



Investment Pattern and Biases in India: an Inter-Temporal Analysis

KEYWORDS

Investment Pattern, Inter-temporal Analysis.

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ABSTRACT *The purpose of the study is to understand the economic structure in terms of the pattern of investment in the Indian economy. To pursue to the objective, inter-temporal analysis has been performed using sectoral and sub-sectoral investment patterns over the pre-reforms (1970-71 to 1990-91) and post-reforms periods (1991-92 to 2010-11). The empirical results implied that there exists an increasing trend of investment in all sectors; especially investment in the industrial sector has grown at a substantial rate during the entire and post-reforms period. The services and agricultural sectors have been ranked at second and third places in terms of investment growth.*

1. Introduction

The study of investment behavior is utmost importance since the investment has a dual role to play in an economic system. Investment implies the production of new capital goods, plants and equipments. Moreover, in economics, investment is the accumulation of newly produced physical entities and good inventories. In recent years there has been an adoption (accordance) among academicians and policy makers over the fact that the 1990s had led to a higher growth pattern in India compared to the previous decades. The present paper carries two objectives:

- i) Analyzing the pattern /composition of investment in different sectors of Indian economy;
- ii) Comparing the actual investment pattern in India with the desired pattern of investment. To pursue these objectives, the study has been divided into six sections. Including the present introductory one, Section-2 represents a review of literature while, the Section-3 presents database and methodology. The Section-4 deals with trends in the growth rate of gross capital information, i.e., investment while the Section-5 deals with the growth in share of each sub-sectors' investment in overall investment of the economy. The last section concludes the findings and withdraws some relevant policy implication from the study.

2. Review of Literature

This is an analysis of the pattern and biases in the rate of gross capital information, share of gross capital information in different sectors and sub-sectors of the economy. There are a huge number of economic papers in the world and India. The following are the review of international and national studies.

Kuijs (2005) analyzed sectoral trends in investment and saving and related the results to structural development in China. The study used a time series data during 1990-2003 and utilized descriptive statistical methods. The study found that there was a steady trend at levels of investment by household and direct investment by the government while there was a noticeable difference between investment by the enterprise sector of China and other countries. Again, it presented the difference between Chinese household saving with other countries. Also, high enterprise investment was financed partly by a large surplus of saving over-investment of household.

Guimaraes and Untreoberdorester (2006) analyzed macroeconomic trends, focusing on the relationship between firms and investment. The study utilized a vector error correction (VCM) using a panel data during 1995-2004. The study found that there is an evidence of sustained over-investment in Malaysia during the Asian crisis. Also, it is impossible to return this investment to pre-crisis level while it observed a sharp decline in private investment recently. The most important determinants of investment across all sectors were profitable. Further, firm size was a main factor enabled to affect investment.

Mallick (2009) conducted a study about trends and patterns of private investment in India. The study employed "The National Account Statistics" (NAS) for the data on private investment and used descriptive statistics to find out the sectoral and sub-sectoral contributions to the growth of private investment. The study found that there was an increasing trend of the rate of capital formation in the private sector while there was a decline in the public sector after economic reforms. Also, both long-and short-run, the industrial sector has been placed in the first rank with respect to contributing to the growth of private sectors. In terms of the annual average of growth of private investment, services sector was dominated sector in attracting private investment during the economic reforms. In sum, the contribution of producer services like real estate ownership of dwellings and business services and others were more that of the sub-sectors of services to the growth investment in India.

Hosamane and Niranjan (2010) have attempted to examine the determinants of investment pattern of Indian manufacturing sector. They emphasized on the role of accelerators and financial variables affecting on investment, so employed the neoclassical Theory using a panel data set of ten manufacturing industries during the period of 1991-2005. The study found that output and profit played a more crucial role on investment than others. Also, there was a positive and significant relationship between sales and net assets with investment with a lag. In sum, the study confirmed that financial constraint had an endeavor impact on investment after one decade of reforms.

Naa-Idar et al. (2012) conducted an attempt to emphasize the private sector by encouraging private investment

in Ghana. The study used the annual data set from 1960-2000 and utilized the techniques of co-integration and error-correction model. The study found that GDP growth affected by the level of private investment in the long-run and inflation rate affected positively on investment in both short-and-long run. Also, they presented public investment crowded out private investment.

Phestavong and Ichihashi (2012) determined major factors to affect economic growth and the interrelationship of public investment, private domestic investment and DFI in Japan. Its methodology was based on Le and Suruga (2005) model and used a panel data sample of 15 developing countries in Asia during the period 1984-2009. The study found that the most important factor affecting growth was private domestic investment while public consumption and Asian financial was harmful for economic growth, even though, FDI had played a positive and significant role in the growth. Also, it observed a decline in FDI level and private domestic investment due to the public investment. In sum, public investment of these countries had played a substitution effect about two other factors.

Assefa et al. (2013) examined the statistical record to compile a critical investment prospect picture. The study provided a scan of the framework of investment, the overall investment trend in Ethiopia. This study presented that there was an optimistic sense of economic, improving and creating new opportunities during the sample period from 2000-2012. They found that major sectors required for emerging capacities and global development like manufacturing, mining, oil and gas, economic infrastructure, tourism and health services.

Bathla (2014) examined the impact of capital information on economic growth in the agricultural sector of India. The study analyzed the temporal trends in gross capital formation in agricultural sector during 1960-61 to 2007-08. The empirical results presented an upward trend of gross fixed capital formation till 1970s, and then it changed to a downward trend during 1980s and 1990s; continued by a significant acceleration from 2000 onwards due to changes in stocks. Results based on the interstate level presented that there were large variations in public and private gross capital formation across states over the period. Also, the share of private gross capital formation has been high at the state level except some states with the highest share of public gross capital formation.

3. Database and Methodology

This is an attempt to study the performance of the various sectors and the sub-sectors in terms of rate of gross capital formation during the period 1970-71 to 2010-11. This is an analysis of the trend in the growth rate of gross capital information, Share of gross capital information on the different sectors and sub-sectors of the economy. Investment is the creation of capital or the net addition to capital stock. It is usually measured by gross capital formation (GFC). Gross capital formation has two components: i) Gross fixed capital formation (GFCF) that represents the gross value of goods which is added to the fixed domestic capital stock during a year; and ii) Change in stock which is the difference between market values of the stocks at the beginning and the end of the period. However, the change in stocks or the inventory investment is more unpredictable by nature [Based on the definitions of the Central Statistical Organization (CSO)].

The study uses the sectoral classification done by [The

National Accounts Statistics (NAS)]. Based on this classification, there are three main sectors; Agriculture, industry and services in which the paper has attempted to present a pattern of investment. The analyses included the gross capital formation at the sectoral and sub-sectoral levels at current and constant prices. It is interesting to note that constant price shows real change in investment while current price shows nominal change. Gross capital formation at constant price excludes any nominal change so the study attempts to analyze the growth of investment in terms of current and constant prices and compare each other so that it can be present a real picture of investment in all three sectors during this period. The trend in investment has been analyzed by using the growth rate of gross capital formation and the share of gross capital formation and the share of GDP.

The first part of this study analyses the trends in terms of sectoral and sub-sectoral growth rate for the period 1970-71 to 2010-11 by dividing the two periods 1970-71 to 1991-92 as the pre-reform period and 1991-92 to 2010-11 as the post-reform period. Also, the same data is used to describe the share of gross capital formation within the private sectors. The source data for gross capital formation have been retrieved from the National Income Statistic by Center of Monitoring Indian Economy.

4. Trends in the Growth of Investment

Table 1 provides the analysis of the trend in investment during the period under evaluation; the period has been divided into two sub periods, i.e., Pre-reforms (before year 1991-92) and Post-reforms (1992-93 onwards) period. It can be observed from the table that the rate of gross capital formation (GCF) in India has accelerated slightly during the post-reforms period in the comparison of pre-reforms period. The growth rate of investment (i.e., GCF) has increased from 14.63 percent during the pre-reform to 15.05 percent during post-reforms period; the observed growth of investment during entire period is 14.88 percent. Further, the observed growth rates of investment are statistically significant as p-value of the t-statistics on all these growth rates are less than the 5 percent level of significance (i.e., 0.05).

Table 2 comprise the growth rate of investment in two sectors (by assets and institutions-by industrial) with two scales: current prices and constant prices. It can be observed a slight increase of investment in two sectors at current prices, but there is a considerable increase of investment in two sectors at consonant prices. The rate of gross capital information has been increasing at the rate of 14.50 percent per annum during the pre-reform to 14.90 percent during the post-reform period; it is 14.70 percent during the entire period. Similarly, the growth rate has been increasing at 14.54 percent during pre-reform to 14.59 percent during post-reform period and it is 14.56 percent during the entire period. The observed growth rates of investment are statistically significant at p-value of the t-statistics on all these growth rates are less than the 5 percent level of significance (i.e., 0.05).

