

The 5th Korea-Iran Cooperation Forum

Economic and Trade Cooperation Opportunity between Iran and Korea



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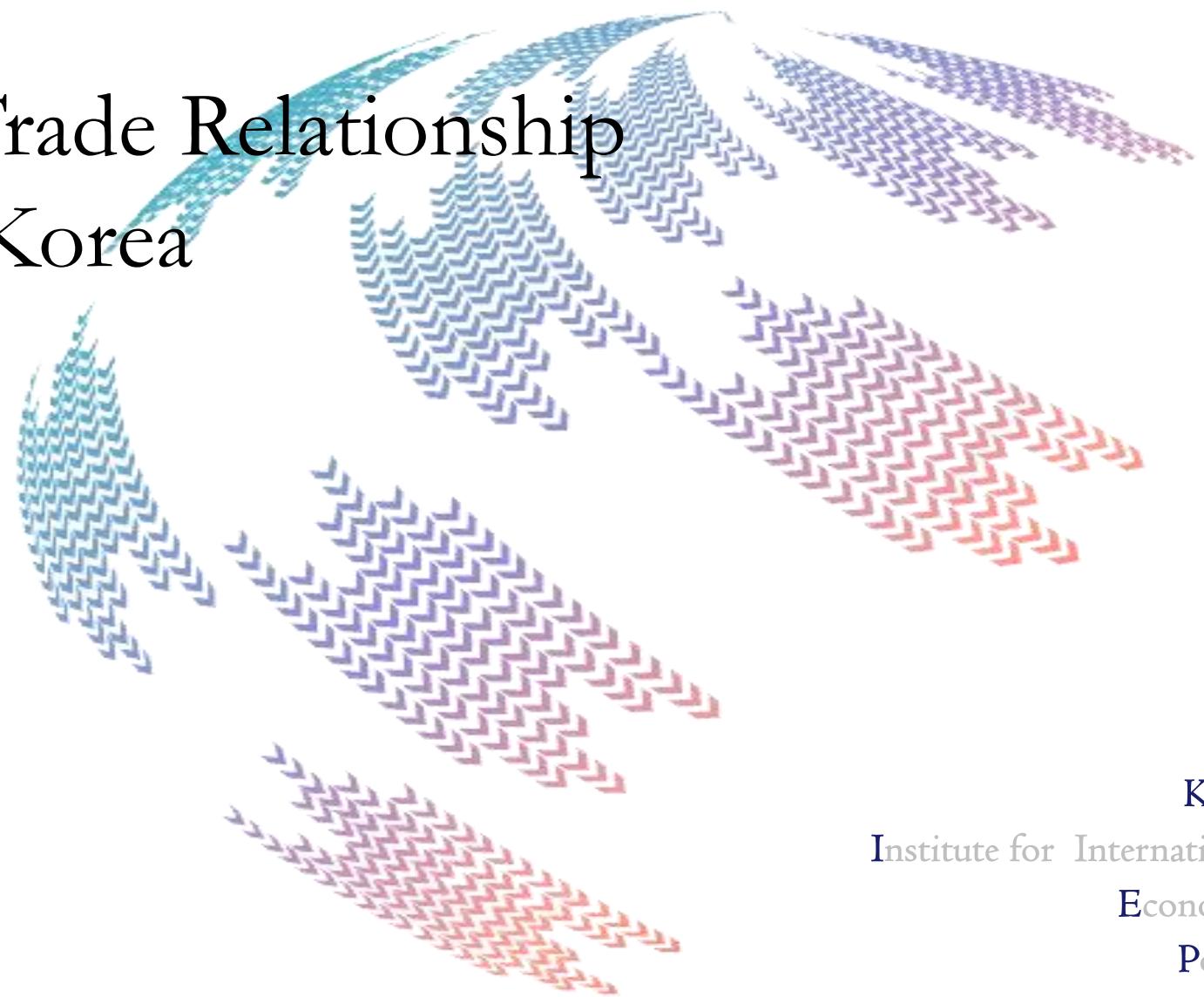
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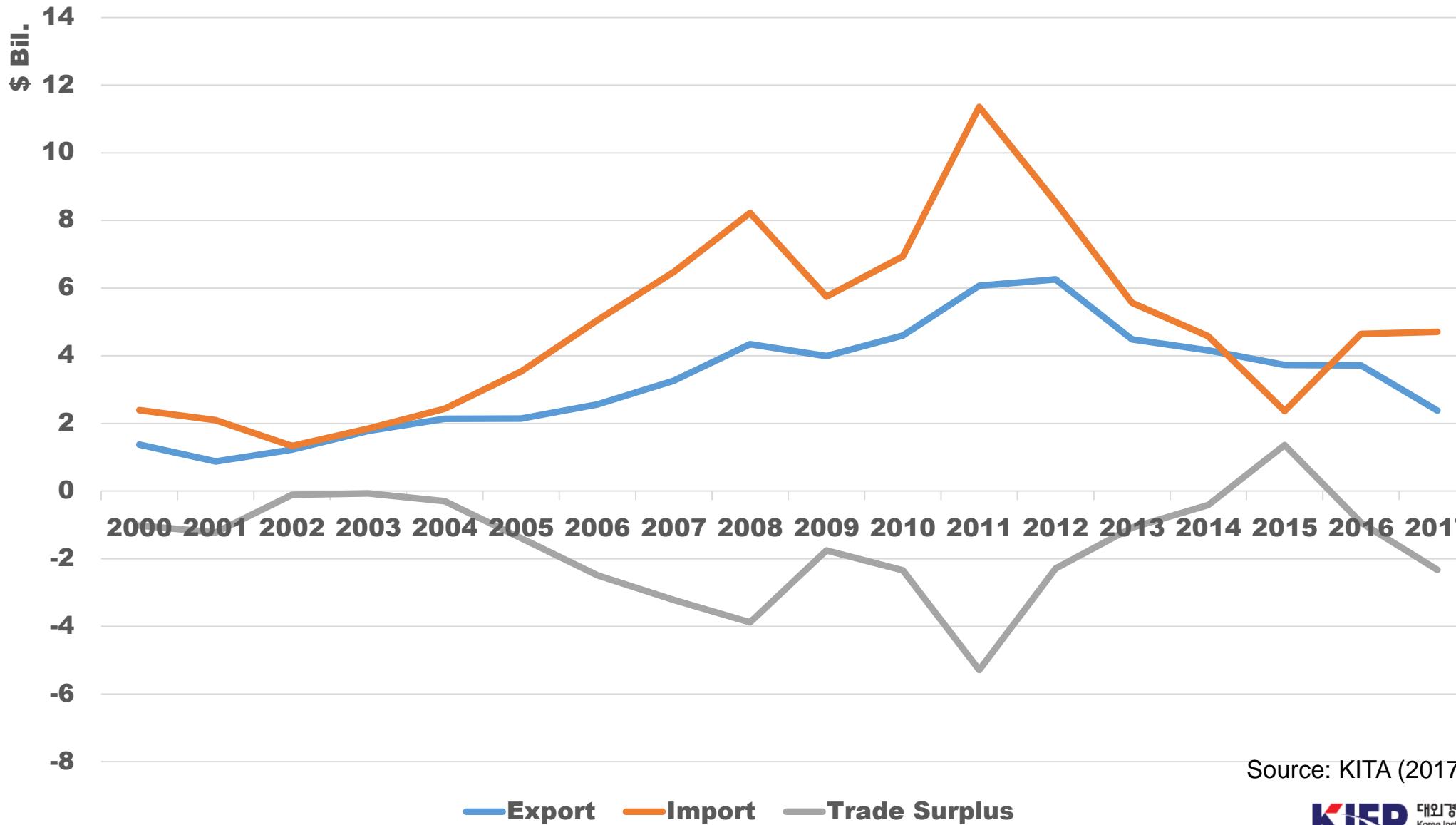
I. Economic and Trade Relationship between Iran and Korea



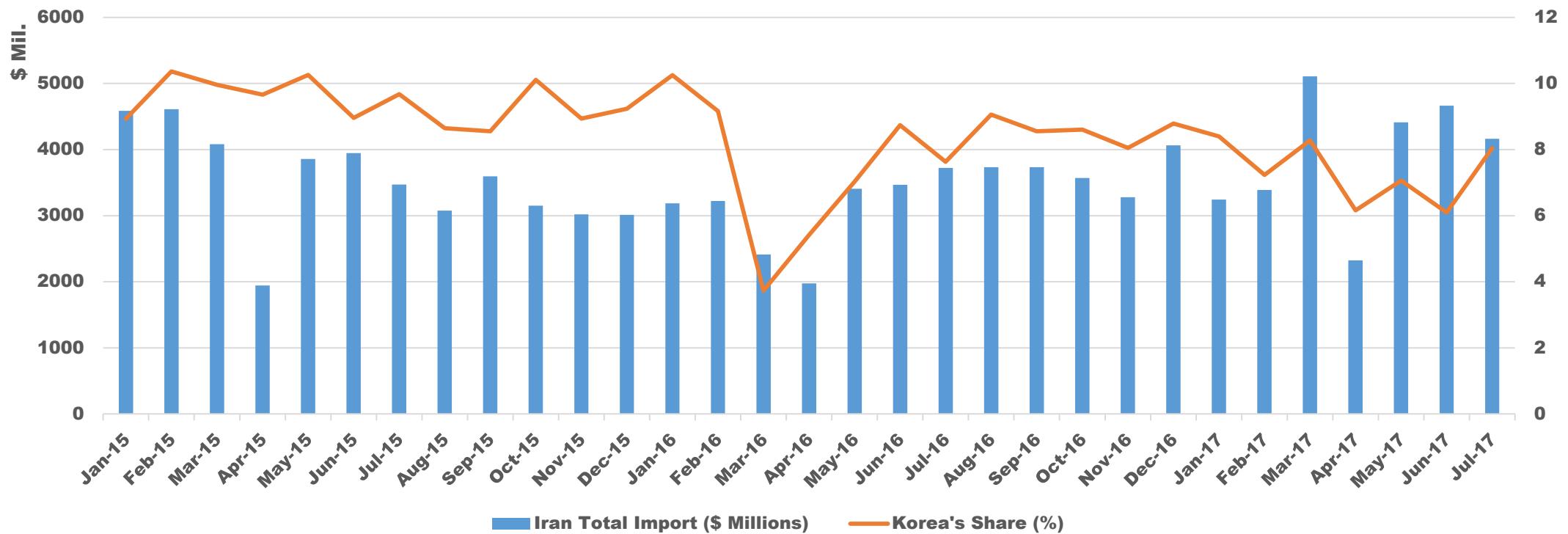
Economic and Trade Relationship between Iran and Korea

- Iran was South Korea's main crude oil provider before the sanction.
- South Korea is Iran's top-3 exporter while Iran is Korea's 4th largest importer from the Middle East (July-2017).
- Iran has been a primary construction partner of Korea in the Middle East since 1970s.

