

Technical Barriers to Trade and Trade Facilitation: *Evidence from the Arab Region*

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Motivation

- Significant Obstacles go beyond conventional tariff measures.
- Non-tariff barriers are of particular concern to developing countries, which may bear additional costs in meeting such mandatory standards:
 - Red Tape cost: time to trade, bureaucracy, etc.
 - Technical Barriers to Trade
 - Sanitary and Phyto-Sanitary measures
- There has been a rising use of technical regulations as instruments of commercial policy in unilateral, regional, and global trade contexts.

Outline

- Why TBT and TF Do Matter?
- Empirical Evidence
- The Way Forward

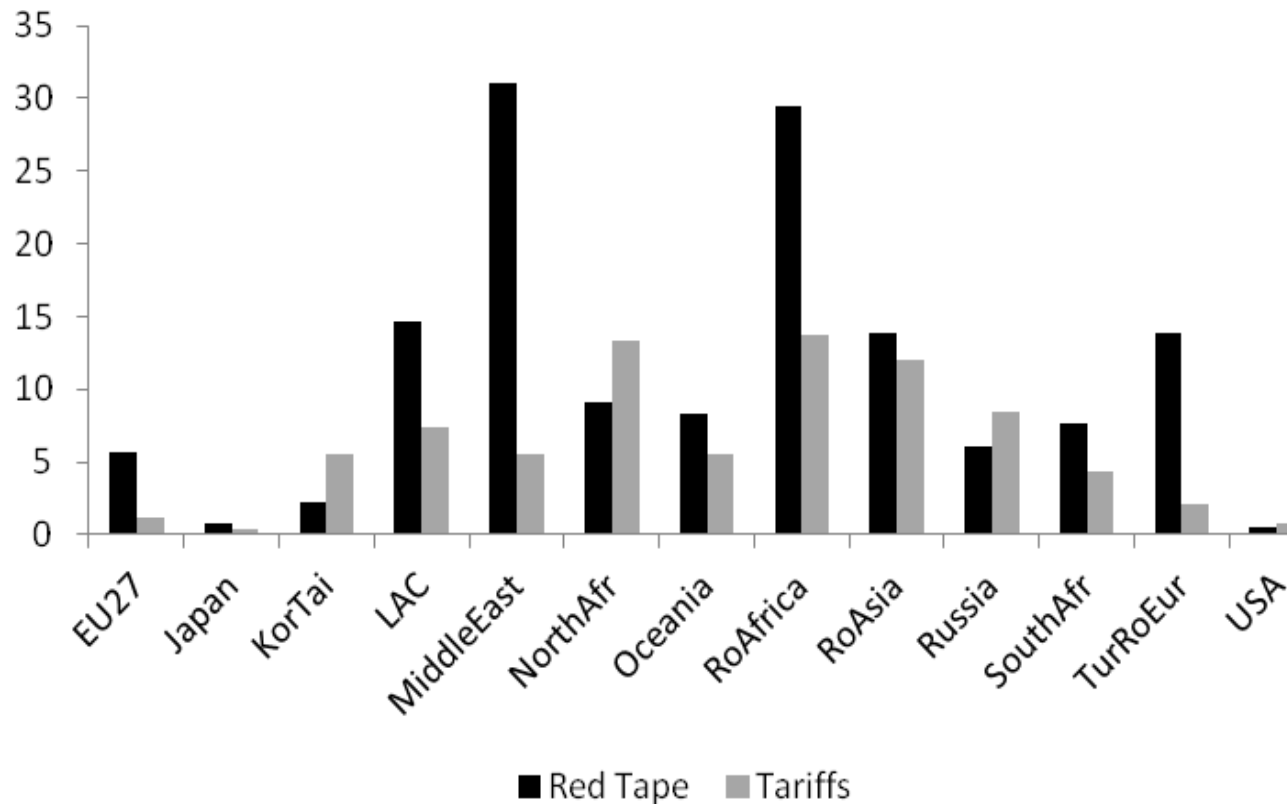
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Why Do Red Tape Barriers Matter?

