

## A COMPARATIVE STUDY OF GROWTH RATE OF PER CAPITA INCOME AND NATIONAL INCOME BEFORE AND AFTER REFORMS PERIOD

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### ABSTRACT

*Per Capita Gross national income is one of the most important indicators for considering development of any country. After the Independence India adopted Controlled economy with public sector dominated set up. Initially first three decades were experienced with slow growth rate. First ten years after independence experienced as recovery period. 1960 to 1990 and 1990 to 2020 Researcher wanted to compare the situation of growth rate of per capita income. As India's Gross national product growth rate rose with high rate after reforms. Researcher is trying to study whether growth rate of per capita income is showing remarkable changes after reforms. This is the time to discuss real situation a just after 30 years of reforms and 30 years before reforms. Can we say that per capita income is also remarkable change. Researcher has studied the growth rate of per capita income from 1962 to 2020 and calculated standard deviation of each decade. She has tried to calculate the consistency of growth rate with the help of standard deviation of growth rate each of the decade It has been observed that growth rate of per capita income is not consistent. Researcher has also calculated standard deviation of growth rates of gross national income growth rate for each decade between 1960 to 2020. Researcher found less consistency in growth rate of per capita income as compared to gross national income.*

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**Keywords:** Gross National Income, Per Capita Income, Growth Rate, Reforms, Development.

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### Introduction

India is a developing economy. After the Independence India adopted mixed economy with dominating public sector. Initial years after independence growth rate of per capita was very low around 2 to 3 % only. First 30 years India experienced licensed Raj and fully controlled economy. Before the reforms our growth rates of national income was around In 1991 India adopted reforms and follow liberalized policy. Policy changed towards openness and rechannelization. After reforms our countries national income growth rate increased remarkably. In the case of per capita income growth rate has not same impact. Even some years we got negative growth rate of per capita income after reforms. There are many variations in the per capita income growth rates. It is not increasing in consistent way. It is the need to study whether per capita income growth rate is consistent.

### Relevance of the Study

After 30 years of reforms it should become mandatory to study that whether India's per capita income is increasing and with the similar growth as gross national income of India. Until unless per capita national income will not increase proportional to national income our country development will not become fruitful. Each and every citizen of the country should get the advantage of growth of national income.

### Statement of the Problem

As developing economy after the reforms government policies are making for development of the country. India's national income growth rate increased. Industrial sector, service sector grew very fast rate. But per capita income is not shown the same growth. Until unless every household of the country will not get the advantages of development and growth, country cannot be considered as growing. Per capita income should increase similar manner as National income. Per capita income growth rate is not symmetrical.

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### Objectives of Study

- To study the growth rates of gross national income of India from 1962 to 2020
- To study the growth rate of per capita national income of India from 1962 to 2020
- To study the comparison of growth rate of gross national income before and after reforms
- To study the comparison of growth rate of per capita national income before and after reforms

### Hypothesis

**H<sub>0</sub>:** Per capita national income growth rate is as consistent as Gross national income after reforms period.

**H<sub>1</sub>:** Per capita national income growth rate is not as consistent as Gross national income after reforms period.

### Research Methodology

Researcher has used secondary data for gross national income and per capita income from 1962 to 2020. Researcher compared the growth rate before and after reforms. She has calculated standard deviation of decadal growth rate for study of consistency. She has collected growth rate of national income as well as per capita income between time period of 1962 to 2020. She has tried to compare situation of thirty years before reforms and thirty after the reforms.

