

Scatter plot

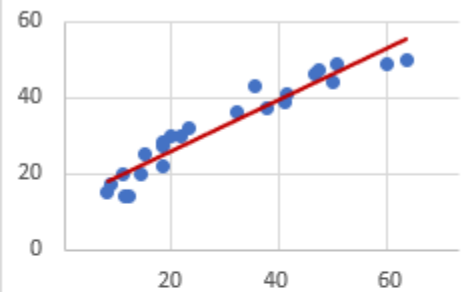
Final assignment

- Deadline January 28th
- Own issue
- Usage of tools introduced in course

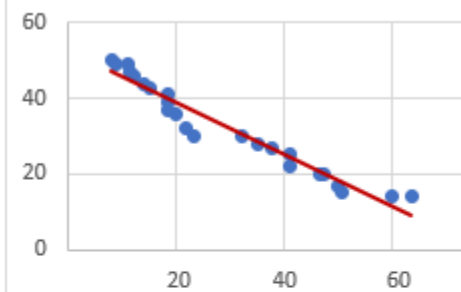
Relationship of two interval variables

- Correlation
- Weight x height
- Unemployment rate x purchase power
- Hours of reading x points in test

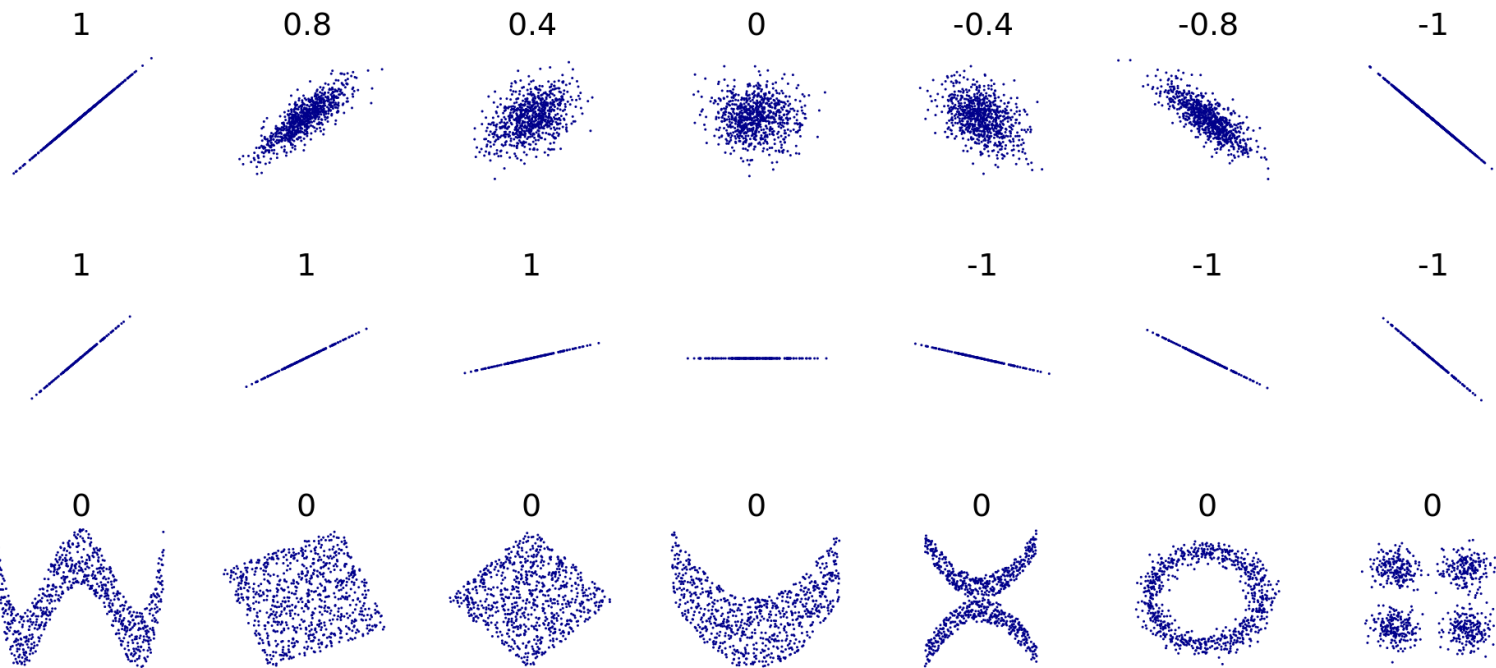
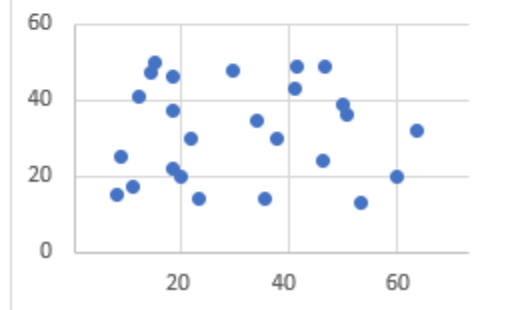
Positive Correlation



Negative Correlation



No Correlation



Scatterplot

The screenshot shows the Microsoft Excel interface with the **Insert** tab selected. The **Charts** group is active, and the **Scatter** chart icon is highlighted with a red circle. A tooltip for the Scatter chart is displayed, providing instructions on when to use this chart type.

