalistic pattern of economic growth always advocates for supply-side economics. The government of India took various initiatives to attract more foreign investment to keep the pace of

<sup>1</sup>Sumit K Majumdar, (2016) "India's Recent Growth -Miracle of Mirage?" *Economic and Political Weekly*,

<sup>2</sup>Hanumantha Rao, (April, 2011) "India and China: A Comparison of the Role of Socio Political Factors in Inclusive Growth, *Economic and Political Weekly*, Vol. XLVI, No. 6.

economic growth. In this direction, the present study attempted to analyse the impact of domestic and foreign investment in the inclusive growth of the Indian economy.

Inclusive growth stands for the equitable development of all sectors in a nation and the growth trajectory of the Indian economy since 1991 liberalisation period. The inclusive growth on agriculture, industry and service sectors are not stable in the Indian economy. The potential of capital accumulation is not utilised in the Indian economy properly. Foreign and Domestic Investments are responsible for the critical patterns of economic growth. The study evaluates the impact of investment growth on the inclusive growth of the economy. The objective of this analysis is to study the effects of domestic and foreign investment in the inclusive growth of the Indian economy.

## **II. REVIEW OF LITERATURE:**

Many of the empirical studies have focused on the Inclusive growth in the Indian economy. Most of the research works have studied various aspects related to inclusive growth in general but specific studies on the inclusive growth in the Indian economy are very much limited in the available literature. Some of the works undertaken in this direction are:

Suryanarayana, M.H. (2014)<sup>9</sup> discussed how far the government was obtaining the objective of inclusive growth. The study used the household consumption distribution data with relative distributional measures across various social groups by rural and urban sector from the National Sample Survey. The study found that at the national level, disparities among the social groups have widened and found a shortfall in the level of the average consumption of the scheduled tribes, and scheduled castes, small decline for the Other Backward Classes and a hike with the other social groups concerning the overall median.

Surgit Mazumdar<sup>10</sup> made the case that the growth trajectory of the economy of India in the post-liberalisation period is characterised by an inherent source instability in manufacturing an industrial growth that distinguishes the period from the 80s. The study argued that the contemporary growth process of the Indian economy confronts the problem of instability, for reasons; however, that is specific to its context and somewhat different from these highlighted by the Harrod-Domar. The author suggests that investment in agriculture and other sectors like infrastructure have to be promoted that could both absorb capital as well as expand the market for manufactured products. A lot of this restructuring of the investment pattern depends on there being appropriate growth of a public investment. Sustained public investment, in any case, would generate stability in investment and growth.

Syed Nawab Haider Naqvi<sup>11</sup> discussed the concept of Inclusive Growth as it had grown from the Industrial Revolution in the West, and other developing nations from 1950 when development economics and development policy were formally booming. It is defined as a policy that intentionally expected to achieve an active association between the per capita income growth and the income distribution and the level of poverty in a budding society concurrently. The dynamic search of these objectives must; therefore, it can be the primary goal of development policy. The pieces of evidence proved that this relationship, though it is correct, is by not automatic, nor is it amenable to quick fixes.

The central concept of his paper is that without inclusive growth, it is not possible to increase the living standard of the people permanently. The author argues that to succeed in grasping the Holy Grail will necessitate a most critical rethinking of the policies for development to lead the developing nations towards the growth path. In specific, the procedures for the development of the fast-growing nations (East Asian countries and now China in particular) have followed with actions to promote their high rates of saving to enhance the finance for the investment needs of a fast-growing economy, and state-supported import-substituting initiative on industrialisation, among others. But they should consider the new knowledge of the development process.

Nirmal Kumar Chandra<sup>12</sup> state that the Congress-led UPA government's initiative for inclusive growth in India attracts the aamadmi, but obscures the ugly reality - India is on track to become another oligarchy like post-Soviet Russia. The super-rich now has an essential voice in preparing the policies of the government. The government has failed to achieve the common minimum programme agenda on inclusiveness. Its claim to have raised the aggregate tax-gross domestic product ratio substantially does not stand the test of scrutiny. The attention needs to give the small borrowers from the agriculture, and small-scale industries remain unfulfilled. The move to extend the social audit to

<sup>3</sup> M H Suryanarayana, M.H. and Mousumi Das (February, 2014) How Inclusive Is India's Reform(ed) Growth?, *Economic & Political Weekly*, Vol. XIIX, No. 6, pp.44-52