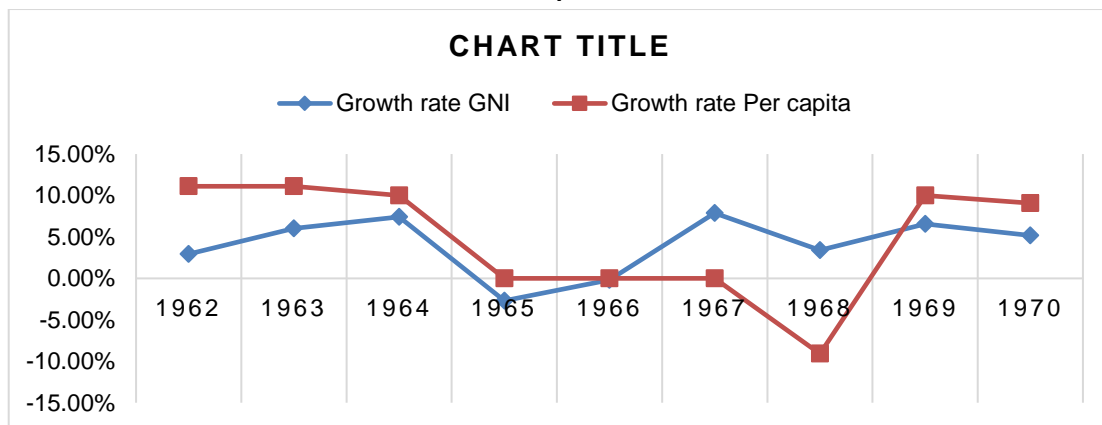
Researcher calculated standard deviation of growth rate of national income and per capita income for every decade. Researcher also calculated average growth rate of national income and per capita income for every decade.

### Analysis of Data

**Table 1: Growth Rate GNI & Per Capita Income**

Sr. No	Year	Growth Rate GNI	Growth Rate Per Capita
1	1962	2.92%	11.11%
2	1963	6.04%	11.11%
3	1964	7.40%	10.00%
4	1965	-2.69%	0.00%
5	1966	-0.19%	0.00%
6	1967	7.88%	0.00%
7	1968	3.41%	-9.09%
8	1969	6.57%	10.00%
9	1970	5.18%	9.09%

**Graph 1**



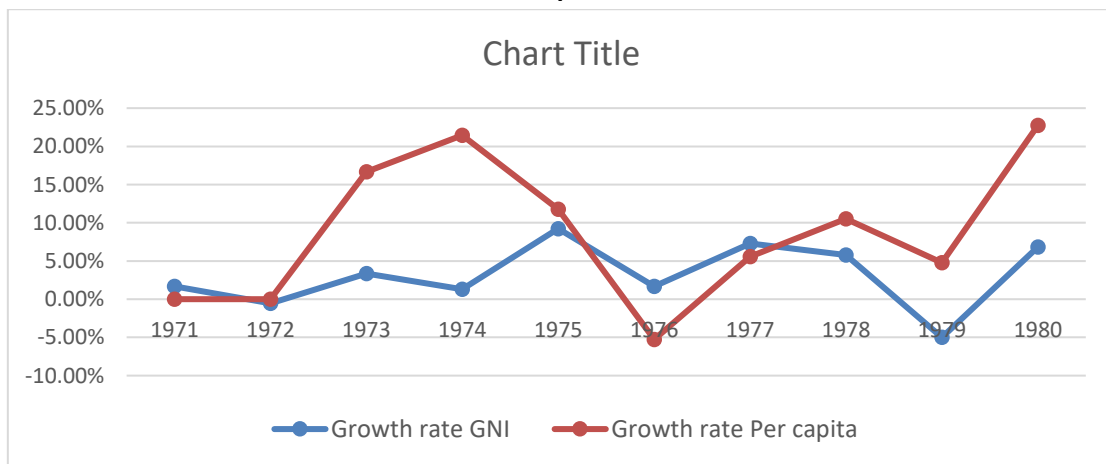
As table 1 we can see that per capita income growth rate is high as compared to gross national income between 1962 to 1964. Per capita income growth rate was negative only in 1968 around 9.09%. GNI growth rate was negative only in 1965 and 1966. Per capita GNI growth rate was zero for three years 1965 to 1967. Remarkable per capita GNI was in 1962 1963 1964 where Per capita growth rate was high as compared to Gross national product. Again in 1969 and 1970 growth rate of per capita was

high as compared to gross national Income. This decade per capita growth rate was good. average growth rate of national income and per capita income both were more or less equal. Around 4 %. Researcher calculated standard deviation of growth rate of both variables. Standard deviation value is higher in case of per capita income.

