

# National Centre for Agricultural Economics and Policy Research (NCAP)

## Bilateral Agricultural Trade between India and Pakistan: Trend, Compositions and Future Directions

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# Introduction

**Agricultural trade constitutes the major chunk of trade between India and Pakistan**

**In 1996, India accorded Most Favored Nation(MFN) to Pakistan; Pakistan not yet given the MFN status to India**

**There have been disruption in normal trade:  
India stopped trade via air and land routes between 2001 and 2004  
The cross border trade was stopped in 2013.**

**Both countries part of South Asian Free Trade Agreement (SAFTA) which came into effect on 1.1.2006; the trade governed under the SAFTA agreement**

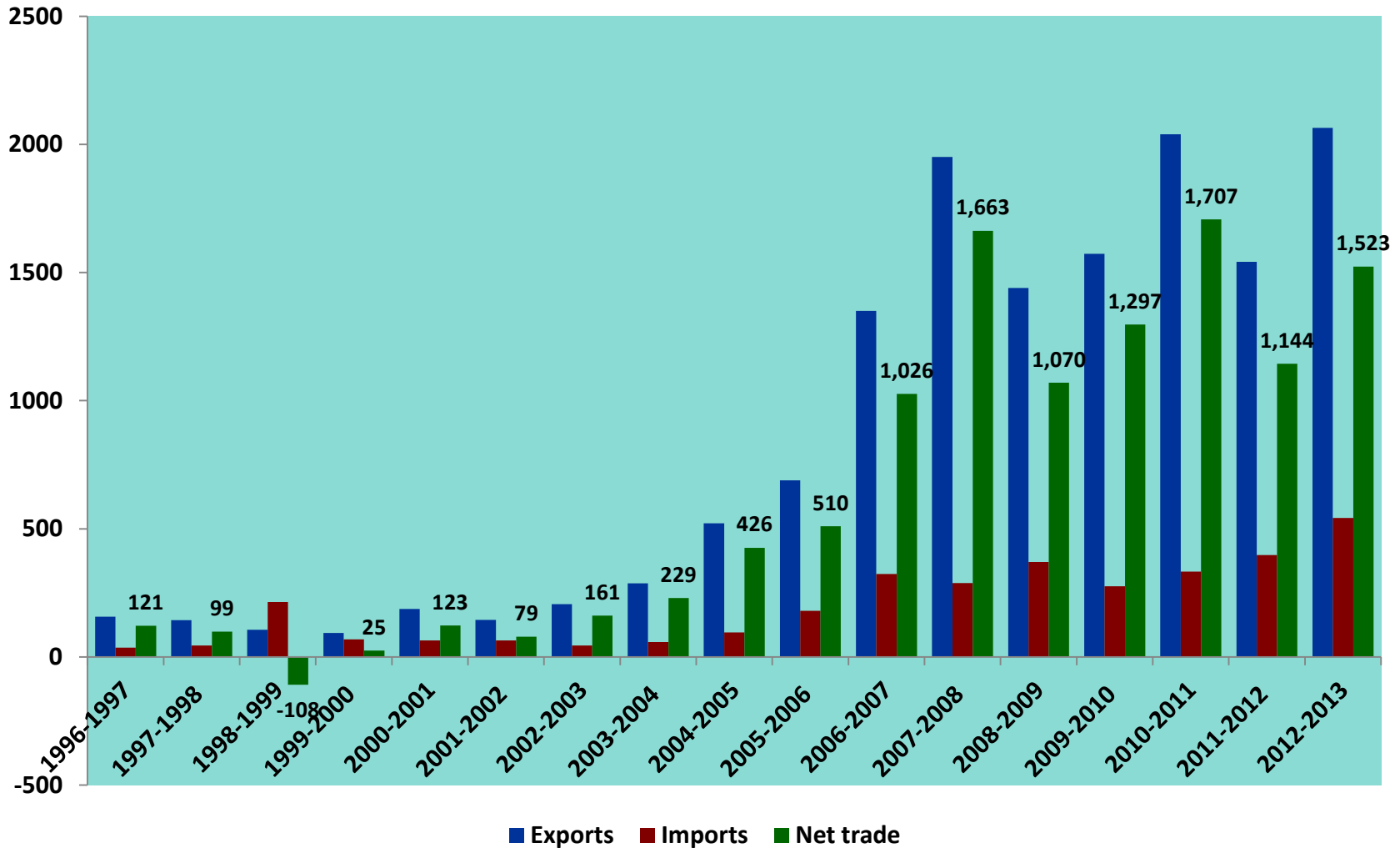
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-  **Trend and composition of bilateral agricultural trade**.....
-  **Emerging and loosing commodities**.....
-  **Regional orientation**.....
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-  **Trade policy of India and Pakistan**.....
-  **Way forward**.....

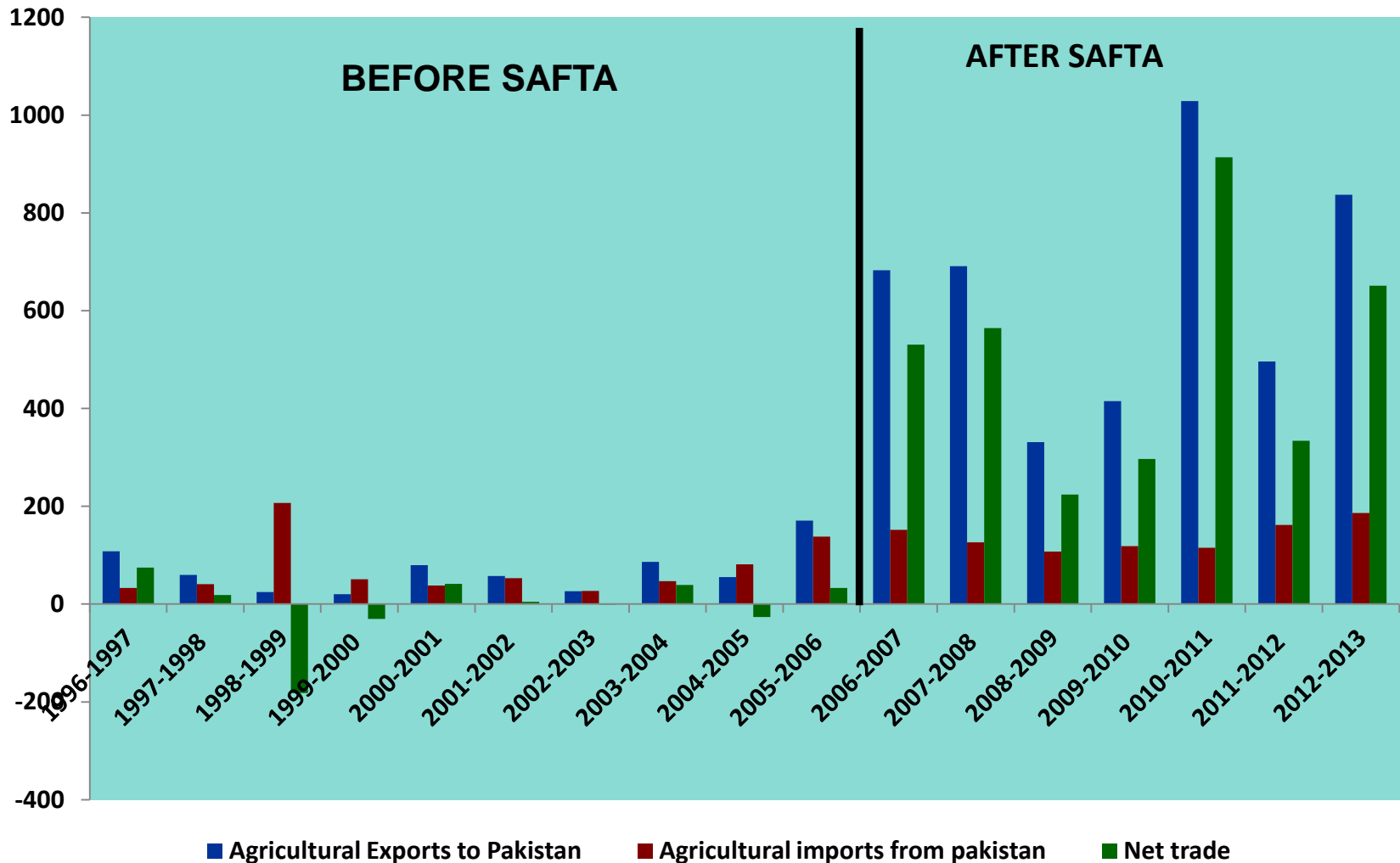
**.....WHAT HAS BEEN THE TREND AND COMPOSITION OF AGRICULTURAL TRADE BETWEEN INDIA AND PAKISTAN?**

# India's Trade (all commodities) with Pakistan (US \$ million)



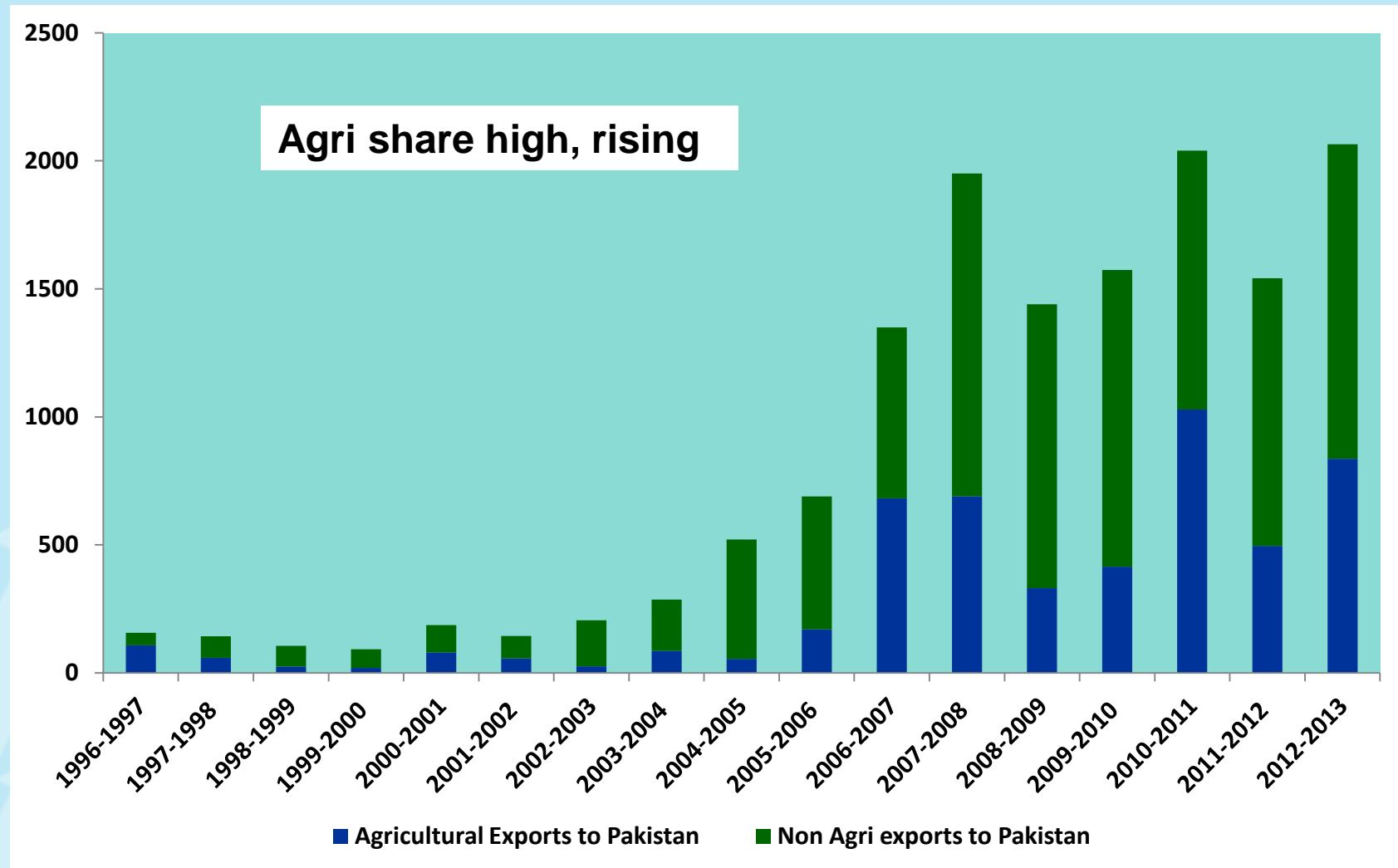
Source: Department of Commerce, Government of India

