
LABOUR MIGRANTS REMITTANCES INDUCED AN EXCHANGE RATE CHANGES EFFECTS ON THE AGRICULTURAL SECTOR OF TAJIKISTAN

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RURAL LABOR IN TRANSITION:
STRUCTURAL CHANGE, MIGRATION
AND GOVERNANCE

Outline

1. Motivation
2. Objective & Research Question
3. Approach
4. Results
5. Conclusion

1. MOTIVATION

1. Motivation

1. Share of Agricultural sector on GDP (2015): 23%.

2. Population growth

On average 2% (1990-2015)

3. Labour Migration and Migrants remittances (2014)

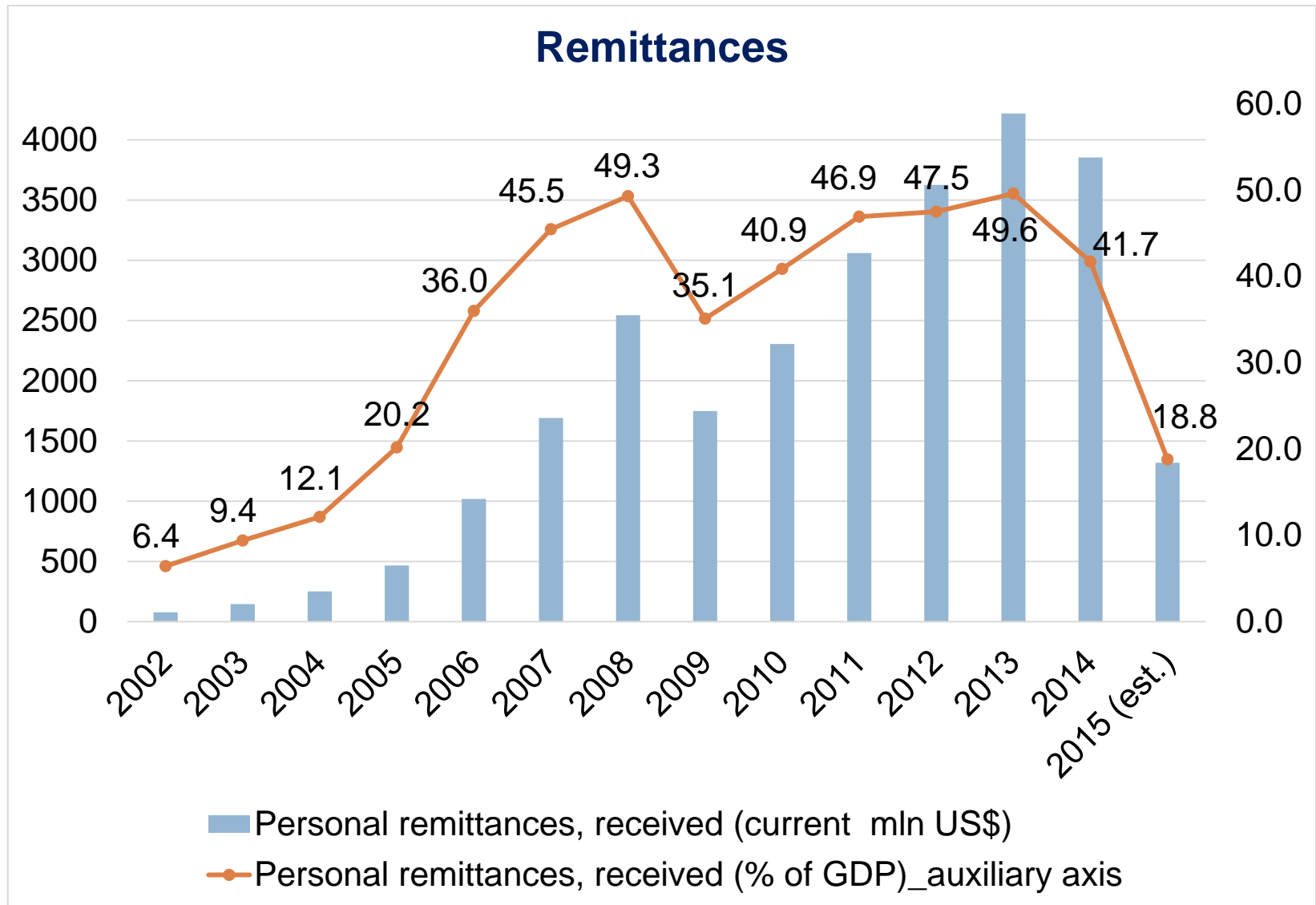
No of migrants - 1.2 million.

- ✓ 15% of total population;
- ✓ 28% of Labour Force;
- ✓ 50% of economically active population.

Remittances: \$3.86 bln. (2014) & \$1.286 bln. (2015).

- ✓ 2 times more than state budget (2014);
- ✓ Equivalent to 42% of GDP (2014);
- ✓ 35% of population income (2014).