Scatter

Use this chart type to:

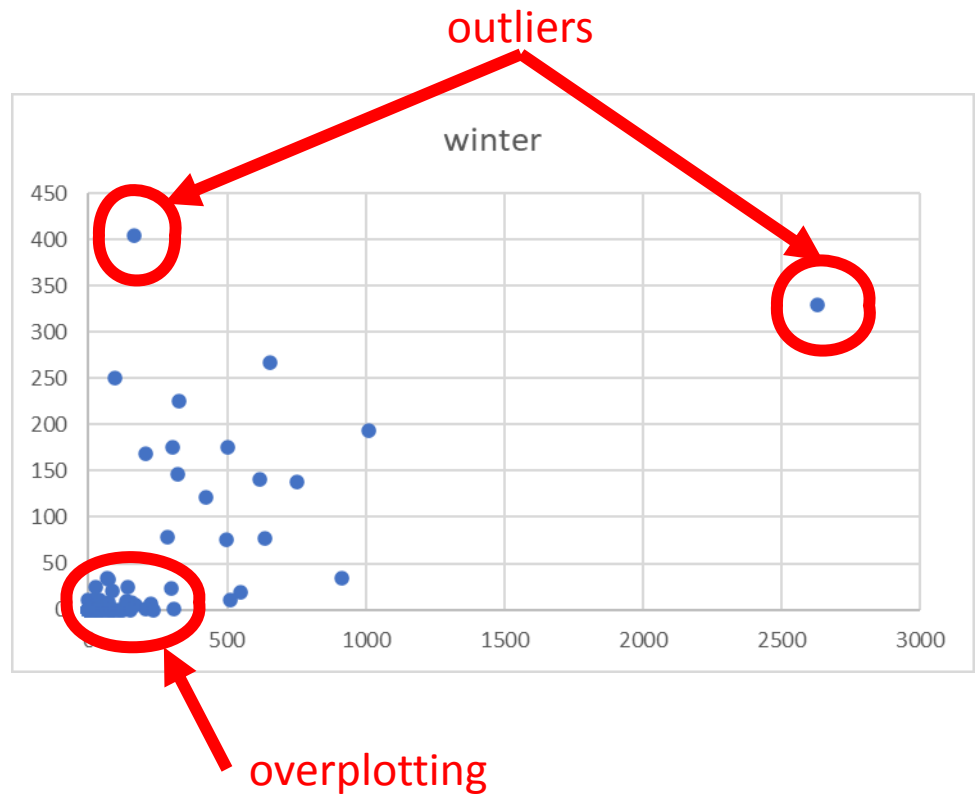
- Compare at least two sets of values or pairs of data.
- Show relationships between sets of values

Use it when:

- The data represents separate measurements.

