

Performance of Tertiary Sector in J&K Economy (1981-2011)

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Abstract The Tertiary Sector (also known as the Services Sector) plays a pivotal role in the Jammu & Kashmir's economic development and constitutes a major part of the economy of the State both in terms of employment potential and its contribution to the State Income. In 2011, it constitutes more than 52 percent of the NSDP as well as 54 percent in employment share in the state economy. There is high degree of output and employment equality in the tertiary sector of the state economy which represents income and productivity equalities in the tertiary sector in the state economy. The study, as a whole, highlights the performance of tertiary sector in the state economy.

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Keywords: Tertiary sector, NSDP, Linking Factor, output and employment equality, Employment elasticity of output.

Introduction

Jammu and Kashmir State is the northernmost state of India. It is situated mostly in the Himalayan Mountains. J&K State shares a border with the states of Himachal Pradesh and Punjab to the south and internationally with China to the north and east and the Pakistan occupied Kashmir and Gilgit-Baluchistan, to the west and northwest respectively.

The Jammu and Kashmir state is bestowed with natural glamour of snow-clad mountains, lakes, streams and rare flora and fauna and holds a prospering tourism sector. Famous for small-scale and cottage industries including carpet weaving, silks, and copper and silverware, the state's economy is mainly dependent on tertiary sector in respect of both output and employment. Also, the state has concentration of a good mineral base and significant power potential.

The Tertiary Sector (also known as the Services Sector) has a pivotal role in the Jammu & Kashmir's economic development and constitutes a major part of the economy of the State both in terms of employment potential and its contribution to the State Income. The sector covers a wide range of activities from the most sophisticated in the field of Information and Communication Technology to simple services pursued by the unorganized/informal

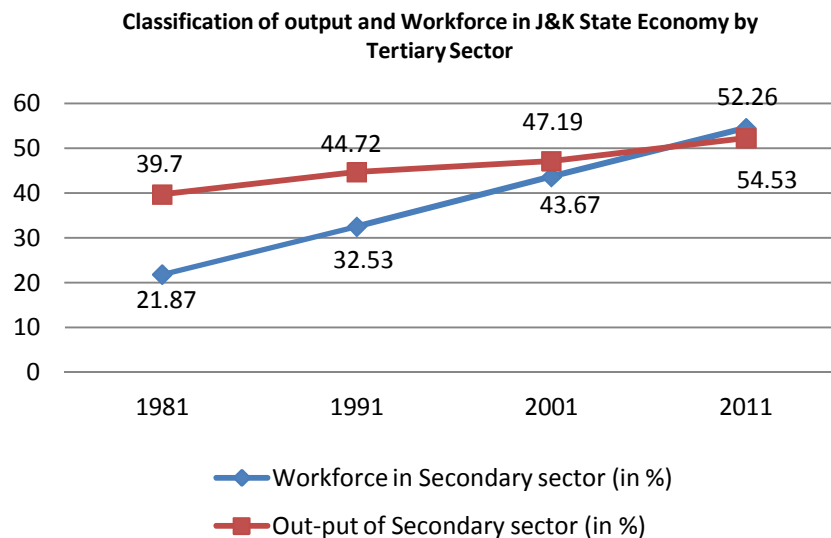
sector workers, such as, vegetable sellers, hawkers, rickshaw pullers, etc. The percentage contribution of tertiary Sector to NSDP indicates that Jammu & Kashmir economy is a service led economy. The percentage contribution of tertiary Sector to NSDP increases continuously during the period of analysis. It increases from 39.7 percent in 1980-81 to 44.71 in 1990-91 to 47.19 percent in 2000-01 and to 52.26 percent in 2010-11. There is a terrific and continuous rise in the percentage of labor force also employed in service sector since 1981 upto 2011. In 1981 the total labor force employed in tertiary sector was 21.87% which rises to 32.53%, 43.67% and 54.53% in 1991, 2001 and 2011 census respectively. The output and employment share move in the same direction. In other words, there is equality in the shift of out-put and employment in the tertiary sector of the economy which is a positive sign for the Jammu & Kashmir economy as it represents income and productivity equalities in the tertiary sector on the one hand and economy as a whole on the other hand. In terms of industrial categories, this sector inter-alia includes subsectors like 'Trade, Hotels and Restaurants', 'Transport, Storage and Communication', 'Banking and Insurance', 'Real estate, Ownership dwellings and business services', 'Public administration' and 'Other Service'.

