PIVOT TABLE GUIDE

August 2023

SUB-NATIONAL UNIT (SNU) FUNCTIONALITY

Pivot table guide for analyzing data gathered from assessing the functionality of sub-national units

A pivot table is a versatile Microsoft Excel tool that empowers you to analyse, summarize, and interpret large datasets in a user-friendly manner.

Why Use a Pivot Table for this SNU analysis?

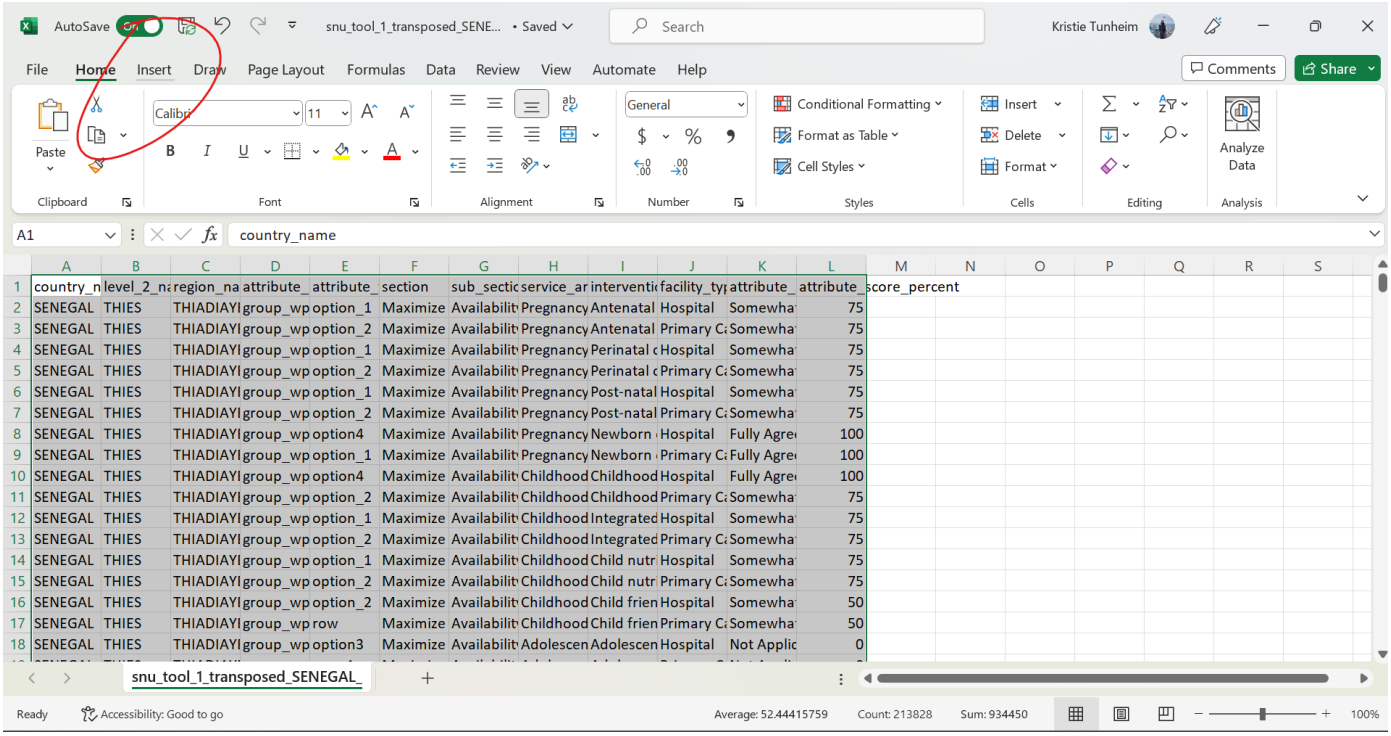
Summarize Data: Pivot tables help you summarize and consolidate the large quantities of data gathered from districts and regions into a more manageable format. They allow you to view data from different angles and perspectives, making it easier to identify patterns and trends that indicate where new interventions need to be strategized and implemented.

Filtering and Sorting: Pivot tables provide tools to filter and sort data based on various criteria. This helps you isolate specific subsets either by region, district, section, sub-section, service area, intervention, or facility type for closer examination.

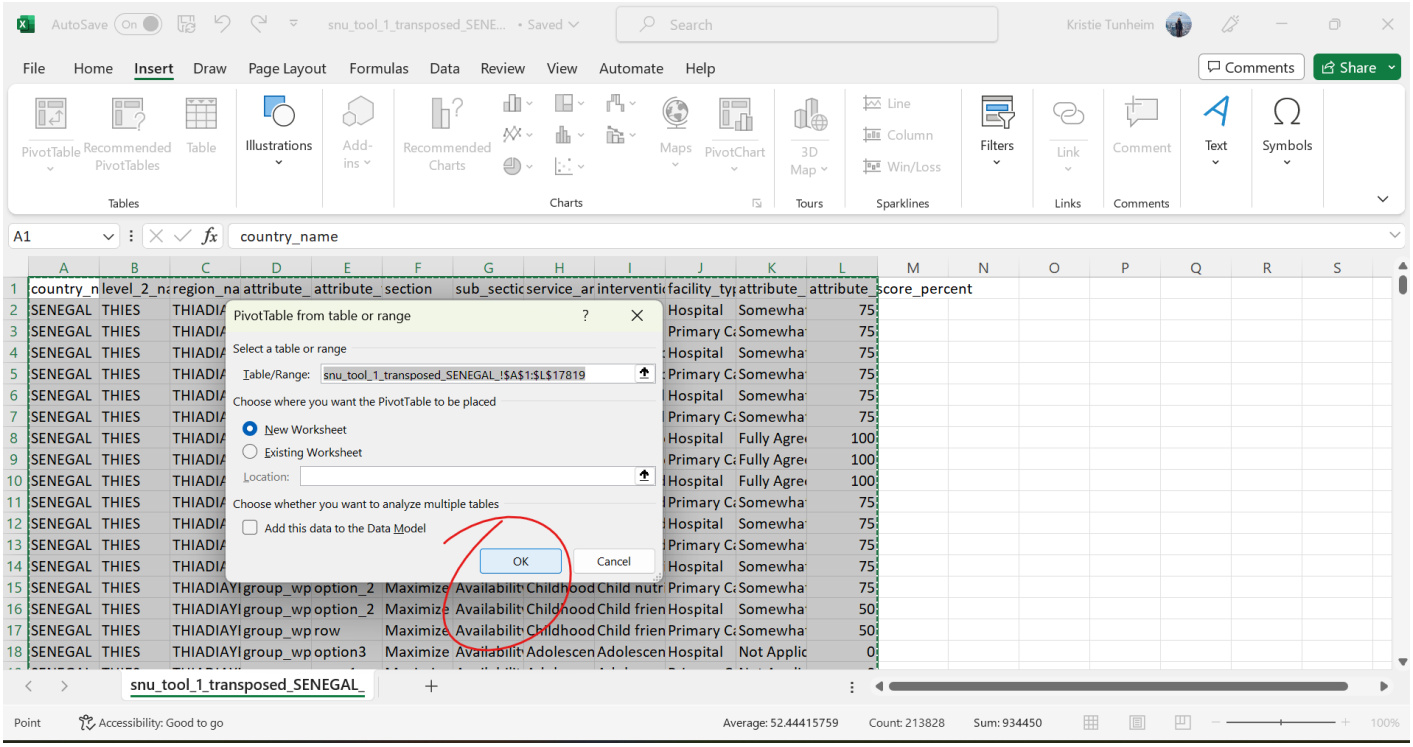
Visual Representation: Pivot tables often come with visualization options like charts and graphs, making it simpler to comprehend data and communicate findings to others.