# India's Agricultural Trade with Pakistan (US \$ million)

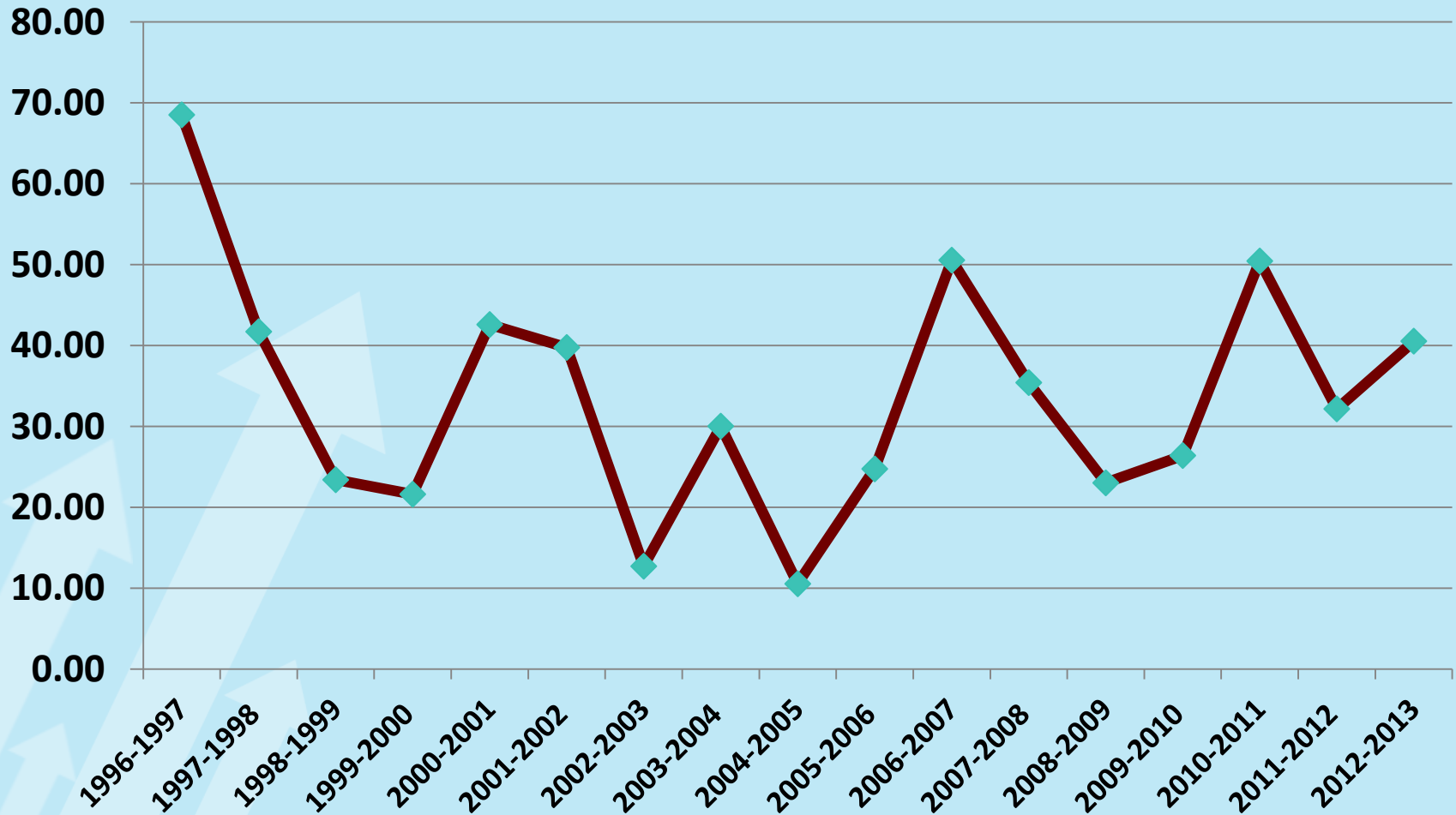


Source: Department of Commerce, Government of India

# Broad Composition of India's exports to Pakistan - agricultural and non-agricultural (US \$ million)

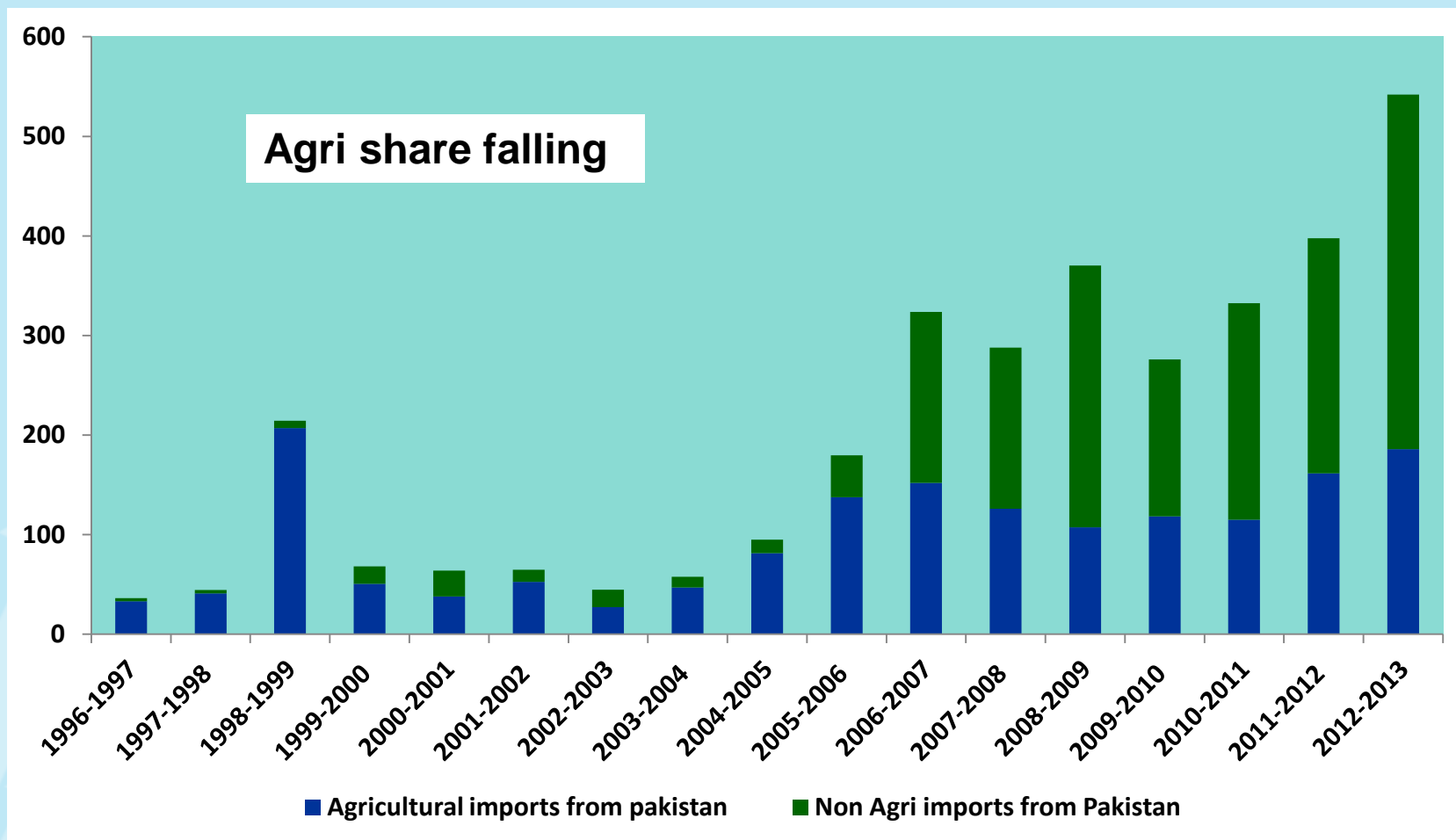


# Share of agriculture in Pakistan Imports from India %

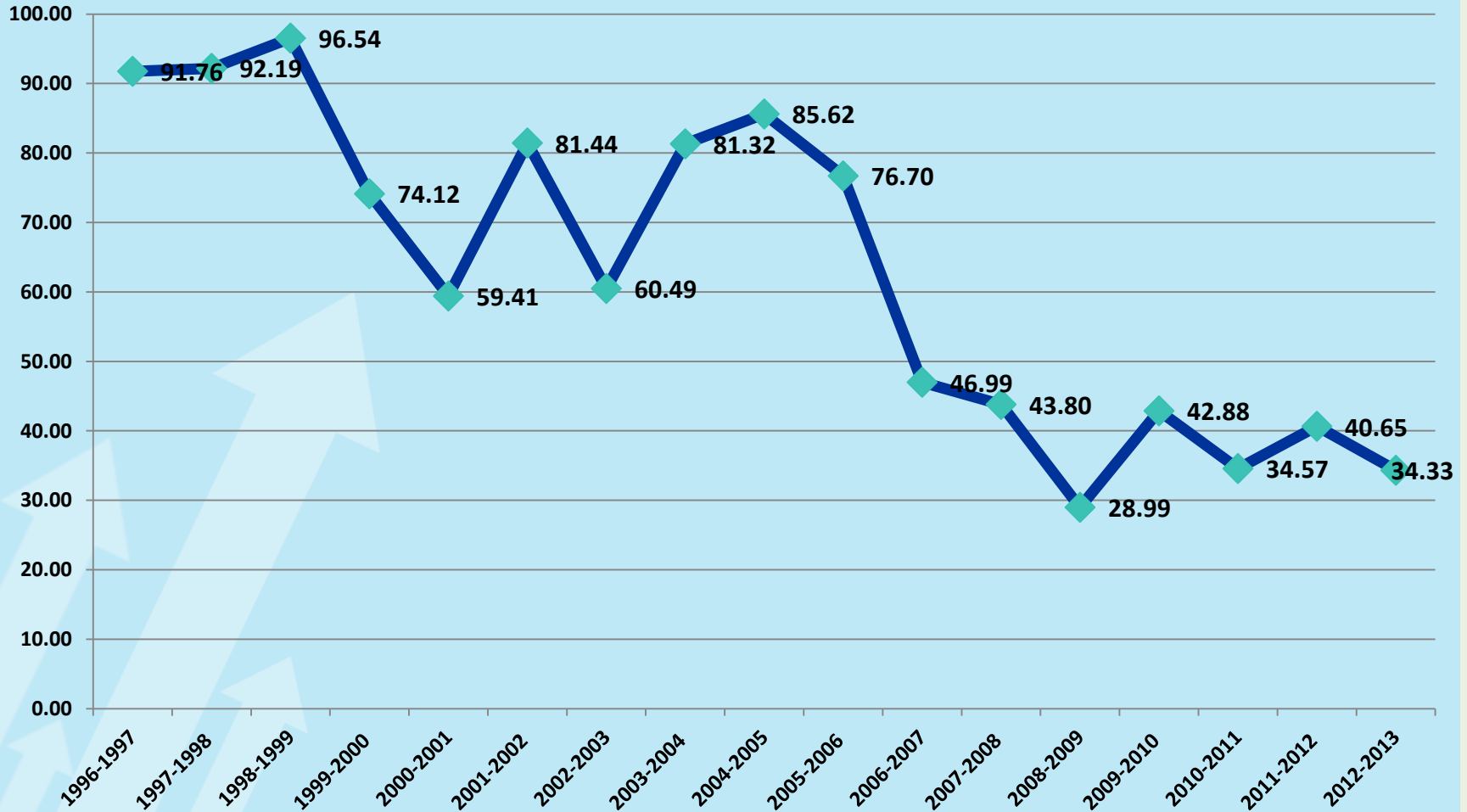




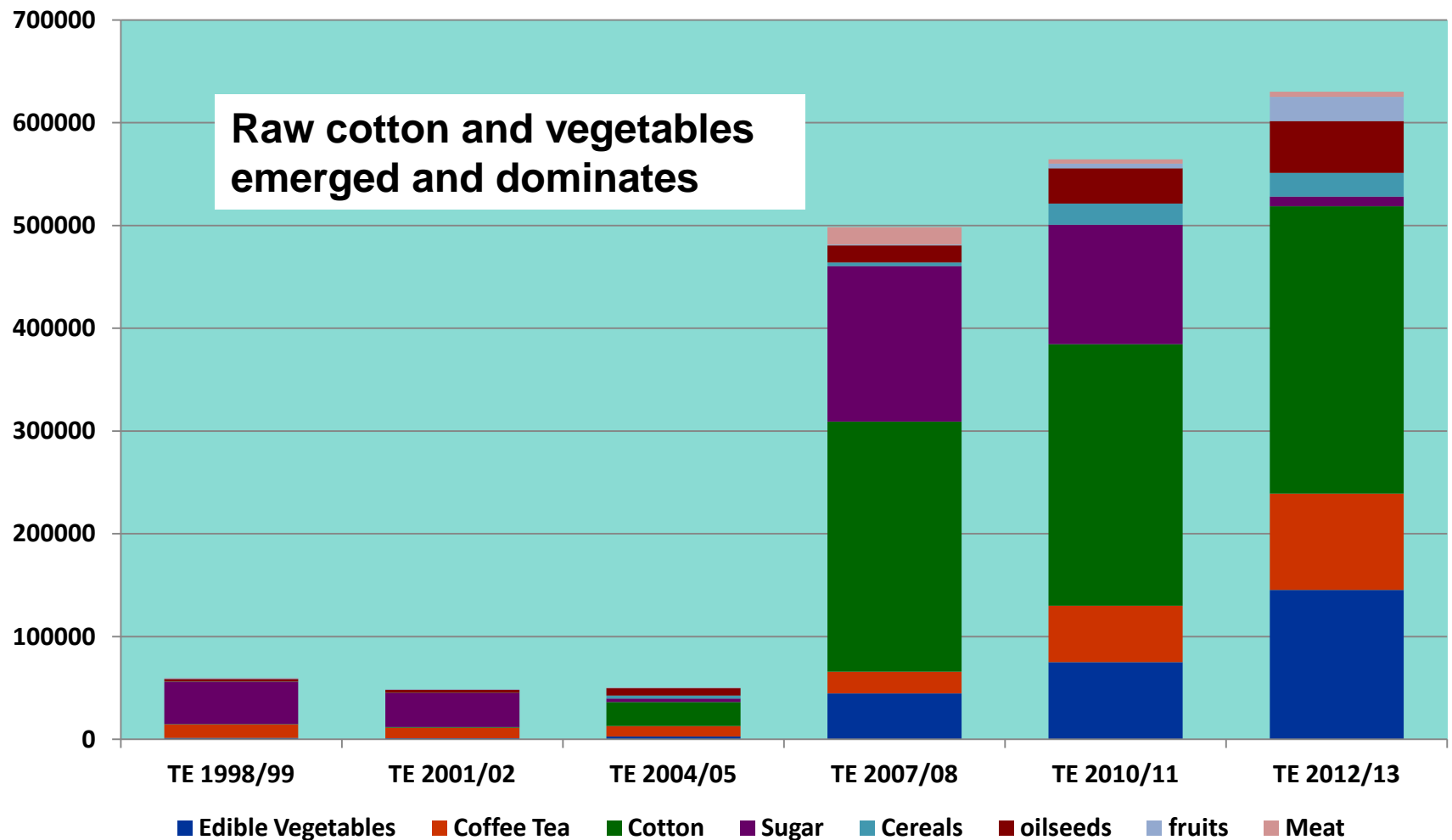
# Composition of India's imports from Pakistan: agricultural and non-agricultural US \$ million)



# Share of Agri in India's Import from Pakistan



# Major agro commodities exported to Pakistan (US '000 \$)



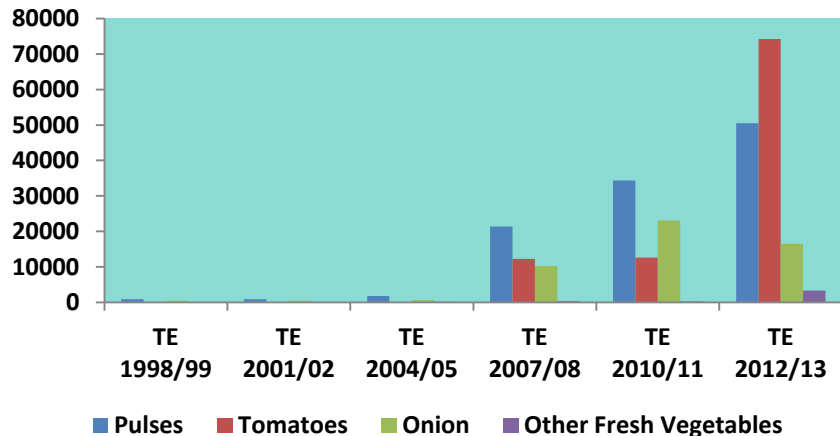