Classification of output and Workforce in J&K State Economy by Tertiary

Year (Decadal)	1981	1991	2001	2011
Workforce in Secondary sector (in %)	21.87	32.53	43.67	54.53
Out-put of Secondary sector (in %)	39.7	44.72	47.19	52.26

Sources: (a) Compiled from Digest of Statistics, Directorate of Economics and Statistics, J&K Government, various issues. (b) Compiled from Census of India, various issues.

Note: Data for 1991 has been inter-polated by the researcher



From the above table and diagramme it becomes clear that the employment and the output share in the tertiary sector move in the same direction, but the speed of movement of employment percentage share is more rapid as compared to the output in the sector.

There is now a high degree of employment and output equality in the tertiary sector of the state economy which is a plus point for it.

Objectives

Some of the explicit objectives of the study are as under;

- 1) To analyze the changes in volume and composition of output in the tertiary sector of the state economy
- 2) To analyze the changes in volume and composition of employment in the tertiary sector of the state economy.
- 3) To examine the employment elasticity of output in the tertiary sector of the state economy.
- 4) To identify the determinants of and obstacles to the growth process of the state economy

Data and Methodology

The study is primarily based on the secondary data that is obtained from the following sources: -

- Economic census, Govt. of India, various issues.
- Digest of statistics; Directorate of Economics and Statistics; Govt. of J&K, various issues.
- Economic Survey; Directorate of Economics and Statistics; Govt. of J&K, various issues.
- Economic Review of J&K; Directorate of Economics and Statistics; Govt. of J&K, 2007-08.
- Reports, journals, magazines and news papers.

In addition to the above sources relevant information has been collected from the following departments:

- Directorate of Economics, Statistics & planning, Govt. of Jammu and Kashmir, Srinagar.
- Directorate of Sericulture, J&K, Srinagar.
- Directorate of Handicrafts, J&K, Srinagar.
- Directorate of Handlooms, J&K, Srinagar.
- Labour Commissioner, J&K, Srinagar.
- Financial Commissioner (Rev), J&K, Srinagar.
- D.F.O Forest Statics Division, Srinagar
- Directorates of Animal Husbandry, J&K, Srinagar.
- Development Commission of Power, J&K, Srinagar.

The following appropriate statistical tools have been used to analyze the data:

5) Linking Factor Method: It is a method through which base year is changed or rebase is formed. It is simply done by using the following two formulas:

a) Deflator = (Factor) × (Out-put level of the corresponding year)

Whereas; Factor = (Old Base) ÷ (New Base)

b) Inflater = (Factor) × (Out-put level of the corresponding year)

Whereas; Factor = (New Base) ÷ (Old Base)

7) Employment Elasticity of Out-put

It refers to the percentage change in employment as a result of a unit percentage change in out-put whereas other factors remain the same.

Mathematically we may express it as;

$$e = \%(\Delta E) \div \%(\Delta O)$$

$$e = (\Delta E / E) \div (\Delta O / O)$$

Whereas; e refers employment elasticity of output

Δ = change

E = employment

O = out-put

8) Growth Rate: Simple, average and compound growth rates have been calculated with the help of the following formulas:

a) Annual Growth Rate or Simple Growth Rate: The annual growth rates for a series of T annual observations, say $y_1, y_2, y_3, \dots, y_t$ is defined as

$$a_t = \frac{y_t - y_{t-1}}{y_{t-1}}$$

Whereas; y_t refers current year out-put

y_{t-1} refers previous year out-put

b) Average Annual Growth Rate: The average growth rate has been calculated with the help of following formula:

$$\text{Average Annual Growth Rate} = (1/T) * \text{Ln} (Y_t / Y_i) * 100$$

Whereas; T refers number of times we see increase or decrease over the time period.

