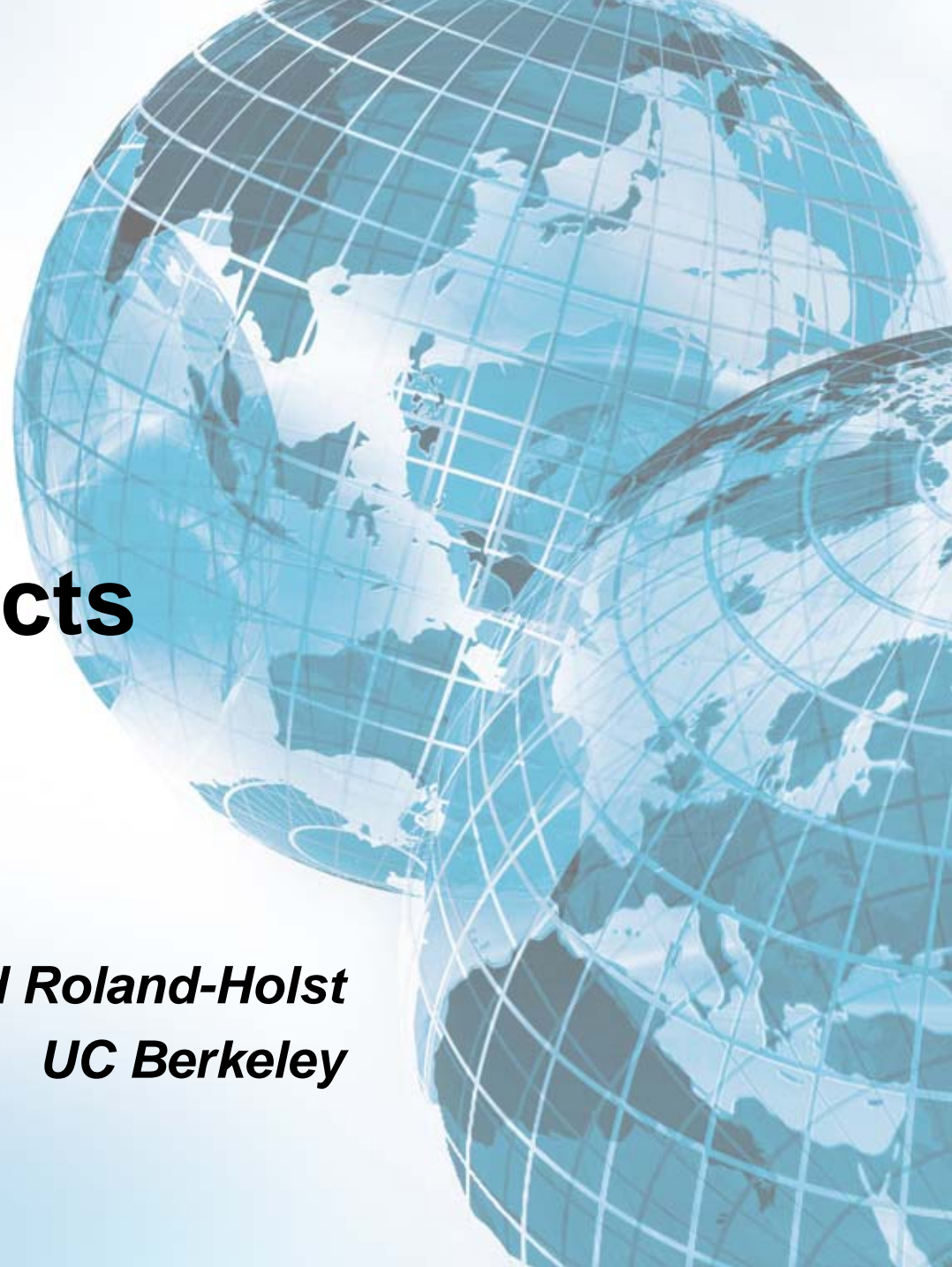# Economic Impacts of Reducing Regional Trade Barriers

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Objectives

➢ Improve visibility for policy makers.