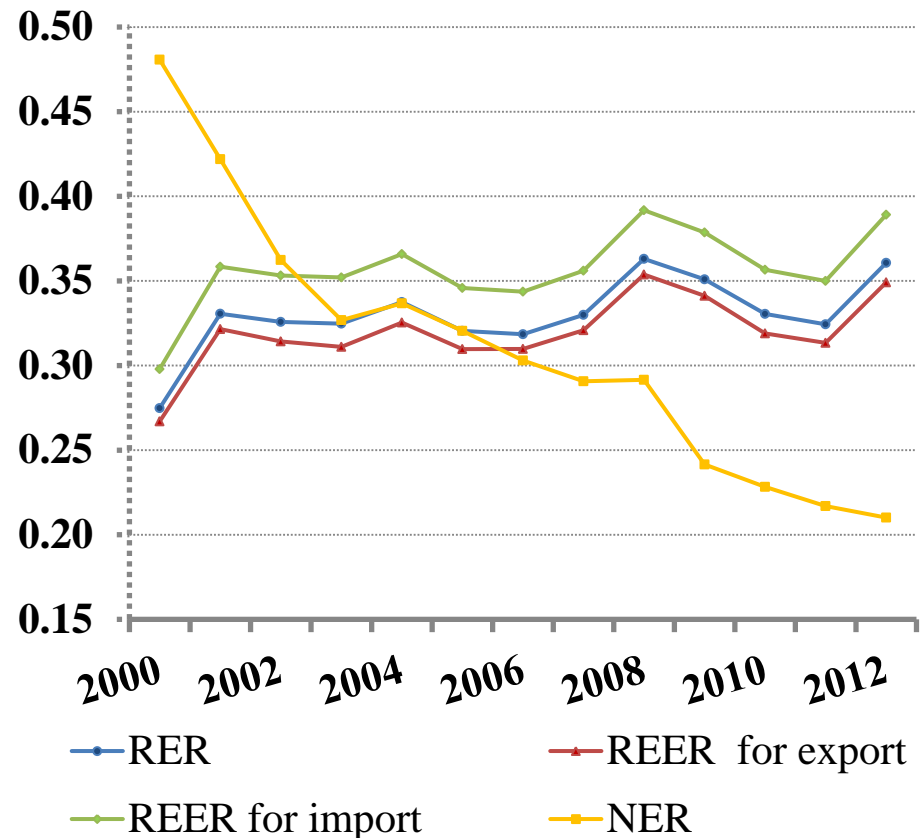
1. Motivation



1. Motivation

Nominal, Real and Real Effective Exchange rates

- Higher the inflation of the CPI in domestic markets compared to foreign markets, ceteris paribus, the more domestic currency should depreciate, but it is not the case for Tajikistan.
- The average gap between NER and RER for 2006-2011 was 23%.
- For 2009-2011 gap was 34%.

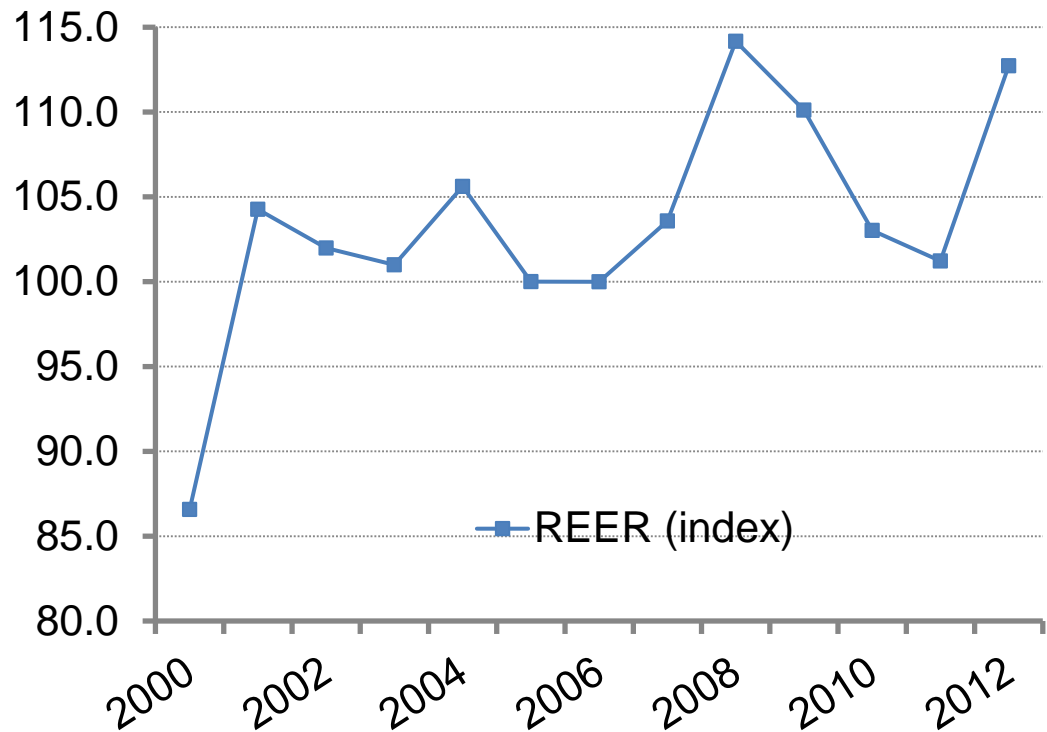


Source: Own calculation and compilation based on WDI of World Bank, 2012

1. Motivation

Remittances and Real Effective Exchange Rate

- REER index in Tajikistan since 2007 has increased by 7.5 percent due to a stable inflow of remittances.
- An increase in REER implies RER appreciation because the former is defined as the price of domestic goods relative to foreign goods (Acosta et al, 2009).

