

## AN EMPIRICAL STUDY ON THE OPPORTUNITY AND CONSTRAINTS FOR SPICE EXPORTER



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### ABSTRACT

Export is widely regarded as the primary driver of economic expansion as it has taken on an increasingly significant role in the development of every nation. In order to achieve quick growth and pay for the country's vital imports, India needs a substantial amount of foreign currency. It is necessary to generate millions of job openings in order to put today's young people to productive use in the construction of the nation. Earning it through exports is the most reliable way to receive foreign currency over the long term, despite the fact that the country has other potential sources of this currency. Not only does the export of highly valued traditional products bring in foreign currency, but it also provides employment for a significant number of people. When compared to other conventional items, the prices of spices on both the local and international markets are significantly higher. This is the manufacture of spices in India requires a significant amount of semi-skilled and unskilled labour. The transformation of the international trade landscape brought about by the formation of the WTO has had a major impact on India's spice exports.

**Keywords:** Opportunity, Constraints

### INTRODUCTION

Annual herbs that produce plants with seeds that can be dried and used as spices are known as seed spices. In addition to imparting flavour to our food and having utility as a preservative and medicine, they are a present from mother nature to all of humanity. About 20 different

types of seed spices are grown in India. Cumin, coriander, fennel, fenugreek, ajwain, dill, nigella, celery, and caraway are among the most well-known of these spices and herbs. Fenugreek is another. Seed spices hold a prominent position within the country's overall collection of spices and play an important part in the functioning of our country's economy. In a wide variety of foods and beverages, flavouring, seasoning, and bringing out the aroma are the primary functions that seed spices are put.

The seed spices are important in the food sector, but they also have medicinal properties, and as a result, they are utilised in a wide variety of pharmaceutical preparations and even in the cosmetics industry. Seed spices are key export oriented commodities, and around ten percent of production is exported in raw as well as in products with value added to them, realising foreign exchange in the amount of rupees equivalent to nearly three thousand crore (Spice Board, 2017). Because spices are fully natural, as opposed to the artificial additives that are typically used for seasoning and flavouring foods, there has been a global rise in the number of customers who are using them. Consequently, during the course of the previous ten years, there has been a discernible upward trend in the export of seed spices. Cumin, coriander, fenugreek, and fennel are the most widely farmed seed spices in India, making them the country's most important seed spices. Ajwain, dill seed, celery, aniseed, and kalongi are examples of some of the lesser-known seed spices.

In every region of India, a particular seed spice is grown for its flavour. But Rajasthan and Gujarat are the two most notable states in terms of the quantity of seed spices they produce. They are collectively referred to as the "Seed Spices Bowl" and are responsible for more than 80 percent of India's total seed spice production (NHB, 2017). There has been a continuous rise in the demand for seed spices, and countries who import these goods view India as a reliable supply. There is no other nation in the world that can compete with the United States' extensive supply base of seed spices. The climate that prevails in Rajasthan, Gujarat, and several other neighbouring states in the arid and semi-arid regions is extremely favourable for the growth and development of a broad variety of seed spices. These states are located in regions that are classified as arid and semi-arid. There is still a significant amount of untapped potential for expanding the production of seed spices by transferring them to new regions. The higher output can be easily accomplished by using disease-resistant varieties that have high yields, as well as by improving cultural methods, biotic stress management, and planting additional land with these crops.

## GROWTH AND FUTURE PROSPECTS

In the following chapters of this book, we will explore, crop by crop, the patterns that have emerged in the production and export of important seed spices over the course of the past ten years. These patterns give the impression that India has a significant amount of potential for growing both the amount of seed spices it produces and the amount that it exports. However, the quality criteria that are expected by countries who are doing imports are getting increasingly difficult to meet. Therefore, in order to raise the volume of seed spices that are exported, it is necessary to boost the quality of our seed spices by using good agricultural practises (GAP) and improving our post-harvest management.

