

Analysis of Agri-Food Trade Structures to Promote Agri-Food Trade Networks among the OIC Member Countries *Part I*

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Key Points

- ▶ OIC countries account for a modest but growing share of world trade in agricultural products.
- ▶ Intra-regional trade is particularly important in agriculture, both because of geographical proximity, but also because of trade policy (RTAs).
- ▶ As such, trade networks in agriculture display important intra-regional dimensions, but vary substantially by product.
- ▶ OIC trade is relatively concentrated in product terms, but the regional distribution is fairly stable over time. The rise of Asia as a source of import demand is notable.
- ▶ There is no single OIC network of trade, but instead different networks for individual products. In some, economies like Turkey and Saudi Arabia play an important “hub” role.
- ▶ Policies in agricultural markets, primarily NTMs, remain more restrictive than in manufacturing, which inhibits trade growth.

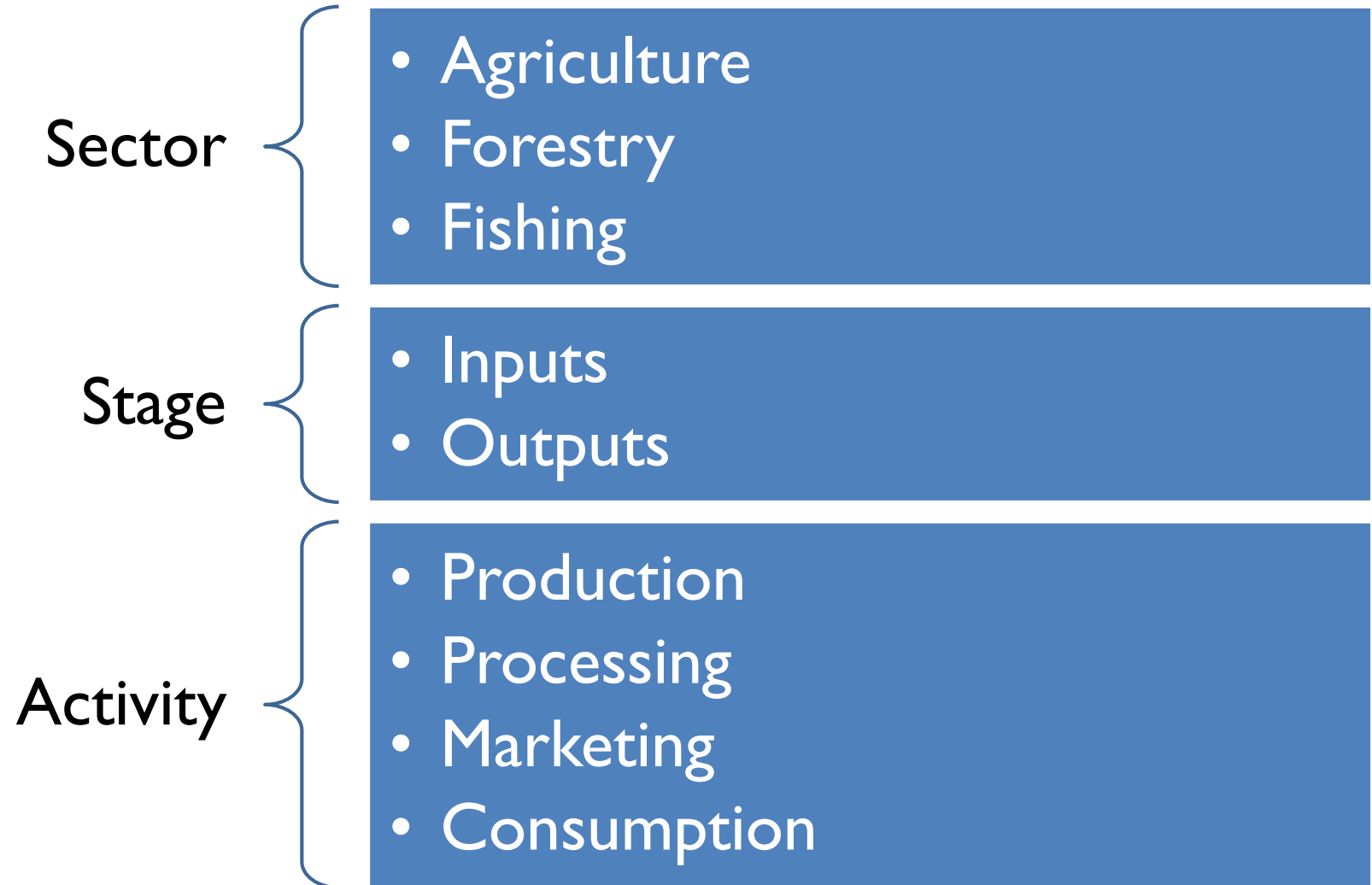
Outline

1. Conceptual Framework and Methodology
2. Overview and Analysis of Global Agri-Food Trade
3. Analysis of the Agricultural Trade Performance of OIC Member Countries
4. Conclusion

1. Conceptual Framework and Methodology

- ▶ Almost half the world's population lives in rural areas, where agriculture is the main source of income.
- ▶ Objectives of the study:
 - ▶ Analyze global and regional agri-food trade networks of OIC member countries.
 - ▶ Identify and elaborate policy recommendations.
- ▶ Organizing framework is the agri-food system.

1. Conceptual Framework and Methodology



1. Conceptual Framework and Methodology

- ▶ **Combination of methodologies:**
 - ▶ Quantitative: data review and analysis of trends and dynamics.
 - ▶ Qualitative: case studies based on interviews and desk research.

- ▶ **Quantitative analysis: main data source is UN Comtrade.**
 - ▶ Only major source with disaggregated bilateral trade data by product (SITC Rev.3).
 - ▶ Data collected as per Comcec product classification (Annex I).
 - ▶ 54/57 OIC members report data, and all 57 are included as partners.

1. Conceptual Framework and Methodology

Sample extract of product classification, showing relevant levels of analysis:

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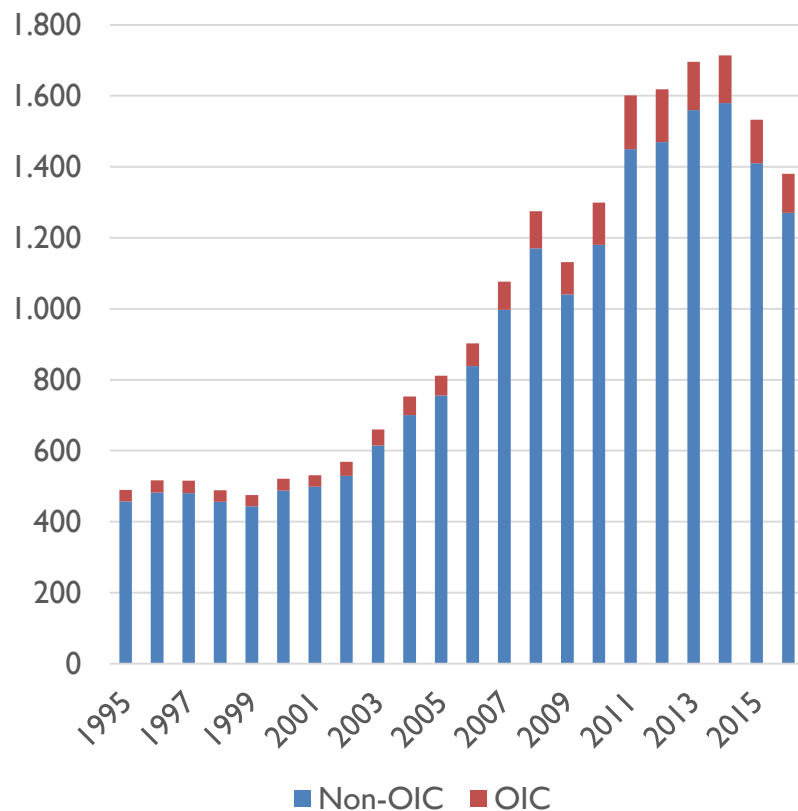
1. Conceptual Framework and Methodology

- ▶ Case studies of three OIC member countries:
 - ▶ Field visits and interviews.
 - ▶ Review of UN Comtrade and other data.
 - ▶ Development of narrative on recent agricultural trade performance, including detailed product-level analysis.

