

## PalArch's Journal of Archaeology of Egypt / Egyptology

### “RECESSION – RECOVERY – A JOURNEY IN TO INDIAN ECONOMY”

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Dr.Pradeep Kumar Shinde<sup>1</sup>, Dr.K.R.Pundareeka Vittala<sup>2</sup>, “RECESSION – RECOVERY – A JOURNEY IN TO INDIAN ECONOMY”,-- Palarch's Journal Of Archaeology Of Egypt/Egyptology 18(9). ISSN 1567-214x

**Keywords: GDP, SECTOR GROWTH, RECESSION, CONTRACTION OF GDP, 97-21.**

#### ABSTRACT

Technically recession refer to negative growth in the GDP for the two quarter accompanied by fall in the production, increase in the unemployment. GDP contraction is the compound effect of several sectors negative growth. This paper examines the how each sector has contributed to the negative growth of GDP in the past 25 years. The possible action for the revival those sectors would lead to restoring of normalcy. It also helps in credit allocation, planning of stimulus packages which are necessary for bounce back. Data pertaining to GDP factor cost, Sectors contribution gathered through DBIE, RBI ware house of data, descriptive statistics & trend % has been used for the meaning full analysis.

#### Introduction

Technically recession refer to negative growth in the GDP for the two quarter accompanied by fall in the production, increase in the unemployment. It is evident from the FY 2019,20 & 21, entire global economy encountered the problems of layoffs, job cut, pay cut, reduction in production & sales, severe unemployment, deflation mismatch in demand and supply. Persistence above features in the economy is said to be recession.

#### Review of literature:

**Rohit Kenge (2020)**, examined the application of business strategy for reducing the effects of the recession & tried to analyze recession as a business opportunity to explore new areas of opportunities and to reduce the denting effect of recession over the economy. **Vikas barbate (2021)**: examines impact of COVID-19 on the Indian economy in the short term and the long term. A decision-tree approach has been adopted for doing the projections. **Nidhi Arora Kumar (2011)** : This paper has highlighted the cause and effect relation of global meltdown on Indian IT Industry,

GDP growth rate and Employment. Moreover, it evaluates the effectiveness of E-Business in terms of investment and revenue generated by the organisation in era of recession and recommends the strategies to be taken to deal with the situation. The empirical data has been collected with the help of primary as well as secondary resources.

**Research gap:**

the previous studies were focused on recession in India as compared to western economies, its impact on IT industry. But no attempt has been made to examine sectorial contraction, like agriculture, manufacturing & services has been contributed to the decline in GDP.

**Statement of the problem:**

GDP contraction is the compound effect of several sectors negative growth. This paper examines the how each sector has contributed to the negative growth of GDP in the past 25 years. The possible action for the revival those sectors would lead to restoring of normalcy. It also helps in credit allocation, planning of stimulus packages which are necessary for bounce back.

**Objectives:**

- 1) **To spot the technical recession i.e. contraction of GDP trend in the Indian economy from FY 1996 to FY2021**
- 2) **To examine the sectorial contribution for the time, lag of 5 years covering 20 quarters to the GDP**
- 3) **To examine the contraction in sectorial output, which lead to recession.**

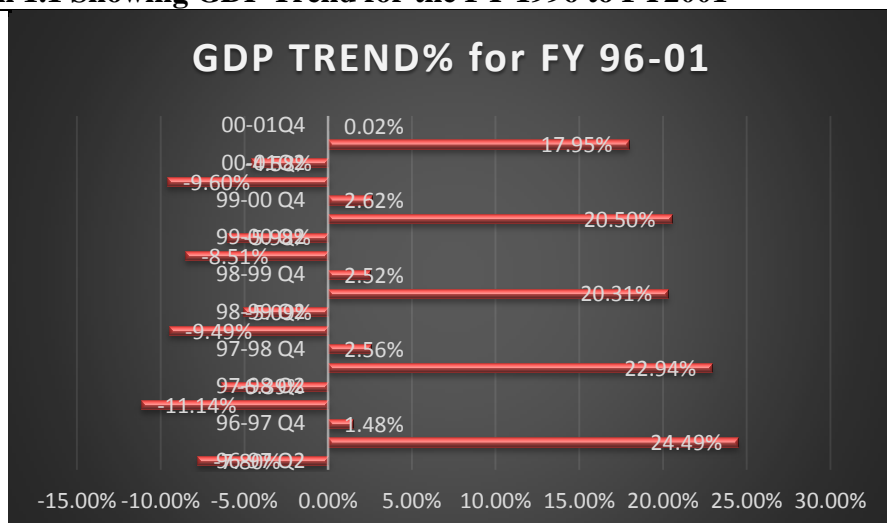
**Source of Data & tools used:**

Data pertaining to GDP factor cost, Sectors contribution gathered through DBIE, RBI ware house of data, descriptive statistics & trend % has been used for the meaning full analysis. Tabulation of data done as per the objectives listed above.