India is widely regarded as one of the world's most important centres for the production of spices. In point of fact, India is the country that produces the most cumin, ginger, chilli peppers, and turmeric in the entire world. The production of pepper in India ranks it as the world's second largest producer. According to recent research, India exports over 3 billion dollars' worth of spices per year, which equates to approximately 3 million tonnes of spices and a value of 186 billion rupees. It is believed that the history and culture of Indian spices dates back to the beginning of human advancement.

The Vedas, the Bible, and the Quran all contain several brief or oblique references to various Indian spices throughout their respective texts. The Rig Veda, which was written approximately 6000 B.C., together with the other three Vedas, Yajur, Sama, and Atharva, has India's oldest and most comprehensive record on spices. Spices are an essential part of the social experience of growing things, which are to all intents and purposes important to the art of cooking. It is more accurate to refer to them as property things that may be utilised in a variety of forms, such as fresh, prepared, dried, broken, or powdered, and that give scent, taste, flavour, shade, and sharpness to food, rather than a single food seasoning factor. Spices can be any part of the plant, including the bark, buds, sprouts, natural goods, leaves, rhizomes, roots, seeds, features of disgrace and styles, or even the complete plant tops.

The dry and semiarid regions of India, specifically Rajasthan and Gujarat, are referred to as the Seed Spices Bowl and are responsible for more than 80% of the country's total seed spice production. There are 109 spices that have been registered by ISO, and India is responsible for producing 63 different spices, out of which 20 are known as seed spices. Out of a total of twenty seed spices, the ICAR-NRCSS working group determined the ten most fundamental seed spices

to be cumin, coriander, fennel, fenugreek, Ajwain, anise, caraway, celery, dill, and nigella respectively.

## **OBJECTIVES**

1. To understand the Spices Industry Overview
2. To study the challenges faced by Spices Industry
3. To study the Opportunities of Spices Industry

## **REVIEW OF LITERATURE**

K.S. Dhindsa's (2013) It has been demonstrated by a number of economists that there is a causal link between international commerce and accelerated rates of economic expansion. Alfred Maizel's research is one of the most recognisable in this field, and he has done a lot of it (1968). His hypothesis is that the ability of primary producing countries to improve their import capacity is the most important factor in determining the rate of economic growth in those countries. Export was examined in research on the causal relationship between economic growth and export. According to him, there are three different ways in which exports contribute to the expansion of the economy.

Ragnar Nurkse (2014) is generally regarded as the principal proponent of the Demand Deficiency Thesis. According to him, trade served as a driver of economic expansion in developing nations throughout the 19th century; however, during the 20th century, it was not nearly as effective a driver of economic expansion as it had been during the 19th century. According to him, this was as a result of the rate of expansion slowing down in the market for conventional exports from developing nations in industrialised countries. This was due to the fact that industrialised countries consume less of these goods.

Raul Prebisch and R.W. Singer (2015) argued, in support of the Demand Deficiency Thesis, that the low income elasticity of demand in industrial countries for the primary products of developing countries can be partly attributed to a secular decline in the prices of primary products in terms of manufactures. This decline was cited as the cause of the low income elasticity of demand (Secular Deterioration Thesis) According to Maizels (1968), the slow development in the global demand for some developing countries' basic products was the cause of the export decline in such countries.

The Supply Deficiency Thesis received endorsement from prominent economists such as Cairncross, BiedaDecosta, and Dhindsa. In his study titled "India's Export Performance," K.S. Dhindsa (2016) discovered that exports of traditional commodities are adversely affected not because of issues related to external demand, but rather because of problems related to domestic supply. In their research titled "Export of Agricultural Commodities from India" that they conducted in 1988, Dacosta and Goddamwar demonstrated that the related.

McGeehan (1986) made the observation that in defining a company's competitive position, factors other than price, such as quality, design, and marketing, are just as essential. Performance, dependability, and aesthetics are all aspects that might be considered part of design. As competition on the global market rises to a higher level, the part that marketing plays in the expansion of exports and sales will inevitably take on a greater degree of significance. According to the findings of the research that he had conducted in a large number of western countries, there is a correlation between pricing and the amount of exports that are made.