➢ Promote empirical standards and capacity for policy research and dialogue.

➢ Quantify the potential gains from improved transport conditions.

Constraints

Modeling

- Economic theory vs. reality
- Transparency

Data

- National level data are available and of adequate quality.
- Data on detailed determinants of tradable prices is very limited.
- Scenario analysis can provide a temporary substitute.

Estimation Framework

We use dynamic CGE models calibrated to detailed Social Accounting Matrices.

Strengths:

➢ Economywide and empirically consistent.

➢ Detailed treatment of linkages and indirect effects.

➢ Explicitly structural and distributional, identifying stakeholders and trade-offs.
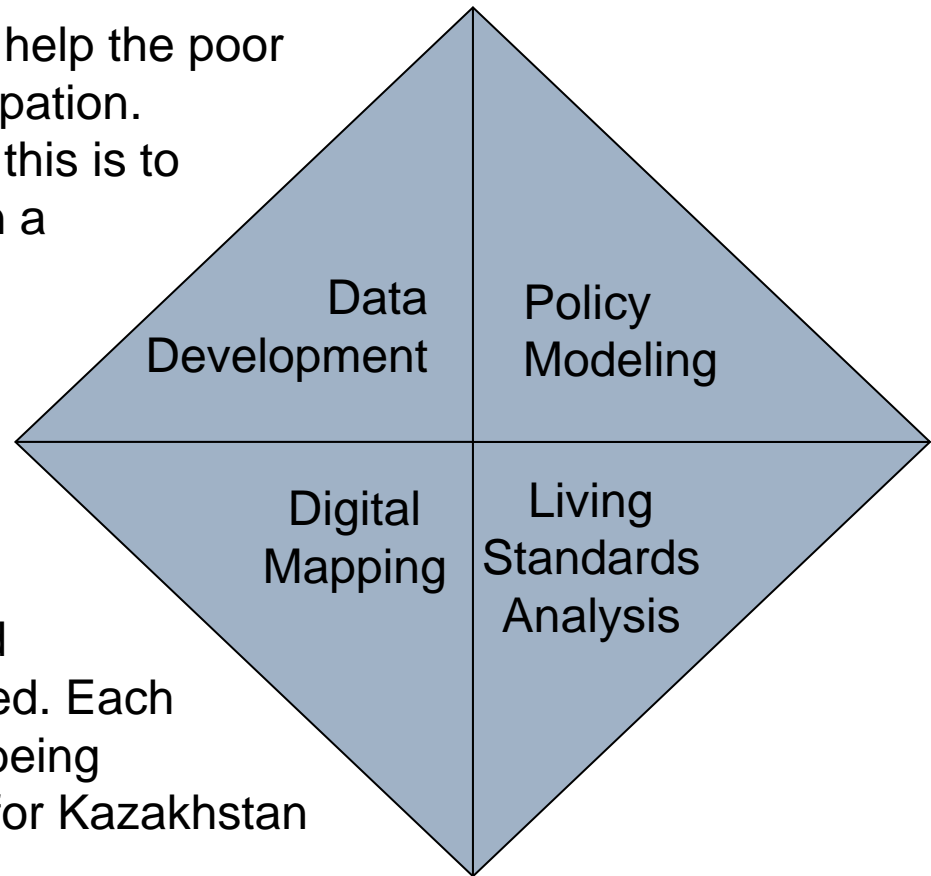
Potential Weaknesses:

➢ Neoclassical and market oriented.