Korea's Trade with Iran

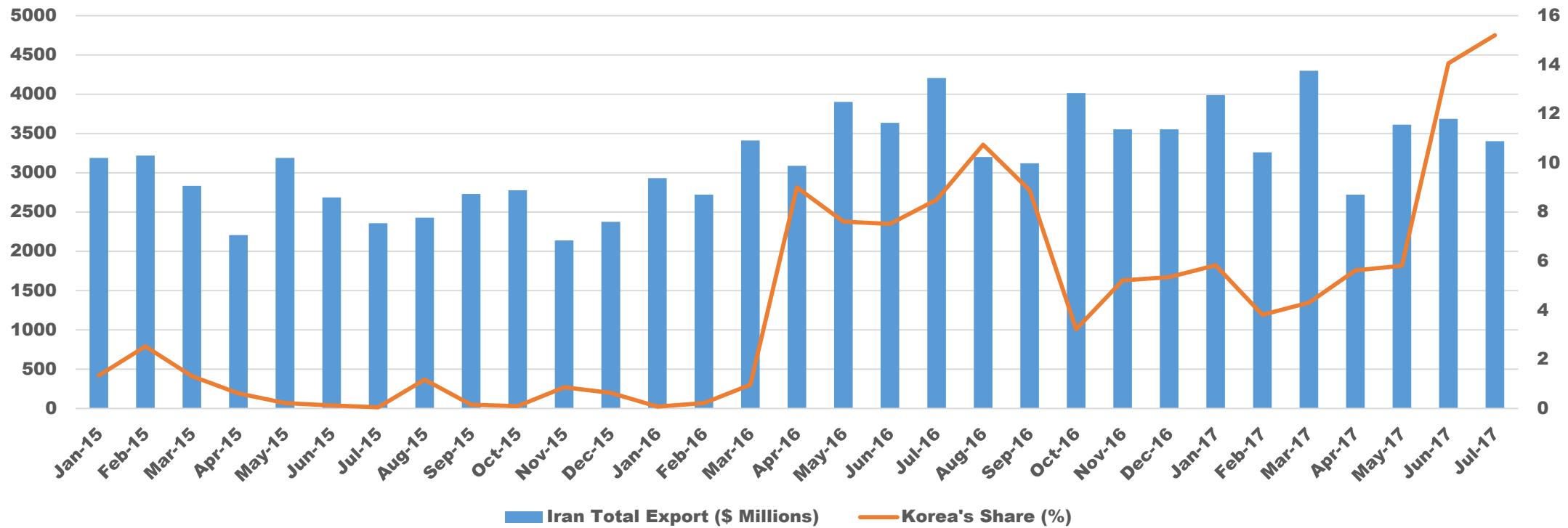


Recent Import of Iran and Korea's Share



Rank (Jul-2017)	Country	2010	2011	2012	2013	2014	2015	2016	2017(-July)
1	China	8.9	11.9	14.6	18.8	23.4	25.9	24.4	24.4
2	UAE	31.9	31.4	22.4	20.1	22.1	18.3	15.1	14.4
3	South Korea	5.9	7.8	8.8	8.4	8.0	9.5	8.1	7.4
4	Turkey	5.5	5.1	6.9	7.5	7.3	7.6	6.8	6.1
5	Germany	6.9	6.8	5.1	5.3	4.8	4.3	5.7	5.9

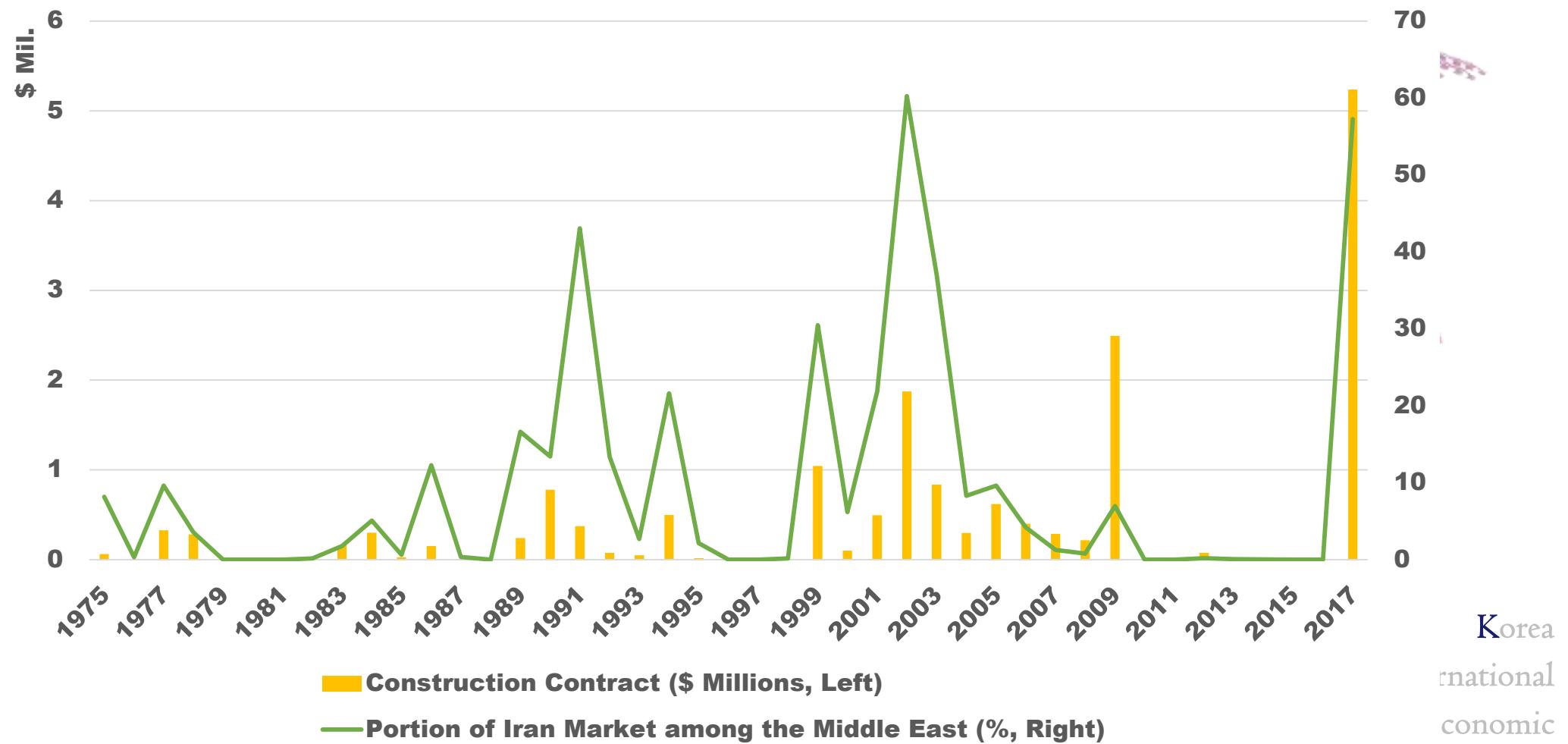
Recent Export of Iran and Korea's Share



Rank (Jul-2017)	Country	2010	2011	2012	2013	2014	2015	2016	2017(-July)	Korea
1	China	17.6	17.4	16.1	22.3	26.4	22.1	19.3	21.8	International
2	UAE	13.7	13.8	12.6	11.4	10.7	14.3	16.1	16.0	Economic
3	Iraq	16.0	14.1	18.6	19.5	17.3	17.5	15.7	14.3	Policy
4	South Korea	2.0	3.6	4.0	1.0	0.8	0.8	5.7	7.8	P
5	India	6.6	8.3	8.1	7.9	6.3	8.4	6.4	6.4	Korea Institute for International Economic Policy

Source: IRICA

Korea's Construction Contract in Iran



Source: Korea International Construction Information Service

II. Trade Dynamics after the Sanction lifted



Trade Dynamics after the Sanction lifted

- After JCPOA agreement was implemented, Iran's export has increased widely.
- South Korea mainly imports oil and raw mining materials from Iran and exports automobiles and their parts, iron steel, electronic appliances.
- South Korea mostly competes with China in Iranian import product markets recently.

Main Product of Korea's Export to Iran

Rank	HS-code	Product	Export in 2016 (\$ Thousands)	Export in 2017 (\$ Thousands, -July)	Portion in total export to Iran(%)	Annual Change (%)
Total Export	-	-	3,716,567	2,377,124	100.0	24.9
1	8708	Parts of Motor Vehicles	340,932	339,861	14.3	79.8
2	8703	Motor Cars and Vehicles for the Transport of Persons	368,749	248,588	10.5	68.9
3	3907	Polyacetals, Other Polyethers	182,798	100,122	4.2	21.4
4	4810	Paper and Paperboard	151,022	98,202	4.1	12.2
5	8418	Refrigerators, Freezers	163,995	94,285	4.0	43.5
6	7209	Flat-rolled Iron and Nonalloy Steel, Cold-rolled	39,308	78,836	3.3	595.8
7	7210	Flat-rolled Iron and Nonalloy Steel, Coted	70,801	69,362	2.9	117.9
8	9013	LCD, Lasers, Other Optical Appliances	90,847	51,646	2.2	-1.8
9	8517	Telephone Sets including Telephones for Cellular Networks or for Wireless Networks	85,172	49,017	2.1	18.3
10	8415	Air Conditioning Machines	72,969	43,611	1.8	-32.1

Source: KITA (2017)

Main Product of Iran's Export to Korea

Rank	HS-code	Product	Export in 2016 (\$ Thousands)	Export in 2017 (\$ Thousands, -July)	Portion in total exp ort to Iran(%)	Annual Change(%)
Total Export	-	-	4,647,659	4,706,493	100.0	122.4
1	2709	Petroleum oil	4,546,637	4,625,168	98.3	122.2
2	7901	Zinc	17,789	18,576	0.4	574.1
3	7404	Copper	27,655	17,804	0.4	37.3
4	7801	Lead	7,665	10,882	0.2	353.2
5	2711	Petroleum Gases	15,995	6,528	0.1	158.3