Ln is the natural logarithm

Y_t refers variable in final time period

Y_i refers variable in initial time period

c) Compound Growth Rate: the compound growth rate (cgr) has been calculated with the help of exponential function which is as:

$$\text{Exponential function } y = ab^x$$

$$\text{The compound growth rate} = (b-1) * 100$$

Performance of Tertiary Sector

Table-1 shows the absolute sectoral share in NSDP in Rs.crores. At current prices,(in 1980-81) the absolute share of tertiary sector was Rs.1051.93 crores which increased to Rs.43716.38 crores in 2010-11, showing an increase of 41.56 times while as at constant prices (at 1993-94 prices), (in 1980-81) the absolute share of tertiary sector was Rs.3793.52 crores which increased to Rs.17380.16 crores in 2010-11, showing an increase of 4.58 times

Table-2 shows the sectoral share to NSDP in percentage. At current prices,(in 1980-81) the % share of tertiary sector to NSDP was 39.61% which increased to 49.95% in 2010-11, showing an increase of 10.34 percentage points while as at constant prices (at 1993-94 prices), (in 1980-81) the %share of tertiary sector was 39.70% which increased to 52.26% in 2010-11, showing an increase of 12.56 percentage points

Table-3 shows per capita income share of tertiary sector to NSDP in rupees. At current prices, (in 1980-81), the share of tertiary sector was Rs.1780 which increased to Rs.37496 in 2010-11, showing an increase of Rs.35716 (i.e. 21.07 times) while as at constant prices (at 1993-94 prices), (in 1980-81) the share of tertiary sector was Rs. 6419 which increased

to Rs.14907 in 2010-11, showing an increase of Rs.8488 (i.e.2.32) times.

During the first five year of reference time period, Average Annual Growth Rate of tertiary Sector to NSDP was 13.36 per cent at current prices which decreased to 8.85 per cent during the second five year which is the least in the entire reference period. However, during the third five year time period, average annual growth rate improved to 18.30 per cent which is the maximum growth rate during the reference period. It decreased to 14.99 percent during the fourth five year, 9.6 percent in fifth five year and finally increased back to 14.08 percent during the sixth five year of the reference period.

The average annual growth rate of tertiary sector in NSDP at current prices was 11.10 percent for the first decade (refer to table-4) while it reached to maximum level during the second decade (i.e. 16.65 percent) and finally it slumped down to 11.84 percent during the last and the final decade of the reference time period.

The average annual growth rate of tertiary sector in NSDP at current prices was 13.20 percent for the whole reference time period (refer to table-5)

Similarly, average annual growth rate of tertiary Sector in NSDP at constant prices rises continuously during the reference period. It was 3.40 percent during the first five year and increased continuously to the maximum 12.49 percent during the last five year.

The average annual growth rate of tertiary sector to NSDP at constant prices was 3.78 percent for the first decade (refer to table-4) while it improved continuously during the second (i.e.4.79 percent) and the third decade (i.e. 9.41 percent) of the reference time period.

The average annual growth rate of tertiary sector to NSDP at constant prices was 5.99 percent for the whole reference time period (refer to table-5)

The compound growth rate of tertiary sector in NSDP at current prices was 12.57 percent for the first decade (refer to table-4) while it reached to maximum level during the second decade (i.e. 18.92 percent) and finally it slumped down to 12.57 percent during the last and the final decade of the reference time period.

