



# India-Pakistan Trade in Pharmaceuticals

Manoj Pant, Professor (Economics)  
School of International Studies, Jawaharlal Nehru  
University  
and

Devyani Pande, Research Assistant, ICRIER

Prepared for Annual Conference on  
“Normalizing India-Pakistan Trade Relations”  
January 21-22, 2014 New Delhi

# Pharmaceuticals: A Link to bridge the Indo-Pak trade gap?

- Pharmaceuticals -- one of the fastest growing sectors in world trade
- Global pharmaceutical market has an annual growth rate of 8%.

## India's Pharmaceutical sector

- World's 3<sup>rd</sup> largest in terms of value and 14<sup>th</sup> in terms of volume
- Estimated at **US \$ 21.7 billion** (2011)
- *Export markets*: US, Russia, UK
- *Import partners*: Switzerland, Germany, US

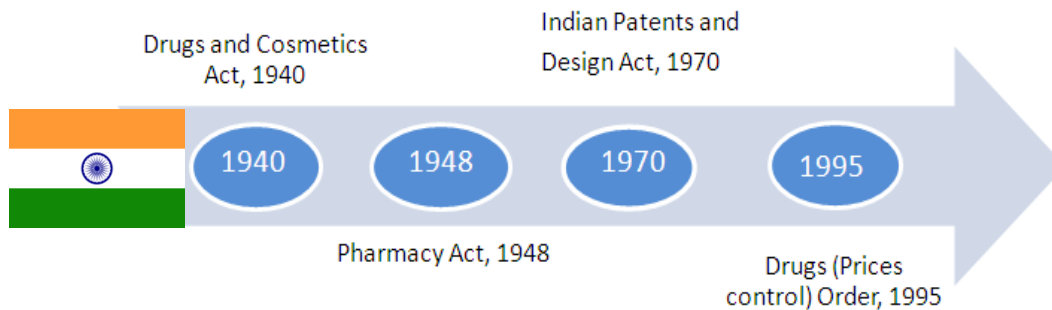
## Pakistan's Pharmaceutical sector

- 10<sup>th</sup> largest in Asia-pacific, at a developing stage
- Estimated at **US \$ 1.63 billion** (2011)
- *Export markets*: Afghanistan, Sri Lanka, Vietnam
- *Import partners*: Switzerland, Germany, Denmark, China

Look west approach

Look east approach

# Evolution of India-Pakistan pharmaceutical sectors



**Pre-1970's:** Small industry size, dominance of MNC's

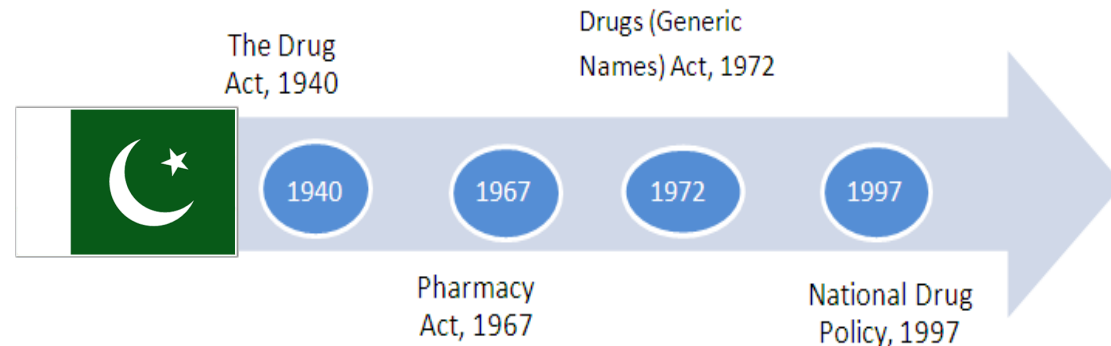
**1970-1995:** Increase in drug production, particularly formulations "*Low cost, high volume production*"

