

# "A Study of Productivity Trends and Export Business Opportunities of Fishing Industry in Gujarat"

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Net, University Grant Commission, 2016 (Dec.)

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## 1.0 Abstract

*This study examines the productivity strength and export business opportunities of fishing industry in Gujarat. It helps to contribute to economic growth at national and local levels with examples of "Marine Product Exports Development Authority" (MPEDA) and the study examines fish exports processing units, fish production availability which helps to develop policy, export business, government schemes.*

**Keywords :** Fishing industry, Productivity, Export Processing business units.

## 2.0 Introduction

Gujarat state lies on the northwest coastal of Indian and is situated between 20.1<sup>0</sup> and 24.7<sup>0</sup> North latitude and 68.4<sup>0</sup> and 7.4<sup>0</sup> east longitude. It has three distinctive regions. The Peninsula of Saurashtra. The desert and marshy area of Kutch and the mainland of central and south Gujarat. The Gulf of Kutch and Gulf of Khambhat make the coastal region rich in fishing resources. About 80 river systems pass through the state.

The state has a coastline of 1600 km and equally large area of estuaries backwaters and lagoons that can be used for fishing. After the declaration of "Exclusive Economic Zone (EEZ)" in 1976, the marine area available to Gujarat is estimated at 2.14 lakh sq.km. This reflects a huge potential for the fishing industry productivity and export business.

Gujarat is one of the industrially advanced states in India. Fishing industry is very important industry in Gujarat. It helps augment food supply, generation of employment and earning foreign exchange. The industry contributes significantly to the socio-economic development of Gujarat. It provides livelihood to five lakh people and earns foreign exchange of about Rs.700 crores per annum contributing 1.67% share to the state of GDP. (Government of Gujarat, 2006)

In Gujarat 58 fishing export processing units are in operation presently. This is attributed to fish production, export business opportunity, liberal government policy. Fish is being exported from export processing units like Pipavav, Okha, Porbandar, Kundla, Mundra and Ahmedabad to more than 70 countries such as Japan, U.S.A., China, Brazil, U.K. and Indonesia also.

International fishing industry is also caught between increased demand of fish products due to "diet diversification" and over supply of fish production. This will increase demand and supply of Gujarat fishing industry business and provide suitable environment for fish production and export business of Gujarat.

To be a responsible global exporter in providing sustainable fish products, Gujarat export processing units must be developed to start competition with other supplying states of India and in the global trade competition.

### 3.0 Objective of the study

1. To study the trend of the production of fishing industry in Gujarat.
2. To examine the marketing pattern of fishing industry in the study area.
3. To analyze the fishing industry export business strength and weakness and market growth.
4. To analyze the price movement and price spread of fish and seafood products at the national and international level.
5. To examine the export and import fish and seafood export business.
6. To suggest suitable measures to improve fishing industry production market and export processing unit business.

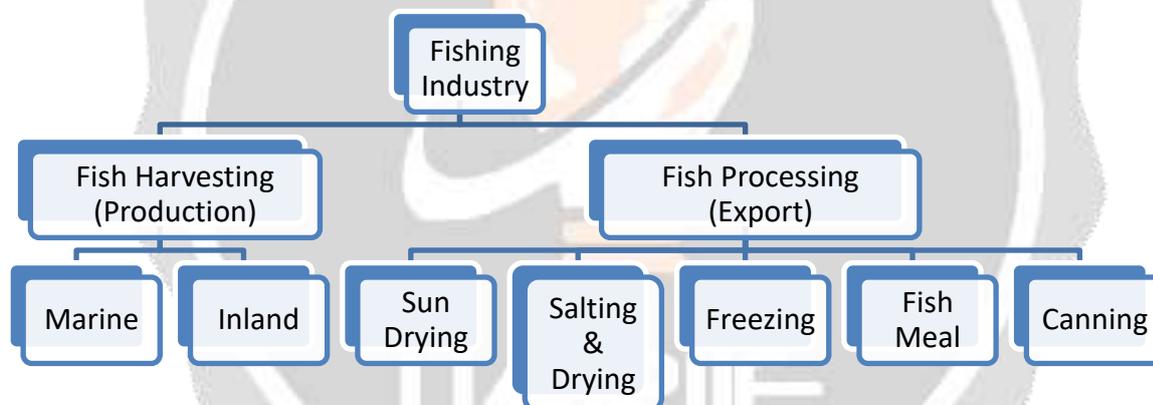
### 4.0 Hypothesis

1. Fishing industry is labour-intensive industry and therefore generates employment.
2. Production and export trends of fishing industry leads to increase in foreign exchange.
3. Fish production and export units run at optimum levels.
4. The adoption of quality standards has an impact on the performance of the fish production and export units.