Pivot Table Introduction

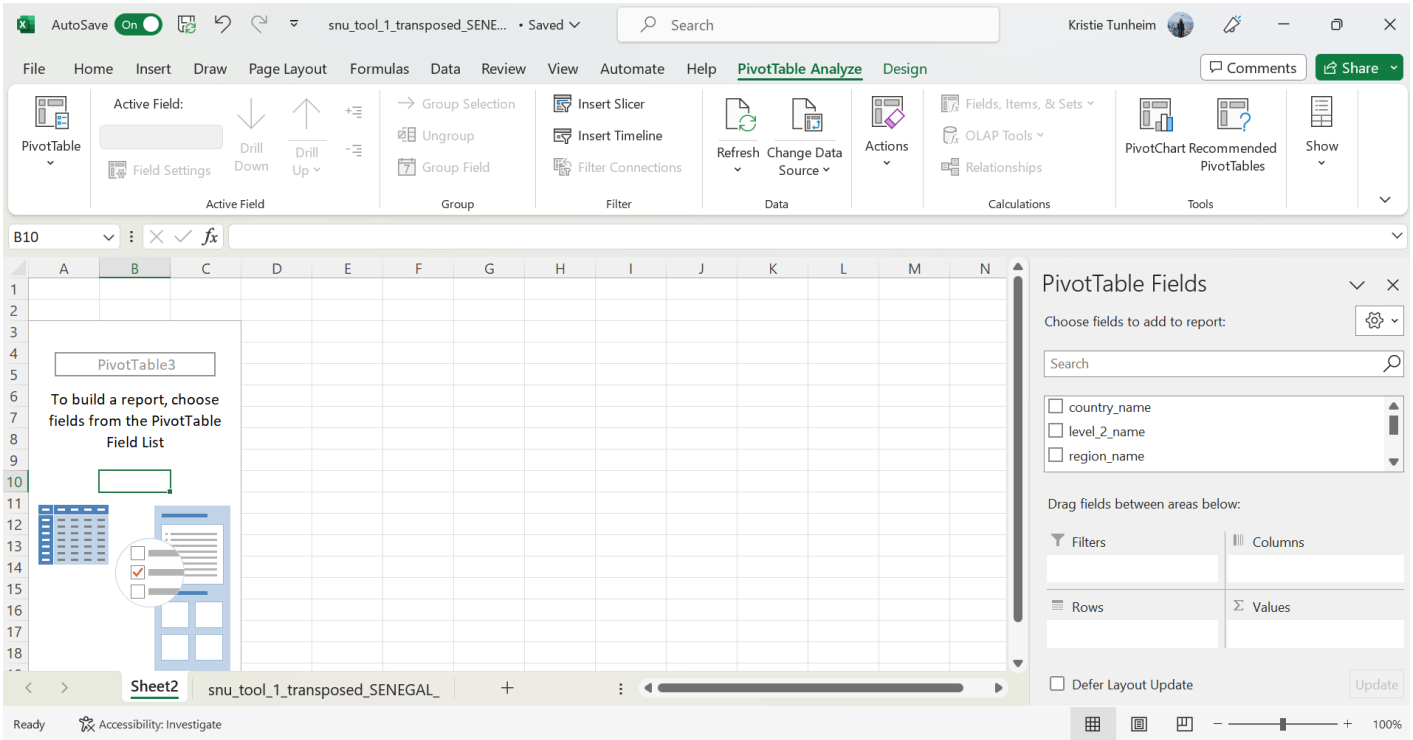
Step 1: Open Excel , click and highlight all of the data you would like you analyze in the pivot table. When all your data is highlighted, click “Insert” on the top.



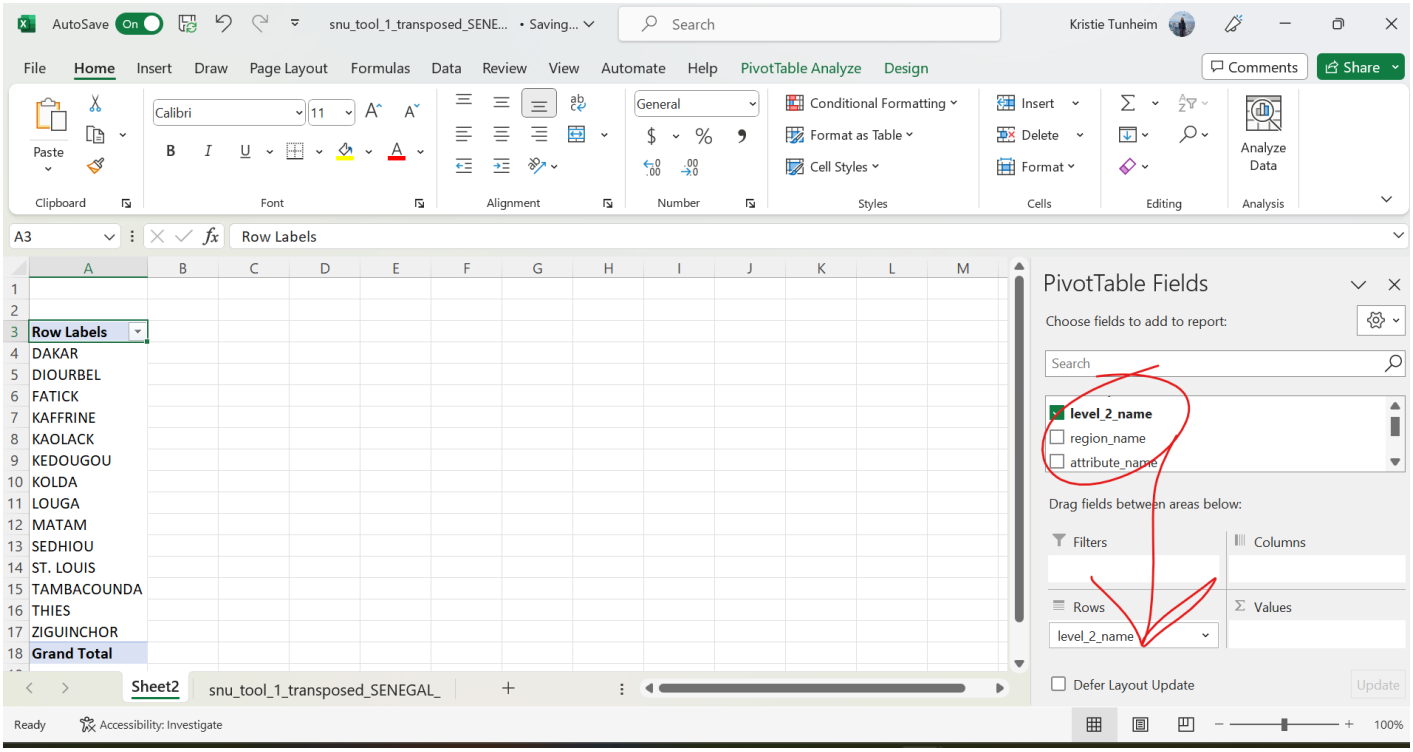
Step 2. After you click “Insert,” click “Pivot Table,” and a box should appear. Click OK.



