

SAS[®] VISUAL ANALYTICS FOR UN COMTRADE



Agenda

Best Practices in Big Data Visualization

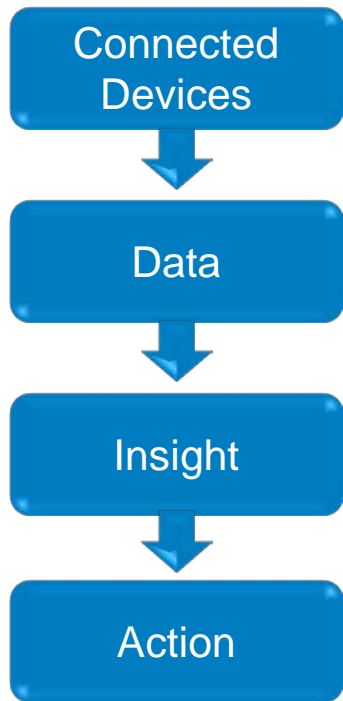
- Big Data update
- SAS Visual Analytics for UN Comtrade
- Lessons Learned

BIG DATA UPDATE IT'S EVERYWHERE!!! AND IT'S GROWING...



- Internet – Social Media
- Internal data sources
- Smart “things”
- And more...

BIG DATA UPDATE “INTERNET OF THINGS“



Smart Grid



Connected PMUs



Detect voltage instabilities on transmission network



Trigger corrective actions to maintain grid reliability

Smart Home



Connected lock



Detect when I leave



Lock the door, set the alarm and adjust the HVAC

Smart Car



Bluetooth dongle reading vehicle data



Predict unsafe conditions & likely collision



Slow the vehicle, alert the driver

Smart City



Sensors embedded in road surface



Detect weather, predict traffic, sense 911 vehicles



Adjust speed limits and shift lane directions to optimize traffic flow

What is SAS Visual Analytics for UN Comtrade?

- **Instant insights on 300+ million rows of trade data**
- **Democratization of INSIGHTS**

What is SAS Visual Analytics for UN Comtrade? Practitioner's Perspective:

- **Data Visualization**
- **Big Data**
- **The Cloud**
- **High Performance Analytics**

What is SAS Visual Analytics for UN Comtrade? Practitioner's Perspective:

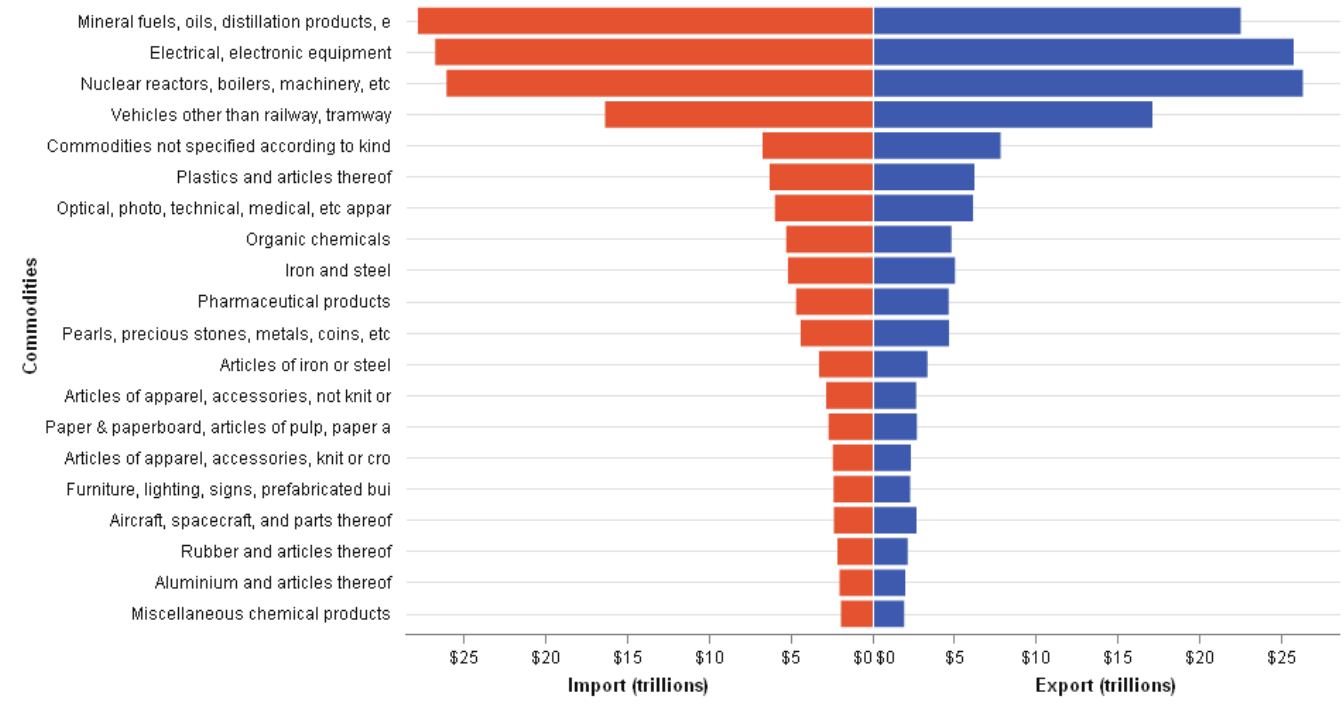
- **Data Visualization**
 - Static views VS Dynamic Interactions
 - Specific questions VS “Let the data tell the story”