# Share of major commodities in agricultural exports to Pakistan (%)

Commodity/ commodity groups	1996-1997	2000-2001	2004-2005	2009-2010	2012-2013
Dairy Products	0.00	0.00	2.13	0.64	1.71
Vegetables	0.27	1.28	11.73	14.41	17.27
Coffee, Tea etc	10.56	18.36	26.99	8.89	10.00
Fruits	0.63	0.31	0.18	0.45	2.99
Cereals	0.04	0.53	7.81	2.63	1.73
Oilseeds	2.25	3.33	8.36	8.55	6.26
Sugar	80.60	71.20	1.00	0.26	0.06
Cotton	0.12	0.09	30.40	58.46	56.38
Others	5.54	4.90	11.40	5.71	3.61

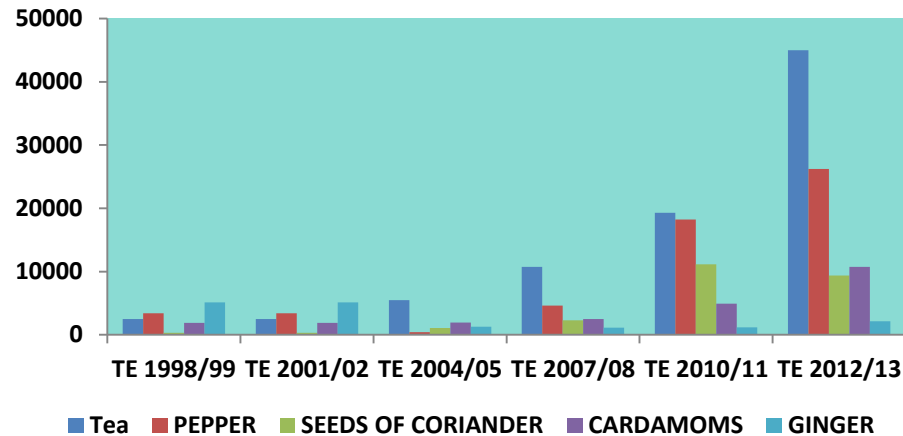
Source: Department of Commerce, Government of India

