



# Workshop on Trade Policy and Trade Indicators

## Module 2.4



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# Similar Export Baskets

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One way to estimate the possible complementarity or competitiveness between two countries is analyzing how similar the structure of their exports baskets is.

Traditionally this is done through percentages, shown graphically or in tables which the reader then compares. It is always a snapshot.

There are also synthetic indicators that enable a more precise analysis considering the development over time.

# Analysis of Export Baskets

Selected countries: main 15 products exported to the USA, 2016

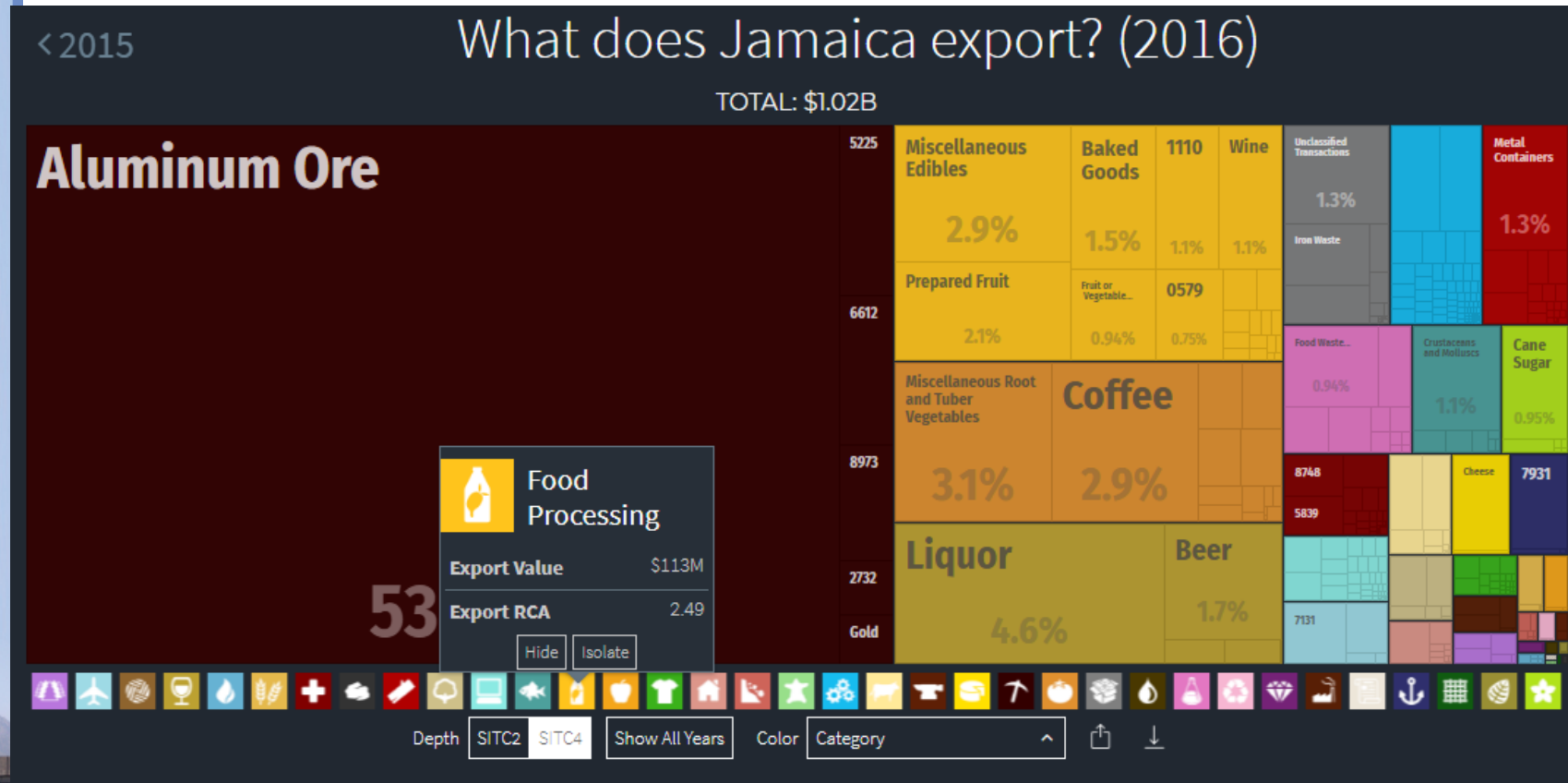
(Shares and millions of dollar)