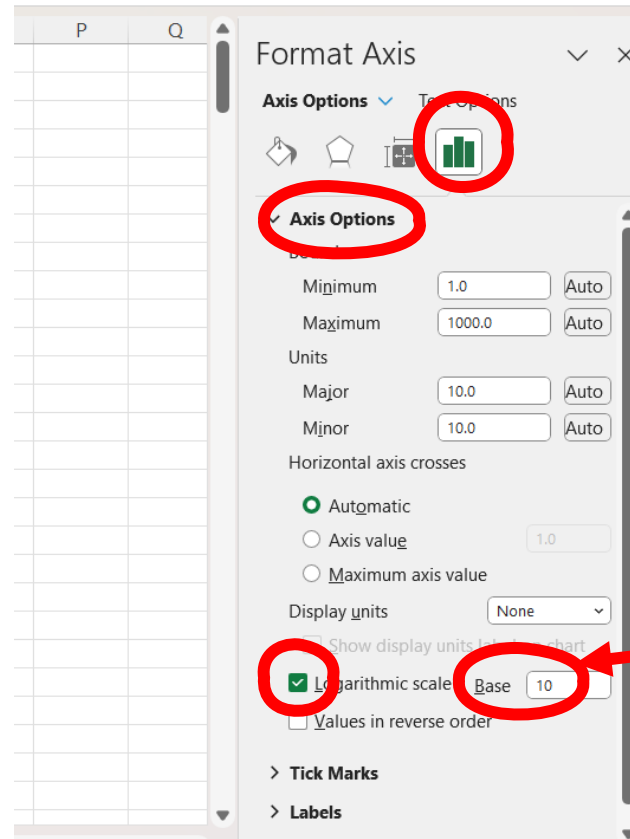
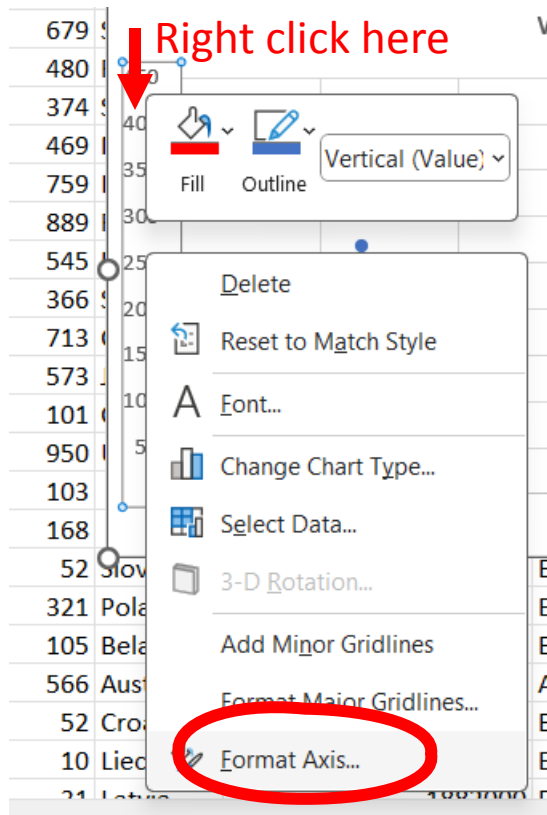
[More Scatter Charts...](#)

	A	B	C	D	E	F	G		L	M
1	Team		summer	winter	total	Country/D	Population	are		
2	Norway	NOR	163	405	568	Norway	5514042	Eur		
3	UnitedState	USA	2629	330	2959	UnitedStat	335591000	Am		
4	Germany	GER	655	267	922	Germany	84482267	Eur		
5	Austria	AUT	96	250	346	Austria	9129652	Eur		
5	Canada	CAN	326	225	551	Canada	40484600	Am		
7	SovietUnion	URS	1010	194	1204					
3	Sweden	SWE	503	176	679					
9	Finland	FIN	305	175	480					
0	Switzerland	SUI	206	168	374					
1	Netherlands	NLD	322	147	469					



Log axis

- Solution when there is a lot of small values and a few high values
 - Typical situation: population
- Problem: it does not work for 0 and negative numbers