**Table 2: Growth Rate GNI & per Capita Income**

SR. No	Year	Growth Rate GNI	Growth Rate Per Capita
1	1971	1.67%	0.00%
2	1972	-0.53%	0.00%
3	1973	3.36%	16.67%
4	1974	1.32%	21.43%
5	1975	9.23%	11.76%
6	1976	1.69%	-5.26%
7	1977	7.28%	5.56%
8	1978	5.80%	10.53%
9	1979	-5.00%	4.76%
10	1980	6.85%	22.73%

**Graph 2**

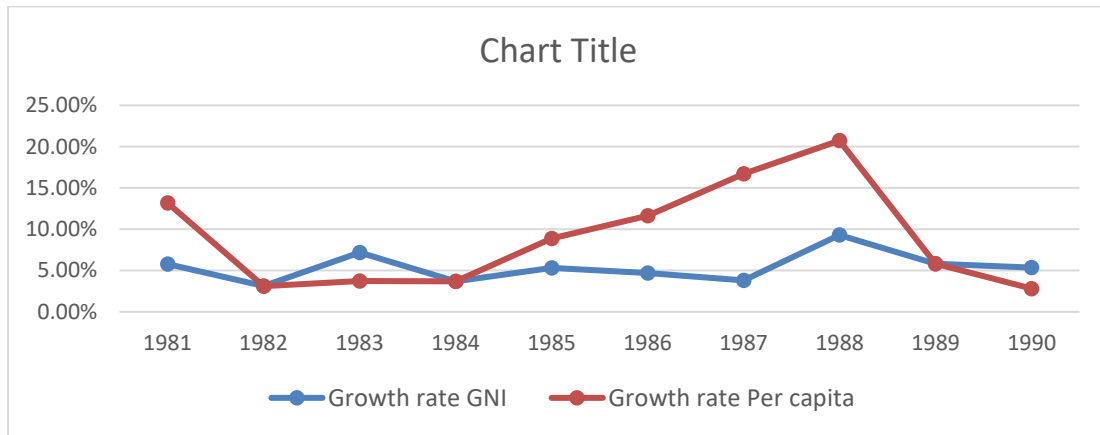


In the decade of 1971 to 1980 growth rate of per capita income was higher than national income for six years. In the year 1973 and 1974 and 1980 growth rate of per capita income more than 15%. It was very remarkably high. Growth rate of per capita income was negative in the year of 1976. We can see very fluctuations in the growth rate of per capita income. lowest value went for minus 5 and highest for around 22%. But for the two years 1971 and 1972 growth rate of per capita were 0, completely constant. In this decade growth rate of per capita , was mostly higher than national income except for three years. we can say it was good sign growth rate of per capita income was high as growth rate of national income. Average growth rate of this decade was around three percent for national Income and around eight percent for per capita income. So per capita average growth rate was high.

**Table 3: Growth Rate GNI & Per Capita Income**

Sr. No	Year	Growth Rate GNI	Growth Rate Per Capita
1	1981	5.79%	7.41%
2	1982	3.13%	0.00%
3	1983	7.19%	-3.45%
4	1984	3.68%	0.00%
5	1985	5.32%	3.57%
6	1986	4.72%	6.90%
7	1987	3.80%	12.90%
8	1988	9.30%	11.43%
9	1989	5.82%	0.00%
10	1990	5.38%	-2.56%