**Analysis & Discussions:**

**Table & Graph 1.1 Showing GDP Trend for the FY 1996 to FY2001**

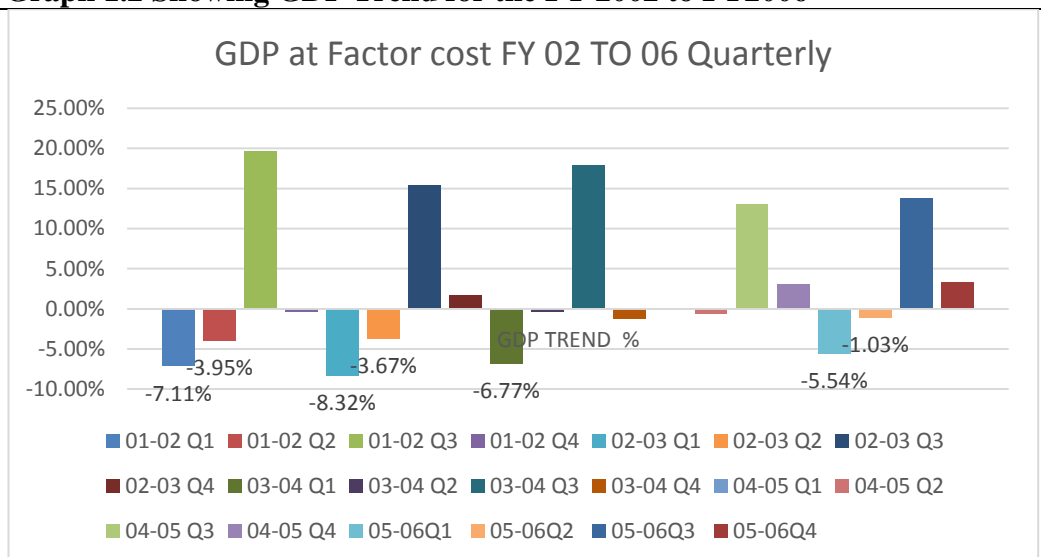
Quarter	GDP TREND %
96-97 Q1	
96-97 Q2	-7.80%
96-97 Q3	24.49%
96-97 Q4	1.48%
97-98 Q1	-11.14%
97-98 Q2	-6.39%
97-98 Q3	22.94%
97-98 Q4	2.56%
98-99 Q1	-9.49%
98-99 Q2	-5.09%
98-99 Q3	20.31%
98-99 Q4	2.52%
99-00 Q1	-8.51%
99-00 Q2	-5.98%
99-00 Q3	20.50%
99-00 Q4	2.62%
00-01 Q1	-9.60%
00-01 Q2	-4.58%
00-01 Q3	17.95%
00-01 Q4	0.02%



For the time span of 5 commencing from the financial year quarter’s 96-97 Q1 to 00-01 Q4, GDP recorded highest growth of 24.49% in the 96-97Q3, negative growth to the larger extent in 97-98Q1 followed by Q2 - 11.14% & -6.39%, which is technically a recession. Average growth recorded during these 5 years is 2.26% per quarter. Contraction of GDP occurred in FY 98-99 Q1 & Q2, 99-00 Q1& Q2, 00-01Q1 & Q2.

