A study on export potential of various spices from India

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Abstract:

Our nation has immense potential for growth of exports in various sectors. The purpose of this research is to determine the export potential of various spices from India on the basis of their past export performances. The present study is based on the Secondary data taken from the website of Spices Board of India and the Trend-Analysis method has been applied on the available statistical data so acquired, to derive the export potential of our country. This study will help stake-holders in encouraging and initiating the exports of concerning sectors along with the sustainable growth and that will definitely lead to promotion of exports of India.

INTRODUCTION

A spice is a dried seed fruit root bark or vegetative substance used in nutritionally insignificant quantities as a food additive for flavour, color, or as a preservative that kills harmful bacteria or prevents their growth. It may be used to flavour a dish or to hide other flavours. In the kitchen, spices are distinguished from herbs, which are leafy, green plant parts used for flavouring or as garnish.

Many spices are used for other purposes, such as medicine, religious rituals, cosmetics, perfumery, or for eating as vegetables. For example, turmeric is also used as a preservative; liquorices as a medicine; garlic as a vegetable.

India is known as “The home of spices”. No Indian meal is considered complete without the tangy and delectable flavour of Indian spices, locally known as ‘masala’. Indian spices are famous in the world for their gastronomic value and are known to possess high medicinal values. There is no other country in the world that produces as many kinds of spices as India. Some of the most widely consumed spices in the country inter alia include: chilli (LalMirach), cinnamon, cumin (Jeera), curry leaf (Curry Patta), fennel (Saunf), asafoetida (hing/heeng), basil (Pudina), Bay Leaves (TajPatta), cardamom small (ChottiElaichi), cardamom—large (BadiElaichi), ginger (Adrak), mustard (sarso), bishops weed (Ajwain), cassia (dal chin), celery (Kala Jeera), clove, coriander (Dhania), fenugreek (Methi), garlic (Lahson), kokam, mint, onion, parsley, pomegranate, turmeric (Haldi), tamarind (Imli) pepper (Kali Mirach), poppy (Post Dana/Khaskhas) rosemary and vanilla. The climate of the country is found suitable for growing almost all spices.

India is one of the largest producer, consumer and exporter of spices. India is reported to grow over 50 spices in different parts of the country. The Spices Board, under the umbrella of Ministry of Commerce and Industry, Government of India is the apex body for promoting exports of Indian spices. Established in 1987, the Board has been playing an important role as a developmental, regulatory and promotional agency for Indian spices. Its broad-based activities include formulation and implementation of quality improvement systems, research and development programmes, imparting of education and training to farmers, processors, packers and exporters on post harvest handling, etc. On the promotion of spices, the Spices Board is regularly participating in international food fairs, assisting exporters for trade fair participation, sending business delegations to identified markets for export development.

During the year 2007-08, the export earnings from spices have surpassed the $1 billion mark for the first time and registered an all time high both in terms of quantity and value in spice exports. The export of spices from India during the year has been 444250 ton valued at $1101.80 million registering an increase of 39% in value over 2006-07.

Kerala, which is the Spices Garden of India, is home to all major items of export like Pepper, Cardamom, Ginger, Turmeric, Curry powder, Spice oils. The export of spices from Kerala is mainly through Cochin and Trivandrum Ports. The major destination of spice exports is USA followed by the European Union, Malaysia, China, Singapore, Sri Lanka, Japan and the Middle East.

LITERATURE REVIEW

According to S. R. (2004) the spices sector is one of the key areas in which India has an inherent strength to dominate the global markets. As a result of the recent WTO regime, competitiveness has emerged as the prime mover of international marketing. This study has contemplated to address some of the export issues in Indian spices based on the performance during the two time periods, viz. pre-liberalization (1981–82 to 1990–91) and post-liberalization (1991–92 to 2000–01).