"Table 1 to Table 2 about here"

Table 3 presents the analysis of the trend in investment (GFC by assets and institutions) at current and constant prices in India. The growth rate of GFC in the public sector has a downward trend during the post-reform period. It is a negative growth of 14.17 percent in the pre-reform pe-

riod and 10.71 percent in post reform, but the growth rate was lower for the entire period at 12.57 percent. Also, the growth rate of investment in the private sector has slightly decreased from 17.35 percent during pre-reform period at 17.29 percent during post-reform. On an average, for the whole period, the sector's growth rate is 17.37 percent. On the other hand, the observed growth of investment in the household sector has accelerated from 13.42 per cent during the pre-reform to 16.26 per cent during post-reform period, but the growth rate in the household sub-sector is the highest over the whole period. Also, the growth rate of gross capital formation in terms of constant prices in the table 3 has been shown that public sector is dominating sector during the post reform period, but the observed growth in private and household sector has declined from 76.9 to 11.6 percent and 36.8 to 10.5 percent during the post-reform period. Also the growth rate of gross capital formation in the private sector is 95 percent in the entire period. The observed growth rates of investment are statistically significant as p-value of the t-statistics of all these growth rates are less than the 5 percent level of significance (i.e., 0.05).

Sector-wise growth rates also present some interesting results. There exists a marginal increase in the growth rate from the pre-reform to post-reform periods. Within the agricultural sector, the growth rate of agriculture has been shown that the growth rate has been very high. It is 11.38 percent during the pre-reform period and 13.52 percent in the post-reform period, but the growth rate is lower for the entire period at 12.37 percent. It means that there exists a sharp increase. In the forestry and logging sub-sector, there is a sharp growth from 15.78 percent during the pre-reform to 86.79 percent during post-reform period, but the observed growth of investment during entire period is 12.49 per cent. Also, the growth rate of the fishing sub-sector can be presented a high growth from 15.37 percent during the pre-reform period to 18.89 percent during post-reform period and the growth rate during the entire period has been slightly at 16.99 percent. It means that the agriculture sector was a promising sector of the economy. Further, the observed growth rates of investment are statistically significant as p-value of the t-statistics on all these growth rates are less than the 5 percent level of significance (i.e., 0.05). (See table 4)

"Table 3 to Table 5 about here"

The analysis table 5 shows the contribution of the industrial sector to the rate of investment that it is low in sub-sectors like mining and quarrying and manufacturing, but it is very high in sub-sectors-Electricity, gas & water supply and construction. The growth rate of mining and quarrying has been 16.15 percent during pre-reform period and it had declined 11.64 percent during post-reform period, but the growth rate during the entire period has been at 14.06 percent. In addition, it has happened in the manufacturing sector. This sector has experienced a slight decline in the rate of investment; It is 15.36 percent during the pre-reform at 14.13 percent during the post-reform and it is 14.79 percent during the entire period. It was interesting to see a sharp accelerating in the sub-sector of industry. The observed growth rate of investment is 16.07 percent in the pre-reform and 99.98 percent during post-reform period in the electricity, gas and water supply. When as the growth rate of investment has been 13.26 percent during the entire period. On the other hand, the construction sector has experienced this situation too. The growth rate of investment is 11.77 percent during the pre-reform and

it accelerates at 22.98 percent during the post-reform period and it is 16.93 percent during the entire period. The observed growth rates of investment are statistically significant as p-value of the t-statistics of all these growth rates are less than the 5 percent level of significance (i.e., 0.05).

It can be observed from table 6 that the rate of investment has been considerable increasing and decreasing during the post-reform period. Some sub-sectors of services witnessed an upward trend in the rate of gross capital formation during the post-reform. The growth rate in trade has increased from 12.51 percent during the pre-reform to 25.39 percent during the post-reform, but the rate is 15.39 percent during the entire period; the growth rate of railway subsector has been 11.10 percent during the pre-reform and has reached to 11.34 percent in post-reform and it is 11.21 percent during the entire period; the growth rate of hotel and restaurants has been 11.83 percent during the pre-reform period and 22.10 percent in post-reform, but it is 14.13 percent during the entire period. In transport by other means, the rate of investment is 12.65 percent during the pre-reform and 15.22 percent during post-reform and it is 14.16 percent in the entire period; Storage has experienced the growth of investment 10.74 percent and 19.39 percent respectively between the pre-and post-reform period, but it is 14.73 percent during the entire period; the growth rate of investment is 14.15 percent during pre-reform in the real state, ownership of dwelling and business services and it decreases to 17.89 percent in the post-reform, but it is 15.88 percent during the entire period; other services had been experienced 15.61 percent and 19.70 percent of the growth rate between two periods, but it is 17.50 percent during the entire period.

Some other sub-sectors of services witnessed a downward trend in the rate of gross capital formation during the post-reform. The growth rate of investment in the communication has been decreased from 18.82 percent during pre-reform to 14.88 percent in post-reform period and it is 16.99 percent in the entire period; the growth rate of investment in banking and insurance 19.03 percent during the pre-reform and 13.08 percent in post-reform but it is 16.27 per cent during the entire period; the growth rate of investment in community, social services 15.43 percent during the pre-reform and 14.43 percent in post-reform period but it is 14.22 percent in the entire period. Finally, public administration and defenses has been experienced 15.30 per cent of growth rate of investment during the pre-reform and 12.21 percent in post-reform; but the growth rate is 13.87 percent during the entire period. The observed growth rates of investment are statistically significant as p-value of the t-statistics of all these growth rates are less than the 5 percent level of significance (i.e., 0.05).

"Table 6 to Table 7 about here"

5. Trends in Growth of Investment Shares: An Inter-sectoral Analysis

In this section, the study analyses the trends in terms of the share in gross capital formation during the 1970-71 to 2010-11 in India. Regarding to the table 8, it shows that the relative share of three sectors (public, private and household) in GDP. It presents that the private sector is the major contributor (4.53 percent) followed by the household sector by 1.89 percent in the entire period. The share of the public, private and household sector was (-) 1.15, 4.40 and 6.40 percent in the pre-reform period. During the post-reform period, it is 4.67 percent in the private sector that

dominated, followed by the household sector 3.62 percent, but the share of the public sector declined to (-) 1.91 percent. In addition, the overall observed share of gross capital formation is statistically significant as p-value of the t-statistic is less than the 5 percent level of significance (i.e. 0.05) whereas the share of the public sector is statistically insignificant with p-value less than tabulated value at 5 percent level of significance (i.e., 0.05).

Based on table 9, the sub-sectoral analysis of the agricultural sector has shown that fishing sector has been dominated over the entire period. The share of fishing in gross capital formation has increased from 0.1 percent to one percent during the pre-and-post reform period. The share of agriculture and forestry sector was decreasing during the pre and post-reform period and also it has been observed the lowest. Also, the overall observed values were statistically significant except fishing was statistically insignificant with p-value higher than the tabulated value at 95 per cent level of significance during the pre-reform period.

Table 10 presents the share of industry in the gross capital formation in that period. The pattern of investment has been improved in the post-reform period. The share of construction sector increased to 8.31 percent, while the share of mining and quarrying ,manufacture and electricity, gas and water supply declined to (-) 2.83 ,0.44 and (-) 6.11 percent respectively. Of course, the construction sector was dominated over the entire period. It can be concluded that there exists statistically insignificant with p-value higher than the level of significance during the entire period among sub-sectors of industry, especially mining and quarrying and manufacturing sectors at 5 percent level of significance (i.e., 0.05) during the pre and post-reform period.

"Table 8 to Table 11 about here"

Based on table 11, during the entire period within the tertiary sector, the contribution of other services is highest with 2, 94 percent, followed by communication with 2.43 percent, while the contribution of banking and insurance to the value of 1.72 percent and real estate, dwelling with 1.3 percent are the lowest. Of course, all of them are statistically significant. During the pre-reform period, it can be observed a decline within the sectors especially banking and insurance from 4.50 to (-) 1.5 percent and communication from 4.28 percent to 0.3 percent in terms of the share of investment; whereas there exists an increase in other services from 1.5 percent to 5.14 percent, storage from (-) 3.7 percent to 4.77 percent and real estate from (-) 0.34 percent to 3.21 percent. All of them are statistically significant during the post-reform period, except trade is statistically insignificant with p-value less than the tabulated value at 5 percent level of significance (i.e., 0.05). It implies that there is an improvement using investment in these sub-sectors of the services sector, even though, it can be observed the lowest contribution of other sub-sectors.

