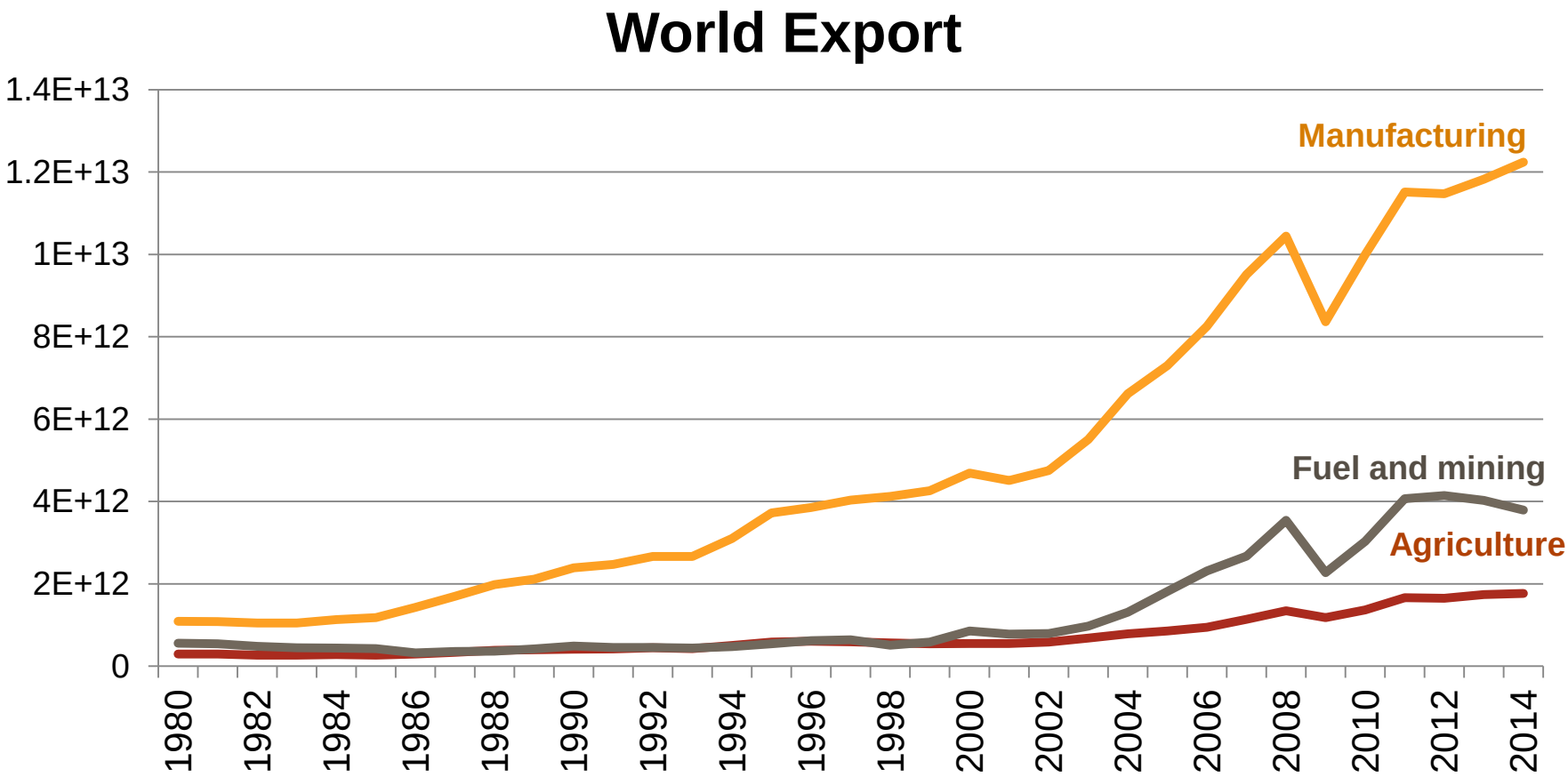
REGIONAL AND INTERNATIONAL COOPERATION IN CENTRAL ASIA AND CAUCASUS: RECENT DEVELOPMENTS IN AGRICULTURAL TRADE.
NOVEMBER 2-4, 2016, SAMARKAND