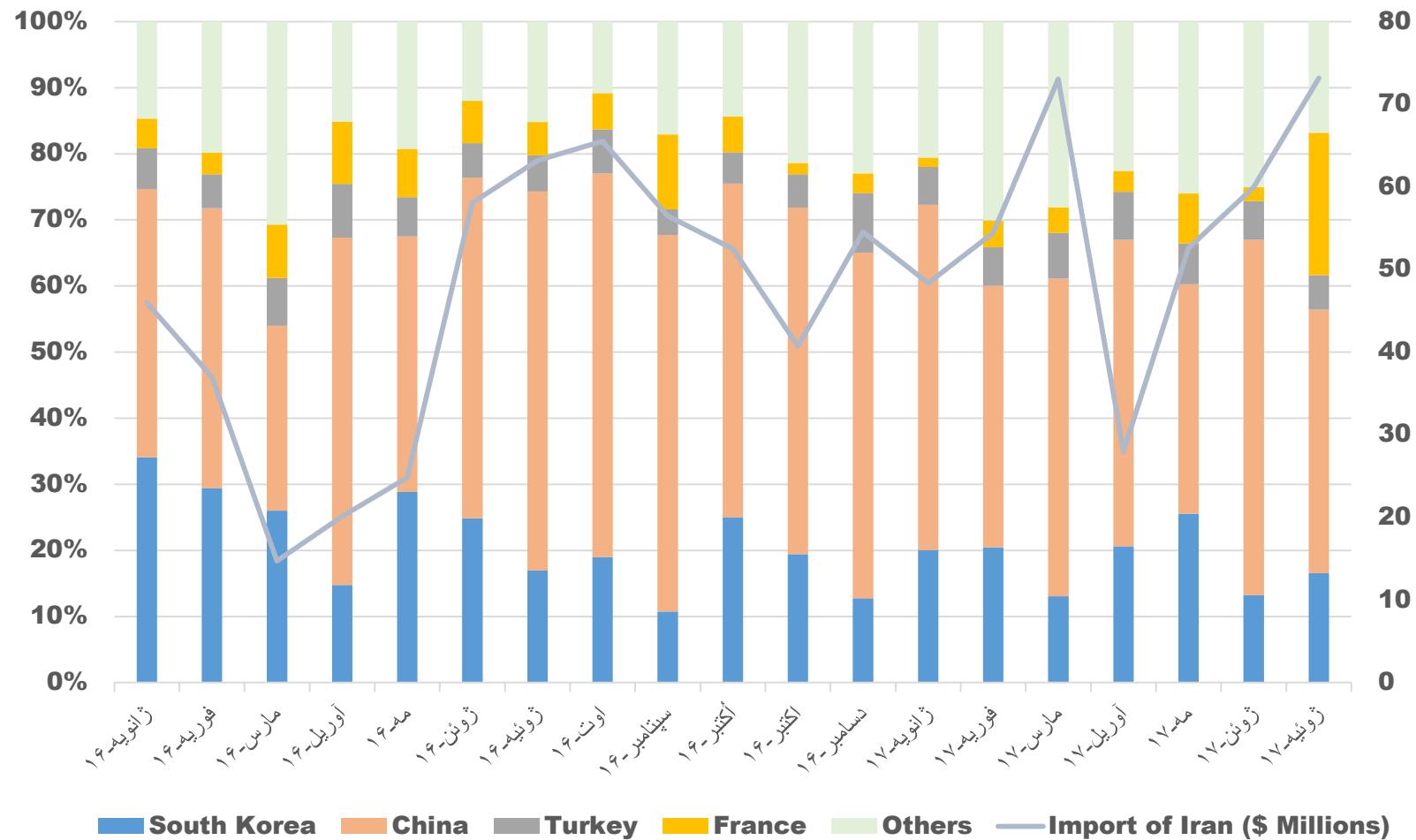
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Source: KITA (2017)