<sup>4</sup>SurajitMazumdar(2008) Investment and Growth in India under Liberalisation: Asymmetries and Instabilities, *Economic and Political Weekly*, Vol. 43, No. 49, pp. 68-77

<sup>5</sup>Syed Nawab Haider Naqvi, (2012), The Idea of Inclusive Growth and Development Policy, *The Pakistan Development Review*, Vol. 51, No. 1, pp. 1-21

<sup>6</sup>Nirmal Kumar Chandra, (2010), Inclusive Growth in Neoliberal India: A Facade?, *Economic & Political Weekly*, Vol XLV, No 8.

plug the uncertainties in the rural employment guarantee programme has been scamped, while steps for social security of the unorganised workforce financed by the budget promise to opening up of the new markets for businesses in insurance and healthcare sectors.

Samir Goswami and Mark P. Lagon<sup>13</sup> in their study, states that the free public elementary school is closer to ten-year-old Rita's home than the factory where she works ten-hour days instead of getting an education. Rita lives in Bawana, a slum on the northern edge of New Delhi that is home to more than one hundred thousand impoverished residents. To showcase a prosperous country to a global audience during the 2010 Commonwealth Games, the Indian government displaced thousands of poor people from their makeshift homes in the capital city's centre to Bawana. In exchange, they were all promised access to good-paying manufacturing jobs in the nearby factories through which they could lift themselves out of poverty and create a better life for their children. The reality, however, differs considerably from the image of India that its government tries to portray to the world: Bawana's thirteen city blocks are a maze of unpaved, muddy lanes lined with open sewers, overflowing public toilets, and rotting garbage. Bawana is also a place where criminals traffic vulnerable children like Rita.

### III. METHODOLOGY:

The present study is based on secondary data which included the details of Agriculture, Industry, Service Sectors in the components of Gross Domestic Product, Foreign Direct Investment, Gross Fixed Capital Formation and Gross Capital Formation in the Indian economy. The variables are measured in Rupees in Crores. The study period from 1990-91 to 2017-18 and this period divided into three sub-periods namely, 1990-91 to 1999-2000, 2000-01 to 2009-10 and 2010-11 to 2017-18. The data are collected from Department of Industrial Policy & Promotion and Handbook of Statistics on the Indian economy for various issues. This study analyses the data, annual growth rate, averages, percentages, unit root test, co-integration and Granger causality tests model have been used.

### IV. EMPIRICAL RESULTS:

#### 4.1 Growth of Agriculture, Industry and Service Sectors

Table 1 presents the details of the growth in Agriculture, Industry and Service sectors, for the period from 1990-01 to 2017-18. The periods are divided into three sub-periods viz., 1990-91 to 1999-2000, 200-01 to 2009-10 and 2010-11 to 2017-18.

In the First decade, Agriculture sector was Rs.1543.50 Crores in 1990-91, and it reached Rs.4553.02 Crores in 1999-2000. The highest value of FDI was Rs.4553.02Crores in 1999-2000. The highest annual growth rate of 20.24 per cent in 1996-97 and the average annual growth rate was 21.66 per cent in during this period. Industry sector was Rs.1112.39Crores in 1990-91, and it reached Rs.3595.05 Crores in 1999-2000. The highest annual growth rate of 22.48 per cent in 1994-95 and the average annual growth rate was 24.80 per cent in during this period. The service sector was Rs.2645.90Crores in 1990-91, and it reached Rs.10324.65 Crores in 1999-2000. The highest annual growth rate of 19.52 per cent in 1995-96 and the average yearly growth rate was 32.35 per cent in during this period.

In the second decade, the Agriculture sector was Rs.4606.08 Crores in 2000-01, and it reached Rs.10835.14 Crores in 2009-10. The highest value of FDI was Rs.10835.14Crores in 2009-10. The highest annual growth rate of 15.70 per cent in 2007-08 and the average annual growth rate was 15.03 per cent in during this period. Industry sector was Rs.4002.93Crores in 2000-01, and it reached Rs.11953.38 Crores in 2009-10. The highest annual growth rate of 19.34 per cent in 2006-07 and the average annual growth rate was 22.07 per cent in during this period. The service sector was Rs.11310.81Crores in 2000-01, and it reached Rs.38300.51 Crores in 2009-10. The highest annual growth rate of 18.08 per cent in 2008-09 and the average annual growth rate was 26.51 per cent in during this period.

