



Pakistan's Cotton and Textile Sectors: Intersectoral Linkages and Effects on Rural and Urban Poverty

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Cotton Trade Policy and Poverty Study in Pakistan and India

➤ **Origins of the Study**

- **Conducted by IFPRI with collaboration by Innovative Development Strategies, Islamabad, for the Agriculture and Rural Development Sector Unit, South Asia Region. Financial support was provided by the Netherlands Ministry of Foreign Affairs through the Bank-Netherlands Partnership Program (BNPP) trust fund**

➤ **Two Reports**

- **“Challenges Facing the Cotton and Textile Sectors in Pakistan: An Analysis of Intersectoral Linkages and their Poverty Implications”**
- **“Studies of the Cotton-Textile-Apparel Industries in Pakistan and India”**

Outline

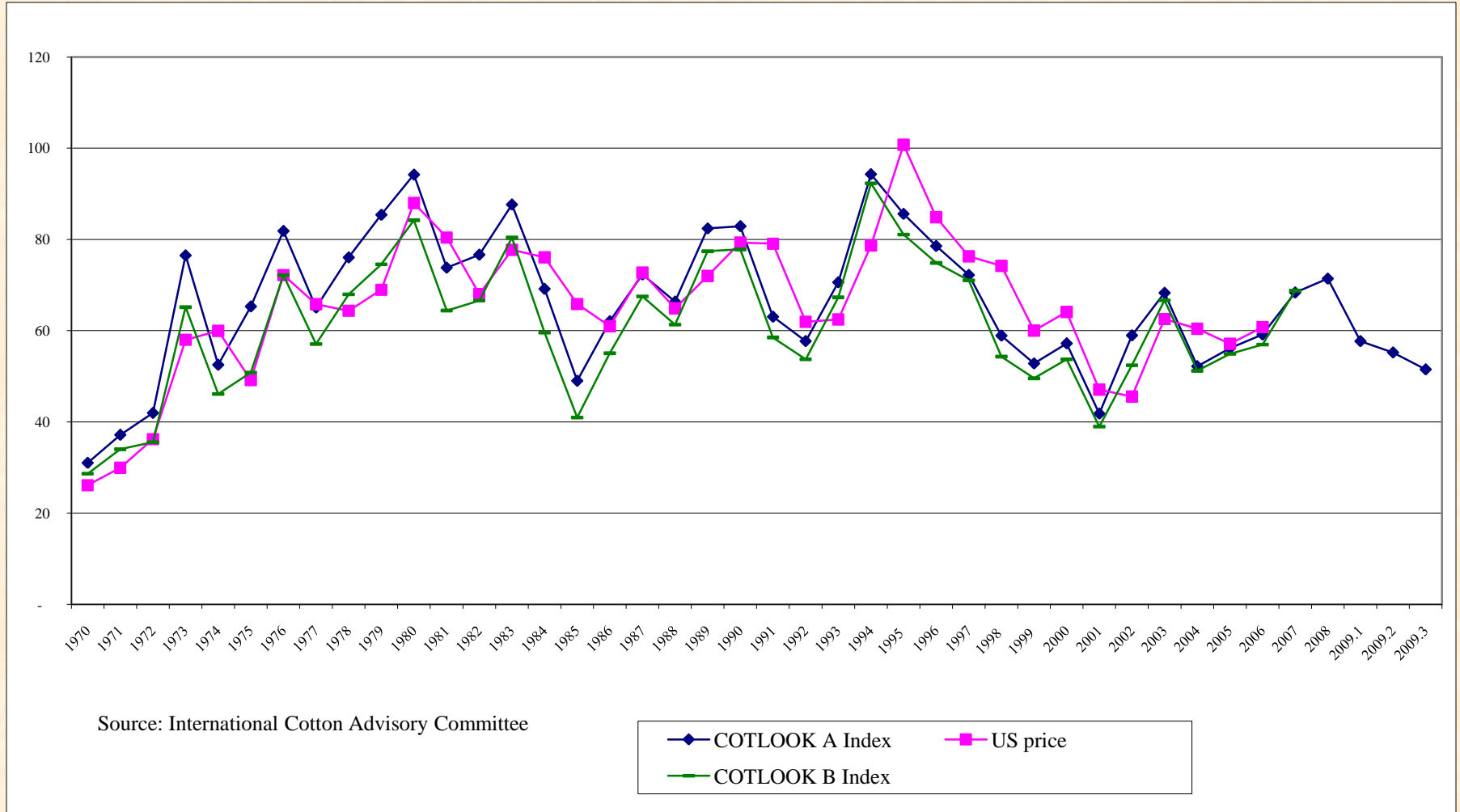
- **Motivation/Challenges**
- **Brief Background**
 - **Cotton and Textiles in Pakistan**
 - **Poverty Trends in Pakistan**
- **Scenarios and Assumptions**
- **Framework of Analysis**
 - **CGE Model and Poverty Analysis**
 - **Intersectoral Input Linkages**
- **Results**
- **Summary**
- **Insights**

Challenges

- **World cotton prices dropped 60% in 1994-01, recovered 70% in 2001-08, and dropped 30% in 1st quarter of 2009**
- **World trade of textiles and clothing was liberalized on January 1, 2005**
- **Foreign savings in Pakistan increased by US\$3 billion in 2004-05 compared to 2001-02, but deteriorated recently to -US\$7 billion in 2006-07, -US\$14 billion 2007-08, and -US\$8 billion in 3 quarters of 2008-09**