Further, we used two indicators to present ranks of sectors and sub-sectors during this period. These indicators are: the growth rate of gross capital formation and the share of capital formation in different sectors of Indian economy. Table 12 and 13 have been present the ranking of the sectors in terms of their share and growth rate of gross capital formation in the period 1970-71 to 2010-11.

"Table 12 to Table 13 about here"

The results of table 12 have determined that the services sector is the leader sector during the pre-and post-reform

period, but the industrial sector is dominated over the agriculture sector in the post-reform period. Banking and insurance and communication are the sub-sectors to contribute the share of investment among the services sector; the mining and quarrying and electricity, gas and water supply are the main contributors among the industrial sector and agriculture is only the sub-sector among the agricultural sector during this period.

It is interesting to note that the rank of sectors in terms of growth rate presented that the services sector dominated over the industry and agriculture during the pre-reform period but during the post-reform the picture has changed. The industry sector dominated over the agriculture and services sectors respectively. The results of table 13 have been presented that some interesting pattern was observed in the sub-sectors during the post-reform period. Forestry contributes the first rank of the growth rate of investment with 86.99 percent within the agriculture sector; electricity, gas and water supply are the main contributor among the industrial sector with 99.98 percent. The growth rate of investment is 25.39 percent and 22.10 percent for the trade and hotel and restaurant sectors respectively. They are the major contributors among the services sector.

6- Conclusion

This paper with the aim of analyzing investment patterns and biases at the entire, sectoral and sub-sectoral levels in India for the periods 1970-71 to 2010-11. The analysis has revealed that the growth rate of investment by assets and institutions is very higher than the industry during the post-reform period, but there is a disparity across the sectors of assets and institutions during the economic reform period. The household sector dominated over the public and private sectors respectively. During the post-reform period, the private sector has experienced a better situation than the public sector. It implies to a considerable change in the public sector.

Within the agriculture sector, all sub-sectors have been witness an increase in the growth rate of investment, but the forestry and logging was only the dominating sector during the post-reform period. Across the industry sector, electricity, gas and water supply dominated over the other sub-sectors with respect to the growth rate of gross capital formation. Among the tertiary sector, hotel and restaurants is the most important sub-sector during the reform periods. Even though, investment has been grown in other services, storage, real estate, ownership and transport by means in India.

Regarding to the share of gross capital formation across sectors and sub-sectors, the analysis has been shown that the industry sector has developed over the services and agriculture during the post-reform period. Within the industry sector, construction was only the important sub-sector, while other sub-sectors are witness a decline. Also, there was such situation across the agriculture sector during the reforms. Fishing dominated over the forestry and agriculture sectors, respectively. Within the services sector, there has been a noticeable change among sub-sectors during the pre-reform period. Banking and insurance and communication are the dominating sub-sectors in terms of the share of investment but they have been declined during the post-reform period. On the other hand, other services, storage and trade are the dominating sectors during the post-reform. It means that the contribution of investment is very higher than other sub-sectors of the services

sector. In sum, during of the post-reform period all three sectors experienced better growth rates of investment.

The ranking of sectors and sub-sectors in terms of the growth rate and the share of investment have been revealed that the services sector dominated over the agri-

culture and industrial sectors respectively, during the pre-reform period while there exists a change in the ranking of the industrial sector during the post-reforms due to the contribution of investment. Also, it can be observed a same trend in the agriculture sector, but the services sector has been experienced a downfall in this period.

Table 1: Gross Capital Formation in India (Rs.crore)

Table 1: Gross Capital Formation in India (Rs.crore)		
Panel A: Gross Capital Formation		
YEAR	GCF AT MARKET PRICES	GCF AT CONSTANT PRICES(2004-05)
1970-71	7215	114805
1971-72	8165	124404
1972-73	8249	118705
1973-74	11858	141782
1974-75	14135	134485
1975-76	14949	120945
1976-77	16273	143053
1977-78	18880	166843
1978-79	24238	198541
1979-80	25648	175445
1980-81	28684	190472
1981-82	33303	180032
1982-83	37522	185456
1983-84	41756	198020
1984-85	49078	207992
1985-86	59648	224567
1986-87	65048	232623
1987-88	80532	263265
1988-89	99796	295654
1989-90	119009	319689
1990-91	152604	379436
1991-92	146907	316769
1992-93	178437	357710
1993-94	197785	365948
1994-95	258561	437228
1995-96	310045	471242
1996-97	336125	475526
1997-98	402092	546285
1998-99	436521	566930
1999-00	538834	666908
2000-01	528299	630056
2001-02	571146	658827
2002-03	627743	708637
2003-04	762416	819925
2004-05	1064041	1064041
2005-06	1279754	1236927
2006-07	1531433	1402369
2007-08	1900762	1656892
2008-09	1931380	1570333
2009-10	2363670	1838870
2010-11	2692031	1974172
Panel B: Growth Rate#		
Entire Period#	14.88***	6.96***
P-Value	(0.000)	(0.000)
Pre-Reforms#	14.63***	4.89***
P-Value	(0.000)	(0.000)
Post-Refor#	15.05***	9.36***
P-Value	(0.000)	(0.000)

Notes: i) *, **, and *** represent significance at 10, 5 and 1 percentage levels of significance, respectively.

Source: a) Economic Intelligence Services (2012) b) Growth are computed by Author

Table 2: Gross Capital Formation in India (Rs.crore)

Panel A: Gross Capital Formation				
By Assets and Institution			By Industry	
Year	MARKET PRICES GCFAI	CONSTANT PRICES GCFAI(2004-05)	MARKET PRICES GCFIND	CONSO ANT PRICES GCFIND(2004-05)
1970-71	7297	114805	7297	116172
1971-72	8545	124404	8545	130450
1972-73	8891	118705	8891	128154
1973-74	11314	141782	11314	134853
1974-75	15009	134485	15009	143814
1975-76	16018	120945	16018	130852
1976-77	16939	143053	16939	149120
1977-78	19222	166843	19222	169879
1978-79	22937	198541	22937	187597
1979-80	26355	175445	26355	180621
1980-81	27003	190472	27003	179291
1981-82	38403	180032	38403	208992
1982-83	43356	185456	43356	215016
1983-84	45792	198020	45792	217263
1984-85	55269	207992	55269	234656
1985-86	67954	224567	67954	256490
1986-87	76008	232623	76008	272223
1987-88	83223	263265	83223	272081
1988-89	104160	295654	104160	308637
1989-90	120007	319689	120007	322370
1990-91	146018	379436	146018	363028
1991-92	151563	316769	151563	326803
1992-93	187768	357710	187768	376493
1993-94	189737	365948	189737	351032
1994-95	242514	437228	242514	409939
1995-96	319603	471242	319603	485871
1996-97	313055	475526	313055	442800
1997-98	385445	546285	385445	523635
1998-99	424046	566930	424046	550691
1999-00	542682	666908	527163	652862
2000-01	525078	630056	510354	608929
2001-02	602456	658827	588269	678663
2002-03	633277	708637	619320	699219
2003-04	742717	819925	718145	772607
2004-05	1052231	1064041	1011178	1011178
2005-06	1266073	1236927	1224682	183303
2006-07	1540583	1402369	1490876	1364822
2007-08	1896799	1656892	1843208	1606175
2008-09	2000103	1570333	1927890	1566234
2009-10	2332380	1838870	2216069	1720116
2010-11	2746189	1974172	2586353	1890645
2011-12	3145592		2898487	1988332

Panel B: Growth Rate#

Entire Period#	14.90***	6.9***	14.56***	6.33***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)
Pre-Reforms#	14.50***	4.48***	14.54***	4.81***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)
Post-Refor#	14.90***	9.21***	14.59***	7.97***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)

Notes: i) *, **, and *** represent significance at 10, 5 and 1 percentage levels of significance, respectively.