- Intra-industry trade and intermediate products trade. require quicker and more efficient delivery.
 - Interdependency of supply chains has become more important.
 - The high cost of complicated, lengthy and redundant procedures: costs account for 2% to 15% of the value of traded goods (OECD, 2002).
- This is why their elimination is likely to have a highly positive impact on both international trade and welfare

Why Do Red Tape Costs Matter?



Source: Zaki (2012)

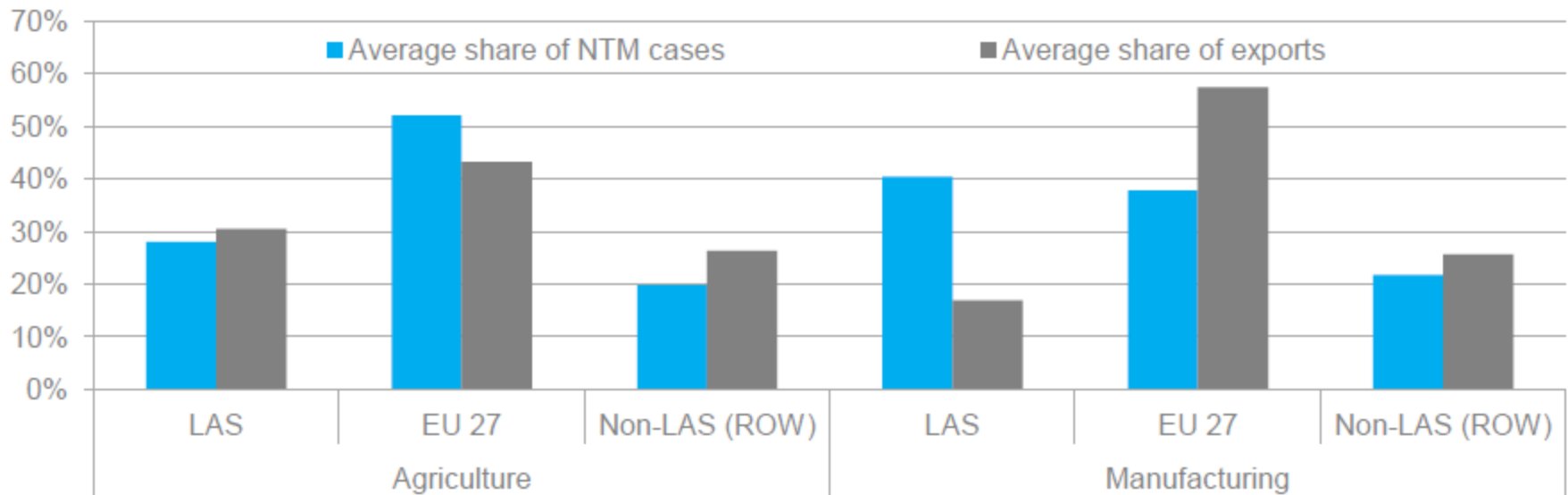
Why Do TBT Matter?

- Technical regulations and red tape barriers imposed on traded goods and agricultural products affect:
 - Trade patterns,
 - The ability of producers to enter new export markets,
 - Consumer costs.
- While these claims are valid:
 - There is relatively little empirical evidence about technical regulations and trade.
 - More studies on the impact of trade facilitation.

Non-Tariff Measures

NTM in agriculture: EU > LAS

NTM in manufacturing: LAS > EU

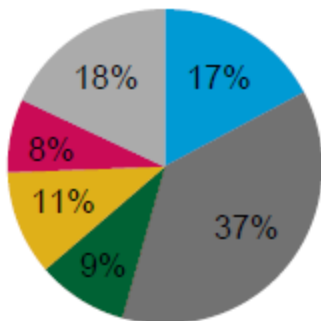


Source: ITC (2012)