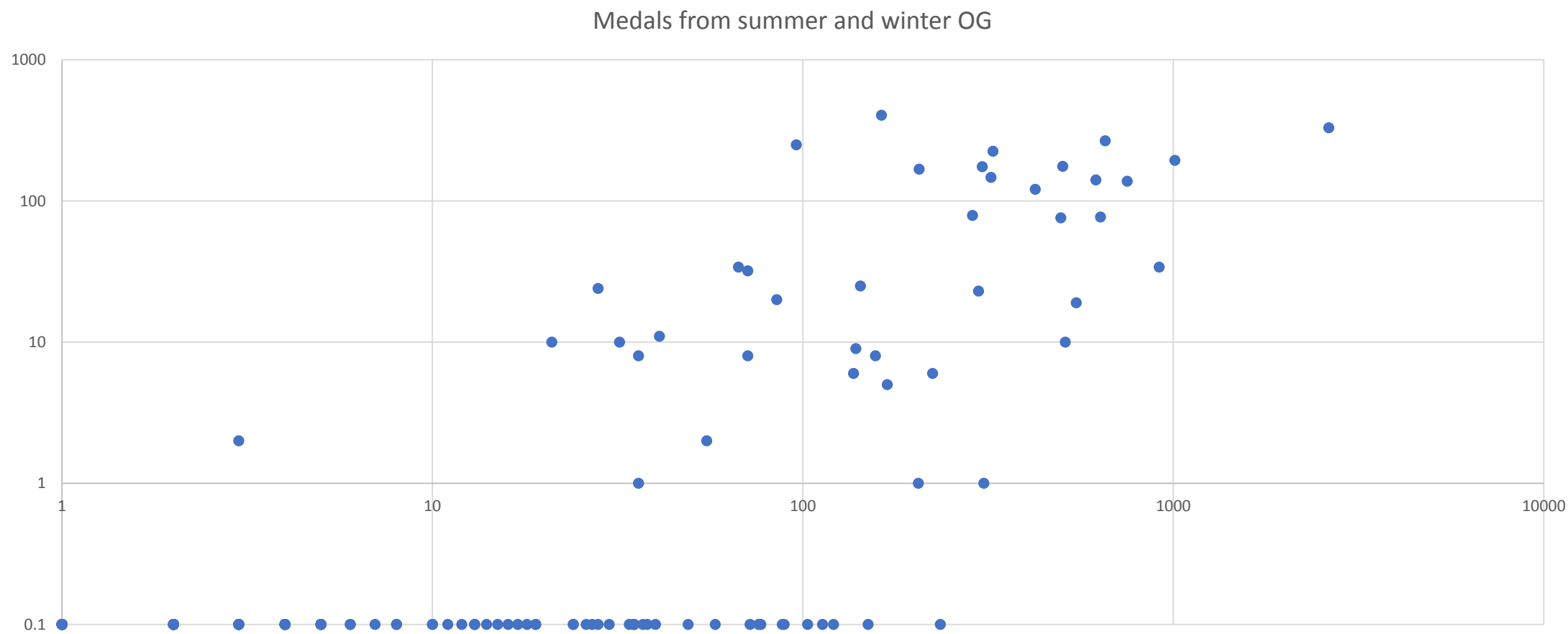


a quantity representing the power to which a fixed number (the base) must be raised to produce a given number (eg for 100 it is 2 because 10^2 is 100)

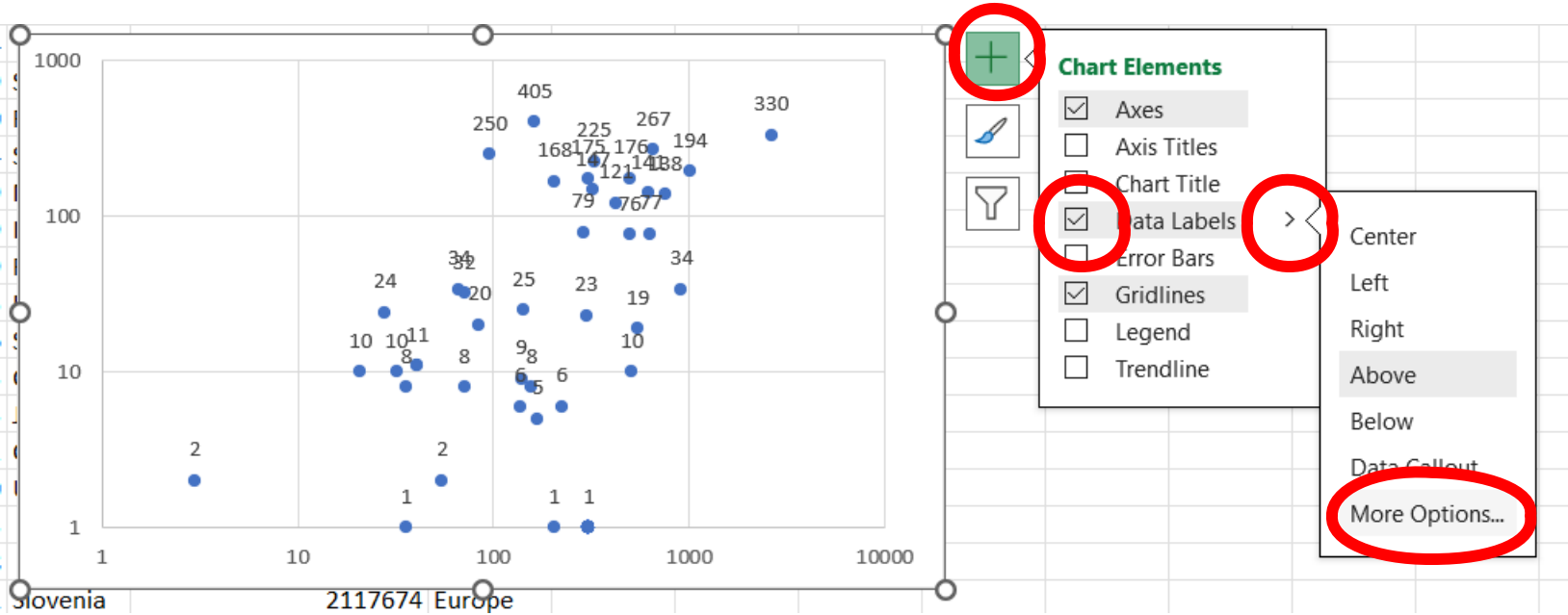
- does not work for zeros!!! (solution replace (ctrl+h) by number between 0 and 1 (e.g. 0.1))