# Trends in exports of major commodities (US '000 \$)

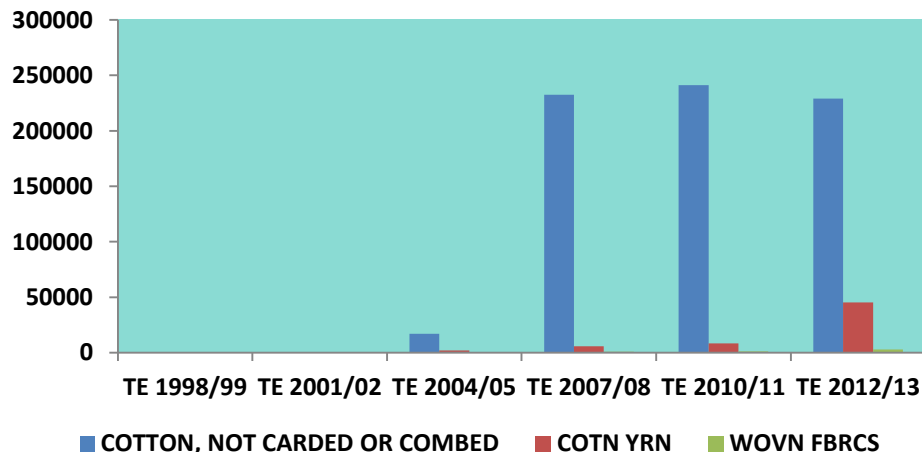
## Edible Vegetables



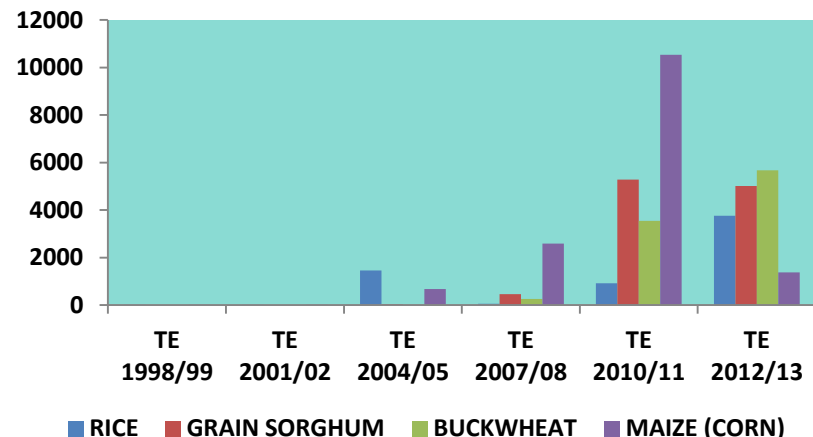
## Beverage and Spices



## Cotton



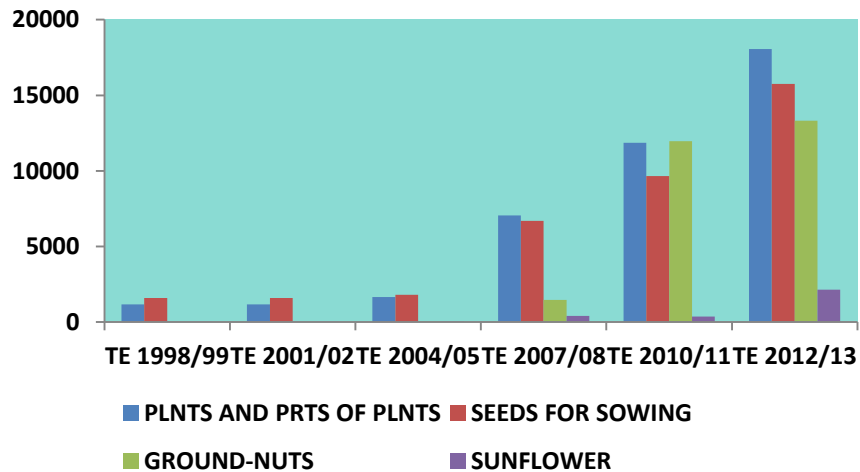
## Cereals



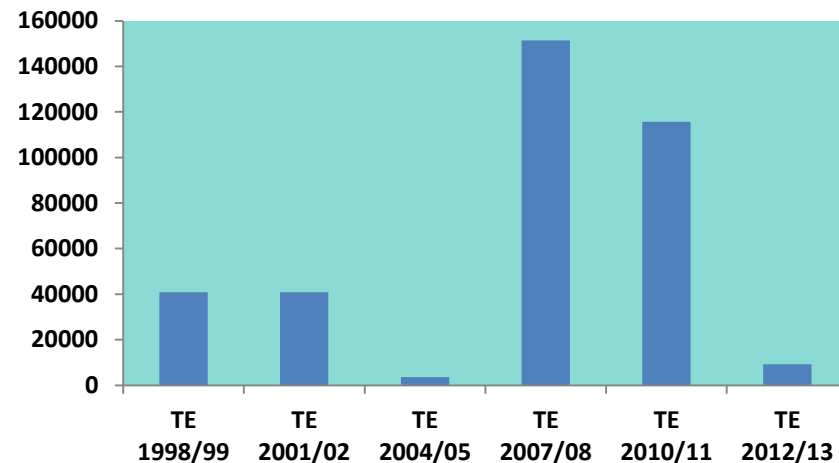
# Trends in exports of major commodities (US '000 \$)

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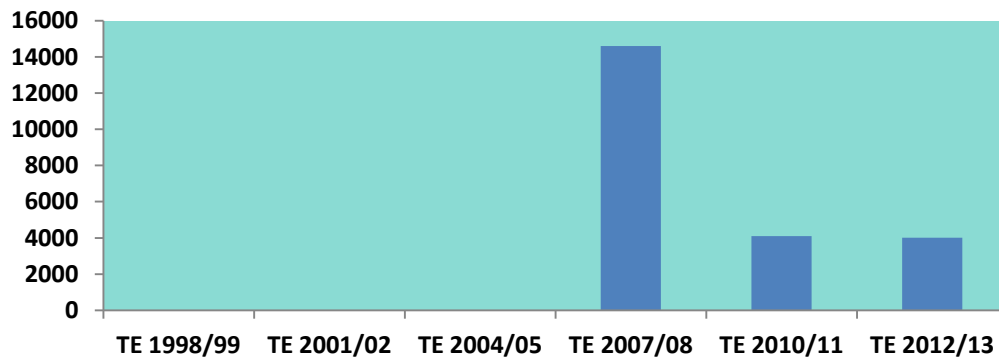
## Oilseeds



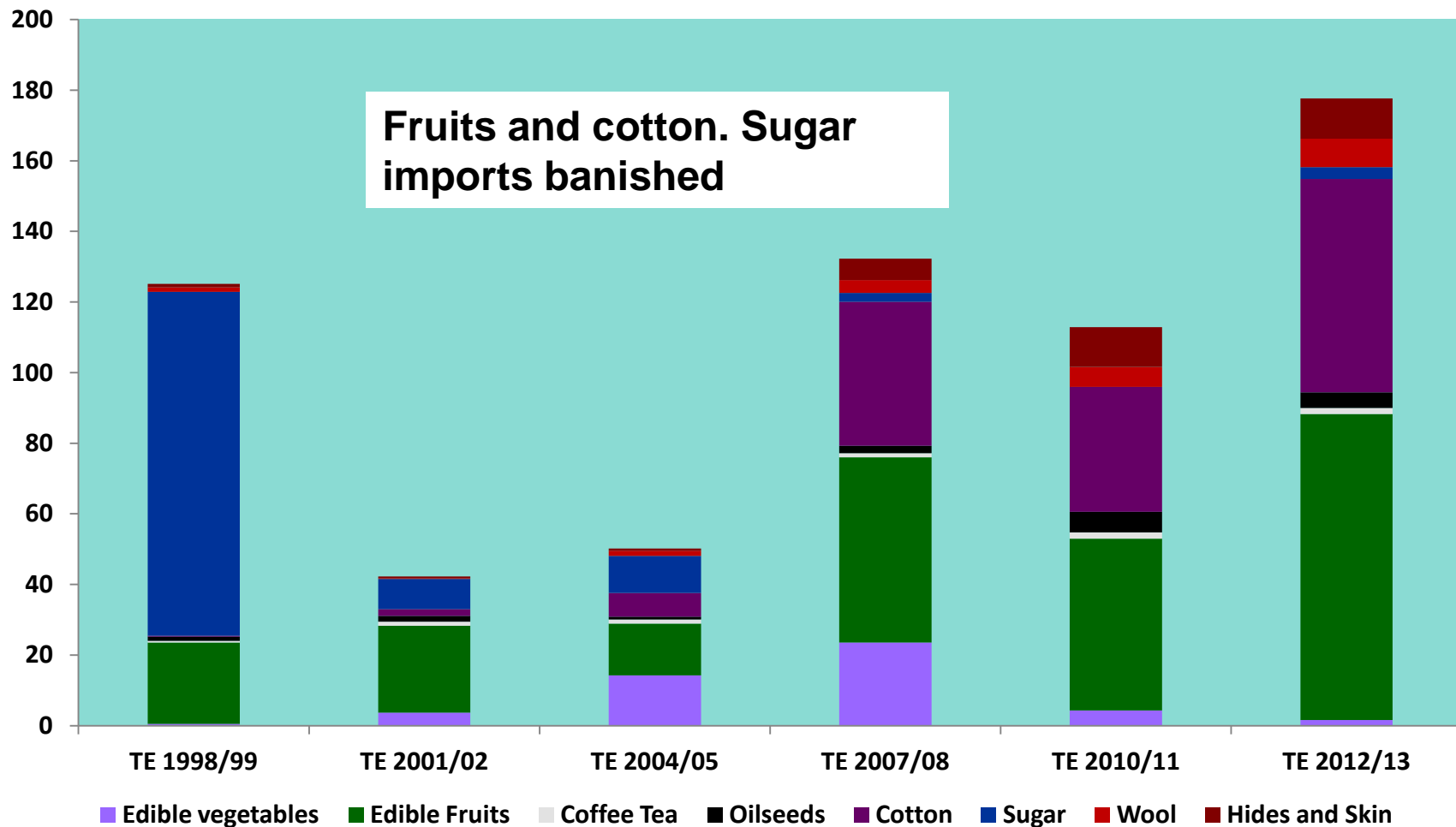
## Sugar



## MEAT OF BOVINE ANIMALS



# Major commodities imported from Pakistan by India (US \$ million)



**`.....HOW DIVERSIFIED ARE THE INDIAN EXPORTS IN TERMS OF COVERAGE OF COMMODITIES AND FOREIGN MARKETS?**

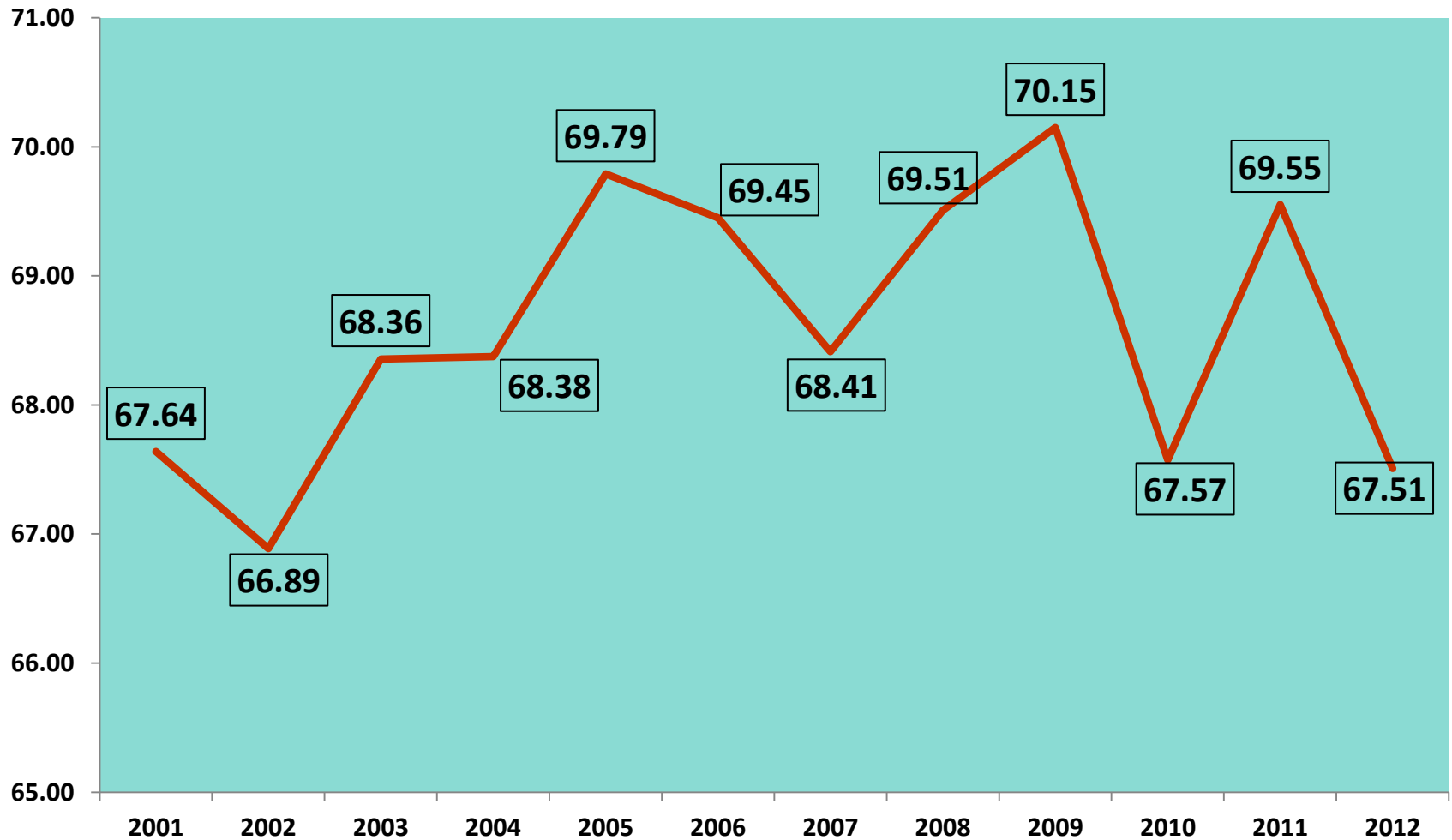


# Diversification Index (Gini-Hirschman Coefficient)

Commodity and Geographical concentration indices were calculated by Gini-Hirschman Coefficient