The study has indicated that all major spices, except turmeric and chillies, have registered a higher growth in value terms during the post-liberalization period. This has been mainly because of the increase in unit value realization whereas, the quantity exported for pepper and ginger has shown a declining trend during the post-liberalization period. In the case of cardamom, turmeric and chilli, fluctuations in value, quantity and unit value have declined in the post-liberalization period.
The analysis on the dynamics in the direction of exports using the Markov chain model has revealed that the erstwhile USSR and the USA have been the stable markets for Indian pepper during the pre-liberalization period. In the post-liberalization period, the USA has emerged as a stable export market mainly due to the disintegration of the erstwhile USSR. During the pre-liberalization period, the price elasticity of export demand for chilli has been significant for UAE, Pakistan and Malaysia whereas the income elasticity of demand has been significant for the UK. However, during the post-liberalization period, the price elasticity of export demand has been significant and highly elastic for Bangladesh. The income elasticity of demand and price elasticity of supply have been found significant for the USA, the UK, Pakistan and Malaysia.

It has been argued that the growth of spices export in the post-liberalization period could be attributed to the trade liberalization policies. Through re-plantation, value-addition and focus on organic cultivation, productivity could be increased and such increase in productivity would reduce the unit cost production and improve the price competitiveness. Demand for organic spices is more in the western countries since organic cultivation has increased the quality of spices. Targeting the western markets would help increase India's export earnings to a larger extent. Suitable policy measures are to be devised and implemented as a long strategy for cashing in on export opportunities by way of increased productivity, investment in market infrastructures and upgradation of spices quality.

**OBJECTIVES OF THE STUDY**

1. To analyze the trend of exports of various spices from India to various countries.

2. To suggest some measures to Spices Board for improvement in the current exporting scenario.

**RESEARCH METHODOLOGY**

**The Study:**
The present study was taken to comprehend the export of various spices from India.

**The Sample:**
Total 14 types of spices (viz. Pepper, Large Cardamom, Small Cardamom, Chilli, Ginger, Turmeric, Coriander, Cumin, Celery, Fennel, Fenugreek, Other Seed Spices, Garlic, Nutmeg & Mace, Curry Powder & Mixture, and Spices Oils & Olerines) were selected to study upon. Data required for the present study was secondary in nature. The yearly export statistics of spices of the nation were been used. The main statistical data was gathered from the website of Spices Board of India, and for the analysis trend-analysis method was applied.

**Tools for data collection:**

**Statistical Tool:**
Trend Analysis method was applied to predict the trend of the export of spices from India.

\[ S = a + bt 
\]

\[ \sum S = Na + b\sum T 
\]

\[ \sum ST = a\sum T + b\sum [T(sq.)] 
\]

Where,
N= Number of Years
S= Value of the corresponding year
t= time (independent variable)
T= Total no. of years from the base year (independent variable)

**Period of the Study:**
5 years (2006-2007 to 2010-2011)

**ANALYSIS AND INTERPRETATION**

**Table 1.1: Spices Board (Ministry of Commerce, India)**

<table>
<thead>
<tr>
<th>Product</th>
<th>Value 2006-07</th>
<th>Value 2007-08</th>
<th>Value 2008-09</th>
<th>Value 2009-10</th>
<th>Value 2010-11</th>
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<tr>
<td></td>
<td>(Lakh hs)</td>
<td>(Lakh s)</td>
<td>(Lakh s)</td>
<td>(Lakh s)</td>
<td>(Lakh s)</td>
</tr>
<tr>
<td>Pepper</td>
<td>3059.91</td>
<td>51950.02</td>
<td>41373.50</td>
<td>31392.47</td>
<td>38318.50</td>
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<tr>
<td>Cardamom (Small)</td>
<td>2348.10</td>
<td>2475.49</td>
<td>16570.14</td>
<td>13216.66</td>
<td></td>
</tr>
<tr>
<td>Cardamom (Large)</td>
<td>1700.106</td>
<td>1500.74</td>
<td>2280.49</td>
<td>1788.72</td>
<td>4462.46</td>
</tr>
<tr>
<td>Chilli</td>
<td>8085.05</td>
<td>10975.01</td>
<td>10809.49</td>
<td>12917.28</td>
<td>15355.39</td>
</tr>
<tr>
<td>Ginger</td>
<td>3883.05</td>
<td>2799.97</td>
<td>3482.51</td>
<td>4675.01</td>
<td>12131.23</td>
</tr>
<tr>
<td>Turmeric</td>
<td>1657.60</td>
<td>15699.99</td>
<td>24857.78</td>
<td>38122.98</td>
<td>70285.14</td>
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</tbody>
</table>