Source: a) Economic Intelligence Services (2012) b) Growth are computed by Author

Table 3: GCF by Assets and Institution in India (Rs.crore)

Panel A: Gross Capital Formation						
Current Prices				Constant Prices of 2004-05		
YEAR	PUBLIC SEC-TOR	PRIVET SEC-TOR	HOUSE-HOLD SECTOR	PUBLIC SECTOR	PRIVET SECTOR	HOUSEHOLD SEC-TOR
1970-71	3044	1093	3160	48436.09	17391.80	50281.88
1971-72	3601	1270	3674	54865.74	19350.04	55977.99
1972-73	4273	1415	3202	61489.44	20362.17	46077.51
1973-74	5172	1733	4408	61839.81	20720.88	52704.92

1974-75	5886	2820	6303	56001.32	26830.39	59968.79
1975-76	7848	2298	5872	63494.30	18591.98	47507.46
1976-77	9172	1413	6354	80629.39	12421.42	55856.86
1977-78	8901	2495	7826	78658.34	22048.37	69158.54
1978-79	10738	2375	9824	87958.29	19454.36	80471.44
1979-80	12878	3220	10257	88091.88	22026.39	70162.95
1980-81	13727	3769	9506	91152.18	25027.51	63123.23
1981-82	19382	9623	9399	104776.75	52020.77	50809.86
1982-83	23412	10711	9233	115716.00	52940.12	45634.96
1983-84	24562	7569	13661	116480.67	35894.56	64784.73
1984-85	29499	10853	14917	125016.42	45994.88	63218.07
1985-86	34522	15304	18128	129970.86	57617.57	68249.57
1986-87	40619	16614	18775	145260.63	59414.56	67142.67
1987-88	39696	13043	30484	129769.12	42638.52	99654.42
1988-89	47073	17207	39880	139457.70	50977.17	118147.83
1989-90	54207	20813	44987	145614.04	55909.10	120846.73
1990-91	62000	25055	58963	154157.37	62296.98	146606.14
1991-92	68494	39537	43531	147690.55	85251.86	93863.95
1992-93	73854	51338	62576	148054.01	102916.52	125445.17
1993-94	81283	51737	56716	150392.35	95725.41	104937.71
1994-95	101530	74575	66408	171687.75	126106.71	112296.27
1995-96	105091	121646	92866	159729.37	184891.56	141148.41
1996-97	110633	119430	82993	156515.78	168961.16	117412.65
1997-98	116367	131728	137350	158097.01	178966.58	186604.66
1998-99	130898	121379	171768	170003.28	157640.51	223083.04
1999-00	154164	140705	232248	190806.82	174148.79	287450.40
2000-01	155299	106524	248530	185211.53	127041.85	296399.99
2001-02	169269	121187	297813	195254.78	139791.34	343532.55
2002-03	163403	145011	310906	184459.90	163697.82	350970.85
2003-04	187730	186088	344327	201890.46	200124.60	370299.56
2004-05	240580	334869	435729	240580	334869	435729
2005-06	293350	500675	430657	283533.03	483919.89	416245.05
2006-07	356556	624179	510140	326506.66	571575.30	467147.12
2007-08	441923	863147	538137	385223.75	752404.22	469093.39
2008-09	531730	636314	759846	432329.81	517363.16	617802.42
2009-10	591622	820966	803481	460265.58	638688.88	625086.03
2010-11	676220	928512	981620	495898.66	680914.29	719860.476

Panel B: Growth Rate#

Entire Period#	12.57***	17.37***	14.71***	47***	95***	68.7***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Pre-Reforms#	14.17***	17.35***	13.42***	43.3***	76.9***	36.8***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Post-Reforms#	10.71***	17.29***	16.26***	50.2***	11.6***	10.5***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Notes: i) *, **, and *** represent significance at 10, 5 and 1 percentage levels of significance, respectively.

Source: a) Economic Intelligence Services (2012) b) Growth are computed by Author

Table 4: GCF by Agriculture in India

(Rs.crore)

Panel A: Gross Capital Formation						
Current Prices				Constant Prices of 2004-05		
YEAR	GCF AGRICULTURE	CGF FORESTRY & LOGGING	GCF FISH-ING	GCF AG-RICULTURE	CGF FORESTRY & LOGGING	GCF FISHING
1970-71	1154	19	25	20500	363	304
1971-72	1304	22	28	21917	411	331
1972-73	1488	20	30	23139	334	342
1973-74	1749	21	36	22833	320	362
1974-75	1906	24	50	23329	315	407
1975-76	2224	28	47	23814	355	398
1976-77	2830	46	52	28668	523	435
1977-78	3040	52	62	30241	509	491
1978-79	3751	62	53	35409	599	398
1979-80	4283	71	60	35445	619	376
1980-81	4074	94	60	31879	792	327
1981-82	3892	103	64	26771	767	302
1982-83	4497	129	85	27923	859	357
1983-84	5240	212	122	30456	1203	452
1984-85	5449	210	136	28351	1080	433
1985-86	5990	187	155	27085	851	460
1986-87	6548	222	200	28577	995	529

1987-88	9094	243	339	34811	948	873
1988-89	9373	276	333	32096	968	794
1989-90	10382	356	401	32117	1124	919
1990-91	17112	427	494	48806	1242	1067
1991-92	13467	412	483	33567	1050	961
1992-93	18583	419	655	43470	1022	1268
1993-94	17526	443	739	36906	964	1391
1994-95	18278	482	825	34209	921	1373
1995-96	20030	575	973	33575	970	1489
1996-97	24277	665	1203	36256	1001	1723
1997-98	28069	807	1597	38087	1096	2193
1998-99	32974	956	2116	43021	1246	2623
1999-00	52260	995	3538	62846	1189	4555
2000-01	48391	978	3557	56601	1134	4374
2001-02	65284	1082	5330	73409	1207	6102
2002-03	61092	886	5544	66330	953	6231
2003-04	59889	1691	5111	62645	1758	5518
2004-05	69148	971	5977	69148	971	5977
2005-06	81886	1298	6758	78786	1271	6547
2006-07	91902	1596	7604	83445	1441	7171
2007-08	113199	13680	8758	96737	1149	7855
2008-09	148574	1426	10348	117406	1113	8609
2009-10	168378	1412	11722	120729	980	9430
2010-11	196435	1617	13512	130907	1017	10330
Panel B: Growth Rate#						
Entire Period#	12.37***	12.49***	16.99***	3.8***	2.9***	2.7***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Pre-Reforms#	11.38***	15.78***	15.37***	1.5***	5.4***	60.2***
P-Value	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
Post-Reforms#	13.52***	86.79***	18.89***	6.4***	-0.4***	14.1***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.465)	(0.000)

Notes: i) *, **, and *** represent significance at 10, 5 and 1 percentage levels of significance, respectively.

Source: a) Economic Intelligence Services (2012) b) Growth are computed by Author

Panel A: Gross Capital Formation Current Prices				Constant Prices of 2004-05				
YEAR	GCF MIN-ING & QUARRYING	GCF MANUFACTURING	GCF ELECTRICITY GAS & WATER SUPPLY	GCF CONSTRUCTION	GCF MIN-ING & QUARRYING	CF MANUFACTURING	GCF ELECTRICITY GAS & WATER SUPPLY	GCF CONSTRUCTION
1970-71	112	2292	654	175	907	28967	9074	1872
1971-72	189	2523	678	221	1998	30260	9460	2389
1972-73	141	2259	710	219	1072	25410	9019	2170
1973-74	343	3409	740	239	-334	32998	9566	2286
1974-75	566	5494	978	290	-927	42556	9058	2291
1975-76	1181	4833	1492	278	-3901	34193	12461	1870
1976-77	955	4573	1617	432	3964	32571	14380	3190
1977-78	712	5656	1972	580	7173	39230	16174	4371
1978-79	684	7300	2244	478	4130	47561	17034	3094
1979-80	1185	7521	2715	614	1628	43172	17478	3685
1980-81	1004	6203	3080	702	6007	34006	19575	3239
1981-82	1717	13872	3985	1221	9662	62582	23316	4730
1982-83	3147	13808	4703	1040	15288	56767	24857	3706
1983-84	2981	13627	4995	711	14239	53700	25251	2599
1984-85	2978	18606	5487	976	13178	68271	24784	3130
1985-86	4074	24654	6967	1164	16152	82351	27768	3259
1986-87	4550	24535	9295	961	17382	78359	35383	2754
1987-88	4360	24254	10848	1578	15396	69419	38068	4119
1988-89	5048	33689	11683	1298	16427	89521	37506	3198
1989-90	6696	36147	12763	2310	19432	87544	35442	5069
1990-91	7039	42914	14894	2797	18307	93993	38144	5617
1991-92	6783	51110	19268	1891	15409	97760	43317	3445
1992-93	6922	65010	18767	3232	14527	113868	38593	5328
1993-94	6900	58926	20996	2745	12427	95590	40342	4234
1994-95	16413	79138	22319	4129	27503	120916	38998	5969
1995-96	12148	144966	23892	7238	20492	204825	38216	9519
1996-97	6501	135338	28761	4456	7986	180877	40861	5604
1997-98	8362	161350	30685	9871	10907	213414	41326	12653
1998-99	9167	167222	35921	10511	11862	212570	46618	12683

