[Commentary by John F Hall]

[New page 9 July 2018]

John MacInnes

An Introduction to Secondary Data Analysis with IBM SPSS Statistics (Sage, Dec. 2017)

Chapter 4: Getting Started with SPSS

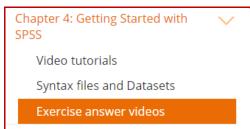
Exercise video answer 10 (4'48")

Previous guides:

Macinnes 2017 Aide-mémoire for easier navigation of companion website
MacInnes 4.1.1 Overview of video tutorials 1 to 6
MacInnes 4.1.2 Downloading the European Social Survey Practice File
MacInnes 4.1.3 Downloading the SPSS syntax
MacInnes 4.1.4_Checking_the_SPSS_files
MacInnes 4.1.5 Guide to video tutorials 7 and 8
MacInnes 4.1.6 Guide to video tutorial 9
MacInnes 4.1.7 Guide to video tutorials 10 and 11
MacInnes 4.1.8 Guide to video tutorial 12
Macinnes_4.2.1_Exercise_answer_videos_1-6
MacInnes 4.2.2 Exercise answer video 7
MacInnes 4.2.3 Exercise video answer 8
MacInnes 4.2.4 Exercise video answer 9

Chapter.4: <u>Exercise answer videos</u>

[direct link to videos on companion site]



Extract from page 104:

10 Produce a chart of the mean size of households across the countries in the survey, ranking average household size from the smallest to the largest.

Exercise question 10

Produce a chart of the mean size of households across the countries in the survey, ranking average household size from the smallest to the largest.

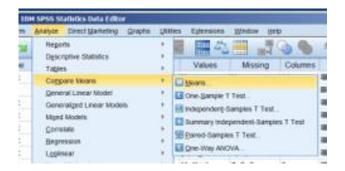
Dependent variable:hhmnbNumber of people living regularly as member of householdIndependent variable:cntryCountrySPSS command:MEANS

[NB: JM leaves the previous cntry by tvtot table in view while specifying a new analysis.]

Checks that pspwght is in operation and that all cases are selected.

From the Data Editor:

Analyze >> Compare Means >> Means



In the Means dialog box, scroll down to hhmnb and click on to transfer it to Dependent List

Image: Concel Help Image: Concel Help

4

Scroll down to hhmnb and click on

to transfer it to Independent List

Means	Dependent List:	<u>Options</u>	📽 Means	Dependent List:
	Layer 1 of 1 Previous Next Layer 1 of 1 Sector 2015 Paste Reset Cancel Help	Style Bootstrap	tvtot polintr polintr frscale freehms figblg frigdnm frigdnm physact	Layer 1 of 1 Previous Next Layer 1 of 1 Carcel Help

Click on Options...

[NB: This brings up the Means Options dialog showing the default statistics Mean, Number of Cases and Standard Deviation, in the Cell Statistics pane, but in the video it shows only Mean and Number of Cases. To tally with the video, highlight Standard Deviation and click on to return it to the Statistics pane.]

×

ions... y<u>l</u>e... strap...

👫 Means: Options 🛛 🗙	🕯 Means: Options 🔀	🚔 Means: Options
Statistics: Cell Statistics: Median Grouped Median Std. Error of Mean Sum Minimum Maximum Range First Last Variance Kurtosis Std. Error of Skewnev	Statistics: Minimum Maximum Maximum Range First Last Variance Kurtosis Std. Error of Kurtosis Skewness Std. Error of Skewne Harmonic Mean Geometric Mean Percent of Total Sur Percent of Total N	Statistics: Cell Statistics: Maximum Range First Last Variance Kurtosis Std. Error of Kewne Harmonic Mean Geometric Mean Percent of Total Sur Percent of Total N Standard Deviation
Statistics for First Layer Anova table and eta I set for linearity Continue Cancel Help Click Continue to return to	Statistics for First Layer Anova table and eta I est for linearity Continue Cancel Help the Means dialog:	Statistics for First Layer Anova table and eta Test for linearity Continue Cancel Help

idno idno tvtot polintr trstprt Irscale freehms rlgblg	Dependent List:	<u>Options</u> Style <u>B</u> ootstrap
Rigdnm Rigdnm Sprncntr	Contry	

[NB: hhmnb and cntry are now both grayed out]

Click on

to get table.