Data Visualization: Dynamic Interactions

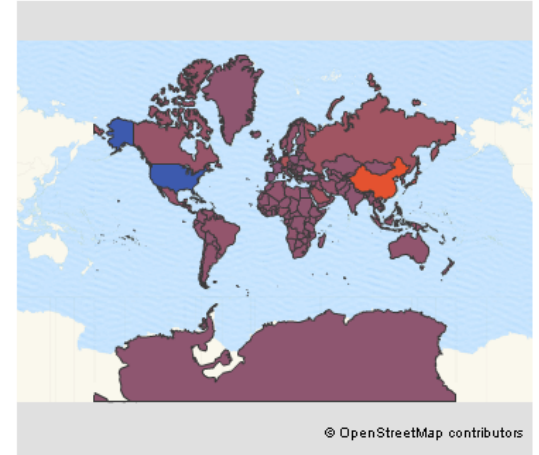
Select Reporter: Select Year (1988 - 2013): Select Partner:

[MORE INFO](#)

Top 20 Commodities



Partners

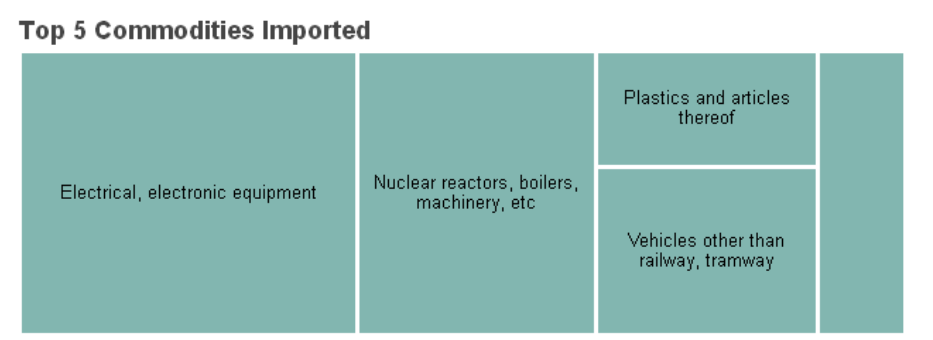
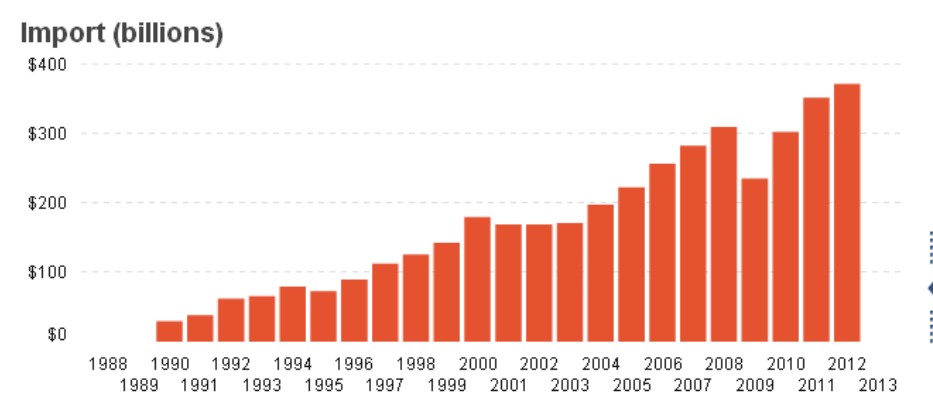