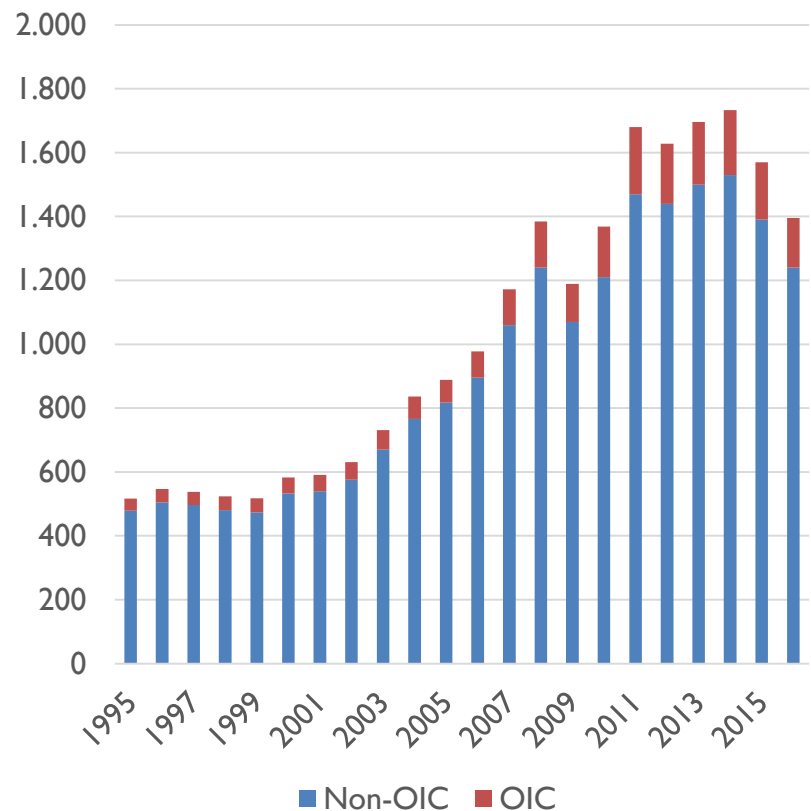
- ▶ Three countries: Cameroon, Tunisia, and Bangladesh.
 - ▶ One from each OIC regional member.
 - ▶ Different levels of per capita income, different sizes, different geography and climate
 - ▶ Different roles of agriculture in the economy, and different patterns of specializations.
 - ▶ Highlights importance of country specificities, and provides examples of general dynamics highlighted elsewhere.