Excel leaves the labels as not transformed, but it change look of axis

Both axes logged

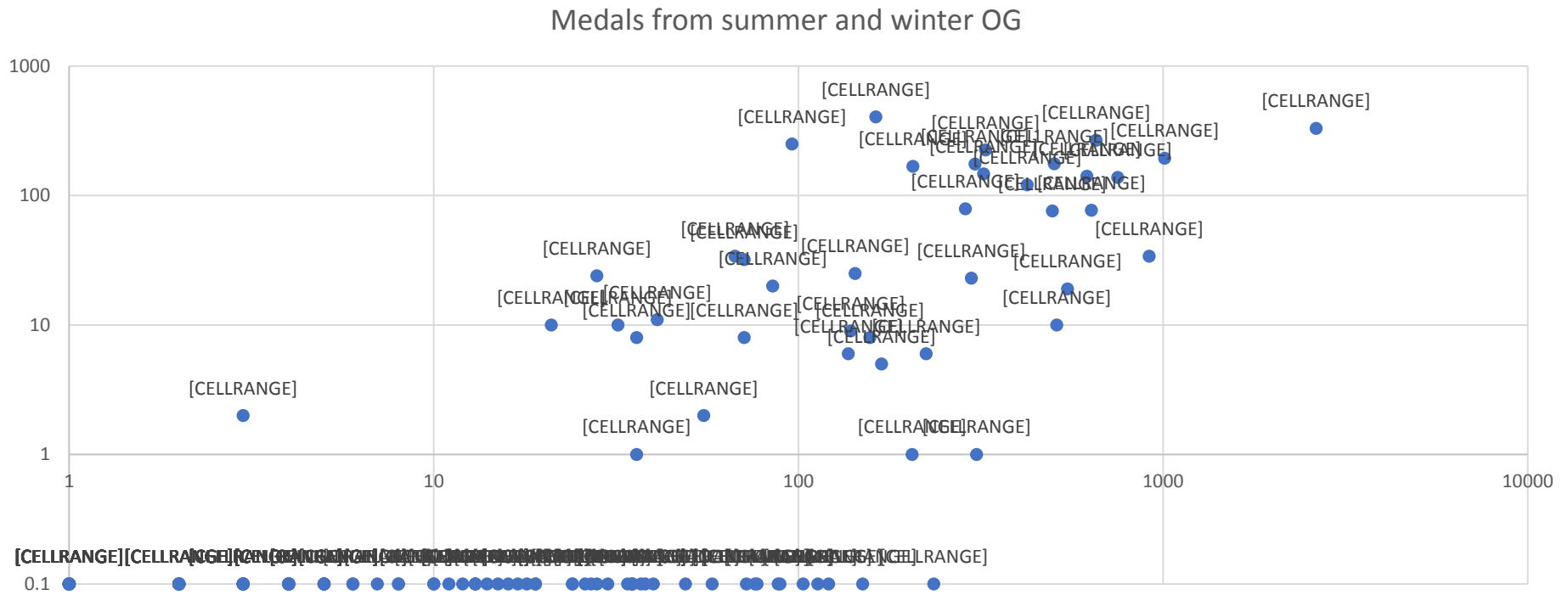


Add point labels



The 'Format Data Labels' task pane is shown on the right. The 'Label Options' section is expanded, and the 'Value From Cells' option is checked. The 'Data Label Range' dialog box is open, showing the range '=Sheet1!\$A\$2:\$A\$37' in the 'Data Label Range' field. The 'OK' button is highlighted. The 'Format Data Labels' task pane also has a red circle around the 'Value From Cells' checkbox and another red circle around the 'Data Label Range' dialog box.

- Overlays need to be managed manually
- Use short names or abbreviations



Add lines

- Trend line
 - Linear
 - Exponential
- Quarters

Add Chart Element Quick Layout Change Colors

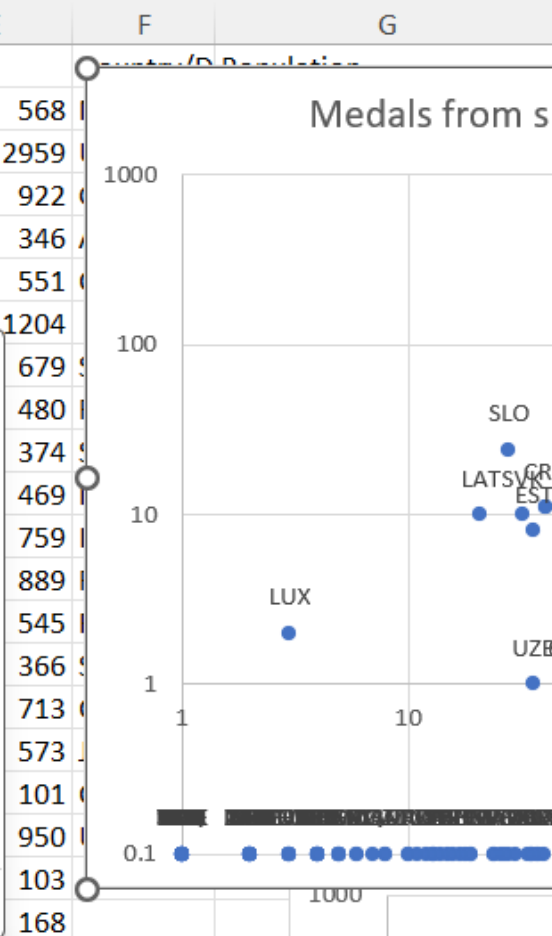
- Chart Styles
- Axes
- Axis Titles
- Chart Title
- Data Labels
- Data Table
- Error Bars
- Gridlines
- Legend
- Lines
- Trendline
- Up/Down Bars