According to him, "The participation of particular countries in the overseas export volume are inversely related to their export prices." In their research, Dacosta and Gaddam War (1988) came to a result that was comparable to this one. Researchers Ball, Eaton, and Steuer (1966) investigated how the pressure of British domestic demand affected the country's export performance. They have arrived at the conclusion that the short run variations in the volume of British export were inversely related to the pressure of domestic demand. This was their finding after doing the research. This is consistent with the traditional viewpoint, which holds that increased demand at home will result in a lower supply of goods available for export.

Keld Laursen (2017) analysed Balassa's Revealed Comparative Advantage (RCA) in a paper that was published, and he did so in order to provide an explanation for a country's export performance. He has examined the similarities and differences between the Revealed Comparative Advantage of Balassa, also known as the Export Performance Ratio, and other measures of international trade specialisation, such as the Michaely Index (including the CTB measure), and the Chi square measure. After doing empirical research and conducting an analysis of the attributes of the RCA index, this paper came to the conclusion that the Revealed Symmetric Comparative Advantage is the most accurate measurement of comparative advantage (RSCA).

According to him, the Revealed Comparative Advantage (RCA) has been used as a measurement of international trade specialisation in a large number of reports (for example, UNIDO; 1986, World Bank 1994) and academic publications (for example, Aghino 1981; Crafts and Thomas 1986; Van Hulst et al 1991; Lim, 1997). These reports and publications include: Amelia U. (2002) used the export demand function methodology, applied a dynamic panel data model based on fixed effects and generalised methods of moments estimators, and investigated the influence of trade liberalisation on the expansion of various developing economies' exports. According to her, the performance of the exports is likely to depend on the primary factor.

In his studies titled "Policy Issues in International Trade and Commodities," which were released by UNCTAD, Macro Fugazza (2004) conducted an analysis of the export performance and the factors that contributed to it. According to him, there does not appear to be any obvious policy implication that emerges from the economic literature, which clearly asserts the relationship between the liberalisation of trade and the expansion of the economy. The empirical facts provide substantial support for the assertion that there is a positive link between the growth in output and the performance of exports. The success of an export operation can be broken down into two categories: internal and external variables. Internal variables are those that pertain to the conditions of the supply side of the exporting country, whereas external elements include conditions pertaining to accessing or entering a foreign market as well as the geography of a country.

## **RESEARCH METHODOLOGY**

A fruit, root, seed, bark, or other vegetative material that has been dried and then employed as a flavoring component in cuisine while having little to no nutritional value is referred to as a spice. According to one definition, it is "a powerfully flavoured or aromatic material of a vegetable origin, produced from tropical plants, and used most commonly as a condiment." They find additional applications in aromatherapy, fragrances, cosmetics, and pharmaceuticals, as well as toiletries. In cuisine, they contribute to or change the flavours already present, whether those flavours be sweet, bitter, sour, "hot," or something else entirely. In addition, they impart a characteristic colour to particular foods. Spices are used in a broad variety of foods and preparations, including ready-to-eat meals, sea food, soups, sauces, packaged meat, and a multitude of other things. Spices are not the same as herbs. Spices include herbs as one of its subcategories. They are herbs or plants with green leaves that are used to flavour food or

decorate plates. However, the definitions provided by ISO do not differentiate between spices and herbs in any way. According to the definition provided by the Encyclopaedia Britannica, spices and herbs are flavorful portions of plants that are used in cooking and the preparation of beverages to season food and drink. The tropical and subtropical regions are the birthplace of spices like cinnamon, cloves, and ginger, while the temperate zones are home to herbs like rosemary, marjoram, and thyme. Caraway, anise, and fennel are examples of spice seeds that thrive in either a tropical or temperate climate.