The compound growth rate of primary sector to NSDP at current prices was 14.25 percent for the whole reference time period (refer to table-5)

Similarly, the compound growth rate of tertiary sector to NSDP at constant prices was 3.57 percent for the first decade (refer to table-4) while it reached to maximum level during the third decade (i.e. 9.95 percent) and it slumped down to 5.25 percent during the second decade of the reference time period.

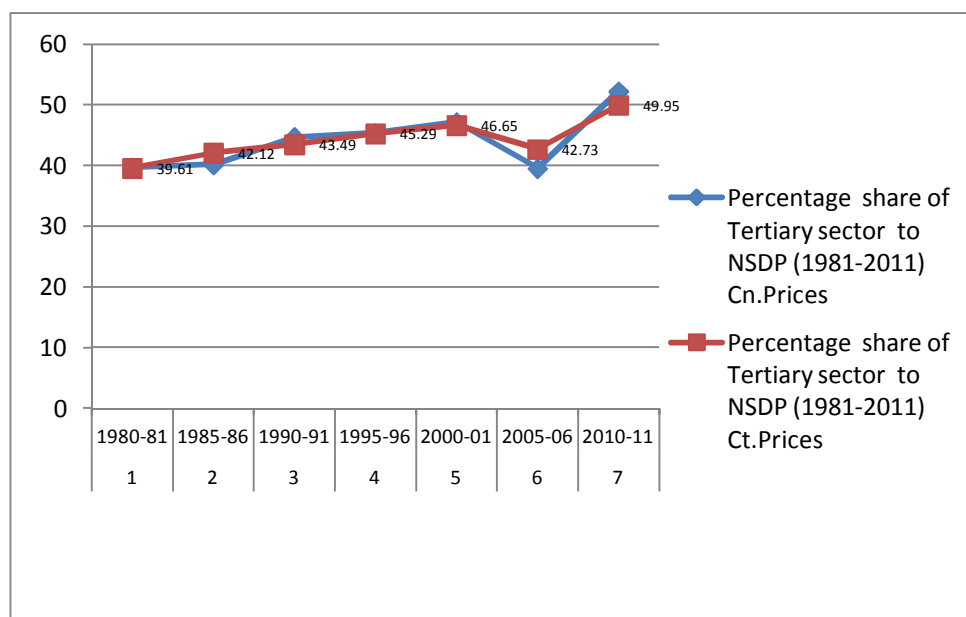
The compound growth rate of primary sector in NSDP at constant prices was 5.49 percent for the whole reference time period.

Percentage share of Tertiary sector to NSDP in Rs.crores (1981-2011)

Year	Tertiary Sector	
	Cn. Prices	Ct. Prices
1980-81	39.7	39.61
1985-86	40.16	42.12
1990-91	44.71	43.49
1995-96	45.36	45.29
2000-01	47.19	46.65
2005-06	39.56	42.73
2010-11	52.26	49.95

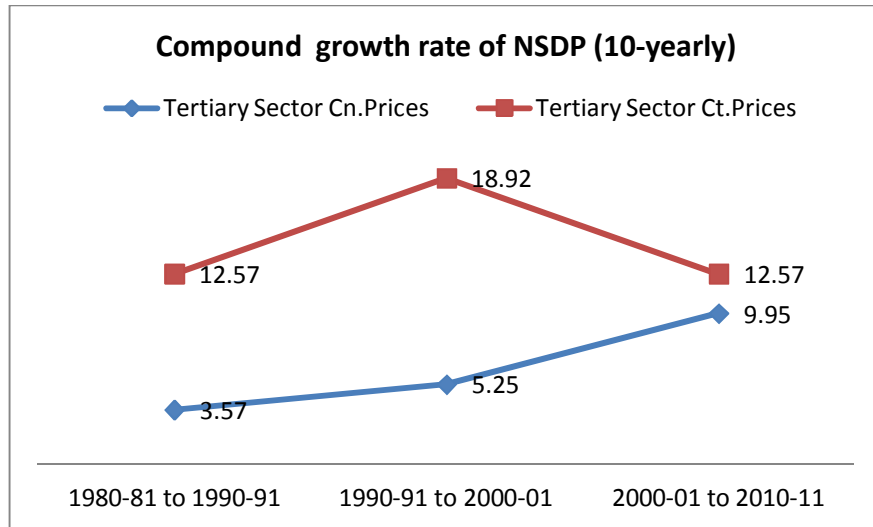
Sources:

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 - Compiled from *State Domestic Product, Directorate of Economics and Statistics, J&K Government, (1980-81 to 1996-97).*
 - Compiled from *State Domestic Product, Directorate of Economics and Statistics, J&K Government, (1993-94 to 1998-99)*
 - Computed from *The Economy of Jammu and Kashmir by Jasbir Singh.*
 - Note: Constant prices at 1993-94 which has been calculated by Linking Factor Method.
- Cn. =Constant
 - Ct. = Current



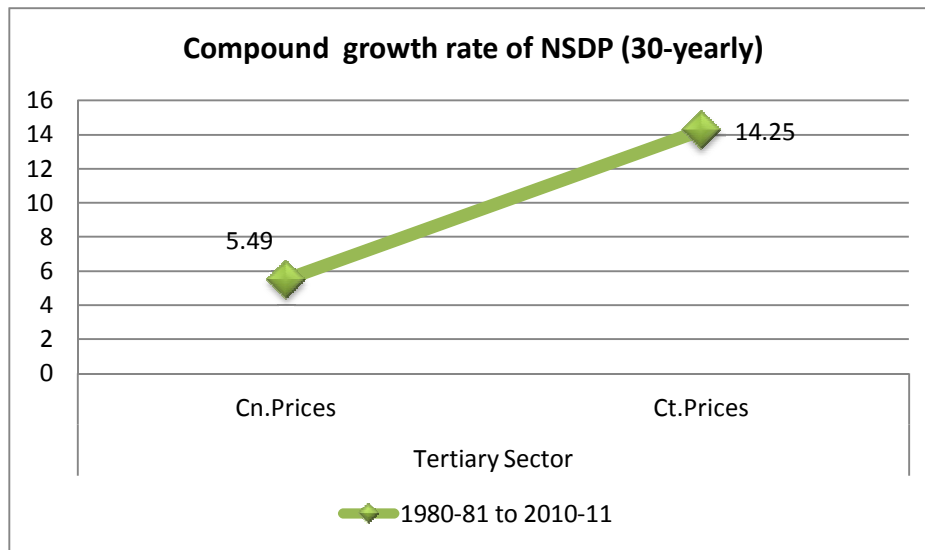
Compound growth rate of NSDP (10-yearly)

Year	Tertiary Sector		NSDP	
	Cn.Prices	Ct.Prices	Cn.Prices	Ct.Prices
1980-81 to 1990-91	3.57	12.57	2.16	10.81
1990-91 to 2000-01	5.25	18.92	4.62	18.15
2000-01 to 2010-11	9.95	12.57	9.49	11.95



Compound growth rate of NSDP (30-yearly)

Year	Tertiary Sector		NSDP	
	Cn.Prices	Ct.Prices	Cn.Prices	Ct.Prices
1980-81 to 2010-11	5.49	14.25	5.07	13.77



Employment Elasticity of Income of Tertiary sector

Sector	1981-1991	1991-2001	2001-2011
Tertiary Sector	0.62	0.34	0.13

The employment elasticity of the tertiary sector is also too low to be able to compensate for that change. But, it is the only key sector which has become the absorber of last resort.

Conclusion

The percentage contribution and the growth rate of the tertiary sector might have more than the existing contribution and the growth rate, but political turmoil hits its position. For example;

- Due to political turmoil the tourists flow slowed which reduced the demand for hotels and restaurants therefore hits its position in the cluster of the subsectors of the tertiary sector.
- Due to political turmoil the cellular private companies have invested in the late period which hits its position in the cluster of the subsectors of the tertiary sector.

