



ISSN (E): 2277-7695  
ISSN (P): 2349-8242  
NAAS Rating: 5.23  
TPI 2023; SP-12(10): 1388-1391  
© 2023 TPI  
[www.thepharmajournal.com](http://www.thepharmajournal.com)  
Received: 11-07-2023  
Accepted: 16-08-2023

**PJ More**  
Assistant Professor,  
Department of Agricultural  
Economics, Sharad College of  
Agriculture, Jainapur,  
Maharashtra, India

**MG Lagare**  
Assistant Professor,  
Department of Agricultural  
Economics, Dr. DYP College of  
Agriculture, Talsande,  
Maharashtra, India

**AB Jain**  
Assistant Professor,  
Department of Agricultural  
Economics, Sharad College of  
Agriculture, Jainapur,  
Maharashtra, India

**RR Gawali**  
M.Sc Scholar, Agricultural  
Entomology Section,  
College of Agriculture, Dhule,  
Maharashtra, India

**Corresponding Author:**  
**PJ More**  
Assistant Professor,  
Department of Agricultural  
Economics, Sharad College of  
Agriculture, Jainapur,  
Maharashtra, India

## Growth trends in export of meat from India

**PJ More, MG Lagare, AB Jain and RR Gawali**

### Abstract

This study entitled "Export of meat from India – An Economic Analysis" For this study time series data of country wise exports for the period 1987 to 2013 were collected from annual publications of APEDA and website, FAO year books. The collected data were evaluated for two different periods *viz.* pre-WTO period: 1987-88 to 1994-95, post-WTO period 1995-96 to 2013-14 and overall period 1987-88 to 2013-14, in order to observe the effect of the WTO on export of meat. The compound growth rates were worked out for quantity and value of export of meat. Values at current and constant prices were compiled to estimate the trends in meat production and export. For the estimation of variability and instability in meat exports, coefficient of variation for each period was calculated and compared with each other.

The period wise compound growth rates for buffalo meat revealed that during pre-WTO period export increased at the rate of 22.45 percent per annum. Export of buffalo meat during post-WTO and overall period registered growth of 12.24 and 12.54 percent per annum.

A similar trend was observed in case of sheep and goat meat and processed meat. Export of animal casings revealed a negative (-3.76 percent) during pre-WTO period whereas for post-WTO and overall period growth in export of animal casings was positive.

The compound growth rates for value of export of meat revealed similar trend as in case of quantity of meat export.

The foregoing analysis revealed that by and large export of meat increased during WTO era.

**Keywords:** Growth trends, export, meat, WTO

### Introduction

Livestock sector contributed important share in Indian export trade. India ranks first in the world in animal and cattle population. India ranks eighth in the world meat production; present meat production in India is estimated at 6.27 million tones which is 2.21 percent of the world's meat production. Buffalo in India contributes about 30 percent of total meat production. The contribution by meat, cattle, sheep, goats and poultry is 30 percent, 5 percent, 10 percent, 10.2 percent and 11.5 percent, respectively.

The meat production has registered a healthy growth from 2.3 million tones at the end of 10<sup>th</sup> Five Year Plan (2006-07) to 5.5 million tones at the end of 11<sup>th</sup> Five Year Plan (2011-12). The growth rate for production of meat in 2011-12 was about 13 percent. In spite of big potential because of large livestock population, the meat industry in India has not taken its due share. There is a scope to increase meat production in India.

The present study on 'Export of meat from India: An economic analysis' has been taken with the following specific objectives:

1. To assess the trends in meat export.

### Methodology

The present study is based on secondary data. The detail information required for the study was collected from secondary sources in order to accomplish the various objectives related to export of meat. Five types of meat were selected for the study namely buffalo meat, sheep and goat meat, animal casings, processed meat and other meat. The country wise time series data on export of meat in terms of value and quantity from 1987-88 to 2013-14 were collected from annual publication of APEDA (Agricultural and Processed Foods Export Development Authority, India) and its website [www.apeda.com](http://www.apeda.com). The collected data were grouped into three periods. Pre-WTO period from 1987-1994, Post-WTO period from 1995-2013 and overall period from 1987-88 to 2013-14.