### 5.0 Overview of Research

#### 5.1 Structure of fishing industry

According to the food and agricultural organisation, the fishing industry means both commercial and recreational activity with two main branches : Fish Harvesting (Production) and Fish Processing for Export (Export). While detailing the basics of the study, the following explanations are necessary.



#### Harvesting :

Commonly, fish is caught from the sea. Which is marine fishing whereas that from the rivers is inland fishing. Fishes are also in an artificially created environment called aquaculture. Catching fish by any of the three ways is harvesting or production.

#### Processing :

Harvested fish needs to be processed for preservation. This is generally done for export purpose. There are many way of processing fish preservation and export.

- (a) Sun drying :  
Fish is dried in direct sunlight. This is the chepest method of preservation.
- (b) Salting and Drying :  
In this method, salt is applied to the fish before drying.
- (c) Freezing :  
This is the most popular method of fish processing for export. Fish is frozen in processing units to preserve it for long.
- (d) Conversion into fish meal :  
Powdered fish is used as poultry feed besides being consumed by human beings.
- (e) Canning :  
Presently this method of fish being packed in cans is not adopted in Gujarat.

## 5.2 Development of fishing industry in Gujarat

Gujarat has one of the richest fishing grounds in India and the most important commercial varieties of fish. The coastal districts of Gujarat are Junagadh, Amreli, Jamnagar, Kutch, Rajkot, Bhavnagar, Kheda, Bharuch, Surat and Valsad.

The climate of the state is extreme. The temperature varies between 2°C to 9°C in winter and goes up to 41°C to 46°C in summer. The only source of rain for the state is the southwest monsoons.

## 5.3 Growth of fish processing in Gujarat

### Fish production and surplus of fish in Gujarat

Fish production has been increasing continuously in Gujarat. In 1990-91, the production of fish was 5.46 lakh tons that increased to 6.61 lakh tons during 2000-01 that has further increased to 7.5 lakh tons in the year 2006-07.

#### Total fish production marine/inland

Year	Marine fish production in M.T.	Value in Crore Rs.	Inland fish production in M.T.	Value in Crore Rs.	Total Fish production in M.T.	Total Value in crore Rs.
2004-05	584	1364.95	51	336.13	635	1701.08
2005-06	664	2015.40	70	420.00	734	2435.00
2006-07	677	2270.61	77	434.72	754	2705.33
2007-08	681	2393.15	79	450.87	760	2844.02
2008-09	684	2542.25	82	520.99	766	3063.24
2009-10	687	2942.24	84	551.50	771	3493.74
2010- up to Dec.10	522	2234.16	52	341.12	554	2575.28

Source : Commissioner of fisheries, Gandhinagar, Gujarat, Report.

Though consumption is increasing both in absolute terms and also proportionately. The surplus is decreasing in proportionate as well as absolute terms though it has started increasing during the past couple of years.

**Surplus of fish in Gujarat**

Year	Production (Tons)	Consumption (Tons)	Surplus (Tons)	Surplus as % or total production
1990-91	546419	153995	392424	71.82
1991-92	569887	153662	416225	73.04
1992-93	660257	217314	442943	67.09
1993-94	684855	339030	345825	50.50
1994-95	715361	804898	410463	57.38
1995-96	658509	250649	407860	61.94
1996-97	725346	308002	417344	57.54
1997-98	772805	360485	412320	53.35
1998-99	631728	415073	216655	34.30
1999-20	741280	523910	217370	29.32
2000-01	661065	417102	243963	36.90
2001-02	701603	538570	163033	23.24
2002-03	777905	609621	168284	21.63
2003-04	654572	483691	170878	26.11
2004-05	635579	462189	173390	27.28
2005-06	733820	570856	162964	22.21
2006-07	753583	502864	250719	33.27