➢ Highly simplified behavior.
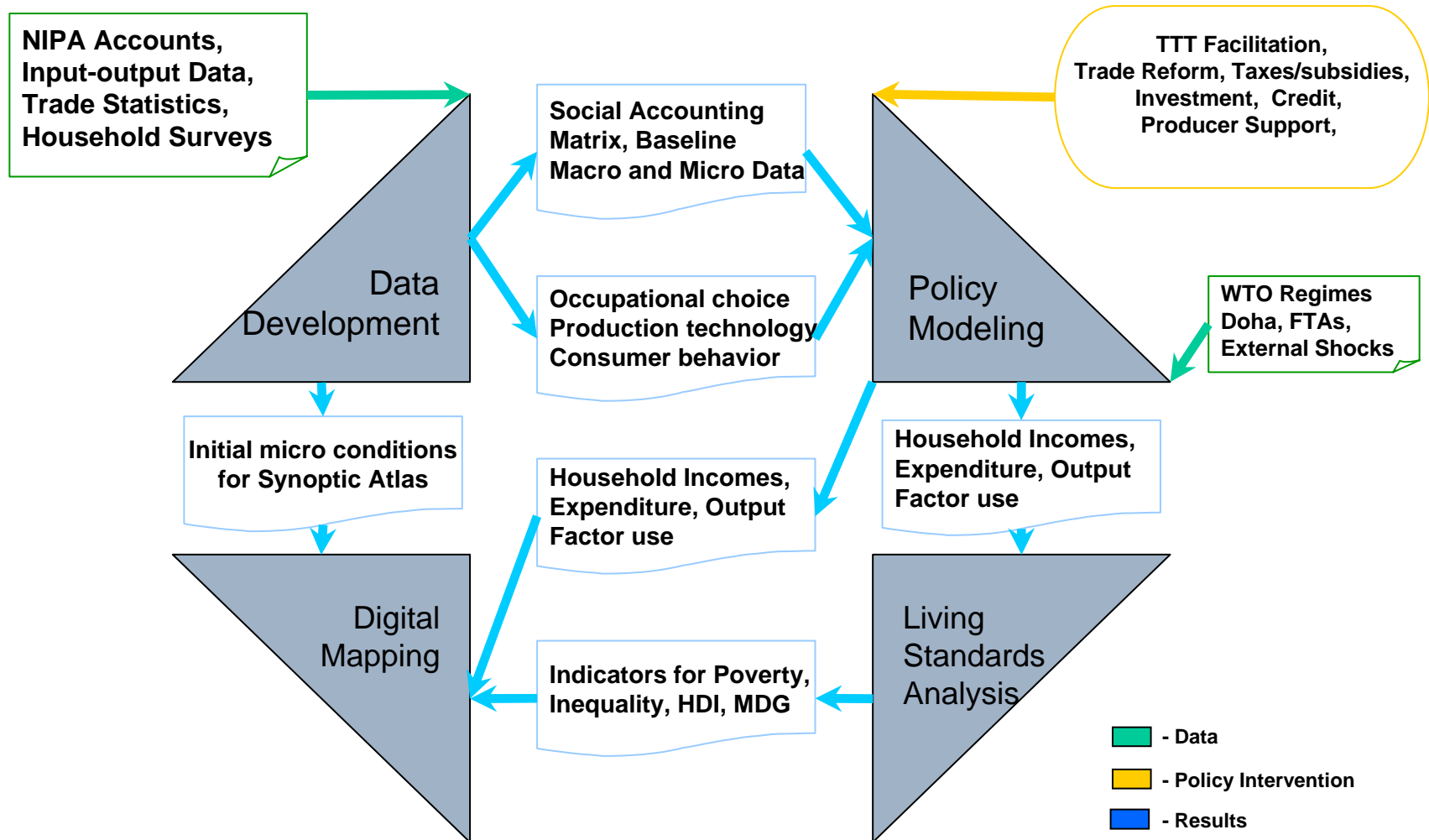
➢ Still relatively aggregate.

Overview of Methodology

Improved TTT conditions will help the poor
if they facilitate market participation.
The most effective way to do this is to
reduce distribution margins in a
nondiscriminatory manner.

To capture linkages
across the economy and
from the top down, a four-fold
assessment framework is used. Each
of these four components is being
developed in prototype form for Kazakhstan
and the Kyrgyz Republic.