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India is the largest exporter of Spices in the world and has major capture over the World Pepper Market. There was a constant downfall in the value of exports from the year 2007-2010 as the data indicated. A declining trend was observed. The exports in the next five years may be between Rs. 37,000 – Rs. 35,000 lakhs. Exports were highest to USA throughout the past five years. Reports of Indian farmers shifting to other more profitable crops have affected the production aspects for the crop in India.

**Table 1.2: Predicted Values of Spices Export**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Value</td>
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<td>Value</td>
<td>(Lakh s)</td>
<td>Value</td>
<td>(Lakh s)</td>
</tr>
<tr>
<td>Pepper</td>
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<td>36679</td>
<td>3616</td>
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<td></td>
<td>1.06</td>
<td>164</td>
<td>7.27</td>
<td>378</td>
<td>3.49</td>
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<tr>
<td>Cardamom (Small)</td>
<td>1861</td>
<td>22200</td>
<td>2578</td>
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<tr>
<td></td>
<td>6.96</td>
<td>182</td>
<td>3.41</td>
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<td>Cardamom (Large)</td>
<td>4090</td>
<td>46718</td>
<td>5253</td>
<td>5834.5</td>
<td>6415.</td>
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<tr>
<td></td>
<td>451</td>
<td>02</td>
<td>153</td>
<td>855</td>
<td></td>
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<tr>
<td>Chilli</td>
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<td>18221</td>
<td>1986</td>
<td>21517</td>
<td>2316</td>
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<tr>
<td></td>
<td>31.2</td>
<td>3.05</td>
<td>94.9</td>
<td>6.8</td>
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<tr>
<td>Ginger</td>
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<td>12742</td>
<td>1458</td>
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<td></td>
<td>5.77</td>
<td>914</td>
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<td>Turmeric</td>
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<td>9802</td>
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<td></td>
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<td>88</td>
<td>9.01</td>
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<td>27309</td>
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<tr>
<td></td>
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<td>366</td>
<td>6.17</td>
<td>98</td>
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<td>Cumin</td>
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<td>65411</td>
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<tr>
<td></td>
<td>8.55</td>
<td>412</td>
<td>4.27</td>
<td>132</td>
<td>9.99</td>
</tr>
<tr>
<td>Celery</td>
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<td>3447.0</td>
<td>3785</td>
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<td>4461.</td>
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<tr>
<td></td>
<td>744</td>
<td>02</td>
<td>272</td>
<td>36</td>
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<tr>
<td>Fennel</td>
<td>7225</td>
<td>8103.2</td>
<td>8981</td>
<td>9859.7</td>
<td>1073</td>
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<td>94</td>
<td>502</td>
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<td>Fenugreek</td>
<td>8786</td>
<td>9942.4</td>
<td>1109</td>
<td>12253</td>
<td>1340</td>
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<tr>
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<td>956</td>
<td>3</td>
<td>7.9</td>
<td>378</td>
<td>8.85</td>
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<tr>
<td>Other Seed Spices</td>
<td>6925</td>
<td>7851.7</td>
<td>8238</td>
<td>8895.0</td>
<td>9551.</td>
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<tr>
<td></td>
<td>056</td>
<td>22</td>
<td>388</td>
<td>54</td>
<td>72</td>
</tr>
</tbody>
</table>

**Graph 1: Pepper**

**CARDAMOM (Large)** = Exports grew by 150% on the year, succeeding the year 2009-10 (i.e. 2010-11). The value of exports of large cardamom for the next five years is predicted to be above Rs. 4,000 lakhs as indicated by the trend. Highest exports were made to Saudi Arabia throughout the past five years. Guatemala is the largest cardamom exporter in the world, but India as an exporter is augmenting its supplies in the world market. Inferior quality of Guatemalan cardamom has helped Indian exporters to make their presence in the world.
CARDAMOM (Small) = Exports considerably increased between the year 2008-2010 from Rs. 4726 lakhs to Rs. 16750.25 lakhs but it reduced to Rs. 13126.25 lakhs in the succeeding year. The exports in the next five years is expected to have a high fillip. Highest exports were made to Pakistan throughout the past five years.