1999-00	9840	183080	33415	10091	11141	222446	41575	12948
2000-01	6822	142001	36521	14111	7356	165618	43588	15688
2001-02	10252	126318	40241	30764	11258	141016	45783	33001
2002-03	10726	163864	38970	30882	11821	182151	42839	33147
2003-04	18110	204214	50700	39774	19400	219111	53937	41348
2004-05	37322	344517	53300	54445	37322	344517	53300	54445
2005-06	54412	417720	67374	59394	52259	404928	64673	57531
2006-07	67191	511176	83662	104122	60456	474405	76369	95799
2007-08	78660	687410	98160	131537	68372	611928	86007	115157
2008-09	68649	493049	118209	106908	57045	420506	98993	88523
2009-10	85385	733249	129411	107390	65984	598445	102278	86290
2010-11	97179	821286	138278	128204	70389	640982	103255	98426
Panel B: Growth Rate#								
Entire Period#	14.06***	14.79***	13.26***	16.93***	7.6***	7.6***	5.5***	9.9***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Pre-Reforms#	16.15***	15.36***	16.07***	11.77***	10.2***	6.2***	6.8***	2.5***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Post-Reforms#	11.64***	14.13***	99.98***	22.89***	5***	9.3***	3.9***	18.5***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Notes: i) ***, and *** represent significance at 10, 5 and 1 percentage levels of significance, respectively.								
Source: a) Economic Intelligence Services (2012) b) Growth are computed by Author								

Table 6: GCF by Services in India

(Rs.crore)

Panel A: Gross Capital Formation (Current Prices)

Yaer	GCF TRADE	GCF HOTELS & RESTAURANTS	GCF Railway	GCF TRANSPORT BY OTHER MEANS	CGF STORAGE	GCF COMMUNICATION	GCF BANKING & INSURANCE	GCF REAL ESTATE OWNER-SHIP of DWELL & BUSINESS	CGF COMMUNITY SERVICES & PERSONAL SERVICES	GCF PUBLIC ADMINISTRATION & DEFENCE	GCF OTHER SERVICES
1970-71	0	0	332	287	8	66	34	856	847	683	164
1971-72	0	0	395	311	8	95	46	977	1152	955	197
1972-73	0	0	424	424	9	140	34	1055	1526	1241	285
1973-74	0	0	451	423	10	127	68	1212	1668	1356	312
1974-75	0	0	490	626	12	169	47	1725	1400	1036	364
1975-76	0	0	553	695	15	214	69	1587	1582	1275	307
1976-77	0	0	509	636	21	253	67	1793	1911	1544	367
1977-78	0	0	522	624	19	267	93	2160	2291	1834	457
1978-79	0	0	586	745	16	304	112	2398	2892	2378	514
1979-80	0	0	798	815	19	322	105	2861	3463	2889	575
1980-81	1385	502	808	1384	18	347	162	2514	4666	3956	710
1981-82	1732	530	965	1204	30	552	192	2543	5801	4993	808
1982-83	2065	534	1040	1162	23	606	236	2841	7440	6459	981
1983-84	2573	558	1177	1100	42	725	272	3769	7724	6621	1103
1984-85	3239	604	1398	1713	44	889	370	3986	9187	7908	1278
1985-86	3186	761	1669	1845	50	962	380	3735	11174	9523	1651
1986-87	3911	797	2302	2537	57	1149	577	4848	13519	11550	1969
1987-88	1721	1115	2147	2553	60	1480	483	8807	14140	11603	2537
1988-89	6946	1420	2616	3344	46	2220	567	8995	16307	13389	2917
1989-90	8360	1627	2605	487	62	2818	791	12450	17251	13598	3656
1990-91	9341	1786	3038	4930	59	2972	847	16234	21133	16640	4493
1991-92	2339	2436	3287	6601	29	3337	1231	15100	23791	19326	4465
1992-93	7966	2679	4864	5337	31	5167	1212	20982	25941	19811	6130

1993-94	7709	2066	5541	7376	96	5980	1919	23225	27552	21647	5905
1994-95	14309	2861	4914	8748	74	7350	3065	23693	35914	28563	7351
1995-96	10425	3426	5133	9511	305	8800	4456	28903	38822	30553	8269
1996-97	2354	3077	5884	10717	-266	8942	4368	35543	41194	31212	9981
1997-98	19987	3175	5005	9381	410	10394	4646	46165	45542	31888	13654
1998-99	10891	3808	4984	12627	558	11109	4789	55438	61011	38572	22438
1999-00	31506	3514	5307	18903	327	15543	6113	88142	64588	43808	20780
2000-01	33531	5754	5430	22201	1301	24930	6433	87993	70400	49199	21201
2001-02	23018	6294	6781	19546	1489	22084	8299	129709	91778	59546	32232
2002-03	14099	3990	9063	28112	1431	15001	4168	130377	101115	64773	36342
2003-04	35665	7022	10878	30276	1402	8044	6682	131722	106965	46999	41965
2004-05	61257	10966	13124	36817	-343	18016	4399	151737	149525	86041	63484
2005-06	77866	16930	15409	42771	660	25071	7779	163799	185555	104978	80577
2006-07	111842	20059	18329	37790	837	24384	13159	175862	221361	127490	93871
2007-08	95748	24378	22229	50144	960	32655	12831	209129	276050	153280	122770
2008-09	140826	26826	29661	69237	1789	71419	9640	334387	296941	179324	117617
2009-10	123328	30324	31767	59515	1715	74430	9827	305657	342509	212401	130108
2010-11	206344	38642	29930	69752	2084	76954	16212	335164	414762	256146	156616

Panel B: Growth Rate#

Entire Period#	15.39***	14.13***	11.21***	14.16***	14.73***	16.99***	16.27***	15.88***	14.92***	13.87***	17.50***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Pre-Reforms#	12.51***	11.83***	11.10***	12.65***	10.74***	18.82***	19.03***	14.15***	15.34***	15.30***	15.61***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Post-Refor#	25.39***	22.10***	11.34***	15.92***	19.39***	14.88***	13.08***	17.89***	14.43***	12.21***	19.70***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Notes: i) *, **, and *** represent significance at 10, 5 and 1 percentage levels of significance, respectively.

Source: a) Economic Intelligence Services (2012) b) Growth are computed by Author

Table 7: GCF by Services (Rs.crore)

Yaer	GCF TRADE	GCF HO-TELS & RESTAURANTS	GCF Railway	GCF TRANSPORT BY OTHER MEANS	CGF STORAGE	GCF COMMUNICATION	GCF BANKING & INSURANCE	GCF REAL ESTATE OWNERSHIP of DWELL.& BUSINESS	CGF COMMUNITY SERVICES & PERSONAL SERVICES	GCF PUBLIC ADMINISTRATION & DEFENCE	GCF OTHER SERVICES
1970-71	0	0	5905	3608	152	1043	479	20300	15966	13136	2830
1971-72	0	0	6346	3584	145	1493	615	22774	19986	16788	3198
1972-73	0	0	6318	4490	146	1715	419	22757	24704	20266	4438
1973-74	0	0	5923	4144	134	1450	724	21596	23095	18299	4104
1974-75	0	0	5596	5224	147	1708	407	24801	16653	12517	4136
1975-76	0	0	5782	5092	178	1934	564	20339	17001	13947	3054
1976-77	0	0	5275	4775	203	2108	546	22775	19518	15997	3521