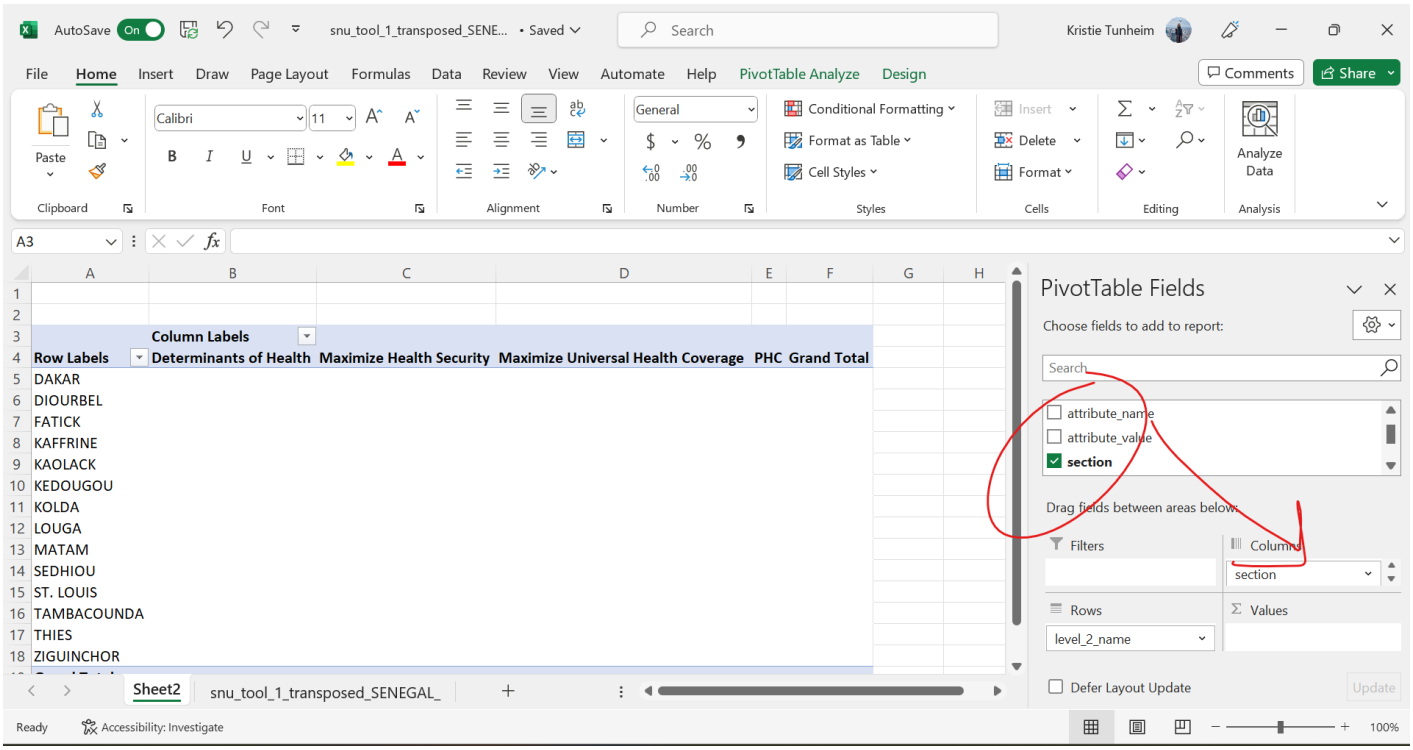
Step 3. Once you click on OK, a new tab will be automatically created that will look like this:



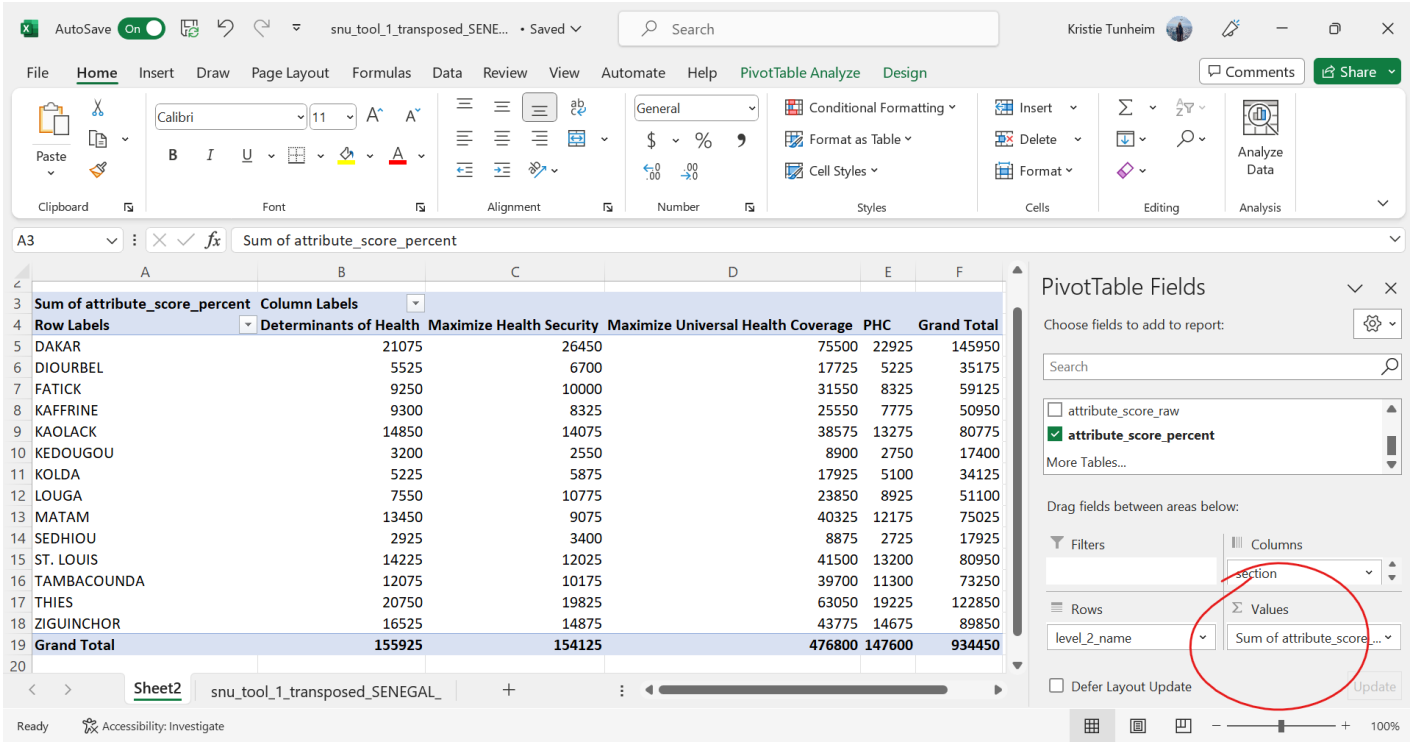
Step 4. Now we are ready to start choosing fields on the right side of the page to organize our data into a pivot table to begin analyzing it. We will start with a basic view using the SNU data, aggregating section averages by region. The first step is to click and hold onto the title to drag “level_2_name” (indicating region) into “Rows” and watch the table transform adding the new table element.



5. Then drag “Section” to “Columns.”

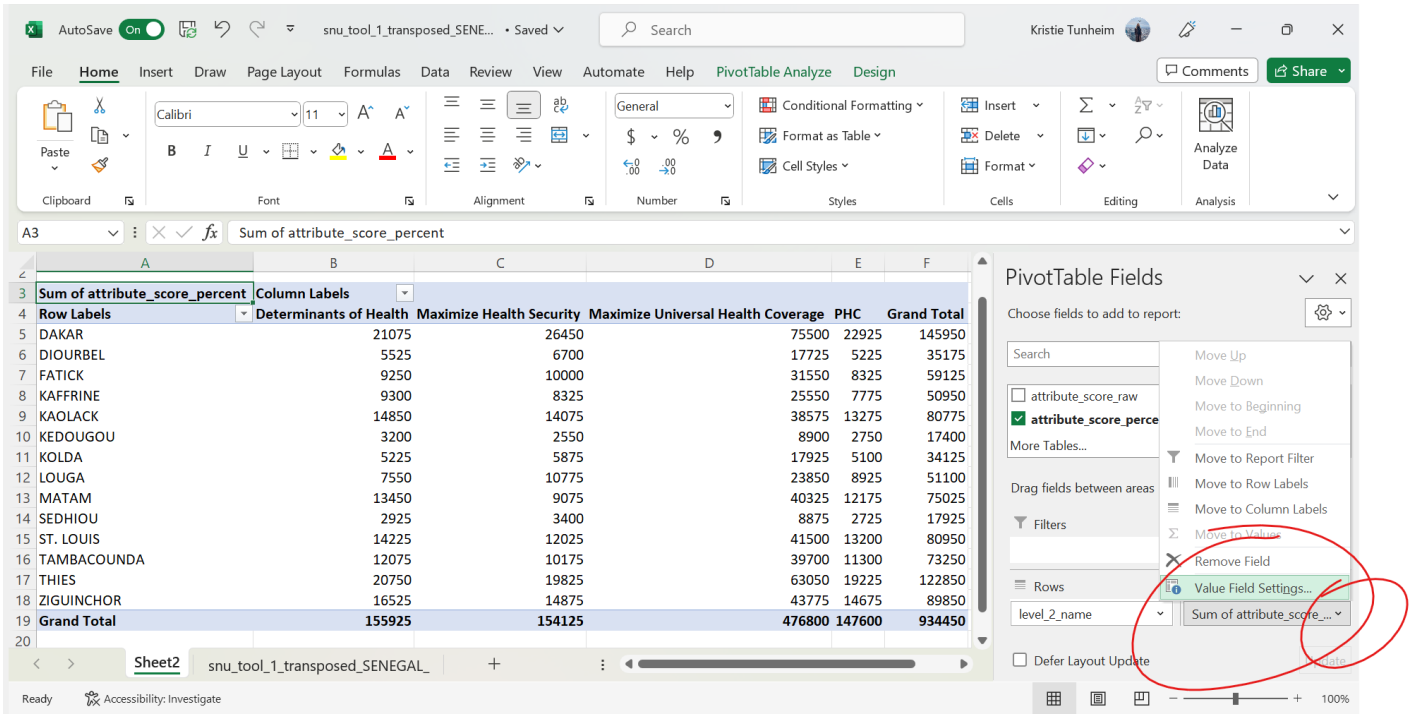


6. Next scroll all the way to the bottom of the PivotTable Fields list and drag " attribute_score_percent" and drop it in the "Values".



Sum of attribute_score_percent	Column Labels				
Row Labels	Determinants of Health	Maximize Health Security	Maximize Universal Health Coverage	PHC	Grand Total
DAKAR	21075	26450	75500	22925	145950
DIOURBEL	5525	6700	17725	5225	35175
FATICK	9250	10000	31550	8325	59125
KAFFRINE	9300	8325	25550	7775	50950
KAOLACK	14850	14075	38575	13275	80775
KEDOUGOU	3200	2550	8900	2750	17400
KOLDA	5225	5875	17925	5100	34125
LOUGA	7550	10775	23850	8925	51100
MATAM	13450	9075	40325	12175	75025
SEDHIOU	2925	3400	8875	2725	17925
ST. LOUIS	14225	12025	41500	13200	80950
TAMBACOUNDA	12075	10175	39700	11300	73250
THIES	20750	19825	63050	19225	122850
ZIGUINCHOR	16525	14875	43775	14675	89850
Grand Total	155925	154125	476800	147600	934450

7. What we see here in the table are the Sums of the scores and we want to see the arithmetic mean. To change this, click on the right side of the "Sum of attribute_score_percent" in the "Values box" and click on "Value Field Settings" and change from "Sum" to "Average".