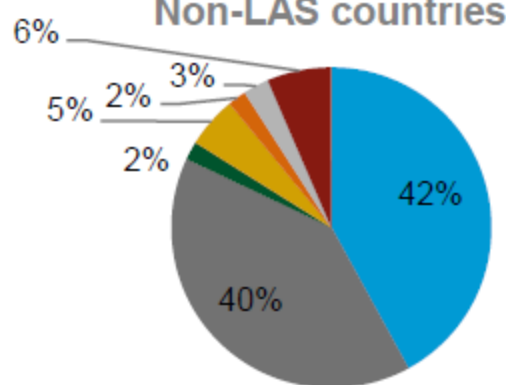
Non-Tariff Measures: Agriculture

More than **50%** of the NTMs in LAS are either SPS or technical regulations: product specific requirements, hygienic requirements, conformity assessment aiming at providing compliance with technical regulation through testing and certification.

LAS countries



Non-LAS countries

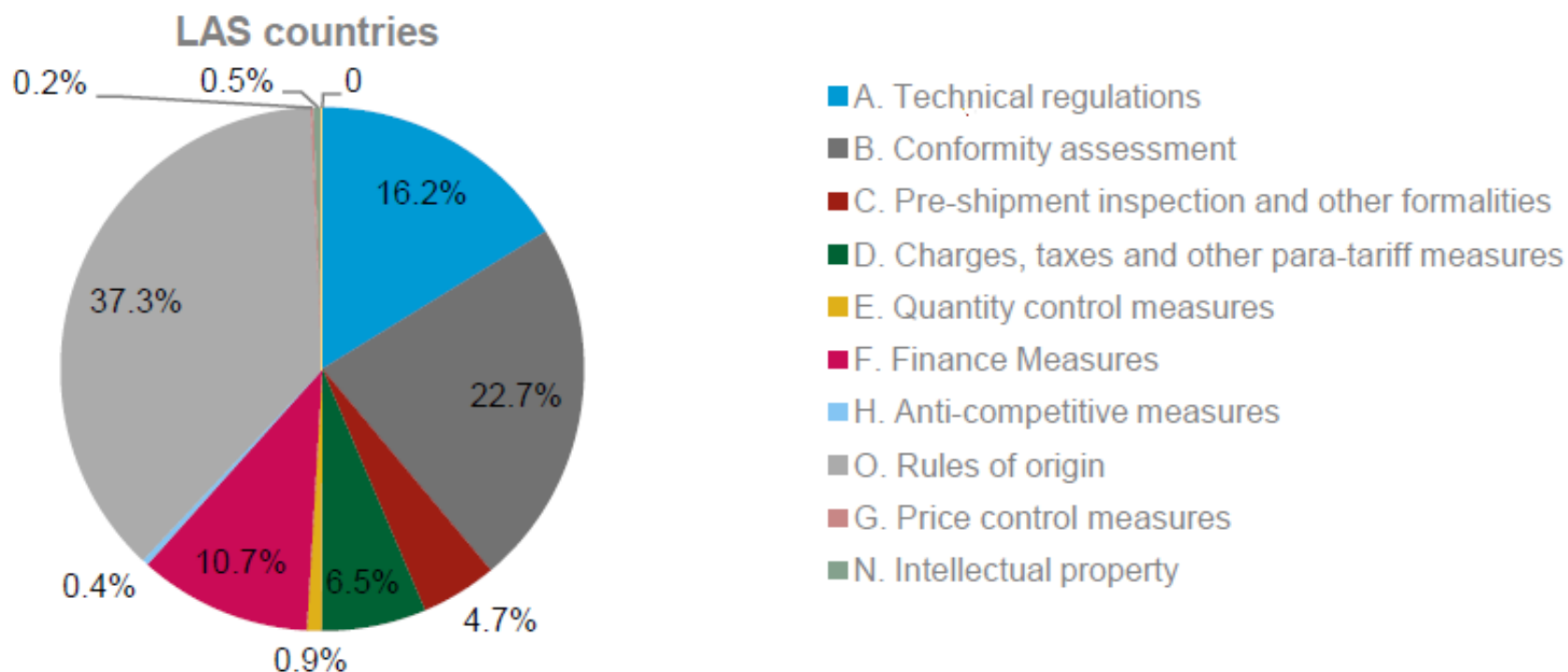


- A. Technical regulations
- B. Conformity assessment
- D. Charges, taxes and other para-tariff measures
- E. Quantity control measures
- F. Finance Measures
- O. Rules of origin
- Other