**5.4 Fish Export**

Fish processing is a branch of the fishing industry. In Gujarat, the number of fish processing units increased from 18 in 1987-88 to 53 in 2007-08. It has been related in the literature that fish production, high rate of return on export, liberal government policy are some of the main contributing factors behind this success. Gujarat contributed 30.71% to the national marine export in terms of quantity and 15.12% in terms of value. The contribution of the state to total marine export from the country has increased to 1.88 lakh tons that is worth Rs.1264.61 crores during the year 2006-07. (Government of Gujarat, 2008)

**Fish products export from Gujarat**

Sr. No.	Year	Qty (in M.T.)	Value (Rs. in crores)
1	2005	136455	934.88
2	2006	188165	1264.60
3	2007	150727	1141.97
4	2008	164725	1485.72
5	2009	183869	1838.75
6	2010-'11 (up to Dec.10)	101900	1033.00

Source : Commissioner of fisheries, Gandhinagar Gujarat.

It increased from Rs.27 per K.g. in 1980-81 to Rs.67 per K.g. in 2006-07. The price increase may be due to strong consumer taste and preferences, high operational cost and widening of demand supply gap. (Gov. of Gujarat, 2008)

#### Direction of Export :

##### Direction of export of marine product from Gujarat

Country		2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Japan	Q.	7179	6492	4574	4790	8697	8503
	V.	62.85	75.42	39.05	44.00	52.99	77.98
U.S.A.	Q.	4021	3773	3738	4993	6424	7484
	V.	27.93	80.96	26.94	39.25	64.61	67.74
Euro Union	Q.	15986	21844	19142	20706	30208	28824
	V.	127.82	188.06	163.92	182.28	298.21	309.09
China	Q.	86168	88957	63443	68004	68199	108881
	V.	301.83	373.89	268.83	301.57	345.64	554.69
South Asia	Q.	11795	7412	11224	14195	14453	16727
	V.	58.77	54.05	68.04	78.91	85.42	113.27
Middle East	Q.	3650	2932	3799	3929	5138	7030
	V.	28.09	22.15	33.22	36.30	51.71	74.57
Others	Q.	3426	2367	2466	3324	5365	11257
	V.	18.43	15.83	14.41	22.28	36.30	67.27
Gujarat		132175	134047	108386	119951	136485	188166
Total		625.72	760.36	614.41	704.59	934.88	1264.61

Source : Gujarat fisheries statics. Q=Quantity in tons, V=Value in crore rupees.

#### Export Markets

Earlier, fish was exported in only to few countries like Srilanka, Singapore and Malaysia as noted by Trivedi and Upadhyay (Trivedi and Upadhyay, 2001). However in the present times, fish is exported to more than 70 countries. Hence, over the years there has been a diversification of the markets.

More ever, earlier only dried items were exported to countries like Srilanka and Singapore. Now due to improvement in quick transportation facility and processing technologies. Frozen products, canned products and even live fishes are exported.

As the table show, Gujarat exported fish 934.88 crores in 2005-06. Therefore, it can be said that export of fish has increased rapidly and the export increased by quantity also.

#### 5.5 Number of fish exporters

The number of fish exporter has been increasing over the years. These were an increase of over 600 fish exporters in a single year from 1074 in 2004 to 1749 in 2005 in India. of these Gujarat has 58 exporters.

#### 5.6 Employment in Gujarat export units

In Gujarat, employment in export processing unit from 3363 in 2001 to 12545 people in 2008. (Thomas, K. 2003). A fish export processing unit on a average employs between 50 to 2000 people. The number of people employed has been increasing due to increase in fish exported processing units.

#### 5.7 Export price

The increase in the export price may be an incentive for the growth of export of fish. Export price of fish has more than doubled. It increased from Rs.27 per Kg. in 1980 to Rs.67 per Kg. in 2006-09. The price increase may be due to strong consumer taste and preferences, high operational cost and widening of demand-supply gap. (Government of Gujarat, 2008).

**Direction of Export (Growth rate %)**

Country	Growth rate %
Japan	1
U.S.A.	19
European Union	19
China	13
South East Asia	14
Middle East	22
Others	30

Source : Computed on the basic of table.