**Graph 3**

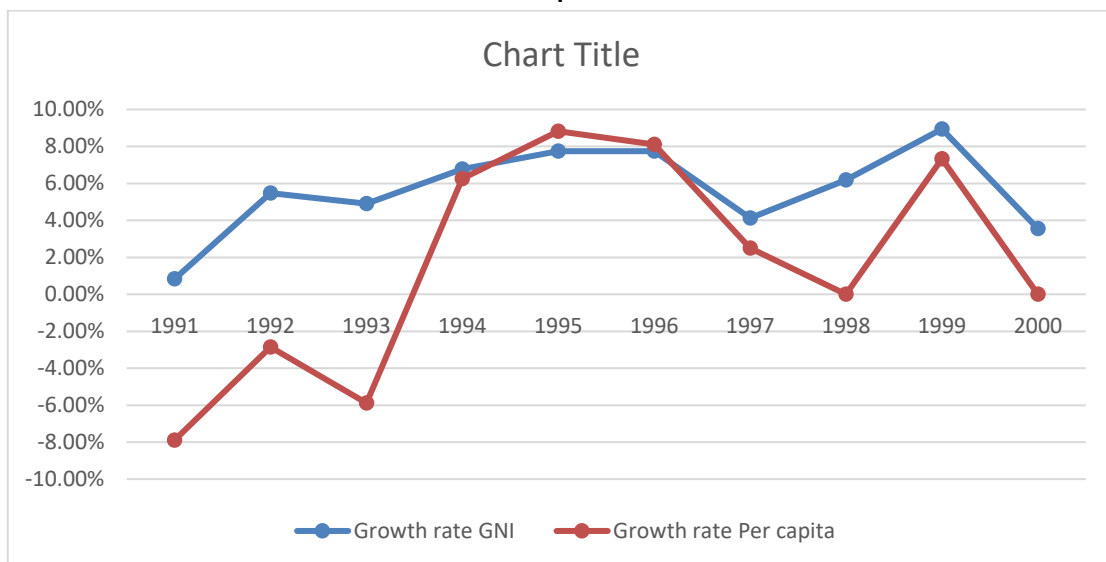


In the decade of 1981 to 1990 again per capita income growth rate was high in as compared to growth rate of national income. It was low only for two years. Per capita income was negative for two years. Growth of national income was in range between three to nine percent, the growth rate of per capita income was in range of minus three to twelve percent. This growth rate was not consistent. Average growth rate of this decade was around five percent for national Income and three percent for per capita income. So, on average growth rate of per capita income was low.

**Table 4: Growth Rate GNI & Per Capita Income**

Sr. No	Year	Growth Rate GNI	Growth Rate Per Capita
1	1991	0.83%	-7.89%
2	1992	5.48%	-2.86%
3	1993	4.90%	-5.88%
4	1994	6.78%	6.25%
5	1995	7.74%	8.82%
6	1996	7.74%	8.11%
7	1997	4.13%	2.50%
8	1998	6.19%	0.00%
9	1999	8.94%	7.32%
10	2000	3.56%	0.00%