World trade: agriculture vs. manufacturing

Natalya Volchkova

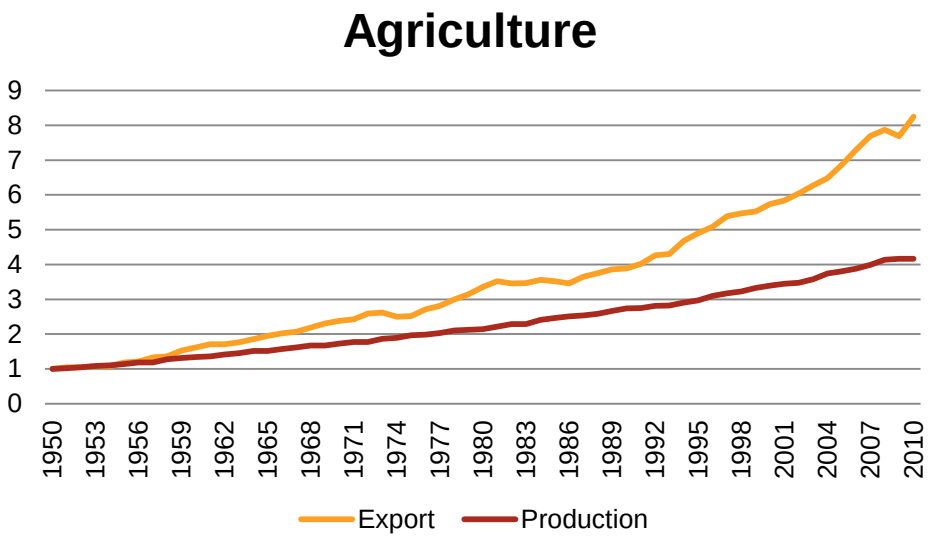
New Economic School, Center for Economic and Financial Research

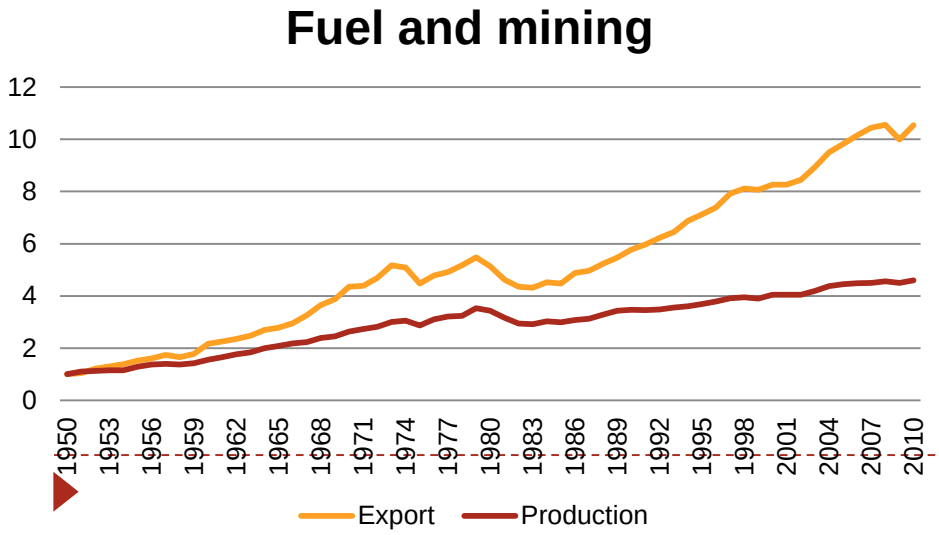
Dynamics of world trade



Source: WTO,2015

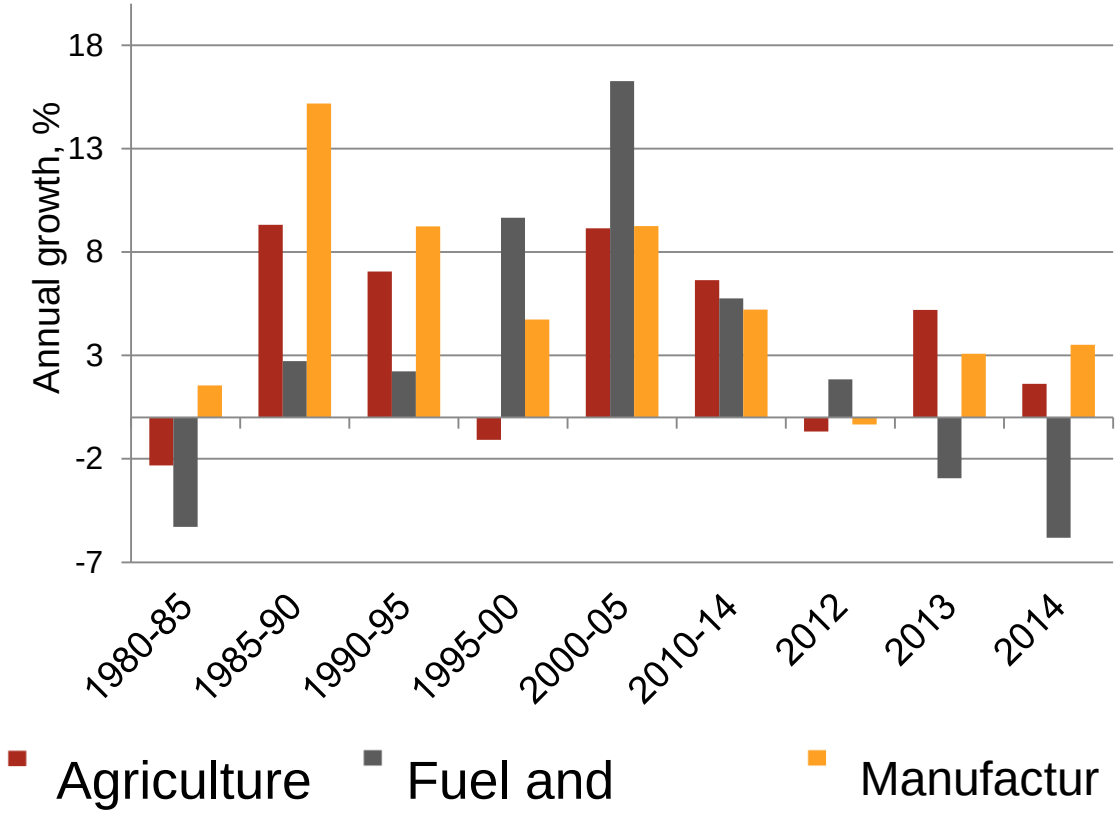
Export and production, by commodity groups (volume, 1950=1)