	Formula	Explanation
Commodity Concentration/ diversification	$C_{xt} = 100 - 100\sqrt{\sum(X_{it}/X_t)^2}$	$X_{it}$ is the value of exports of the commodity $i$ in the year $t$ . $X_t$ is the total agricultural exports in the year $t$ . $C_{xt}$ is the diversification coefficient
Geographical Concentration/ diversification	$G_{xt} = 100 - 100\sqrt{\sum(X_{it}/X_t)^2}$	$X_{it}$ is the value of exports of the export destination $i$ in the year $t$ . $X_t$ is the total agricultural exports in the year $t$ . $G_{xt}$ is the diversification coefficient

# Commodity diversification of India's Agri Exports to World



**`HOW MUCH IS INTENSITY OF INDO – PAK  
AGRICULTURAL EXPORTS W. R. TO TOTAL  
AGRICULTURAL EXPORT FROM INDIA?**

# Trade Intensity Index

$s$  is the Source

$d$  is the destination

$$TII = \frac{\sum_{sd} X_{sd}}{\sum_{wd} X_{wd}} \bigg/ \frac{\sum_{sw} X_{sw}}{\sum_{wy} X_{wy}}$$

$X$  is the exports

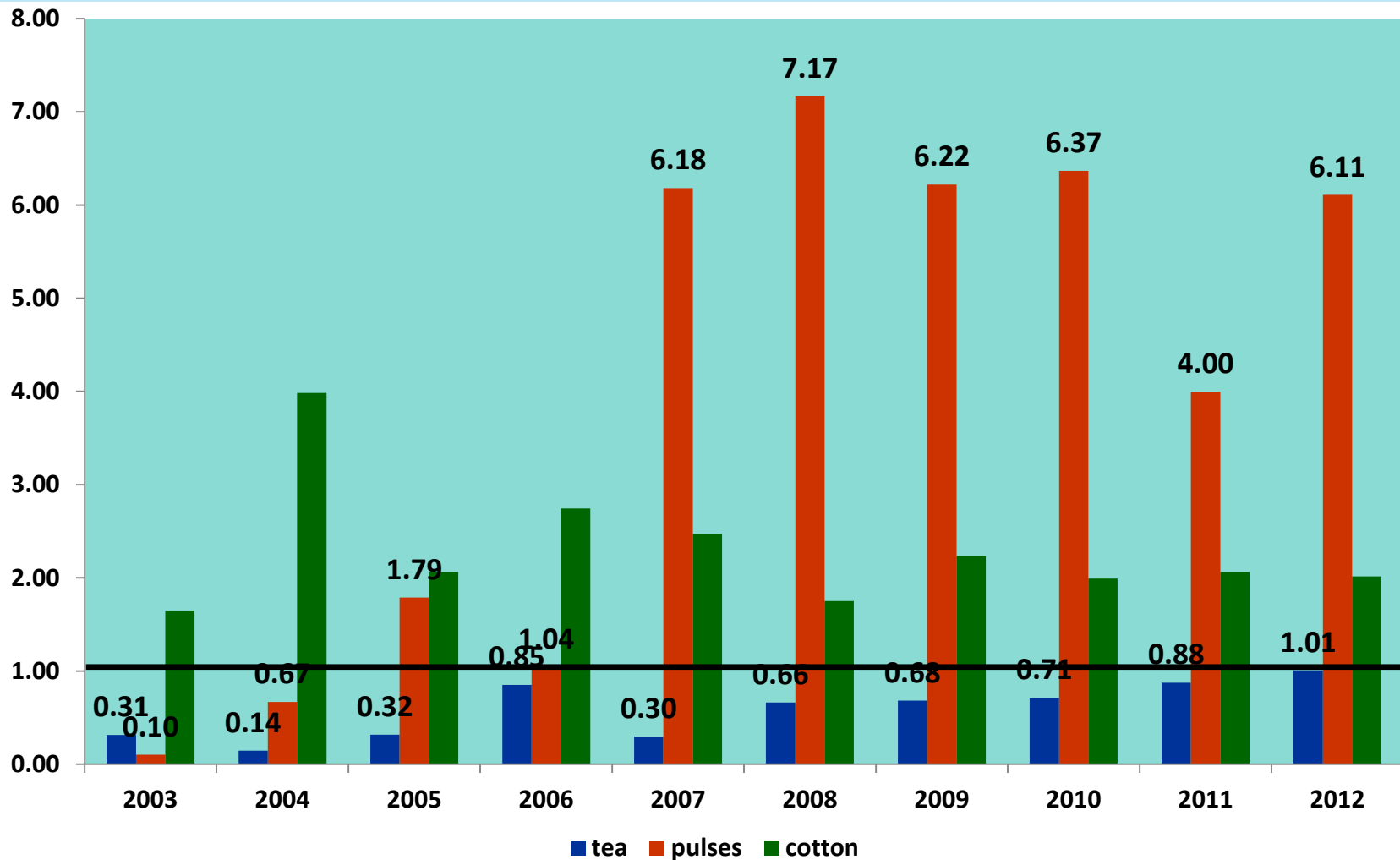
$w$  is the world

The numerator is the export share of the source region to the destination, the denominator is the export share of the world to the destination.

Trade Intensity

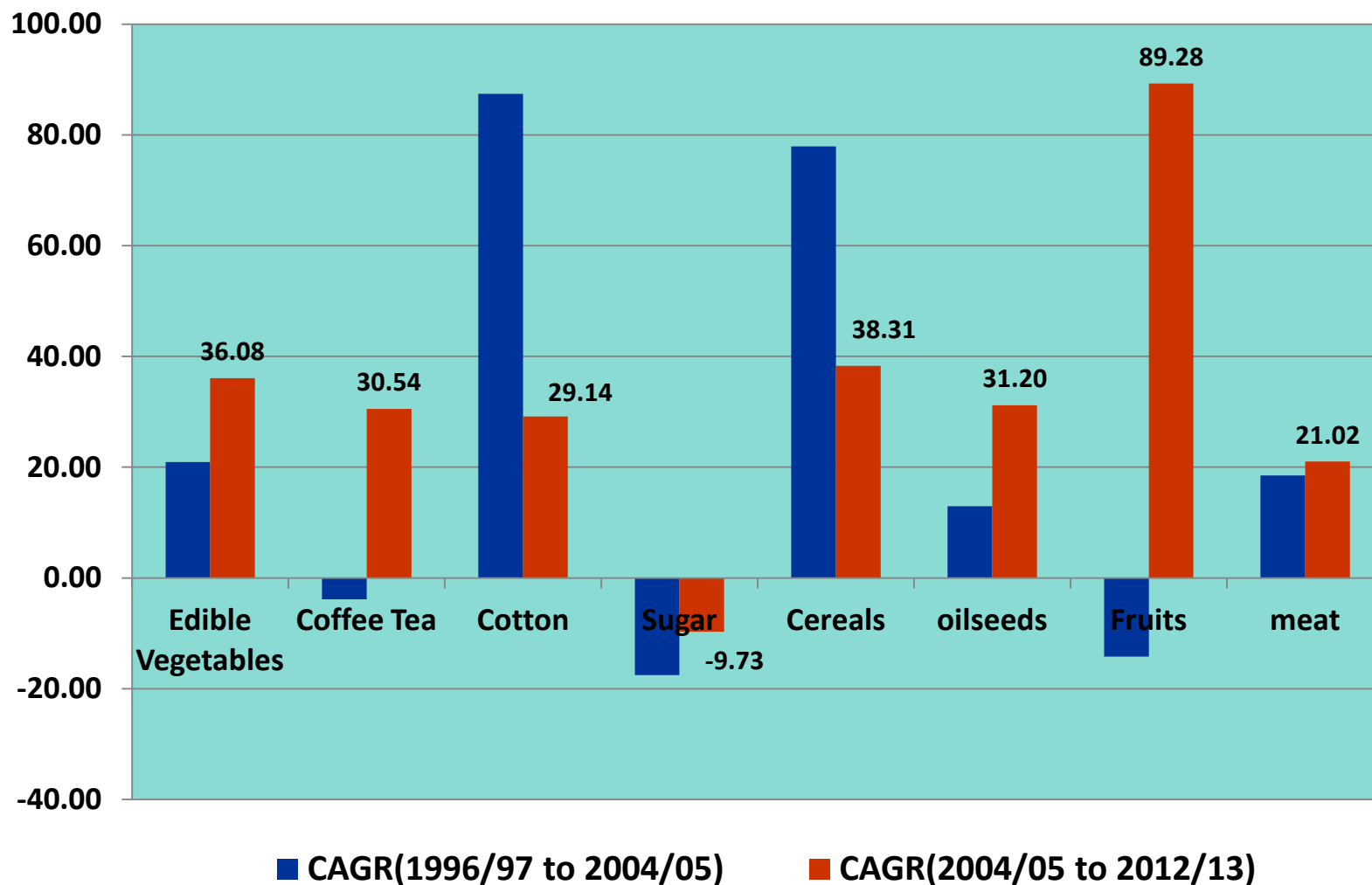
The statistic tells us whether or not a region exports more (as a percentage) to a given destination than the world does on average to that destination