**Table & Graph 1.2 Showing GDP Trend for the FY 2002 to FY2006**

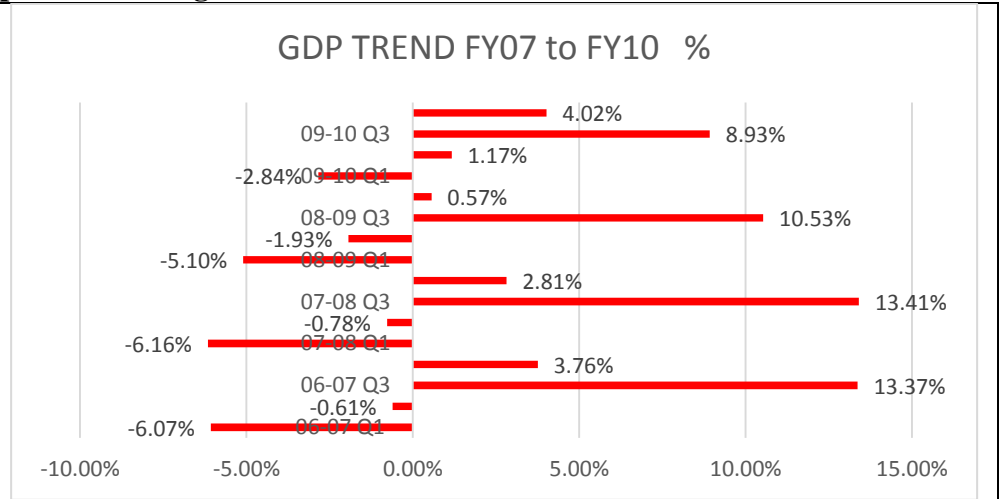
Quarter	GDP TREND %
01-02 Q1	-7.11%
01-02 Q2	-3.95%
01-02 Q3	19.63%
01-02 Q4	-0.27%
02-03 Q1	-8.32%
02-03 Q2	-3.67%
02-03 Q3	15.41%
02-03 Q4	1.68%
03-04 Q1	-6.77%
03-04 Q2	-0.36%
03-04 Q3	17.84%
03-04 Q4	-1.22%
04-05 Q1	2.33%
04-05 Q2	-0.61%
04-05 Q3	13.07%
04-05 Q4	3.02%
05-06 Q1	-5.54%
05-06 Q2	-1.03%
05-06 Q3	13.81%
05-06 Q4	3.32%



For the observed time lag of 5 years commencing from financial year quarter’s 01-02 Q1 to 05-06 Q4, GDP recorded highest growth of 19.63% in the 01-02 Q3, negative growth of GDP occurred in 02-03 Q1 – 8.32%, 02-03 Q2 -3.67%, 03-04Q1 & Q2 6.77% & 0.36%, 05-06 Q1 & Q2 – 5.54% & 1.03%, Technically the above mentioned years are recession reported consecutively negative growth in the GDP. Average GDP growth during 5 FY 02 -06 was 3.11%.

**Table & Graph 1.3 Showing GDP Trend for the FY 2006 to FY2010**

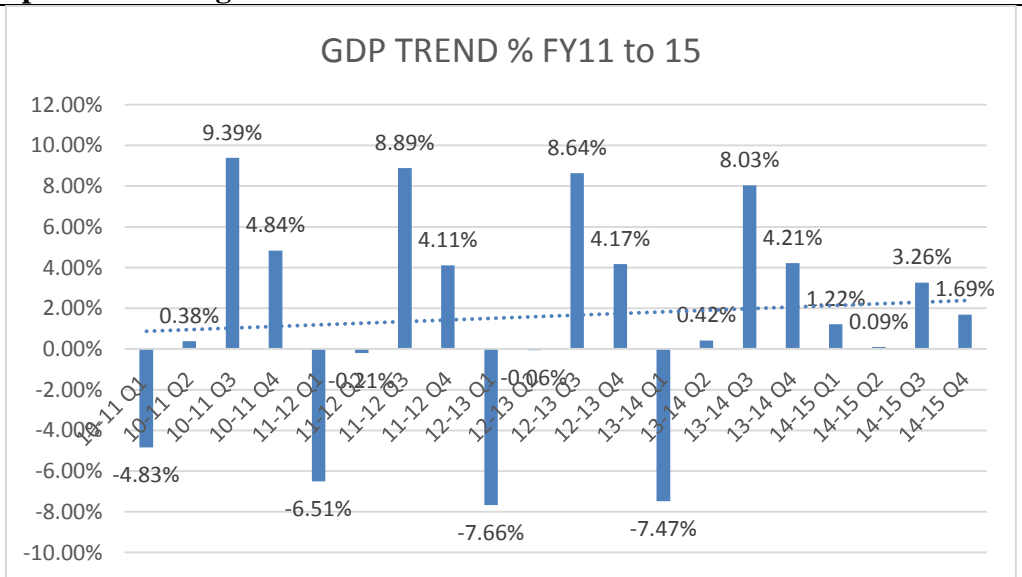
Quarter	GDP TREND %
06-07 Q1	-6.07%
06-07 Q2	-0.61%
06-07 Q3	13.37%
06-07 Q4	3.76%
07-08 Q1	-6.16%
07-08 Q2	-0.78%
07-08 Q3	13.41%
07-08 Q4	2.81%
08-09 Q1	-5.10%
08-09 Q2	-1.93%
08-09 Q3	10.53%
08-09 Q4	0.57%
09-10 Q1	-2.84%
09-10 Q2	1.17%
09-10 Q3	8.93%
09-10 Q4	4.02%



For the FY 07 TO 10, observed 20 quarters, highest growth GDP found in the year Q3 07-08 13.41%, recession trend occurred in 06-07 Q1 & Q2 with rate of -6.07% & -0.61% respectively. Average GDP growth during these 5 years was 2.74%.