**TABLE 1**  
**GROWTH OF INCLUSIVE GROWTH IN INDIA**

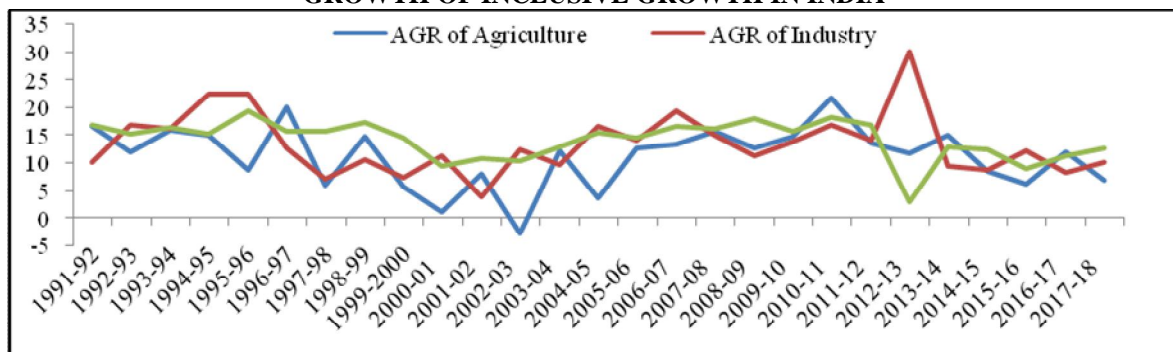
Year	Agricultur e	Annual Growth Rate of Agriculture	Industry	Annual Growth Rate of Industry	Service	Annual Growth Rate of Service
1990-91	1543.50	-	1112.39	-	2645.9	-
1991-92	1803.13	16.82	1225.09	10.13	3091.72	16.85
1992-93	2022.19	12.15	1433.17	16.98	3562.83	15.24
1993-94	2345.66	16.00	1665.48	16.21	4147.78	16.42
1994-95	2701.07	15.15	2039.94	22.48	4785.25	15.37

<sup>13</sup> Samir Goswami and Mark P. Lagon, (2013), Almost A Miracle: Encouraging Inclusive Growth in India, *World Affairs*, Vol. 176, No. 1, pp. 51-56

1995-96	2937.01	8.74	2497.24	22.42	5719.46	19.52
1996-97	3531.42	20.24	2816.13	12.77	6628.88	15.90
1997-98	3747.44	6.12	3020.23	7.25	7672.20	15.74
1998-99	4303.84	14.85	3344.96	10.75	9003.10	17.35
1999-2000	4553.02	5.79	3595.05	7.48	10324.65	14.68
<b>Average</b>	<b>2948.83</b>	<b>21.66</b>	<b>2274.97</b>	<b>24.80</b>	<b>5758.18</b>	<b>32.25</b>
2000-01	4606.08	1.17	4002.93	11.35	11310.81	9.55
2001-02	4986.20	8.25	4162.43	3.98	12528.82	10.77
2002-03	4850.80	-2.72	4685.08	12.56	13846.11	10.51
2003-04	5446.67	12.28	5145.74	9.83	15629.75	12.88
2004-05	5654.26	3.81	6009.28	16.78	18051.10	15.49
2005-06	6377.72	12.79	6852.38	14.03	20674.93	14.54
2006-07	7229.84	13.36	8177.68	19.34	24125.24	16.69
2007-08	8365.18	15.70	9413.62	15.11	28042.06	16.24
2008-09	9432.05	12.75	10492.20	11.46	33111.43	18.08
2009-10	10835.14	14.88	11953.38	13.93	38300.51	15.67
<b>Average</b>	<b>6778.39</b>	<b>15.03</b>	<b>7089.47</b>	<b>22.07</b>	<b>21562.08</b>	<b>26.51</b>
2010-11	13196.86	21.80	13969.15	16.86	45322.59	18.33
2011-12	14990.98	13.60	15945.68	14.15	52980.25	16.90
2012-13	16751.07	11.74	20740.29	30.07	54535.57	2.94
2013-14	19263.72	15.00	22694.01	9.42	61673.79	13.09
2014-15	20936.12	8.68	24691.03	8.80	69415.65	12.55
2015-16	22275.33	6.40	27751.65	12.40	75718.01	9.08
2016-17	24963.58	12.07	30104.07	8.48	84291.52	11.32
2017-18	26701.47	6.96	33162.36	10.16	94963.32	12.66
<b>Average</b>	<b>19884.89</b>	<b>14.62</b>	<b>23632.28</b>	<b>19.63</b>	<b>67362.59</b>	<b>45.37</b>