Agricultural trade is lagging behind over last 70 years

- Around 1960 agricultural trade share was more than 30% of world trade (Sandri et al, 2007), today it is below 10%



Share in world merchandise trade, %	
Agricultural goods	**9,5**
Fuel and mining	**20,5**
Fuel	16,6
Manufacturing goods	**66,2**
Iron and steel	2,6
Chemicals	11,1
Office and telecom equipment	9,7
Automotive products	7,5
Textile	1,7
Apparel	2,6

Source: WTO, 2015

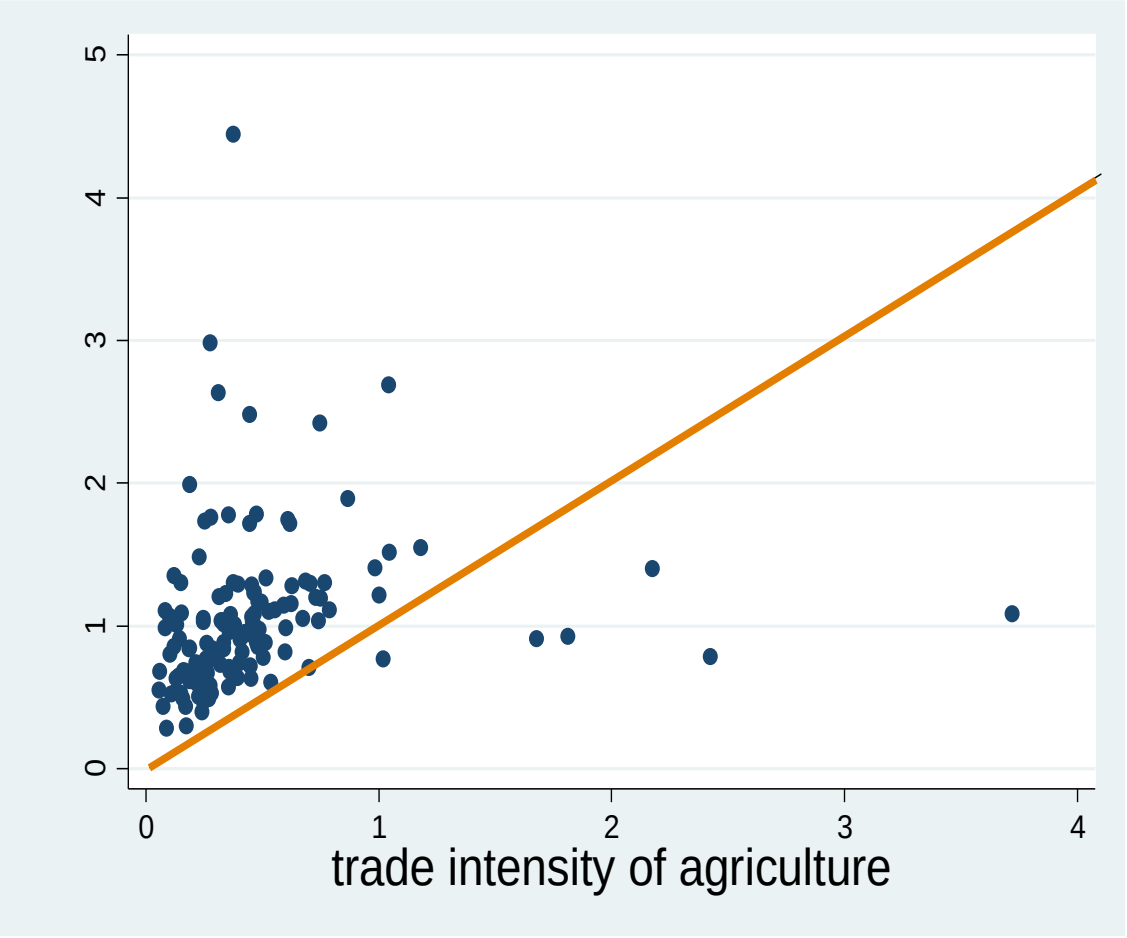
Is agricultural trade crowding out because of lower share of agriculture in GDP?