**After 1995:** Decline in tariff and non-tariff measures, increase in exports due to strong R&D

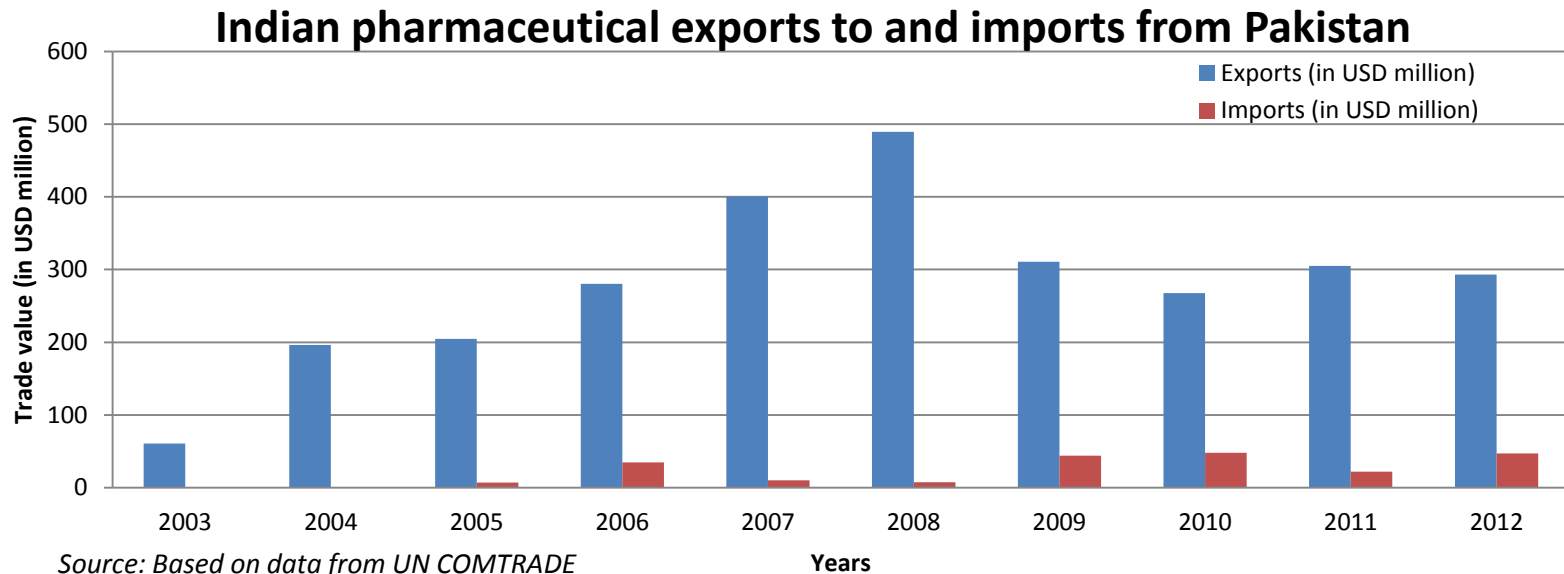
**Pre-1970's:** Reliance on imports, industry gradually developed

**1970-1995:** National companies suffered → discriminatory policies → flooded by poor quality drugs

**After 1995:** With a policy of deregulation, market share of national companies grew

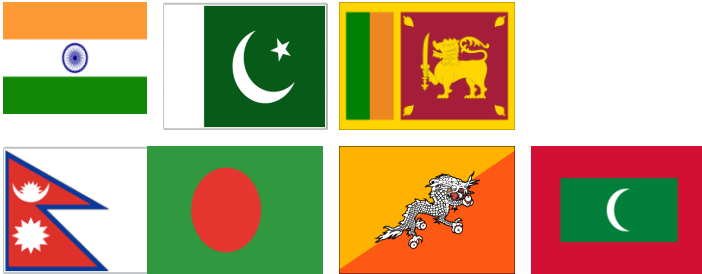


# Trends in Indo-Pak Pharmaceutical Trade



- Trade balance in pharmaceutical items in favour of India – Pak’s pharma sector still developing
- CAGR of Indian exports to Pakistan has been 19% (2003 to 2012)
- Share of Indian exports to Pakistan with respect to Indian exports to the world has been just 1-3% over 2009-12