Iran's Import of HS:8708 and Main Exporters' Share

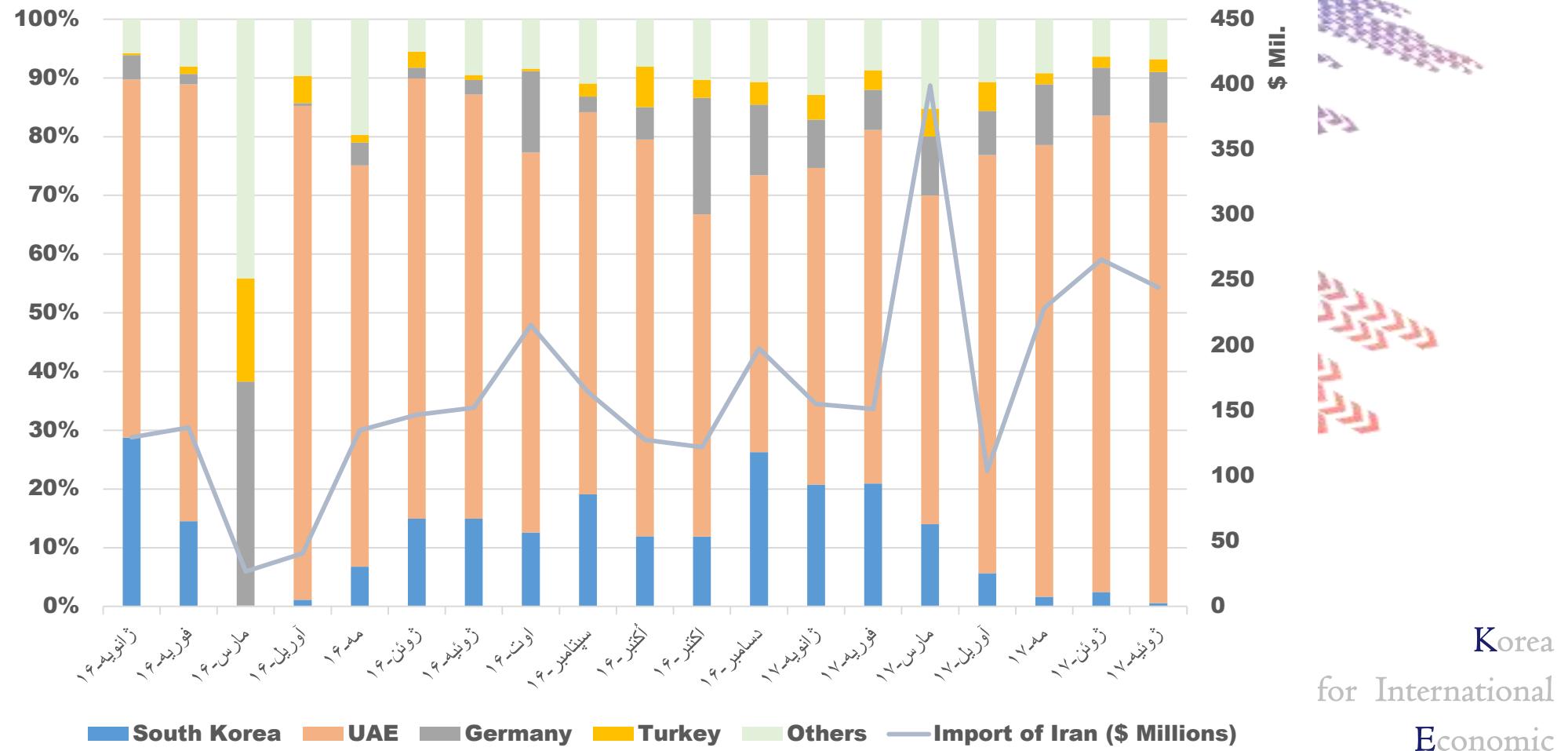


HS8708: Parts of Motor Vehicles

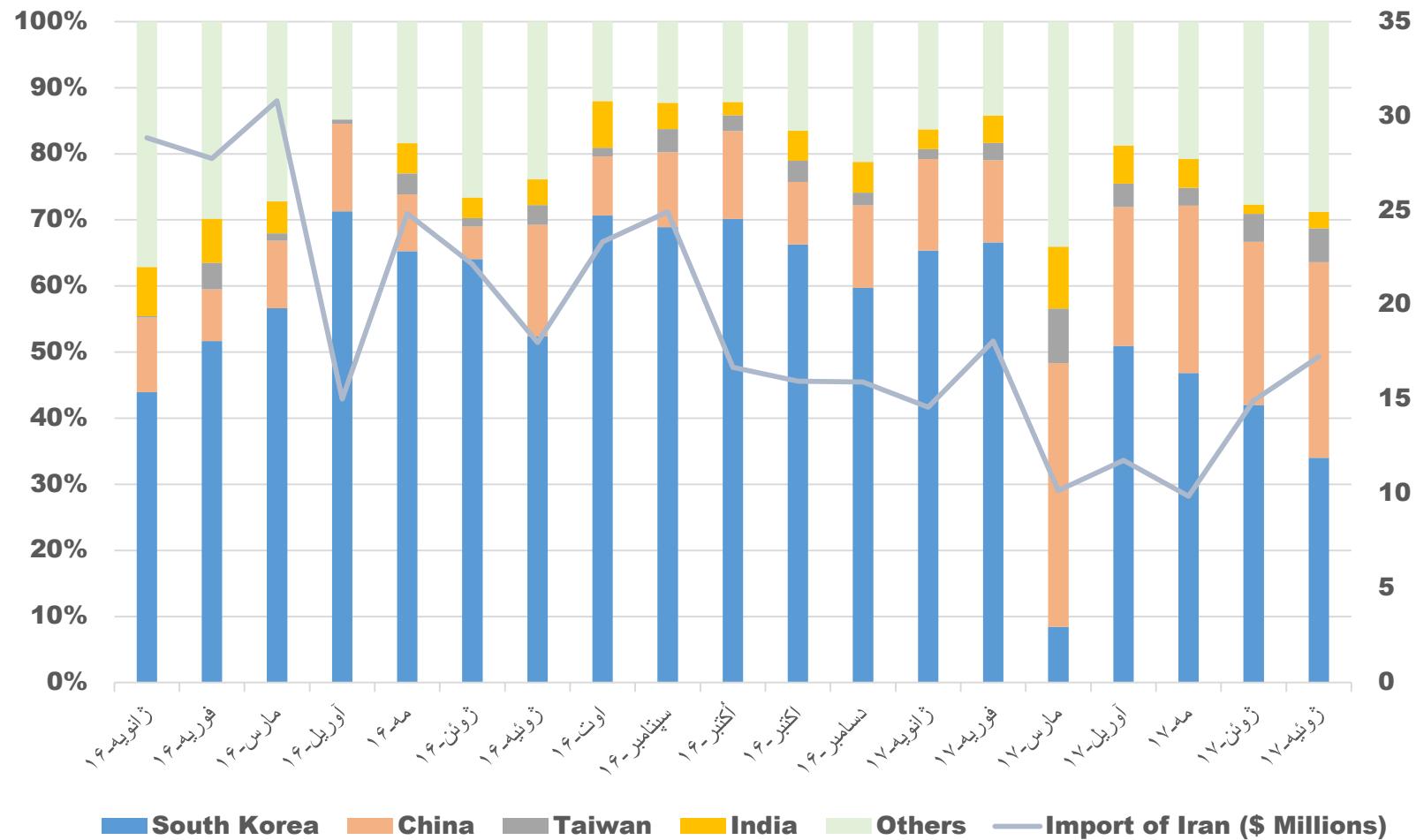
Source: IRICA



Iran's Import of HS:8703 and Main Exporters' Share



Iran's Import of HS:3907 and Main Exporters' Share

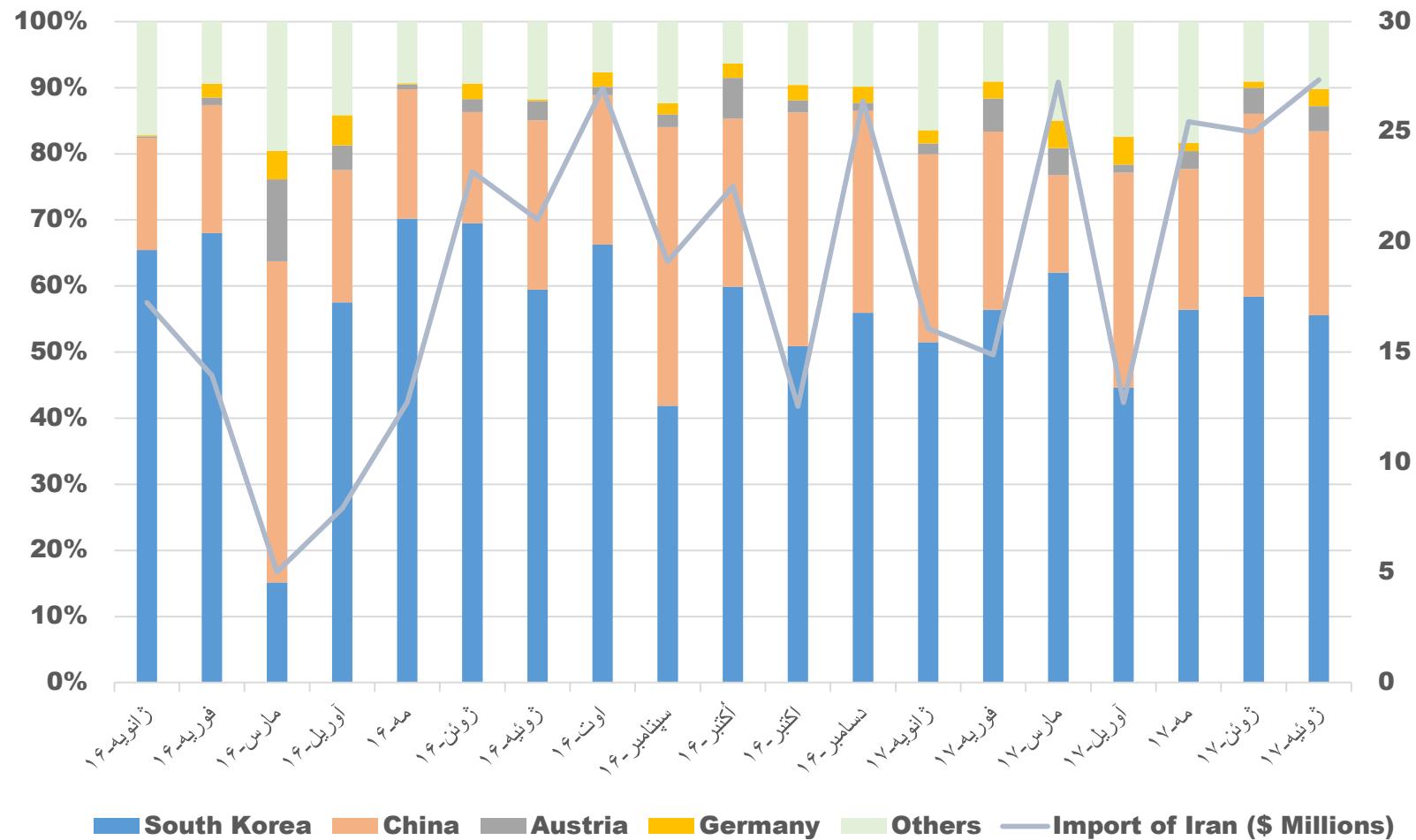


HS3907: Polyacetals, Other Polyethers

Source: IRICA



Iran's Import of HS:4810 and Main Exporters' Share



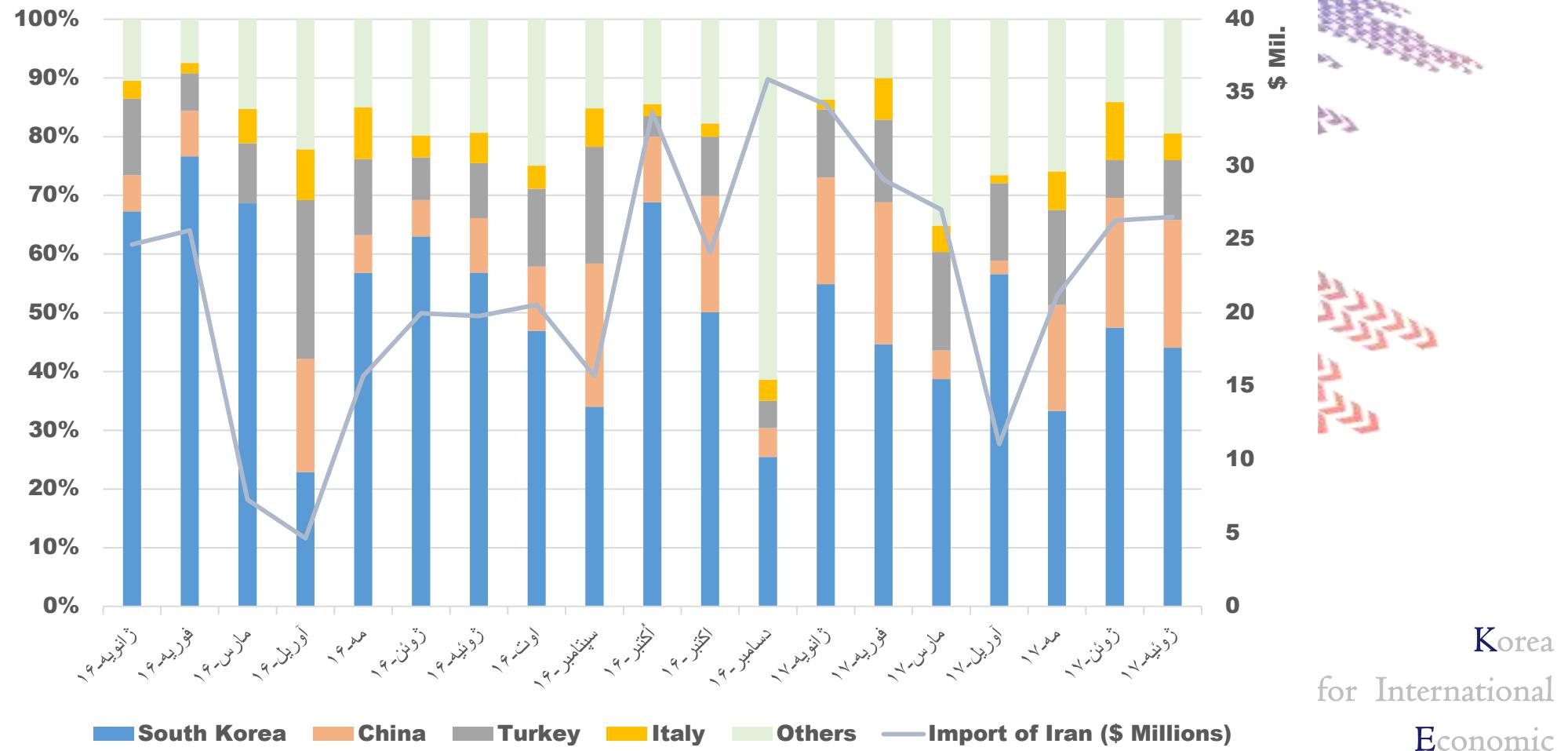
HS4810: Paper and Paperboard



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Source: IRICA

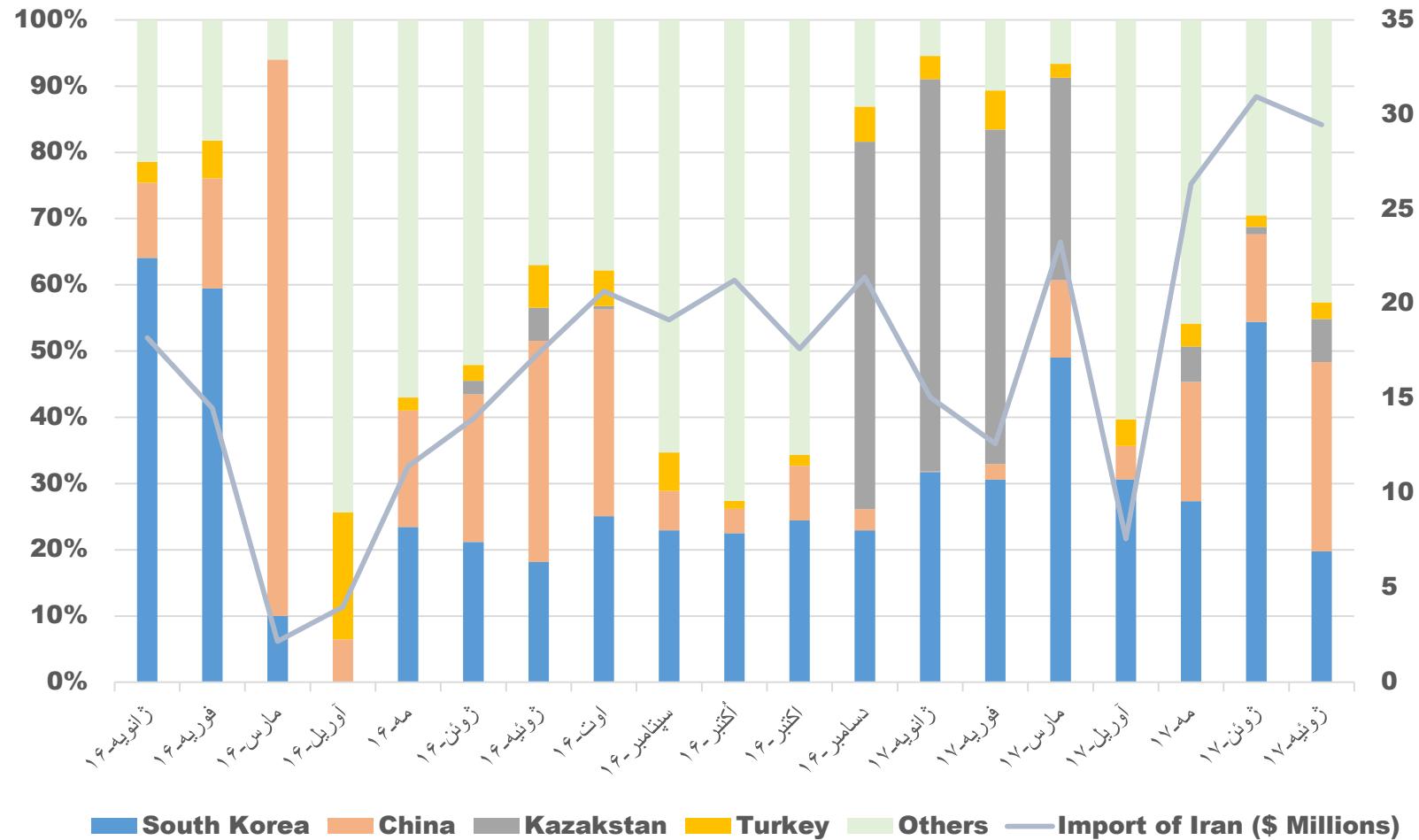
Iran's Import of HS:8418 and Main Exporters' Share