# Trade intensity index for Indian export to Pakistan

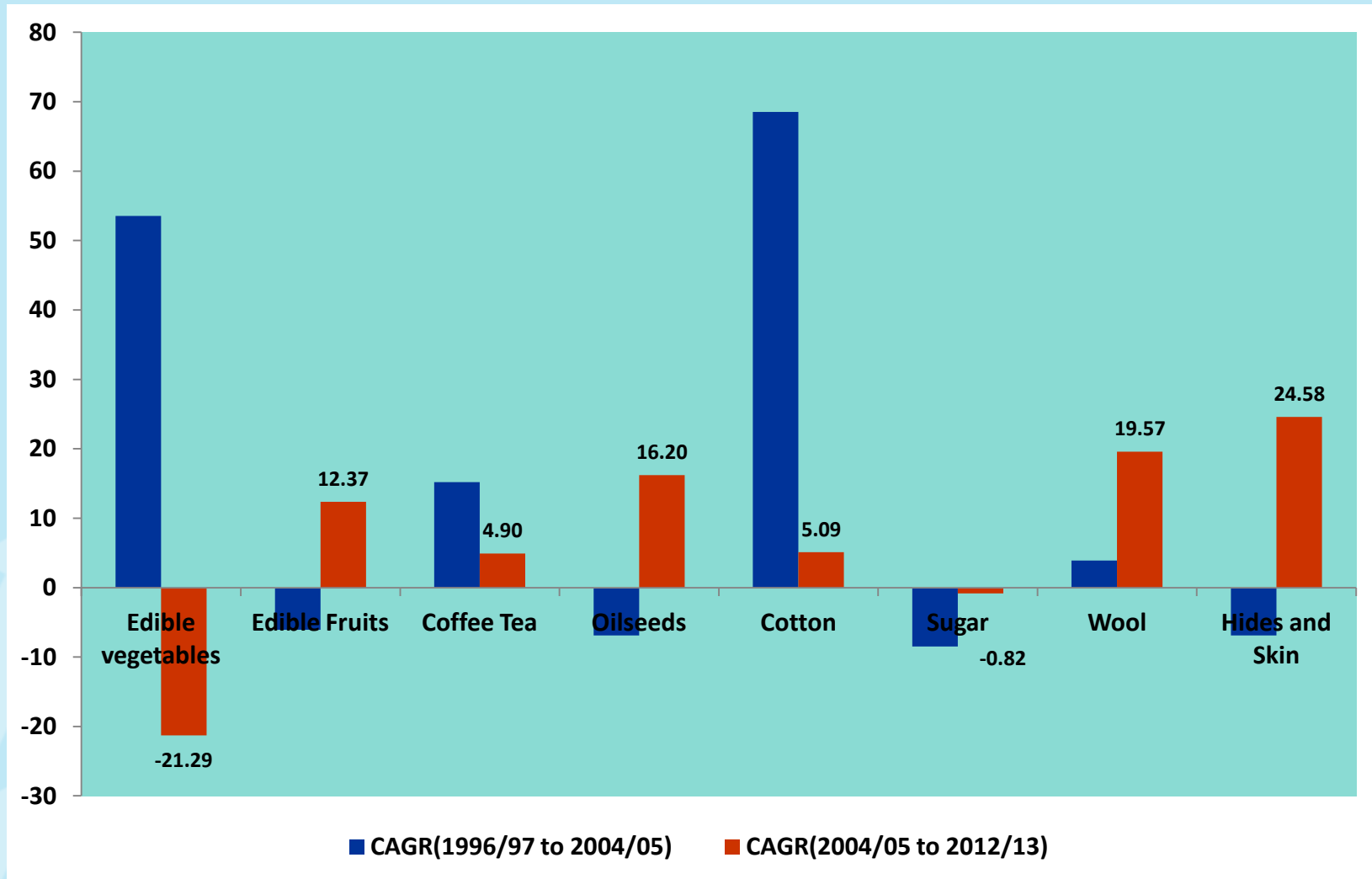


**.....WHAT HAS BEEN THE GROWTH IN  
BILATERAL AGRICULTURAL TRADE AND  
WHICH COMMODITIES ARE GAINING  
MOMEMTUM?**

# Growth in India's agricultural exports to Pakistan

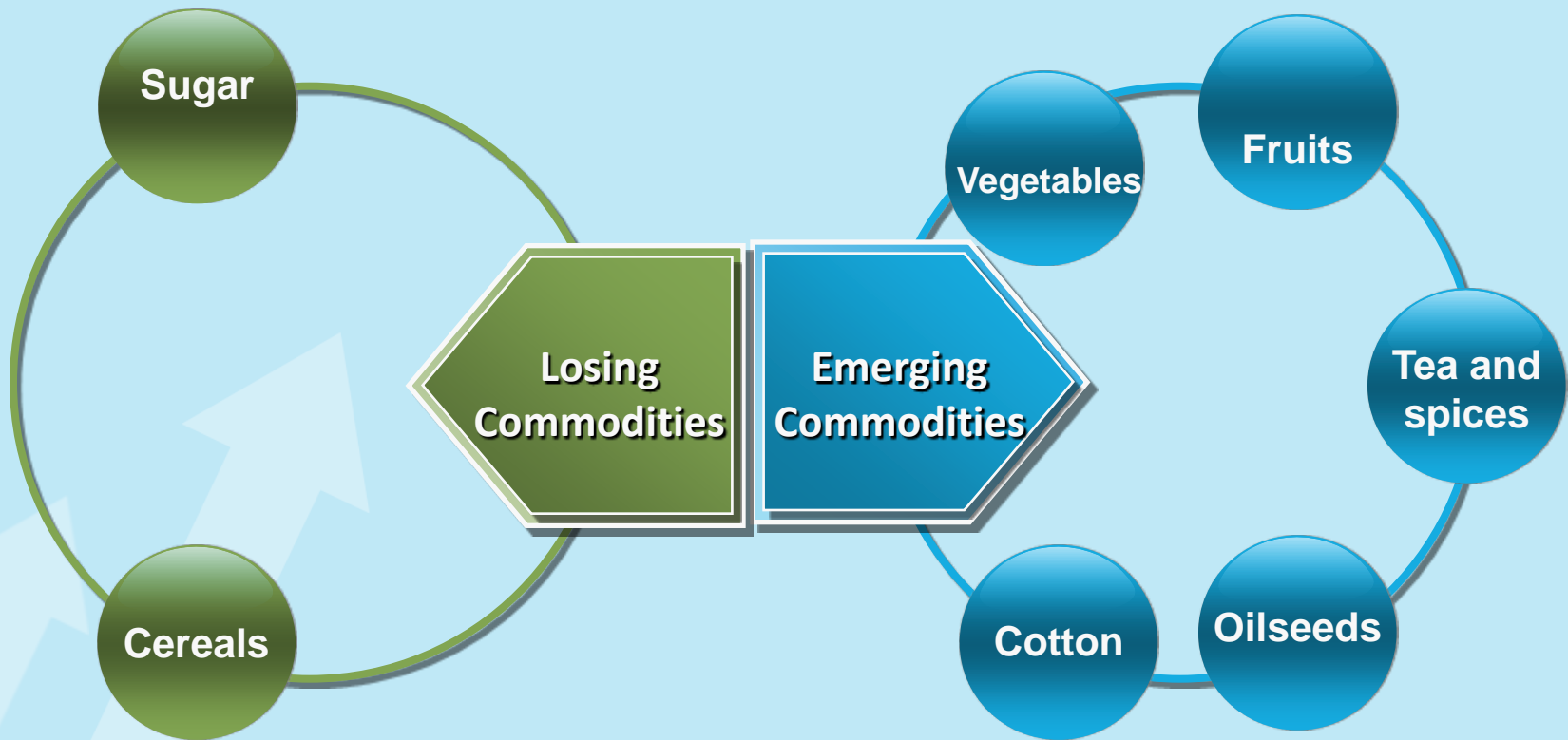


# Growth in agricultural imports from Pakistan

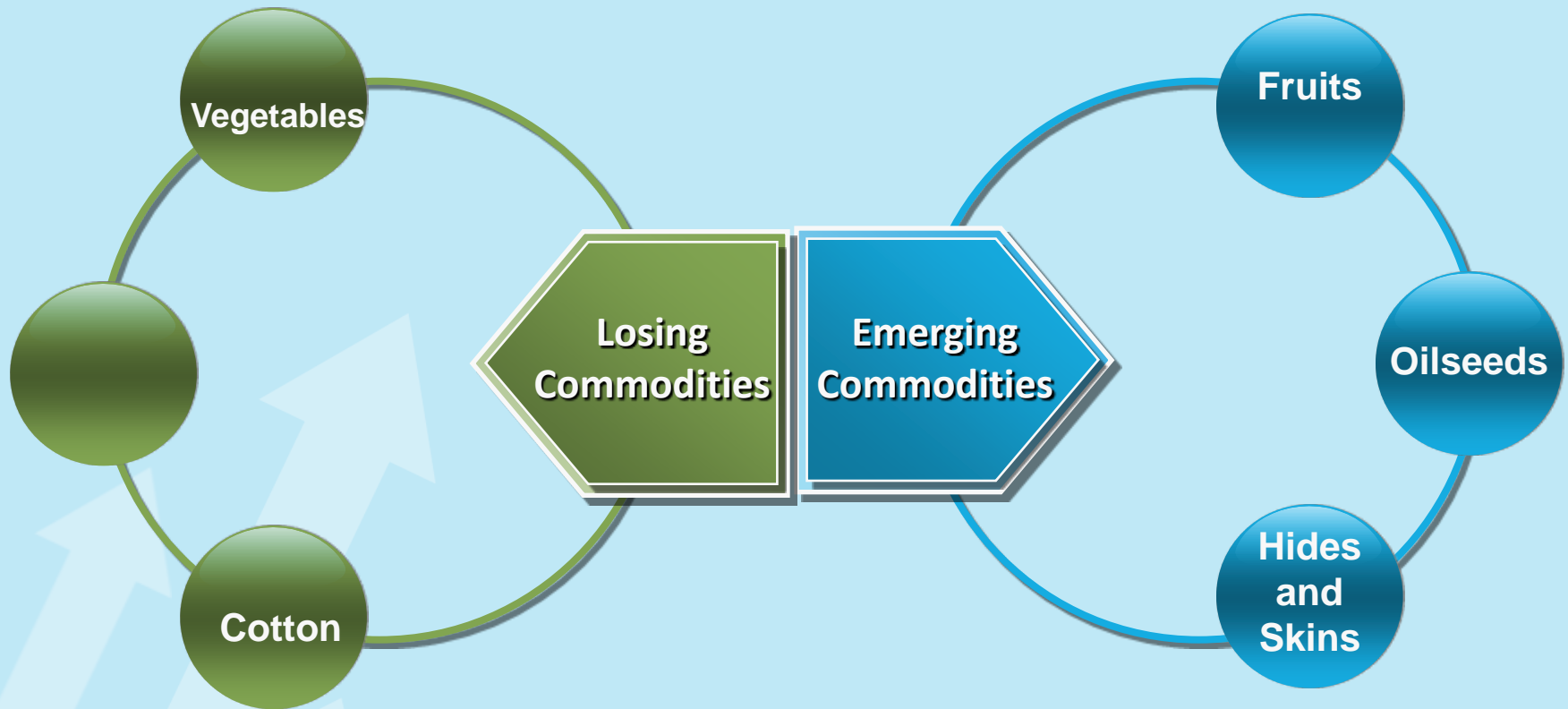




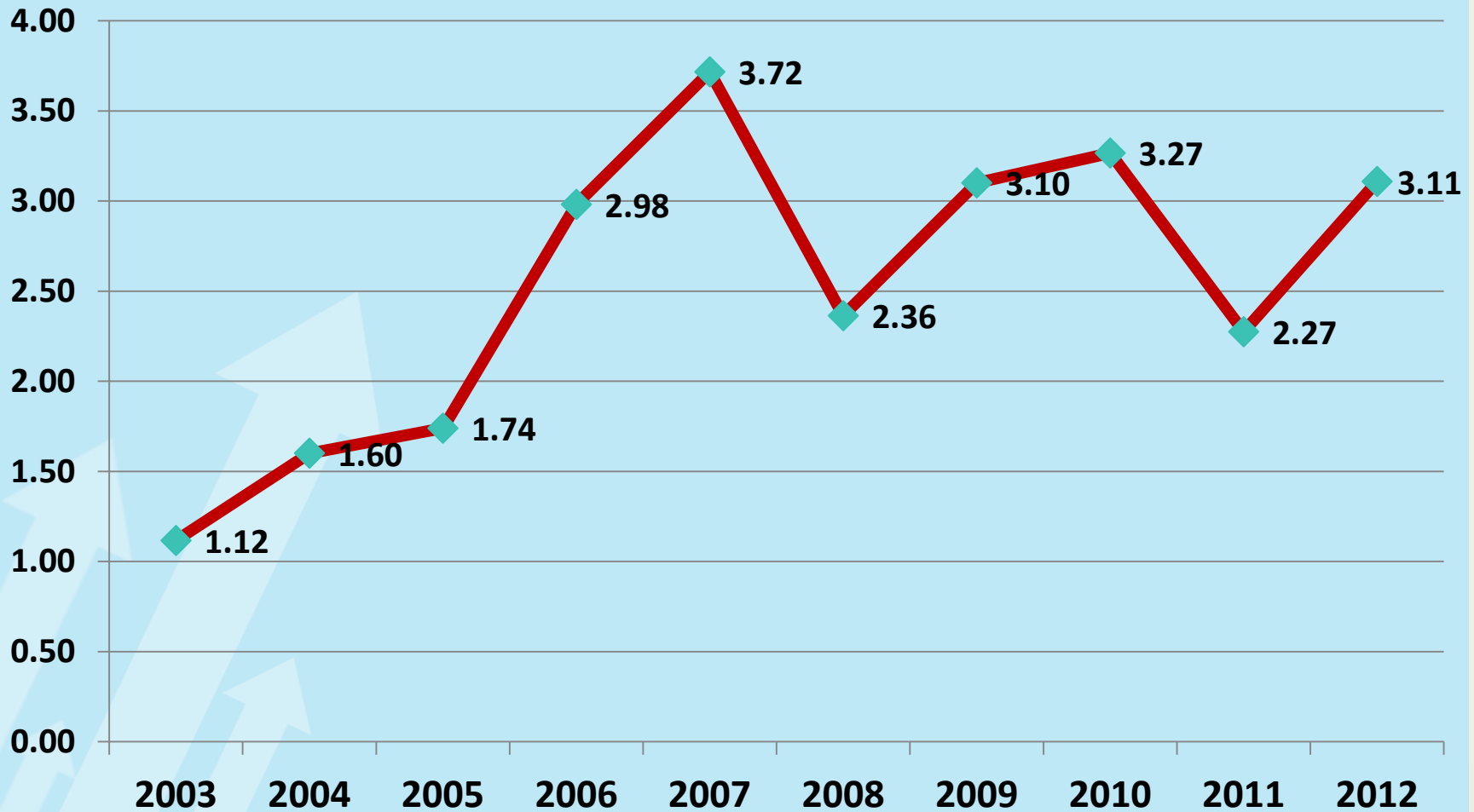
# Emerging and losing commodities in agricultural exports to Pakistan