Value added as a percent of GDP, 2007

	Agriculture, Forestry &Fishing	Industry	Services
USA	1	22	71
Japan	2	30	68
Canada	2	33	65
France	2	21	77
Italy	2	27	71
Albania	21	20	59
Chad	23	44	32
Pakistan	21	26	53
Tanzania	45	18	37
Mali	37	24	39

Trade intensity of agriculture is way below that of manufacturing for almost all countries

- Data from GTAP 2011 for 140 countries



Why globalization is biased toward manufacturing?

- Does globalization naturally favor manufacturing goods more than agricultural ones?
  - Market structure
  - Technology
  - “Natural” trade related costs
- Or differences are man created through regulation and trade policies?

Main driving forces of international trade

- (+) Comparative advantage determined by differences in
  - technologies
  - factor endowments
  - tastes
- (+) New trade mechanism based on
  - Economy of scale
  - Product differentiation and love for variety
  - Market power
- (-) Tariff and non-tariff barriers
- (-) Exchange rate fluctuation
- (-)Transport costs

- All these factors affect manufacturing trade and agricultural trade in the same direction but may be with different strength

Comparative advantage was the main driver of trade for centuries

- Comparative advantage in agriculture is defined by
  - Endowment of arable land
  - Access to fresh water
  - Capital per labor ratio
  - The use of modern technologies in agriculture and industry

Geography, infrastructure

Investments

- Growth in extractive sectors can decrease comparative advantage in agriculture
- Increase in world price of goods for which there is a agricultural substitutes (biofuel) can positively affect comparative advantage in agriculture

New (intraindustry) trade became an important feature of international trade after WW II

- Modern understanding of the mechanism of this trade relies on
  - Product differentiation and love for variety
  - Economy of scale in production
  - Monopolistic competition
- Currently the share of new trade in overall trade flows is evaluated around 80% for developed countries and less for developing.

Is intraindustry trade more relevant to manufacturing goods than to agricultural ones?

- Sort of, but estimations indicate that differences are not drama

SITC	Average GLI for 4-digit SITC groups	Weighted average GLI for 4-digit SITC groups
Food and animals	0.17	0.37
Beverages and tobacco	0.21	0.34
Crude materials, not edible	0.13	0.27
Mineral fuels	0.11	0.22
Animal and veg oils	0.11	0.26
Chemicals	0.17	0.58
Manufacturing goods	0.19	0.51
Machinery and transport	0.18	0.58

Source: Sawyer and Sprinkler, 2012

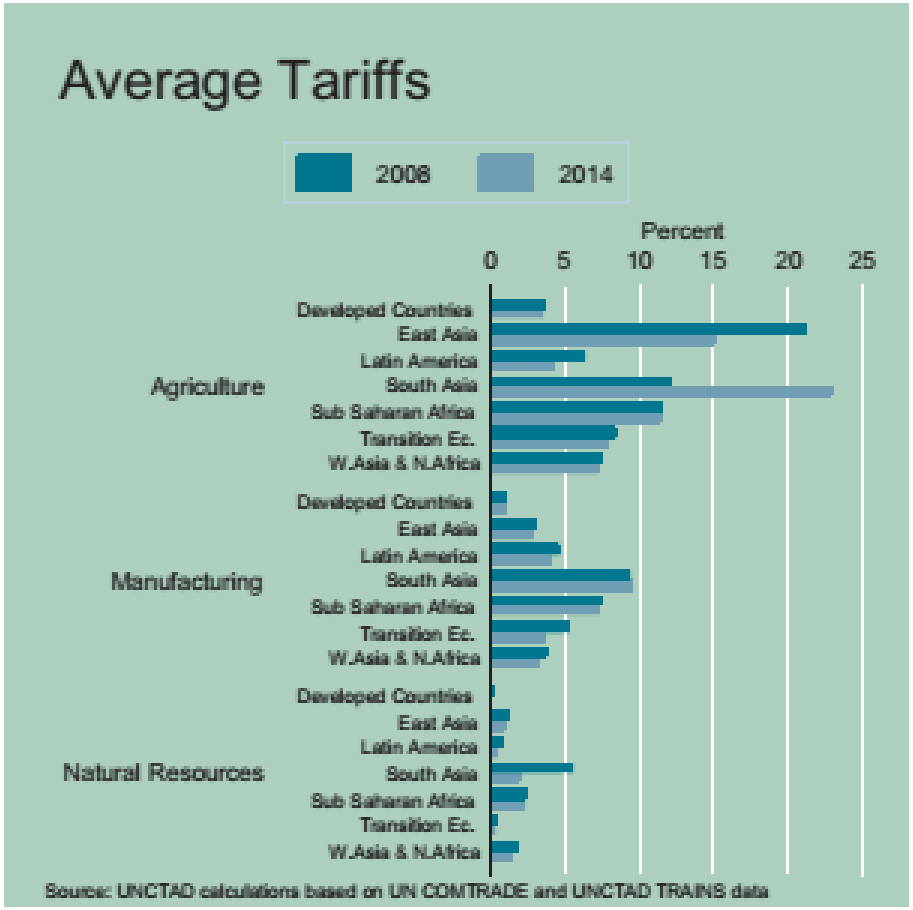
Main driving forces of international trade

