EXPORT PERFORMANCE OF SPICES IN INDIA: AN EMPIRICAL STUDY

P. Hari Babu
Faculty, Commerce and Business Administration
Acharya Nagarjuna University Ongole Campus
haribabu.pokuri@ gmail.com

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ABSTRACT

Spices has been a prime source of livelihood for millions of people and above 3 million farmers are engaged directly or indirectly in spices cultivation, processing, manufacturing grading, marketing and other allied activities. So the spices industry is a prominent place over the past seven decades. India is being a world largest producer and exporter. The sustainability of Indian spices industry is mainly depends on exports. India is now facing stiff competition from many developing countries. The Indian spices processing industry have the various problems like availability of raw material, unscientific production methods, Marketing problems etc. The world exports of spices fluctuated during the period under study. Indian spices exports have more than doubled in between 2008 to 2015. Thus many reasons can be attributed to the fluctuation of exports during this period, such as increase in food prices, inflation, world recession etc. However the actual exports gained momentum after 2011. The present paper reviews the export performance of Indian spices

Key words: *Spices, Exports, Gross Value Added, Gross Domestic Product, Tariff barrier*

INTRODUCTION

Agriculture plays a vital role in India's economy. Over 58 per cent of the rural households depend on agriculture as their principal means of livelihood. Agriculture, along with fisheries and forestry, is one of the largest contributors to the Gross Domestic Product (GDP). Spices entered in to human history around 5000 years before Christ and spice trade has a legacy of 5000 years. Spices is one of the economically and commercially significant agriculture crops in the world. Today, Indian spices are the most sought-after globally, given their exquisite aroma, texture, taste and medicinal value. Traditionally, spices in India have been grown in small land holdings, with organic farming gaining prominence in recent times.

Spices may be dried fruits, roots, seeds

or barks of vegetable substance primarily used to flavour, colour or preserve food. "Spices and Herbs are dried parts of various plants cultivated for their aromatic pungent or otherwise desirable substances, the dominant spices of trade including cardamom, chilli , cinnamon, cloves, ginger and pepper.

In India, different states are known as different spices. They are produced in all the states and union territories. Andhra Pradesh and Telangana is known for ginger, turmeric, chilli, and Mustard, Gujarat for Cumin, Dill seeds, fenugreek, fennel, Chilli and garlic. Himachal Pradesh fir ginger, Haryana is known for garlic, Karnataka for pepper, ginger,cardmon (small) , ginger , chilli , turmeric and garlic, Orissa for ginger , chilli, turmeric and garlic. Kerala is known for pepper, ginger, chilli, turmeric, nutmeg and mace, Clove. The majority of Indian spices production is undertaken in very small holdings, often on hilly tracts of land. It is that 2.5 to 3.0 million small holders cultivate one or more spices

As per estimates by the Central Statistics Office (CSO), the share of agriculture and allied sectors (including agriculture, livestock, forestry and fishery) was 15.35 per cent of the Gross Value Added (GVA) during 2015–16 at 2011–12 prices. India is the largest producer, consumer and exporter of spices and spice products. India's fruit production has grown faster than vegetables making it the second.

Review of literature

Basu, P.K. suggests in his research thesis "Foreign Trade Policy in India Since The Plan Period (1951-85)", formulation of a national export policy incorporating term strategy and an appropriate organisational set up. Further the researcher suggests that, to achieve the export goal, planning product mix for country's export, prioritising commodities and markets for promotion of exports, strengthening marketing efforts, liberalising exchange control system and policy towards channelization of foreign trade, negotiation for reduction of tariff and non tariff barrier, economic co-operation among developing countries to secure better terms of exports of primary commodities are essential and necessary.

Major technological developments in electronics, computer science and synthetic material have had substantial adverse effects on the consumption of natural raw material. This trend may continue and future technological innovations could well lead to the virtual collapse of a number of traditional raw materials markets. As a result of this declining trend in commodity exports, there is bitter competition among developing countries to earn much needed foreign exchange either by underselling or subsiding their commodity exports. If any developing country is reluctant to do so, the importing developed countries or their TNCs take counter measures like country substitution, commodity substitution, releasing previous stocks, recycling and ocean bed exploration so as to bring down prices of commodities and raw materials exported by developing countries.