## **DATA ANALYSIS**

In today's globalised economy, a nation's success or failure in the realm of international trade is the most important factor in determining overall economic performance. Indicators such as the level of openness (Ratio of Trade in Goods and Services to GDP), the growth of exports over a given period of time (used in the World Bank's World Development Indicators), the Trade Performance Index or Revealed Comparative Advantage, etc. are frequently utilised when assessing a country's level of success in international trade. In this chapter, an attempt has been made to offer the details regarding the increase of India's primary spice exports throughout the pre-WTO period and during the WTO period. This growth was observed during both of these time periods. The growth of all of the most important spices and goods using spices, as well as the volatility within that increase, are detailed in this article. The investigation of this chapter provides responses to the first and second goals of the research activity. India, the world's largest provider of many different spices, sends many different kinds of spices and other products out onto the global market. The amount of spices exported from India climbed by 368.76 percent throughout the period of time from 1994-95 to 2012-13, while the value of those exports increased by 1853.34 percent. The creation of the World Trade Organization (WTO) and the subsequent adoption of trade liberalisation policies by member countries resulted in the introduction of new suppliers to the global market. At the same time, India discovered some new markets for her spices to sell them in in addition to her usual markets. As a result, the exportation of spices from India may be affected by both unfavourable and favourable conditions brought about by events occurring in other regions of the world, such as economic turmoil and prosperity respectively. In this regard, an effort is made to analyse the increase of India's spices export throughout the WTO period and compare it to the time prior to the establishment of the WTO. Instability and the general direction of growth are both analysed as part of the process of determining how the expansion of spice exports has been

impacted by both internal and external shocks. A technique that is widely used and is known as the "Chow Test" was employed in order to determine whether or not there was a structural shift in the increase of spice exports between the two time periods known as "Pre WTO" and "WTO." The findings of the study indicate that there was a significant shift in the underlying dynamics of the expansion of spice exports during the WTO era. There is a gap in the total spices exported from 1985-1986 to 2012-13, with the gap beginning in 1995 and having a P value of 0.0160868. Ten of the thirteen most important spices and the products derived from them exhibit a discontinuity in production around the time that the WTO was established (1995). Cardamom (P value of 0.0518), Mint-Related Products (P value of 0.2256), and Nutmeg/Mace Do Not Show a Break in the Statistical Pattern ( P value 0.3342). Prior to WTO, the only data that were accessible for mint goods were those from the previous three years, and the only data that were available for nutmeg and mace were those from the previous two years. In order to conduct research on the expansion of spice exports, the simple and compound annual growth rates are calculated over the preceding five years, ten years, and WTO term (18 years). The value of the exports measured in Indian rupees will be taken into consideration for the study. When conducting an investigation into trends and levels of instability, the annual simple growth rate is also considered. Standard Deviation, often known as STDV, is utilised for the purpose of researching the instability in the growth. The Ordinary Least Square (OLS) approach is used to determine growth trends in the data. We obtain the regression equation for each commodity using the data from 1995 to 1996. The investigation is broken down into three primary parts.

### **GROWTH IN THE EXPORT OF MAJOR SPICES**

India's total spices exports have increased much both in terms of quantity and value during the WTO regime. This increase in the growth of export is not uniform for all spices and in all periods. Growth in the export is also an indication of domestic supply and foreign demand for the commodity and there by export performance. In this section, the growth in the India's major spices during the WTO regime is analysed and compared to the pre-WTO period using Simple and Compound Growth Rates (CGR). A comparison is also made between Average Annual Growth Rate and Component Annual Growth Rate of spices and Aggregate Export of India. Recent trends, especially the trends in the export growth of last ten years (2003-04 to 2012-13) were also analysed and compared with the growth rate of ten years just preceding the WTO for understanding the differences.