Background: World Cotton/Textile Trade

Nominal World Cotton Prices



Background: Cotton and Textiles in Pakistan

- **It is the 4th largest producer of world cotton (9% of total).**
- **It has 3.5% (2005) share in world textile exports.**
- **It has 1.3% (2005) share in world clothing exports.**
- **50% of cotton farmers in Pakistan are small -- average production on small farms is 1.81 acres.**
- **Cotton production is susceptible to virus attacks and pest infestations (Bt cotton has not yet been formally adopted).**
- **It produces cotton yarn with low counts (20s) which command low world prices because of primitive ginning technology, contamination, the absence of cotton standardization, and other constraints.**
- **At present, exports and imports of cotton are duty free. There is limited government intervention to support raw cotton prices. The government provides some subsidies to the textile sector.**

Background: Cotton and Textiles in Pakistan

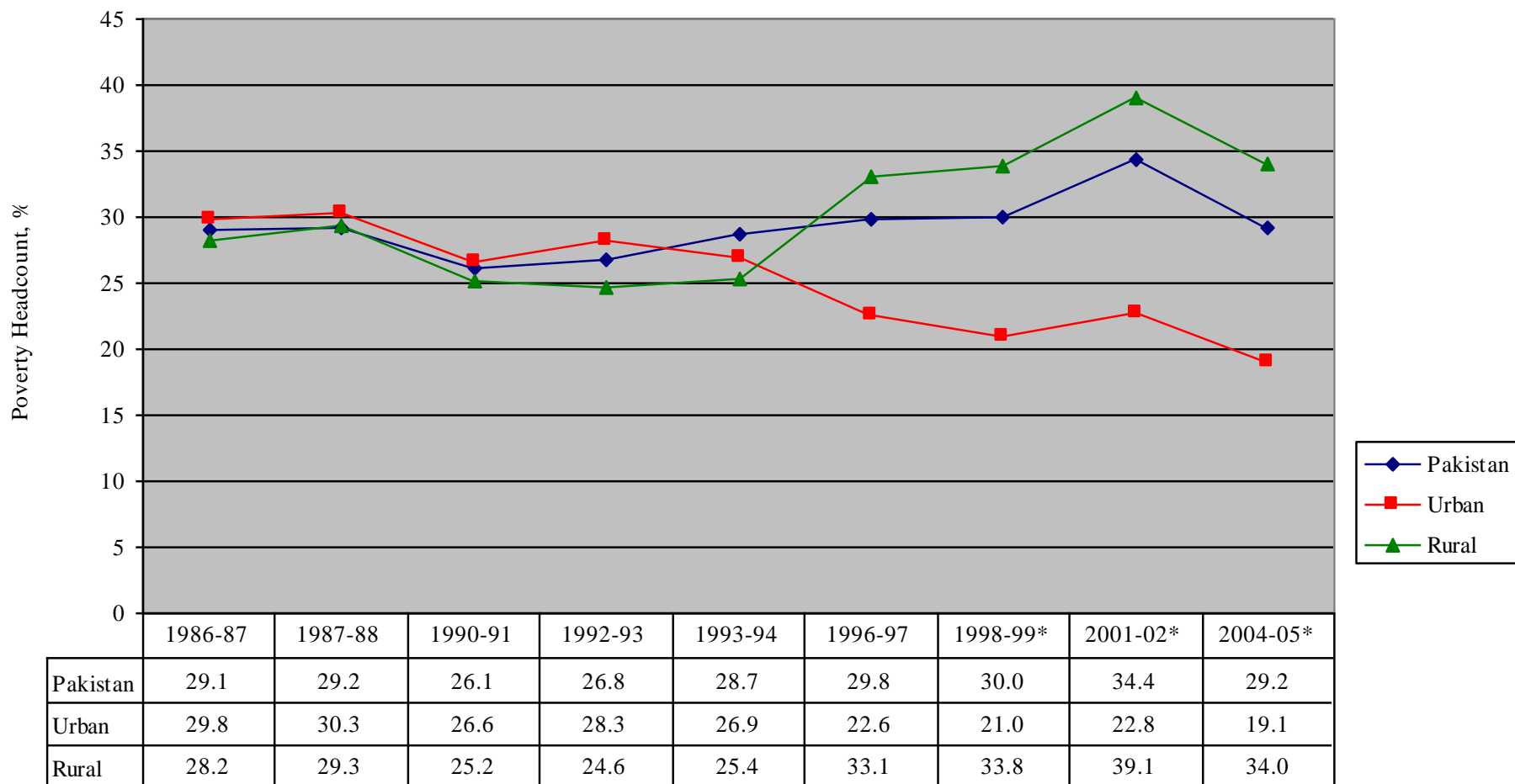
Share of Cotton Product Exports to Total Pakistan Exports

	ave. 1990-92	ave. 1995-97	ave. 2003-05
Exports of All Cotton Products/Total Pakistan Exports	61.1	62.6	60.9
Exports of Cotton Lint/Exports of All Cotton Products /1/	13.1	5.8	3.3
Exports of Cotton Manufactures/Exports of All Cotton Products /1/	86.9	94.2	96.7
Cotton Yarn	29.7	27.7	13.5
Cotton Cloth	18.7	23.8	22.0
Tents & Canvas	1.7	0.7	0.9
Cotton Bags	0.7	0.5	
Towels	3.3	3.5	5.7
Bed Wear	6.7	8.3	17.5
Other Madeup	2.8	3.7	5.2
Garments	13.9	13.0	12.8
Hoseiry	9.5	13.1	19.1