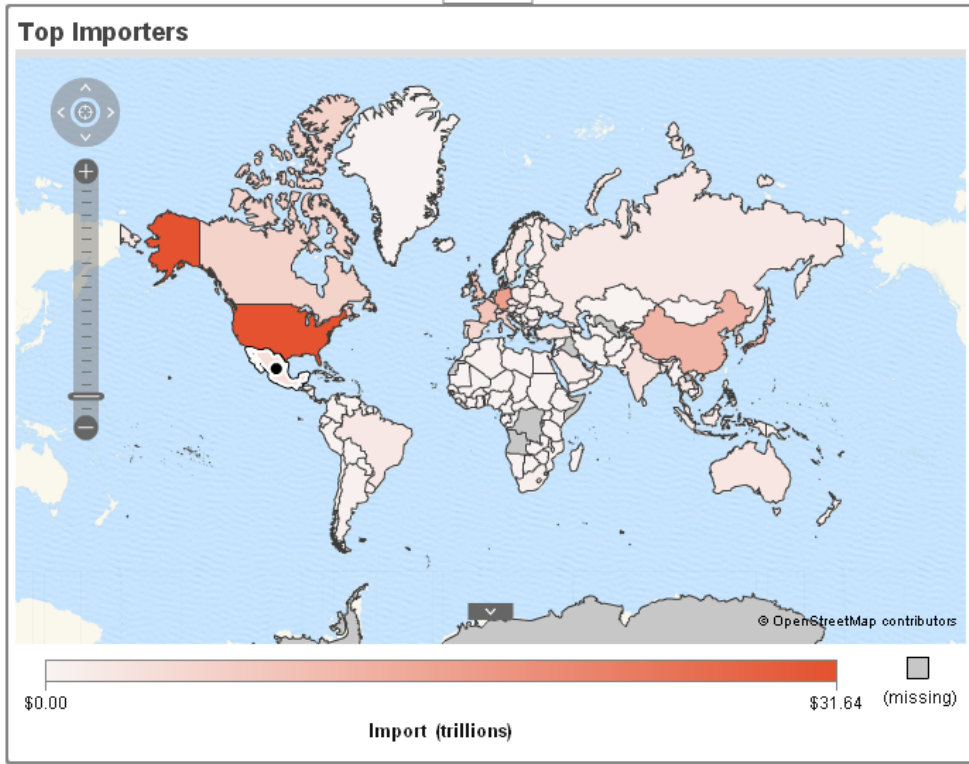


Partner	Import	Export
China	\$19,674,705,630,865	\$11,1
United States	\$19,589,737,134,283	\$27,7
Germany	\$16,692,827,131,857	\$13,6
Japan	\$12,745,205,161,966	\$8,2
France	\$8,470,576,114,466	\$9,1