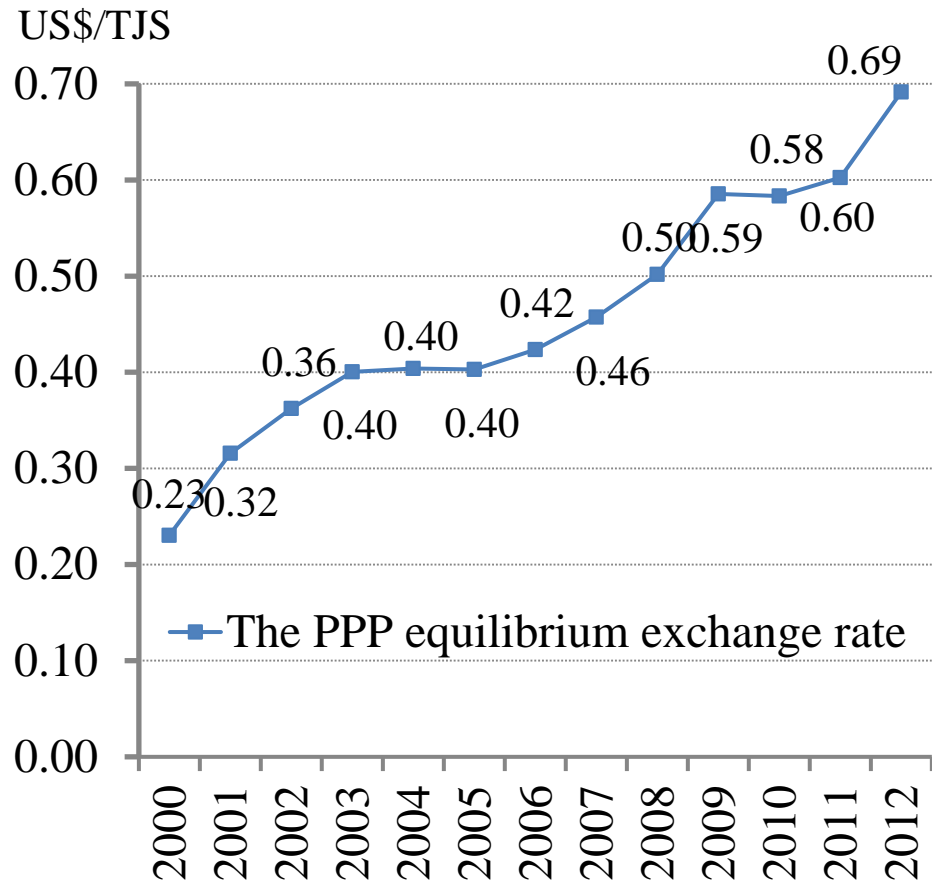


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1. Motivation

Purchasing Power Parity Equilibrium Exchange Rate

- PPP equilibrium exchange rate is used to reflect the deviation from a base year equilibrium exchange rate.
- The choice of base year is a tricky part of this approach.
- In 2002 (base year and roughly equilibrium ExR) there were no exceptional constraints imposed on imports, exports, labour migration or capital movements. Remittances were low and did not allow expansion of imports.
- In 2003-2012 the TJS appreciated against the USD, i.e. more units of USD were needed to buy TJS.

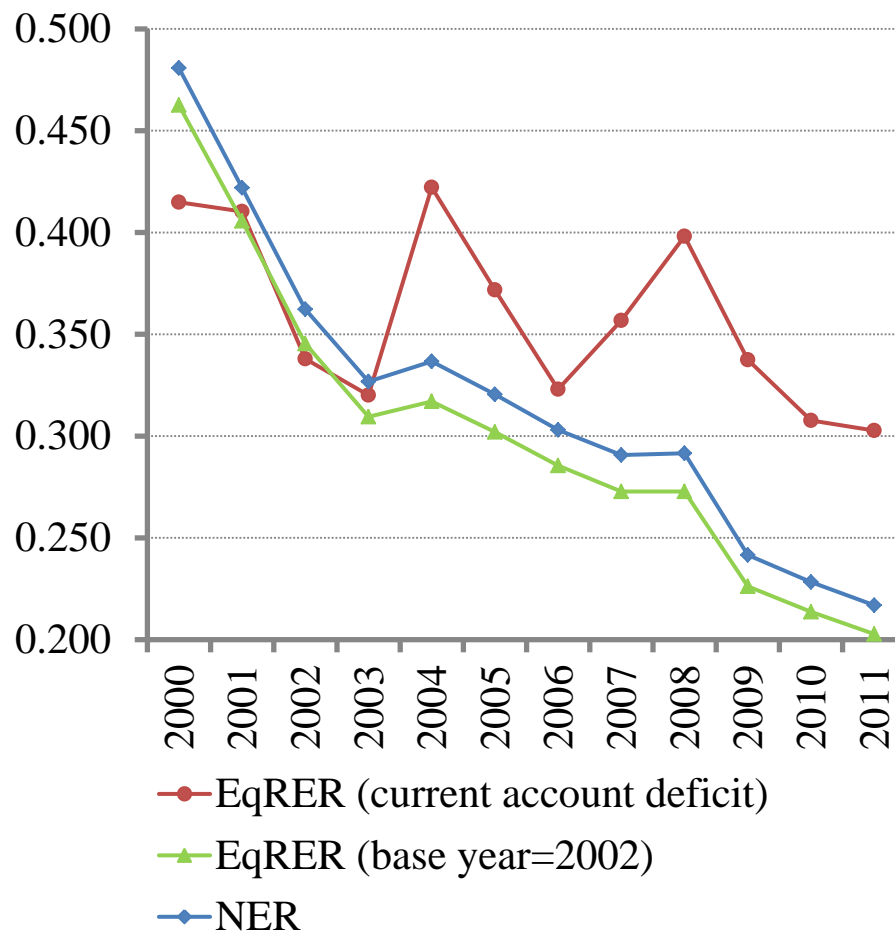


Source: Own calculation and compilation based on WDI of World Bank, 2012

1. Motivation

Equilibrium real exchange rate using elasticity approach

- The EqRER (current account deficit – **red line**) reflects appreciation and the EqRER (2002 is a base year – **green line**) depreciation of the TJS against the USD.
- During 2006-2011, the gap between the EqRER (current account deficit) & EqRER (base year is 2002) an average of 28 percent.
- The NER & EqRER (2002) have smooth curved paths, while the EqRER (current account deficit) fluctuates depending on how much imports exceed exports.