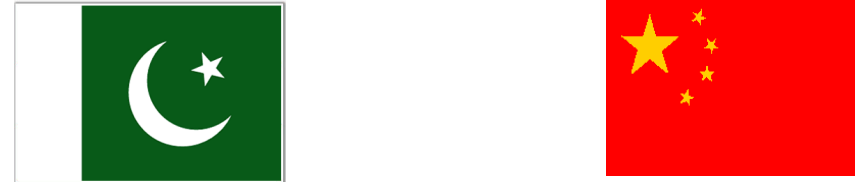
# Regional Trade Agreements



## SAFTA

### South Asian Free Trade Area Agreement

- January 2004
- India's list for Pak 1) Sensitive list (6 pharma items)
- Pak lists for India
  - 1) Sensitive list (24 pharma items)
  - 2) Negative list (35 pharma items)
- MFN status to India => no negative list => allowing trade in medicaments, antibiotics containing penicillin (currently, 36% share in Pak's imports from world)



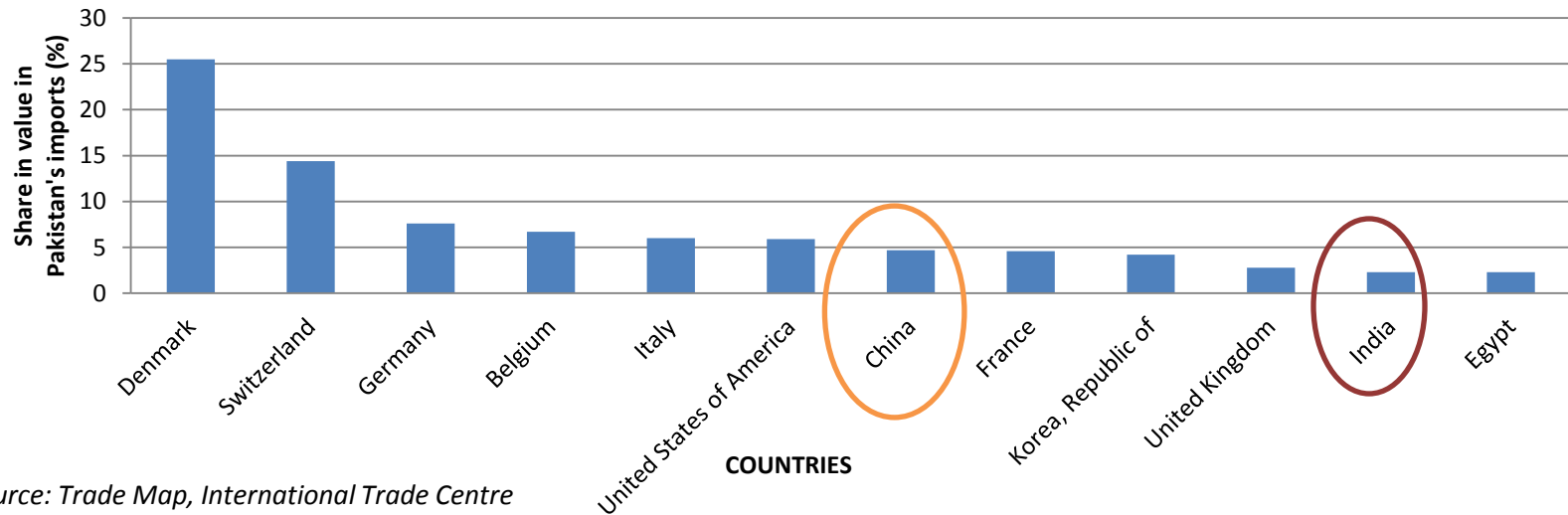
## PCFTA

### Pakistan-China Free Trade Agreement

- In effect from July 2007
- Zero-rated market access for pharmaceuticals under PCFTA
- Share of items in India's negative list that Pakistan imports from China = 31%