CHILLI = India and China are the largest exporters of chillies in the world. Exports of chilli in India had constantly increased in the past five years and the same trend may continue to follow in the succeeding years as predicted by the trend analysis. Lower Chinese output (in terms of quality) had helped India in augmenting its exports by 20% by the year 2007. Highest exports were made to Malaysia throughout the past five years.

GINGER = This commodity didn’t seem to show much potential of exports from the year 2006 to 2010 but its exports boosted from Rs. 4675 lakhs to 12131.75 lakhs in the last year (i.e. 2011) as the farmers had invested huge amount of money and labour in ginger, in Karnataka. Crop failure in China was another reason for boost of Ginger exports in India. The predicted value of exports for the next five years is Rs. 10900 – Rs. 18500, lakhs. Highest exports were made to Saudi Arabia in the year 2006-07 and 2009-10 and to UK from 2007-2009. But it was Bangladesh to whom the highest exports were made in the year 2010-11. India produces one third of the world’s total production of Ginger.

TURMERIC = India is the world’s largest producer of Turmeric. Positive trend has been observed again since there was a massive augment in its exports in the last year (i.e. 2009-10, from Rs 38123 lakhs to 70285.15 lakhs), due to increase in demand from United Arab Emirates, Iran, Bangladesh and Malaysia. Predicted values of exports for the next five years lie between Rs 72000 – 123997.3 lakhs. Highest exports were made to U.A.E throughout the five years.

CORIANDER = Value of exports considerably decreased in the previous year (from Rs. 22585 lakhs to 16663.25). Still it is showing a positive trend line because the exports before the previous year were augmenting every year. Predicted values of exports for the next five years lie between Rs. 24000 – 36000 lakhs. Only in the year 2009-10, highest exports were made to Pakistan and during the remaining four years (viz. 2006-07, 2007-08, 2008-09, 2010-11) out of the past five years, highest exports were made to Malaysia.
CUMIN = India is the highest Cumin producing country. The value of exports increased by 86% in the year 2008-09 over its previous year and remained stable during the next year (i.e. 2009-10), thanks to the sudden drop in cumin production in Syria and Turkey. But it badly declined in the succeeding year (i.e. 2010-11, to 39597.75 lakhs) due to erratic weather in the major producing states of Gujarat and Rajasthan during its initial growing stage. And hence, it is incredible to see the positive trend for the next five years which predicts values amounting between Rs. 58,968.25 – 84,739.99 lakhs. Highest exports were made to U.S.A from the year 2006 to 2008 which was then taken over by U.A.E from 2008 to 2010. And in the year 2010-11, highest exports of cumin were made to U.K.

CELERY = Exports of celery have been increasing every year except for the year 2010-11 where it reduced just by 2.87% over its previous year. The predicted values of exports for the next five years are between Rs. 3,100 – 4,400 lakhs. Highest exports were made to U.S.A throughout the five years.

FENNEL = Exports of fennel too have an increasing trend. Incessant rainfall had damaged crops in the major producing states like Gujarat (North) and Rajasthan (South). The predicted values of exports for the next five years are between Rs. 7,000 – 10,500 lakhs. Highest exports were made to Malaysia in the years 2006-07 & 2009-10 whereas the same were made to U.S.A from the year 2007-2009. Pakistan was the country where the highest exports were made in the year 2010-11.

