



**IMPACT OF INDIA- SINGAPORE TRADE AGREEMENT ON THE  
PERFORMANCE OF PLANTATION SECTOR IN INDIA**

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**ABSTRACT**

*Trade Agreements play a significant role in enhancing international trade. They liberalize the trade between the countries through tariff reduction and other measures. This study is conducted to know whether there is any increase in export and import of the plantation sector due to India-Singapore Comprehensive Economic Cooperation Agreement, 2003. For the purpose of the study the pre and post export- import data of plantation sector are analysed. The data of five plantation products viz; tea, coffee, rubber, cardamom and pepper for a period of 20 years are used. The data collected are analysed using % Growth Rate, CAGR and t test. The study found that there is no significant improvement in the export and import value after signing the trade agreement.*

**Key words:** Trade Agreement, India-Singapore Trade Agreement

## **I. INTRODUCTION**

Trade Agreements play an important role in foreign trade. Trade Agreements are the agreements between two or more countries to reduce the tariff on export and import. They are one of the tools to improve trade between countries and also one of the instruments of trade policy of the contracting nations. Trade agreements may be either bilateral or multilateral trade agreements.

The main objectives of a trade agreement are:

1. To have economic cooperation between the countries.
2. To increase the foreign trade between the countries.
3. To reduce the tariff barriers between the contracting nations.
4. To improve the balance of trade of the countries.
5. To have access to goods which are not available in the domestic country.
6. To have access to services of experts and technology between foreign countries.

India and Singapore signed the Comprehensive Economic Cooperation Agreement on 3<sup>rd</sup> April, 2003. Its objective is to have a comprehensive economic cooperation between the two countries and to provide tariff reduction in trade of goods, services and investment.

The study is about the impact of India- Singapore Comprehensive Economic Cooperation Agreement on the performance of export and import of the selected five plantation crops viz. tea, coffee, rubber, cardamom and pepper during the pre and post trade agreement period.

## **II. STATEMENT OF THE PROBLEM**

One of the main issues in the foreign trade of contracting countries is the change in the export and import between the countries after signing of the trade agreement. For example. After the Central American Free Trade Agreement (CAFTA)<sup>1</sup> which was signed in August 2004, the US

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<sup>1</sup>The Central American Free Trade Agreement is an agreement between the United States and Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and the Dominican Republic which was signed in August, 2004 to liberalise trade between the Central American Countries.

import of sugar from the Central American Countries increased and the production of sugar within the country decreased.

### **III. REVIEW OF LITERATURE**

Suresh (2007) in his study on the impact of trade agreements and regional economic integration in SAARC Countries found that there is welfare effect and trade creation rather than trade diversion to SAARC countries with the implementation of trade agreements and regional economic integration.

Dhami and Nabi (2013) analysed India's agriculture export performance in pre and post WTO Regime and found that the annual growth of agriculture exports on an average increased to 9.5% during the post WTO Period which was -2.8 % during the pre WTO Period.

Varma and Chowdhary(2013) analysed the trade creation and trade diversion effect of India Sri Lanka Trade Agreement and found that the trade agreement leads to trade creation among the member countries than the trade diversion among the non- member countries.

Harikumar (2014) in his study on the changing phases of India's International trade before and after the liberalization period found that with the liberalization, India's exports and imports have increased.

Sahni(2014) analysed the trends in India's exports during the pre and post reform period and found that there is increase in India's exports during the post reform period and there is change in structure, composition and direction of India's exports to foreign countries.

Aparna(2014) analysed the impact of SAFTA on the performance of plantation sector and found that there is increase in export and import of plantation crops to SAFTA countries after signing of the trade agreement.

### **IV. OBJECTIVE**

To know whether the trade agreement leads to increase in export and import value of contracting countries after signing of the trade agreement.

## V. HYPOTHESES

Trade Agreement leads to increase in export and import value of the contracting countries after signing of the trade agreement.

Ho 1. There is no significant difference between the mean of export value of pre and post trade agreement period.