Data
Development

Policy
Modeling

Digital
Mapping

Living
Standards
Analysis

Detailed Methodology

NIPA Accounts, Input-output Data, Trade Statistics, Household Surveys

Social Accounting Matrix, Baseline Macro and Micro Data

TTT Facilitation, Trade Reform, Taxes/subsidies, Investment, Credit, Producer Support,

Data Development

Occupational choice Production technology Consumer behavior

Policy Modeling

WTO Regimes Doha, FTAs, External Shocks

Initial micro conditions for Synoptic Atlas

Household Incomes, Expenditure, Output Factor use

Household Incomes, Expenditure, Output Factor use

Digital Mapping

Indicators for Poverty, Inequality, HDI, MDG

Living Standards Analysis

- Data
- Policy Intervention
- Results

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Structure of the Kazakhstan SAM

The 2002 SAM consolidates official data on:

- 61 production activities and commodties
- 2 factors of production (labor and capital)
- 30 household groups (16 regions)
- 1 trading partner

Structure of the Kyrgyz SAM

The 2002 SAM consolidates official data on:

- 88 production activities and commodties
- 10 factors (9 labor and capital)
- 16 household groups (8 regions)
- 5 trading partners (Rus, Kaz, Uzb, Chi, ROW)

Data Requirements

- ➢ Industry data are very good.

- ➢ Household data good for regional insights, but could be extended with household survey data.

- ➢ Trade data are very weak, both by direction and in terms of price components

Margins, Market Participation, and Income Determination

In developing countries, limits to market participation are one of the most important factors explaining poverty.

The rural poor are confined behind walls of distribution costs that reinforce subsistence production and other social isolation.

Margins and Development

Investments and other policy commitments to reducing margins can be a potent catalyst for development. Among other things, lower margins:

1. Expand the horizon for profitable investment across the economy.

2. Reduce rural purchaser prices, including those for agricultural inputs and technology.

3. Increase rural producer prices and profitability.

Three Channels for Market-based Rural Poverty Alleviation

1. Agricultural diversification toward higher income elasticity products

2. Export expansion

3. Migration

Infrastructure facilitates all these.

Expanding the Basis for Sustainable Growth

Primary Industries

Public Investment

Urban Growth

Infrastructure

Rural Poverty

Exports
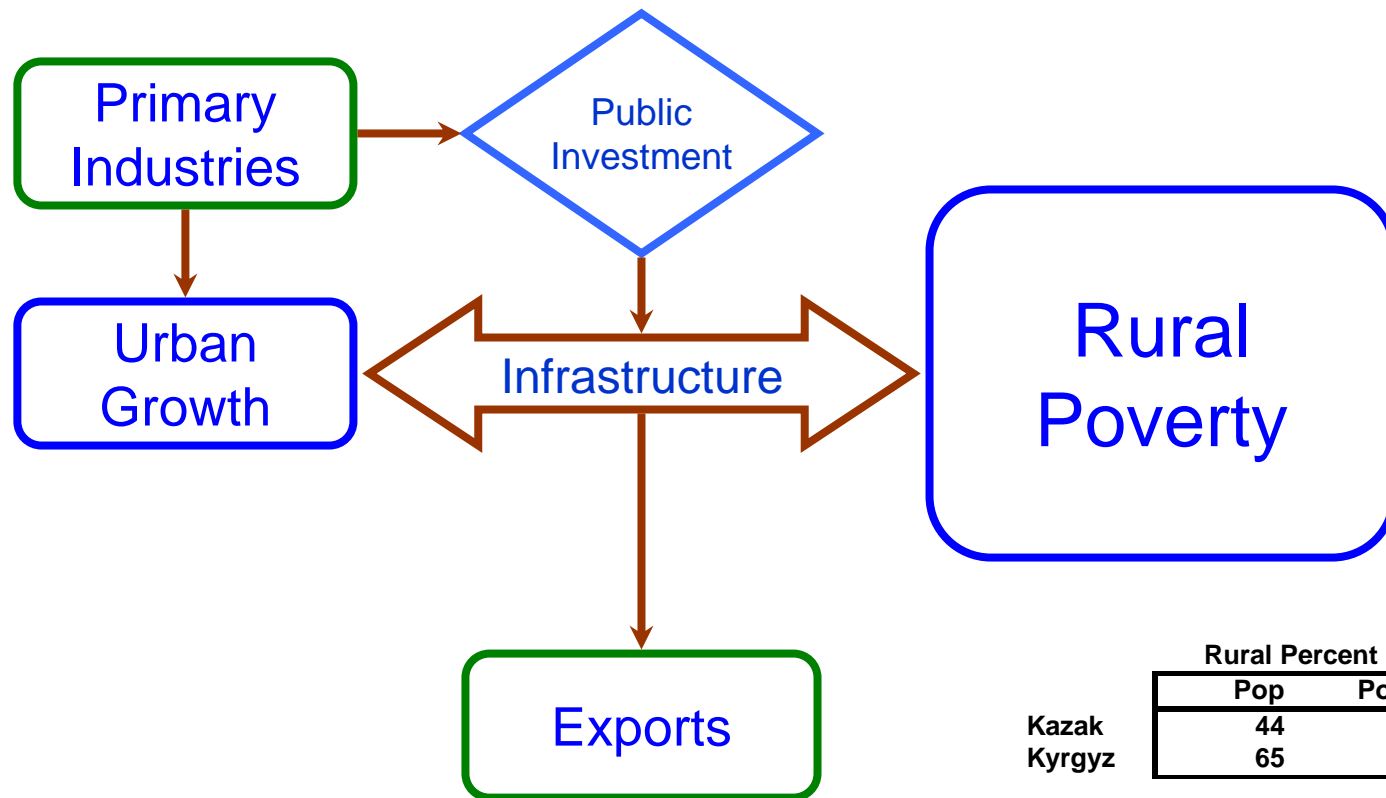
Rural Percent		
	Pop	Poor
Kazak	44	62
Kyrgyz	65	80