**Table & Graph 1.4 Showing GDP Trend for the FY 2011 to FY2015**

Quarter	GDP TREND %
10-11 Q1	-4.83%
10-11 Q2	0.38%
10-11 Q3	9.39%
10-11 Q4	4.84%
11-12 Q1	-6.51%
11-12 Q2	-0.21%
11-12 Q3	8.89%
11-12 Q4	4.11%
12-13 Q1	-7.66%
12-13 Q2	-0.06%
12-13 Q3	8.64%
12-13 Q4	4.17%
13-14 Q1	-7.47%
13-14 Q2	0.42%
13-14 Q3	8.03%
13-14 Q4	4.21%
14-15 Q1	1.22%
14-15 Q2	0.09%
14-15 Q3	3.26%
14-15 Q4	1.69%



For the observed 20 quarters commencing from FY11 to FY15, max growth in the GDP occurred in the year 10-11 Q3- 9.39%, 12-13 Q3-8.64%, 13-14 Q3-8.03%. no recession occurred in the 5 years where as negative growth in GDP emerged in 10-11 Q1--4.83%, 13-14 Q1--7.47%, 12-13 Q1--7.66%, 11-12 Q1--6.51%. average growth rate in GDP – 1.63%.

**Table & Graph 1.5 Showing GDP Trend for the FY 2016 to FY2021**

Quarter	GDP TREND %
15-16 Q1	2.46%
15-16 Q2	0.70%
15-16 Q3	2.28%
15-16 Q4	3.01%
16-17 Q1	3.03%
16-17 Q2	-0.24%
16-17 Q3	1.56%
16-17 Q4	2.34%
17-18 Q1	1.73%
17-18 Q2	0.35%
17-18 Q3	2.48%
17-18 Q4	2.87%
18-19 Q1	1.09%
18-19 Q2	-0.49%
18-19 Q3	2.07%
18-19 Q4	2.80%
19-20 Q1	0.33%
19-20 Q2	-0.89%
19-20 Q3	1.22%
19-20 Q4	2.38%
20-21 Q1	-24.84%
20-21 Q2	19.40%

For the FY 16 to 21 from the values it is possible to infer that no recession trend occurred in India, technically. Whereas negative growth recorded very high in the past 25 years i.e. 24.84% in the 20-21 Q1. Average growth rate in GDP recorded was 1.12%, which is very low as compared to the previous data.

**Table 1.6 : Sectorial contribution to GDP**

Average quarterly contribution	A	B	C	D	E	F	G	H
1996-97 Q1 TO 2000-01 Q4	25.63%	2.37%	15.46%	2.47%	5.63%	21.44%	12.68%	14.32%
2001-02 Q1 TO 2006-07 Q4	20.11%	1.84%	12.40%	1.96%	4.79%	19.29%	11.08%	12.35%
2007-08 Q1 TO 2012-13 Q4	15.14%	2.28%	16.12%	1.95%	7.88%	26.56%	17.15%	12.91%
2013-14 Q1 TO 2020-21 Q2	15.67%	2.88%	17.69%	2.22%	8.14%	18.80%	21.82%	12.80%

- A. Agriculture & allied activities
- B. Mining & Quarrying
- C. Manufacturing D
- D. Electricity, Gas & Water Supply
- E. Construction
- F. Trade, hotels, transport & communication
- G. Finance, Insurance, Real Estate & Business Services
- H. Community, Social & Personal Services

For the observed 82 quarters, commencing from FY 1996-97 to 2020-21, sectorial contribution for a time lag of 5 years. Agriculture and allied activities contributed 25.63% till 2001 fiscal year. It has reduced by 5% i.e. 20.11% by FY2007, later it has further reduced to 15.67% by 2020-21. It infers the contribution of other sectors

enhanced to the total GDP. Mining contributing at the range of 2.37% to 2.88% for the observed period. Manufacturing contribution has enhanced by 2%, it remained to contribute at the range of 15.46% to 17.69%. electricity, gas & water supply contribution remained at 2.22%. construction contributes 8.4% by the end 21FY & enhanced by 3% compared to FY96-97. Trade & hotels, transport & communication contributed at highest 26% in FY2016, further reduced to 18% in 2021. Finance, Insurance, Real Estate & Business Services remained at 12.68% in 96-97, enhanced its contribution to 21.82% in FY2021. Nearly its contribution increased by 10%. Growth of service sectors is clearly indicated through from it. Community, Social & Personal Services contribution remained at 13% throughout the 25 years.