fx

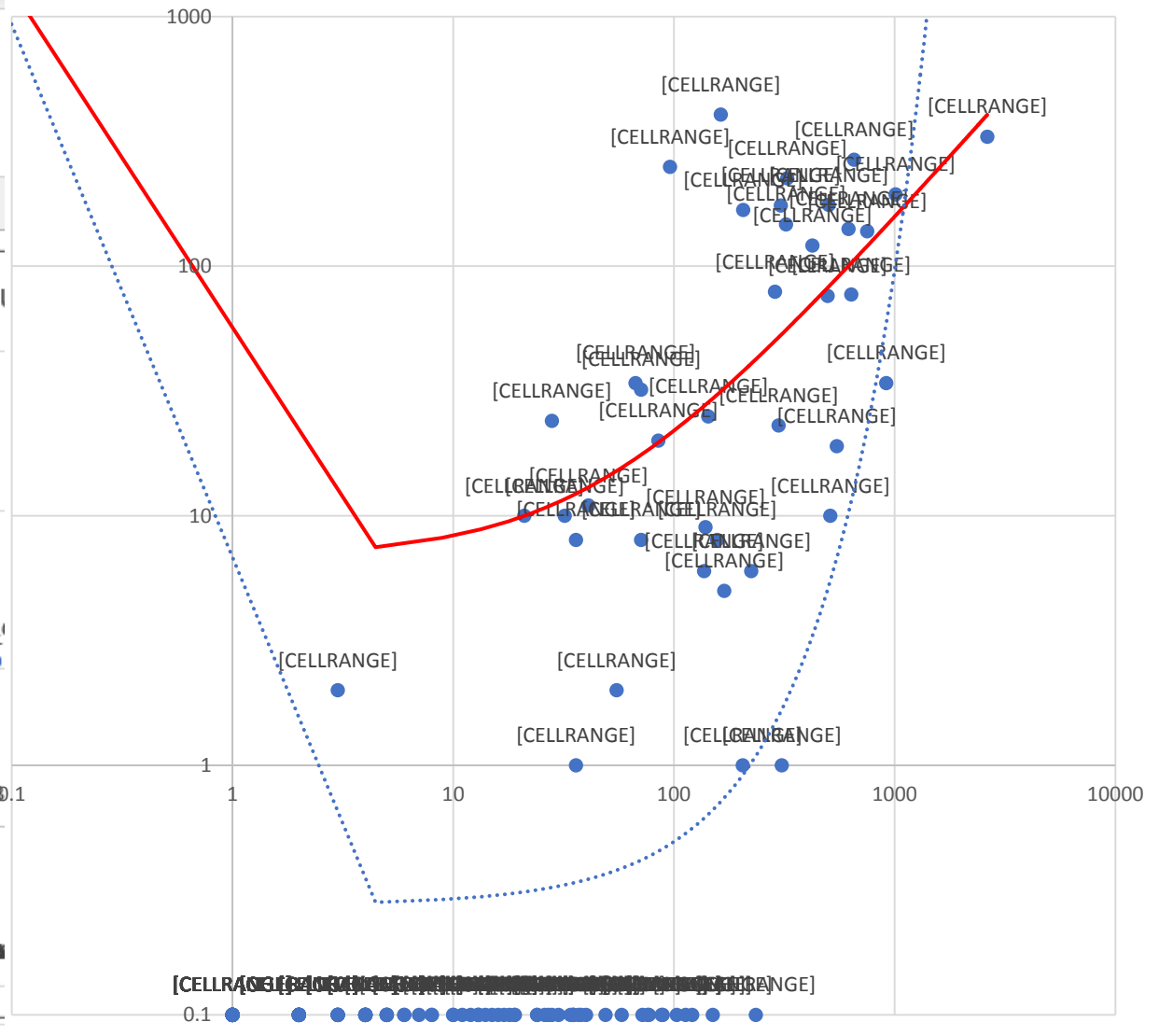
	summer	winter	total
	163	405	568
	2629	330	2959
	655	267	922
	96	250	346
	326	225	551
	1010	194	1204

- None
- Linear
- Exponential
- Linear Forecast
- Moving Average
- More Trendline Options...