2. Overview and Analysis of Global Agri-Food Trade

Exports of agricultural products*

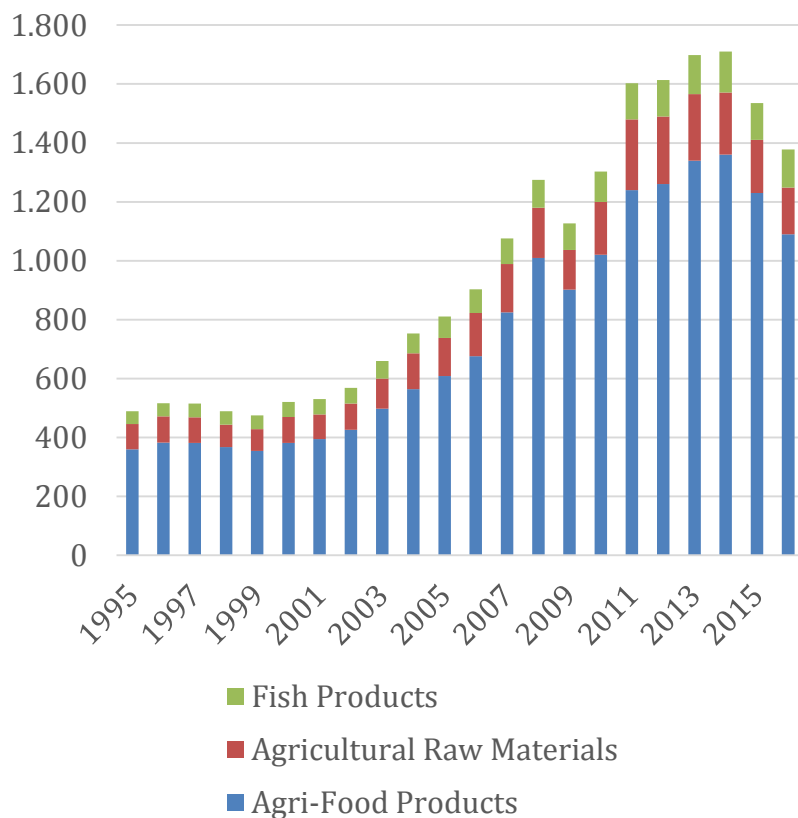


Imports of agricultural products

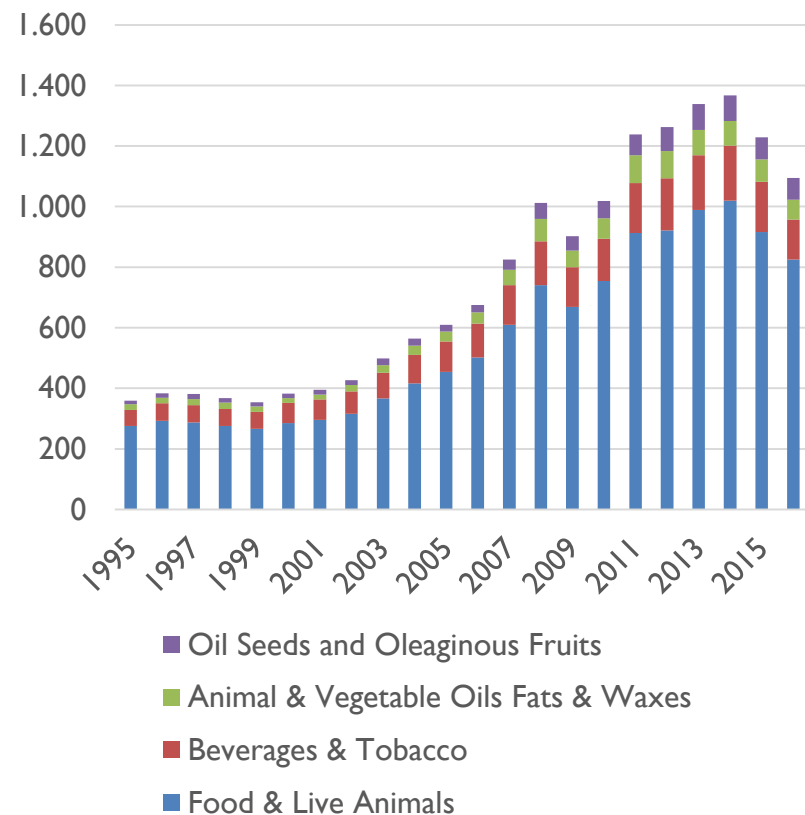


2. Overview and Analysis of Global Agri-Food Trade

World exports of agricultural products by title

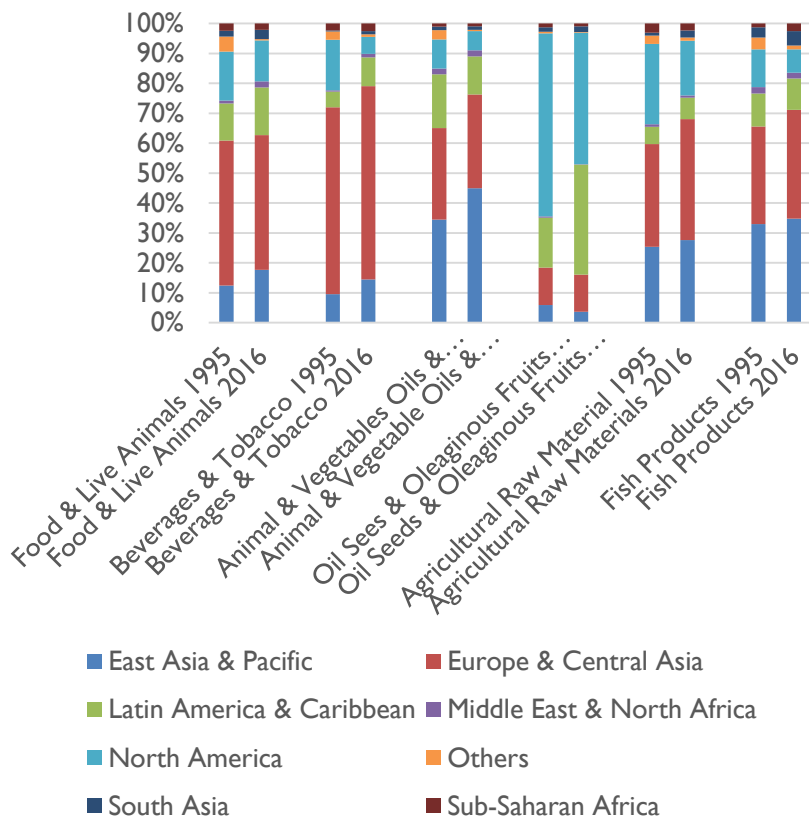


World exports of agri-food products by section

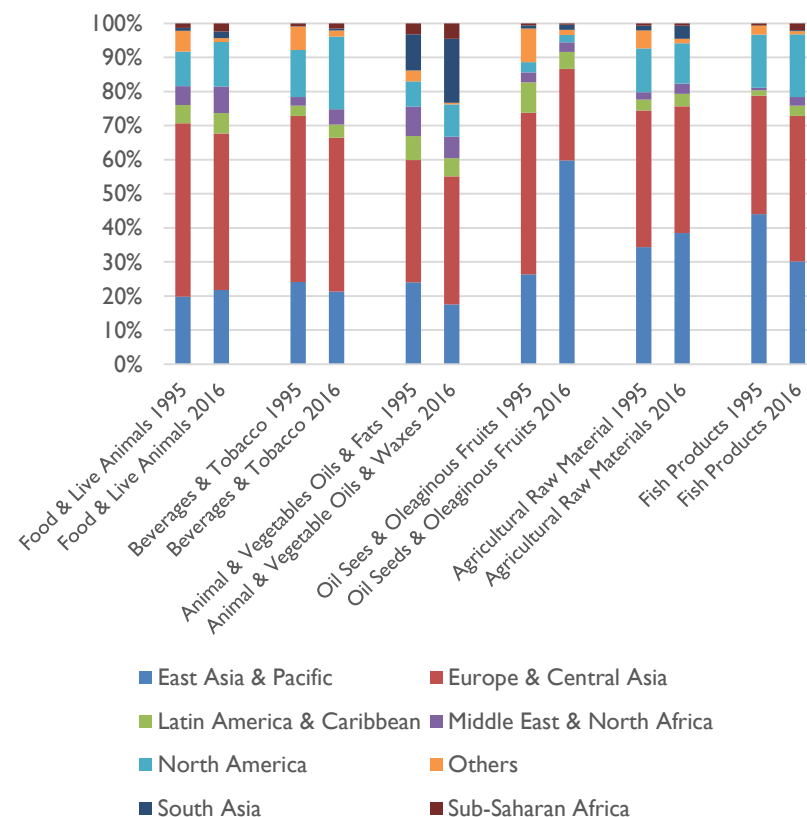


2. Overview and Analysis of Global Agri-Food Trade

World exports by section and origin region



World imports by section and destination region



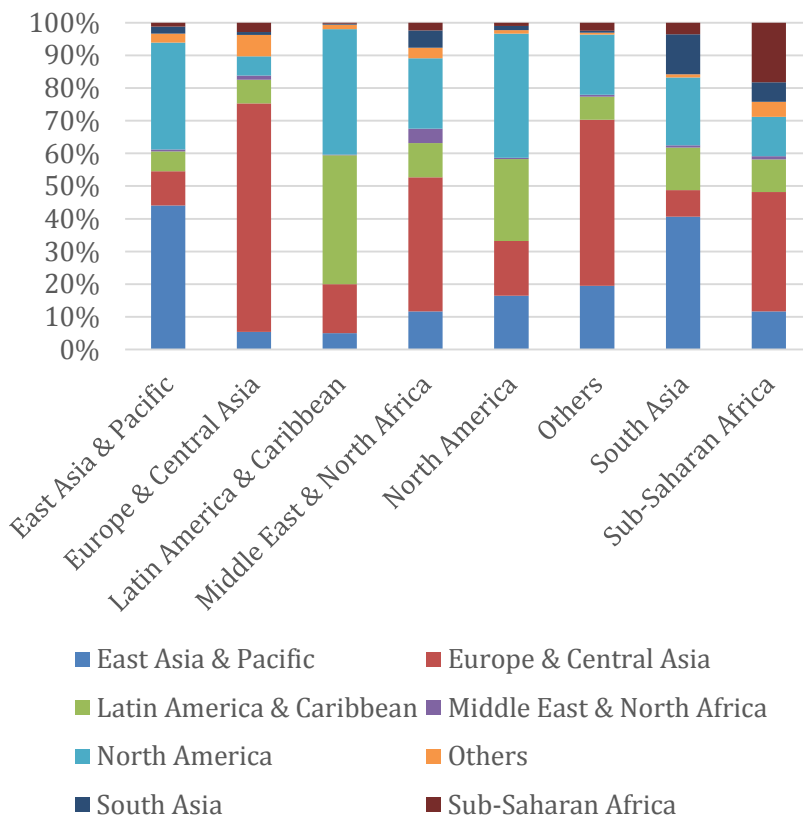
2. Overview and Analysis of Global Agri-Food Trade

Theoretical Revealed Comparative Advantage (TRCA), index number.

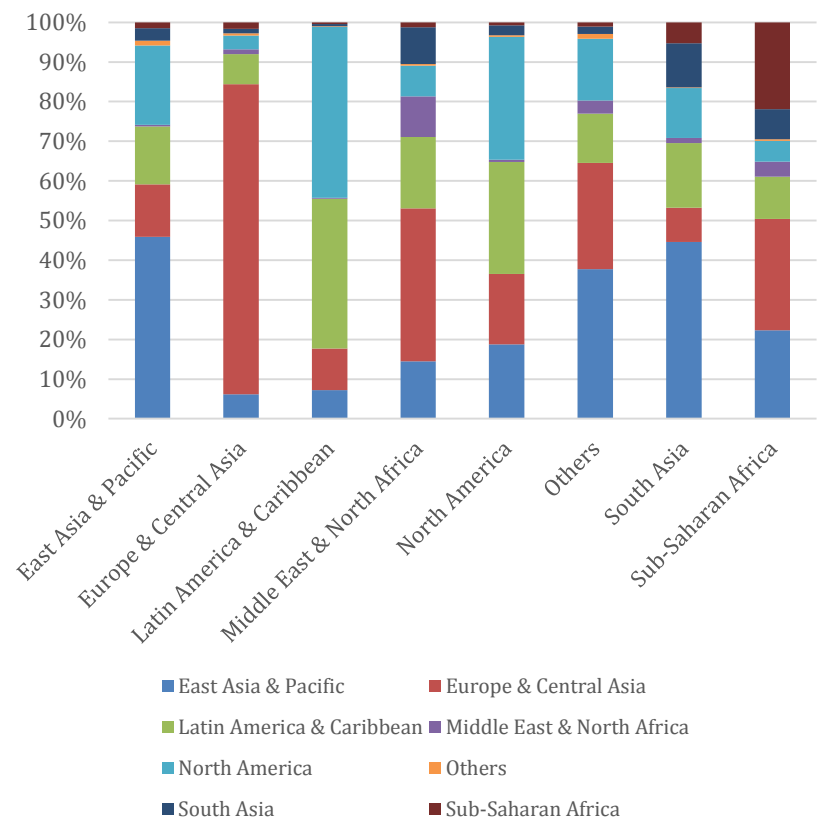
	East Asia & Pacific	Europe and Central Asia	Latin America & Caribbean	Middle East & North Africa	North America	South Asia	Sub-Saharan Africa
Live animals	1.50	1.81	1.67	1.15	2.01	2.35	1.66
Meat	1.44	1.92	2.30	1.18	2.36	7.85	1.55
Dairy products	1.73	2.50	1.93	1.43	1.76	3.93	1.50
Fish and crustaceans	1.74	1.56	1.77	1.20	1.49	5.70	1.59
Cereals	2.74	2.98	2.90	1.91	3.06	10.23	1.94
Vegetables and fruit	1.76	1.90	2.14	1.46	1.91	4.88	1.61
Sugar products	1.75	1.75	2.24	1.51	1.44	5.42	1.44
Coffee	1.59	1.63	1.95	1.17	1.24	6.59	1.71
Animal feed	1.50	1.84	2.17	1.10	2.32	4.29	1.60
Other edible products	2.09	2.32	2.03	1.77	2.08	6.49	1.60
Beverages and tobacco	1.44	1.76	1.73	1.05	1.47	4.43	1.23
Crude materials	1.95	2.07	2.05	1.26	1.90	6.20	1.80
Oil seeds and oleaginous fruits	0.96	0.79	1.06	0.53	1.45	3.33	1.08
Animal and vegetable fats and oils	2.20	1.85	2.13	1.51	1.70	6.49	1.69