# Trends in Pharmaceutical Trade

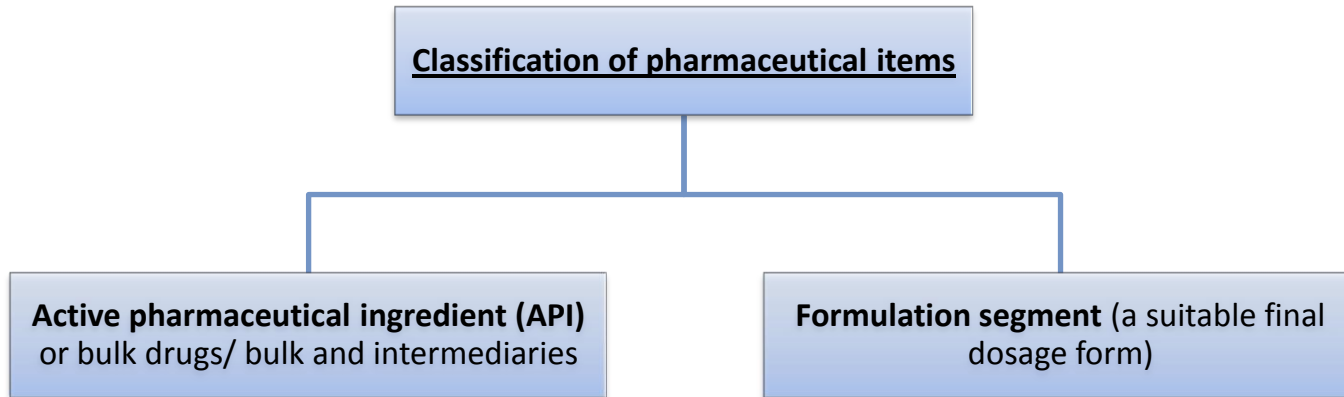
## List of supplying markets for pharmaceutical items imported by Pakistan in 2012 (HS code 30)



Source: Trade Map, International Trade Centre

- China -- the only Asian country which features in Pakistan's top 10 import partners
- Pakistan imports of pharmaceuticals from China > Pak imports of pharmaceuticals from India

# Methodology for Empirical Analysis



- Production of pharmaceutical items involves use of :
  - Organic chemicals
  - Inorganic chemicals
  - Other chemicals
- Data on these have been used from UN COMTRADE at 6-digit level according to the harmonized system, mainly of HS codes 28- inorganic chemicals, 29- organic chemicals and 30- pharmaceutical items

# Trade Indicator: 1) Intra-Industry Trade (IIT) Index

<u>Pharmaceutical exports and imports of India, simple Grubel Lloyd index, Adjusted Grubel Lloyd index and group-wise adjusted GL indices (2009-12)</u>				
	2009	2010	2011	2012
Simple Grubel- Lloyd index (GL)	0.25	0.30	0.13	0.27
Adjusted Grubel- Lloyd (GL')	0.12	0.15	0.039	0.272
<b>Group-wise adjusted GL indices</b>				
Bulk and intermediaries adjusted GL index	0.12	0.16	0.073	0.13
Formulations adjusted GL index	0.0017	0.0026	0.000045	0.0143

- Grubel- Lloyd (GL) index captures IIT

$$GL = \frac{(X + M) - (X - M)}{(X + M)} = 1 - \frac{|X - M|}{(X + M)}$$

- But suffers from → *Aggregation bias* and *Imbalance bias*. The adjusted GL index removes the imbalance effect

$$GL' = 1 - \frac{\sum_{i=1}^n |X_{ij} - M_{ij}|}{(X_j + M_j)}$$

- To analyse trade in the two broad segments of pharma sector, the group-wise adjusted GL index indicates more trade in the bulk and intermediaries segment