**Graph 4**

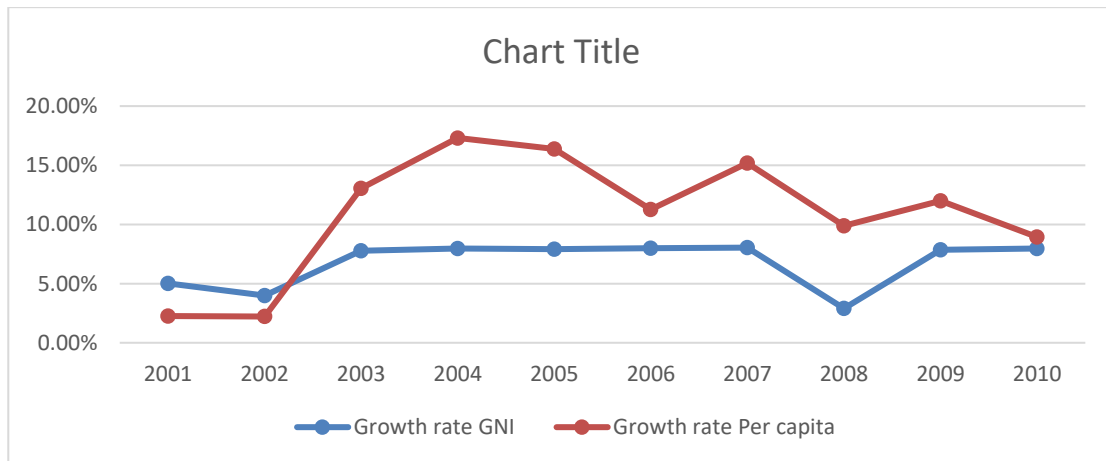


After the reforms in the decade 1991 to 2000 growth rate of per capita more of less low as compared to growth rate of national income. Growth rate of per capita income was negative for three years, even every year in above decade growth rate of national income was positive. Range of growth rate of national income was between one percent to eight percent while growth rate of per capita income minus seven to eight percent. Average growth rate of national income around five percent but average growth rate of per capita income was only around one percent. we can say after first decade of reforms per capita income was not growing as expectations.

**Table 5: Growth Rate GNI & Per Capita Income**

Sr. No	Year	Growth Rate GNI	Growth Rate Per Capita
1	2001	5.02%	2.27%
2	2002	3.99%	2.22%
3	2003	7.79%	13.04%
4	2004	7.96%	17.31%
5	2005	7.90%	16.39%
6	2006	7.99%	11.27%
7	2007	8.04%	15.19%
8	2008	2.90%	9.89%
9	2009	7.86%	12.00%
10	2010	7.97%	8.93%

**Graph 5**

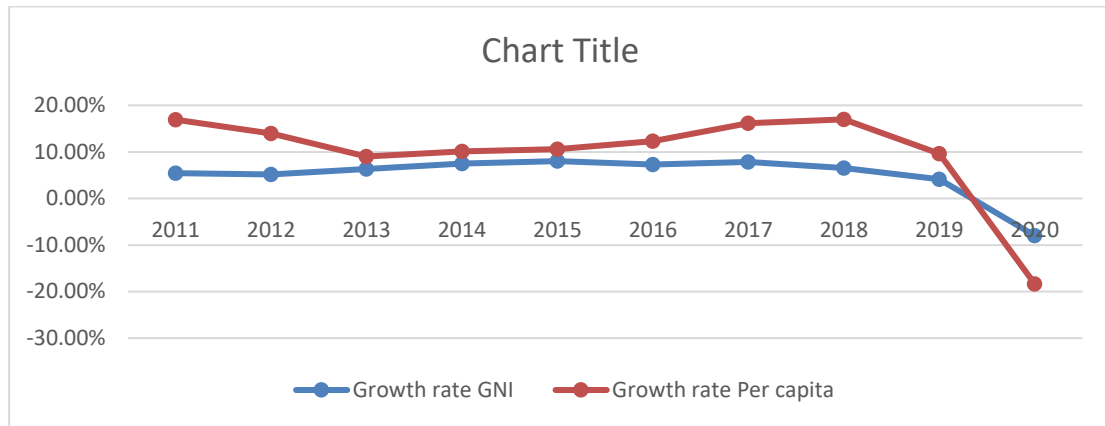


In the second decade of reforms growth rate of both national income and per capita income were positive only. One remarkable thing in this decade except first two years growth rate of per capita income was high as compared to national income. Range of growth rate of national income was between two percent to eight percent while growth rate of per capita income two to seventeen percent. Average growth rate of national income around six percent but average growth rate of per capita income was around ten percent. So this decade performance of per capita income was better than national income.