Source: Own calculation and compilation based on WDI of World Bank, 2012

1. Motivation

An exchange rate changes have ambiguous effects on consumers and producers in the exporting and importing country, depending on the net trade status of the country (Khakimov, 2015).

	Consumer	Producer	Overall Welfare
Domestic currency appreciation in net importer country	Gain	Loss	Positive
Domestic currency depreciation in net importer country	Loss	Gain	Negative
Domestic currency appreciation in net exporter country	Gain	Loss	Negative
Domestic currency depreciation in net exporter country	Loss	Gain	Positive

Source: Khakimov, 2015.

2. OBJECTIVE

&

RESEARCH QUESTION

Objective & Research Question

Objective

- To assess the impact of exchange rate changes on agricultural sector of Tajikistan.

Research question

- What is the effect of experimental exchange rate depreciation (by 10%) on agricultural sector of Tajikistan?

3. APPROACH

3. Approach

AGRISIM – partial-equilibrium, ex-ante, non-linear, multi-market, and multi region net trade model.

COUNTRIES & REGION		COMMODITIES	
Australia	Kyrgyzstan	Livestock	Crops
Brazil	Mexico	Beef & Veal	Wheat
Canada	Russia	Milk	Coarse grains
China	South Africa	Pig meat	Maize
Egypt	Tajikistan	Poultry	Rice, refined
European Union 27	Ukraine	Eggs	Sugar, refined
India	USA	Mutton & Goat	Cotton, fiber
Japan	Uzbekistan		Oils
Kazakhstan	Rest of the World		

3. Approach

Model includes 67 equations:

- Commodity balance sheet;
- Yield and area functions;
- Net trade equations;
- Prices;
- Price transmission elasticity;
- Welfare functions;
- Elasticities, etc.

Developed & simulated scenarios:

Status Quo or Base Simulation (BS) – under Official Exchange Rate

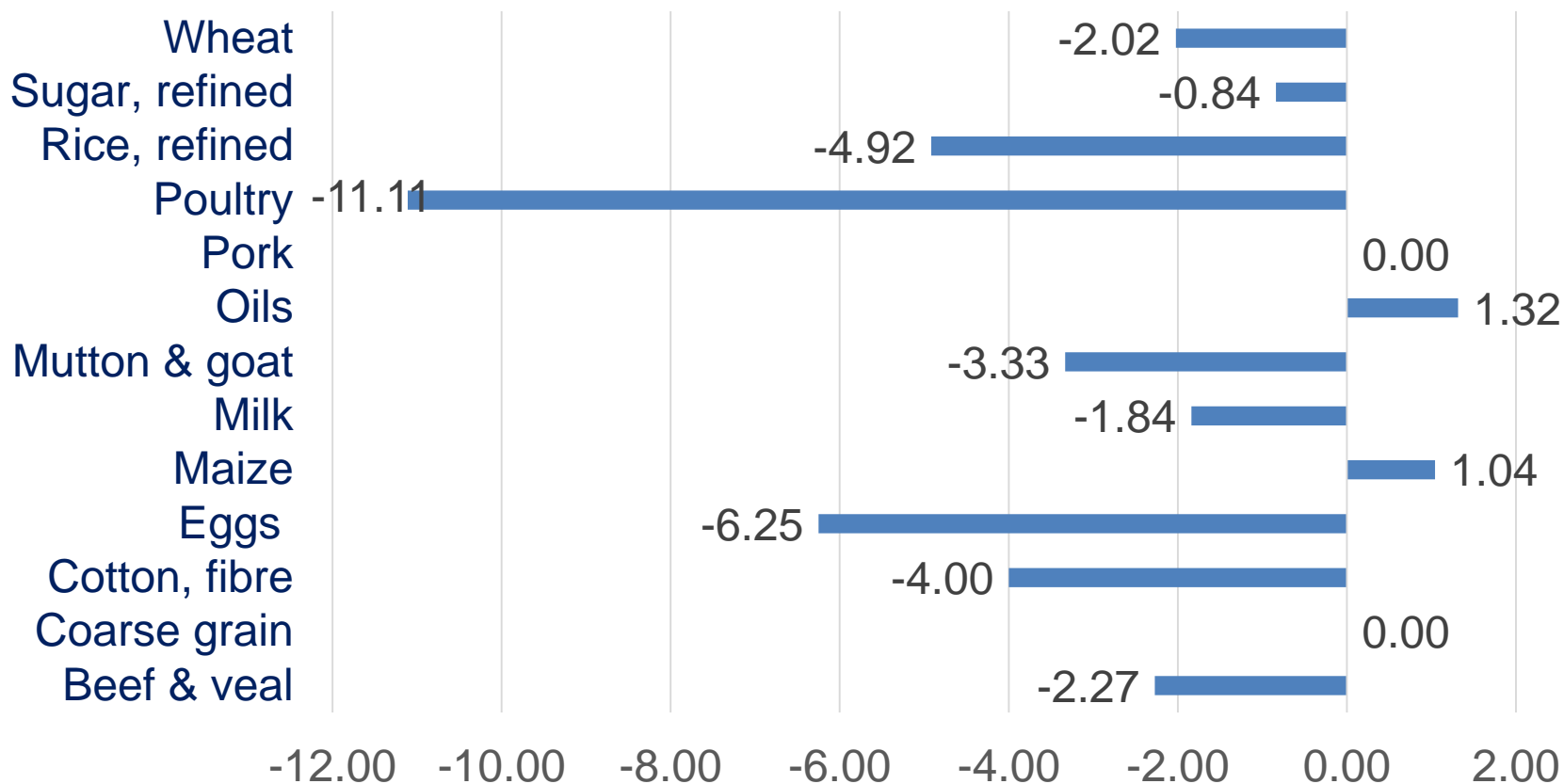
Scenario 1 (Sc1) – under 10% Depreciated Exchange Rate