Sources: Handbook of Statistics on Indian Economy

**DIGRAM 1  
GROWTH OF INCLUSIVE GROWTH IN INDIA**



In the third decade, the Agriculture sector was Rs.13196.86 Crores in 2010-11, and it reached Rs.26701.47 Crores in 2017-18. The highest annual growth rate of 21.80 per cent in 2010-11 and the average annual growth rate was 14.62 per cent in during this period. Industry sector was Rs.13969.15Crores in 2010-11, and it reached Rs.33162.36 Crores in 2017-18. The highest annual growth rate of 30.07 per cent in 2012-13 and the average annual growth rate was 19.63 per cent in during this period. The service sector was Rs.45322.59Crores in 2010-11, and it reached Rs.94963.32 Crores in 2017-18. The highest annual growth rate of 18.33 per cent in 2010-11 and the average annual growth rate was 45.37 per cent in during this period.

The inclusive growth of the variables Agriculture, Industry and Service sectors has increased year by year. The highest growth is Service, Industry and Agriculture sectors, respectively in the Indian economy.

#### 4.2 Share of Inclusive Growth into FDI, GFCF and GCF in India

The share of Inclusive growth into Foreign Direct Investment, Gross Fixed Capital Formation and Gross Capital Formation has been worked out, and the values are given in Table 2.

In the year 1990-91 to 2017-18, the share of FDI to Agriculture, Industry and Service sectors are decreased by year by years. The foreign direct investment to the Industry sector is very low as compared to Agriculture and Service sectors in 1990-91 to 2004-05. After 2004-05, Agriculture is very low as compared to Industry and Service sectors during the study period. The contribution of FDI was the first place in Service sectors, second place in Industry sectors and third place in Agriculture sectors during the study period. It means that FDI does not promote on the real economy.

The share of Gross Fixed Capital Formation to Agriculture and Industry sectors are decreased by year by years, and Service sectors slightly increased during the period from 1990-91 to 2017-18. The gross fixed capital formation to the agriculture sector is shallow as compared to Industry and Service sectors during the study period. The contribution of gross fixed capital formation was the first place in Service sectors, second place in Industry sectors and third place in Agriculture sectors during the period from 1990-91 to 2017-18. It means that gross fixed capital formation is influencing the inclusive growth in the Indian economy.

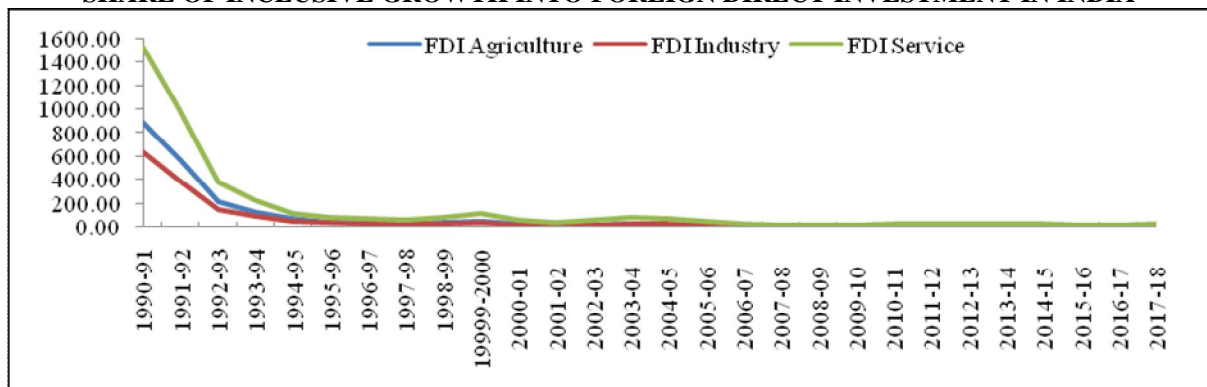
The share of gross capital formation to Agriculture, Industry and Service sectors are decreased by year by years. The foreign direct investment to the Industry sector is very low as compared to Agriculture and Service sectors in 1990-91 to 2013-14, and after 2014-15, Industry sector increased during the study period. The contribution of gross capital formation was the first place in Service sectors, second place in Industry sectors and third place in Agriculture sectors during the study period. It means that gross capital formation profoundly influencing inclusive growth on the Indian economy. The study explained the domestic investment on gross fixed capital formation and gross capital formation is profoundly influencing the inclusive growth as compared to foreign direct investment in the Indian economy.