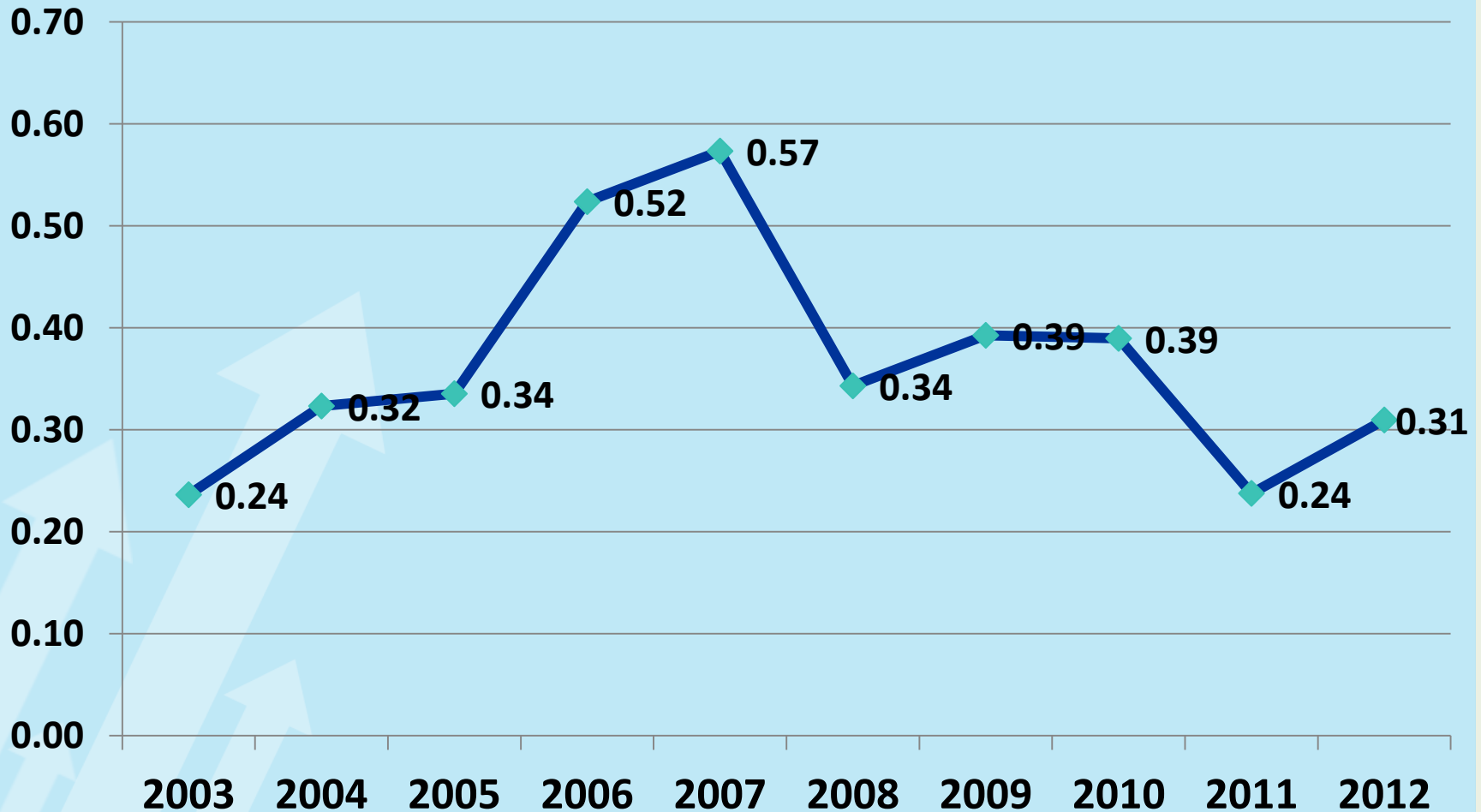
# Emerging and losing commodities in agricultural imports from Pakistan



# Share of Indo Pak Agri Trade in Total Agri Trade of Pakistan %



# Share of Indo-Pak Agri Trade in India's total Agri Trade %



**.....WHAT HAS BEEN THE TRADE  
COMPLEMENTARITY IN BILATERAL TRADE  
BETWEEN INDIA AND PAKISTAN?**

# Trade Complementarity Index (TCI)

d is the importing country of interest, s is the exporting country of interest, w is the world, x is the commodity export flow, X is the total export flow, m the commodity import flow, and M the total import flow.

$$TCI = \left[ 1 - \frac{\sum_i \left| \frac{\sum_w m_{iwd}}{\sum_w M_{wd}} - \frac{\sum_w x_{isw}}{\sum_w X_{sw}} \right|}{2} \right] * 100$$

Mathematical Definition

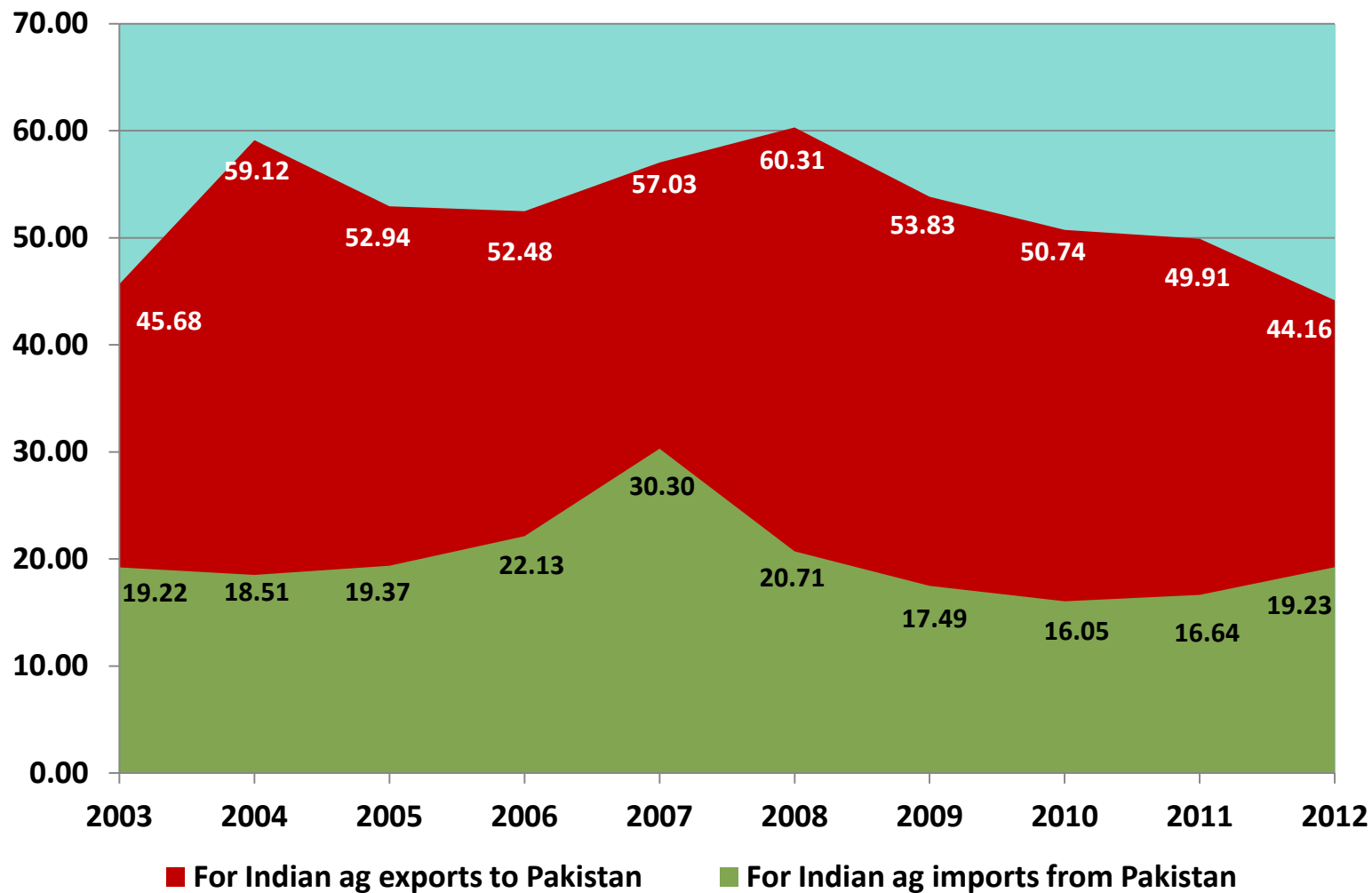
## Explanation

the sum of the absolute value of the difference between the sectoral import shares of one country and the sectoral export shares of the other. Dividing by 2 covers this to a number between 0 and 1, with zero indicating all shares matched and 1 indicating none did.

## Definition

It measures the degree to which the export pattern of one country matches the import pattern of another.