Ho 2. There is no significant difference between the mean of import value of pre and post trade agreement period

## VI METHODOLOGY

The study is analytical in nature and secondary data is used. The export import data of five plantation products viz. tea, coffee, rubber, cardamom and pepper are collected. The data of five plantation products are collected separately and aggregated. The aggregate effect on all plantation crops together are only studied. For the purpose of the study the 20 years export import data (1996-2016) from India to Singapore are collected. The data of plantation crops are collected from the Export- Import Data Bank, Department of Commerce, Government of India website <http://www.commerce.nic.in/eidb/>

The data collected are analysed with % Growth rate and Compound Annual Growth Rate.

1. The **straight line method** is used to find the % Growth rate

% Growth rate =  $(\text{Current year} - \text{Base Year}) / \text{Base Year} \times 100$

2. **CAGR** =  $(\text{Antilog } b^{1-1}) \times 100$

$B_1 = \ln(1+r)$

3. **t test** is conducted for testing of the significance of the finding.

t test =  $\frac{\text{Mean}_1 - \text{Mean}_2}{SE}$

## VII ANALYSIS

The table No.1 and 2 shows the performance of plantation items export and import during the pre and post trade agreement period to Singapore.

**Table No.1** Export of Plantation items to Singapore in US Million\$ during the pre and post India Singapore Trade Agreement, 2003

Year	Pre ta	% Growth rate	Year	Post Ta	% Growth rate
1996-1997	30.48		2003-2004	27.31	161.0899
1997-1998	23.58	-22.6378	2004-2005	12.61	-53.8264
1998-1999	17.14	-27.3113	2005-2006	13.26	5.154639
1999-2000	8.46	-50.6418	2006-2007	16.07	21.19155
2000-2001	10.99	29.90544	2007-2008	19.89	23.771
2001-2002	8.66	-21.2011	2008-2009	22.59	13.57466
2002-2003	10.46	20.78522	2009-2010	22.78	0.84108
			2010-2011	33.73	48.06848
			2011-2012	55.62	64.89772
			2012-2013	35.11	-36.8752
			2013-2014	28.01	-20.2222
			2014-2015	20.78	-25.8122
			2015-2016	19.95	-3.99423
Mean		-11.9			15.2
CAGR		-1.58			-26.39
SD		30.8			
t value		1.12			
p value		.28			

(Source: Department of Commerce, Export Import Data Bank, Govt. of India)

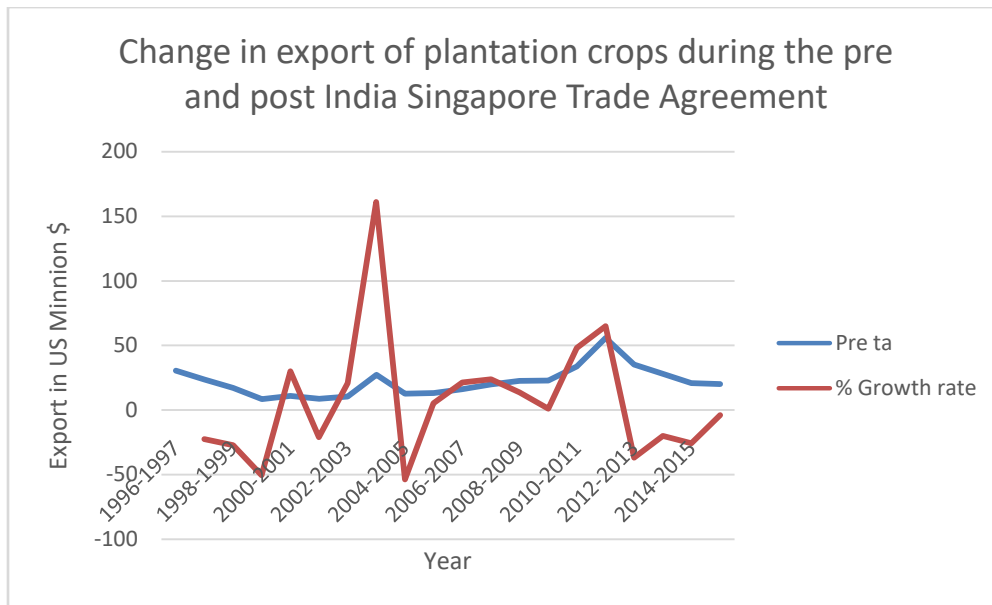
Table No.1 shows that the CAGR during the pre trade agreement period is -11.9% and it increased to 15.2% during the post trade agreement period. The average growth rate during the pre trade agreement period was -1.58% and it decreased to -26.39% during the post trade agreement period. The significance of difference is tested by conducting a 't' test taking the null hypothesis that:

**Ho 1** There is no significant difference between the mean of export value of pre and post trade agreement period.

Since the p value is .28 which is greater than the level of significance accepted the null hypothesis.

Thus it is concluded that there is no significant increase in the mean of export of plantation crops after signing of the India Singapore trade agreement, 2003.

**Graph No.1** Pre and post trade Agreement export and % Growth rate of export



From the graph no.1 it is clear that the pre trade agreement plantation export to Singapore is fluctuating and increases after the trade agreement. The % growth rate also shows a fluctuating trend and increases after the trade agreement and becomes down during 2010.

**Table No.2** Import of Plantation items from Singapore in US Million \$ during the pre and post India Singapore Trade Agreement, 2003

Year	Pre TA	% Growth rate	Year	Post TA	% Growth rate
1996-1997	8.23		2003-2004	10.91	16.55982906
1997-1998	7.93	-3.6452	2004-2005	16.53	51.51237397

1998-1999	11.73	47.91929	2005-2006	17.79	7.622504537
1999-2000	9.71	-17.2208	2006-2007	21.62	21.52894885
2000-2001	11.51	18.53759	2007-2008	24.9	15.17113784
2001-2002	10.75	-6.60295	2008-2009	22.04	-
2002-2003	9.36	-12.9302	2009-2010	20.58	-
			2010-2011	22.95	11.51603499
			2011-2012	27.15	18.30065359
			2012-2013	26	-4.23572744
			2013-2014	38.11	46.57692308
			2014-2015	44.27	16.16373655
			2015-2016	52.41	18.38716964
Mean		4.34			15.5
CAGR		25.99			.91
SD		24.7			18.3
t value		1.11			
p value		.28			

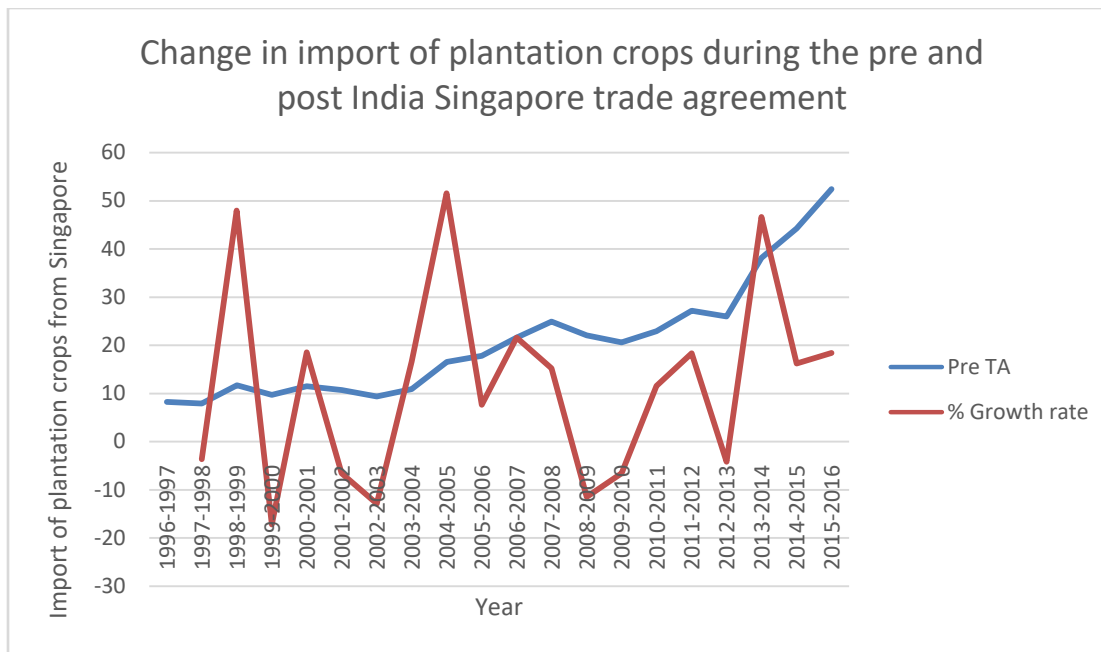
(Source: Department of Commerce, Export Import Data Bank, Govt. of India)