2. Overview and Analysis of Global Agri-Food Trade

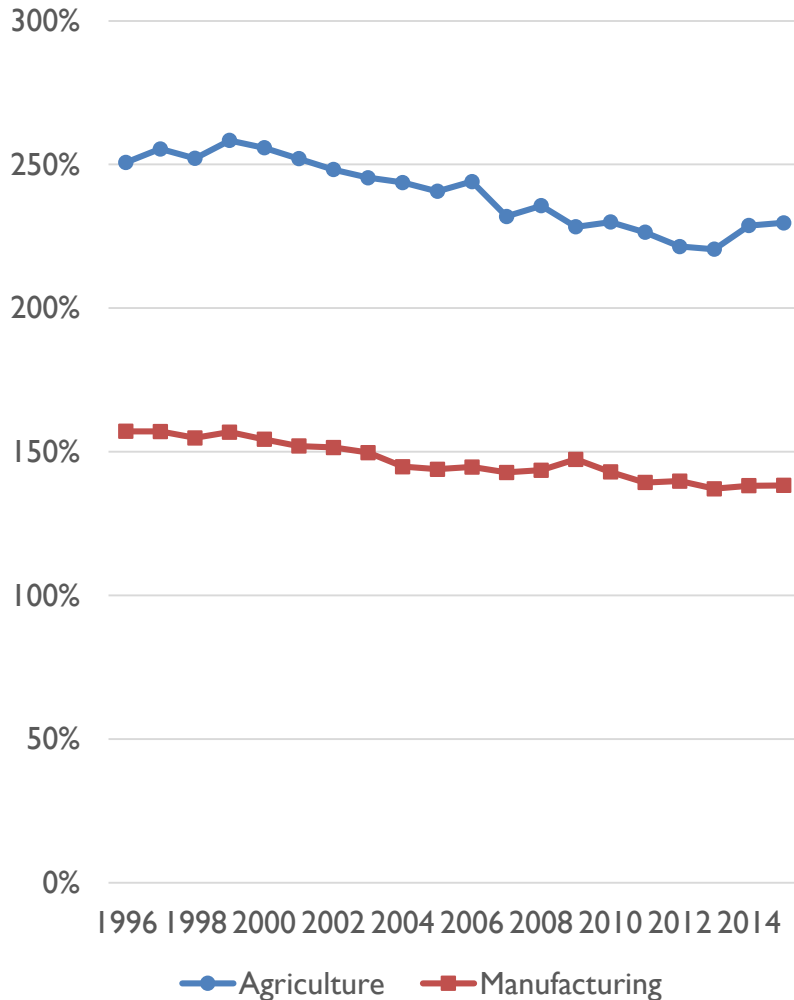
Direction of exports 1995



Direction of exports 2016



2. Overview and Analysis of Global Agri-Food Trade



- ▶ MFN and preferential tariffs have fallen in all three sections since 1996.
- ▶ However, trade costs in remain much higher than in manufacturing.
- ▶ Key problem is non-tariff measures (NTMs).

2. Overview and Analysis of Global Agri-Food Trade

▶ Key findings:

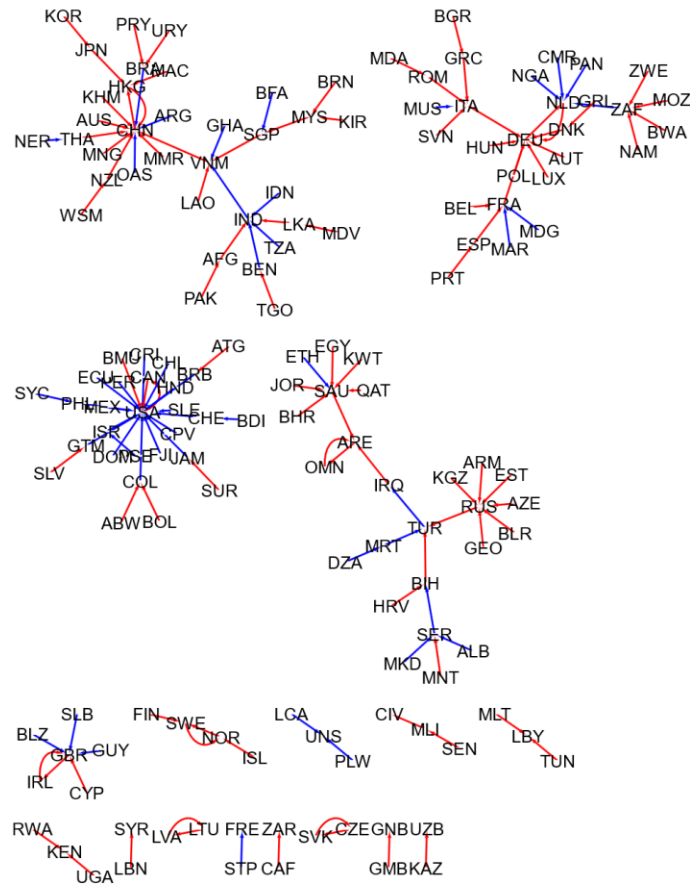
- ▶ OIC countries together only account for a modest, but growing, proportion of total world trade in agricultural products.
- ▶ Worldwide, the most traded agricultural products are agri-food products, followed by agricultural raw materials, then fish products.
 - ▶ Trade in agri-food products is dominated by live animals within the Annex I classification.
- ▶ At the section level, exports and imports are relatively concentrated by region, often led by Europe and North America, with East Asia playing an increasingly important role in some sectors.
- ▶ The regional distribution of trade flows is relatively stable over time, although East Asia is clearly increasing in importance relative to other regions.
- ▶ Patterns of comparative advantage vary significantly across regions and products, but most regions have high potential products.
- ▶ Although policies have been liberalized in recent years, agricultural markets remain substantially more distorted than markets for manufactured goods.

2. Overview and Analysis of Global Agri-Food Trade

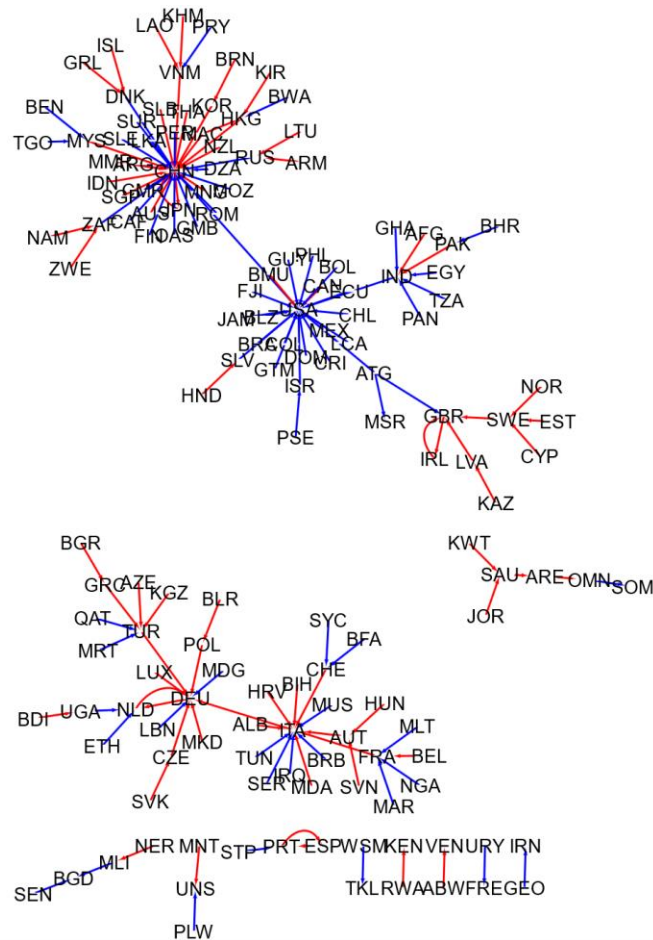
- ▶ No single way of representing the global network of trade in agricultural products.
 - ▶ Have to work at an aggregate level to avoid zero flows, which are common at a disaggregated level.
 - ▶ Have to simplify to look at largest flow only, to avoid overcrowding the figure.
 - ▶ Apply standard mathematical techniques to display the network.