Source: ITC (2012)

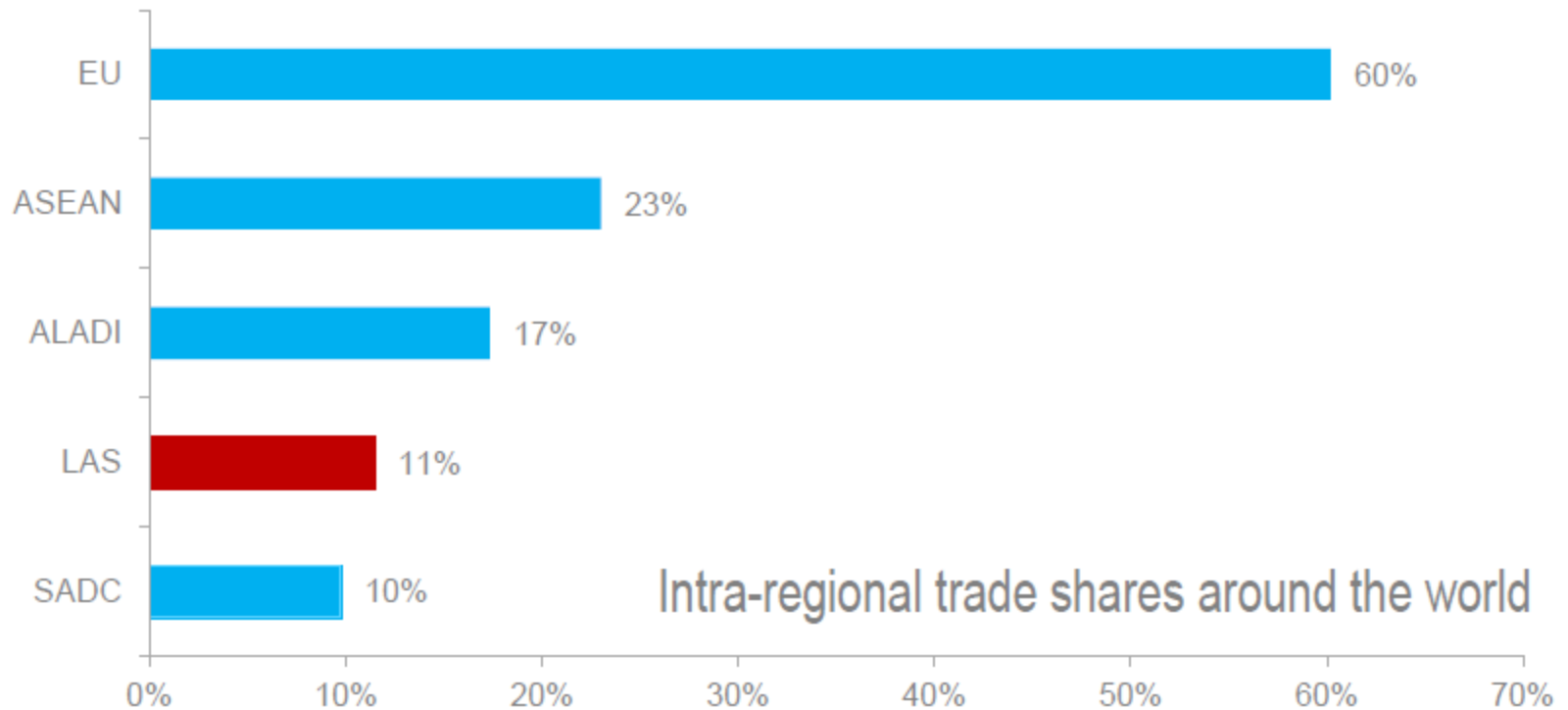
Non-Tariff Measures: Manufacturing

Rules of origin rank first followed by technical regulations in LAS countries



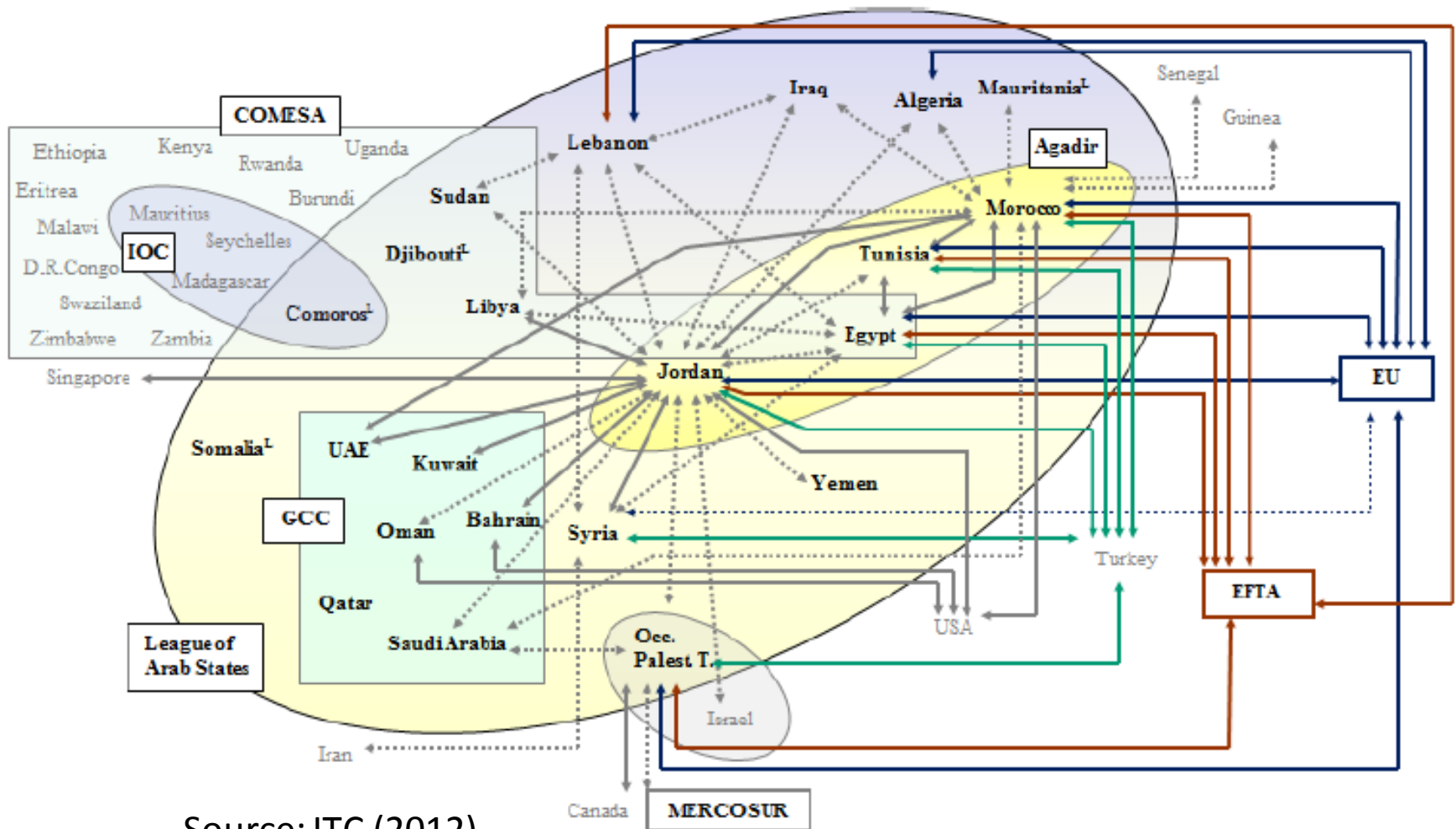
Source: ITC (2012)

Therefore, low intra-regional trade



Source: ITC (2012)

The Arab Spaghetti Bowl



Source: ITC (2012)

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- Why TBT and TF Do Matter?
- **Empirical Evidence**
- The Way Forward

Empirical Evidence on TBT

- There is relatively little empirical evidence about technical regulations and trade.
- Few rigorous empirical attempts have been made to determine the economic impact of differing regulations and conformity assessment requirements.