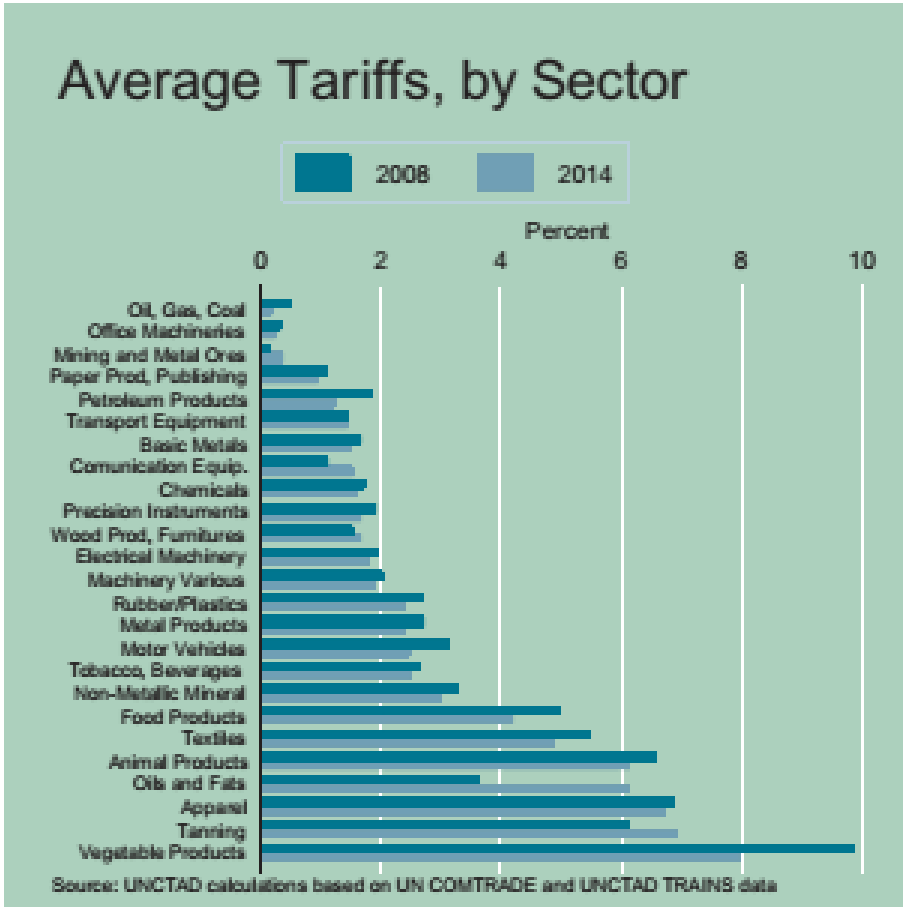
- (+) Comparative advantage determined by differences in
  - technologies
  - factor endowments
  - tastes
- (+) New trade mechanism based on
  - Economy of scale
  - Product differentiation and love for variety
  - Market power
- (-) Tariff and non-tariff barriers
- (-) Exchange rate fluctuation
- (-)Transport costs

GATT-WTO shaped the world trade after WW II and was strongly biased toward manufacturing

- GATT: liberalization of agricultural trade was at periphery of negotiations
  - While industrial tariffs in OECD countries decreased by 9/10 and are now below 4%, agricultural protectionism increased
  - World average tariffs on agricultural goods are 5-10 times higher that on manufacturing goods
  - Quotes
  - Non tariff barriers
  - Accumulated contradictions of interests of group of countries with
    - Different income level
    - Different geographical and climate positions
- WTO: liberalization of agricultural trade became one of the most important of Development Round (Doha Round)
  - …. and to large extent became an important reason for its failure

Trade liberalization: sectoral and regional differences





Источник: UNCTAD, 2015

Why trade liberalization is so important?