**TABLE 2**  
**SHARE OF INCLUSIVE GROWTH INTO FDI, GFCF AND GCF IN INDIA**

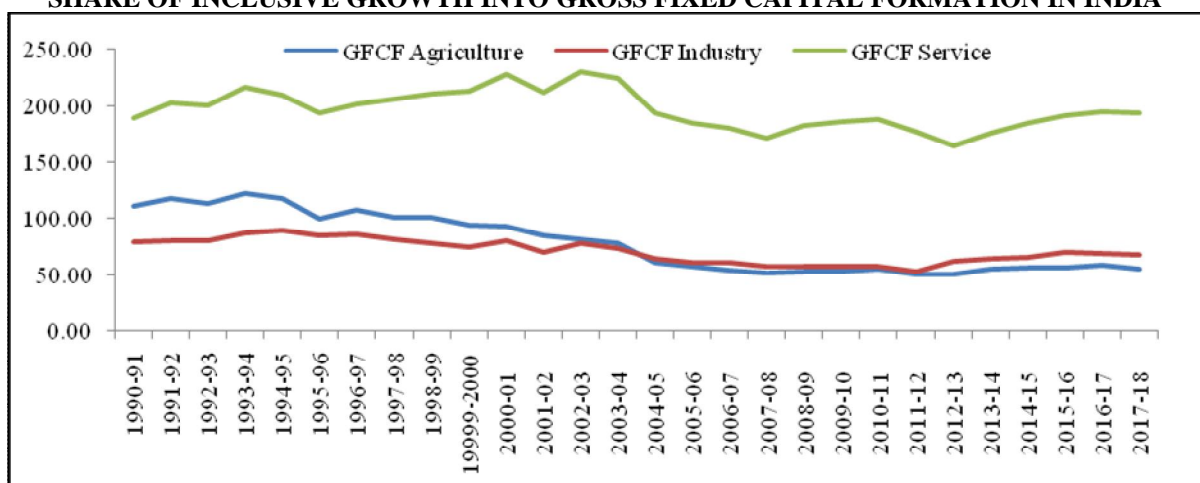
Year	Foreign Direct Investment			Gross Fixed Capital Formation			Gross Capital Formation		
	Agriculture	Industry	Service	Agriculture	Industry	Service	Agriculture	Industry	Service
1990-91	887.07	639.30	1520.63	110.52	79.65	189.45	101.14	72.89	173.38
1991-92	570.61	387.69	978.39	118.26	80.35	202.78	122.74	83.39	210.45
1992-93	209.55	148.52	369.21	113.65	80.55	200.24	113.33	80.32	199.67
1993-94	127.62	90.61	225.67	122.52	86.99	216.64	118.60	84.21	209.71
1994-95	65.46	49.44	115.98	118.24	89.30	209.47	104.47	78.90	185.07
1995-96	40.95	34.82	79.75	99.54	84.64	193.85	94.73	80.54	184.47
1996-97	35.26	28.12	66.19	107.65	85.85	202.07	105.06	83.78	197.21
1997-98	28.35	22.85	58.03	100.63	81.10	206.02	93.20	75.11	190.81
1998-99	41.55	32.29	86.92	100.78	78.32	210.81	98.59	76.63	206.25
1999-2000	48.76	38.50	110.57	93.94	74.18	213.03	84.50	66.72	191.61
<b>Average</b>	<b>205.52</b>	<b>147.21</b>	<b>361.13</b>	<b>108.57</b>	<b>82.09</b>	<b>204.44</b>	<b>103.64</b>	<b>78.25</b>	<b>194.86</b>
2000-01	25.03	21.75	61.46	93.02	80.84	228.41	87.19	75.77	214.10
2001-02	17.04	14.22	42.81	84.48	70.52	212.27	87.30	72.88	219.36
2002-03	19.65	18.98	56.10	80.70	77.94	230.34	77.27	74.63	220.57
2003-04	27.47	25.95	78.82	78.09	73.78	224.09	71.44	67.49	205.00
2004-05	20.76	22.07	66.28	60.73	64.54	193.88	53.14	56.48	169.65
2005-06	16.05	17.25	52.04	56.93	61.17	184.55	49.84	53.54	161.55
2006-07	7.02	7.94	23.41	53.80	60.86	179.53	47.21	53.40	157.53
2007-08	5.98	6.73	20.05	50.96	57.34	170.81	44.01	49.53	147.53
2008-09	4.93	5.48	17.30	51.79	57.61	181.82	48.84	54.32	171.44
2009-10	6.03	6.65	21.32	52.71	58.15	186.31	45.85	50.58	162.08
<b>Average</b>	<b>15.00</b>	<b>14.70</b>	<b>43.96</b>	<b>66.32</b>	<b>66.27</b>	<b>199.20</b>	<b>61.21</b>	<b>60.86</b>	<b>182.88</b>
2010-11	8.03	8.50	27.59	54.83	58.03	188.29	46.44	49.16	159.50
2011-12	6.81	7.25	24.08	50.01	53.19	176.73	46.84	49.82	165.53
2012-13	8.96	11.10	29.18	50.38	62.38	164.02	49.22	60.95	160.26
2013-14	8.81	10.38	28.21	54.79	64.55	175.43	50.07	58.99	160.31
2014-15	7.57	8.93	25.11	55.82	65.84	185.09	55.18	65.08	182.96
2015-16	6.12	7.62	20.79	56.29	70.13	191.35	53.29	66.40	181.15
2016-17	6.18	7.45	20.86	57.59	69.44	194.44	56.44	68.07	190.59
2017-18	6.80	8.44	24.17	54.53	67.72	193.93	56.32	69.94	200.29
<b>Average</b>	<b>7.41</b>	<b>8.71</b>	<b>25.00</b>	<b>54.28</b>	<b>63.91</b>	<b>183.66</b>	<b>51.73</b>	<b>61.05</b>	<b>175.07</b>