| Belize |      |       | Dominican Rep. |       |       | Jamaica |       |       |
|--------|------|-------|----------------|-------|-------|---------|-------|-------|
| CUCI3  | US\$ | 90.0% | CUCI3          | US\$  | 81.5% | CUCI3   | US\$  | 88.6% |
| 059    | 19.2 | 23.5  | 872            | 919.0 | 20.1  | 334     | 172.5 | 34.6  |
| 036    | 14.0 | 17.1  | 122            | 630.6 | 13.8  | 285     | 131.9 | 26.5  |
| 333    | 11.2 | 13.8  | 897            | 400.9 | 8.8   | 098     | 23.7  | 4.8   |
| 061    | 4.8  | 5.8   | 772            | 393.8 | 8.6   | 054     | 23.0  | 4.6   |
| 893    | 4.8  | 5.8   | 845            | 309.9 | 6.8   | 112     | 16.4  | 3.3   |
| 081    | 4.1  | 5.1   | 851            | 298.1 | 6.5   | 058     | 13.7  | 2.7   |
| 872    | 2.8  | 3.4   | 893            | 136.8 | 3.0   | 048     | 10.4  | 2.1   |
| 248    | 2.7  | 3.4   | 841            | 129.3 | 2.8   | 522     | 9.6   | 1.9   |
| 098    | 2.2  | 2.7   | 061            | 107.8 | 2.4   | 897     | 7.1   | 1.4   |
| 057    | 2.0  | 2.4   | 541            | 107.7 | 2.4   | 931     | 6.5   | 1.3   |
| 551    | 1.8  | 2.2   | 778            | 66.5  | 1.5   | 692     | 6.2   | 1.2   |
| 112    | 1.3  | 1.5   | 764            | 61.5  | 1.3   | 057     | 5.3   | 1.1   |
| 897    | 1.2  | 1.5   | 054            | 57.3  | 1.3   | 744     | 5.2   | 1.1   |
| 542    | 0.8  | 0.9   | 553            | 53.8  | 1.2   | 713     | 5.1   | 1.0   |
| 553    | 0.7  | 0.9   | 658            | 53.8  | 1.2   | 071     | 5.0   | 1.0   |

Source: CEPAL, using data from COMTRADE

# Analysis of Export Baskets

Observatory of Economic Complexity: Jamaica's exports to the world, 2016  
(SITC at 4 digits level)





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# Similarity Index

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Measures the difference in the export structures of two countries, calculated as the sum of the minimal share of each product group in the total exports of each economy, to the same destination.

It always lies between 0 and 1. It is 0 for two countries that have totally distinct trade structures, thereby hinting on the absence of any competition or complementarity between those countries.

$$SI = \sum_{k=1}^n \text{Min} \left[ \frac{X_i^k}{XT_i}, \frac{X_j^k}{XT_j} \right]$$

# Analysis of the similarity Index

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Selected countries: similarity index to the USA, 2016

|                | Belize | Dominican Rep. | Jamaica | Surinam |
|----------------|--------|----------------|---------|---------|
| Belize         |        | 0.36           | 0.26    | 0.20    |
| Dominican Rep. | 0.36   |                | 0.21    | 0.49    |
| Jamaica        | 0.26   | 0.21           |         | 0.17    |
| Surinam        | 0.20   | 0.49           | 0.17    |         |