- New new trade theory of heterogeneous firms indicate that redistribution of market shares among domestic firms with different levels of productivity is an important source of economic efficiency increase
  - Pavcnic (2002) shows that productivity growth in manufacturing industry in 1979-1986 in Chile was 19.3% out of which
    - 6.6% – increase in productivity at plant level
    - 12.7% – resource reallocation toward more effective producers due to trade liberalization

Divergence of economic policies in agriculture and manufacturing in 2nd half of 20 century

- In the second half of 20 century trade and economic policy in agriculture in developed and developing world was very interventionistic. Various regulations aimed at stabilization of prices at domestic markets brought substantial volatility of world prices.
  - Tyers & Andreson (1992): a volatility of world agricultural prices in 1980-es was 3 times higher than under free trade, while trade volumes were lower.
- These interventions were not effective and also contributed to substantial increase in inequality and poverty in the world (Anderson (2010)).
- Export subsidy conflict between US and Europe in 1980-es led to substantial decline in world agricultural prices as of 1986 prices
- High export subsidies in developed countries and import tariffs in developing ensured significant decline in revenues of farmers and agricultural firms in developing and poor countries.

Trade and economic policies in agriculture brought price volatility

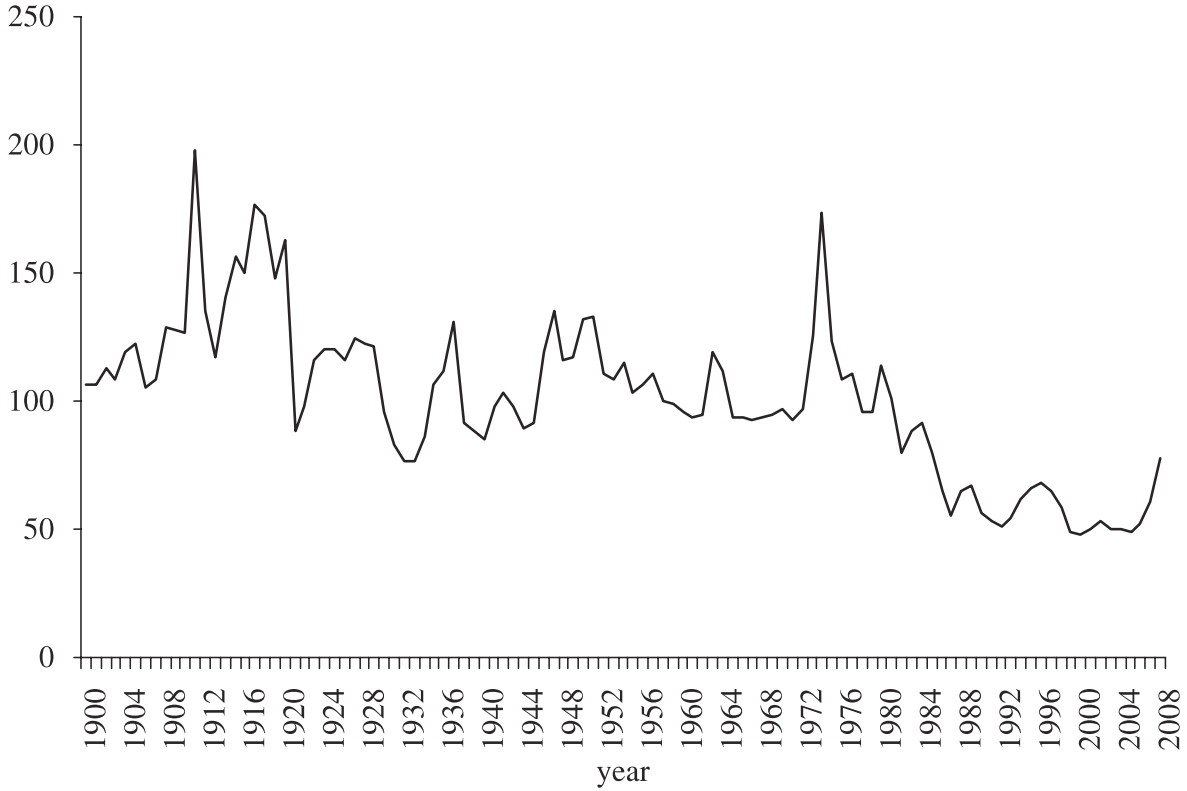


Figure 1. Real international food price index, 1900–2008 (1977–1979 = 100). The deflator used is the price of manufactured exports to developing countries from the five largest HICs (France, Germany, Japan, the UK and the USA). Author's compilation using data from Pfaffenzeller *et al.* (2007), updated from 2004 with data from www.worldbank.org/prospects. Solid line, real food price index.