HS8418: Refrigerators, Freezers

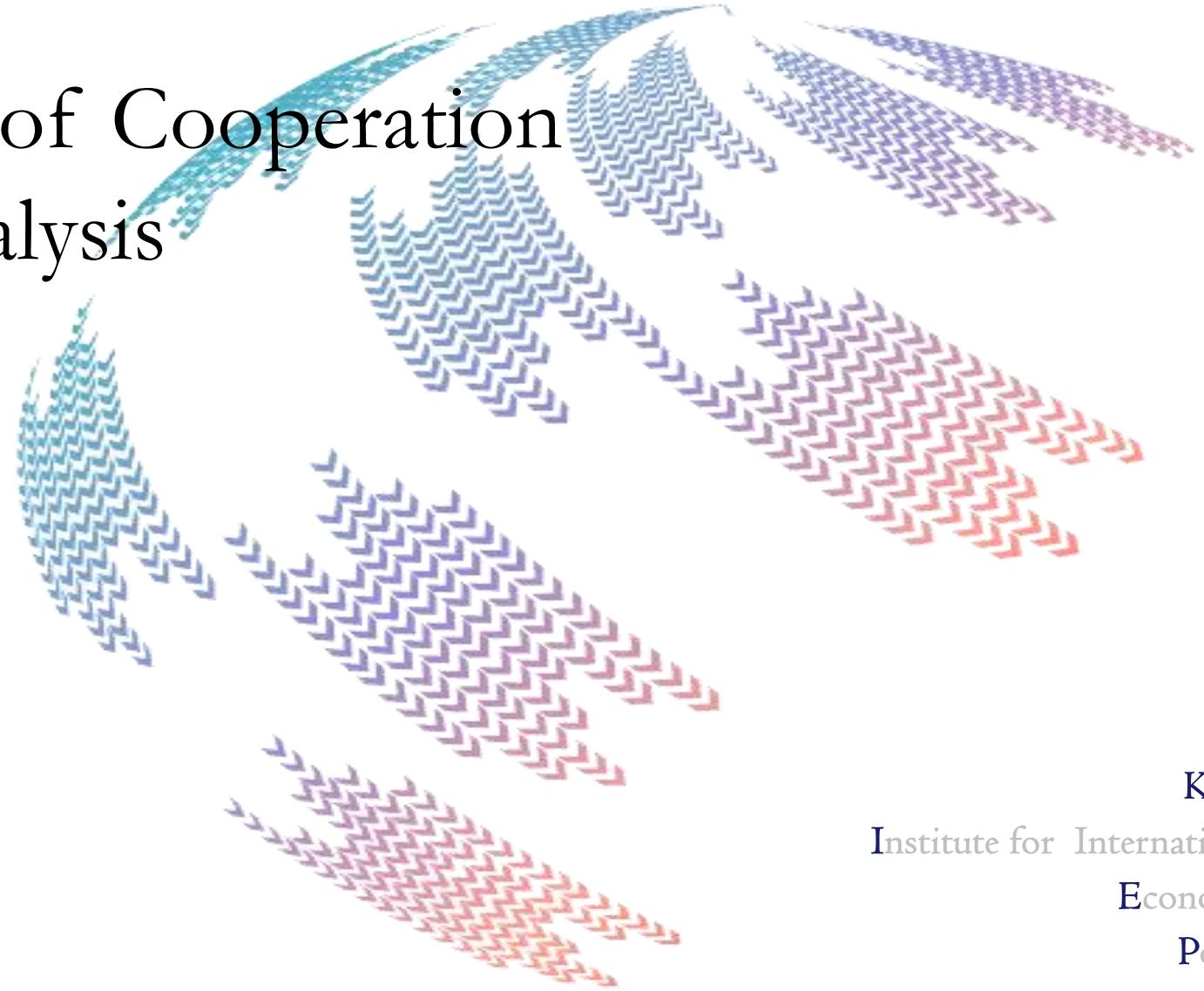
Source: IRICA

Iran's Import of HS:7209 and Main Exporters' Share



HS7209: Flat-rolled Iron and Nonalloy Steel, Cold-rolled

III. Potential Area of Cooperation based on RCA Analysis



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Potential Area of Cooperation based on RCA Analysis

- Revealed Comparative Advantage Index (Balassa, 1965) of country i 's export in product k , where X_i^k is country i 's export in product k

$$RCA_i^k \equiv \frac{X_i^k / \sum_i X_i^k}{\sum_k X_i^k / \sum_i \sum_k X_i^k}$$

- Bilateral RCA of origin country i 's export to destination country n of product k , where X_{ni}^k is country i 's export in product k to destination country n

$$BRCA_{ni}^k \equiv \frac{X_{ni}^k / \sum_i X_{ni}^k}{\sum_k X_{ni}^k / \sum_i \sum_k X_{ni}^k}$$

- Index of Import Demand of country n 's export in product k

$$IID_n^k \equiv \frac{\sum_i X_{ni}^k / \sum_i \sum_k X_{ni}^k}{\sum_i X_i^k / \sum_i \sum_k X_i^k}$$

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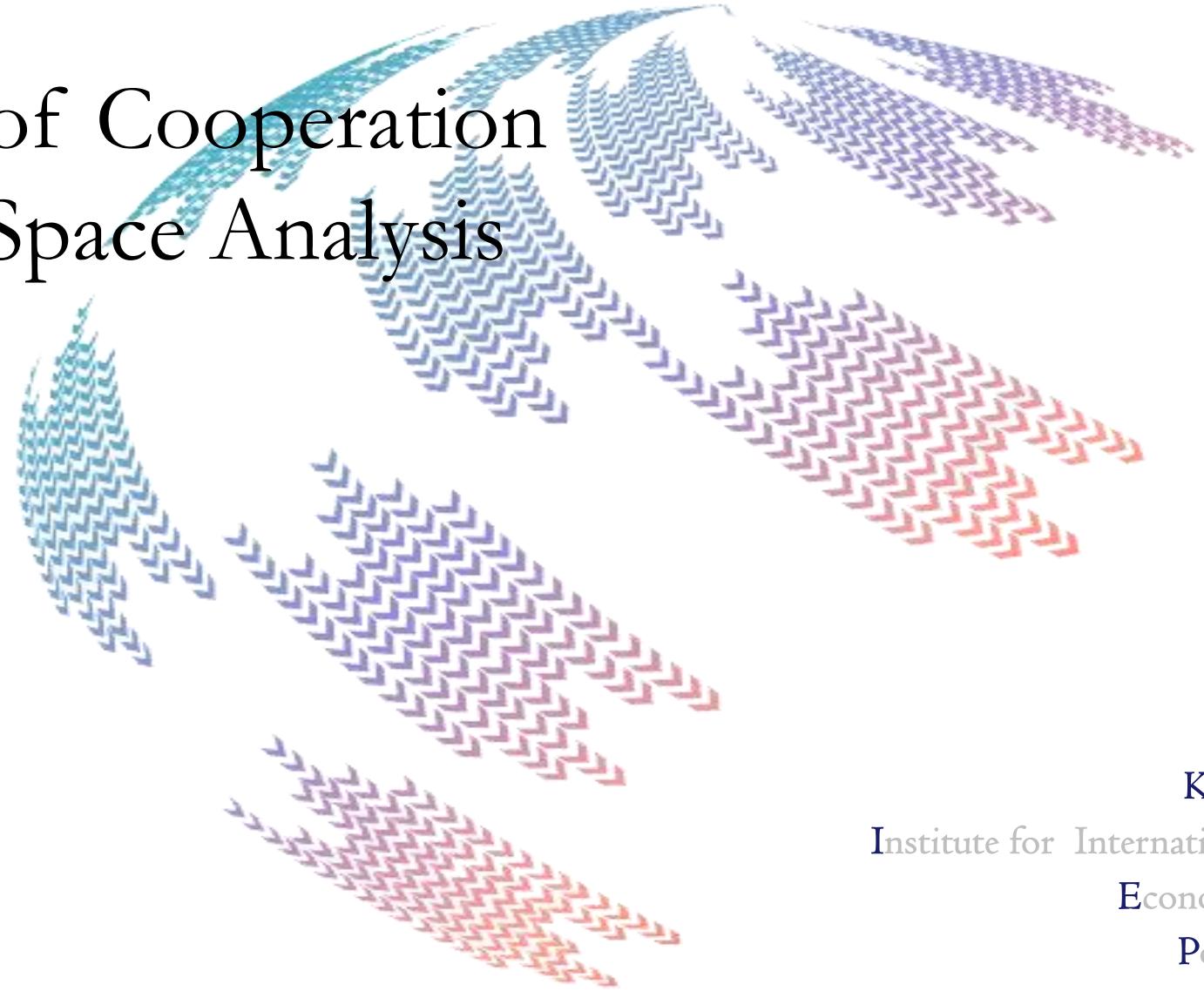
Import and Export Potentials between Iran and Korea

HS code	Product	IID	RCA	BRCA	RCA/BRCA
7209	Flat-rolled Iron and Nonalloy Steel, Cold-rolled	92.7	13.6	3.8	3.5
4809	Carbon Paper, Self-copy Paper	87.1	19.8	4.8	4.1
8470	Calculating Machines	76.4	1.9	2.9	0.7
7229	Wire of Other Alloy Steel	64.5	8.8	3.5	2.5
8450	Household- or Laundry-type Washing Machines	61.6	7.1	4.4	1.6
2823	Titanium Oxides	60.8	6.4	5.2	1.2
4810	Paper and Paperboard	60	4.1	5.3	0.8
8418	Refrigerators, Freezers	47.7	5.8	4.9	1.2
4013	Inner Tubes of Rubber	45.6	12.9	3.5	3.7
5501	Synthetic Filament Tow	42.1	5.5	3.2	1.7

Source: author's calculation with UN COMTRADE data

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IV. Potential Area of Cooperation based on Product Space Analysis



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Potential Area of Cooperation based on Product Space Analysis

- Product Space Analysis is a theory developed by Hidalgo and Hausmann (2009) and others to analyze the network of relatedness between products (product space).
- “Since countries tend to move to goods close to those they are currently specialized in, allowing nations located in more connected parts of the product space to upgrade their exports basket more quickly.” (Hidalgo et al., 2007)