/1/ Will add up to 100%

Source: Textile Commission's Organization

Background: Poverty Trends in Pakistan



Source: Pakistan Economic Survey 2002-03; World Bank 2007

*From World Bank 2007 "Pakistan Promoting Rural Growth and Poverty Reduction" 2004-05 are estimates of the World Bank

Scenarios and Assumptions

External Shocks

- **Increase in world cotton and textile prices**
 - **Increase in world prices of cotton yarn (20%) and textiles (5%)**

Domestic Policy Shocks

- **Increase in total factor productivity**
 - **Dynamic effects of 5% increase in TFP in raw cotton, cotton yarn, and textiles**

World Prices of Cotton, Yarn, and Fabric

	COTLOOK - B	Cotton yarn	Cotton fabric
Mean: 1990-2005	115.7	107.2	113.3
Std. dev.	26.5	14.0	8.7
C.V. %	22.9	13.0	7.7
1994-2001			
Change, %	-57.8	-27.4	-6.4
Ratio /1/		0.47	0.11

/1/ Relative to change in COTLOOK - B

Framework of Analysis

2001-02 Pakistan CGE Model (based on 2001-02 SAM)

2001-02 Pakistan Household Survey

Shocks

➤ **Sectoral re-allocation**

- 34 sectors, 5 factors of production, 19 households
- changes in output and factor demand due to changes in relative output and factor prices

➤ **Changes in household income**

- 19 household groups

➤ **Changes in consumer prices**

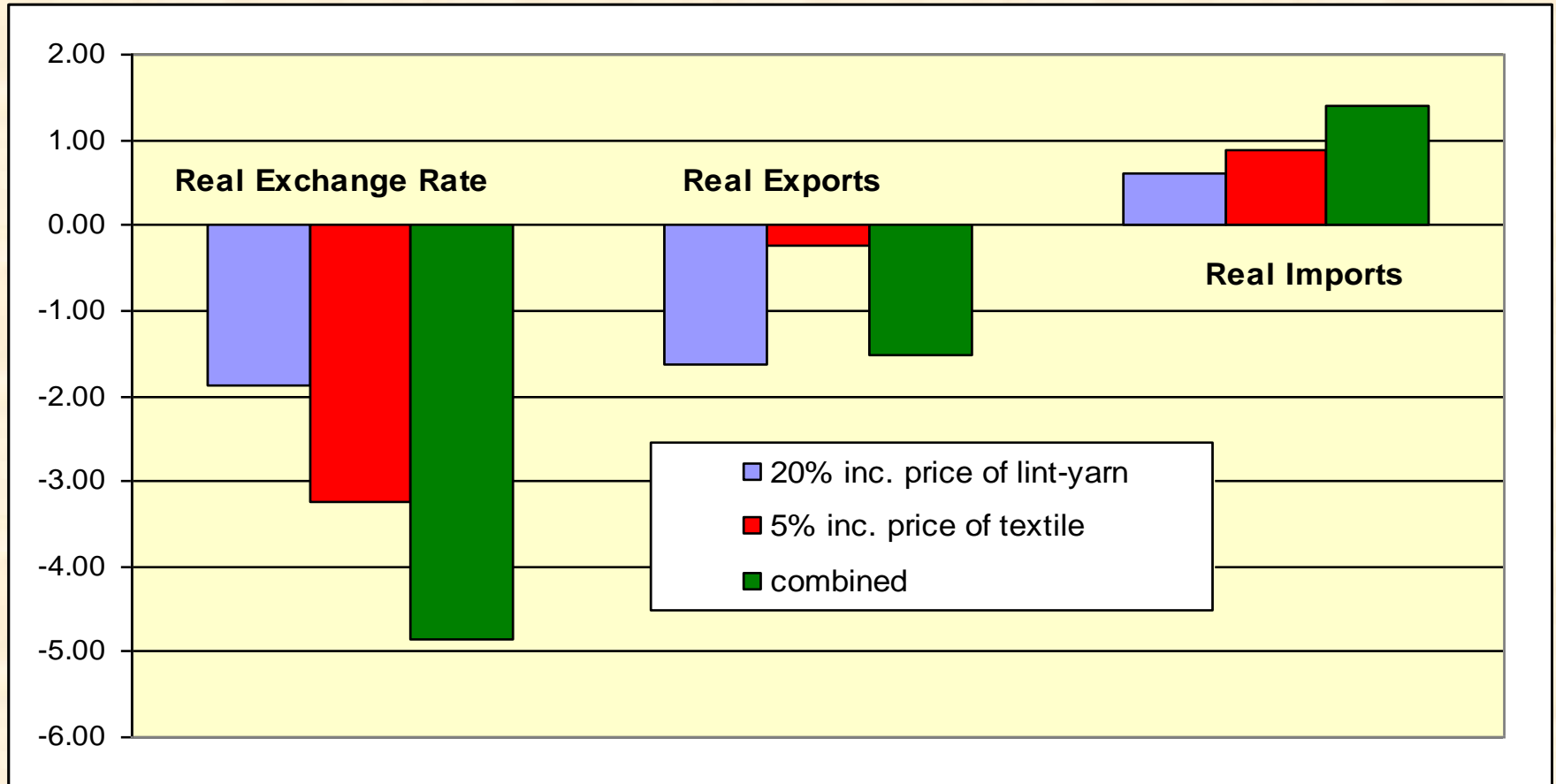
**Changes in
poverty indicators**

Inter-sectoral Input Linkages (%)