Source: Andersen, 2010

Main driving forces of international trade

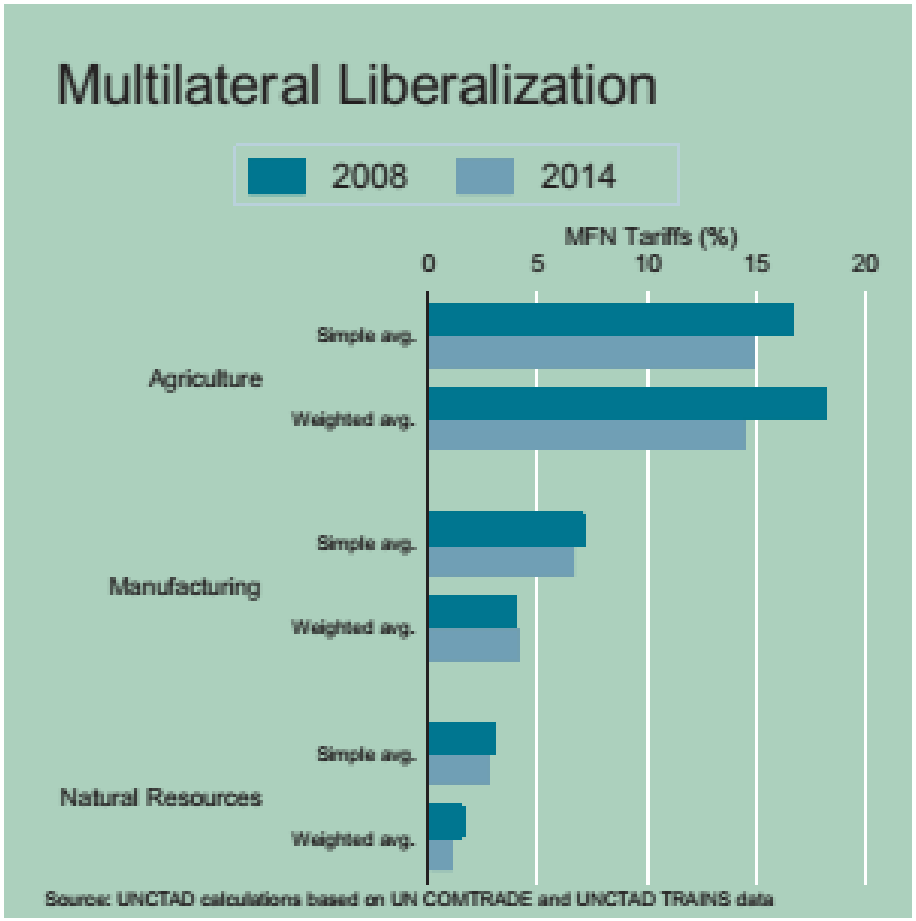
- (+) Comparative advantage determined by differences in
  - technologies
  - factor endowments
  - tastes
- (+) New trade mechanism based on
  - Economy of scale
  - Product differentiation and love for variety
  - Market power
- (-) Tariff and non-tariff barriers
- (-) Exchange rate fluctuation and Spillover from interventionist domestic policies to world prices
- (-)Transport costs

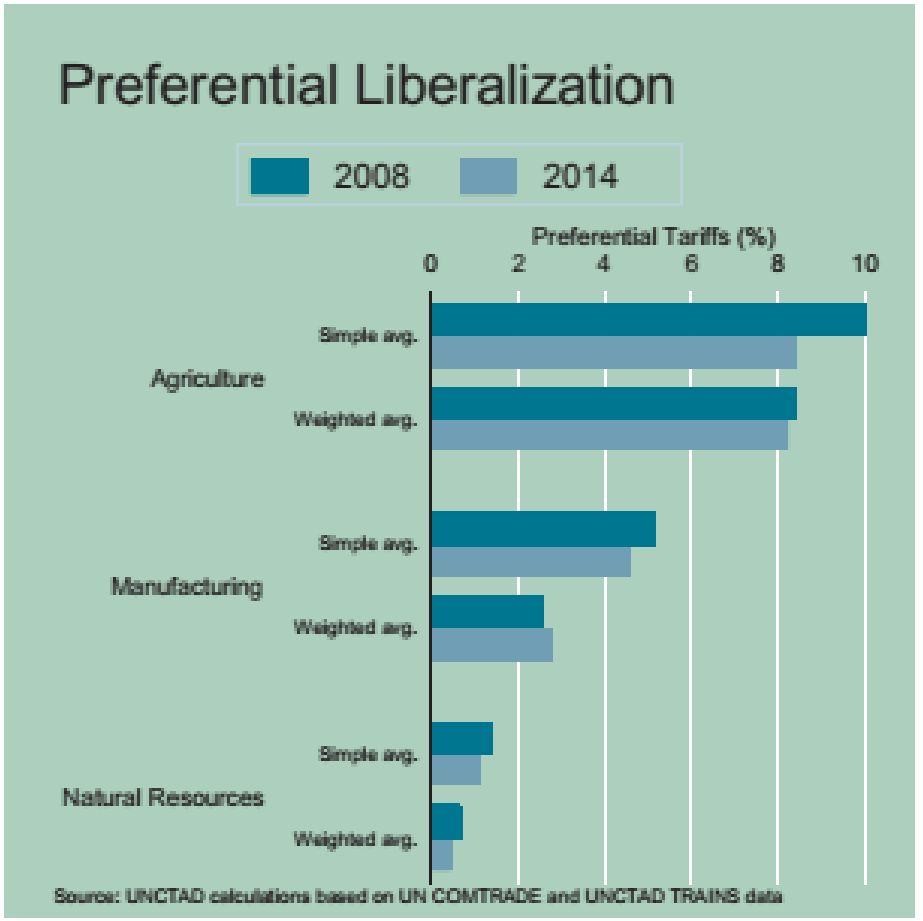
Measuring trade costs directly indicate twice as high costs in agriculture than in manufacturing