4. RESULTS

4. Results

Figure 1. Demand changes

Sc1 against BS (%)

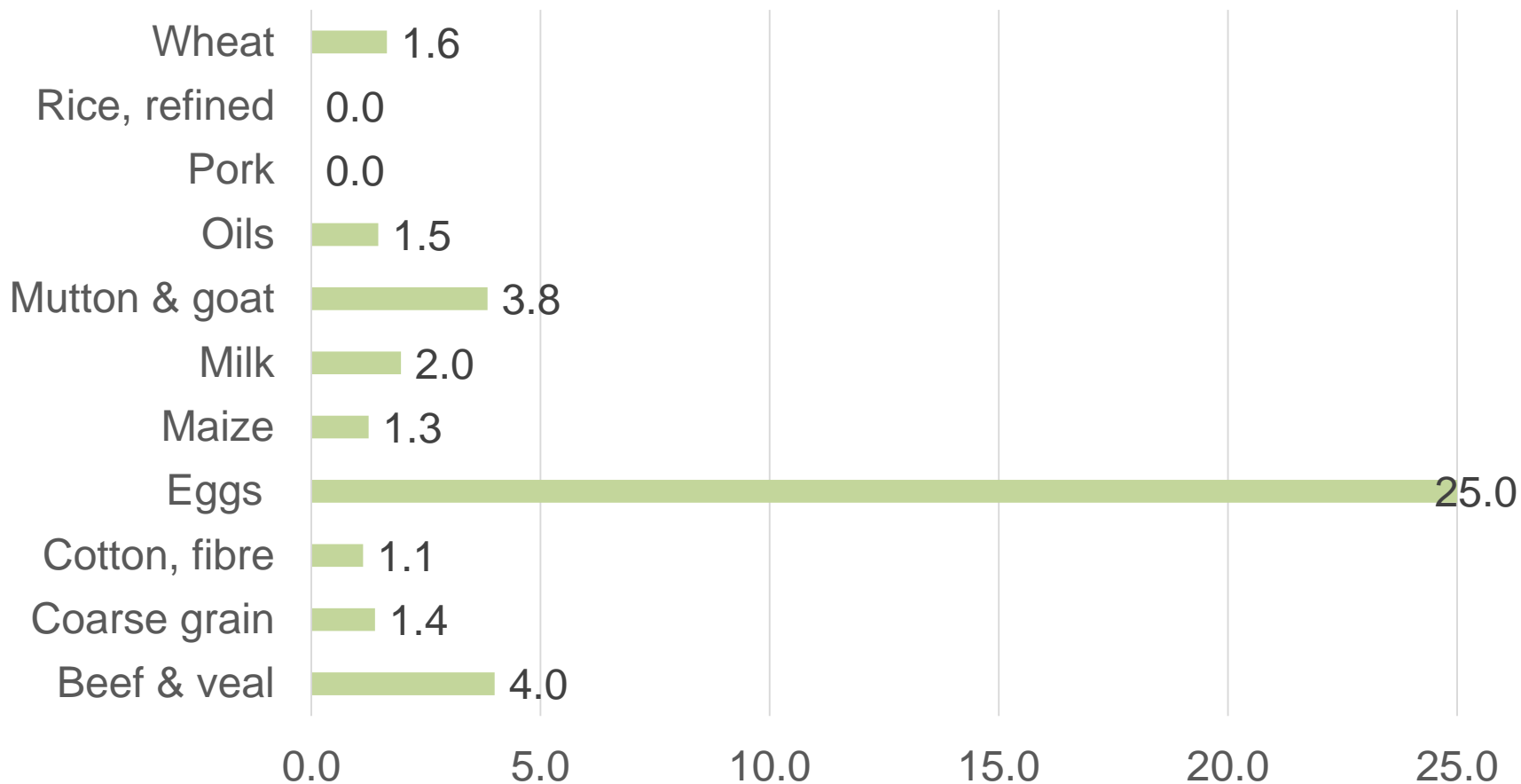


Source: own compilation based on AGRISIM simulation results

4. Results

Figure 2. Supply changes