	Raw Cotton	Cotton Lint and Yarn	Textile
Intermediate input	38.8	78.4	77.8
Raw cotton	0.0	30.0	0.0
Cotton lint & yarn	1.7	23.2	22.7
Textile	0.0	0.5	23.8
Others	37.1	24.7	31.3
Primary input (value added)	61.2	21.6	22.2
Skilled labor	0.0	4.3	4.8
Unskilled labor	20.0	0.7	1.3
Farm labor	16.2	0.0	0.0
Workers	3.8	0.7	1.3
Capital	5.3	16.6	16.1
Land	36.0	0.0	0.0
Total	100.0	100.0	100.0

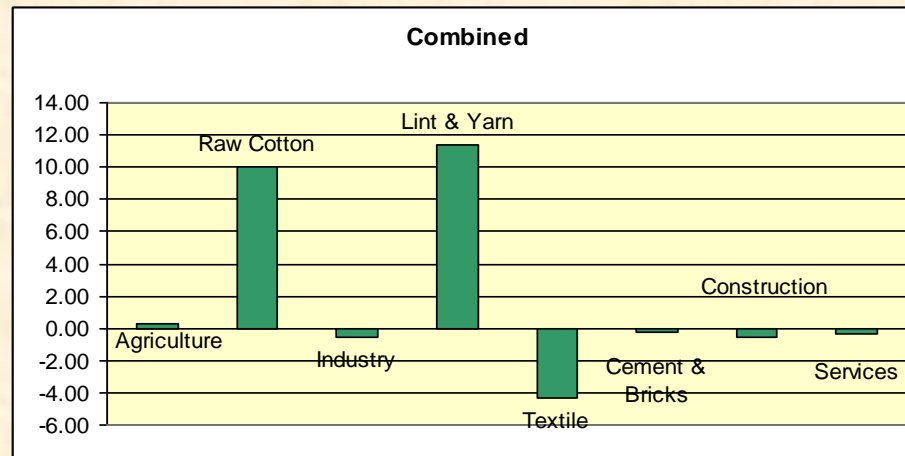
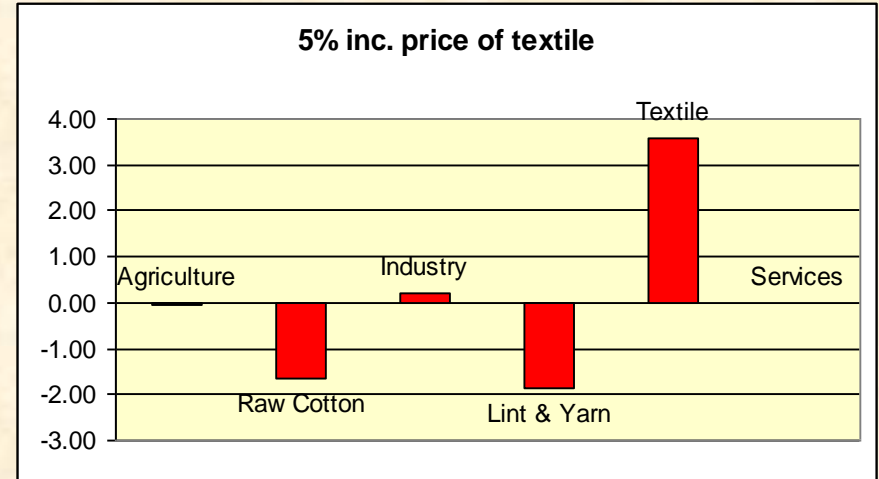
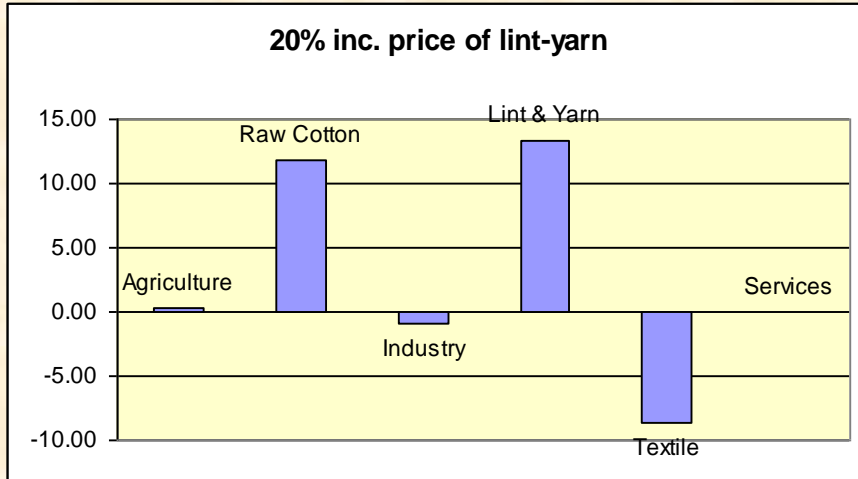
Macro Effects for Increase in World Cotton and Textile Prices