**Table 1 Average Annual Growth Rate (AAGR) and Compound Annual Growth Rate (CAGR) of Major Spices in the WTO regime (1995-96 to 2012-13)**

Items	AAGR	CAGR
Pepper	5.51	6.77
Cardamom (S)	18.48	16.8
Chilli	20.72	14.9
Ginger	13.42	9.12
Turmeric	13.93	14.81
Coriander seed	13.45	12.98
Cumin seed	21.4	26.24
Fenugreek	11.93	10.06
Nutmeg & Mace	46.04	56.89
Tamarind	11.47	9.58
Mint products	25.03	27.82
Spice oil and oleoresin	16.05	15.58
Curry powder / Mixture / Paste	16.38	15.58
Aggregate Export	16.58	16.39

Note: AAGR: Average Annual Growth Rate, CAGR: Compound Annual Growth Rate Sources: Calculated from Spices Statistics 2004, Statistics Section of Spices Board, Cochin, RBI Hand Book 2013-14 (Calculated from Table 3.15 to Table 3.27).

According to the findings in Table 4.1, India's total exports increased at a rate of 16.58 percent annually on average over the WTO period, and the compound annual growth rate during this time was 16.39 percent. During the same time period, out of the most important spices, the Average Annual Growth Rates of five items were higher than that rate, and the rates of another five were relatively near to it. During the WTO regime, pepper was the only crop to exhibit

growth in the single digits. If one uses the CAGR, then out of the 13 different types of spices, five showed a growth rate that was larger than the CAGR of India's aggregate exports, and four are very near to that pace. Pepper, ginger, and tamarind are the only spices with a CAGR that is less than 10; ginger and tamarind both have a CAGR that is near to ten. This demonstrates that the growth rates for exporting a variety of spices during the WTO system are of a substantial nature.

### EXPORT GROWTH RATE DURING THE PRE-WTO AND WTO PERIOD

A comparison with the growth rate of exports during the time period before the WTO is necessary in order to gain an understanding of the shifts that occurred in the rate of growth of spice exports during the WTO period.

**Table 2 Ten Years Average Annual Growth Rate (AAGR) of Major Spices during the Pre-WTO and WTO period**

Items	1985-86 – 1994-95 Period I	1995-96 – 2004-05 Period II	2003-04 – 2012-13 Period III
Pepper	13.63	-6.67	12.72
Cardamom	-21.398	11.42	15.05
Chilli	17.76	21.67	20.22
Ginger	-1.13	12.69	20.56
Turmeric	9.68	12.42	16.80
Coriander	15.04	15.28	12.88
Cumin	15.16	14.25	25.15
Fenugreek	14.96	7.76	14.14
Nutmeg/mace	8.43*	59.73	20.71

Tamarind	13.33**	2.96	15.53
Mint product	NA	22.36	19.41
Spice oil and Oleoresin	21.91	16.76	13.83
Curry powder/ Mixture/paste	13.09	15.21	13.84
Aggregate export	19.65	15.13	18.57

Note:NA: Data not Available.

Growth of one year 1994-95. Growth of 6 years 1989-90 to 1994-95. Source: Calculated from Table 3.15 to Table 2. According to the data presented in Table 4.2, the average annual growth rate of India's aggregate export during the Pre-WTO period (which spans the years 1985–1986 to 1994–1995) was 19.65 percent. During the same time period, the export of spice oil and oleoresins was the only one of 13 different spices to have a growth rate that was larger than the growth rate of aggregate export. This rate was 21.9%. During that time period, both cardamom tiny (with a growth rate of -21.4%) and ginger (with a growth rate of 1.13%) demonstrated a declining growth rate. The average annual growth rate of total exports fell to 15.13 percent during the initial ten-year period when the WTO was in effect (Period II). During the same time period, the pace of expansion of the production of six different types of spices became substantial. In comparison to the increase rate of aggregate exports, the growth rates of chilli (21.67 percent), coriander (15.28 percent), nutmeg and mace (59.73 percent), mint products (22.36 percent), spice oil and oleoresins (16.76 percent), and curry goods (15.21 percent) were all higher (15.13 percent). Pepper export was the only commodity to demonstrate a decline in growth during period II (-6.67%). The rate of growth of total exports accelerated to 18.57 percent during Period III (which lasted from 2003–2004 to 2012–2013). During the same time period, the growth rate of aggregate export was higher than the growth rate of five items of spices, including chilli (20.22 percent), ginger (20.56 percent), cumin (25.15 percent), nutmeg & mace (20.71 percent), and mint products (19.41 percent). The growth rate of turmeric (16.80 percent) was close to that rate. The rates of all of the things turned out to be positive, and the rates of growth for seven of the items are higher than the rates of growth for Period II.