National Model Simulations

We contrast four hypothetical scenarios:

1. Tm05- Reduce import tariffs by 50 percent.

2. Tm00 – Unilateral tariff removal.

3. Tmg50 – Maintain tariffs, but reduce distribution margins 50 percent.

4. Tmg55 – Reduce tariffs and margins 50 percent.

Main Conclusions

1. Distribution margins may be more important barriers to trade than tariffs.

2. Trade would expand considerably.

3. Aggregate output would increase and living standards would rise considerably over the medium term.

4. Significant sector adjustments would occur in both economies.

5. The poor would on average benefit more than the rich.

1. Distribution margins may be more important barriers to trade than tariffs

Margin policy is trade policy, whether directed at specific trade barriers or general distribution costs.

Improved regional TTT cooperation would expand trade considerably, with exports increasing more than imports for each country considered.

Reducing distribution costs, whether by domestic policy or regional cooperation, would therefore provide a major boost to trade.

2. Trade Would Expand Considerably

Moreover, the trade balance would improve.

Increasing exports from more competitive domestic producers would more than offset increased import penetration.

3. Output and living standards would rise considerably over the medium term

Shifting resources to sectors with established comparative advantages, expanded trade, and enhanced competition would improve the efficiency of resource allocation, raise productivity, and foster economic growth.

This would make more resources available for domestic consumption and investment.

Reducing trade margins would simultaneously reduce consumer prices and increase producer prices, raising real incomes.
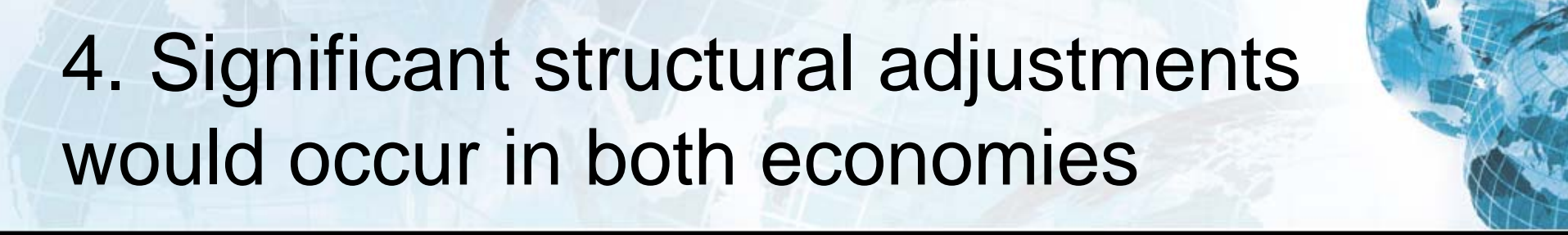
Macroeconomic Impacts