- Due to political turmoil the private banker and insurance companies could not find feasible environment for their institutes therefore the sub-sector could not grow at the speed which were attainable for it.

- The percentage share to NSDP by public administration sector has increased continuously and gained the first rank in the sub-sectors of tertiary sector due to political instability as magnitude of administrative services are positively correlated to political instability. Therefore, this is the only sub-sector of the tertiary sector which got benefitted through political instability as political instability can be reduced by efficient administration.

- The percentage contribution and the growth rate of other subsectors of tertiary sector increases

continuously as because of sharp increase in the educational, medical & health services because of the pushing factors in the form of different schemes by the state government.

Spread of education in the state has made great strides during the past decades of planned development and considerable educational facilities are being made available even in remote, hilly and backward areas. Besides, mobile educational institutions have been provided for nomadic population of Gujjars and Bakerwals.

The health and medical services have been increased manifold times in Jammu & Kashmir state by simply increasing the infrastructure related to health care segment of the service sector of the state economy.

Appendix

Absolute share of Tertiary sector to NSDP in Rs.crores (1981-2011)

S.No.	Year	Tertiary Sector		NSDP	
		Cn.Prices	Ct.Prices	Cn.Prices	Ct.Prices
1	1980-81	1506.06	416.66	3793.52	1051.93
2	1985-86	1785.18	812.65	4445.38	1929.23
3	1990-91	2197.03	1264.81	4913.66	2908.26
4	1995-96	2736.15	3158.29	6031.48	6973.05
5	2000-01	3546.42	6684.35	7515.45	14328.4
6	2005-06	4864.73	10800.65	12297.25	25278.1
7	2010-11	9083.49	21837.51	17380.16	43716.38

Per capita share of Tertiary sector to NSDP Rs.crores (1981-2011)

S.No.	Year	Tertiary Sector		NSDP	
		Cn.Prices	Ct.Prices	Cn.Prices	Ct.Prices
1	1980-81	2548.32	705.01	6418.82	1779.91
2	1985-86	2659.29	1210.56	6622.05	2873.87
3	1990-91	2882.48	1659.42	6446.68	3815.61
4	1995-96	3054.08	3525.27	6732.31	7783.29
5	2000-01	3531.59	6656.39	7484.02	14268.47
6	2005-06	4472.49	9929.81	11305.74	23239.96
7	2010-11	7790.97	18730.17	14907.08	37495.82

Percentage of average annual growth rate of NSDP (5-yearly)

S.No.	Year	Tertiary Sector		NSDP	
		Cn.Prices	Ct.Prices	Cn.Prices	Ct.Prices
1	1980-81 to 1985-86	3.4	13.36	3.17	12.13
2	1985-86 to 1990-91	4.15	8.85	2	8.21
3	1990-91 to 1995-96	4.39	18.3	4.1	17.49
4	1995-96 to 2000-01	5.19	14.99	4.4	14.4
5	2000-01 to 2005-06	6.32	9.6	9.85	11.35
6	2005-06 to 2010-11	12.49	14.08	6.92	10.96

Percentage of average annual growth rate of NSDP (10-yearly)

S.No.	Year	Tertiary Sector		NSDP	
		Cn.Prices	Ct.Prices	Cn.Prices	Ct.Prices
1	1980-81 to 1990-91	3.78	11.1	2.59	10.17
2	1990-91 to 2000-01	4.79	16.65	4.25	15.95
3	2000-01 to 2010-11	9.41	11.84	8.38	11.15

Percentage of average annual growth rate of NSDP (30-yearly)

S.No.	Year	Tertiary Sector		NSDP	
		Cn.Prices	Ct.Prices	Cn.Prices	Ct.Prices
1	1980-81 to 2010-11	5.99	13.2	5.07	12.42

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