## Trade Indicator: 2) Trade Complementarity Index (TCI)

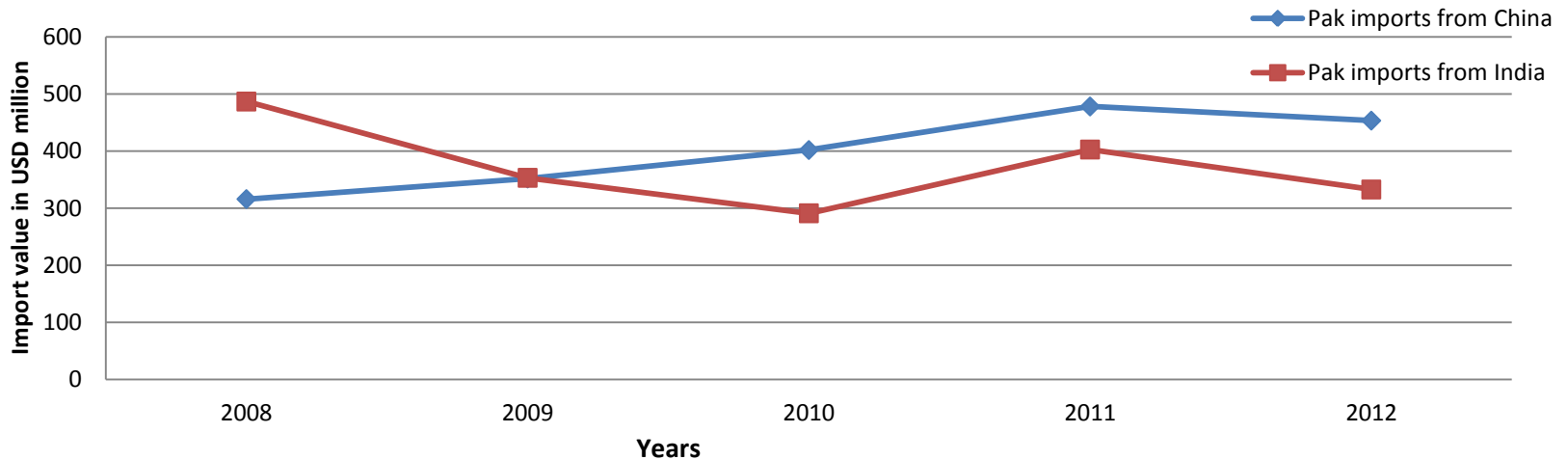
- TCI is a useful indication of the trade potential in pharmaceuticals sector.
- It measures the extent to which two countries are “natural trading partners”

	2012	
Trade Complementarity Index	67.91	72.03

- With perfect correlation between sectoral shares, the index is 100 and with perfect negative correlation, it is 0.
- **Results:** The measure of adequacy of Pakistan’s export supply to India’s import demand is just about 68 percent whereas, in the case of India’s exports it is 72 percent.

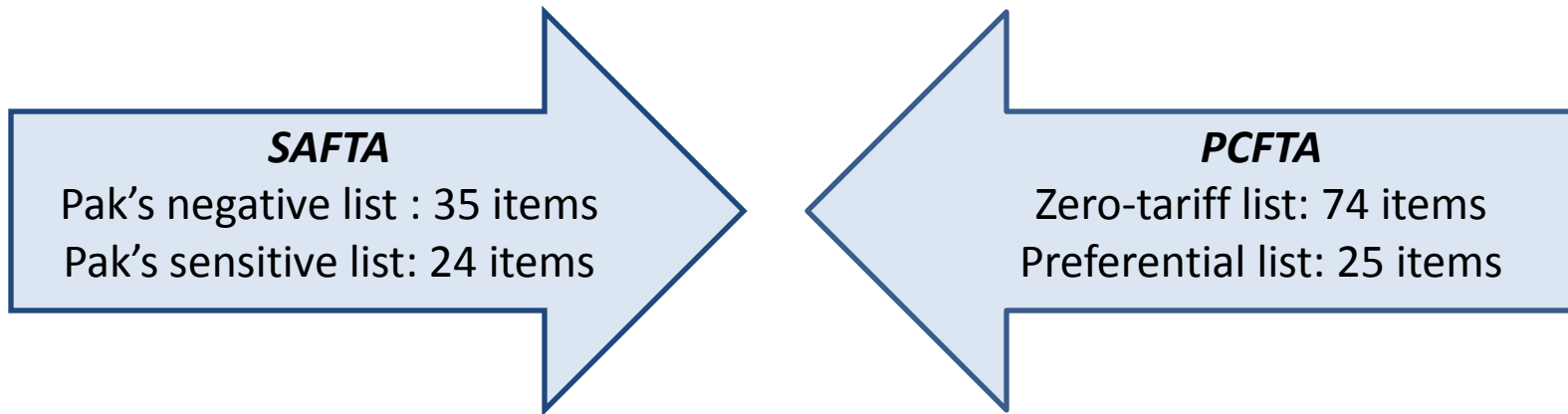
# India-Pakistan-China Trade in Pharmaceuticals: The Dynamics

## Pakistan's pharmaceutical imports from India and China



- Switch in Pak imports from India to China , in 2009
- After 2009 – rise in the gap between value of imports from India and China
- Trade diversion?-- can be attributed to PCFTA

# Are Indian pharmaceutical items substitutes for Chinese exports to Pakistan?



- Comparison reveals: No common pharma items in the negative/sensitive lists for India and zero-tariff/preferential lists under PCFTA
- No favourable treatment to China over India
- Competitiveness of Chinese pharmaceuticals?