Double click the table to enter Pivot mode:

Report

OK

Highlight all means in column (not the Total)

Country	Mean	N
Albania	4.53	1189
Belgium	2.81	1869
Bulgaria	3.06	2260
Switzerland	2.75	1493
Cyprus	3.31	1116
Czech Republic	2.96	2009
Germany	2.64	2951
Denmark	2.59	1650
Estonia	2.64	2380
Spain	3.07	1886
Finland	2.44	2197
France	2.82	1968
United Kingdom	2.88	2285
Hungary	2.71	2014
Ireland	3.28	2628
Israel	3.86	2506
Iceland	3.10	749
Italy	2.96	960
Lithuania	2.80	2109
Netherlands	2.81	1845
Norway	2.72	1623
Poland	3.27	1893
Portugal	2.95	2151
Russian Federation	2.92	2484
Sweden	2.61	1847
Slovenia	3.21	1255
Slovakia	3.33	1847
Ukraine	3.26	2178
Kosovo	6.25	1295
Total	3.06	54637

	Report					
	Variables Number of people living regularly as member of household					
	Country	Mean	Ν			
	Albania	4.53	1189	i i		
	Belgium	2.81	1869			
	Bulgaria	3.06	2260			
	Switzerland	2.75	1493			
	Cyprus	3.31	1116			
	Czech Republic	2.96	2009			
	Germany	2.64	2951			
	Denmark	2.59	1650			
	Estonia	2.64	2380			
	Spain	3.07	1886			
	Finland	2.44	2197			
	France	2.82	1968			
	United Kingdom	2.88	2285			
•	Hungary	2.71	2014			
	Ireland	3.28	2628			
	Israel	3.86	2506			
	Iceland	3.10	749			
	Italy	2.96	960			
	Lithuania	2.80	2109			
	Netherlands	2.81	1845			
	Norway	2.72	1623			
	Poland	3.27	1893			
	Portugal	2.95	2151			
	Russian Federation	2.92	2484			
	Sweden	2.61	1847			
	Slovenia	3.21	1255			
	Slovakia	3.33	1847			
	Ukraine	3.26	2178			
	Kosovo	6.25	1295			
	Total	3.06	54637			
-				· · · · · · · · · · · · · · · · · · ·		

Report

Variables Number of people living regularly as mem

Country	Mean	Ν
Finland	2.44	2197
Denmark	2.59	1650
Sweden	2.61	1847
Estonia	2.64	2380
Germany	2.64	2951
Hungary	2.71	2014
Norway	2.72	1623
Switzerland	2.75	1493
Lithuania	2.80	2109
Belgium	2.81	1869
Netherlands	2.81	1845
France	2.82	1968
United Kingdom	2.88	2285
Russian Federation	2.92	2484
Portugal	2.95	2151
Czech Republic	2.96	2009
Italy	2.96	960
Bulgaria	3.06	2260
Spain	3.07	1886
Iceland	3.10	749
Slovenia	3.21	1255
Ukraine	3.26	2178
Poland	3.27	1893
Ireland	3.28	2628
Cyprus	3.31	1116
Slovakia	3.33	1847
Israel	3.86	2506
Albania	4.53	1189
Kosovo	6.25	1295
Total	3.06	54637

ð

Report
Number of people living regularly as member of household

Country	Mean	Ν
Finland	2.44	2197
Denmark	2.59	1650
Sweden	2.61	1847
Estonia	2.64	2380
Germany	2.64	2951
Hungary	2.71	2014
Norway	2.72	1623
Switzerland	2.75	1493
Lithuania	2.80	2109
Belgium	2.81	1869
Netherlands	2.81	1845
France	2.82	1968
United Kingdom	2.88	2285
Russian Federation	2.92	2484
Portugal	2.95	2151
Czech Republic	2.96	2009
Italy	2.96	960
Bulgaria	3.06	2260
Spain	3.07	1886
Iceland	3.10	749
Slovenia	3.21	1255
Ukraine	3.26	2178
Poland	3.27	1893
Ireland	3.28	2628
Cyprus	3.31	1116
Slovakia	3.33	1847
Israel	3.86	2506
Albania	4.53	1189
Kosovo	6.25	1295
Total	3.06	54637