2. Overview and Analysis of Global Agri-Food Trade

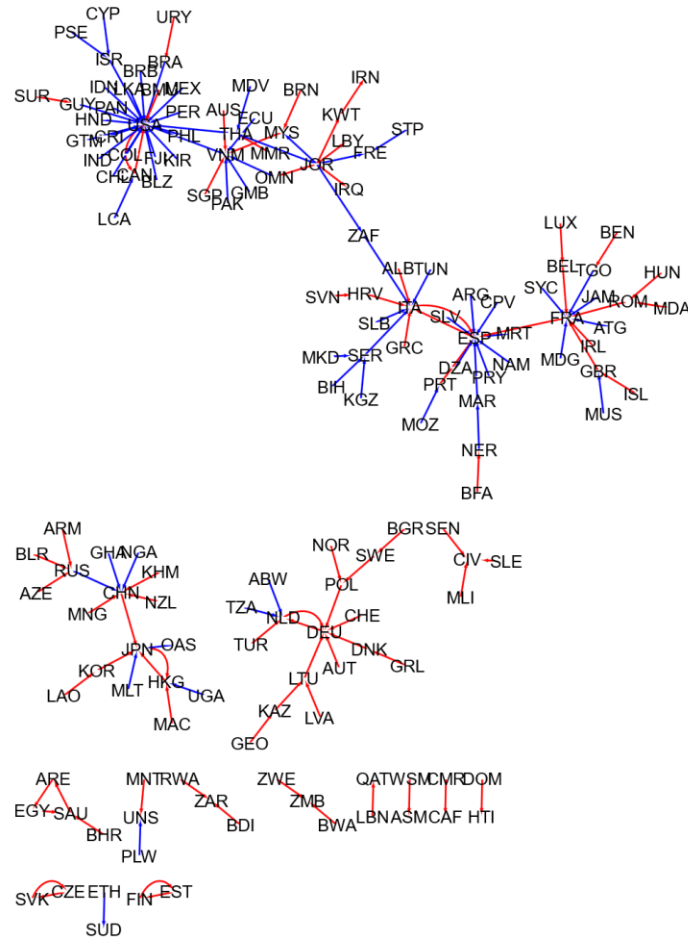
Agri-Food Products



2. Overview and Analysis of Global Agri-Food Trade *Agricultural Raw Materials*



2. Overview and Analysis of Global Agri-Food Trade *Fish Products*



2. Overview and Analysis of Global Agri-Food Trade

▶ Key findings:

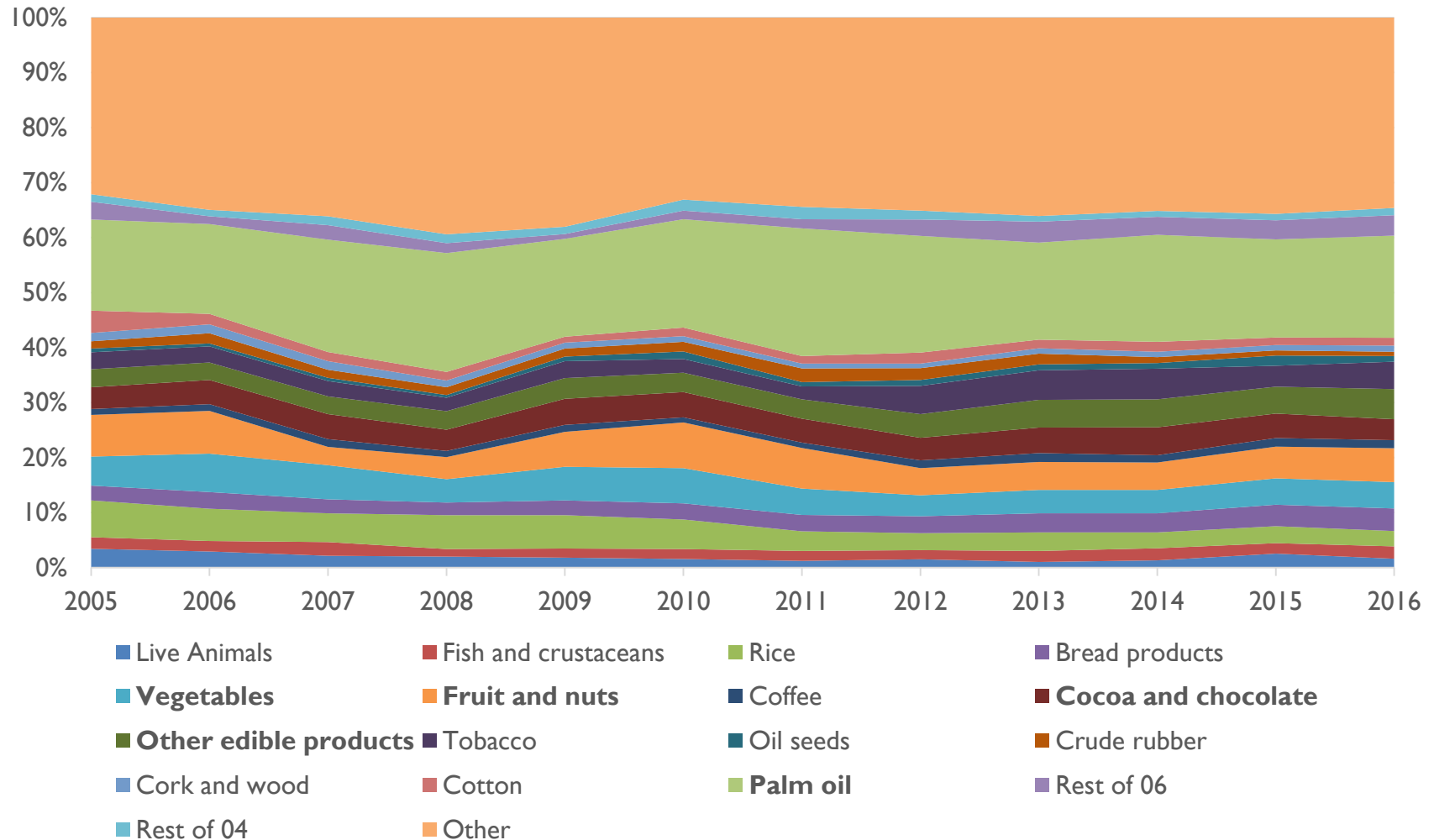
- ▶ Trade networks vary substantially across products.
- ▶ The USA, the EU, and China are the key focal points, but the degree of importance varies substantially by sector.
 - ▶ China is a key hub for exports of agricultural raw materials, for example, but all three hubs play a lesser role in relation to fish.
- ▶ Intra-regional trade (red lines) plays a dominant role in agricultural trade, although inter-regional trade (blue lines) is also very important for some countries.

3. Analysis of the Agricultural Trade Performance of OIC Member Countries

- ▶ 10 leading export and import goods within the OIC account for a large proportion of total exports (percent).