### Trend Analysis

The growth in quantity exported and export values realized from exports was analyzed using

the following exponential growth function of the form

$$Y = ab^xe^u$$

Where,

Y = Dependent variables

a =intercept

b =regression coefficient

x =Number of years

e<sup>u</sup> =Error term

The compound growth rate was estimated by using the semi-logarithmic form of the equation as below:

$$\text{Log } Y = \text{Log } a + \text{Log } b$$

Then, the percent compound growth rate (g) was computed using:

$$g = (\text{Antilog of Log } b - 1) \times 100$$

## Results

### Trend Analysis

The trends in the export of meat during pre-WTO period (1987-88 to 1994-95), post-WTO period (1995-96 to 2013-14) and Overall period (1987-88 to 2013-14) were analyzed with the help of compound growth rates. The results are presented in the Tables. 1

**Table 1:** Period wise trends in quantity of meat export

Sr. No.	Type of meat	Period	CGR
1	Buffalo Meat	Pre-WTO	22.45*
		Post-WTO	12.24*
		Overall	12.54*
2	Sheep and Goat Meat	Pre-WTO	14.67*
		Post-WTO	6.20*
		Overall	3.56*
3	Animal Casings	Pre-WTO	-3.76*
		Post-WTO	5.36*
		Overall	5.14*
4	Processed Meat	Pre-WTO	68.44*
		Post-WTO	4.25*
		Overall	9.99*
5	Other Meat	Pre-WTO	NA
		Post-WTO	-26.96*
		Overall	-26.96*

\*significant at 0.05 % level of significance

The period wise compound growth rates for buffalo meat are presented in Table 1. The Table 1 revealed that, during pre-WTO period quantity of buffalo meat export registered impressive growth of 22.45 percent per annum. The export of buffalo meat during post-WTO period increased at the rate of 12.24 percent per annum. During the period under study export of buffalo meat grew at the rate of 12.54 percent per annum.

The compound growth rate for sheep and goat meat revealed that at overall level export of sheep and goat meat grew at the rate of 14.67 percent per annum. The growth in sheep and goat meat export during pre and post WTO period was at par. This revealed that there was no much change in export of sheep and goat meat from India during pre and post WTO period.

The export of animal casings showed significant upward trend. During pre WTO period export of animal casings from India decreased by -3.76 percent per annum. However, during post WTO period export of animal casings registered impressive growth of 5.36 percent per annum. At overall level growth in export of animal casings was found to be 5.14 percent per annum.

It has been reported in many studies that with spread of civilization demand for processed food increases. Similar results were revealed by the compound growth rates of processed meat export. During the period under study export of processed meat recorded a highest growth of 68.44 percent per annum during pre WTO period. The growth in export of processed meat was 4.25 percent per annum during post WTO

and at overall period 9.99 percent per annum.

India has been exporting other meat viz. swine, poultry etc. since 2005-06. Hence data were not available for pre WTO period as mentioned. The compound growth rates for other meat for the period under study recorded a negative growth of -26.96 percent per annum.

### Trends in export value

The compound growth rates were estimated for export value of meat at current and constant prices, to ascertain effect of changes in exchange rates. The results of the same are depicted in Table 2.

### Buffalo Meat

The compound growth rates for export value of buffalo meat were estimated at current and constant prices. The results are presented in Table 2 and Table 2 revealed that during pre WTO period export value of buffalo meat registered an impressive growth of 32.02 percent per annum at nominal prices as well as real prices (19.79 percent) as compared to post WTO period. The difference between nominal and real growth rates indicated influence of exchange rates on export earnings. It was high during pre WTO period. Export of buffalo meat during post WTO period recorded a growth of 23.56 and 14.91 percent per annum at nominal and real prices respectively. At the overall level export earnings from buffalo meat grew at the rate of 22.46 percent per annum at nominal and real prices.

**Table 2:** Period wise trends in value realized from export of meat

Sr. No.	Type of Meat	Period	CGR at nominal prices	CGR at real prices	Difference between
1	Buffalo Meat	Pre-WTO	32.02* (0.0434)	19.79* (0.04302)	12.23
		Post-WTO	23.56* (0.01215)	14.91* (0.008829)	8.65
		Overall	22.46* (0.007045)	14.23* (0.005342)	8.17
2	Sheep and Goat Meat	Pre-WTO	15.4NS (0.09379)	4.71 NS (0.09593)	10.69
		Post-WTO	15.13* (0.02687)	7.07* (0.02617)	8.06
		Overall	9.91* (0.01563)	2.53 NS (0.0152)	7.38
3	Animal Casings	Pre-WTO	-1.48 NS (0.03076)	-10.61* (0.03235)	-12.09
		Post-WTO	4.7* (0.018111)	-2.62 NS (0.01889)	7.32
		Overall	4.94* (0.00894)	-2.1* (0.0095)	7.04
4	Processed Meat	Pre-WTO	42.15 NS (0.19391)	28.98NS (0.1963)	13.17
		Post-WTO	8.53* (0.022961)	0.93 NS (0.025)	7.6
		Overall	13.28* (0.01932)	5.67* (0.019)	7.61
5	Other Meat	Pre-WTO	NA	NA	NA
		Post-WTO	-23.27* (0.08219)	-33.76* (0.09881)	10.49
		Overall	-23.27* (0.08219)	-33.76* (0.09881)	10.49