Table No.2 shows that the CAGR during the pre trade agreement period was 4.34% and it increased to 15.5% during the post trade agreement period. The average growth rate during the pre trade agreement was 4.34 and increased to 15.5 during the post trade agreement.

**Ho 2:** There is no significant difference between mean of import value during pre and post trade agreement period.

Since the p value is .28 which is greater than the level of significance .05 accepted the null hypothesis. Thus it is concluded that there is increase in import of plantation crops after signing of the trade agreement.

**Graph No.2** Import value of plantation crops during pre and post trade agreement period and % growth rate.



From Graph No. 2 it is clear that the Import value of plantation crops are less during the pre trade agreement period and increases and becomes down after the signing of the trade agreement. The % growth rate of import value of plantation crops also shows a fluctuating trend.

### VIII. LIMITATIONS OF THE STUDY

1. The export import value of five plantation crops tea, coffee, rubber, cardamom and pepper are only used for the study.
2. The separate effects of the India-Singapore trade agreement on each plantation crop are not studied.
3. Only the impact of India Singapore Trade Agreement is studied.

### IX. FINDINGS

It is found that there is no significant increase in export to Singapore after signing the India Singapore Comprehensive Economic Cooperation Agreement. And the import value didn't show any significant increase after signing the India Singapore trade agreement, 2003. Thus it can be concluded that trade agreements lead to no significant increase in export and import after signing the trade agreement.



## X. CONCLUSION

Trade Agreements act as a measure to improve the foreign trade between the countries. With the implementation of trade liberalization like tariff reduction and tariff exemption increases the foreign trade. By analyzing the export and import value of plantation crops of India and Singapore, found that due to tariff reduction the export value and import value of plantation crops after signing of the India and Singapore Trade Agreement didn't shows any significant increase.

## REFERENCES

- Moktan Suresh (2007) *The Impact of Regional Trade Agreements and Regional Economic Integration on Trade Flows*, Research Paper, Graduate School of International Development, Nagoya University.
- SahniPriyanka (2012) *Trends in India's exports: A Comparative Study of Pre and Post Reform Period*,IOSR Journal of Economics and Finance (IOSR-JEF) e-ISSN: 2321-5933, p-ISSN: 2321-5925.Volume 3, Issue 2. Ver. I (Mar. - Apr. 2014), PP 08-18
- Dhami&Nabi (2013) *Analysis of India's Agriculture Performance in pre and post WTO Regime*, International Journal of Enhanced Research in Management & Computer Applications, ISSN: 2319-7471Vol. 2, Issue 4, April-2013, pp: (1-5)
- Varma and Chaudhary(2013) *Trade Creation and Trade Diversion in the India- Sri Lanka Free Trade Agreement- A Sector Specific Analysis*, Working Paper, January 2013.
- Harikumar(2014) *Changing phases of India's International trade before and after liberalization period*, International Journal of Application or Innovation in Engineering & Management (IJAIEEM), Volume 3, Issue 3, March 2014
- Aparna(2014) *Impact of Trade Agreement on Plantation Sector: A Study with Reference to SAFTA*, Paper Presented in the International Conference of Commerce Association of Kerala, May 2014