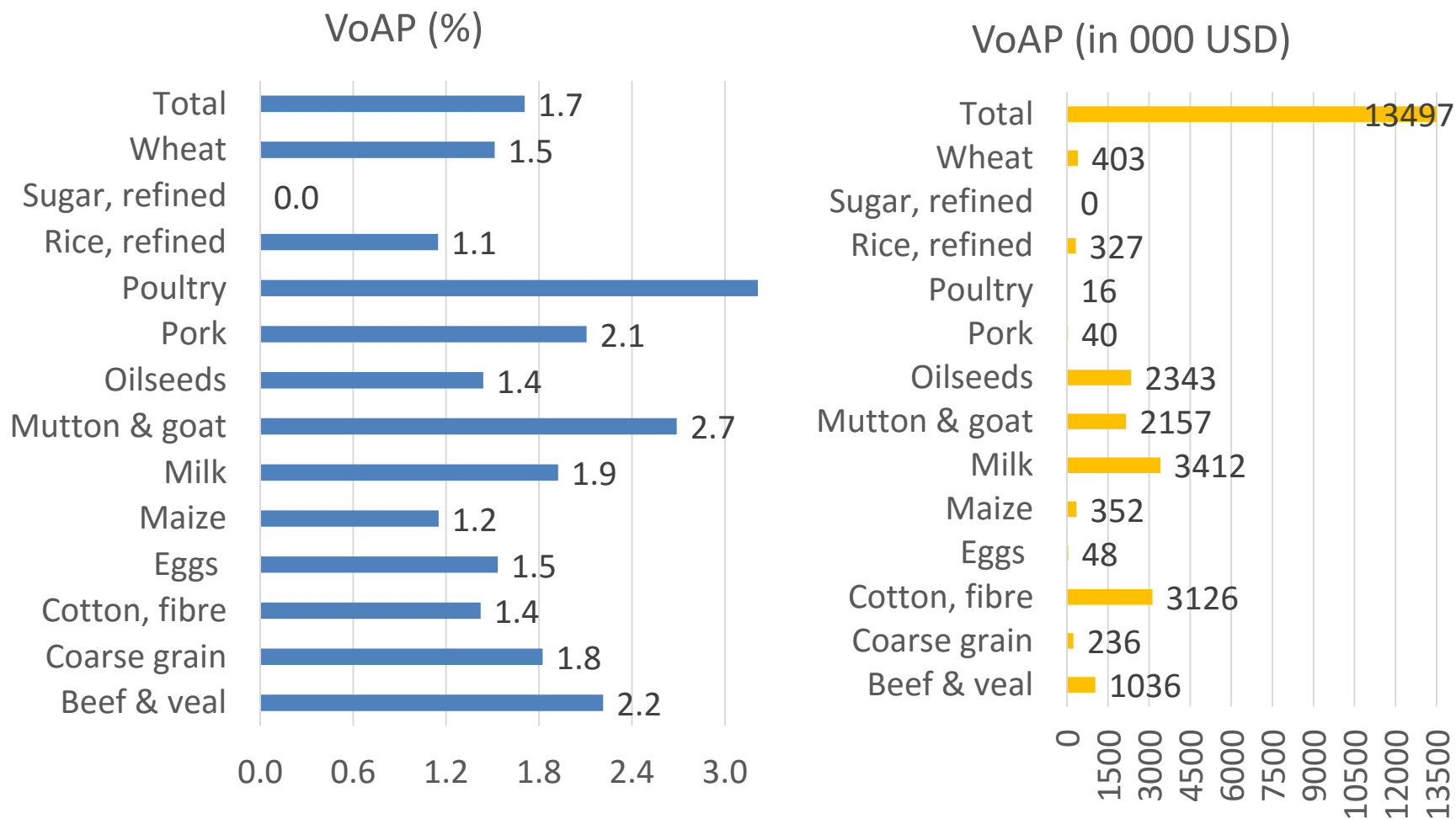
Sc1 against BS (%)



Source: own compilation based on AGRISIM simulation results

4. Results

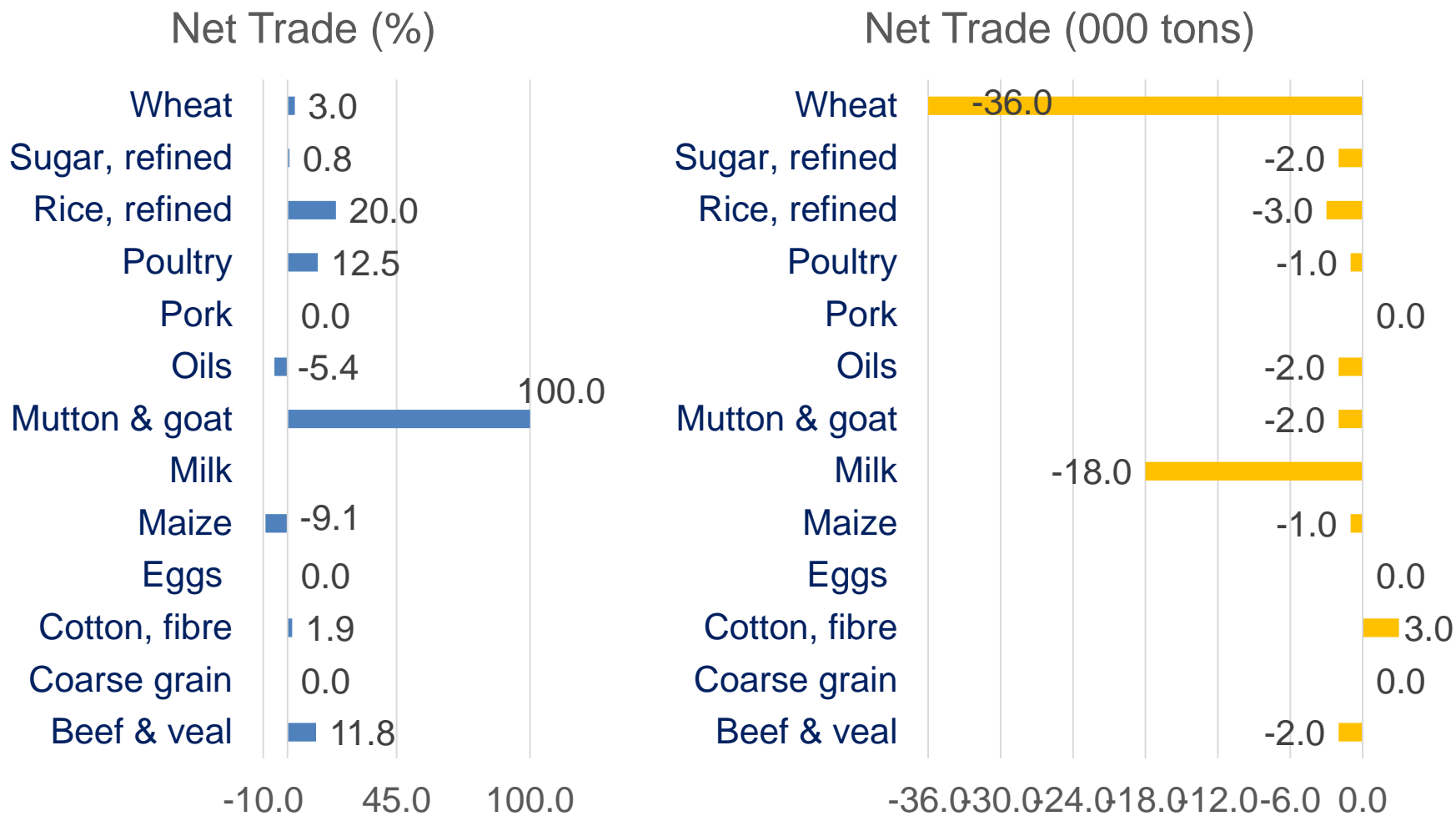
Figure 3. Value of Agricultural Production Changes