Sources: Handbook of Statistics on Indian Economy

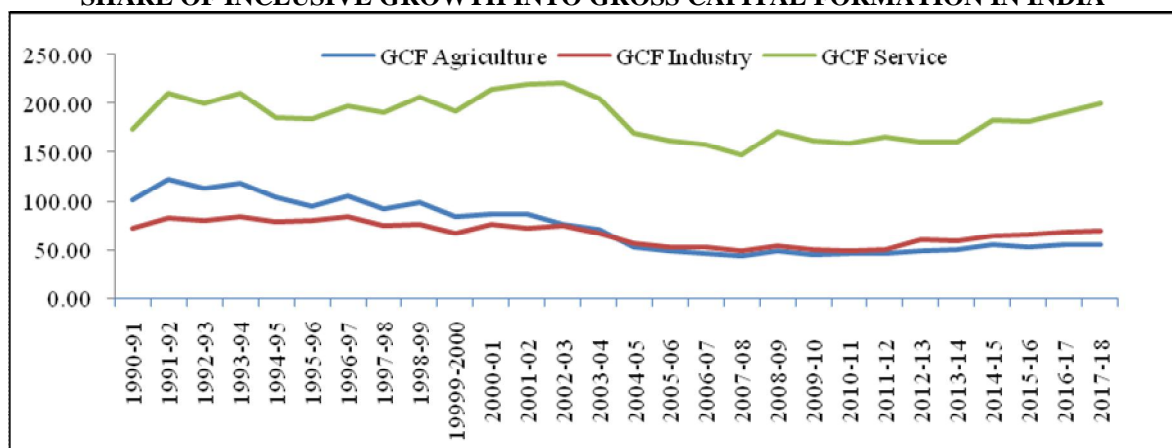
**DIGRAM 2**  
**SHARE OF INCLUSIVE GROWTH INTO FOREIGN DIRECT INVESTMENT IN INDIA**



**DIGRAM 3**  
**SHARE OF INCLUSIVE GROWTH INTO GROSS FIXED CAPITAL FORMATION IN INDIA**



**DIGRAM 4**  
**SHARE OF INCLUSIVE GROWTH INTO GROSS CAPITAL FORMATION IN INDIA**



**4.3 Unit Root Test**

The study applied unit root test results of the Augmented Dickey-Fuller test with constant and linear trend specifications. Table 3 shows that the unit root results of all the study variables of Agriculture, Industry and Service sectors, Foreign direct investment, Gross fixed capital formation and Gross capital formation in the Indian economy. ADF test is used to evaluate the null hypothesis of a unit root.

For Agriculture, the statistic values are statistically significant at the 1per cent level in the intercept with linear trend specifications in the level and first difference unit root test of the ADF test. The result indicates that it rejects the null hypothesis. Hence Agriculture is stationary at level.

For industry, the statistic values are statistically significant at the 1per cent level in the intercept and intercept with linear trend specifications in the first difference unit root test of the ADF test. The result indicates that it rejects the null hypothesis. Hence industry is stationary at primary difference.