# Unit Value Analysis: Competitiveness of Chinese Pharmaceuticals

Sr. No.	Top 13 Pakistan imports from China	Share of items in Pakistan's imports from China (percent)	Country with greater unit value
1.	Antibiotics & their derivatives (ex	9	India
2.	Nucleic acids & their salts	6	India
3.	Nitrile-function comps.	6	India
4.	Lysine & its esters; salts thereof	6	India
5.	Organo-sulphur compounds	4	China
6.	Heterocyclic comps.	4	India
7.	Amino-acids, other than those containing	3	India
8.	Glutamic acid & its salts	3	India
9.	Heterocyclic compounds with oxygen	3	India
10.	Sulphonamides	2	India
11.	Medicaments (excluding goods of healing)	2	India
12.	Disodium carbonate	2	China
13.	Cyclic amides	2	India

 Items in Pakistan's negative list for India

- 1) Unit values (= trade value/ quantity ) used as proxies for prices – not a foolproof method
- 2) **Pak-India unit values > Pak-China unit values** => retaining these in negative list needless since free competition would lead to the survival of cheapest and best quality items
- 3) Increase in consumer surplus, Increase in sales from India could lower unit values as exporters prefer maximizing sales than just profits

# Industry Insights

## *Few big players are proponents of competition and welcome integration*

- Gain from Indian R&D experience
- Possibility of direct trade instead of indirect trade (from third countries such as Dubai)
- Larger market access for Pak pharmaceutical companies
- Possibility of better drug regulatory framework – more exposure to Indian market

## *Apprehensions of smaller players*

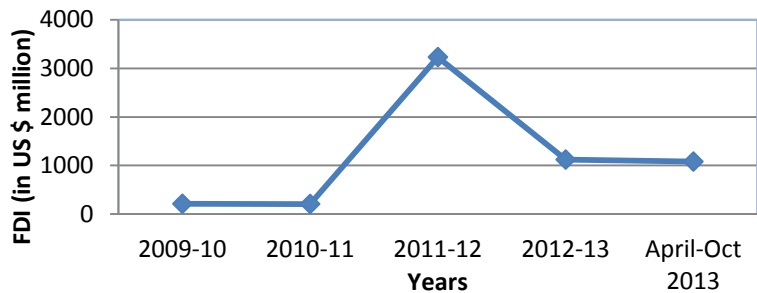
- Fear of competition and “influx” of pharmaceutical items
- Need time to establish themselves to face competition

# FDI in pharmaceutical sector

- FDI and Trade: Substitutes and Complements
- FDI is just another way of doing trade!
- Internalization theory of FDI

## India

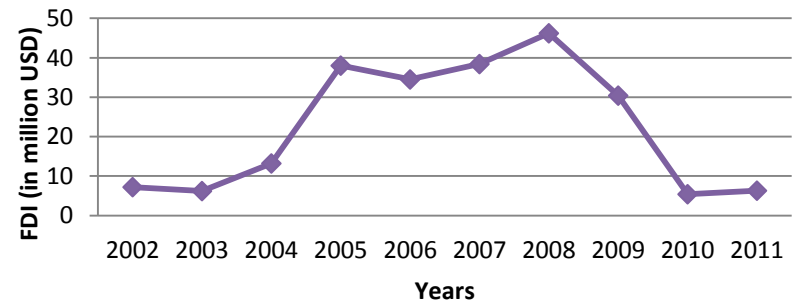
FDI in drugs and pharmaceuticals sector in India



- 100% FDI through automatic route in greenfield and brownfield investments
- MNC's have 30% market share
- Dominance of national companies

## Pakistan

FDI in pharmaceuticals & OTC items (in US \$ million)



- 100% foreign equity in manufacturing sector + 5% customs duty on plant & machinery + 25% tax relief
- MNC's have 53% share in pharmaceutical market

# Concluding Remarks

- Eliminate the negative list– give market access to India like given to China– competition would solve problems + incorporate trigger mechanisms to restrict trade if the need be
- Pak pharmaceutical items cheaper than Indian ones– more market access to India with liberalized trade
- Advantages of liberalization– gain to Pak pharmaceutical industry more than that to India



**THANK YOU**