- Xu (2012) evaluates broad measures of trade costs, "which include all costs incurred in getting a good to a final user" for agricultural and manufacturing goods and finds
  - while trade costs on both tradeable goods are substantial, agricultural trade costs are much larger than manufacturing trade costs.
  - for every one dollar worth of agricultural goods, trade costs are in a range least 2.7 - 5.48 dollars.
  - on manufactured goods range is 1.77 - 2.65 dollars
- Transport costs are also more important for agriculture: for every one dollar worth of agricultural and manufactured goods, distance adds at least 1.89 and 0.89 dollars to the cost of shipping from one country to another.

Potential way to address the problem – in preferential trade agreements

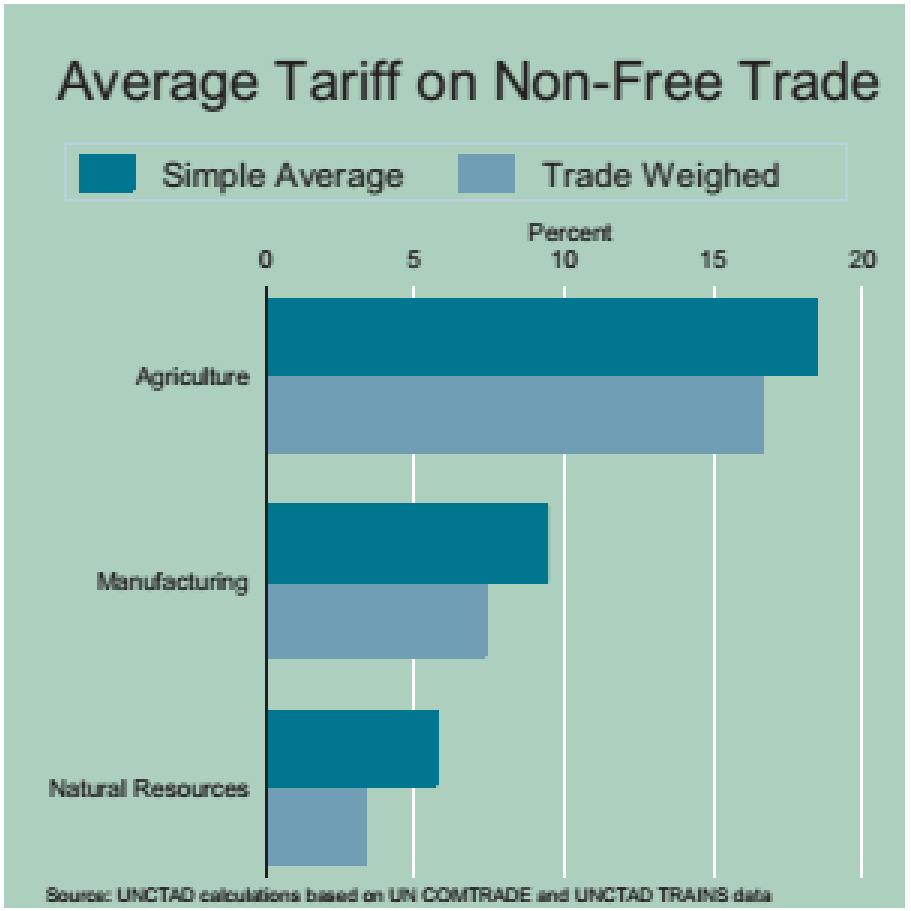
- Agricultural liberalization is more successful in preferential trade agreements





Источник: UNCTAD, 2015

Preferential access plays a key role for agricultural market access



Источник: UNCTAD, 2015

More on preferential trade agreements effects

- Numerous empirical studies found the positive trade creation effects of preferential arrangements to be larger than the negative trade diversion.
- McCalla (1992) points out that agriculture serves as a notable exception as trading blocs tend to provide high levels of protection to their agricultural producers
- Josling (1993) argues that agricultural commodities are easily subject to arbitrage across member nations of the trading bloc, which tends to undermine the intended functioning of many instruments of national agricultural policies in the bloc's member countries, for both border and domestic measures.

Conclusions

- Role of agricultural trade in overall trade diminishes mostly due to protectionist policies at domestic markets and on the borders
- Xu (2004) concludes that high agricultural trade costs are the main impediments to trade in agriculture and countries may not be fully enjoying the gains from agricultural trade because of high trade barriers.
- Multilateral liberalization is not able today to address this problem
- The potential way to boost agricultural trade may be through deep preferential trade agreements
  - The return to such policies might be multifold
  - It will work even better for PTAs of countries with similar level of development
- But it might be a further impediment for multilateral liberalization of agricultural trade