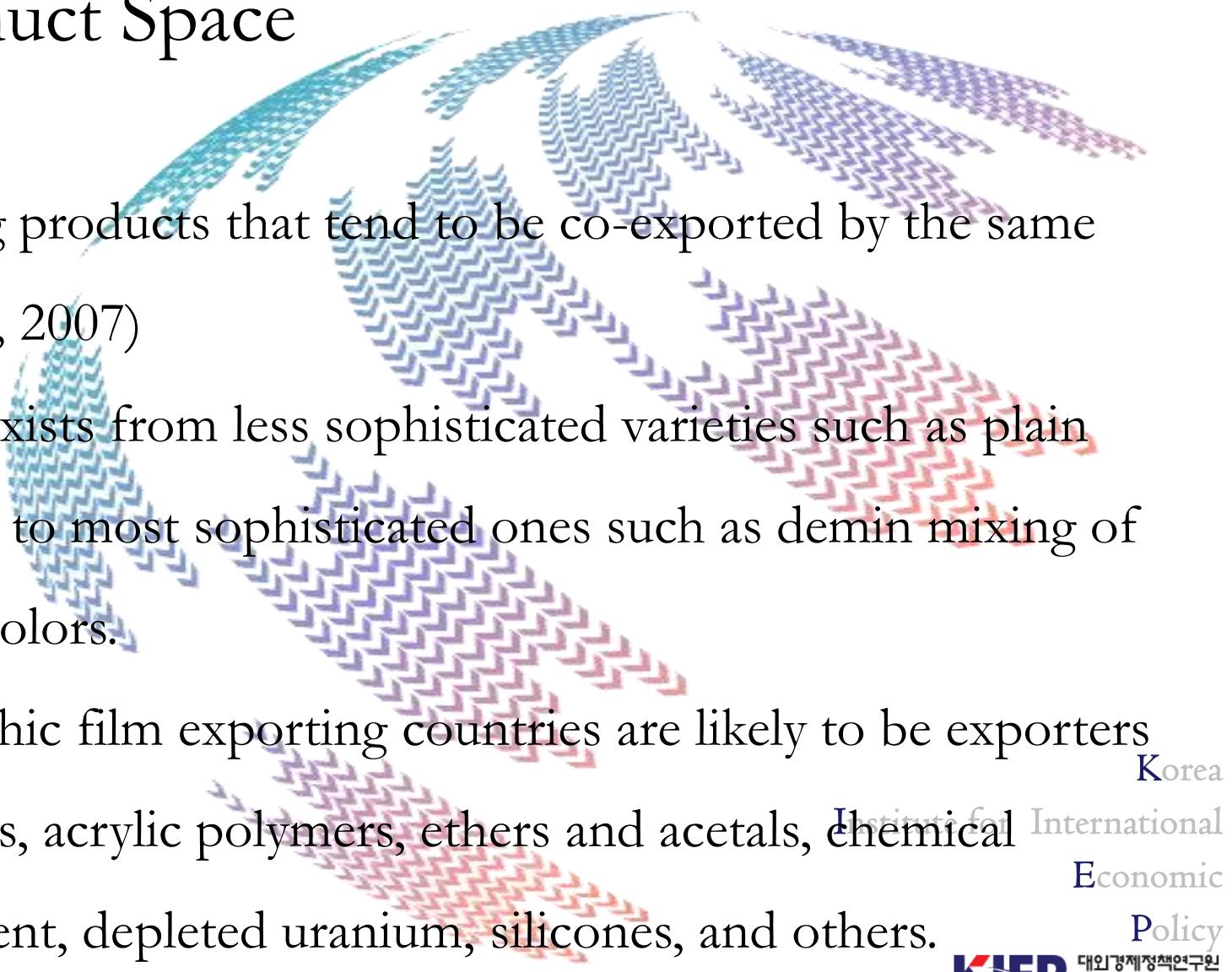
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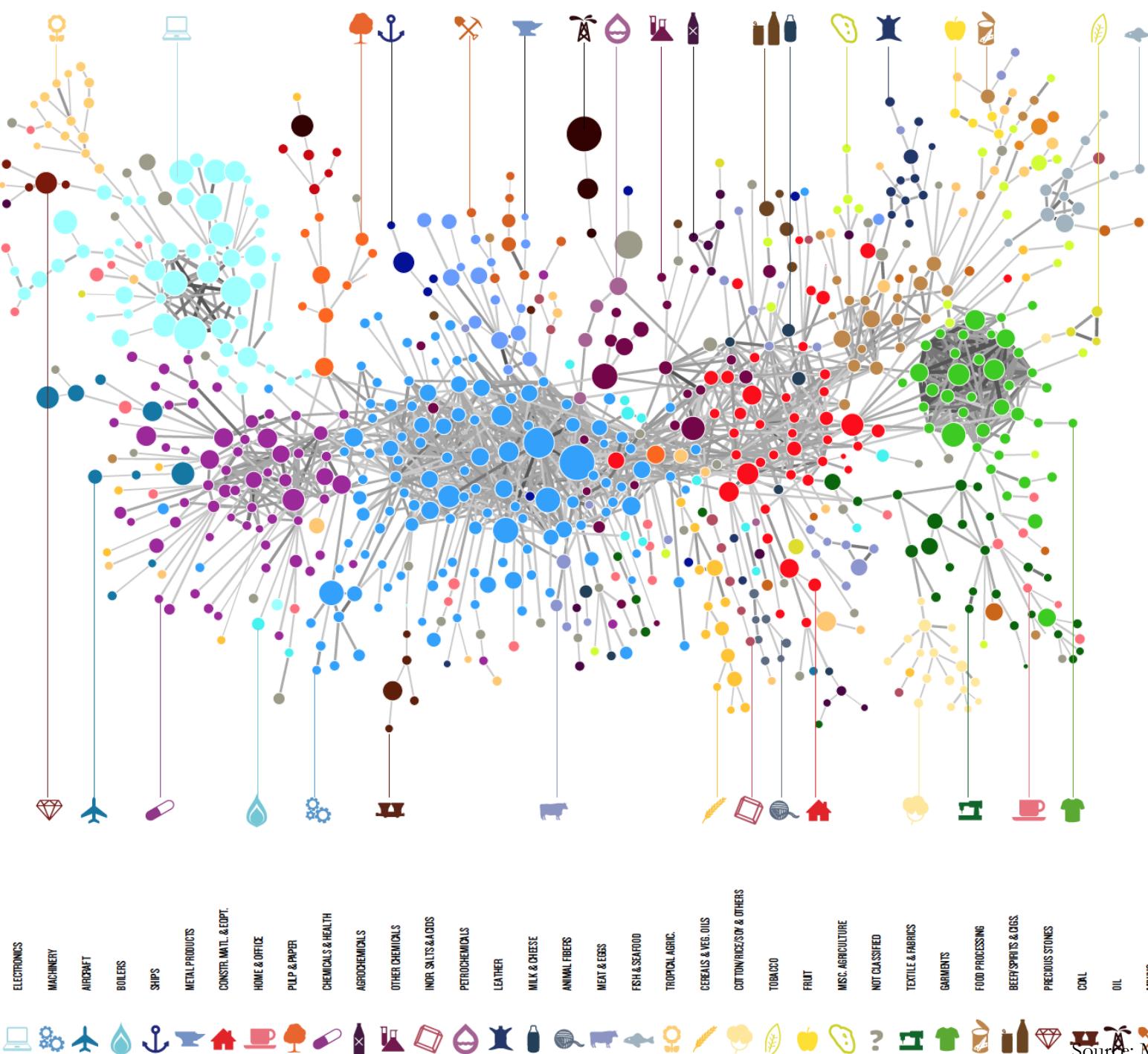
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An Example of Product Space

- The network connecting products that tend to be co-exported by the same countries (Hidalgo et al., 2007)
- Textile industry widely exists from less sophisticated varieties such as plain woven fabrics of cotton to most sophisticated ones such as denim mixing of different materials and colors.
- For example, photographic film exporting countries are likely to be exporters of non-optical glass balls, acrylic polymers, ethers and acetals, chemical products, X-ray equipment, depleted uranium, silicones, and others.



Product Space

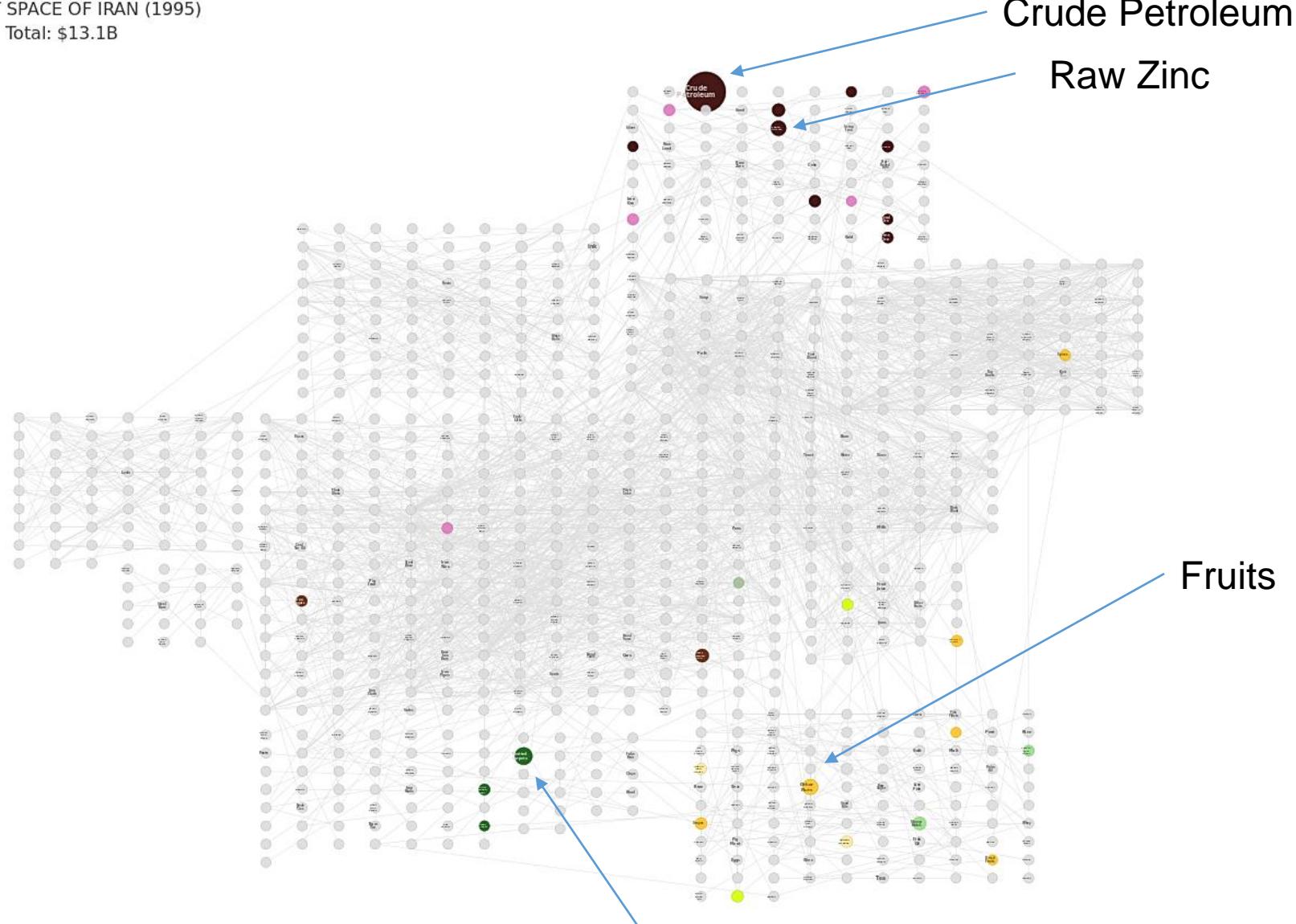


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Source: MIT Observatory of Economic Complexity