1977-78	0	0	5213	4464	186	2325	703	27727	21462	17369	4093
1978-79	0	0	5465	4977	152	2400	794	28002	26427	22103	4323
1979-80	0	0	6171	4412	162	2348	640	27217	27717	23472	4245
1980-81	9187	2649	5645	6727	146	2394	1030	21388	34301	29516	4785
1981-82	9349	2374	5633	5255	208	3452	1112	17427	36050	31152	4898
1982-83	9675	2176	5111	4878	151	3515	1199	17034	41520	36135	5385
1983-84	10874	2134	5524	4493	235	3798	1310	20700	40297	34747	5550
1984-85	12592	2120	5988	6389	224	4138	1688	19464	42827	37049	5778
1985-86	11845	2469	6240	6207	227	3998	1462	20031	46086	39516	6570
1986-87	13405	2424	8060	7560	239	4730	2085	18427	51313	44154	7160
1987-88	5392	3054	7813	7071	236	5300	1630	29514	48435	40184	8252
1988-89	20026	3548	8316	8324	158	7241	1670	28532	50314	41694	8619
1989-90	22409	3765	7295	10995	182	8266	2113	38521	47180	37474	9706
1990-91	22539	3823	7837	10138	157	7920	2066	47621	53753	42829	10924
1991-92	5267	4641	7987	12135	75	7727	2671	37466	53325	43574	9751
1992-93	16523	4740	10452	9076	73	11149	2295	49145	54963	42670	12293
1993-94	14432	3327	11148	11944	195	11979	4331	48304	54410	43497	10912
1994-95	24245	4337	9496	13179	136	12992	5081	46281	64305	51909	12397
1995-96	16483	4808	8929	13255	478	14267	6716	49562	62287	49656	12631
1996-97	4257	4139	9453	13983	-317	13085	6152	57218	60522	46265	14256
1997-98	28240	4251	8006	11815	574	14051	6255	67843	62923	43990	18933
1998-99	14149	4880	7660	15262	733	14411	6068	77608	79298	50091	29207
1999-00	40022	4232	8285	22024	411	19130	7343	115221	79522	53979	25543
2000-01	40414	6874	8232	24536	1560	29667	7298	112283	83707	58705	25001
2001-02	27391	7251	9985	20968	1717	25092	9292	160283	104906	68300	36606
2002-03	16545	4392	12427	29876	1595	16455	4593	157090	112773	72123	40650
2003-04	39116	7588	12809	31879	1493	8491	7143	146258	114113	69153	44960
2004-05	61257	10966	13124	36817	-343	18016	4399	151737	149525	86041	63484
2005-06	75113	16372	15044	41549	637	23999	7494	158265	178835	100937	77898
2006-07	100625	18283	166982	35658	752	22381	12126	157660	201268	115033	86235
2007-08	80391	20985	19308	45899	795	28936	11304	173540	237812	130486	107327
2008-09	109169	21351	23653	60036	1367	60937	8144	253262	236121	139995	96126
2009-10	91512	23247	25121	49553	1257	59175	8148	222262	255704	154144	101561
2010-11	143145	27719	22743	56147	1424	57781	12590	226151	287640	171811	115830

Panel B: Growth Rate#

Entire Period#	30.7***	26.6***	32.9***	6.9***	6.1***	9.0***	8.7***	6.7***	6.5***	5.4***	9.3***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Pre-Reforms#	55.5***	48***	1.1***	4.4***	0.7***	9.5***	9.9***	2.8***	4.9***	4.9***	5.3***
P-Value	(0.000)	(0.000)	(0.309)	(0.000)	(0.589)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Post-Refor#	1.7***	1.7***	7.1***	9.9***	12.4***	8.5***	7.2***	11.3***	8.3***	6***	14***

P-Value	(0.000)	(0.719)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
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Notes: i) **, and *** represent significance at 10, 5 and 1 percentage levels of significance, respectively.

Source: a) Economic Intelligence Services (2012) b) Growth are computed by Author

Year	GCF TRADE	GCF HOTELS & RESTAURANTS	GCF Railway	GCF TRANSPORT BY OTHER MEANS	CGF STORAGE	GCF COMMUNICATION	GCF BANKING & INSURANCE	GCF REAL ESTATE OWNERSHIP of DWELL.& BUSINESS	CGF COMMUNITY SERVICES & PERSONAL SERVICES	GCF PUBLIC ADMINISTRATION & DEFENCE	GCF OTHER SERVICES
1970-71	0	0	5905	3608	152	1043	479	20300	15966	13136	2830
1971-72	0	0	6346	3584	145	1493	615	22774	19986	16788	3198
1972-73	0	0	6318	4490	146	1715	419	22757	24704	20266	4438
1973-74	0	0	5923	4144	134	1450	724	21596	23095	18299	4104
1974-75	0	0	5596	5224	147	1708	407	24801	16653	12517	4136
1975-76	0	0	5782	5092	178	1934	564	20339	17001	13947	3054
1976-77	0	0	5275	4775	203	2108	546	22775	19518	15997	3521
1977-78	0	0	5213	4464	186	2325	703	27727	21462	17369	4093
1978-79	0	0	5465	4977	152	2400	794	28002	26427	22103	4323
1979-80	0	0	6171	4412	162	2348	640	27217	27717	23472	4245
1980-81	9187	2649	5645	6727	146	2394	1030	21388	34301	29516	4785
1981-82	9349	2374	5633	5255	208	3452	1112	17427	36050	31152	4898
1982-83	9675	2176	5111	4878	151	3515	1199	17034	41520	36135	5385
1983-84	10874	2134	5524	4493	235	3798	1310	20700	40297	34747	5550
1984-85	12592	2120	5988	6389	224	4138	1688	19464	42827	37049	5778
1985-86	11845	2469	6240	6207	227	3998	1462	20031	46086	39516	6570
1986-87	13405	2424	8060	7560	239	4730	2085	18427	51313	44154	7160
1987-88	5392	3054	7813	7071	236	5300	1630	29514	48435	40184	8252
1988-89	20026	3548	8316	8324	158	7241	1670	28532	50314	41694	8619
1989-90	22409	3765	7295	10995	182	8266	2113	38521	47180	37474	9706
1990-91	22539	3823	7837	10138	157	7920	2066	47621	53753	42829	10924
1991-92	5267	4641	7987	12135	75	7727	2671	37466	53325	43574	9751
1992-93	16523	4740	10452	9076	73	11149	2295	49145	54963	42670	12293
1993-94	14432	3327	11148	11944	195	11979	4331	48304	54410	43497	10912
1994-95	24245	4337	9496	13179	136	12992	5081	46281	64305	51909	12397
1995-96	16483	4808	8929	13255	478	14267	6716	49562	62287	49656	12631
1996-97	4257	4139	9453	13983	-317	13085	6152	57218	60522	46265	14256
1997-98	28240	4251	8006	11815	574	14051	6255	67843	62923	43990	18933
1998-99	14149	4880	7660	15262	733	14411	6068	77608	79298	50091	29207
1999-00	40022	4232	8285	22024	411	19130	7343	115221	79522	53979	25543
2000-01	40414	6874	8232	24536	1560	29667	7298	112283	83707	58705	25001

2001-02	27391	7251	9985	20968	1717	25092	9292	160283	104906	68300	36606
2002-03	16545	4392	12427	29876	1595	16455	4593	157090	112773	72123	40650
2003-04	39116	7588	12809	31879	1493	8491	7143	146258	114113	69153	44960
2004-05	61257	10966	13124	36817	-343	18016	4399	151737	149525	86041	63484
2005-06	75113	16372	15044	41549	637	23999	7494	158265	178835	100937	77898
2006-07	100625	18283	166982	35658	752	22381	12126	157660	201268	115033	86235
2007-08	80391	20985	19308	45899	795	28936	11304	173540	237812	130486	107327
2008-09	109169	21351	23653	60036	1367	60937	8144	253262	236121	139995	96126
2009-10	91512	23247	25121	49553	1257	59175	8148	222262	255704	154144	101561
2010-11	143145	27719	22743	56147	1424	57781	12590	226151	287640	171811	115830

Panel B: Growth Rate#

Entire Period#	30.7***	26.6***	32.9***	6.9***	6.1***	9.0***	8.7***	6.7***	6.5***	5.4***	9.3***
P-Value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Pre-Reforms#	55.5***	48***	1.1***	4.4***	0.7***	9.5***	9.9***	2.8***	4.9***	4.9***	5.3***
P-Value	(0.000)	(0.000)	(0.309)	(0.000)	(0.589)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Post-Refor#	1.7***	1.7***	7.1***	9.9***	12.4***	8.5***	7.2***	11.3***	8.3***	6***	14***
P-Value	(0.000)	(0.719)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Notes: i) *, **, and *** represent significance at 10, 5 and 1 percentage levels of significance, respectively.