% Change from base



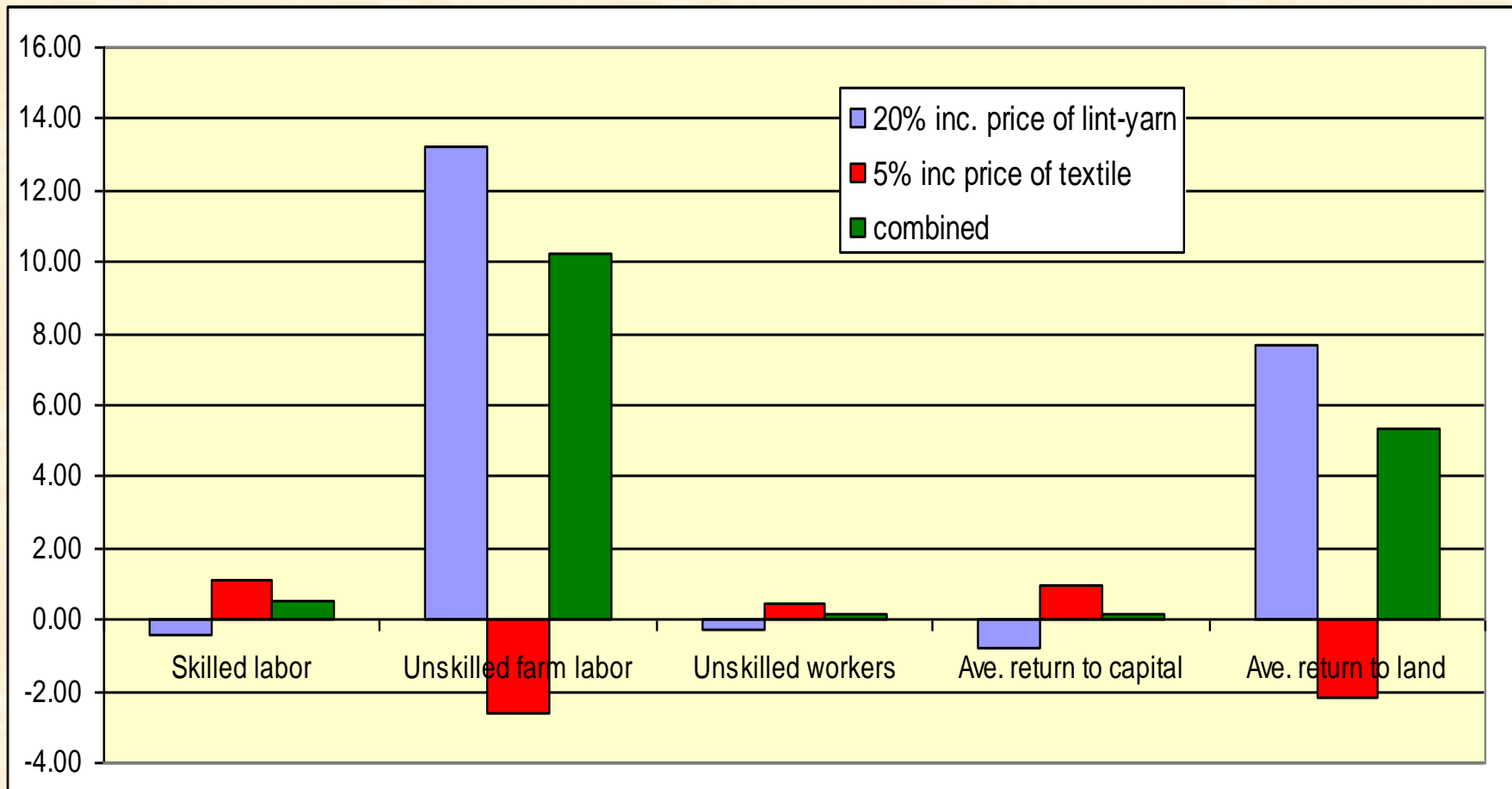
Sectoral Effects on Output for Increase in World Cotton and Textile Prices