1	Netherlands	NED
2	Italy	ITA
3	France	FRA
4	Russia	RUS
5	SouthKorea	KOR
6	China	CHN
7	Japan	JPN
8	CZ	CZE
9	GreatBritain	GBR
10	ROC	ROC
11	CSSR	TCH



Medals from summer and winter OG

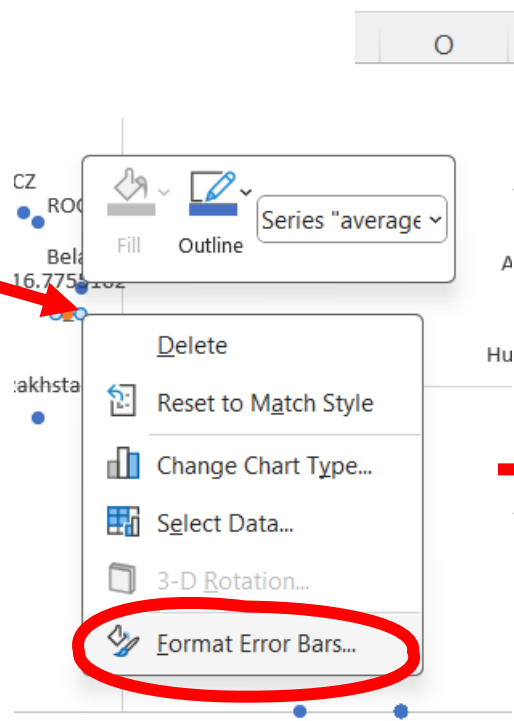


Add quartals

The screenshot shows the Excel ribbon with the 'Select Data' button circled in red. Below it, the 'Select Data Source' dialog box is open. The 'Chart_data range' is set to '=Sheet1!\$C\$1:\$D\$289'. The 'Legend Entries (Series)' section has an 'Add' button circled in red, and a series named 'winter' is listed. The 'Horizontal (Category) Axis Labels' section contains a list of values: 163, 2629, 655, 96, and 326. The 'OK' and 'Cancel' buttons are at the bottom.


The screenshot shows an Excel spreadsheet with a scatter plot. The data points are labeled with country names: Canada, Sweden, Ireland, Russia, Germany, France, Soviet Union, and China. The values 80.2449 and 16.77551 are highlighted in green in the spreadsheet. The 'Edit Series' dialog box is open, showing the series name 'averages', the X-axis values '=Sheet1!\$J\$2' (value 80.24489796), and the Y-axis values '=Sheet1!\$K\$2' (value 1). Red arrows point from the highlighted cells in the spreadsheet to the corresponding input fields in the dialog box. The 'OK' and 'Cancel' buttons are at the bottom.