Source: a) Economic Intelligence Services (2012) b) Growth are computed by Author

Table 8: Share of Assets and Institution Components in GDP in India (Rs.crore)

YEAR	Panel A: Gross Capital Formation		
	PUBLIC SECTOR	PRIVET SECTOR	HOUSEHOLD SECTOR
1970-71	6.39	2.29	6.63
1971-72	7.06	2.49	7.2
1972-73	7.6	2.52	5.7
1973-74	7.56	2.53	6.44
1974-75	7.29	3.49	7.8
1975-76	9.05	2.65	6.77
1976-77	9.82	1.51	6.8
1977-78	8.41	2.36	7.39
1978-79	9.37	2.07	8.57
1979-80	10.24	2.56	8.16
1980-81	9.17	2.52	6.35
1981-82	11.02	5.47	5.35
1982-83	11.91	5.45	4.7
1983-84	10.72	3.3	5.96
1984-85	11.5	4.23	5.81
1985-86	11.92	5.29	6.26
1986-87	12.54	5.13	5.8
1987-88	10.78	3.45	8.28
1988-89	10.77	3.94	9.13
1989-90	10.8	4.15	8.96
1990-91	10.58	4.27	10.06
1991-92	10.16	5.87	6.46
1992-93	9.54	6.63	8.08
1993-94	9.12	5.8	6.36
1994-95	9.71	7.13	6.35

1995-96	8.57	9.92	7.57
1996-97	7.8	8.41	5.85
1997-98	7.4	8.38	8.74
1998-99	7.26	6.73	9.52
1999-00	7.66	6.99	11.54
2000-01	7.16	4.91	11.46
2001-02	7.21	5.16	12.68
2002-03	6.46	5.73	12.29
2003-04	6.62	6.56	12.13
2004-05	7.42	10.33	13.44
2005-06	7.94	13.56	11.66
2006-07	8.3	14.53	11.88
2007-08	8.86	17.31	10.79
2008-09	9.44	11.3	13.5
2009-10	9.16	12.71	12.44
2010-11	8.81	12.1	12.79

Panel B: Growth Rate#

Entire Period#	-0.26	4.53***	1.89***
P-Value	(0.274)	(0.000)	(0.000)
Pre-Reforms#	-1.15***	4.40***	0.40
P-Value	(0.013)	(0.000)	(0.415)
Post-Reforms#	-1.91***	4.67***	3.62***
P-Value	(0.000)	(0.000)	(0.000)

Notes: i) *, **, and *** represent significance at 10, 5 and 1 percentage levels of significance, respectively.

Source: a) Economic Intelligence Services (2012) b) Growth are computed by Author

Table 9: Share of Agriculture Components in GCF in India (Rs.crore)

Panel A: Gross Capital Formation			
YEAR	GCF AGRICULTURE	CGF FOR-ESTRY & LOGGING	GCF FISHING
1970-71	15.81	0.26	0.34
1971-72	15.26	0.26	0.33
1972-73	16.74	0.22	0.34
1973-74	15.46	0.19	0.32
1974-75	12.7	0.16	0.33
1975-76	13.88	0.17	0.29
1976-77	16.71	0.27	0.31
1977-78	15.82	0.27	0.32
1978-79	16.35	0.27	0.23
1979-80	16.25	0.27	0.23
1980-81	15.09	0.35	0.22
1981-82	10.13	0.27	0.17
1982-83	10.37	0.3	0.2
1983-84	11.44	0.46	0.27
1984-85	9.86	0.38	0.25
1985-86	8.81	0.28	0.23
1986-87	8.61	0.29	0.26
1987-88	10.93	0.29	0.41
1988-89	9	0.26	0.32
1989-90	8.65	0.3	0.33
1990-91	11.72	0.29	0.34
1991-92	8.89	0.27	0.32
1992-93	9.9	0.22	0.35
1993-94	9.24	0.23	0.39
1994-95	7.54	0.2	0.34
1995-96	6.27	0.18	0.3

1996-97	7.75	0.21	0.38
1997-98	7.28	0.21	0.41
1998-99	7.78	0.23	0.5
1999-00	9.91	0.19	0.67
2000-01	9.48	0.19	0.7
2001-02	11.1	0.18	0.91
2002-03	9.86	0.14	0.9
2003-04	8.34	0.24	0.71
2004-05	6.84	0.1	0.59
2005-06	6.69	0.11	0.55
2006-07	6.16	0.11	0.51
2007-08	6.14	0.07	48
2008-09	7.71	0.07	0.54
2009-10	7.6	0.06	0.53
2010-11	7.6	0.06	0.52

Panel B: Growth Rate#

Entire Period#	-2.18***	-2.79***	3.78***
P-Value	(0.000)	(0.000)	(0.000)
Pre-Reforms#	-3.16***	1.62***	0.10
P-Value	(0.000)	(0.013)	(0.958)
Post-Reforms#	-1.05**	-7.91***	1.00***
P-Value	(0.040)	(0.000)	(0.001)

Notes: i) *, **, and *** represent significance at 10, 5 and 1 percentage levels of significance, respectively.

Source: a) Economic Intelligence Services (2012) b) Growth are computed by Author

Table 10: Share of Industry Components in GCF in India (Rs.crore)

Panel A: Gross Capital Formation				
YEAR	GCF MINING & QUARRYING	GCF MANUFACTURING	GCF ELECTRICITY GAS & WATER SUPPLY	GCF CONSTRUCTION
1970-71	1.53	31.41	8.96	2.4
1971-72	2.21	29.53	7.93	2.59
1972-73	1.59	25.41	7.99	2.46
1973-74	3.03	30.13	6.54	2.11
1974-75	3.77	36.6	6.52	1.93
1975-76	7.37	30.17	9.31	1.74
1976-77	5.64	27	9.55	2.55
1977-78	3.7	29.42	10.26	3.02
1978-79	2.98	31.83	9.78	2.08
1979-80	4.5	28.45	10.3	2.33
1980-81	3.72	22.97	11.41	2.6
1981-82	4.47	36.12	10.38	3.18
1982-83	7.26	31.85	10.85	2.4
1983-84	6.51	29.76	10.91	1.55
1984-85	5.38	33.66	9.93	1.77
1985-86	6	36.28	10.25	1.71
1986-87	5.99	32.28	12.23	1.26
1987-88	4.24	29.14	13.03	1.9
1988-89	4.85	32.34	11.22	1.25
1989-90	5.58	30.12	10.64	1.92
1990-91	4.82	29.39	10.2	1.92
1991-92	4.48	33.72	12.71	1.25
1992-93	3.69	34.62	9.99	1.72
1993-94	3.64	31.06	11.07	1.45
1994-95	6.77	32.63	9.2	1.7
1995-96	3.8	45.36	7.48	2.26
1996-97	2.08	43.23	9.19	1.42
1997-98	2.17	41.86	7.96	2.56
1998-99	2.16	39.43	8.47	2.48
1999-00	1.87	34.73	6.34	1.91
2000-01	1.34	27.82	7.16	2.76
2001-02	1.74	21.47	6.84	5.23
2002-03	1.73	26.46	6.29	4.99
2003-04	2.52	28.44	7.06	5.54
2004-05	3.69	34.07	5.27	5.38
2005-06	4.44	34.11	5.5	4.85

2006-07	4.51	34.29	5.61	6.98	
2007-08	4.27	37.29	5.33	7.14	
2008-09	3.56	25.57	6.13	5.55	
2009-10	3.85	33.09	5.84	4.85	
2010-11	3.76	31.75	5.35	4.96	
Panel B: Growth Rate#					
Entire Period#	-0.48	0.22	-1.30***	2.36***	
P-Value	(0.429)	(0.267)	(0.000)	(0.000)	
Pre-Reforms#	1.53	0.81*	1.53***	-2.76***	
P-Value	(0.225)	(0.061)	(0.000)	(0.000)	
Post-Reforms#	-2.83**	0.44**	-6.11***	8.31***	
P-Value	(0.051)	(0.035)	(0.000)	(0.000)	
Notes: i) *, **, and *** represent significance at 10, 5 and 1 percentage levels of significance, respectively.					
Source: a) Economic Intelligence Services (2012) b) Growth are computed by Author					