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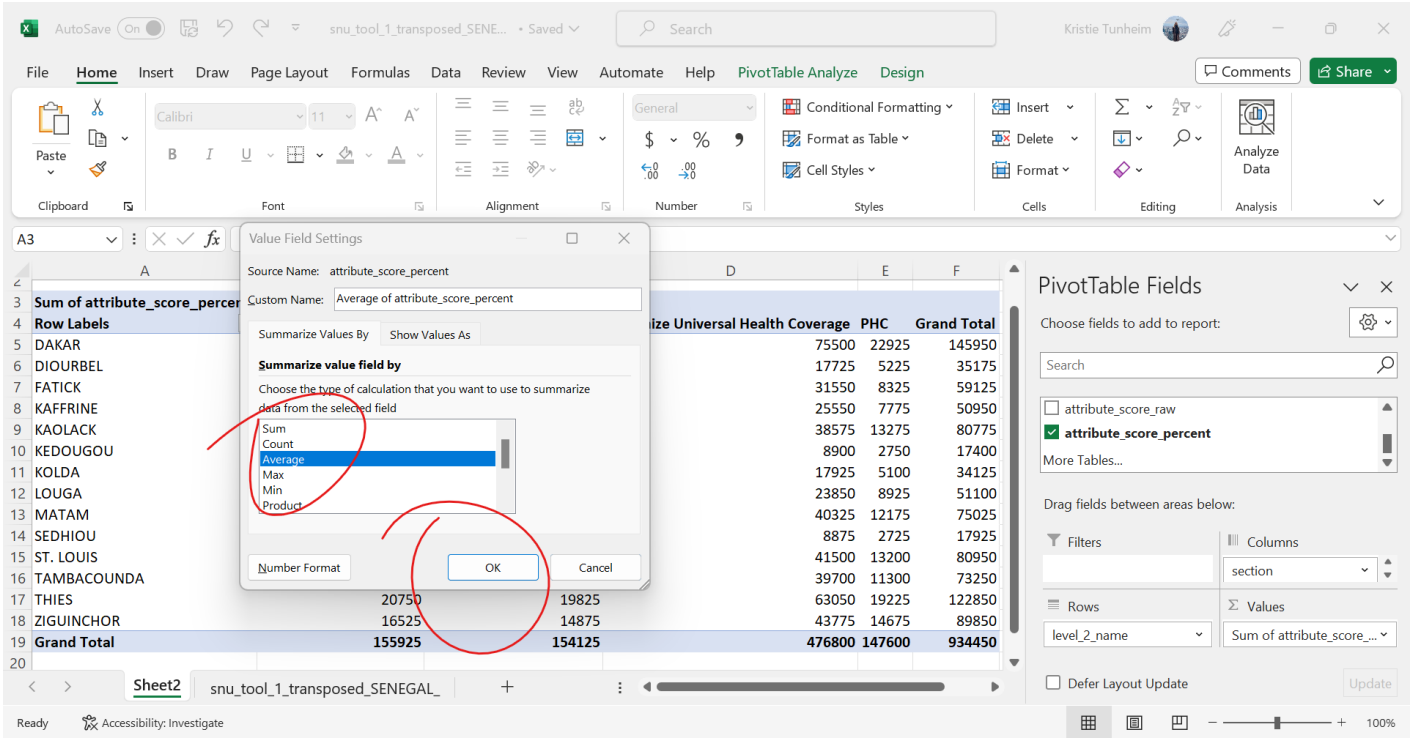
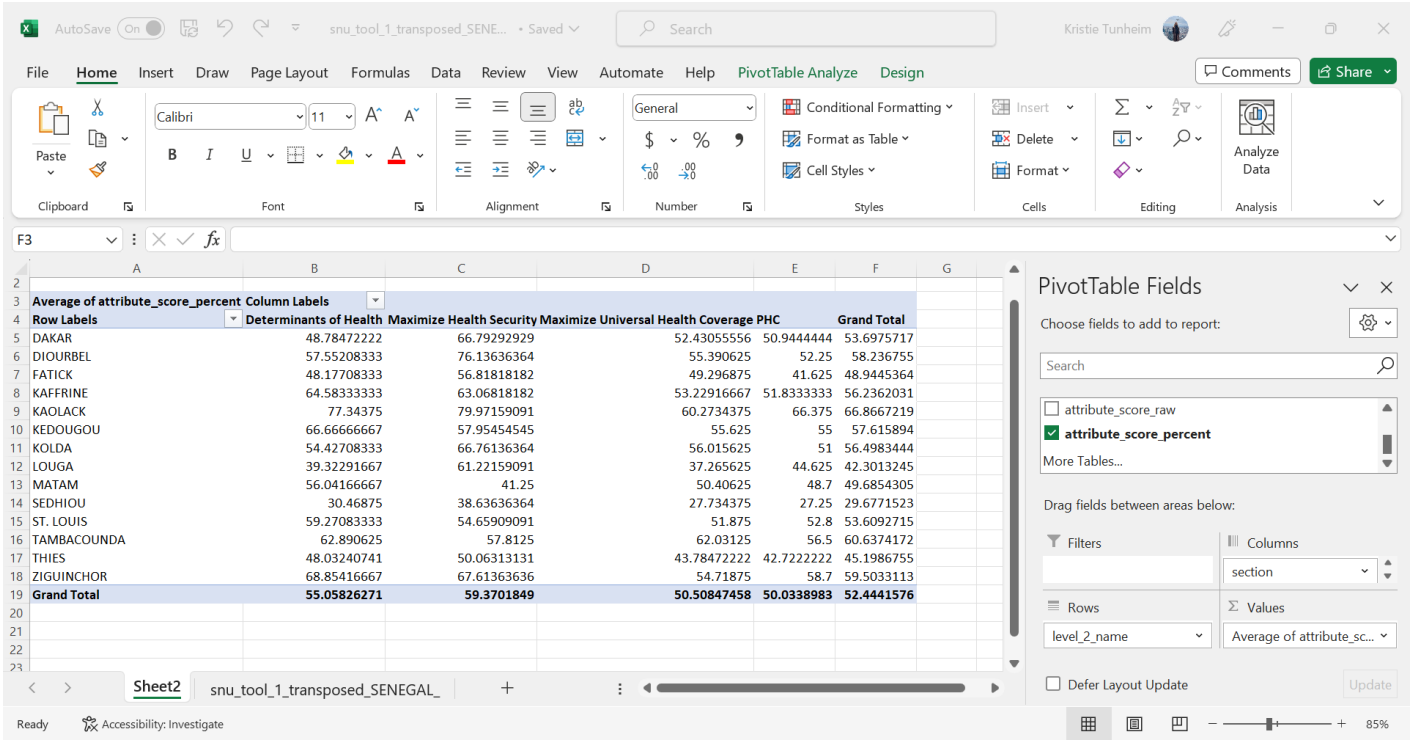
8. Click “Average,” then click OK.