For Service, the statistic values are statistically significant at the 1per cent level in the intercept and intercept with linear trend specifications in the first difference unit root test of the ADF test. The result indicates that it rejects the null hypothesis. Hence the Service sector is stationary at first difference.

For FDI, the statistic values are statistically significant at the 5per cent level in the intercept with linear trend specifications in the level and first difference unit root test of the ADF test. The result indicates that it rejects the null hypothesis. Hence FDI is stationary at level.

For Gross fixed capital formation, the statistic values are statistically significant at the 1per cent level in the intercept with linear trend specifications in the first difference unit root test of the ADF test. The result indicates that it rejects the null hypothesis. Hence GFCF is stationary at first difference.

For Gross capital formation, the statistic values are statistically significant at the 1per cent level in the intercept with linear trend specifications in the first difference unit root test of the ADF test. The result indicates that it rejects the null hypothesis. Hence GCF is stationary at first difference.

**TABLE 3**  
**Unit Root Test for Inclusive Growth in the Indian Economy**

Variables	Level		First Difference		Remarks
	Intercept	Linear Trend	Intercept	Linear Trend	
<b>Agriculture</b>	1.312317	-4.466322***	-2.395048	-3.682595**	I(0)
<b>Industry</b>	-0.531450	-1.569035	-3.886124***	-3.856493**	I(1)
<b>Services</b>	-2.193415	-2.882841	-3.526966**	-3.850594**	I(1)
<b>FDI</b>	-3.611319**	-3.777587**	-3.030135**	-3.532188	I(0)
<b>GFCF</b>	-0.828273	-1.283548	-4.236095***	-4.299630**	I(1)
<b>GFC</b>	-0.926176	-1.120455	-5.089661***	-5.415878***	I(1)

\*\*\* denotes the level of significance at 1 per cent level

\*\* denotes the level of significance at 5 per cent level

#### 4.4 Co-integration Test

Johansen's unrestricted co-integration rank test has been administered to check the possibility of the long-term relationship between Agriculture, Industry and Service sectors, FDI GFCF AND GCF. The Johansen co-integration tests based on two statistics, viz., trace test statistics and maximum Eigen value test statistics the co-integration test accepts/rejects null hypotheses.

Table 4 represents the results of the statistics of Trace, and Max Eigen value is more than the critical value at five per cent level of significance, which indicates the reject the null hypothesis. Therefore, we can reject the null hypothesis of even more than two co-integrated equations among the six variables, such as Agriculture, Industry and Service sectors, FDI, GFCF and GCF in the study.

**TABLE 4**  
**Johansen Co-integration Test for Inclusive Growth in the Indian Economy**

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of C.E. (s)	Eigen Value	Trace Statistic	0.05 Critical Value	Probability
None	0.988963	211.8321	95.75366	0.0000
At most 1	0.765753	94.66200	69.81889	0.0002
At most 2	0.670343	56.92614	47.85613	0.0056
At most 3	0.481176	28.07385	29.79707	0.0780
At most 4	0.321910	11.01288	15.49471	0.2107
At most 5	0.034488	0.912527	3.841466	0.3394
Unrestricted Cointegration Rank Test (Maximum Eigen Value)				
Hypothesized No. of C.E. (s)	Eigen Value	Max-Eigen Statistic	0.05 Critical Value	Probability
None	0.988963	117.1701	40.07757	0.0000
At most 1	0.765753	37.73585	33.87687	0.0164
At most 2	0.670343	28.85299	27.58434	0.0342
At most 3	0.481176	17.06097	21.13162	0.1691

At most 4	0.321910	10.10036	14.26460	0.2054
At most 5	0.034488	0.912527	3.841466	0.3394

#### 4.5 Granger Causality Test

The study explores the direction of relationship, i.e. whether a one-way relationship exists between variables or if there is a two-way directional relationship between variables, Granger causality test has been conducted. The analysis investigates causality between nine variables (Agriculture and FDI, GFCF and GCF, Industry and FDI, GFCF and GCF and Service sectors FDI, GFCF and GCF).

Table 5 exhibits the results of the Granger causality test exhibit rejection of all null hypotheses except fourth and seventh. It indicates the absence of any causality between the return of two Industry and Service sectors and FDI. However, in respect of Industry and Service sectors and FDI uni-directional relationship has been evidenced. The probability of F statistics rejects the fourth and seventh null hypotheses. Therefore we have sufficient evidence to conclude that investment by foreign direct investment Granger cause Industry and Service sectors in India.