Modeling Trade Facilitation

- MIRAGE model: multi-regional and multi-sectoral (Bchir et al, 2001 and Decreux and Valin, 2007).
- Following Decreux and Fontagné (2009), the cost associated with administrative barriers is modeled as an iceberg cost (Samuelson, 1954) since it is one of the most tractable ways of modeling transport costs and it does not have an impact on other markets.

Modeling Trade Facilitation

- The cost insurance and freight (CIF) price $PCIF_{i,r,s,t}$ is modeled in the following way:

$$PCIF_{i,r,s,t} = PFOB_{i,r,s,t} + (1 + tcost_{i,r,s,t})\mu_{i,r,s}PTr_{i,r,s,t} \quad (1)$$

where $\mu_{i,r,s,t}$ is the demand of transport per unit of traded volume and $PTr_{i,r,s,t}$ is the price of transport.

- The demand for transport $Tr_{i,r,s,t}$ takes into account the iceberg cost added to the trade flow $Trade_{i,r,s,t}$:

$$Tr_{i,r,s,t} = \mu_{i,r,s}(1 + tcost_{i,r,s,t})Trade_{i,r,s,t} \quad (2)$$

Data

- GTAP 7 (Badri and Walmsley, 2008) database that has a 2004 reference year
- Afterwards, the World Bank and the International Monetary Fund projections have been used to simulate the evolution of the economy (reference scenario).

Data

- For trade facilitation data, AVEs of the administrative barriers have been estimated using a gravity model (Zaki, 2009): they take into account many trade facilitation aspects such as the number of documents to export and to import, corruption, the internet widespread and some geographical impediments such as the fact of being landlocked or an island.
- GTAP dataset and AVEs have been aggregated to the MIRAGE level of regions and sectors where 19 regions and 21 sectors are taken into account.

Simulations

- Simulating the impact of a partial removal of red tape costs

Welfare Gains



	Short Run Welfare Gains			
	Capital accum.	Terms of trade gains	Other gains	Welfare
Australia NZ	0.06	0.37	0.32	0.75
Brazil	0.03	0.01	0.2	0.24
Canada	0.06	0.04	0.81	0.91
China	0.12	-0.61	1.65	1.16
Egypt	0.09	0.55	0.83	1.46
European Union	0.07	0.04	1.29	1.39
India	0.09	-0.14	0.67	0.61
Japan	0.01	-0.09	-0.06	-0.14
Korea and TWN	0.12	-0.97	2.33	1.47
Mexico	0.06	-0.5	1.75	1.3
Middle East	0.36	0.38	2.4	3.14
North Africa	0.2	0.87	1.87	2.94
Other LAC	0.12	-0.05	2.03	2.1
Ro Africa	0.35	1.01	3.31	4.67
Ro Asia	0.39	0.17	4.63	5.19
Ro Eur. Turkey	0.15	0.25	2.23	2.63
Russia	0.21	0.36	1.32	1.88
South Africa	0.14	-0.29	2.15	1.99
USA	0.02	0.2	0.09	0.31