**Table 1.7: Sectorial contribution trend (growth and decline) to the GDP for the period 96-97 to 20-21 (quarterly, time lag 5 years),**

Sectors/20 quarters	96-97 Q1 to 00-01Q4	01-02 Q1 to 05-06Q4	06-07 Q1 to 09-10 Q4	10-11 Q1 to 14-15 Q4	15-16 Q1 to 20-21 Q2
Agriculture & allied activities	7.55%	6.02%	6.17%	6.06%	3.98%
Mining & Quarrying	2.02%	1.82%	2.20%	1.41%	1.20%
Electricity, Gas & Water Supply	1.10%	1.37%	1.47%	1.62%	2.20%
Manufacturing	1.25%	2.25%	2.03%	1.48%	3.32%
Construction	1.96%	3.17%	1.71%	1.33%	2.26%
Trade, hotels, transport & communication	2.32%	3.09%	3.47%	1.73%	2.41%
Finance, Insurance, Real Estate & Business Services	1.95%	2.21%	2.55%	3.97%	3.44%
Community, Social & Personal Services	5.52%	2.86%	3.27%	2.77%	1.09%

Observed period of FY 97 to FY21 100 Quarters, data has been divided in to time lag of 5 years for the purpose of examining the trends in each sector describes the following. Data presented is a quarterly growth for each sector. Agriculture & allied activities have grown at average of 7.55% per quarter during first five years, declined to 3.98% during last five years 16-21. Contribution from Agriculture & allied activities is gradually declining.

Average quarterly growth of Mining & Quarrying stood at 2% for entire period and reduced to 1.2% in FY 16-21. Electricity, Gas & Water Supply growth increased from 1.1% to 2.2%. manufacturing sector quarterly growth has been increased from 1.25% to 3.32% over the span of 25 years. Construction sector contribution growth is increased at the rate of 2.26% which remained uniform.

Trade, hotels, transport & communication growing at the rate of 2.41% per quarter. Finance, Insurance, Real Estate & Business Services growth has been doubled over the span of 25 years, it is increased from 1.95% to 3.44%. Community, Social & Personal Services growth has been declined from 5.52% to 1.09%.