Kazakhstan: Aggregate Results

	tm50	tm00	tmg50	tmg55
Real GDP	1.6	2.7	19.5	19.5
CPI	-8.1	-17.3	-20.1	-20.1
Real consumption	-1.5	-5.4	12.6	12.6
Real investment	-1.9	-3.4	9.5	9.5
Exports	15.5	36.1	48.2	48.2
Imports	12.9	29.5	37.5	37.5

Kyrgyz Republic: Aggregate Results

	tm50	tm00	tmg50	tmg55
Real GDP	0.5	1.1	43.6	44.5
CPI	-0.7	-1.8	-5.6	-6.4
Real consumption	0.6	1.4	52.8	53.8
Real investment	-0.1	-0.1	17.7	17.4
Exports	0.4	1.4	32.8	34.4
Imports	0.3	1.0	10.2	11.1

4. Significant structural adjustments would occur in both economies

Reducing trade margins would increase profitability of export-oriented industries and decrease profitability of import-substituting ones.

As a result, resources would shift from the latter to the former, whose share of aggregate output would increase.

In Kazakhstan, mining and machinery production would benefit most, while agriculture, food, textiles, and apparel would be the biggest winners in the Kyrgyz Republic.

Kazakhstan: Output by Industry

(percent change from Baseline in 2015)

	Scenario			
	tm50	**tm00**	**mrg50**	**tmg55**
1 Agriculture	-.03	-.07	7.29	7.18
2 Fishery	1.00	2.30	35.84	37.01
3 Energy	.23	.31	-7.36	-6.91
4 Metal Mining	.23	.74	-21.12	-20.71
5 Other Mining	-.18	-1.80	5.11	4.68
6 Processed Food	-1.30	-2.56	129.72	129.32
7 Textile and Apparel	-2.60	-5.19	16.63	14.15
8 Wood Products	2.46	6.01	20.86	23.80
9 Paper and Pring	.23	1.09	-17.76	-17.21
10 Chemicals	.41	1.69	56.41	57.59
11 Other Mineral Products	-2.68	-21.66	-2.22	-5.42
12 Metallurgy	.23	.74	-21.91	-21.49
13 Metal Products	2.51	9.04	-16.36	-13.81
14 Machinery	-3.29	-12.40	.01	-2.34
15 Other Industry	.63	5.10	3.33	3.60

Kyrgyz Republic: Output

(percent change from Baseline in 2015)