Raffer, (1987) The emerging unfavourable conditions, for the commodity exports of developing countries, have a mixed impact on their economies. In general, the commodity export sector became an instrument for transmitting recession form industrial centers to peripheral economies and thus becoming a major source of its stability (Maizels,1987) But the shocks are being absorbed and some of the developing countries are slowly shifting from exports of raw commodities to process and semi processed commodities and intermediate manufactured goods. Maizels aptly observed that the previous close linkage between commodity exports and balance of payments has been declining and the traditional role of commodity exports as an "engine of growth" for developing countries in general is marginalizing (Maizels 1987) .For example ,for all developing countries ,the share of agricultural commodity trade in total exports was 50percent in 1965 and it declined to 23percent by 1980 .The same trend is also observed in the Indian exports mix as 68.4percent of Indian exports consisted of food products and raw materials in 1938-1939 , decreased to 33.0percent by 1980 and the share of manufactured items increased significantly over the same period from 30.0 to 58.8percent .But the share of tobacco exports remained more or less constant (Gill and Ghuman ,1982)

According to Bhagwati and Srinivasan (1983), trade liberalization leads to trade diversification by altering the product composition for existing production towards higher value-added products. There is a strong connection between trade liberalization and trade diversification. The export promotion strategy promotes intra-industry specialization and as a result, intra-industry trade in manufactures among developing countries, and between them and the industrial countries develop significantly. Sen (2000) has made a critical appraisal of the import substitution and export promotion strategies adopted by the governments.

Morrissey and Filatotchev (2001) have analyzed implications of globalization and trade for exports from marginalized economies. If producers in developing economies are brought in to the commodity chain merely as contract suppliers, they may continue to be marginalized by globalization. According to Mansoob (1997 protectionism in the developed economies directed towards the goods of the developing economies is not going to promote the interests of unskilled workers of the former.

Research problem

Research studies on export performance of various products of general consumption across the world have been superfluous. These are considered to be of mutual benefit for the producers and the consumers countries across the world. Such category includes Foods, beverages and utilities of household consumption. However, there is one particular produce which has a greater monetary value even

though it is not known for common good. Export has assumed an important place in the development process of any economy. For achieving rapid growth, a minimum of foreign exchange is necessary for a developing country like India. Spice exports from India are expected to reach US$ 3 billion by 2016–17 (Spices Board -2016) due to creative marketing strategies, innovative packaging, strength in quality and strong distribution networks. The spices market in India is valued at **Rs 40,000 crore** (US$ 5.87 billion) annually, of which the branded segment accounts for 15 per cent India is the largest producer, consumer and exporter of spices, with a 46 per cent share by volume and 23 per cent share by value, in the world market. The Indian spice export basket consists of around 50 spices in whole form and more than 80 products in value added form largest **fruit** producer in the world (Spices Board -2016). The sustainability of Indian Spices industry is mainly depends on exports. India is now facing stiff competition from many developing countries.

Need for the study

There have been several regulations in different countries to export of agriculture commodities. These regulations have caused the reduction of spices exports. This results welfare loses in spices exporting countries, as a result of decrease spices production. Welfare losses include a decrease foreign revenue, incase unemployment unfavorable terms of trade and loss of revenue to the Government. In addition, this situation increases poverty levels, and a reduction in social welfare services, which may calls unrest among they people, it is therefore very necessary to know the trends in the Export performance of spices, that can help in understanding the kind of impact it will have and its social political consequences, this study therefore attempted to find out the trends in export performance of spices from 2001-02 to 2015-16.

Objective

The main purpose of the study is to find out whether they have been an increase or decrease in the export of spices. The second purpose is to inter possible causes for variations in spices exports from 2001-02 to 2015-16.

Performance evaluation

To analyse the Export performance of Indian spices has to collect the secondary data from the Spices Board, Annual Reports from 2001-02 to 2016. In this section we consider the following objectives:

- To examine the average growth of the quantity of spices
- To find out the average growth of value of spices
- To examine the functional relationship between the Value and quantity of exports

Hypothesis

In view of the proposed objectives, the researcher has formulated the following hypothesis (for the study.