Table 11: Share of Services (Rs.crore)											
Components in GFC in India											
Panel A: Gross Capital Formation											
Year	GCF TRADE	GCF HOTELS & RESTAURANTS	GCF Railway	GCF TRANSPORT BY OTHER MEANS	CGF STORAGE	GCF COMMUNICATION	GCF BANKING & INSURANCE	GCF REAL ESTATE OWNERSHIP OF DWELL. & BUSINESS	CGF COMMUNITY SERVICES & PERSONAL SERVICES	GCF PUBLIC ADMINISTRATION & DEFENCE	GCF OTHER SERVICES
1970-71	0	0	4.55	3.93	0.11	0.9	0.47	11.73	11.61	9.36	2.25
1971-72	0	0	4.62	3.64	0.09	1.11	0.54	11.43	13.48	11.18	2.31
1972-73	0	0	4.77	4.77	0.1	1.57	0.38	11.87	17.16	13.96	3.21
1973-74	0	0	3.99	3.74	0.09	1.12	0.6	10.71	14.74	11.99	2.76
1974-75	0	0	3.36	4.17	0.08	1.13	0.31	11.49	9.33	6.9	2.43
1975-76	0	0	3.45	4.34	0.09	1.34	0.43	9.91	9.88	7.96	1.92
1976-77	0	0	3	3.75	0.12	1.49	0.4	10.59	11.28	9.12	2.17
1977-78	0	0	2.72	3.25	0.1	1.39	0.48	11.24	11.92	9.54	2.38
1978-79	0	0	2.55	3.25	0.07	1.33	0.49	10.45	12.61	10.37	2.24
1979-80	0	0	3.03	3.09	0.07	1.22	0.4	10.86	13.14	10.96	2.18
1980-81	5.13	1.86	2.99	5.13	0.07	1.29	0.6	9.31	17.28	16.45	2.63
1981-82	4.51	1.38	2.51	3.14	0.08	1.44	0.5	6.62	15.11	13	2.1
1982-83	4.76	1.23	2.4	2.68	0.05	1.4	0.54	6.55	17.16	14.9	2.26
1983-84	5.54	1.22	2.57	2.4	0.09	1.58	0.59	8.23	16.87	14.46	2.41
1984-85	5.86	1.09	2.53	3.1	0.08	1.61	0.67	7.21	16.62	14.31	2.31
1985-86	4.69	1.12	2.46	2.72	0.07	1.42	0.59	6.97	16.44	14.01	2.43
1986-87	5.15	1.05	3.03	3.34	0.07	1.51	0.76	6.38	17.79	15.2	2.59
1987-88	2.07	1.34	2.58	3.07	0.07	1.78	0.58	10.58	16.99	13.94	3.05
1988-89	6.67	1.36	2.51	3.21	0.04	2.13	0.54	8.64	15.66	12.85	2.8
1989-90	6.97	1.36	2.17	4.16	0.05	2.35	0.66	10.37	14.37	11.33	3.04
1990-91	6.4	1.22	2.08	3.38	0.04	2.04	0.58	11.12	14.47	11.4	3.08
1991-92	1.54	1.61	2.17	4.36	0.02	2.2	0.81	9.96	15.7	12.75	2.95
1992-93	4.24	1.43	2.59	2.84	0.02	2.75	0.65	11.17	13.82	10.55	3.26
1993-94	4.06	1.09	2.92	3.89	0.05	3.15	1.01	12.24	14.52	11.41	3.11
1994-95	5.9	1.18	2.03	3.61	0.03	3.03	1.26	9.77	14.81	11.78	3.03
1995-96	3.25	1.07	1.61	2.98	0.1	2.75	1.39	9.04	12.15	9.56	2.59

1996-97	0.75	0.98	1.88	3.42	-0.07	2.86	1.4	11.35	13.16	9.97	3.19
1997-98	5.19	0.82	1.3	2.43	0.11	2.7	1.21	11.98	11.82	8.27	3.54
1998-99	2.57	0.9	1.17	2.98	0.13	2.62	1.13	13.07	14.39	9.1	5.29
1999-00	5.98	0.67	1.01	3.59	0.06	2.95	1.16	16.72	12.25	8.31	3.94
2000-01	6.57	1.13	1.06	4.35	0.25	4.88	1.26	17.24	13.79	9.64	4.15
2001-02	3.91	1.07	1.15	3.32	0.25	3.75	1.41	22.05	15.6	10.12	5.48
2002-03	2.28	0.64	1.46	4.54	0.23	2.42	0.67	21.05	16.33	10.46	5.87
2003-04	4.97	0.98	1.51	4.22	0.2	1.12	0.93	18.34	14.89	9.05	5.84
2004-05	6.06	0.08	1.3	3.64	-0.03	1.78	0.44	15.01	14.79	8.51	6.28
2005-06	6.36	1.38	1.26	3.49	0.05	2.05	0.64	13.37	15.15	8.57	6.58
2006-07	7.5	1.35	1.23	2.53	0.06	1.64	0.88	11.8	14.85	8.55	6.3
2007-08	5.19	1.32	1.21	2.72	0.05	1.77	0.7	11.35	14.98	8.32	6.66
2008-09	7.3	1.39	1.54	3.59	0.09	3.7	0.5	17.34	15.4	9.3	6.1
2009-10	5.57	1.37	1.43	2.69	0.08	3.36	0.44	13.79	15.46	9.58	5.87
2010-11	7.98	1.49	1.16	2.7	0.08	2.98	0.63	12.96	16.04	9.9	6.13

Panel B: Growth Rate#

Entire Period#	0.00*** ***	-1.78	-3.35***	-0.44*	0.20	2.43***	1.72***	1.30***	0.35*	2.94***	-0.63***
P-Value	(0.000)	(0.121)	(0.000)	(0.084)	(0.799)	(0.000)	(0.001)	(0.000)	(0.070)	(0.020)	(0.000)
Pre-Re-forms#	-5.07	-2.15	-3.45***	-0.67	-3.71***	4.28***	4.50***	-0.34	0.80**	1.05***	0.75
P-Value	(0.180)	(0.585)	(0.000)	(0.208)	(0.017)	(0.000)	(0.000)	(0.604)	(0.056)	(0.010)	(0.135)
Post-Re-form#	2.88	-1.63	-3.23***	-0.16	4.77***	0.30	-1.50	3.21***	-0.15	5.14***	-2.24***
P-Value	(0.135)	(0.387)	(0.000)	(0.783)	(0.007)	(0.717)	(0.123)	(0.000)	(0.746)	(0.000)	(0.000)

Notes: i) *, **, and *** represent significance at 10, 5 and 1 percentage levels of significance, respectively.

Source: a) Economic Intelligence Services (2012) b) Growth are computed by Author

Table 12: Rank of Sectors and Sub-Sectors in Terms of Share of Gross Capital Formation

Sectors	Pre-reform period	Post-reform period	Entire periods
Agriculture			
Agriculture	-3.16 (3)	-1.05 (2)	-2.18 (2)
Forestry & Logging	1.62 (1)	-7.91 (3)	-2.79 (3)
Fishing	0.1 (2)	1 (1)	3.78 (1)
Industry			
Mining and Quarrying	1.53 (1)	-2.83 (3)	0.48 (2)
Manufacture	0.81 (3)	0.44 (2)	0.22 (3)
Electricity, Gas and Water Supply	1.53 (2)	-6.11 (4)	-1.3 (4)
Construction	-2.76 (4)	8.31 (1)	2.36 (1)
Services			
Trade	-5.07 (11)	2.88 (4)	0 (7)
Hotel and Restaurants	-2.15 (8)	-1/63 (9)	-1.78 (10)
Railway	-3.45 (10)	-3.23 (11)	-3.35 (11)
Transport by Other means	-0.67 (7)	-0.16 (7)	-0.44 (8)
Storage	-3.71 (9)	4.77 (2)	0.2 (4)
Communication	4.28 (2)	0.3 (5)	2.43 (2)
Banking and Insurance	4.50 (1)	-1.5 (8)	1.72 (3)
Real estate, Ownership of Dwelling & Business Services	-0.34 (6)	3.21 (3)	1.30 (4)
Community Services and Personal Services	0.8 (4)	-0.15 (6)	0.35 (5)
Public Administration & Defenses	0.75 (5)	-2.24 (10)	-0.63 (9)
Other Services	1.05 (3)	5.14 (1)	2.94 (1)

Source: Author's Calculations

Table 13: Rank of Sub-Sectors in Terms of Growth Rate of Investment

Sectors	Pre-reform period	Post-reform period	Entire periods
Agriculture			
Agriculture	11.38 (3)	13.52 (3)	12.37 (3)
Forestry and Logging	15.78 (1)	86.99 (1)	12.49 (2)
Fishing	15.37 (2)	18.89 (2)	16.99 (1)
Industry			
Mining and Quarrying	16.15 (1)	11.64 (4)	14.06 (3)
Manufacture	15.36 (3)	14.13 (3)	14.79 (2)
Electricity, Gas and Water Supply	16.07 (2)	99.98(1)	13.26 (4)
Construction	11.97 (4)	22.89 (2)	16.93 (1)
Services			
Trade	12.51 (11)	25.39 (1)	15.39 (5)
Hotel and Restaurants	11.83 (9)	22.10 (2)	14.13 (9)
Railway	11.10 (10)	11.34 (11)	11.21 (11)
Transport by Other means	12.65 (7)	15.92 (6)	14.16 (8)
Storage	10.74 (11)	19.39 (4)	14.73 (7)
Communication	18.82 (2)	14.88 (7)	16.99 (2)
Banking and Insurance	19.03 (1)	13.08 (9)	16.27 (3)
Real estate, Ownership of Dwelling & Business Services	14.15 (6)	17.89 (5)	15.88 (4)
Community Services and Personal Services	15.34 (5)	14.43 (8)	14.92 (6)
Public Administration & defenses	15.30 (4)	12.21 (10)	13.87 (10)
Other Services	15.61 (3)	19.70 (3)	17.50 (1)

Source: Author's Calculations

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