or

Right click on highlighted means >> Sort Rows >> Ascending

Country Mean N Albania 4.53 1189 Belgium 2.81 1869 Bulgaria 3.06 2260 Switzerland 2.75 1493 Cyprus 3.31 1116 Czech Republic 2.96 2009 Germany 2.64 2951 Denmark 2.59 1650 Estonia 2.64 2380 Spain 3.07 1886 Finland 2.44 2197 France 2.82 1968 United Kingdom 2.88 2285 Hungary 2.71 2014 Ireland 3.28 2628 Israel 3.86 2506 Iceland 3.10 749 Italy 2.96 960 Lithuania 2.80 2109 Netherlands 2.81 1845 Norway 2.72 1623 Poland 3.27 1893 P	Variables Number of people living regularly as me				
Belgium2.811869Bulgaria3.062260Switzerland2.751493Cyprus3.311116Czech Republic2.962009Germany2.642951Denmark2.591650Estonia2.642380Spain3.071886Finland2.442197France2.821968United Kingdom2.882285Hungary2.712014Ireland3.282628Israel3.862506Iceland3.10749Italy2.96960Lithuania2.802109Netherlands2.811845Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovenia3.211255Slovakia3.331847	Country	Mean	Ν		
Bulgaria3.062260Switzerland2.751493Cyprus3.311116Czech Republic2.962009Germany2.642951Denmark2.591650Estonia2.642380Spain3.071886Finland2.442197France2.821968United Kingdom2.882285Hungary2.712014Ireland3.282506Iceland3.10749Italy2.96960Lithuania2.802109Netherlands2.811845Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovakia3.331847	Albania	4.53	1189		
Switzerland 2.75 1493 Cyprus 3.31 1116 Czech Republic 2.96 2009 Germany 2.64 2951 Denmark 2.59 1650 Estonia 2.64 2380 Spain 3.07 1886 Finland 2.44 2197 France 2.82 1968 United Kingdom 2.88 2285 Hungary 2.71 2014 Ireland 3.28 2628 Israel 3.86 2506 Iceland 3.10 749 Italy 2.96 960 Lithuania 2.80 2109 Netherlands 2.81 1845 Norway 2.72 1623 Poland 3.27 1893 Portugal 2.95 2151 Russian Federation 2.92 2484 Sweden 2.61 1847 Slovenia 3.21 1255 <	Belgium	2.81	1869		
Cyprus3.311116Czech Republic2.962009Germany2.642951Denmark2.591650Estonia2.642380Spain3.071886Finland2.442197France2.821968United Kingdom2.882285Hungary2.712014Ireland3.282628Israel3.862506Iceland3.10749Italy2.96960Lithuania2.802109Netherlands2.811845Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovakia3.331847	Bulgaria	3.06	2260		
Czech Republic2.962009Germany2.642951Denmark2.591650Estonia2.642380Spain3.071886Finland2.442197France2.821968United Kingdom2.882285Hungary2.712014Ireland3.282628Israel3.862506Iceland3.10749Italy2.96960Lithuania2.802109Netherlands2.811845Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovakia3.331847	Switzerland	2.75	1493		
Germany2.642951Denmark2.591650Estonia2.642380Spain3.071886Finland2.442197France2.821968United Kingdom2.882285Hungary2.712014Ireland3.282628Israel3.862506Iceland3.10749Italy2.96960Lithuania2.811845Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovakia3.331847	Cyprus	3.31	1116		
Denmark2.591650Estonia2.642380Spain3.071886Finland2.442197France2.821968United Kingdom2.882285Hungary2.712014Ireland3.282628Israel3.862506Iceland3.10749Italy2.96960Lithuania2.802109Netherlands2.811845Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovenia3.211255Slovakia3.331847	Czech Republic	2.96	2009		
Estonia2.642380Spain3.071886Finland2.442197France2.821968United Kingdom2.882285Hungary2.712014Ireland3.282628Israel3.862506Iceland3.10749Italy2.96960Lithuania2.802109Netherlands2.811845Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovenia3.211255Slovakia3.331847	Germany	2.64	2951		
Spain 3.07 1886 Finland 2.44 2197 France 2.82 1968 United Kingdom 2.88 2285 Hungary 2.71 2014 Ireland 3.28 2628 Israel 3.86 2506 Iceland 3.10 749 Italy 2.96 960 Lithuania 2.80 2109 Netherlands 2.81 1845 Norway 2.72 1623 Poland 3.27 1893 Portugal 2.95 2151 Russian Federation 2.92 2484 Sweden 2.61 1847 Slovenia 3.21 1255 Slovakia 3.33 1847	Denmark	2.59	1650		
Finland2.442197France2.821968United Kingdom2.882285Hungary2.712014Ireland3.282628Israel3.862506Iceland3.10749Italy2.96960Lithuania2.802109Netherlands2.811845Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovenia3.211255Slovakia3.331847	Estonia	2.64	2380		
France2.821968United Kingdom2.882285Hungary2.712014Ireland3.282628Israel3.862506Iceland3.10749Italy2.96960Lithuania2.802109Netherlands2.811845Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovenia3.211255Slovakia3.331847	Spain	3.07	1886		
United Kingdom2.882285Hungary2.712014Ireland3.282628Israel3.862506Iceland3.10749Italy2.96960Lithuania2.802109Netherlands2.811845Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovenia3.211255Slovakia3.331847	Finland	2.44	2197		
Hungary2.712014Ireland3.282628Israel3.862506Iceland3.10749Italy2.96960Lithuania2.802109Netherlands2.811845Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovenia3.211255Slovakia3.331847	France	2.82	1968		
Ireland 3.28 2628 Israel 3.86 2506 Iceland 3.10 749 Italy 2.96 960 Lithuania 2.80 2109 Netherlands 2.81 1845 Norway 2.72 1623 Poland 3.27 1893 Portugal 2.95 2151 Russian Federation 2.92 2484 Sweden 2.61 1847 Slovenia 3.21 1255 Slovakia 3.33 1847	United Kingdom	2.88	2285		
Israel3.862506Iceland3.10749Italy2.96960Lithuania2.802109Netherlands2.811845Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovenia3.211255Slovakia3.331847	Hungary	2.71	2014		
Iceland3.10749Italy2.96960Lithuania2.802109Netherlands2.811845Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovenia3.211255Slovakia3.331847	Ireland	3.28	2628		
Italy2.96960Lithuania2.802109Netherlands2.811845Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovenia3.211255Slovakia3.331847	Israel	3.86	2506		
Lithuania2.802109Netherlands2.811845Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovenia3.211255Slovakia3.331847	Iceland	3.10	749		
Netherlands2.811845Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovenia3.211255Slovakia3.331847	Italy	2.96	960		
Norway2.721623Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovenia3.211255Slovakia3.331847	Lithuania	2.80	2109		
Poland3.271893Portugal2.952151Russian Federation2.922484Sweden2.611847Slovenia3.211255Slovakia3.331847	Netherlands	2.81	1845		
Portugal 2.95 2151 Russian Federation 2.92 2484 Sweden 2.61 1847 Slovenia 3.21 1255 Slovakia 3.33 1847	Norway	2.72	1623		
Russian Federation 2.92 2484 Sweden 2.61 1847 Slovenia 3.21 1255 Slovakia 3.33 1847	Poland	3.27	1893		
Sweden2.611847Slovenia3.211255Slovakia3.331847	Portugal	2.95	2151		
Slovenia 3.21 1255 Slovakia 3.33 1847	Russian Federation	2.92	2484		
Slovakia 3.33 1847	Sweden	2.61	1847		
	Slovenia	3.21	1255		
1 Uzraina 2.06 24.70	Slovakia	3.33	1847		
Okraine 3.20 2178	Ukraine	3.26	2178		
Kosovo 6.25 1295	Kosovo	6.25	1295		
Total 3.06 54637	Total	3.06	54637		