Null Hypothesis (H_0): There is no functional relationship between value and Quantity of exports

Alternative Hypothesis (H_1): There is a functional relationship between value and Quantity of Exports.

Research Methodology

Research design is the framework of the research study. It lays out the structure, procedures and data analysis of the research. In this study descriptive and analytic research design has been found to be most suitable type of research design. In this way, the trends in Export performance of Spices are described with the help of statistical tools.

Data Collection Method

The data used for present data is based on secondary sources. The secondary data have been collected from the publications of Indian spices Board Ministry of Commerce Government of India viz, Annual reports Brochures and Websites.

Data Analysis Technique

The researcher has used the statistical tools like Ordinary Least Squares (OLS), Regression analysis to find out region wise growth rates, and worked out find the behavior of the trade variables under the study. In addition routine descriptive statistics, like frequency, mean, Standard Deviation (SD), Shapiro-Wilk normality test were used. The computer software's used are R 3.2.1 version and MS-Excel has been used for computation. Analysis of growth rates are worked out by using the linear function and worked out find the behavior of trade variables under the study. The following sections discuss the result analysis of three objectives respectively.

Results and Discussion

To achieve the above objectives, the following statistical techniques have been used:

To establish the functional relationship value and quantity of the exports of spices, here fitted a linear function Y (value of species) = A+ B (Quantity of spices) as shown below table-1 and 2.

In order to assess trend of the export performance of spices, the average growth of Quantity in spices is 4,68,437.7 tones and the average growth value of spices is 5,932.97 crores. Initially, before establishing the relationship between the value and Quantity of spices, let us find out the normality of two variables to apply a parametric or a non-parametric correlation tool.

The theory states that both the variables in correlation should be normally distributed. If any one of them is not normally distributed the Karl-pearson correlation is not appropriate (Gerrish & Lathlean, 2015). So it is better to apply nonparametric test of correlation i.e., spearman rank correlation for better results. It is observed that both the spearman's rho and Kendall's tau are the best tools for examining the coefficient of correlation in the absence of normality in the analyzing data. They best suit when the

data is ordinal in nature (Snyder & Mangrum, 2005).

The data has tested the normality of two variables using Shapiro-wilks test. From the p-values i.e., 0.1151, value of Quantity of Spices and 0.009881, value of species, it is clear that, one of the variables ie. Quantity of spices is normally distributed and the other ie., value of species is not. By this, it is concluded that a parametric correlation tool named Karl Pearson Coefficient of Correlation cannot be applied. Thereby, an equivalent non-parametric test named Spearman's Rank Correlation is used. From the results, it is observed that the Spearman's Rank correlation (rho) between Quantity of Species and Value of Spices is 0.974 at 1% of level of significance. This values states that there is a strong correlation between the two variables. From this, we can state that our results do not accept the null hypothesis (H_0). Therefore, it states that there is a significant functional relationship between Quantity and Value of Spices.

Table 1: Correlations

Test	Quantity/value	Correlation Coefficient	Quantity	Value
Kendall's tau_b	quantity	Correlation Coefficient	1.000	.974**
		Sig. (2-tailed)	.	.000
		N	13	13
	value	Correlation Coefficient	.974**	1.000
		Sig. (2-tailed)	.000	.
		N	13	13
Spearman's rho	quantity	Correlation Coefficient	1.000	.995**
		Sig. (2-tailed)	.	.000
		N	13	13
	value	Correlation Coefficient	.995**	1.000
		Sig. (2-tailed)	.000	.
		N	13	13

**Correlation is significant at the 0.01 level (2-tailed).

Even, Kendall's tau is also used by the paper to establish the results obtained by Spearman's Rank Correlation, as stated in the above Table 1.