Source: CEPAL, using data from COMTRADE



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# Krugman Index

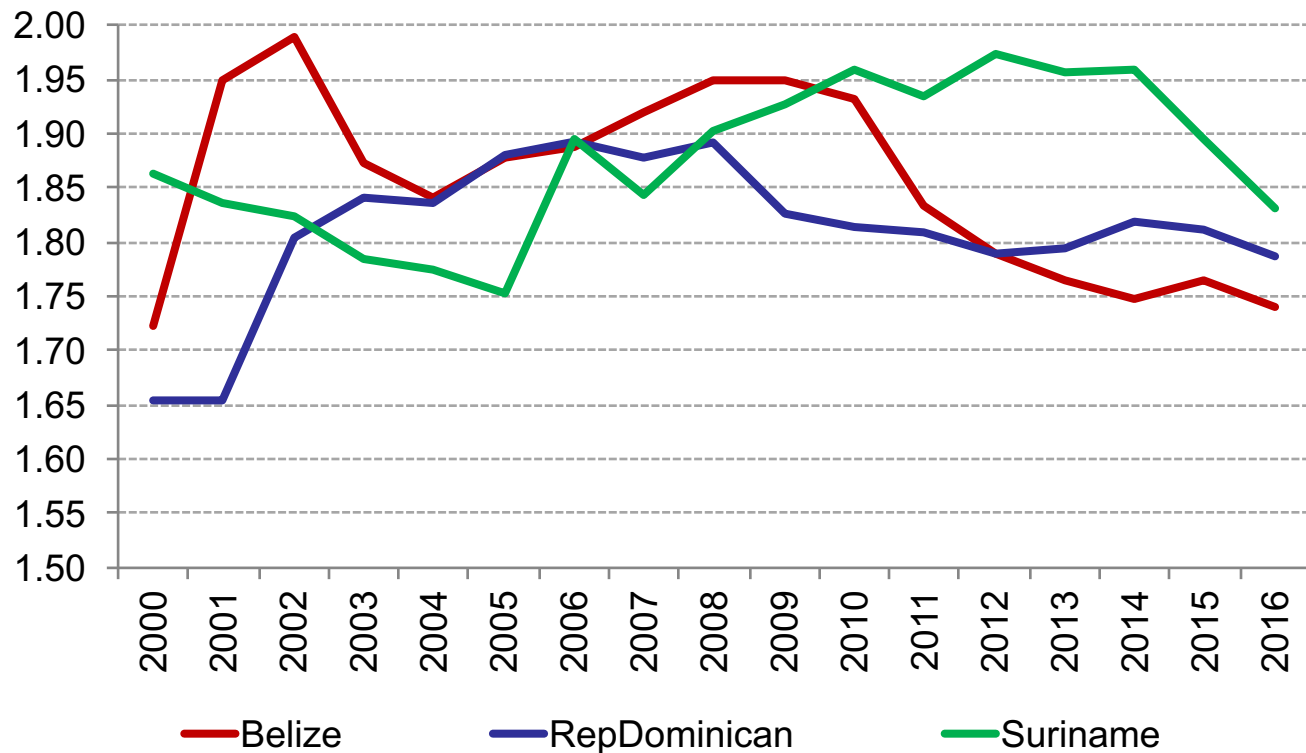
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Measures the difference between export structures, by summing up the differences in the share of each industry in a country's total and the corresponding share of the same industry of another reference country. The index varies between 0 (the structures are exactly equal) and 2 (there is absolutely no overlap in the trade structures of the two countries).

$$KI_i = \sum_{k=1}^n |P_i^k - P_j^k|$$

# Analysis of the Krugman Index

Jamaica: Krugman index referred to Belize, Dominican Rep., and Surinam, exporting to the United States 2000-2016



Source: CEPAL, using data from COMTRADE





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# Exercise: Krugman Index

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Please calculate the Krugman index for the exports of Jamaica to the United States, compared with those of Bahamas, Dominican Republic, Mexico and the countries of the Central American Common Market.

$$KI_i = \sum_{k=1}^n |P_i^k - P_j^k|$$



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