Welfare Gains



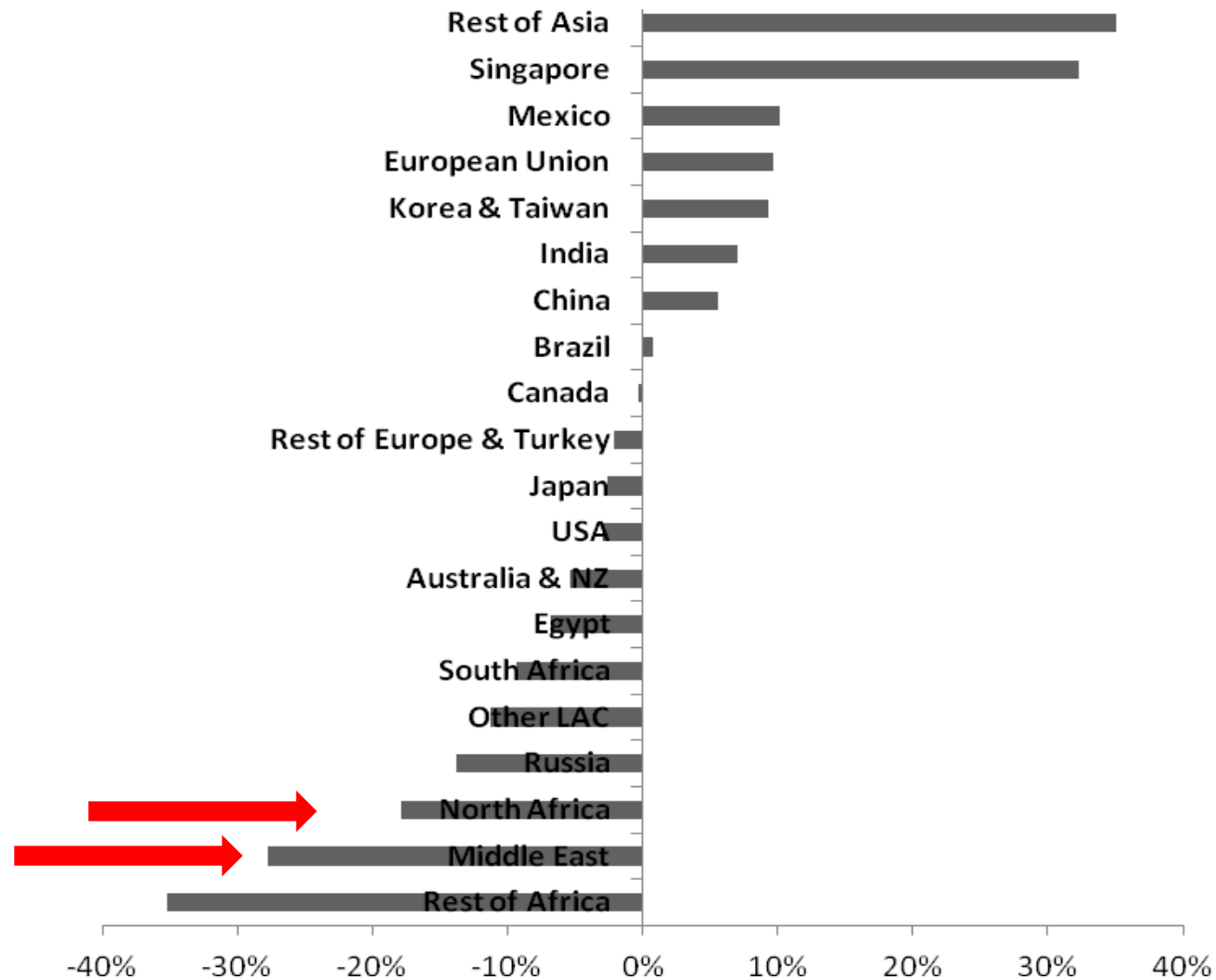
	Long Run Welfare Gains			
	Capital accum.	Terms of trade	Other gains	Welfare
Australia and NZ	0.47	0.45	0.37	1.29
Brazil	0.25	0.05	0.07	0.37
Canada	0.45	0.16	0.8	1.41
China	0.54	-0.87	1.78	1.45
Egypt	0.81	0.56	0.87	2.24
European Union	0.62	0.06	1.36	2.04
India	0.48	-0.44	0.87	0.91
Japan	0.07	-0.1	-0.09	-0.12
Korea and Taiwan	0.89	-1.26	2.56	2.18
Mexico	0.56	-0.43	2.34	2.47
Middle East	2.5	1.08	2.08	5.66
North Africa	1.6	1.63	1.22	4.44
Other LAC	0.98	-0.01	2.1	3.07
Ro Africa	2.8	1.16	3.32	7.28
Ro Asia	3.22	-0.42	5.17	7.97
Ro Eur. and Turkey	1.24	0.33	2.19	3.75
Russia	0.99	1.2	0.64	2.83
South Africa	1.44	-0.31	2.23	3.36
USA	0.16	0.23	0.16	0.55