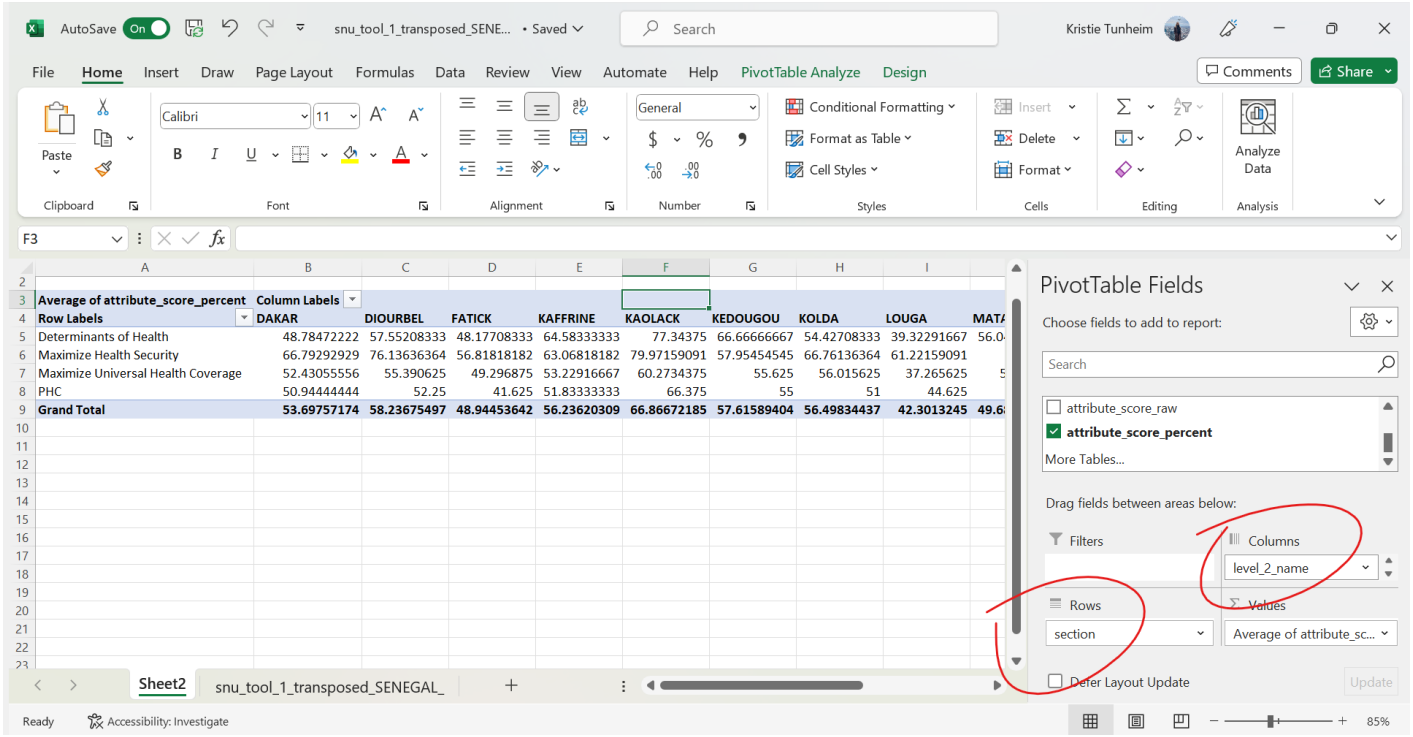


9. This then shows us the average scores per region within the tool’s sections.



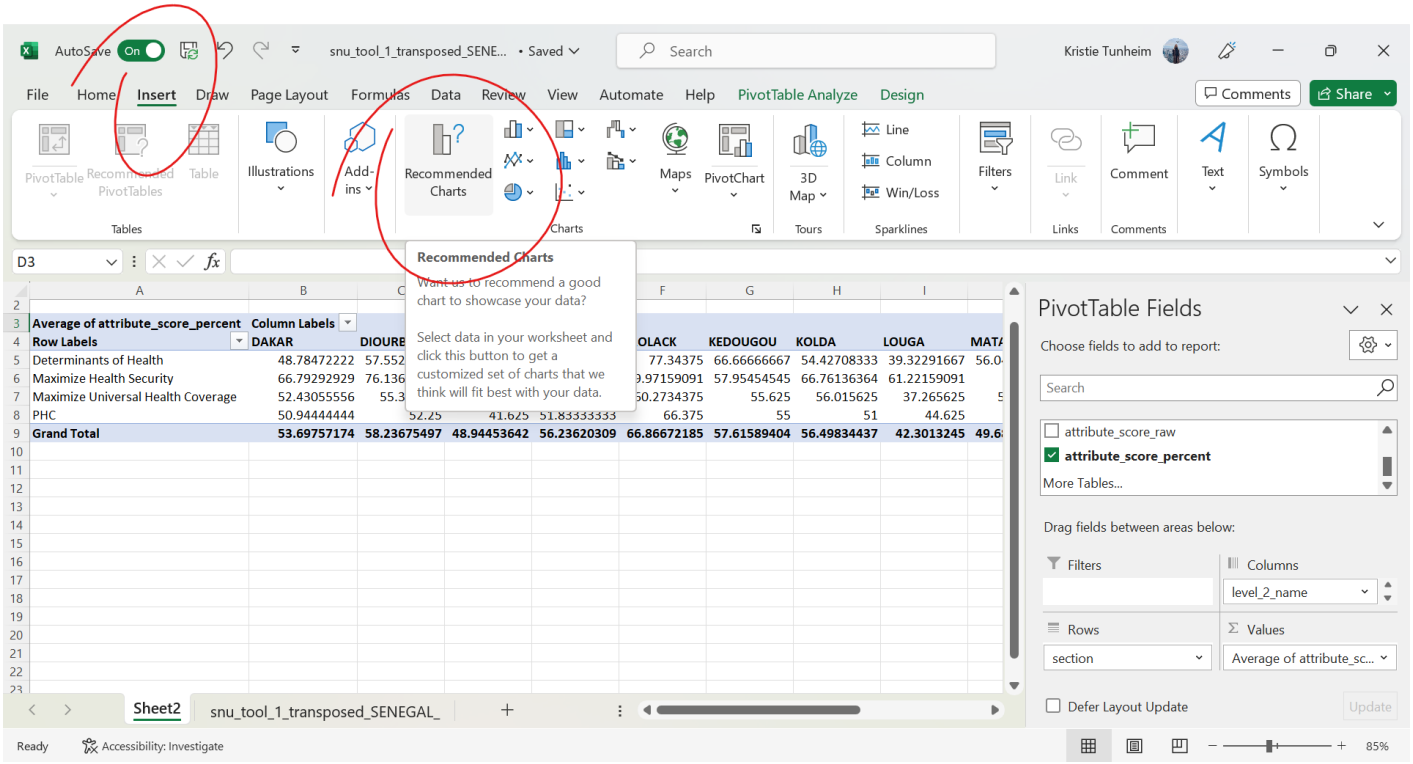
From here, you can get creative and explore the data building on the previous 9 steps to get you started. Below are a few tools you can use to gain more comfort with using pivot tables for data analysis.