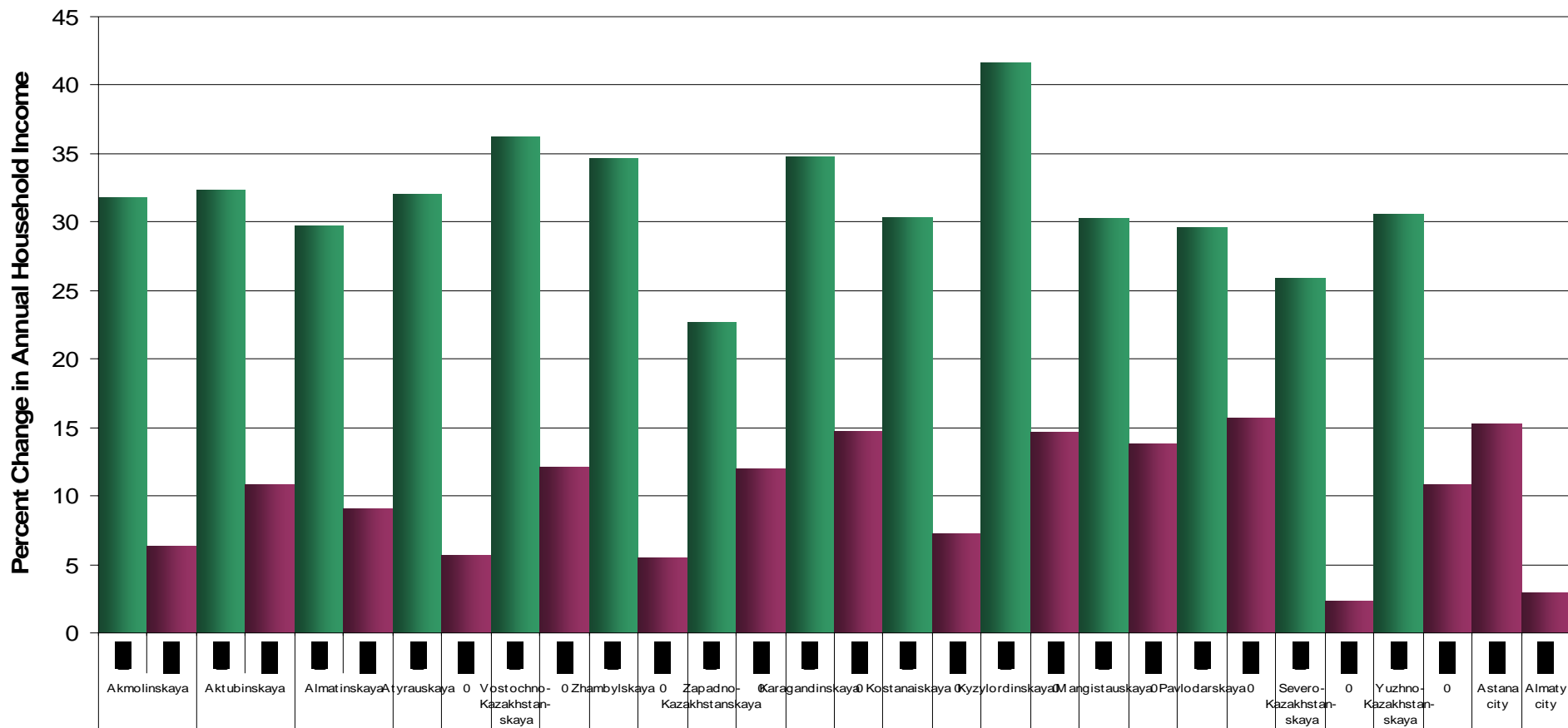|	Scenario			
	tm50	tm00	mrg50	tmg55
1 Agriculture	.37	.32	6.64	6.78
2 Energy Fuels	3.64	8.60	-1.82	2.60
3 Other Mining	9.61	22.52	10.45	20.38
4 Processed Food	-16.00	-37.18	15.46	-2.79
5 Textiles and Apparel	-3.11	-6.80	16.72	12.83
6 Wood & Paper Products	-10.56	-21.64	6.08	-5.16
7 Chemicals	10.96	26.63	12.70	24.39
8 Mineral Products	-8.11	-17.09	5.57	-3.28
9 Metal Products	9.91	23.15	10.78	20.85
10 Machinery	7.59	20.34	6.68	14.95
11 Technology	14.37	37.36	21.55	39.81
12 Electrical Appliances	14.35	36.92	14.16	30.28
13 Medical Products	23.06	60.62	15.20	42.81
14 Vehicles	.21	.37	3.42	3.88
15 Other Industries	-1.94	-3.20	10.41	8.18

5. The poor would benefit proportionately more than the rich

Trade margins are much higher for rural than for urban areas, and the majority of the poor live in rural areas. Thus reducing trade margins would:

- Stimulate growth in rural areas more than in urban areas.
- Raise real incomes proportionately more for the poor.