# Trade complementarity Index



**.....WHO ARE INDIA'S COMPETITORS IN  
PAKISTANI MARKET?**



# Major Suppliers in Pakistani Markets for the commodities exported by India

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Coffee Tea	
Kenya	49.5%
India	13.1%
China	7.8%
Rwanda	4.8%
Vietnam	4.5%

Edible Vegetables	
India	33.9%
Australia	21.2%
Myanmar	7.6%
Ethiopia	6%
China	5.9%

Meat	
India	73.9%
China	16.4%
UAE	5.1%
US	2.4%
Jordan	0.7%

Cereals	
US	36.2%
China	32%
Thailand	10.4%
India	6.2%
Brazil	3.4%

Cotton	
India	27.9%
US	17.4%
Brazil	15.8%
China	11.1%
Afghanistan	10%

Dairy Products	
US	30.5%
New Zealand	15.1%
France	11.9%
Germany	10.8%
Lithuania	8.6%
India	2.8%

Source: International Trade Centre

**`.....HOW FAVOURABLE IS THE TRADE  
POLICY ENVIRONMENT IN TWO  
COUNTRIES?**

# India's Import Duty Structure

Item Description	Basic Customs duty (%) (As on 01.09.2012)	Bound Duty (%) (As on 01.09.2012)
<b>Cereals and Pulses</b>		
Pulses other than peas (pisum sativum)	Free	100
Maize (Corn) seed	50	70
Buck wheat and canary seed	Free	100
Other cereals (rye, barley etc.)	Free	100
<b>Dairy Products</b>		
Fresh milk and cream	30	100
Butter and melted butter (ghee)	30	40
Cheese	30	40
Milk powder	60	60
Yoghurt	30	150
<b>Plantation Crops</b>		
Tea	100	150
Coffee	100	100
Other Spices	30/70	150/100
<b>Meat &amp; Poultry</b>		
Meat of poultry, not cut in pieces, fresh or chilled	30	100
Raw harms, pig fat; meat of bovine animals	30	100
other meat and offal	30	100
Processed hams	30	55
Fish	30	unbound

# India's Import Duty Structure

Item Description	Basic Customs duty (%) (As on 01.09.2012)	Bound Duty (%) (As on 01.09.2012)
Sugar	10	150
<b>Edible Oils (Crude)</b>		
Soyabean Oil	7.5	45
RBD Palmolein	7.5	300
Palm oil	7.5	300
Groundnut Oil	7.5	300
Sunflower	7.5	300
Coconut oil Edible grade	7.5	300
Coconut oil other	7.5	300
Rapeseed oil	7.5	75
Colza or Mustard oil	7.5	75
Castor Oil/ Tung oil	7.5	100
Safflower	7.5	300
Other Oils edible grade	7.5	300
Other Oils other than edible grade	65	100/300

# India's Exports and Pakistan's Imports: \$ Mill TE 2012-13: Identification of Growth Opportunities

Product	India's Exports to world	Pakistan's Imports from India	Pakistan's Imports from world
Live animals	11.9	0.0	15.7
Meat and meat products	2720.4	5.0	4.9
Fish and crustaceans	2976.7	0.3	4.0
<b>Dairy products and eggs</b>	<b>289.1</b>	<b>10.2</b>	<b>114.1</b>
Products of animal origin	134.5	0.8	2.6
Live trees and plants of parts	73.0	0.0	1.4
<b>Vegetables, roots and tubers</b>	<b>981.1</b>	<b>121.7</b>	<b>554.8</b>
<b>Fruits and nuts</b>	<b>1355.4</b>	<b>19.4</b>	<b>125.4</b>
<b>Tea and spices</b>	<b>2662.4</b>	<b>86.2</b>	<b>433.5</b>
Cereals	6424.8	21.6	87.1
<b>Oilseeds</b>	<b>1660.3</b>	<b>49.9</b>	<b>644.9</b>
Lac gums etc	2951.5	10.7	10.7
Vegetable planting material and prod.	62.4	2.6	18.8
<b>Animal or vegetable fats</b>	<b>937.6</b>	<b>0.5</b>	<b>2251.5</b>
<b>Sugar and sugar confectionery</b>	<b>1698.0</b>	<b>118.7</b>	<b>323.6</b>
<b>Cereal preparations</b>	<b>357.6</b>	<b>5.3</b>	<b>79.3</b>
Vegetable, fruits and nuts prep	345.7	0.8	28.6
Misc edible preparations	437.7	0.4	48.4
Tobacco and tobacco products	877.6	2.3	16.4
Raw hides and skins	990.0	0.5	92.1
Wool and other products	184.1	0.6	15.5
<b>Cotton</b>	<b>8261.6</b>	<b>327.6</b>	<b>808.1</b>
Other vegetable textile fibres	364.4	2.2	67.8

# Indian Imports and Pakistani Exports \$Million TE 2012-13: Identification of Growth Opportunities

	Pakistan's Exports to world	India's Imports from Pakistan	India's Imports from world
Live animals	23.0	0.0	10.0
Meat and meat products	166.7	0.0	1.6
Fish and crustaceans	261.4	1.1	83.1
Dairy products and eggs	71.4	0.0	157.0
Products of animal origin	48.0	0.1	39.7
Live trees and plants of parts	1.1	0.0	19.9
Vegetables, roots and tubers	189.0	3.5	2030.7
Fruits and nuts	304.3	78.7	1882.4
Tea and spices	57.8	1.7	432.8
Cereals	2382.6	0.0	32.8
Oilseeds	57.7	4.2	202.3
Lac gums etc	97.8	1.4	135.5
Vegetable planting material and products	6.4	0.0	10.1
Animal or vegetable fats	166.4	0.6	9219.4
Sugar and sugar confectionery	136.0	2.3	486.5
Cereal preparations	40.6	0.0	40.7
Vegetable, fruits and nuts preparations	0.0	0.6	72.4
Misc edible preparations	0.0	0.1	36.5
Tobacco and tobacco products	25.2	0.0	36.8
Raw hides and skins	447.0	12.1	515.8
Wool and other products	11.7	8.5	399.1
Cotton	4778.7	47.8	572.0
Other vegetable textile fibres	4.8	0.2	251.9

# Main Conclusions

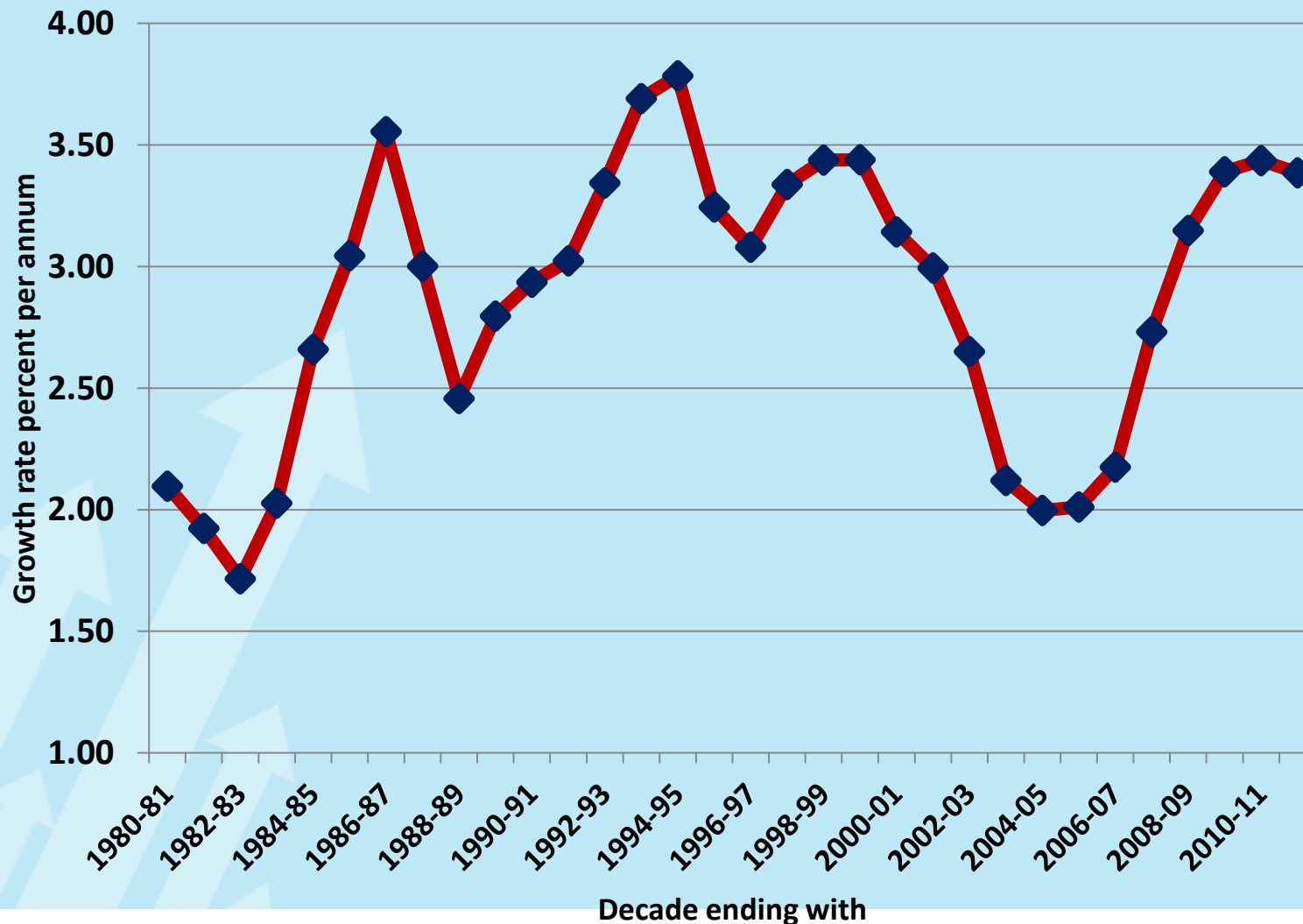
- Agriculture trade has moved to higher level after implementation of SAFTA.
- Agriculture share in India's export to Pakistan increasing, whereas agriculture share in Pakistan's export to India declining.
- Export to Pakistan dominated by one to two commodities though diversifying. Sugar share largely replaced by cotton and vegetables.
- Minor products witnessed consistent and spectacular growth (*Psyllium Isabgol*)
- Changes in domestic instability in production is playing major role in determining trade trend and composition – thus much trade for stabilization not based on comparative advantage.
- Demand diversification in both countries is infusing dynamism and consistency in trade.
- Export to third country promoting demand for raw material and affecting trade pattern.



- **There is high complementarity between Pakistan's imports and India's export of agricultural products, however, there is low complementarity between India's imports and Pakistan's exports.**
- **There are opportunities for Pakistan to push export of fruits and nuts, raw hides & skins and cotton textiles.**
- **Major import of India are also the imports of Pakistan**
- **Large opportunity for India to export dairy products, vegetables, tea & spices, oilseeds and raw cotton.**
- **Acceleration of agricultural growth in India post 2005-6 has thrown many surprises.**
- **Proximity and regional trade**



# Growth Trajectory of Agriculture GDP at 2004-5 Prices, 1971-80 to 2001-12



# Recent Achievements Indian Agri

- **Growth deceleration to growth acceleration**
  - **DE 1996-97 to DE 2004-05: 3.5% to 2.0%**
  - **DE 2004-05 to DE 2012-13: 2.0% to 3.7%**
- **Technology fatigue (by end of 10<sup>th</sup> Plan) to technology resurgence-resilience of the system**
  - **TFP growth rate up from 0.5% to 2.0%**
- **Net foreign exchange earnings 10 fold rise in 11 years**
  - **2001-02: \$ 2.5 billion.**
  - **2012-13: > \$ 25 billion.**

# Policy Suggestions

- Agriculture trade need to be classified in 3 categories
  - Trade based on comparative advantage -focus on demand diversification in two countries. Minor products and unique products.
  - Trade to address price and market volatility.
  - **Trade in technology and knowledge products**
  - Policy and strategy – facilitating mechanisms
- **Agriculture innovation led integration**
  - ✓ Neglect of agri R&D in South Asia
  - ✓ Technology spillovers, but serves some purpose
  - ✓ Partner in technology generation:
    - Nature of modern research – regional research alliance
  - ✓ Sharing of knowledge capital
  - ✓ Best practices, innovation
  - ✓ Trade in seed and planting material including animal



**Thank You!**