## CONCLUSION

India fulfils about half of the requirements of the rest of the world despite the fact that its spice production accounts for less than ten percent of our total spice production. India produces more than six million tonnes of various categories of spices with a total value of approximately four billion US Dollars. Although the consumption of spices has been steadily increasing all over the world, in the international scenario after the first of January 1995, India has been facing challenges in the world market while also seeking the new opportunities of liberalised trade. This is despite the fact that the consumption of spices has been steadily increasing all over the world. In today's interconnected and globalised world, the idea of self-sufficiency is a fallacy, and every occurrence, regardless of whether it is economic, political, social, cultural, or natural, etc., causes ripple effects in other regions of the world as well. According to the findings of a number of studies, the WTO system had a significant impact on the manner in which various agricultural commodities that India exported were received, as well as on the rates of growth and comparative advantages enjoyed by those commodities on the worldwide market.

## REFERENCE

1. Anonymous.(1982). "Encyclopaedia Britannica", Micropaedia, 15th Edition. Chicago: Encyclopaedia Britannica Publishers.
2. Anonymous.(1984). "Export Statistics of Spices". Cochin: Spices Board Publication.  
Anonymous.(1991). "Spice Statistics". Cochin: Spices Board Publication.
3. Anonymous.(2004). "Spices Statistics" Updated up to March 2004, 5th Edition. Cochin: Spices Board Publication. Dacosta, G.C., Goddamwar, S.B. (1988). "Export of Agricultural Commodities from India". Bombay: Himalaya Publishing House.
4. Datta,S.K,etal.(2001). "Composition of India's Agricultural Export: Changes in the Post Reform Period". New Delhi: Oxford& IBP Publishing Co. Pvt. Ltd.
5. Datta,S.K., Deodhar,S.Y.(2001). "Implications of WTO Agreement for Indian Agriculture". New Delhi: Oxford& IBP Publishing Co. Pvt. Ltd.
6. Dhindsa,(1981). "India's Export Performance: Some Policy Implications". New Delhi: Intellectual Publishing House. Bibliography Dept. of Applied Economics, CUSAT 243  
Farrooqi,A.A.,etal.(2005)."
7. Cultivation of Spice Crops". New Delhi: Universities Press (India) Limited  
Gibbs,Walter,M.(1909). "Spices and How to Know Them". New York: Buffalo Publication. Henry,
8. N.Ridely.(1969). "Spices" Vol.1, London: Macmillan& Company Limited.

- Ian, Barnett.(2013). "Spices Island: The History, Romance, and Adventure of the Spice Trade Over 2000 Years." Australia: Rosenberg Publishing.
9. Jack, Turner.(2004). "The History of a Temptation of Spices: An Analytical study. New York: Harper Prenal Publication. James, Riedel.(1982). "Trade as an Engine of Growth in Developing Countries: A Reappraisal". Working paper No.555. Washington DC: World Bank.
10. Kamal Nayan Kabra.(2002). "A Decade of Reforms: The Unfinished Agenda". New Delhi: Indian Institute of Public Administration.
11. Khan, M.S.(1990). "Spices in Indian Economy". New Delhi: Academic Foundation Publication.
12. Krugman, R., Paul.(1994). "International Economics Theory and Policy". Fourth Edition. Boston: Addison-Wesley Publication.
13. Mahindru, S.N.(1982). "Spices in Indian Life". New Delhi: S.Sulthanchand & Sons Publication.