% Change from base



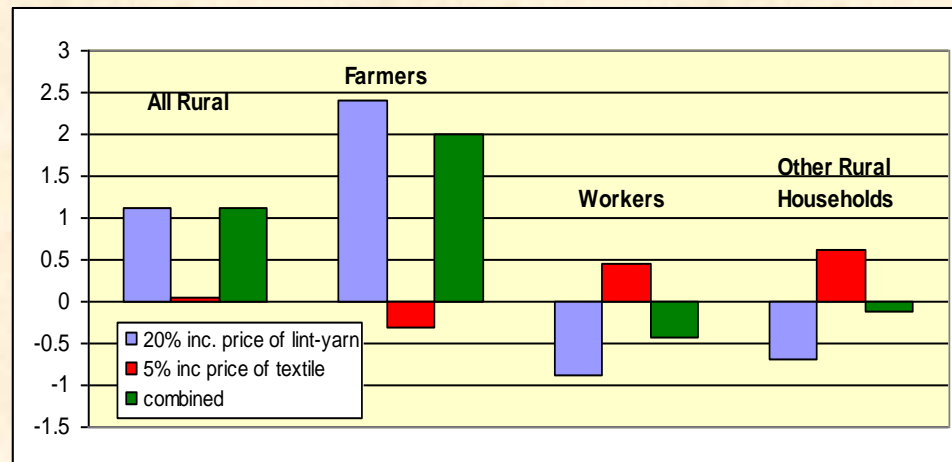
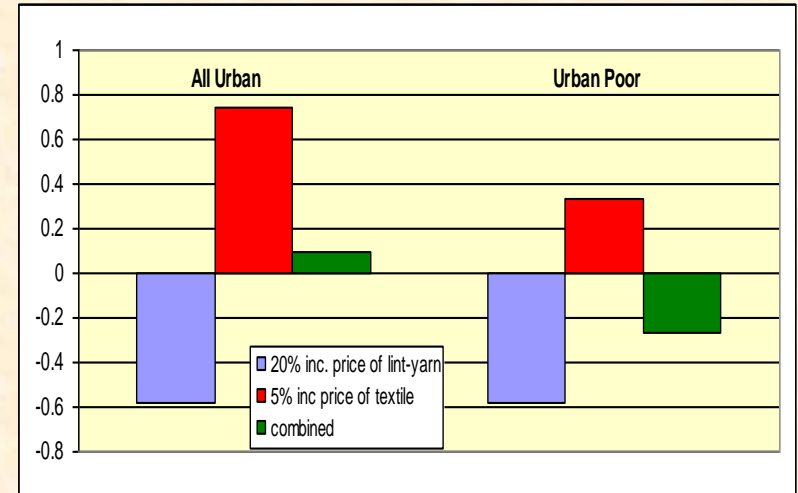
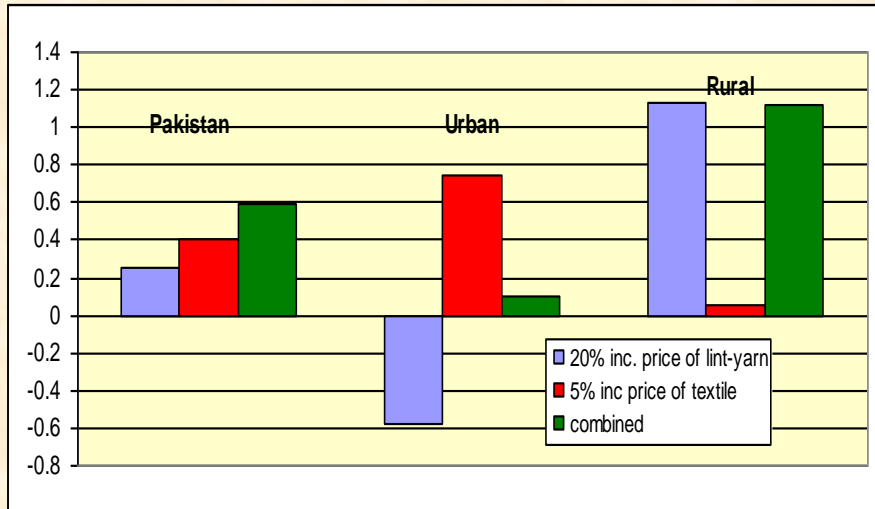
Real Factor Price Effects for Increase in World Prices

% Change from base



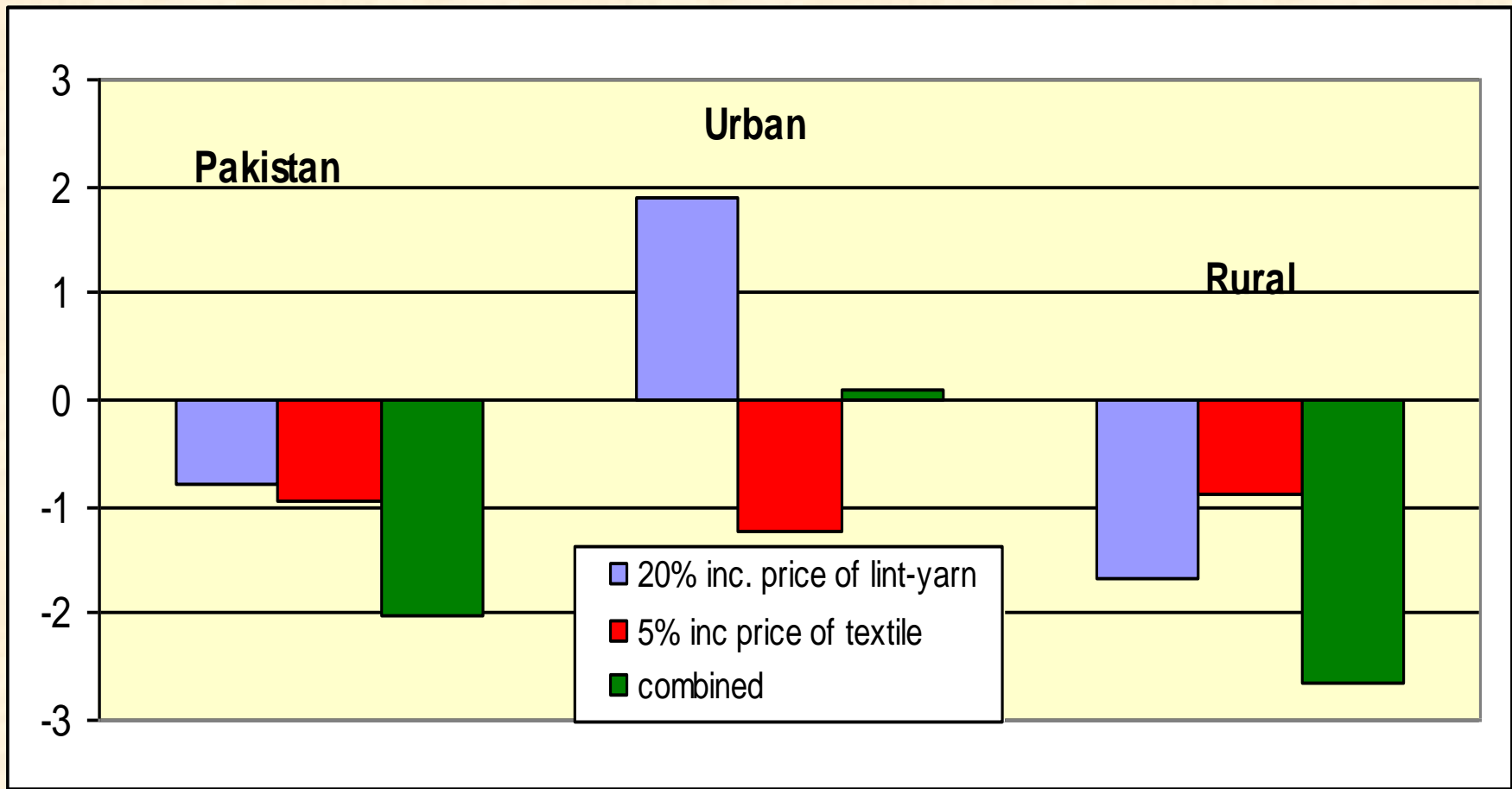
Real Income Effects for Increase in World Cotton and Textile Prices