FENUGREEK = Exports of Fenugreek increased by 117% in the year 2008-09 over its previous year. But, it slightly declined for the successive two years. Predicted values of exports for the next five years amount between Rs. 8,500 – 13,500 lakhs. In the years 2008-09 & 2009-10, highest exports were made to Egypt and Yemen Arab Republic respectively. Other than these two periods, Japan was the country where the highest exports of Fenugreek were made in the past five years.
OTHER SEED SPICES = Exports of other seed spices increased by 108% in the year 2008-09 over its previous year and slightly declined for the successive two years. The predicted values of exports for the next five years are between Rs. 6900 – 9500 lakhs. Highest exports were made to Nepal throughout the past five years.

GARLIC = Exports were extremely low from the year 2007 and continued to 2009 (amounting between Rs. 350 – 400 lakhs). But, the failure of Chinese garlic crop helped India to export garlic to Indonesia, Malaysia, Philippines and Bangladesh and the exports massively boosted by 1892% in the next two years. As per the trend, the predicted values of the next five years lies between Rs. 6000 – 10500 lakhs. Highest exports were made to Malaysia in the year 2006-07 which changed to U.K from the year 2007-2009. Bangladesh is the country where highest exports have been made in the past two years. China is the largest producer of garlic while India stands in the second position.

NUTMEG & MACE = Exports of nutmeg & mace have an increasing trend. The importing countries had a complaint about the presence of aflatoxin in the product which resulted to a minute decline in the growth rate of exports in 2010-2011. The predicted values of exports for the next five years are between Rs. 11500 – 18500 lakhs. Highest exports have been made to U.A.E throughout the past five years.

CURRY POWDER & MIXTURE = Exports of curry powder & mixture have been stable in the past five years. Predicted values of exports for the next five years are between Rs. 25000 – 38215 lakhs. Highest exports have been made to U.K throughout the past five years except during the previous year (i.e. 2010-11) where the highest exports were made to Nigeria.

SPICE OILS & OLERNES = Exports of spice oils & olernes have been increasing in a fluctuating manner in the past five years. Still a positive trend has been observed.
which predicted the value of total exports in the next five years to be between Rs. 94000 – 128408 lakhs. Highest exports were made to U.S.A throughout the past five years.

MINT PRODUCTS  Value of exports of mint products decreased by 16% in the year 2009-10 over the previous year (i.e. 2010-11) due to the lack of demand amid supply pressure in the spot market. It increased by 42% by the next year (i.e. 2010-11). Predicted values of exports in the next five years amounted between Rs. 162400 – 197500 lakhs. Highest exports were made to China throughout the past five years except during the year 2008-09 where the highest exports were made to U.S.A.

CONCLUSION AND DISCUSSION

India’s contribution to world production for spices is 84%, which itself is massive. China exists at the second position in spices export but it declined in terms of exports since the past few years. India has suitable topography which supports production of various spices. Cheap labour, skilled manpower, government support, low operating costs are some of the major strengths of India.

The result of the study shows that there is a high potential for growth for most of the spices (except Pepper) in the coming years, which will definitely continue. Pepper production should be given more encouragement in the form of monetary and fiscal incentives and to motivate farmers/exporters to produce more efficaciously, so that the overall production grows, and also the declining trend is reversed. Opportunities exist for every other product in terms of competition in the already existing target markets. Competitors can be defeated with ease. Cardamom enjoys a unique position in the export market, where Guatemala is the only country in the competing field. Trade agreements between the two countries may develop good relations and it can earn a good reputation for India in terms of export. Producers should be made aware of the international standards of production (use of pesticides, proper removal of dirt/insects etc) to yield better quality of spices for the export market, and thus no importing country will have complain for it.

IMPLICATIONS

The study would have implication for the following groups:

For Exporters from India: This study will help them to find out export potential from India. It will also help them to know the current situation of export of spices and the export potential lies in the sectors of various spices in India.

For Researchers: The researchers can further carry out studies to understand export industry.

For Government: This research is helpful to government bodies as it would help them to identify the sectors in which exporters should be given some incentives so that the export can be increased and in which sectors Foreign Direct Investments should be invited flexibly.

For Students: This study is also useful for the students who want to explore the Indian Market. This report would provide a good stepping stone to carry out their study.

LIMITATION OF THE STUDY

The statistical data were taken for last five years i.e. from 2006-07 to 2010-11, which may not generalize the results.

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