Country	Mean	Ν
Albania	4.53	1189
Belgium	2.81	1869
Bulgaria	3.06	2260
Switzerland	2.75	1493
Cyprus	3.31	1116
Czech Republic	2.96	2009
Germany	2.64	2951
Denmark	2.59	1650
Estonia	2.64	2380
Spain	3.07	1886
Finland	2.44	2197
France	2.82	1968
United Kingdom	2.88	2285
Hungary	2.71	2014
Ireland	3.28	2628
Israel	3.86	2506
Iceland	3.10	749
Italy	2.96	960
Lithuania	2.80	2109
Netherlands	2.81	1845
Norway	2.72	1623
Poland	3.27	1893
Portugal	2.95	2151
Russian Federation	2.92	2484
Sweden	2.61	1847
Slovenia	3.21	1255
Slovakia	3.33	1847
Ukraine	3.26	2178
Kosovo	6.25	1295
Total	3.06	54637

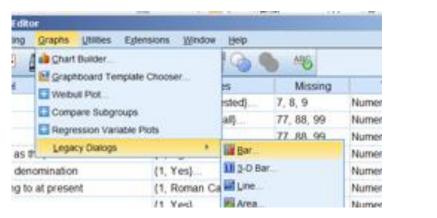
Number of people living regularly as member of household JM proceeds to copy the table to Excel and produce charts (not reproduced here).