**TABLE 5**  
**Granger Causality Test for Inclusive Growth in the Indian Economy**

Null Hypothesis	Observation	F-Statistic	Probability
Agriculture does not Granger Cause FDI FDI does not Granger Cause Agriculture	26	2.78992 0.96808	0.0842 0.3961
Agriculture does not Granger Cause GFCF GFCF does not Granger Cause Agriculture	26	1.03370 2.98646	0.3731 0.0722
Agriculture does not Granger Cause GCF GCF does not Granger Cause Agriculture	26	1.69494 2.84094	0.2078 0.0809
The industry does not Granger Cause FDI FDI does not Granger Cause Industry	26	4.07105 0.46162	0.0321 0.6365
The industry does not Granger Cause GFCF GFCF does not Granger Cause Industry	26	0.52800 3.52765	0.5974 0.0478
The industry does not Granger Cause GCF GCF does not Granger Cause Industry	26	0.78083 2.48799	0.4709 0.1072
Service does not Granger Cause FDI FDI does not Granger Cause Service	26	4.68000 0.57433	0.0209 0.5717
Service does not Granger Cause GFCF GFCF does not Granger Cause Service	26	1.75516 0.68912	0.1973 0.5130
Service does not Granger Cause GCF GCF does not Granger Cause Service	26	0.19638 3.14070	0.8232 0.0641

#### V. CONCLUSION:

The study analysed time series data on inclusive growth of components of GDP (Agriculture, Industry and Service sectors), FDI, GFCF and GCF in the Indian economy and it attempt to establish the growth and share and relationship with the Agriculture, Industry and Service sectors on FDI, GFCF and GCF for 28 years from 1990-91 to 2017-18. The inclusive growth of the variables Agriculture, Industry and Service sectors has increased year by year. The highest growth is Service, Industry and Agriculture sectors, respectively in the Indian economy. The contribution of gross capital formation was the first place in Service sectors, second place in Industry sectors and third place in Agriculture sectors during the study period. It means that gross capital formation highly influencing inclusive growth on the Indian economy. The study explained the domestic investment on gross fixed capital formation and gross capital formation is highly influencing the inclusive growth as compared to foreign direct investment in the Indian economy. The results of co-integration indicate the possibility of the above six variables. Granger causality test is a uni-directional relationship between Industry and Service sectors in FDI. Therefore, the policy framework for the liberalisation of domestic investment should be formulated with consideration to inclusive growth on the Indian economy.

#### REFERENCES:

- [1] Peter E Robertson (October 2-8, 2010) "Investment Led Growth in India: Fact or Mythology?", Economic and Political Weekly, Vol. 45, No. 40, pp. 120-124



- [2] Surajit Mazumdar (December 6-12, 2008), Investment and Growth in India under Liberalisation: Asymmetries and Instabilities, *Economic and Political Weekly*, Vol. 43, No. 49, pp. 68-77
- [3] Hanumantha Rao, C.H. (March. 28 - April. 3, 2009) Inclusive Growth: Recent Experience and Challenges Ahead, *Economic and Political Weekly*, Vol. 44, No. 13, Global Economic & Financial Crisis, pp. 16-21
- [4] Suryanarayana, M.H. and Mousumi Das (February 2014) How Inclusive Is India's Reform Growth? *Economic & Political Weekly*, Vol. XIIX, No. 6, pp.44-52
- [5] Nirmal Kumar Chandra (February 2010) Inclusive Growth in Neoliberal India: A Facade? *Economic & Political Weekly*, Vol.XLV, No. 8, pp.43-56
- [6] MISAL D.M. (2015) Inclusive Growth and Economic Development in India, *World Research Journal of Economics*, Volume 3, Issue 1, pp.025-029
- [7] Suresh Chand Aggarwal, DivyaSatija and Shuheeb Khan (May 2019) Inclusive Growth in India – Learning from Best Practices of Selected Countries, *Indian Council for Research on International Economic Relations*, Working Paper, No.375, pp.1-39
- [8] Sumit K Majumdar, (2016) "India's Recent Growth -Miracle or Mirage?" *Economic and Political Weekly*,
- [9] Syed Nawab Haider Naqvi, (2012), The Idea of Inclusive Growth and Development Policy, *The Pakistan Development Review*, Vol. 51, No. 1, pp. 1-21
- [10] Samir Goswami and Mark P. Lagon, (2013), Almost A Miracle: Encouraging Inclusive Growth in India, *World Affairs*, Vol. 176, No. 1, pp. 51-56