Right click here



Format Error Bars

Error Bar Options



Horizontal Error Bar

Direction

Both

Minus

Plus

End Style

No Cap

Cap

Error Amount

Fixed Value 0.1

Percentage 5.0

Standard Deviation(s) 1.0

Custom

From minimum to average

From average to maximum

Custom Error Bars


Positive Error Value

Negative Error Value



Format Error Bars

Error Bar Options



Line

No line

Solid line

Gradient line

Automatic

Color

Transparency

Width

Compound type

Dash type

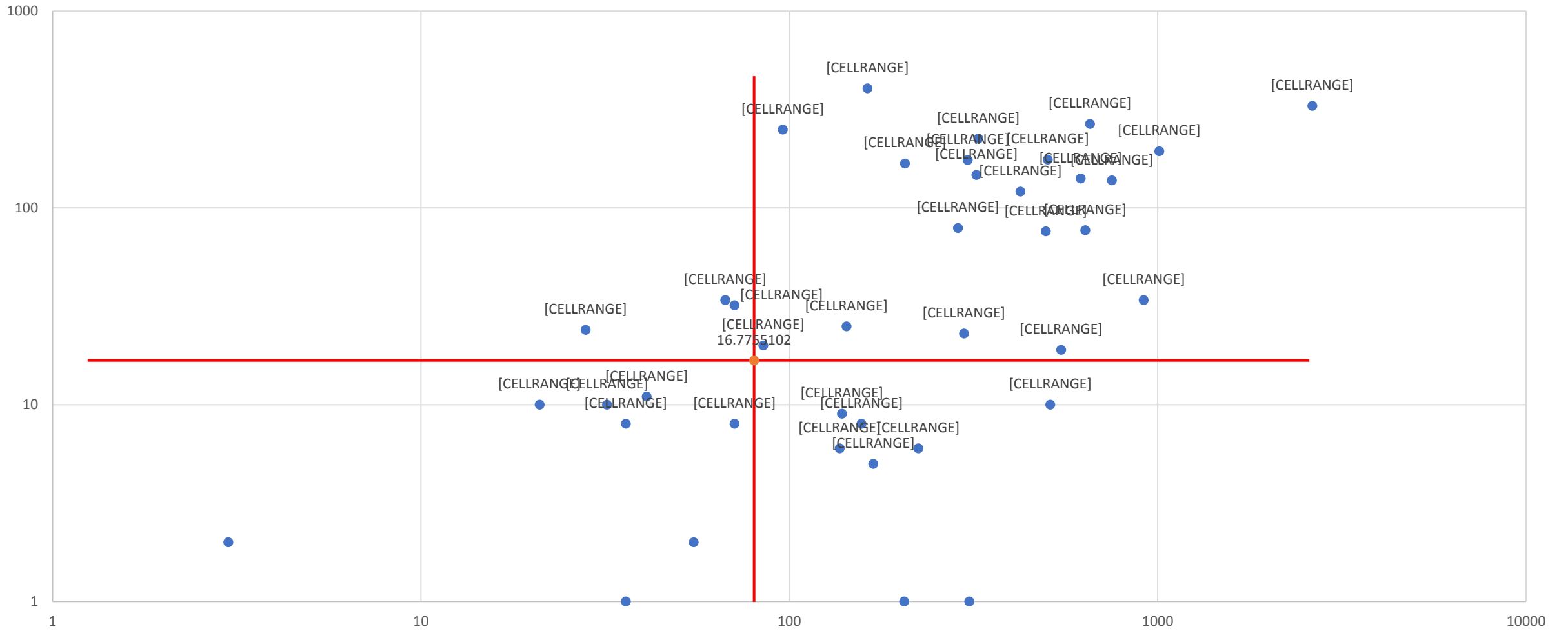
Cap type

Join type

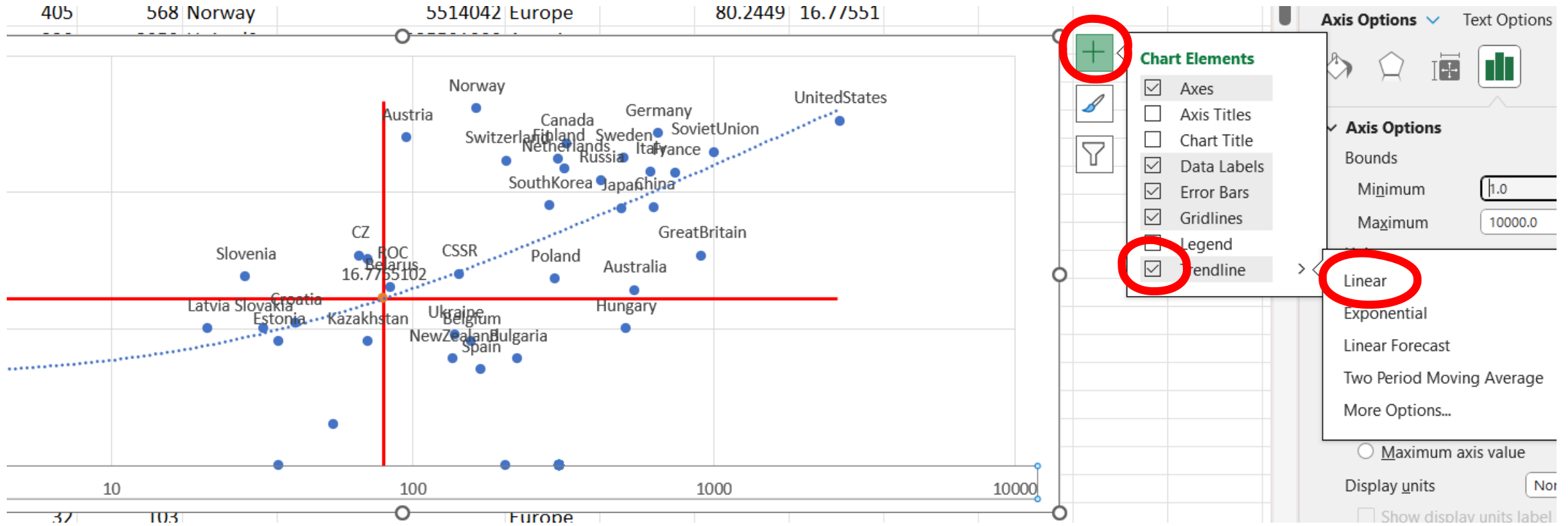
Begin Arrow type

Begin Arrow size

End Arrow type



Trend line



Set of boxplots