If we wanted to change the axis and put the sections on the left and the regions on the right, we would just swap the Rows and Columns to see this change.

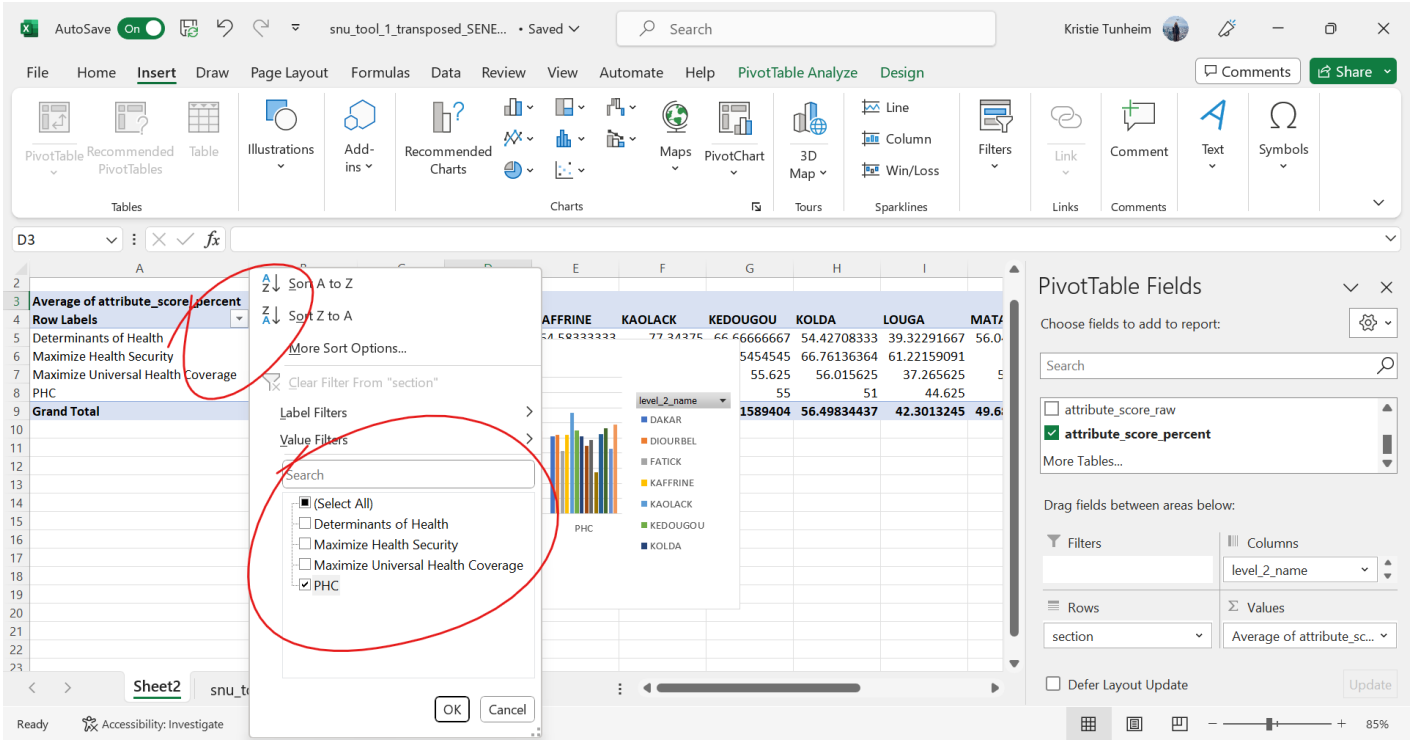


Average of attribute_score_percent	Column Labels								
Row Labels	DAKAR	DIOURBEL	FATICK	KAFFRINE	KAOLACK	KEDOUGOU	KOLDA	LOUGA	MATA
Determinants of Health	48.78472222	57.55208333	48.17708333	64.58333333	77.34375	66.66666667	54.42708333	39.32291667	56.0
Maximize Health Security	66.79292929	76.13636364	56.81818182	63.06818182	79.97159091	57.95454545	66.76136364	61.22159091	
Maximize Universal Health Coverage	52.43055556	55.390625	49.296875	53.22916667	60.2734375	55.625	56.015625	37.265625	5
PHC	50.94444444	52.25	41.625	51.83333333	66.375	55	51	44.625	
Grand Total	53.69757174	58.23675497	48.94453642	56.23620309	66.86672185	57.61589404	56.49834437	42.3013245	49.6