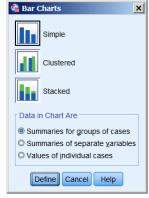
He also produces them using SPSS.

Charts from SPSS

Variables:	hhmnb cntry	Number of people living regularly as member of household Country
SPSS command	CHART	•

Graphs >> Legacy Dialogs >> Bar





Define

🝓 Define Simple Bar: Summaries for Groups of Cases 🛛 🗙				
Respondent's id Country [cntry] TV watching, tot How interested in Trust in political Placement on lef Gays and lesbia Belonging to part Religion or deno Born in country [Physically active Religion or denol Born in country [Physically active Keligion or denol Born in country [Physically active Age of responde Legal marital stat Main activity, last Total hours norm Design weight [d Population size w agegroup agegroup Trust in political Template	Bars Represent N of cases Qum. N Other statistic (e.g., mean) Variable: Change Statis Category Axis: Category Axis: Panel by Rows: Nest variables (no en Columns: Nest variables (no en columns: Nest variables (no en columns)	mpty rows)	Ţities Ωptions	

[NB: JM's SPSS settings use variable **labels** not variable **names**: in very large files this makes it difficult to find the variable(s) you want.]

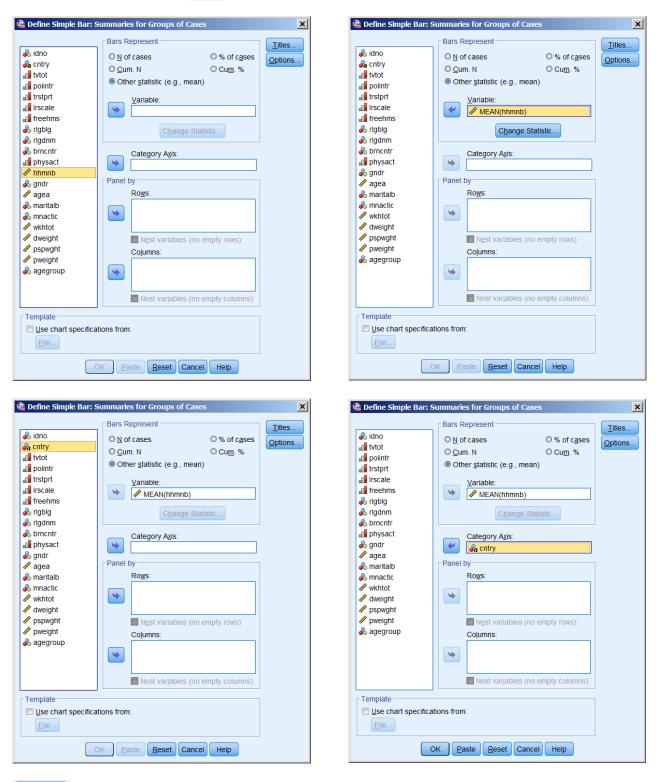
Drag the right edge of the window out see the full labels:

It's easier with variable Labels (but for this you need to change SPSS settings):



🔚 Define Simple Bar: S	Summaries for Groups of Cases	×
	Bars Represent	<u>T</u> itles
🚴 idno 🚜 cntry		Options
tvtot polintr	O Other statistic (e.g., mean)	
📲 trstprt	<u>Variable:</u>	
Irscale I freehms		
💰 rigbig 💑 rigdnm	Change Statistic	
🗞 brncntr	Category Axis:	
physact hhmnb		
andr 🖉	Panel by Rows:	
🛷 agea 🗞 maritalb		
mnactic		
🛷 dweight	Nest variables (no empty rows)	
pspwght pweight	Columns:	
lagegroup		
	Nest varjables (no empty columns)	
r Template		
Use chart specification	ations from:	
<u>E</u> ile		
	OK Paste Reset Cancel Help	

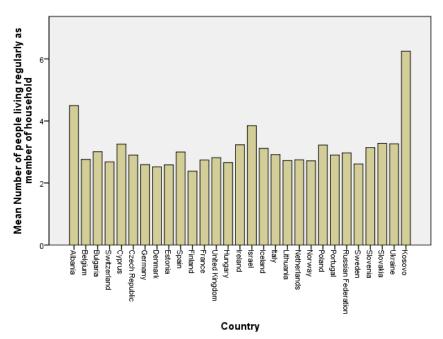
Highlight hhmnb and click in the variable box which will fill with MEAN(hhmnb)



Paste generates the following syntax:

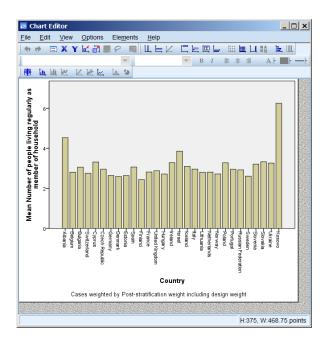
GRAPH

/BAR(SIMPLE)=MEAN(hhmmb) BY cntry. which produces the following chart:

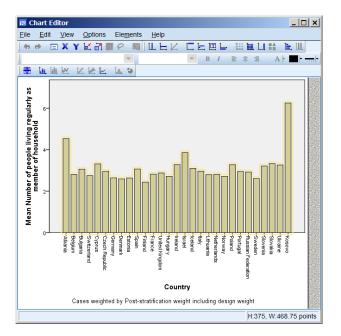


Cases weighted by Population size weight

Double click the chart to open the Chart Editor:



Double click anywhere in the bars: (they will be outlined in yellow.)



and the Properties dialog opens: Change Custom

Properties		×			
Bar Options	Depth & Angle	Variables			
Chart Size	Fill & Border	Categories			
Variable: Country T					
	categories less than	5 %			
Categories	Discutions A				
Order:	om 🔻 <u>D</u> irection: As	scending 💌			
Albania					
Belgium					
Bulgaria Switzerland		×			
Cyprus Czech Repub	lic	T			
Excluded:	inc.				
		t			
Lower margin (%):	5 <u>U</u> pper m	argin (%): 5			
	Apply	<u>C</u> lose <u>H</u> elp			

to Statistic

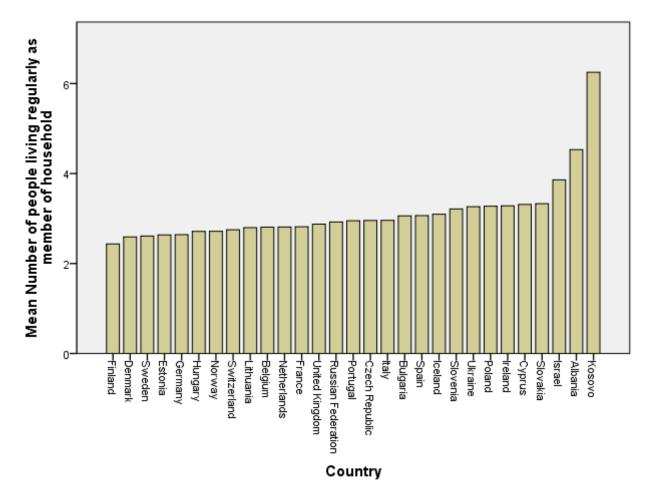
Properties X			
Bar Options	Depth & Angle	Variables	
Chart Size	Fill & Border	Categories	
Variable: Country Collapse (sum) Categories So <u>r</u> t by: Stati <u>O</u> rder: Cust Albania Belgium Bulgaria Switzerland Cyprus Czech Reput <u>E</u> xcluded:	categories less than: stic Direction: Asc om stic e		<u>v</u> a ⊂Ca
Lower margin (%):	5 <u>U</u> pper ma	ırgin (%): 5	Lo
		2ancel Help	

Properties X					
Bar Options	Depth & Angle	Variables			
Chart Size	Fill & Border	Categories			
Variable: Country	Variable: Country T				
Collapse (sum) categories less than: 5 %					
Sort by: Custom Direction: Ascending					
Order: Custom Albania Statistic Belgium Value Switzerland Cyprus Czech Republic					
Excluded:					
Lower margin (%): 5 Upper margin (%): 5					
		<u>Close</u> <u>H</u> elp			

and click Apply

Properties		×		
Bar Options	Depth & Angle	Variables		
Chart Size	Fill & Border	Categories		
Variable: Country ▼ Country ▼ Country ▼ Categories less than: 5 %				
Sort by: Stati	stic 🔻 Direction: As	scending 🔻		
Order: Finland Denmark Sweden Estonia Germany Hungary				
Excluded:				
Lower margin (%):	5 Upper m	Close Help		

Click Close to get the chart with bars re-ordered in ascending order of means:



Cases weighted by Post-stratification weight including design weight

- End of: Exercise video answer 10
- Back to: Exercise video answer 9
- Back to: Exercise video answer 8
- Back to: MacInnes Chapter 4: Getting Started with SPSS
- Back to: MacInnes (2017)