% Change from base



Poverty Effects for Increase in World Cotton and Textile Prices

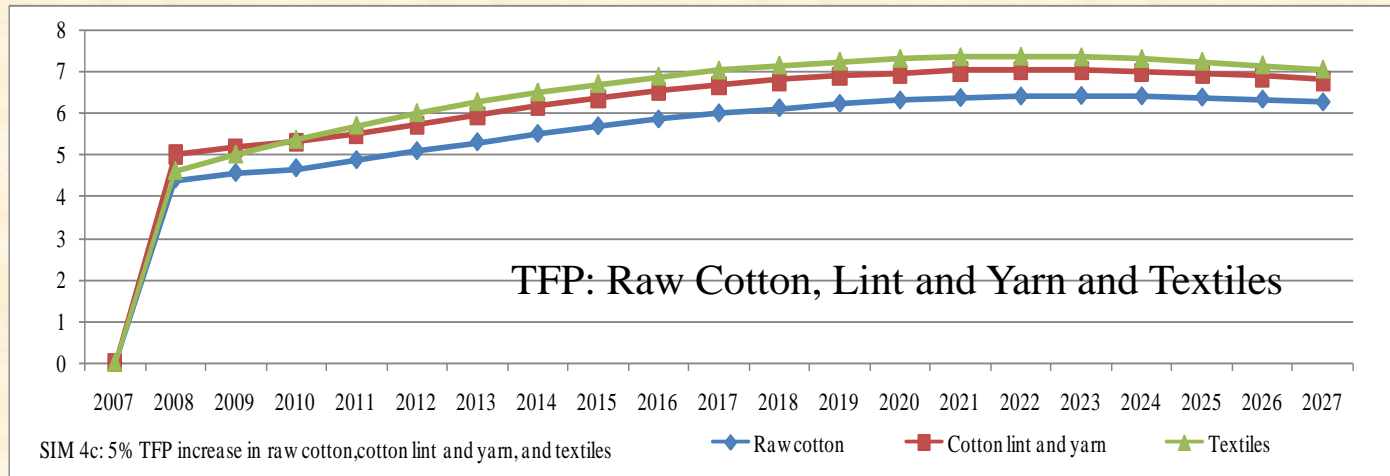
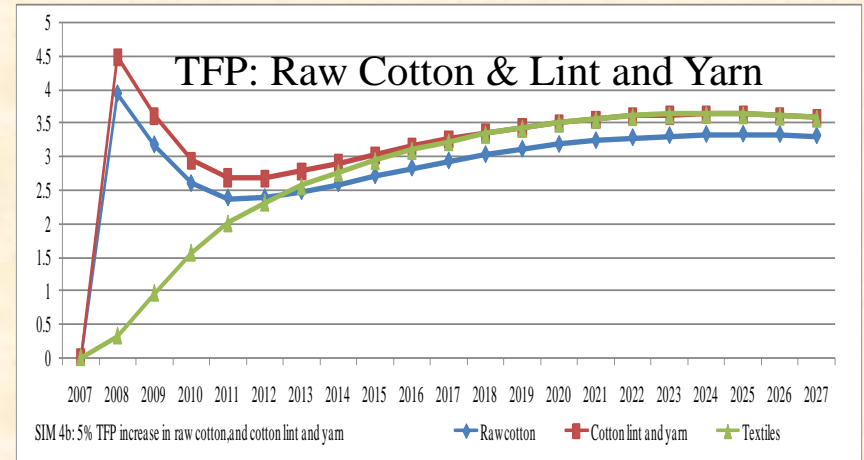
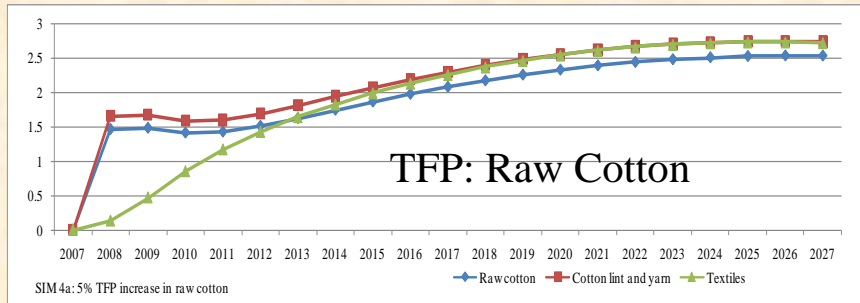
% Change from base