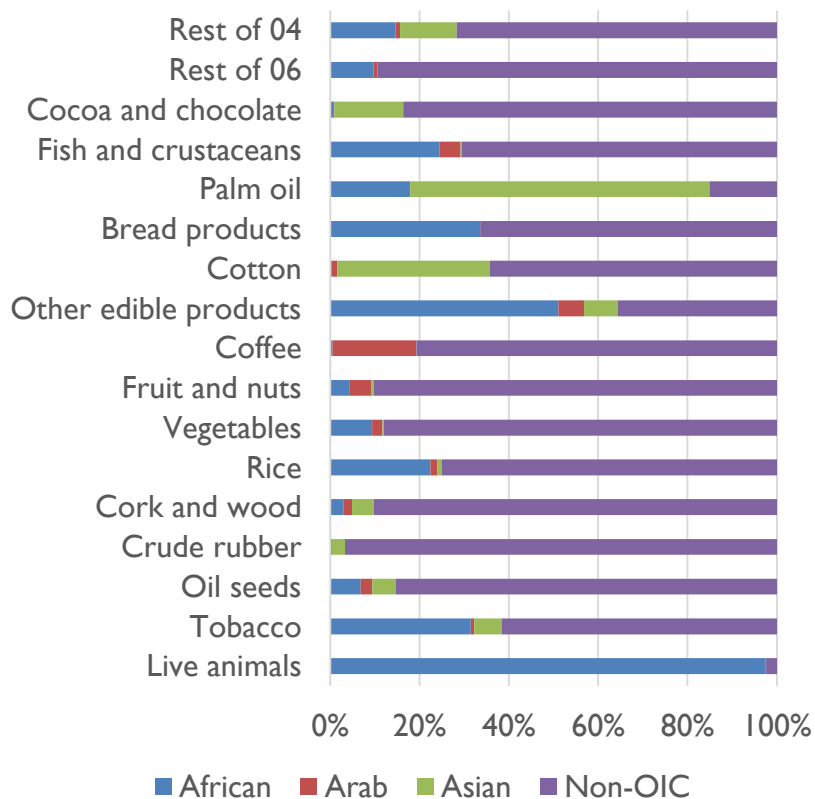
	African Group		Arab Group		Asian Group	
	2005	2016	2005	2016	2005	2016
Live animals	1.72	3.22	3.26	1.63	0.75	0.34
Tobacco	2.45	6.83	2.36	4.49	3.20	3.11
Oil seeds	0.89	5.55	0.90	0.30	0.36	0.89
Crude rubber	3.67	1.19	0.11	0.20	10.77	6.21
Cork and wood	14.04	6.71	0.42	0.24	5.63	3.20
Rice	0.61	2.55	3.18	0.26	3.02	2.44
Vegetables	1.25	2.43	10.33	11.89	2.68	2.04
Fruit and nuts	5.25	5.54	9.78	11.85	11.04	6.86
Coffee	4.94	5.87	0.41	0.48	1.55	2.30
Other edible products	1.35	3.20	2.04	4.85	1.99	3.84
Cotton	15.00	15.00	3.90	0.46	1.36	0.59
Bread products	0.16	0.19	1.94	3.36	1.51	2.59
Palm oil	1.24	2.32	0.50	0.70	20.55	28.64
Fish and crustaceans	7.34	6.58	12.34	10.12	7.44	5.65
Cocoa and chocolate	32.15	15.92	1.51	1.97	3.68	3.83
Rest of 06	0.39	0.40	4.55	7.24	0.75	0.76
Rest of 04	0.57	0.96	0.42	0.45	2.43	3.45
Total (Leading Products)	93.01	84.44	57.96	60.48	78.71	76.75