**Table 6: Growth Rate GNI & per Capita Income**

Sr. No	Year	Growth Rate GNI	Growth Rate Per Capita
1	2011	5.45%	11.48%
2	2012	5.14%	8.82%
3	2013	6.31%	2.70%
4	2014	7.49%	2.63%
5	2015	8.02%	2.56%
6	2016	7.30%	5.00%
7	2017	7.82%	8.33%
8	2018	6.55%	10.44%
9	2019	4.16%	5.47%
10	2020	-7.97%	-10.38%

Graph 6



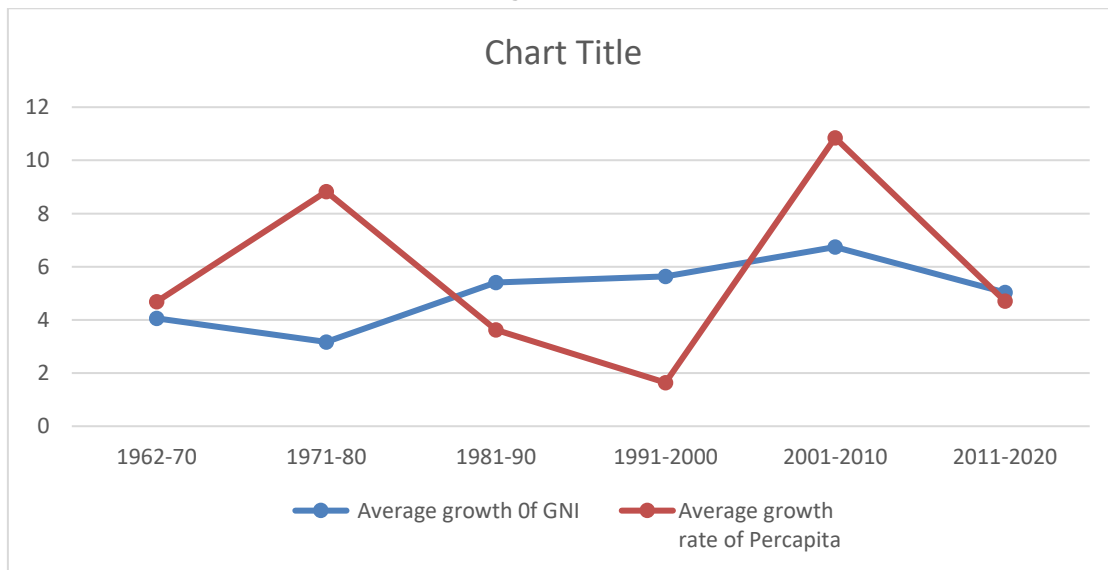
Impact of covid in the year 2020 growth rate of both national income and per capita income went negative. But other years performance was good. For the three years growth rate was low as compared to growth rate of national income. Range of growth rate of national income was between minus seven two percent to eight percent while growth rate of per capita income minus ten two to seventeen eleven percent. Average growth rate of national income around five percent but average growth rate of per capita income was around four percent.

Table 7: Average Growth Rate and Standard Deviation of National Income and Per Capita Income

Decade	Average GNI in B	Average Per Capita	Average Growth of GNI	Average Growth Rate of Per Capita	SD GNI	SD per Capita GNI
1962-70	\$53.47B	\$107	4.06	4.69	3.58	5.08
1971-80	\$116B	\$181	3.17	8.82	4.25	9.47
1981-90	\$261.35B	\$325	5.41	3.62	2.1	5.77
1991-2000	\$374.56B	\$382	5.63	1.64	2.4	5.97
2001-2010	\$911.40B	\$779	6.74	10.85	1.98	5.27
2011-2020	\$2253.47B	\$1,705	5.03	4.71	4.73	3.48