Trade Gains



	Long Run changes		
	Exports	Imports	Tot
Australia NZ	7.97	7.47	1.15
Brazil	4.38	5.43	0.15
Canada	5	5.28	-0.02
China	8.83	9.51	-2.27
Egypt	8.33	8.42	1.21
European Union	10.6	10.54	-0.7
India	9.56	8.81	-3.02
Japan	2.1	2.96	-1.09
Korea Taiwan	8.18	9.41	-2.16
Mexico	11.79	11.94	-2
Middle East	13.66	15.12	2.34
North Africa	11.21	12.14	3.86
Other LAC	16.2	17.28	-0.29
Ro Africa	22.28	22.45	2.33
Ro Asia	16.18	17.08	-1.36
Ro Eur. Turkey	14.69	15.04	0.07
Russia	7.88	10.12	3.82
South Africa	17.93	19.27	-1.04
USA	3.9	3.44	0.6

Exports Diversification



Intra-Trade in MENA

	Aust NZ	Brazil	Canada	China	Egypt	EU	India	Japan	Kor Tai	Mex	Mid East	No Afr
Aust NZ	17.79	2.85	8.52	5.98	4.51	8.95	7.47	1.66	2.87	15.14	9.42	12.5
Brazil	0.31	0	1.49	10.55	7.82	4.95	9.36	-0.84	5.85	21.36	1.66	3.03
Canada	11.66	-0.78	0	6.8	8.19	9.06	4.99	2.38	5.6	14.52	8.22	3.75
China	2.96	2.78	6.11	14.12	3.26	8.09	8.8	-1.05	9.5	14.62	10.42	4.23
Egypt	1.57	8.78	2.56	11.27	0	6.3	11.21	-1.46	1.37	8.32	33	6.4
EU	11.9	2.38	7.62	8.28	8.34	11.63	6.34	1.44	7.13	13.64	14.82	13.63
India	3.36	8.16	3.94	17.48	6.65	8.23	0	1.74	5.96	6.64	8.2	47.73
Japan	-0.4	-2.24	-0.52	3.33	-2.66	0.71	5.09	0	3.58	5.49	2.68	-0.42
Kor Tai	6.09	1.53	11.55	11.67	4.04	12.62	8.82	7.36	14.78	10.65	4.9	8.63
Mex	11.43	11	9.8	29.1	7.58	12.31	16.33	5.2	17.61	0	26	15.45
Mid East	9	9.94	8.54	9.22	17.59	12.26	13.17	2.59	2.62	14.47	45.09	28.08
No Afr	14.02	9.54	6.2	13.5	26.88	11.26	8.14	2.56	-1.39	9.51	30.03	22.08

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The Way Forward: Political Economy

- More legal and institutional reforms are needed to address trade policy issues.
- These barriers may generate some rents (corruption), therefore there will be a political cost:
 - For instance, workers at the customs authority may be against these reforms aiming at reducing bureaucracy and corruption (revenues may be lost).
- **Political will** of policymakers to pursue the implementation of reforms.

The Way Forward: Research and Data

- Urgent need to build more comprehensive datasets on technical barrier to trade:
 - administering firm-level surveys in developing countries
- More empirical research is needed to assess the impact of TBT:
 - Indices, AVEs
 - Introducing them in CGEs to assess the impact of their removal.

Thanks for your attention!