Kazakhstan: Household Real Incomes

Estimated Effect of Combined 50% Tariff and Margin Reductions (tmg55) on Kazakhstan Real Household Income
(percent change from Baseline in 2015)

Kyrgyz Household Real Incomes

**Estimated Effect of Combined 50% Tariff and Margin Reductions (tmg55)
on Kyrgyz Real Household Income
(percent change from Baseline in 2015)**
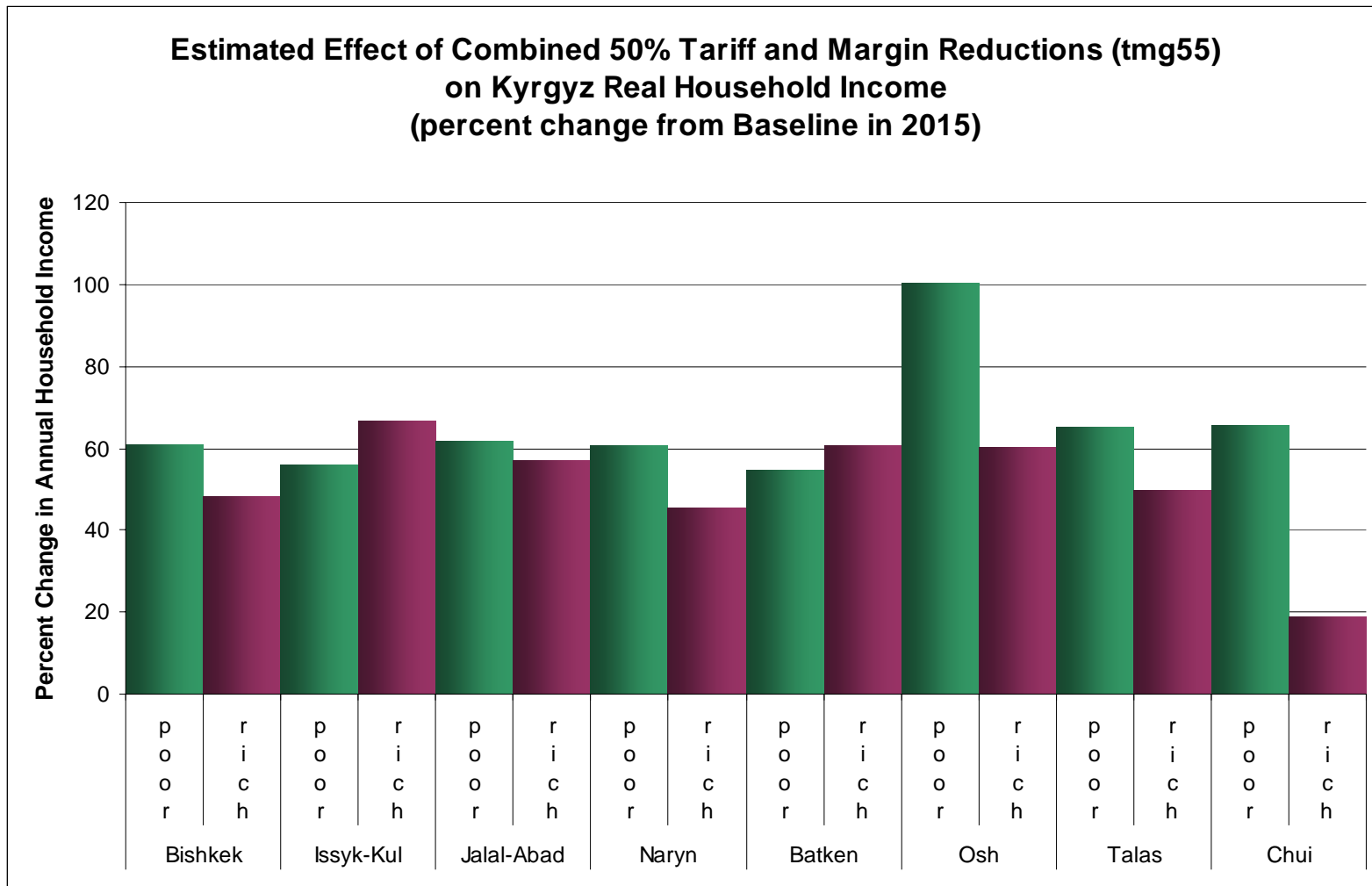
Extensions

➢ Better trade and margin data are essential to better understand actual policy options and incidence

➢ Limits to the single country approach: Large external forces will influence the future of individual CAR economies.

Discussion