\*significant at 0.05 % level of significance, NS non-significant

### Sheep and Goat Meat

The compound growth rate for export earnings from sheep and goat meat export during pre WTO period worked out to 15.4 and 4.71 percent per annum at nominal and real prices. Whereas, it was 15.13 and 7.07 percent per annum respectively for post WTO period. During the period under study value of sheep and goat meat export grew at the rate of 9.91 and 2.53 percent per annum at nominal and real prices respectively. The effect of exchange rate on value realization was relatively high during pre WTO period as compared to post WTO period.

### Animal Casings

The export earnings from animal casings during pre WTO period registered negative growth at nominal and real prices. However, during post WTO and for overall period it recorded a positive growth of 4.7 and 4.94 percent per annum at nominal prices. While growth rates for the same turned out to be negative at real prices. This could be attributed to changes in exchange rate and inflation.

### Processed Meat

At nominal price growth in export value of processed meat was high (42.15 percent) during pre WTO period, while it was 8.53 and 13.28 percent per annum during post WTO and overall respectively. Similarly trend was observed at real prices.

### Other Meat

The export earnings from other meat registered a negative growth at nominal as well as real prices for post WTO period instability index for export of animal casings turned out to be 41.73 percent indicating instability in its export quantity.

The export of processed meat was relatively stable during post WTO 40.12 percent as compared to pre WTO period 56.75 percent. The instability index for overall period was 46.53 percent.

The variability in export of other meat was to the tune of 82.55 percent.

### Conclusion

- This study showed that the impact of World Trade Organization on meat export was positive and beneficial to the meat industry.
- Among the importing countries UAE, Saudi Arabia, Malaysia, Kuwait, Angola, Egypt, Oman Hong Kong, Iraq and Portugal were the most stable and loyal importers of Indian meat.
- As observed that meat have tangible share in export earnings and it is a remunerative industry, so Government should provide necessary facilities including medium and long term loans for those who are engaged in meat industry, thereby to expand this industry and create more and more job opportunities and finally to promote economic welfare for the nation as a whole.
- There is a need to set up schemes for diversification and preparations of value added meat products depending upon market demand, suitable processing and manufacturing units can be set up.

### References

1. Adhikari A, Sekhon MK. Export of Basmati rice from India: Performance and Trade direction. Journal of Agricultural Development and Policy. 2014;21(1):1-13.
2. Fathima KB, Biradar RS, Salim SS. Growth pattern and competitiveness of Indian shrimp export trade. Fishery

- Technology. 2006;43(1):99-106.
3. Gopal Nikita, Jeyanthi P, Geethalakshmi V, Unnithan GR. Indian finfish export: An analysis of export performance and revealed comparative advantage. *Agricultural Economics Research Review*. 2009;22:291-297.
  4. Brajesh Jha. India's Tobacco Exports—Recent trends, Determinants and Implications. *Indian Journal of Agricultural Economics*. 2002;57(1):52-63.
  5. Kumar S, Singh R. WTO and export competitiveness of apple: A study of Himachal Pradesh. *Indian Journal of Agricultural Marketing*. 2008;22(1):46-59.
  6. Nalini Ranjankumar, Rai AB, Rai M. Export of cucumber and gherkin from India: Performance, Destination, Competitiveness and Determinants. *Agricultural Economics Research Review*. 2008;21(1):130-138.
  7. Patil KM, Patil VS, Patil RB, Chavan S, Mundinamuni SM. Export performance and export management of Indian spices. *Indian Journal of Agricultural Marketing*. 2013;27(3):131-137.
  8. Rudrapur S, Mundunamuni SM, Sattigeri V, Keraba V. Growth and export performance of Indian Tea. *Indian Journal of Agricultural Research*. 2013;27(3):123-130.