**Table 1.8 showing recession trend in Indian economy and corresponding sectorial trend**

Industry/ Year	Quarter	Recession period GDP decline %	A	B	C	D	E	F	G	H
1997-98	Q1	-11.14%	-10.40%	-8.63%	-9.93%	0.44%	-3.96%	-6.82%	3.94%	-33.65%
	Q2	-6.39%	-24.10%	-1.93%	0.90%	2.16%	-0.62%	-2.93%	-0.09%	4.53%
1998-99	Q1	-9.49%	-1.62%	-11.84%	-6.27%	1.50%	-5.22%	-6.69%	-2.73%	-33.22%
	Q2	-5.09%	-24.18%	-2.29%	0.86%	-2.28%	-2.53%	-1.45%	0.86%	11.69%
1999-00	Q1	-8.51%	-5.38%	-11.51%	-7.35%	-1.49%	-3.64%	-6.81%	-2.20%	-23.47%
	Q2	-5.98%	-26.85%	1.27%	1.54%	3.03%	-1.43%	-1.06%	1.30%	5.48%
2000-01	Q1	-9.60%	-6.08%	-12.40%	-2.80%	-2.99%	-2.69%	-6.20%	-4.94%	-30.52%
	Q2	-4.58%	-23.06%	0.05%	0.61%	0.39%	-3.57%	-2.41%	0.36%	12.82%
2001-02	Q1	-7.11%	1.13%	-14.12%	-6.15%	-1.91%	-1.22%	-3.67%	-1.98%	-28.36%
	Q2	-3.95%	-20.84%	2.43%	0.79%	1.90%	-2.53%	-1.49%	0.82%	9.45%
2002-03	Q1	-8.32%	-8.26%	-7.30%	-4.90%	0.67%	-2.94%	-4.62%	-0.01%	-26.11%
	Q2	-3.67%	-23.92%	0.87%	3.40%	1.50%	-0.33%	-0.76%	0.97%	9.53%
2003-04	Q1	-6.77%	-0.08%	-12.14%	-6.71%	1.49%	-0.48%	-6.48%	-1.60%	-22.19%
	Q2	-0.36%	-18.20%	0.55%	4.17%	-0.38%	5.48%	1.30%	1.59%	14.88%
2005-06	Q1	-5.54%	-5.48%	-8.16%	-5.19%	3.45%	1.98%	-9.09%	0.38%	-15.78%
	Q2	-1.03%	-19.96%	-6.59%	3.35%	-2.02%	0.48%	2.61%	1.97%	9.25%
2006-07	Q1	-6.07%	-8.24%	-7.33%	-3.37%	1.20%	-2.49%	-10.15%	0.32%	-14.00%
	Q2	-0.61%	-19.60%	-6.80%	3.73%	0.13%	-0.59%	4.26%	2.30%	6.26%
2007-08	Q1	-6.16%	-9.11%	-16.76%	-5.59%	3.28%	-3.44%	-9.61%	-0.43%	-13.59%
	Q2	-0.78%	-19.90%	-3.31%	2.11%	-0.82%	1.59%	2.25%	2.10%	8.90%
2008-09	Q1	-5.10%	-8.39%	-16.81%	-6.29%	1.47%	-2.05%	-10.23%	-3.49%	-14.66%
	Q2	-1.93%	-20.20%	-4.15%	1.70%	0.18%	2.64%	1.46%	1.57%	9.70%
2011-12	Q1	-6.51%	-8.84%	-9.72%	-1.93%	3.21%	-1.81%	-8.83%	3.58%	-20.50%
	Q2	-0.21%	-19.26%	-8.55%	-1.68%	0.37%	0.82%	0.75%	2.10%	20.03%
2012-13	Q1	-7.66%	-10.24%	-15.63%	-7.32%	2.10%	-8.45%	-8.22%	4.19%	-19.08%
	Q2	-0.06%	-19.30%	-7.67%	-0.63%	-2.42%	-3.71%	2.26%	1.16%	19.78%
Average		-4.86%	-13.86%	-7.25%	-2.04%	0.54%	-1.57%	-3.56%	0.46%	-5.88%
max		-11.14%	-26.85%	-16.76%	-9.93%	2.42%	-3.96%	-10.23%	-4.94%	-33.65%

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For the studied period Financial years 1997-2021 (25 years), 13 times contraction of GDP occurred in a 2 successive quarters as per the listing done in the above table. Technically 13 times recession recorded in the Indian economy for the span of 25

years. Highest amount decline in the GDP occurred in the year 97-98 q1 – by - 11.14%. Agriculture & allied activities shown a remarkable decline in the year 2000 q2 by 26.85%. Mining & Quarrying slashed by 16.76% in 2008-09 q2. Electricity, Gas & Water Supply de growth encountered is 9.93% in the year 97-98q2.

Construction industry maximum decline happened in the year 19-98 by 3.96%. reduction in the productivity of Trade, hotels, transport & communication occurred in the year 2008-09 q2 by 10.23%.

It is possible to generalise that, whenever GDP contraction occurred, except Electricity, Gas & Water Supply, Finance, Insurance, Real Estate & Business Services & Community, Social & Personal Services remaining all the sectors have shown the de growth.

An average of 4.86% GDP quarterly decline has occurred due to 13.86% decline in Agriculture & allied activities, 7.25% of DE growth in the Mining & Quarrying, - 7.25% of Manufacturing 1.57% in Trade, hotels, transport & communication.

### **Suggestions:**

- 1) Agriculture de growth is an average 13.86% per quarter during the contraction of GDP, hence the recovery of this sector is the utmost priority during the recession period. This can be achieved through interest free loan without collateral. Fixing minimum support price for the agricultural products & construction of cold storage facilities for the farm products.
- 2) Manufacturing & mining: this sector has declined by 9.25% per quarter during the contraction of GDP, this sector can be revived, through credit rationing, consumer loans can be offered at a lower interest rate which can liquidate the piled stocks of manufacturing products.
- 3) Construction: this segment has the lowest de-growth as compared to other sector, during recession period, this sector has been declined by 1.57%. revival of this sector would be possible by slashing the interest rate on the housing loan, offering tenders to build the infrastructure.
- 4) Trade, hotels, transport & communication: this branch can be revived with easing of norms, particularly, FDI, Customs procedure and rates etc.

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