The export of fish to the U.S.A. and European Union has growth at a compounded rate of 19% per annum and to with Middle East countries at a rate of 22% per annum during 2001-'02 to 2006-'07. The rate of growth in export to Japan in low. This may be due to demand for the specific type of fish in Japan.

## 6.0 Research Methodology and Data Collection

### 6.1 Preliminary Training

In order to identify the problems conforming fishing industry, the researcher undertook training from the experts in the field. A preliminary survey was later carried out in five different areas to get an insight into the problem. Visits were also paid to various fisheries institutes of Gujarat and in other parts of India namely MPEDA, CMFRI, CTFT and fisheries department. Visits were also paid to boat building yards and fisheries co-operatives.

### 6.2 Geographical Area

The area of study is Gujarat. Primary datas have been collected from all processing units of Gujarat. All fish exported and production processing units of Gujarat are spread over in five major centres i.e. Veraval, Chorwad, Mangrol, Porbandar and Varvada.

### 6.3 Period of study

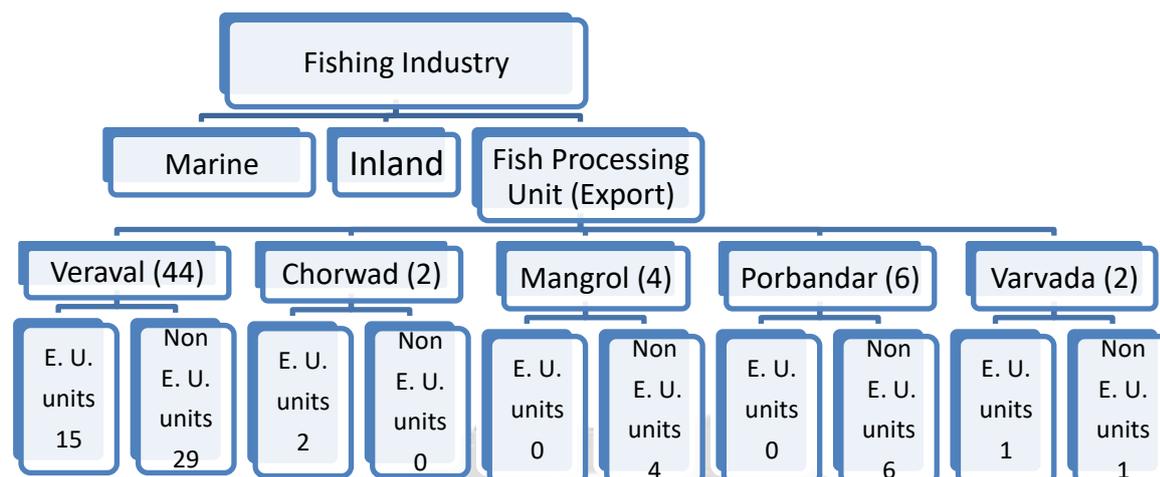
Secondary data has been collected since 1972-'73 and outwards. This is because the Gujarat fish processing industry incepted during this year. Primary data relates to the year 2005-'06 to 2009-'10.

### 6.4 Processing of data

Initially the questionnaires were edited for coding. The edited questionnaires were then coded for tabulation, SPSS Computer software tools used in analysis include correlation regression. T-test, Chi-square test, one way analysis of variance, measures of central tendency statistics, descriptive statistics growth rate etc.

### 6.5 Sampling Technique

Sampling derived on the basis of multistage stratified sampling and sequential techniques. Details of number of EU units and non-EU units in each centres are as under.



As per fish export association of India (Gujarat Region) there are total 58 fish processing units in Gujarat. Initially 70% units have been selected with minimum one unit from each fish processing centre. Units have been selected from both E.U. and non-E.U. in same ratio.

#### 7.0 Expected outcome of the research

Directly and indirectly, fishing industry provide employment to the people of coastal area of Gujarat. It play a key role in socio-economic development of any state by preventing and reducing poverty. By official statistics we can see that millions of people are involved in fishing activities.

This study also exime market pattern of fishing production and export. So it can be easy to analyse the price movement at national and international level. It will help to suggest suitable measure to improve fish and seafood market.

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