3. Analysis of the Agricultural Trade Performance of OIC Member Countries

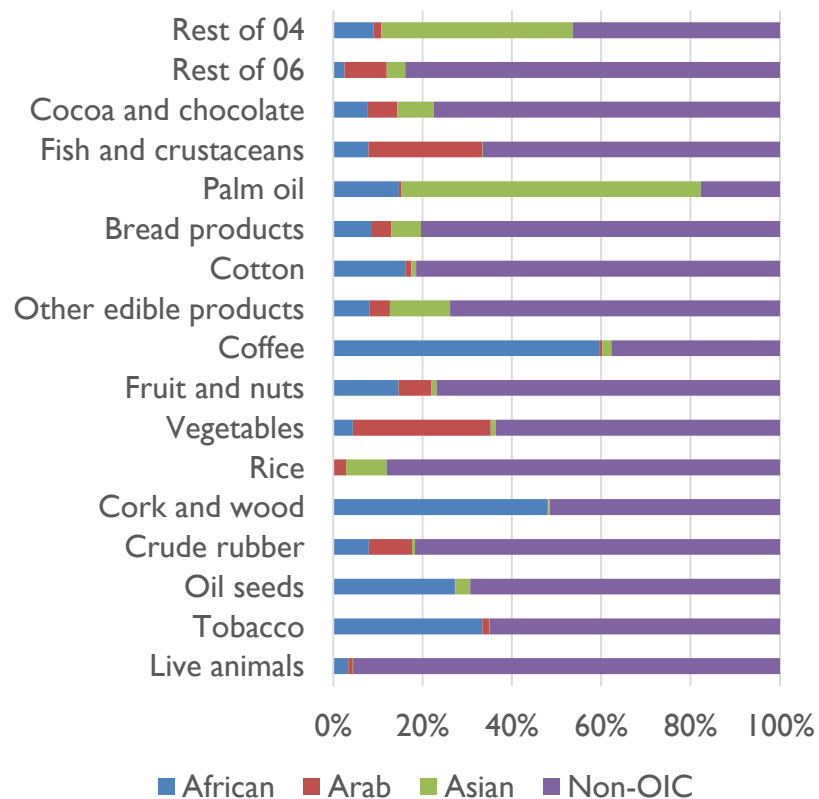


3. Analysis of the Agricultural Trade Performance of OIC Member Countries

African Group: Exports

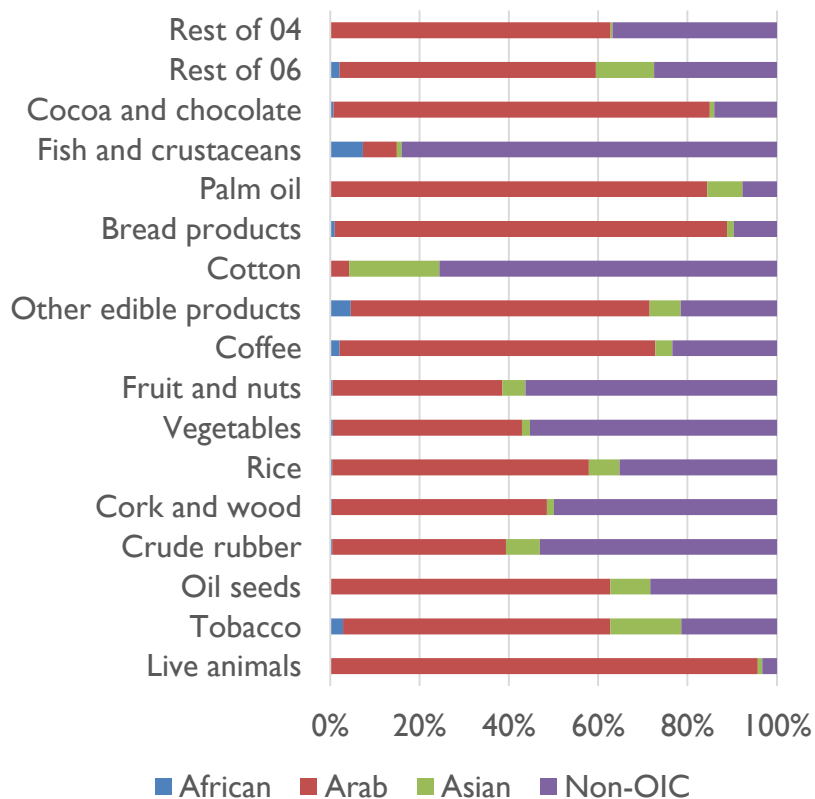


African Group: Imports

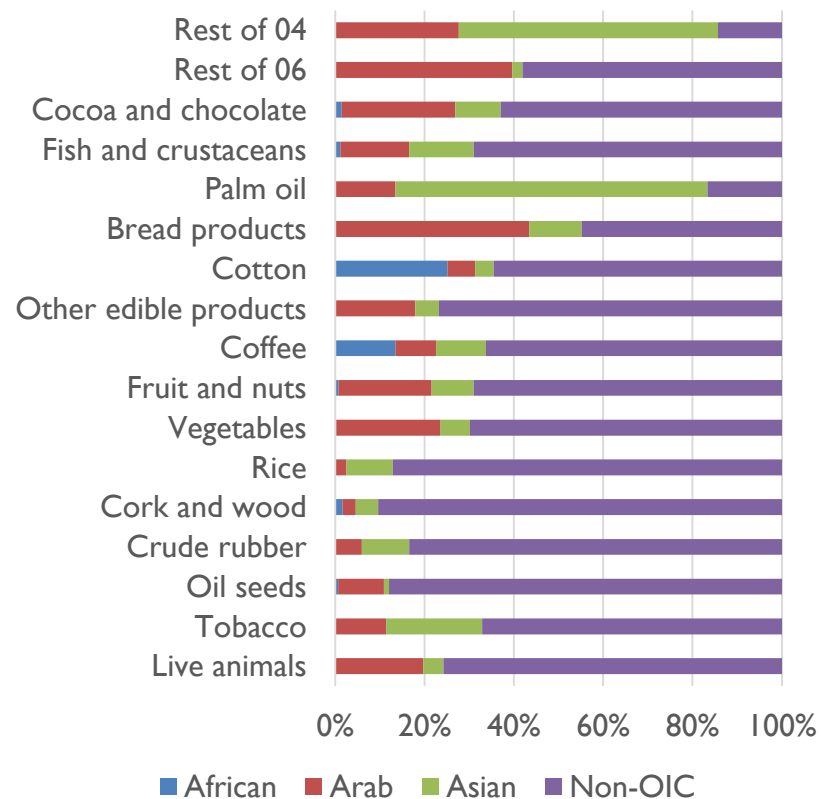


3. Analysis of the Agricultural Trade Performance of OIC Member Countries

Arab Group: Exports

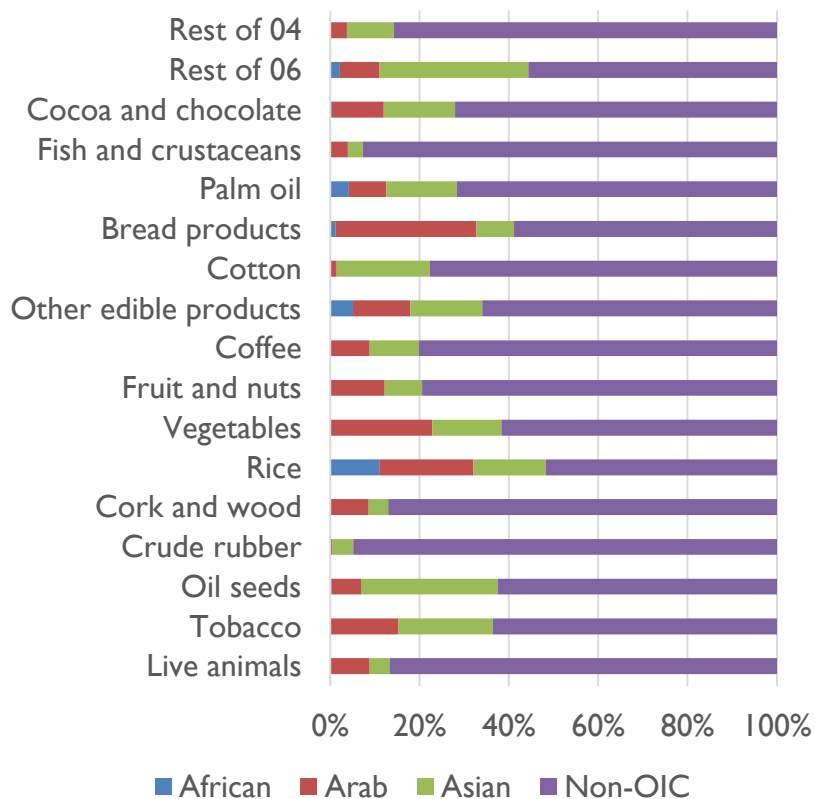


Arab Group: Imports

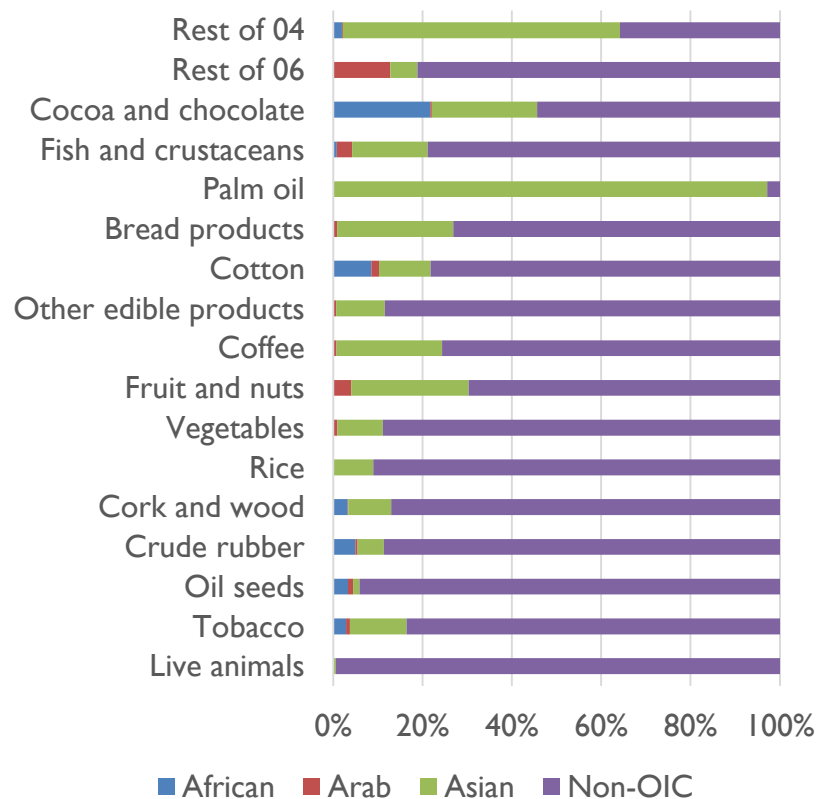


3. Analysis of the Agricultural Trade Performance of OIC Member Countries

Asian Group: Exports



Asian Group: Imports



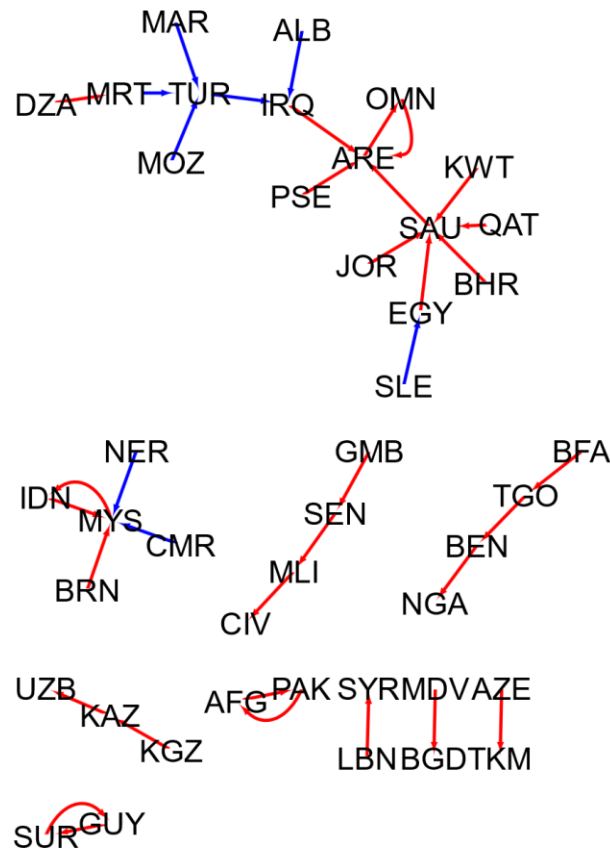
3. Analysis of the Agricultural Trade Performance of OIC Member Countries

▶ Key findings:

- ▶ Among key products, OIC trade is primarily composed of a relatively small number:
 - ▶ Vegetables
 - ▶ Fruits and nuts
 - ▶ Palm oil
 - ▶ Other edible products
 - ▶ Cocoa and chocolate
- ▶ Non-OIC markets are particularly important for the African and Asian groups, on both the export and import sides.
 - ▶ Intra-regional trade within the Arab group plays a relatively more significant role.
 - ▶ Within the other two groups, intra-regional trade is also important, but to a lesser degree.