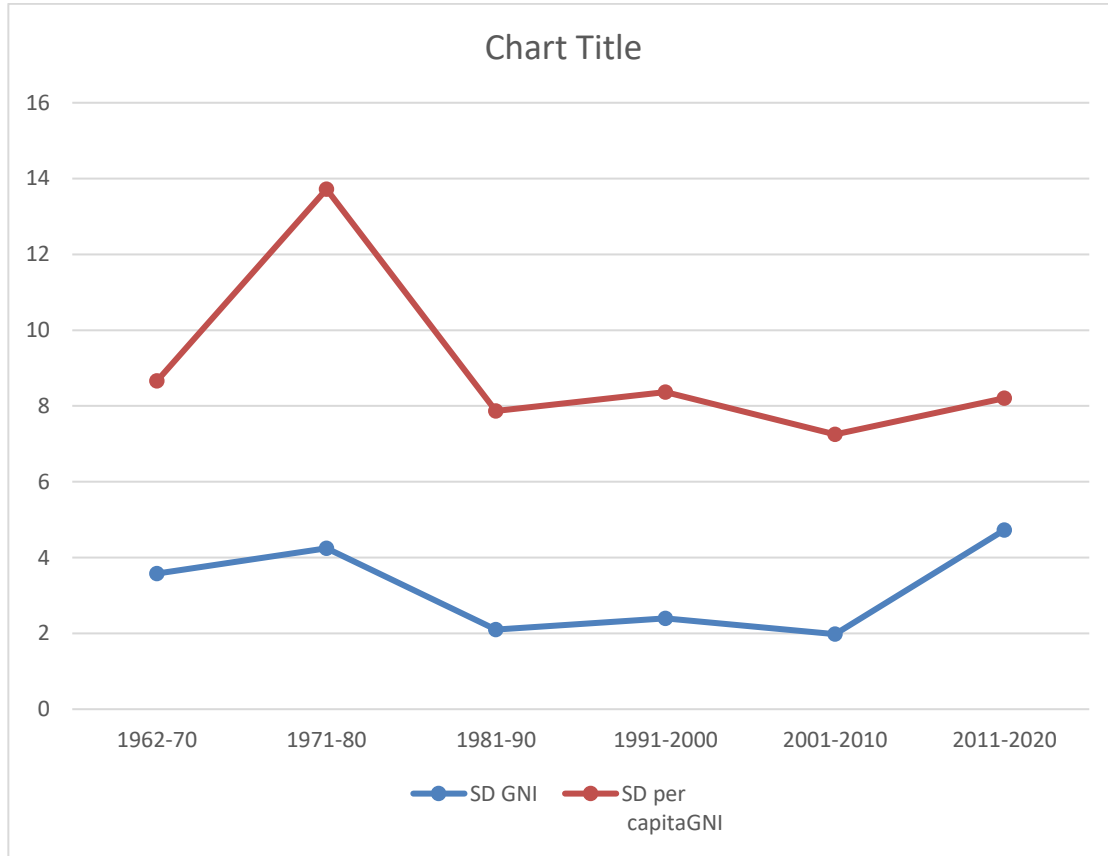
Graph 7

Average Growth Rate



Above table seven and graph seven average growth rate of per capita income is only for two decades high as compared to growth rate of national income. For four decades average growth rate of national income was high.

**Graph 8**  
**Standard Deviation of Growth Rate of National Income and Per Capita Income**



Above graph perfectly shows that standard deviation of growth rate of national income is less than growth rate of per capita income. That means there is more deviation in the case of per capita income growth, less consistency as compared to growth rate of national income.

#### Hypothesis Test

H<sub>0</sub>: Per capita national income growth rate is as consistent as growth rate of Gross National Income after reforms period

H<sub>1</sub>: Per capita national income growth rate is not as consistent as growth rate of Gross National Income after reforms period

#### Hypothesis H<sub>0</sub>

Null hypothesis rejected and alternate H<sub>1</sub> accepted that Per capita national income growth rate is not as consistent as growth rate of Gross National Income after reforms period.

#### Conclusion

After the study of the trends of the growth rate of national income and per capita income it can be concluded that there is no stability in growth rate of per capita income. Even author cannot observe any difference or remarkable performance in per capita income before and after reforms. There are very fluctuations in growth rate of per capita income. it is not showing exact same trend of national income. Author can say national income is performing well after the reforms. Remarkable reforms can be observed after 1991, but for per capita income remained with negative growth for some year even after reforms. The growing population cannot be the factor of such fluctuations.

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