As there is a correlation, we can apply regression in order to examine the impact of Quantity and the value of Spices. After running the data in R 3..1 version, the

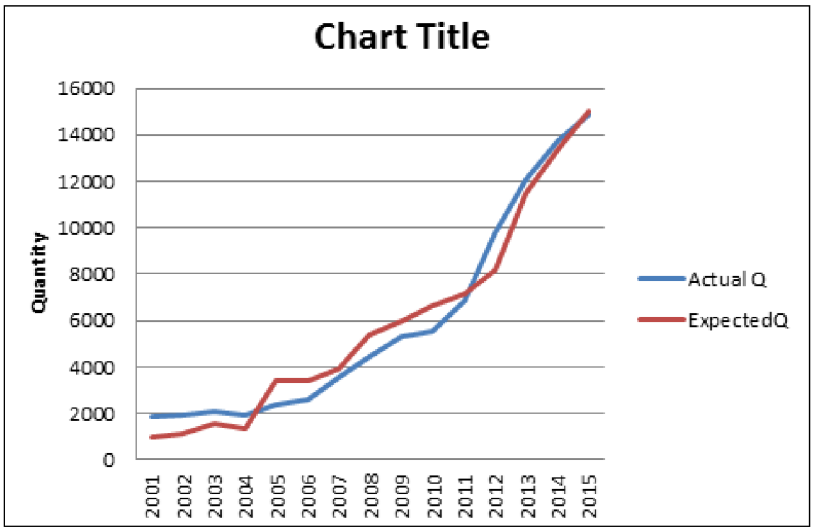
results have come up with the following regression equation, used for finding the expected values as well as for predicting the future value of species based on our exports of quantity of spices. The following table -2 exhibits the results in detail.

y hat(V) = (-4082.99+0.021382(Q) — — Regression Equation

Table 2: India Spices exports from 2001-02 to 2015-16

Year	Quantity	Value	y hat(V) = (-4082.99+0.021382(Q)		Actual Q	Expected Q	Residuals	
2001-02	235916	1833.53	961.37	2001-02	1833.53	961.3659	872.1641	
2002-03	243203	1940.55	1117.18	2002-03	1940.55	1117.177	823.3735	
2003-04	264106	2086.71	1564.12	2003-03	2086.71	1564.124	522.5855	
2004-05	254382	1911.6	1356.21	2004-05	1911.6	1356.206	555.3941	
2005-06	348524	2350.52	3369.15	2005-06	2350.52	3369.15	-1018.63	
2006-07	350363	2627.63	3408.47	2006-07	2627.63	3408.472	-780.842	
2007-08	373750	3575.75	3908.53	2007-08	3575.75	3908.533	-332.783	
2008-09	444250	4435.5	5415.96	2008-09	4435.5	5415.964	-980.464	
2009-10	470520	5300.26	5977.67	2009-10	5300.26	5977.669	-677.409	
2010-11	502750	5560.5	6666.81	2010-11	5560.5	6666.811	**-1106.31**	min
2011-12	525749	6840.7	7158.58	2011-12	6840.7	7158.575	-317.875	
2012-13	575270	9783.42	8217.43	2012-13	9783.42	8217.433	1565.987	max
2013-14	726613	12112.76	11453.45	2013-14	12112.76	11453.45	659.3108	
2014-15	817250	13735.39	13391.45	2014-15	13735.39	13391.45	343.9405	
2015-16	893920	14899.68	15030.81	2015-16	14899.68	15030.81	-131.127	

SOURCE: SPICES BOARD COCHIN, 2016



From the above chart it has been clearly observed that the actual export of Indian spices declined as against expected during 2004 to 2011. As per the report of, the world economic situation and prospects United Nations 2011, global market underwent many trails. Thus many reasons can be attributed to the decline of exports during this period, such as increase in food prices, inflation, world recession etc. However the actual exports gained momentum after 2011, with world economy stabilizing and increase in the production.

Conclusion

It can be concluded from the above discussion, an attempt was made to present the importance of the study, various research studies conducted on export performance Indian spices across the world. Further, the findings of the study observed that the previous close linkage between commodity exports and balance of payments has been declining and the traditional role of commodity exports and also the emerging unfavourable conditions, for the commodity exports of developing countries, have a mixed impact on their economies. Some of the developing countries are slowly shifting from exports of raw commodities to process and semi processed commodities and intermediate manufactured goods. The above discussion is that India is performing well as far as exports of spices are concerned. .It seems that various factors appear to play a larger role determining the performance of exports. Still it has the potential to perform better under such circumstances the GOVT should design supportive polices and development of strategies for spices exports**.**

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