PRODUCT SPACE OF IRAN (1995)

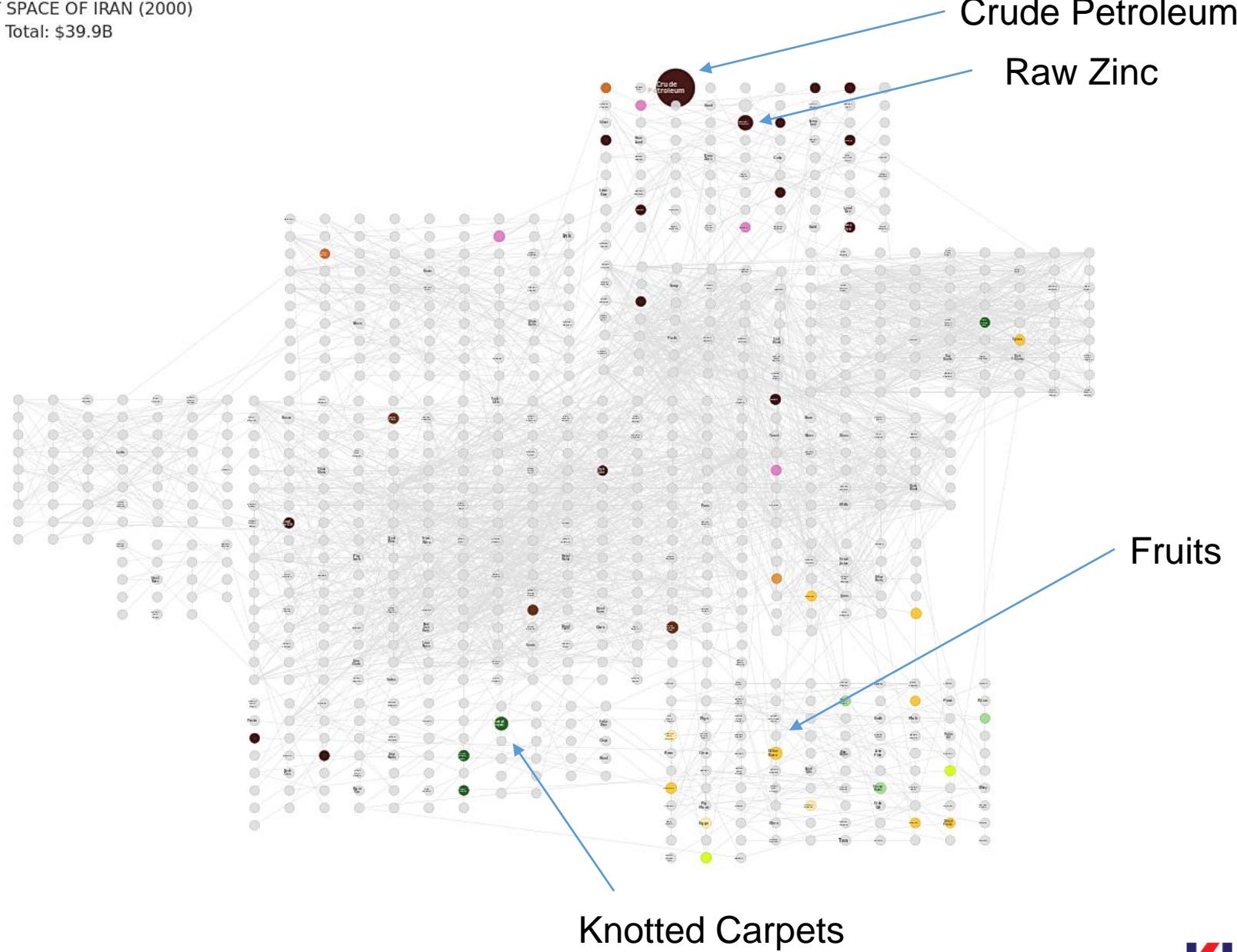
Total: \$13.1B



Source: MIT Observatory of Economic Complexity

PRODUCT SPACE OF IRAN (2000)

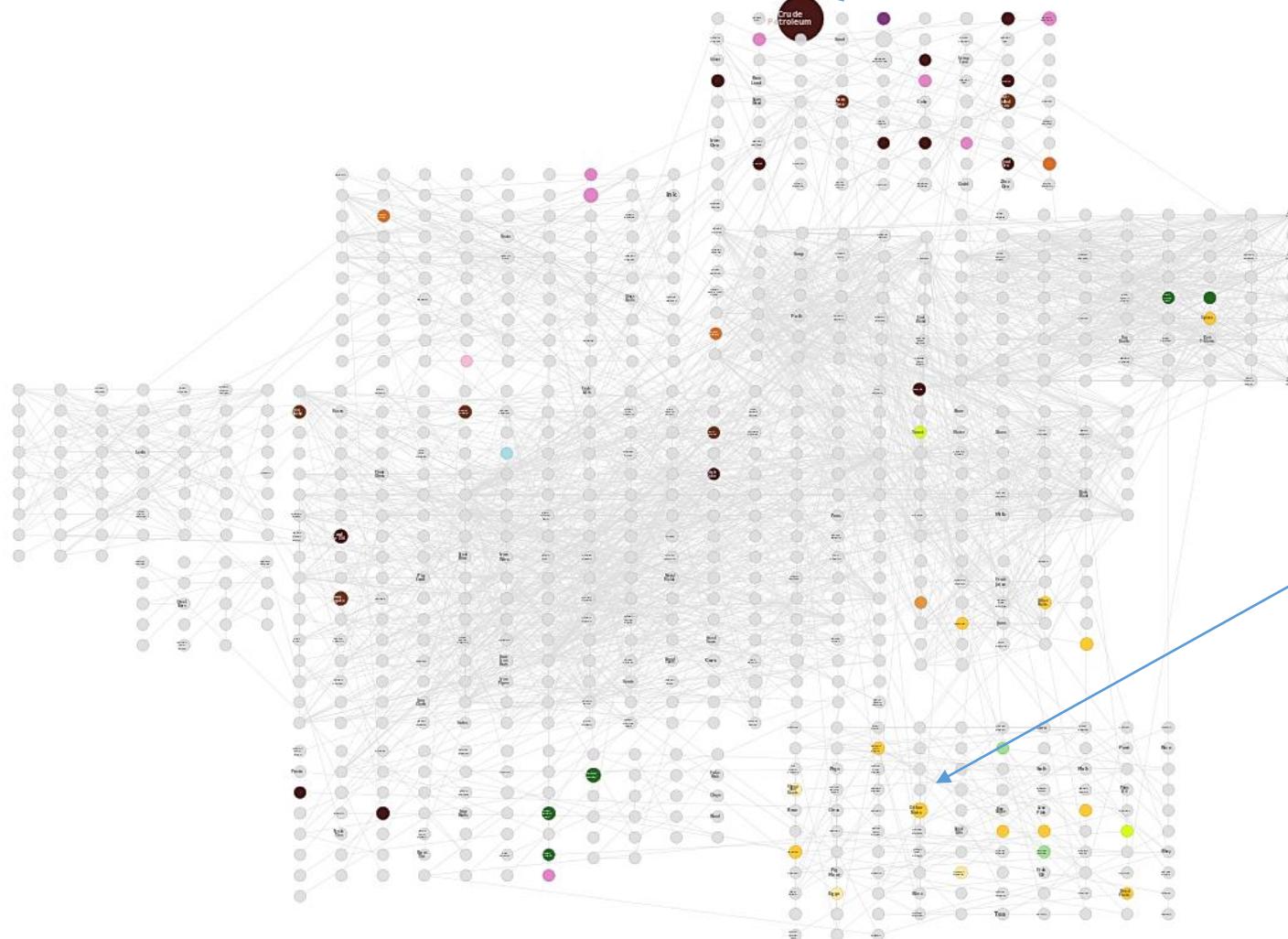
Total: \$39.9B



Source: MIT Observatory of Economic Complexity

PRODUCT SPACE OF IRAN (2005)