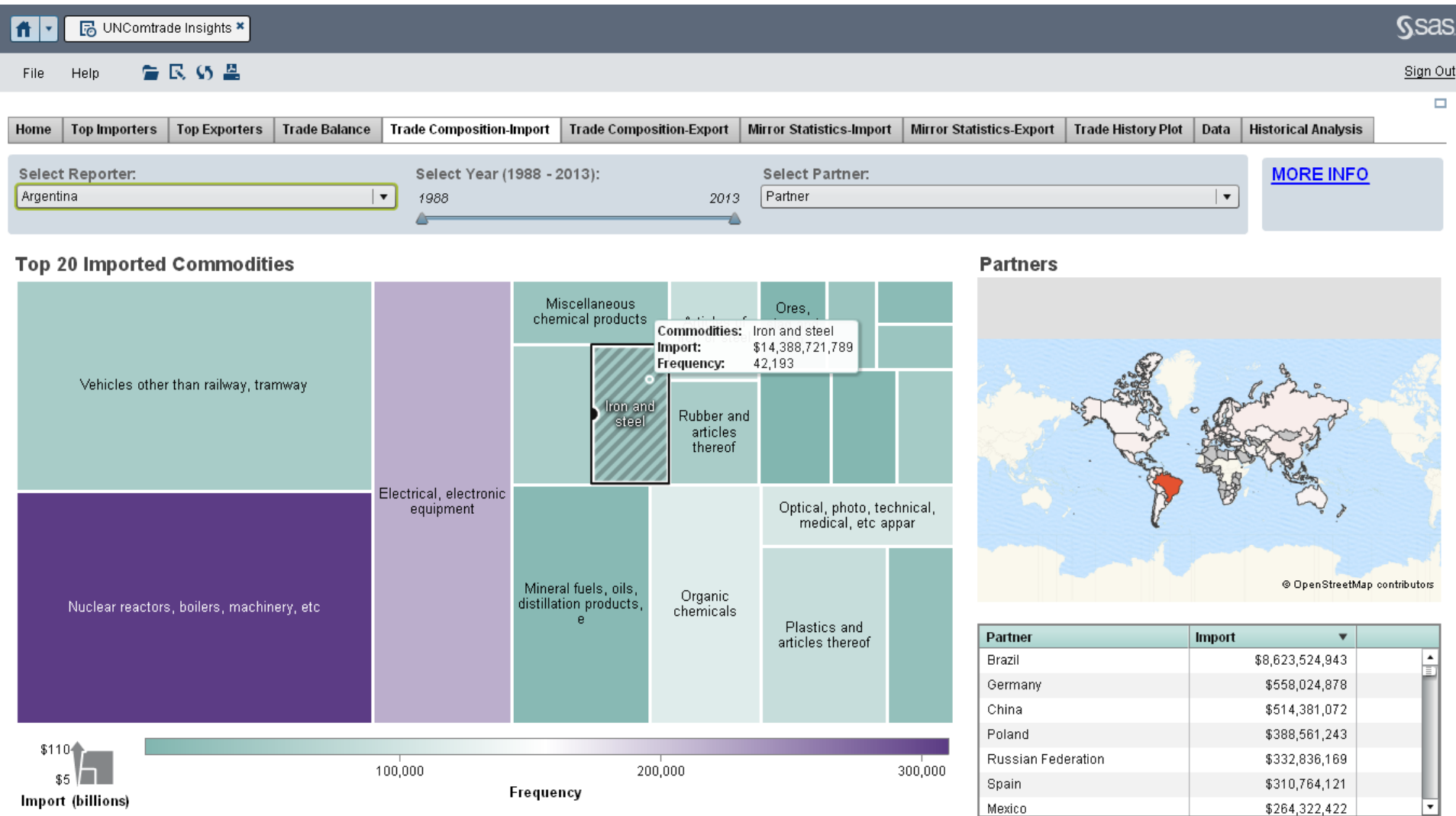
Data Visualization: Dynamic Interactions

Select Region: Reporter Region Select Year (1988 - 2013): 1988 2013 Select Commodity: Commodities

[MORE INFO](#)



Data Visualization: Let the Data tell the story



What is SAS Visual Analytics for UN Comtrade? Practitioner's Perspective:

- **Big Data**
 - Sampling VS Using Full Dataset
 - One dataset VS Multiple Disparate Datasets

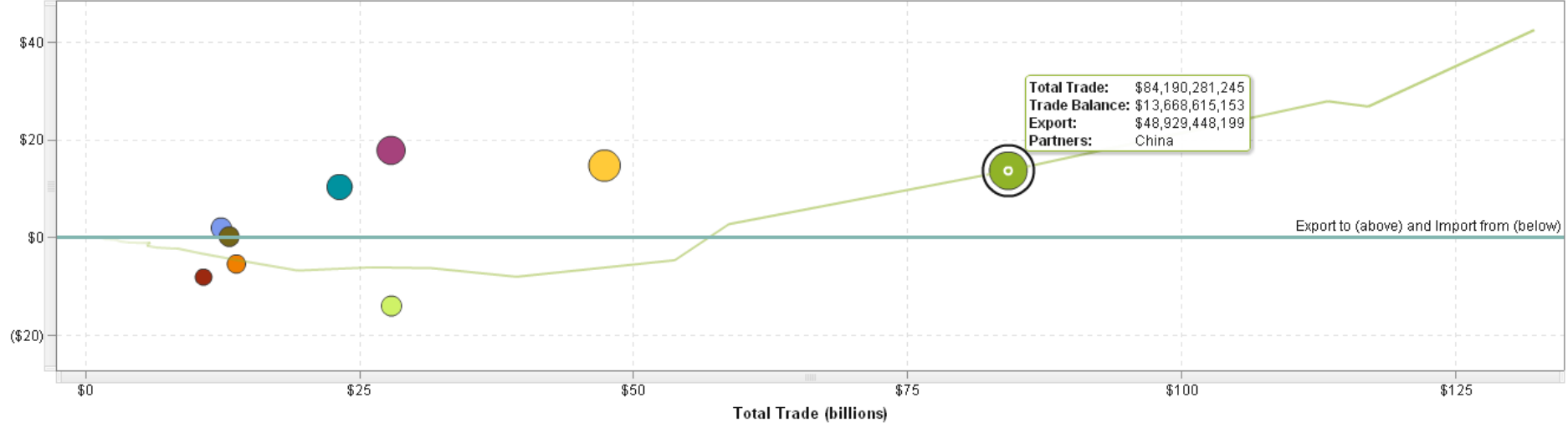
Big Data: No more sampling

Select Reporter: Australia
 Select Partner: All Partners
 Select Commodity: All Commodities

[CLICK HERE FOR MORE INFO ON THIS SECTION](#)

Top Trading Partners Since 1988

Trade Balance (billions)



Export (billions) \$87 \$0

Partners: Areas, nes, China, Germany, Japan, Korea, Republic of, New Zealand, Singapore, Special Categories, United Kingdom, United States

Play, 2010, Loop, Speed: 1/5X, 1X, 5X

Big Data: Use entire/multiple data sets

UNComtrade Insights sas Sign Out

File Help Home Top Importers Top Exporters Trade Balance Trade Composition-Import Trade Composition-Export Mirror Statistics-Import Mirror Statistics-Export Trade History Plot Data Historical Analysis

Select Year (1988 - 2013): 1988 2013

Select Partner: Partner [MORE INFO](#)