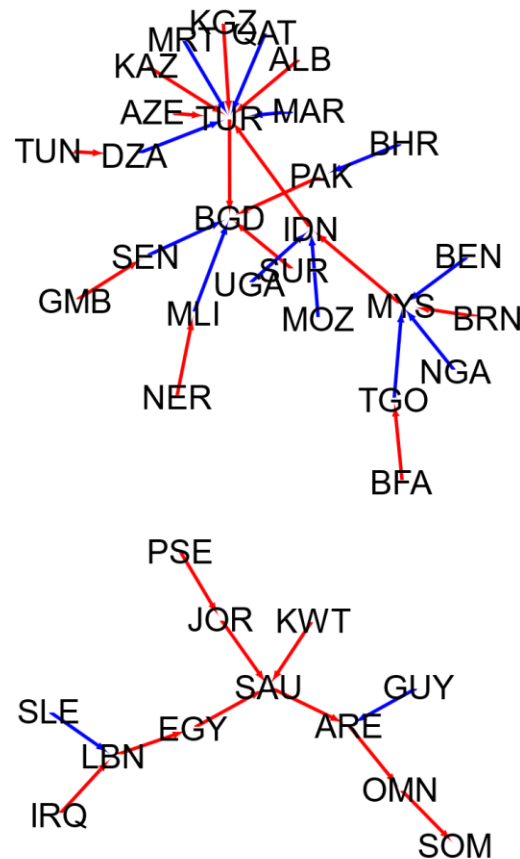
3. Analysis of the Agricultural Trade Performance of OIC Member Countries

Agri-Food Products



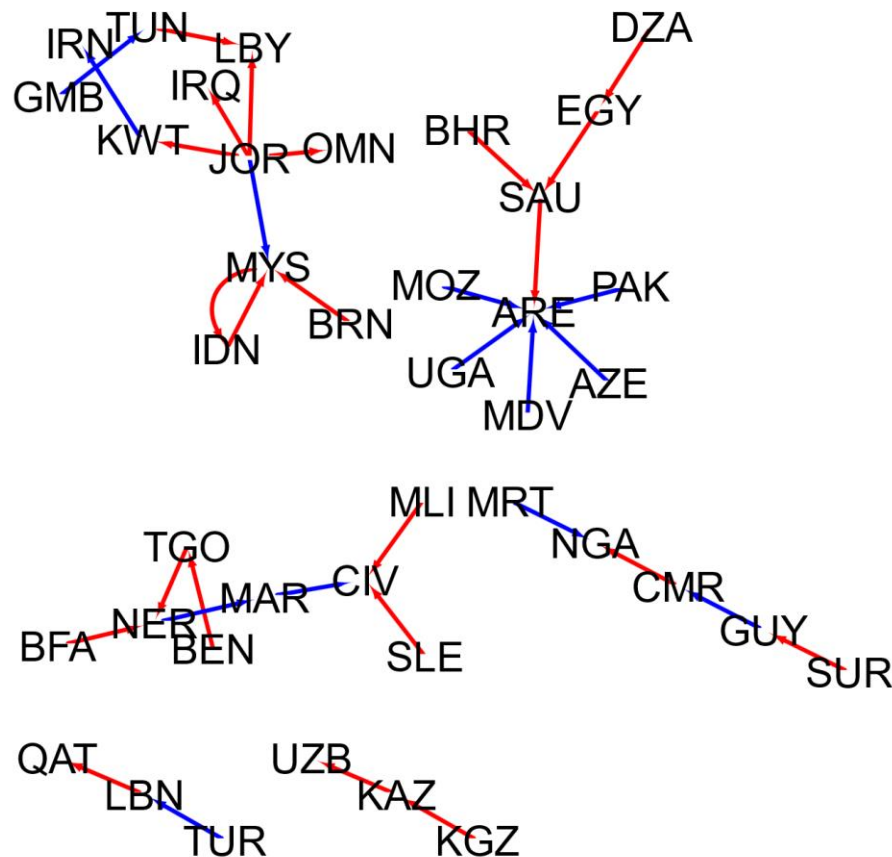
3. Analysis of the Agricultural Trade Performance of OIC Member Countries

Agricultural Raw Materials



3. Analysis of the Agricultural Trade Performance of OIC Member Countries

Fish Products



3. Analysis of the Agricultural Trade Performance of OIC Member Countries

Percentage of Exports Under RTAs (2016)

	African Group	Arab Group	Asian Group
Live animals	99.95	98.94	78.2
Tobacco	71.56	50.32	49.41
Oil seeds	89.62	85.98	47.01
Crude rubber	98.95	95.44	25.62
Cork and wood	78.34	96.77	47.2
Rice	49.7	94.16	42.21
Vegetables	23.65	95.85	69.94
Fruit and nuts	76.61	97.84	63.6
Coffee	78.85	83.65	56.11
Other edible products	77.69	74.66	62.75
Cotton	59.65	99.53	88.97
Bread products	85.08	83.22	55.24
Palm oil	33.32	92.11	28.65
Fish and crustaceans	45.06	94.67	65.92
Cocoa and chocolate	21.05	77.91	72.79
Rest of 06	91.08	74.44	77.58
Rest of 04	86.1	99.14	68.07

Preference Margin (% of MFN tariff, 2016)

	African Group	Arab Group	Asian Group
Live animals	25.1	73.05	7.45
Tobacco	39.44	68.48	24.66
Oil seeds	36.84	43.2	6.92
Crude rubber	34.78	51.85	9.92
Cork and wood	23.91	50.05	23.81
Rice	25.55	77.57	23.95
Vegetables	27.14	43.6	21.23
Fruit and nuts	22.39	49.67	7.39
Coffee	19.27	43.55	28.17
Other edible products	21.66	59.35	14.38
Cotton	42.86	46.87	22.07
Bread products	20.63	52.35	23.56
Palm oil	33.69	40.31	5.61
Fish and crustaceans	28.4	33.77	18.47
Cocoa and chocolate	23.29	48	14.37
Rest of 06	18.37	51.8	10.96

3. Analysis of the Agricultural Trade Performance of OIC Member Countries

▶ Key findings:

- ▶ No single intra-OIC trade network. Networks are product specific, and contain a mix of intra- and inter-regional elements.
- ▶ Intra-regional trade relations are driven by geographical proximity, but also trade policy, specifically RTAs.
- ▶ Distinct sub-networks are evident, sometimes involving a very small number of countries.
- ▶ In agricultural raw materials, Turkey and Saudi Arabia act as “hub” economies connected to a large number of “spokes”.
- ▶ Intra-OIC network analysis leaves to one side the very important role of non-OIC export destinations for most countries and products.

4. Conclusion

World Agricultural Trade

- ▶ OIC countries account for a modest, but growing, proportion of total world trade in agricultural products.
- ▶ At the section level, exports and imports are relatively concentrated by region, often led by Europe and North America.
- ▶ The regional distribution of trade flows is relatively stable over time, although East Asia is clearly increasing in importance relative to other regions.
- ▶ Although policies have been liberalized in recent years, agricultural markets remain substantially more distorted than markets for manufactured goods.
- ▶ Trade networks vary substantially across products. The USA, the EU, and China are the key focal points for networks, but the degree of importance varies substantially.
- ▶ Intra-regional trade plays a dominant role in agricultural trade, although inter-regional trade is also very important for some countries.

4. Conclusion

Performance of OIC Countries

- ▶ Among key products, OIC trade is relatively concentrated, although the level varies by regional grouping.
- ▶ Non-OIC markets are particularly important for the African and Asian groups, on both the export and import sides. Intra-regional trade is important, but to a lesser degree.
- ▶ There is no single intra-OIC trade network. Networks are product specific, and contain a mix of intra- and inter-regional elements.
- ▶ Intra-regional trade relations are driven by geographical proximity, but also trade policy, specifically RTAs.
- ▶ Distinct sub-networks are evident, sometimes involving a very small number of countries.
- ▶ In agricultural raw materials, Turkey and Saudi Arabia act as “hub” economies connected to a large number of “spokes”.
- ▶ Intra-OIC network analysis leaves to one side the very important role of non-OIC export destinations for most countries and products.