Total: \$67.9B



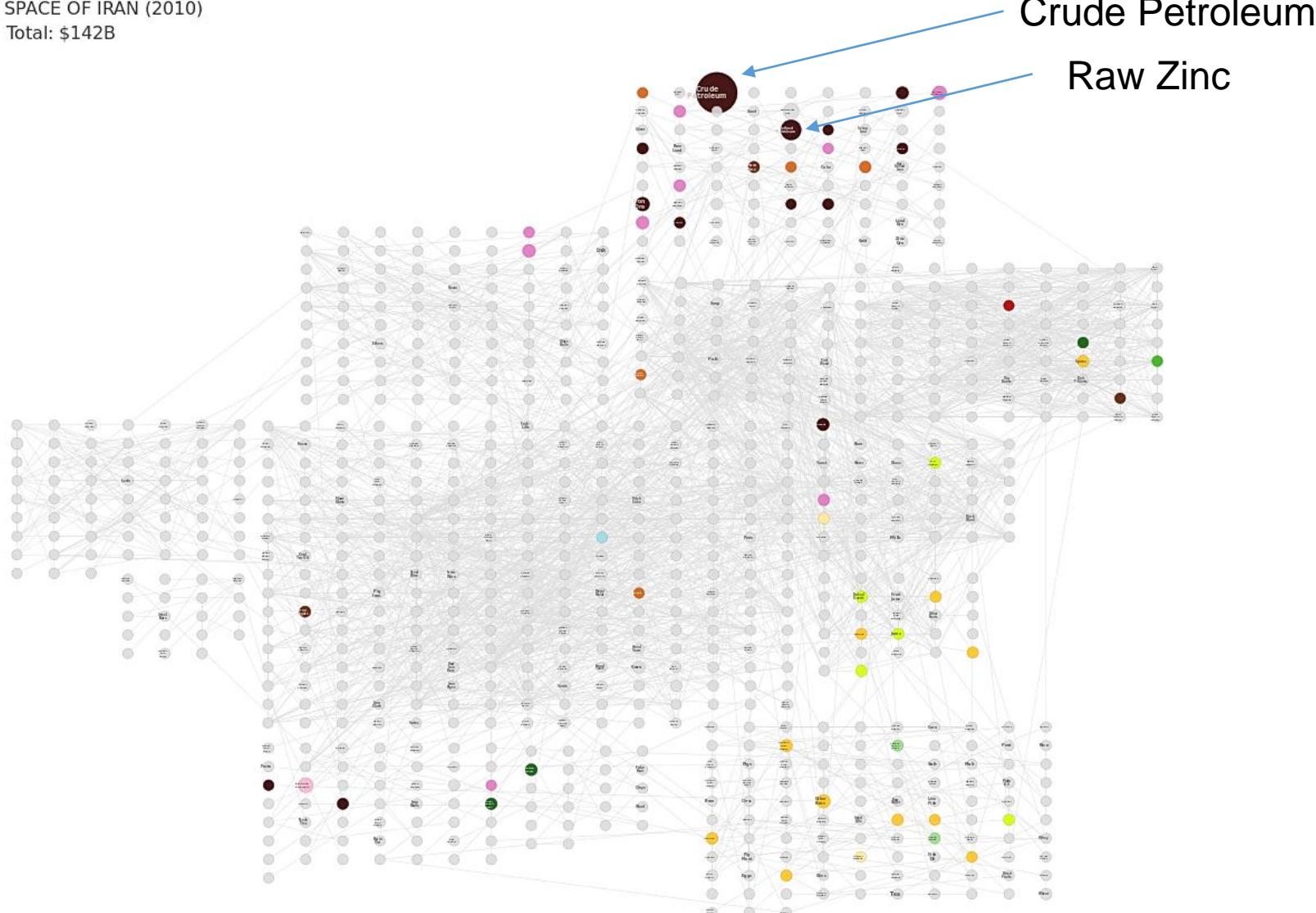
Crude Petroleum

Fruits

Source: MIT Observatory of Economic Complexity

PRODUCT SPACE OF IRAN (2010)

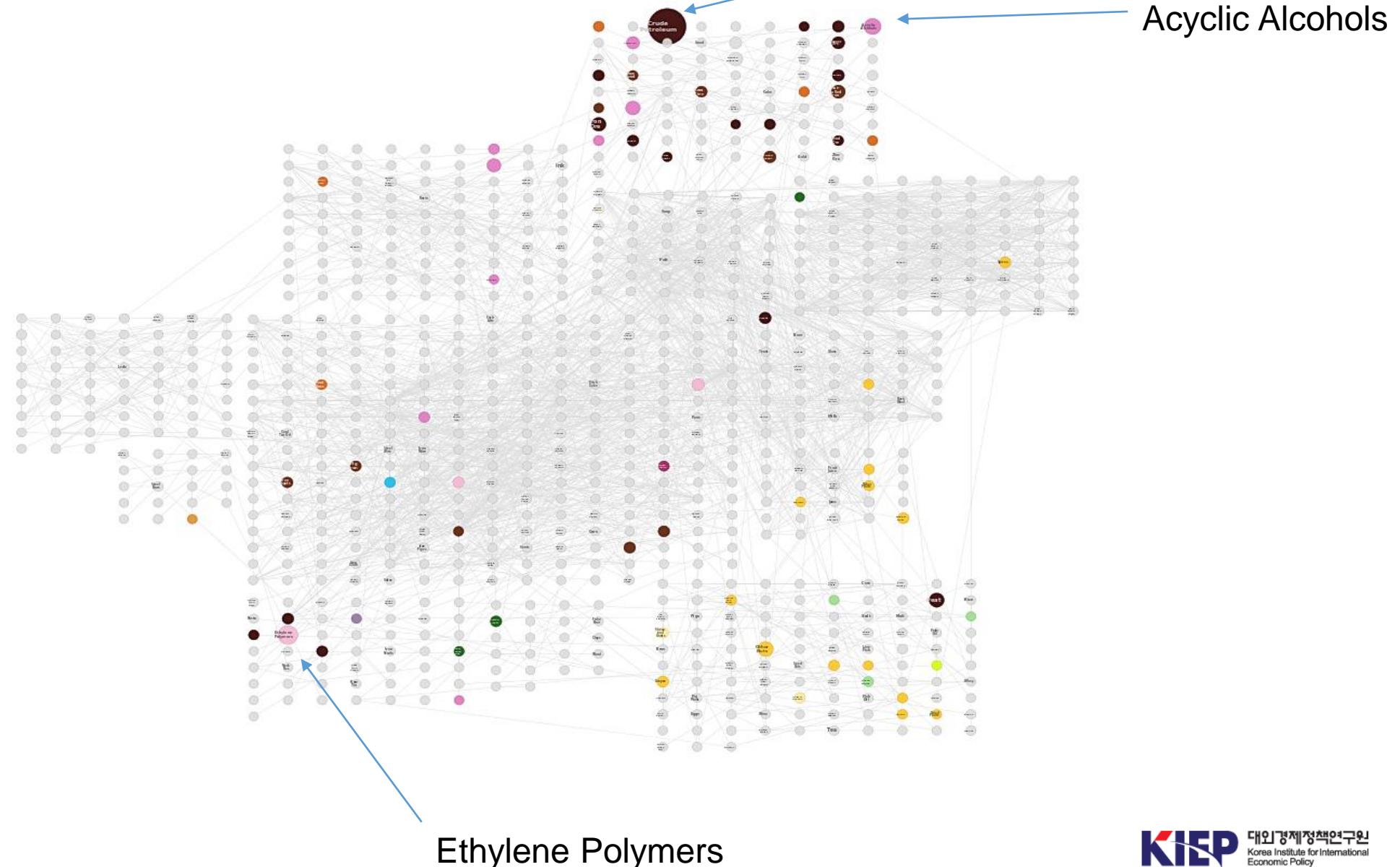
Total: \$142B



Source: MIT Observatory of Economic Complexity

PRODUCT SPACE OF IRAN (2015)

Total: \$31.8B



Source: MIT Observatory of Economic Complexity

Key Recommendations from Product Space Analysis

- Iran might focus on petroleum related products such as alloy and copper products, synthetic rubber.
- Iran may also have a great potential in food products such as milk related products.
- Since Iran is specialized in Asphalt and cement related products, locomotive parts or construction parts industry might be promising.

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Key Recommendations from Product Space Analysis

- Even during the sanction, Iran has expanded its economic complexity. Industry policy to grow a few focus-product related industry could be advised.
- This analysis is very limited because it is using only exporting goods (domestic productions not considered) in limited time data.

V. Policy Suggestions for a Sustainable Partnership between Iran and Korea



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Policy Suggestions for a Sustainable Partnership between Iran and Korea

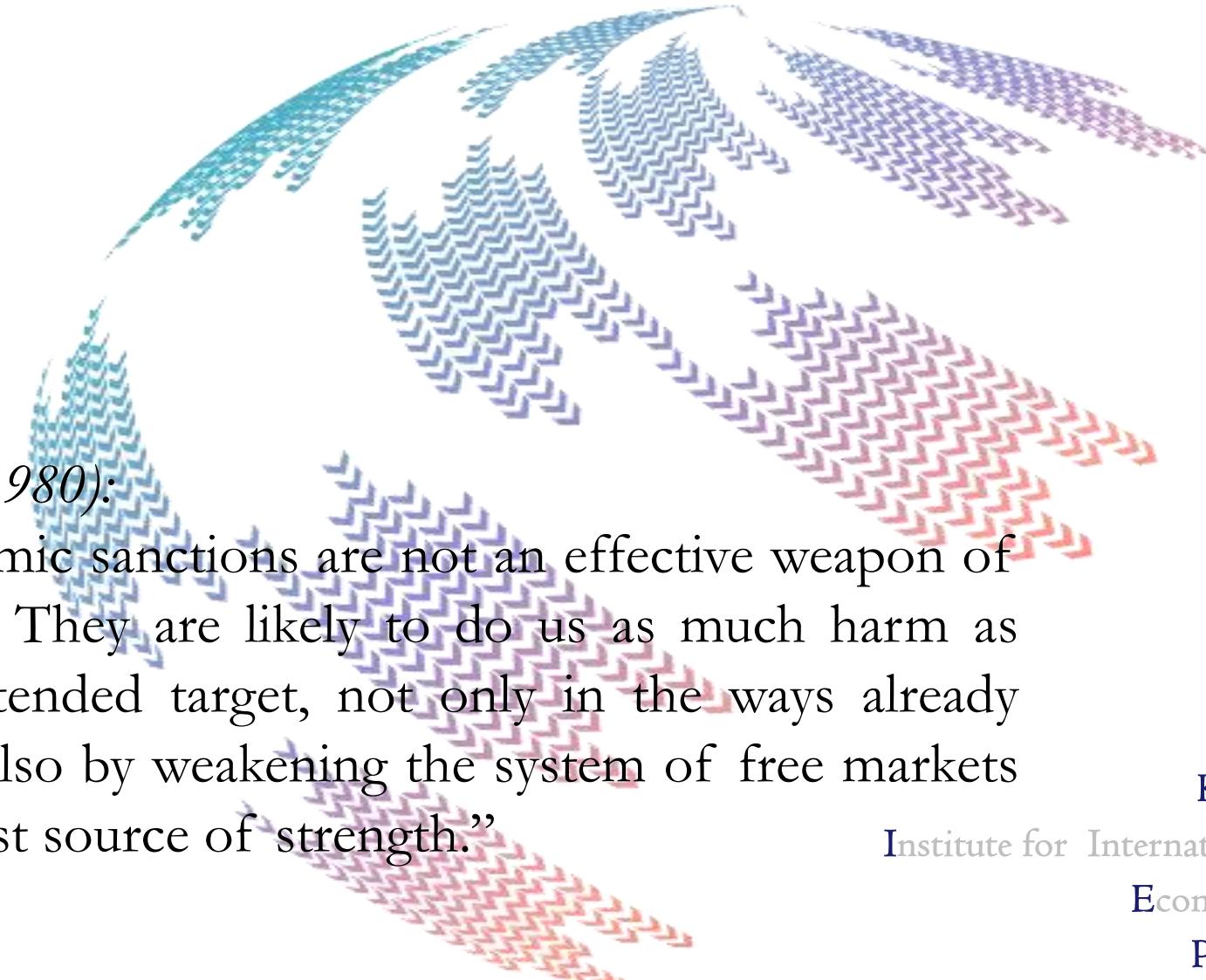
- The two countries have a long economic partnership history from oil plant and construction industry, which are still important sector in Iran.
- After the sanction lifted, the two countries' cooperation should not be limited in specific industry or sectors, but extend to various sectors such as transportation infrastructure, ICT, medical industry, education, environment services.

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Policy Suggestions for a Sustainable Partnership between Iran and Korea

- Iran and Korea can cooperate in the automobile industry to find a mutually beneficial relationship for both.
- The two countries' cooperation platform to support G2G, B2B, B2G, and financing partnerships is important.



Thank You

Milton Friedman (1980):

“All in all, economic sanctions are not an effective weapon of political warfare. They are likely to do us as much harm as they do their intended target, not only in the ways already mentioned, but also by weakening the system of free markets that is our greatest source of strength.”