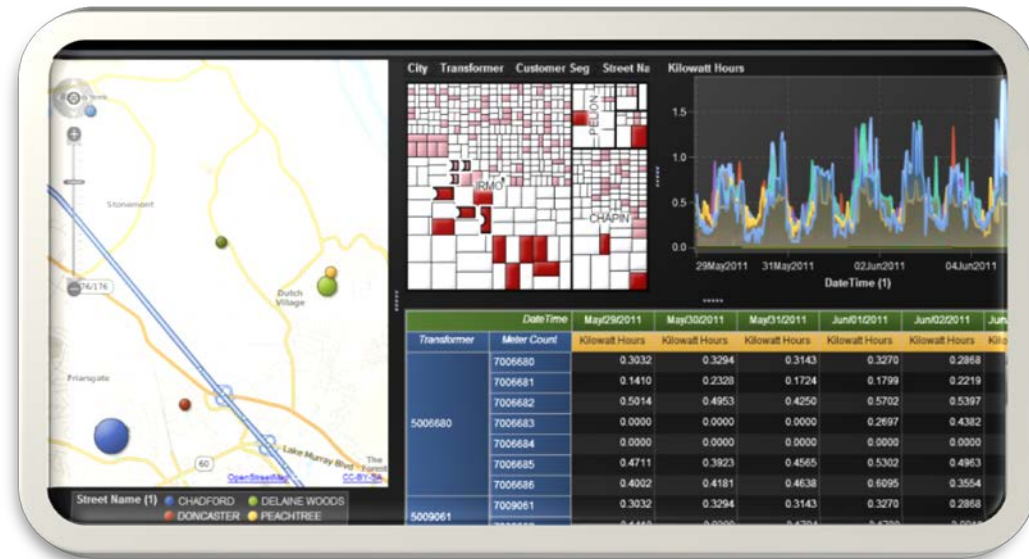
Data

Reporter	Export	Import	Trade_Balance	Export_Mirror	Import_Mirror
Total	\$198,383,181,211,441	\$203,400,251,952,336	(\$5,017,070,740,895)	\$203,400,251,952,336	\$198,383,181,211,441
Afghanistan	\$2,136,743,889	\$24,105,839,829	(\$21,969,095,940)	\$6,472,541,552	\$67,047,305,166
Albania	\$15,623,088,651	\$51,081,845,045	(\$35,458,756,394)	\$18,902,330,064	\$44,907,758,631
Algeria	\$756,904,223,123	\$478,805,422,144	\$278,098,800,979	\$720,151,278,430	\$443,215,621,197
American Samoa	.	.	.	\$638,491,754	\$2,132,643,692
Andorra	\$910,659,986	\$11,819,403,311	(\$10,908,743,325)	\$2,890,112,719	\$29,903,462,000
Angola	.	.	.	\$504,668,566,630	\$173,359,232,204
Anguilla	\$54,431,373	\$1,115,875,828	(\$1,061,444,455)	\$199,458,524	\$1,745,620,167
Antarctica	.	.	.	\$122,148,040	\$601,005,119
Antigua and Barbuda	\$555,322,084	\$4,474,432,172	(\$3,919,110,088)	\$12,723,273,619	\$22,444,645,944
Areas, nes	.	.	.	\$2,552,345,381,827	\$4,166,526,595,916
Argentina	\$794,389,309,045	\$663,775,238,540	\$130,614,070,505	\$897,214,082,964	\$664,526,636,471
Armenia	\$13,026,384,102	\$37,420,882,074	(\$24,394,497,972)	\$10,976,876,147	\$23,114,608,718
Aruba	\$1,610,609,169	\$13,299,994,880	(\$11,689,385,711)	\$41,793,497,838	\$33,478,558,971
Australia	\$2,603,948,451,682	\$2,639,558,544,632	(\$35,610,092,950)	\$2,515,755,692,318	\$2,237,980,999,729
Austria	\$1,906,838,486,202	\$2,023,992,189,178	(\$117,153,702,976)	\$2,029,062,103,620	\$2,211,090,534,370
Azerbaijan	\$166,189,939,608	\$68,717,412,800	\$97,472,526,808	\$182,709,537,639	\$100,283,954,759
Bahamas	\$7,905,839,850	\$39,306,677,444	(\$31,400,837,594)	\$37,395,262,949	\$128,860,217,084
Bahrain	\$127,340,992,230	\$120,045,650,433	\$7,295,341,797	\$103,403,541,419	\$108,727,845,916
Bangladesh	\$92,444,404,597	\$424,210,252,720	(\$331,765,848,123)	\$342,750,404,295	\$266,234,545,724

What is SAS Visual Analytics for UN Comtrade? Practitioner's Perspective:

- **The Cloud**

- Access Insights via browser or tablet
- Easier to scale
- Sometimes cheaper



What is SAS Visual Analytics for UN Comtrade? Practitioner's Perspective:

- **High Performance Analytics**
 - Hours VS seconds
 - Integrated analytics

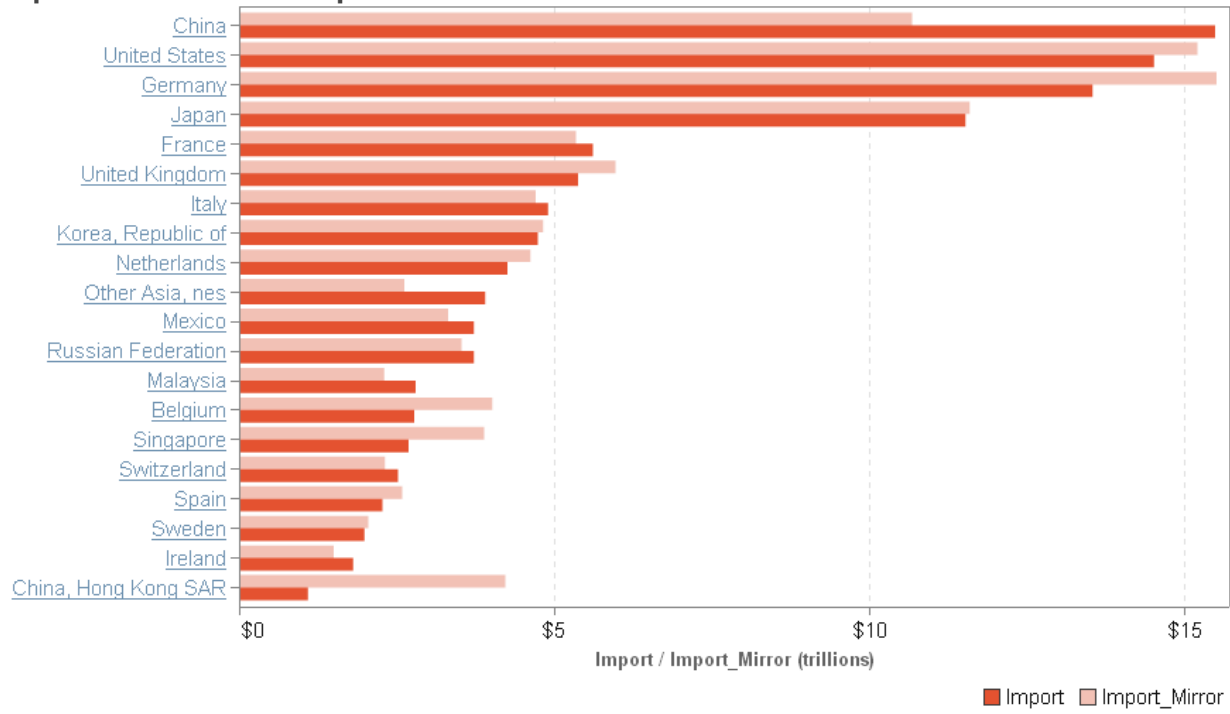
High Performance Analytics: Integrated Analytics

Select Reporter:

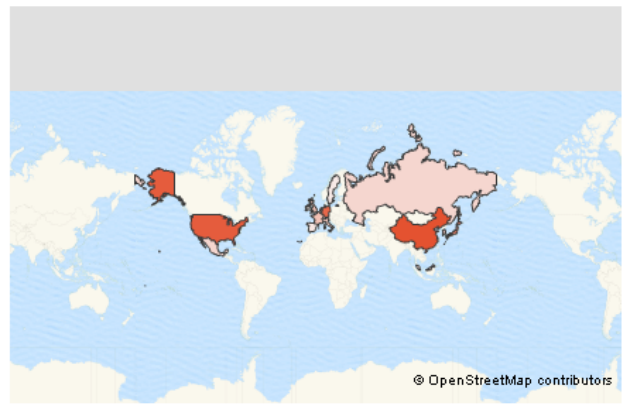
Select Year (1988 - 2013):