Source: own compilation based on AGRISIM simulation results

4. Results

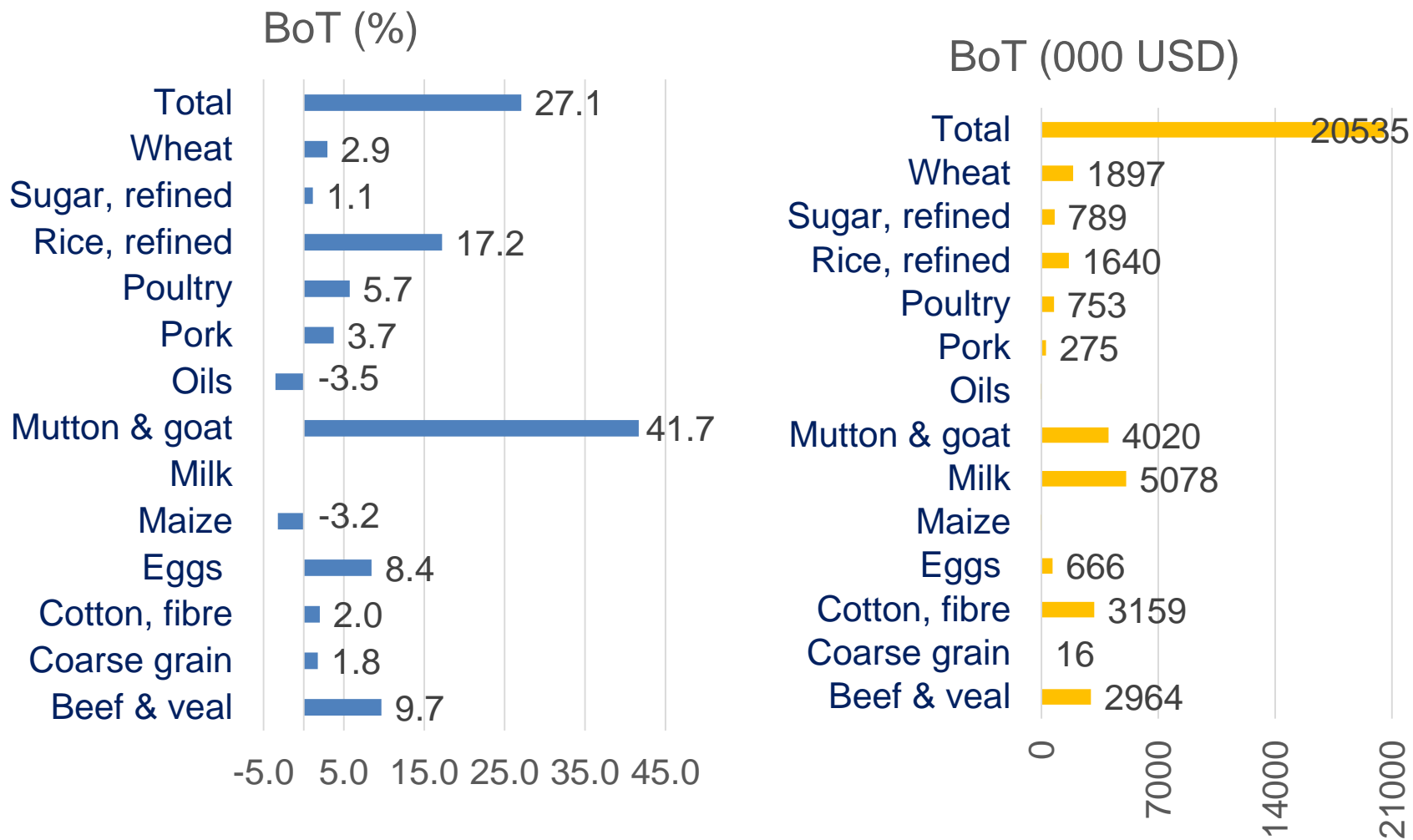
Figure 4. Net Trade Changes



Source: own compilation based on AGRISIM simulation results

4. Results

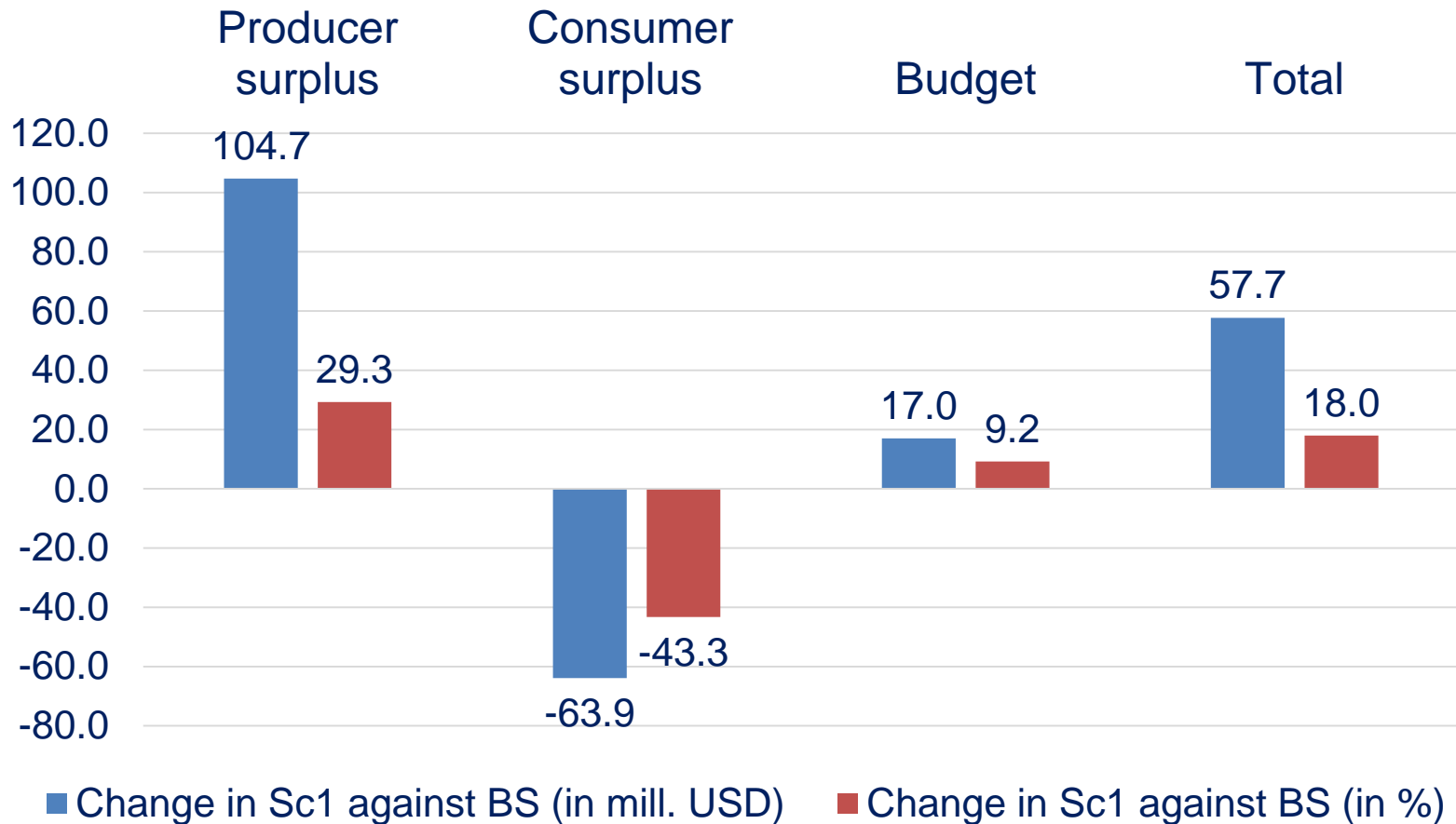
Figure 5. Balance of Trade Changes



Source: own compilation based on AGRISIM simulation results

4. Results

Figure 6. Welfare Changes



Source: own compilation based on AGRISIM simulation results

5. CONCLUSION

5. Conclusion

- A depreciation of TJS will lead to increase domestic production and value of agricultural production, while demand slightly decrease.
- The producer gains exceed the gain of consumers that ensure overall welfare gain. Producer and budget gains prevail over consumer losses and therefore an overall gain will be ensured. Thus, the gain of gainers exceeds the loss of losers and the Kaldor-Hicks criterion is met.
- Simulated scenarios under official and depreciated exchange rates reveal that the net trade and balance of trade will improve under the depreciated exchange rate compared to BS, although remaining negative.

5. Conclusion

- The recent study by Justino & Shemyakina (October 2010) show that the household-receivers of labour migrant remittances in Tajikistan are less incentive to offer own services in domestic labour market than households without labour migrants.
- This study reveals that currency depreciation will lead to an improvement of current account balance, thus positively influence the agricultural sector.
- Moreover, the study confirm that and exchange rate appreciation induced by labour migrant remittances has negative effect on agriculture sector of Tajikistan.
- How will affect the exchange rate changes induced by labour migrant remittances other sectors of economy are subject of further analysis.

Thank you for your kind attention!