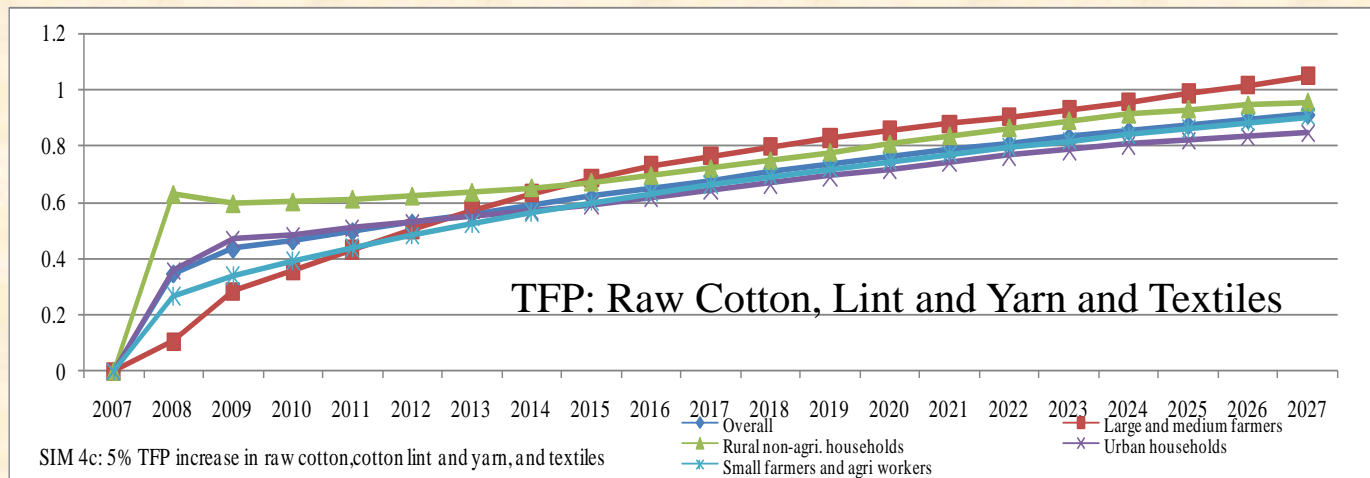
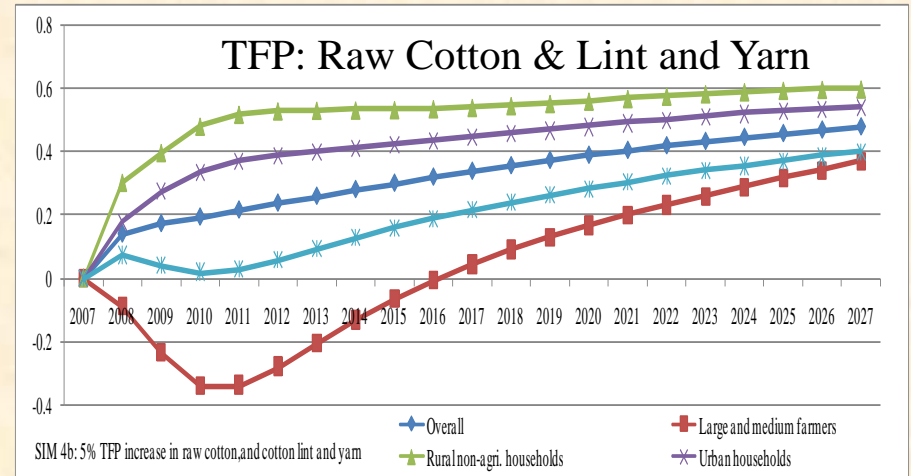
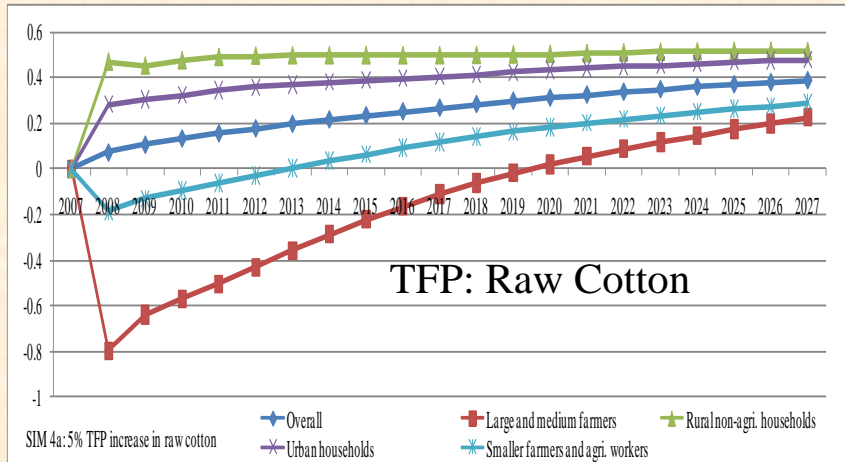
Effects of Domestic Policies for Cotton-Textile Sector

- **Dynamic effects of increase in total factor productivity**

Output Effects of Higher TFP



Income Effects of Higher TFP



Summary and Insights (1)

- **Increase in world cotton and textile prices has significant positive effects on cotton households, but negative on non-cotton households**
- **Simultaneous increase in TFP in cotton-related sectors generates significant intersectoral effects and sustained growth in income of all groups in the short and long run**

Summary and Insights (2)

- **Improved competitiveness through higher productivity is key to addressing issues regarding the abolition of MFA in 2005**
- **Investing in productivity improvement is far better than using scarce resources to support the sector through subsidies**