[MORE INFO](#)

Import Mirror Statistics - Top 20 Commodities



Trade Partners



Commodities	Import	Import
Mineral fuels, oils, distill...	\$27,842,199,185,375	\$22,530,722,6...
Electrical, electronic eq...	\$26,773,687,407,439	\$25,774,277,3...
Nuclear reactors, boiler...	\$26,100,946,700,867	\$26,320,390,2...
Vehicles other than rail...	\$16,392,231,842,626	\$17,117,936,6...
Commodities not specifi...	\$6,746,749,768,544	\$7,829,170,8...
Plastics and articles the...	\$6,315,249,565,406	\$6,224,597,9...
Optical, photo, technical,...	\$5,997,341,629,709	\$6,129,837,3...

SAS® Visual Analytics for UN Comtrade

**Traditional Analysis of
UN Comtrade**

**SAS Visual Analytics
for UN Comtrade**

SAS® Visual Analytics for UN Comtrade

Traditional Analysis of UN Comtrade

1. Download data 50,000 rows at a time.

SAS Visual Analytics for UN Comtrade

1. Get instant insights on 300+ million rows of data.

SAS® Visual Analytics for UN Comtrade

Traditional Analysis of UN Comtrade

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2. Manipulate and aggregate data – often requiring help from IT.

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2. Enable any level of user to apply advanced analytics from one easy-to-use environment.

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3. Perform basic analysis of data with Excel or statistics packages.

SAS Visual Analytics for UN Comtrade

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3. Easily perform risk analysis and mirror statistics analysis.

SAS® Visual Analytics for UN Comtrade

Traditional Analysis of UN Comtrade

1. Download data 50,000 rows at a time.
2. Manipulate and aggregate data – often requiring help from IT.
3. Perform basic analysis of data with Excel or statistics packages.
4. Create static reports.

SAS Visual Analytics for UN Comtrade

1. Get instant insights on 300+ million rows of data.
2. Enable any level of user to apply advanced analytics from one easy-to-use environment.
3. Easily perform risk analysis and mirror statistics analysis.
4. Create and easily share visually stunning and revealing reports.

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SAS Visual Analytics for UN Comtrade

- **Free Basic Version**
 - <http://comtrade.un.org> (no log-in required)
- **Advanced Version (coming)**
 - Pre-release access to UN Statistical Commission
 - Subscription-based
 - Email: i-sah.hsieh@sas.com

FREE Basic Version (no log-in required)

<http://comtrade.un.org>

UN Comtrade Database

Free access to detailed global trade data. UN Comtrade is a repository of official trade statistics and relevant analytical tables. It contains annual trade statistics starting from 1962 and monthly trade statistics since 2010

Get trade data »

Visualize data ▾

Legacy annual »

Comtrade Labs

WITS Trade Data Visualizations

SAS Visual Analytics for UN Comtrade

The Atlas of Economic Complexity

Partner Concentration of Trade, 2013

Resources Futures

Global Economic Dynamics

The Observatory of Economic Complexity

ANALYTICAL TABLES

Country Profile

LAST UPDATE: MAY 2014

Overview (in tables, charts and analytical text) of the latest trends of trade in goods and services of most countries in the world.

Commodity Profile

LAST UPDATE: DECEMBER 2014

NEXT UPDATE: DECEMBER 2015

Overview (in tables, charts and analytical text) of the latest trends of trade in goods by commodity classes (SITC Rev. 3 three-digit

Quarterly table of external trade conversion factors

PUBLISHED IN MARCH, JUNE, SEPTEMBER, DECEMBER

External trade conversion factors in US dollars per national currency

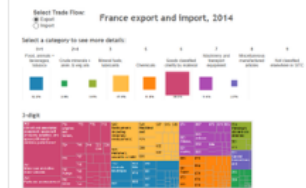
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All set for the 46th Session of the Statist Commission ow.ly/1Hv9n Better

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