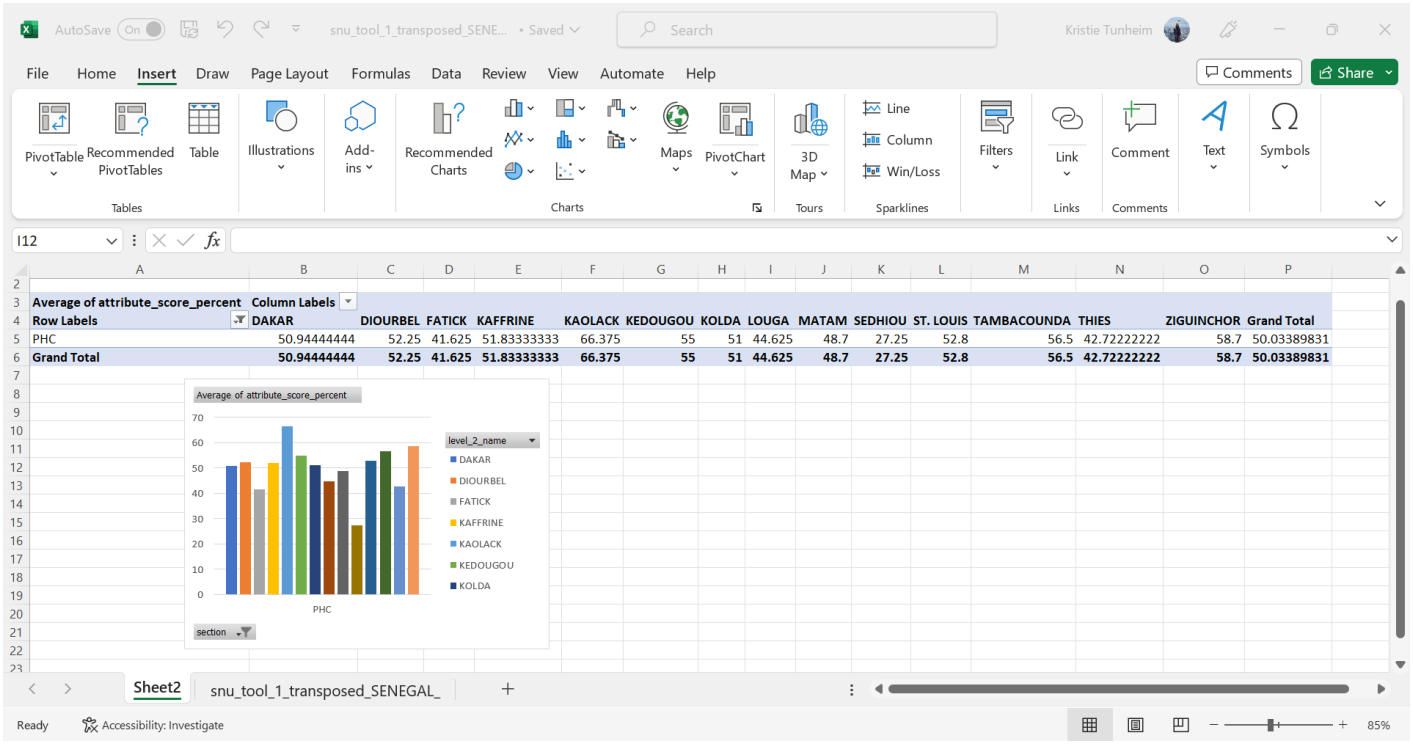
If we wanted to create a chart with this data, we would simply click on “Insert” above and click on “Recommended Charts” to see the options.



Let’s choose a Clustered Column chart. However, this looks a bit too busy so let’s click on the “filter” button in the pivot table to reduce the chart to PHC only.

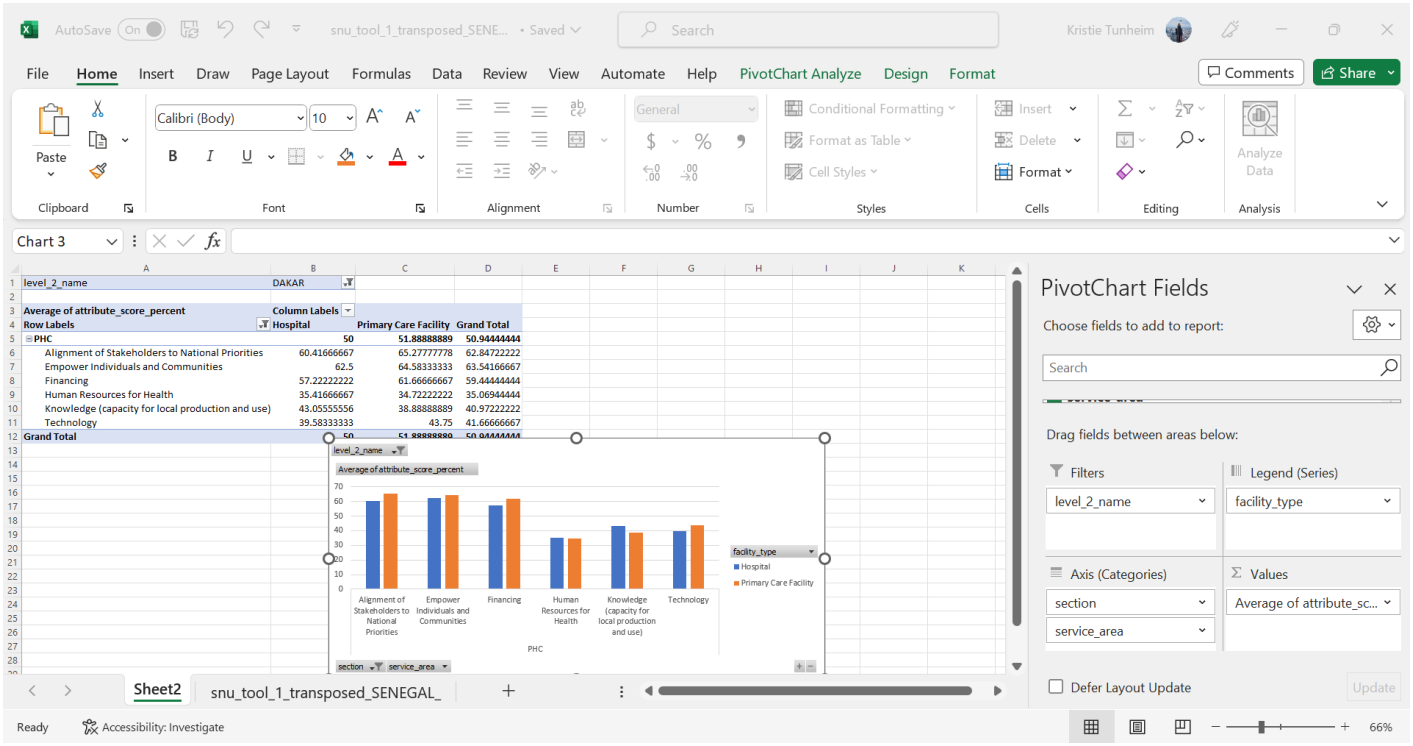


Here's what the new chart looks like after modifying the filters.



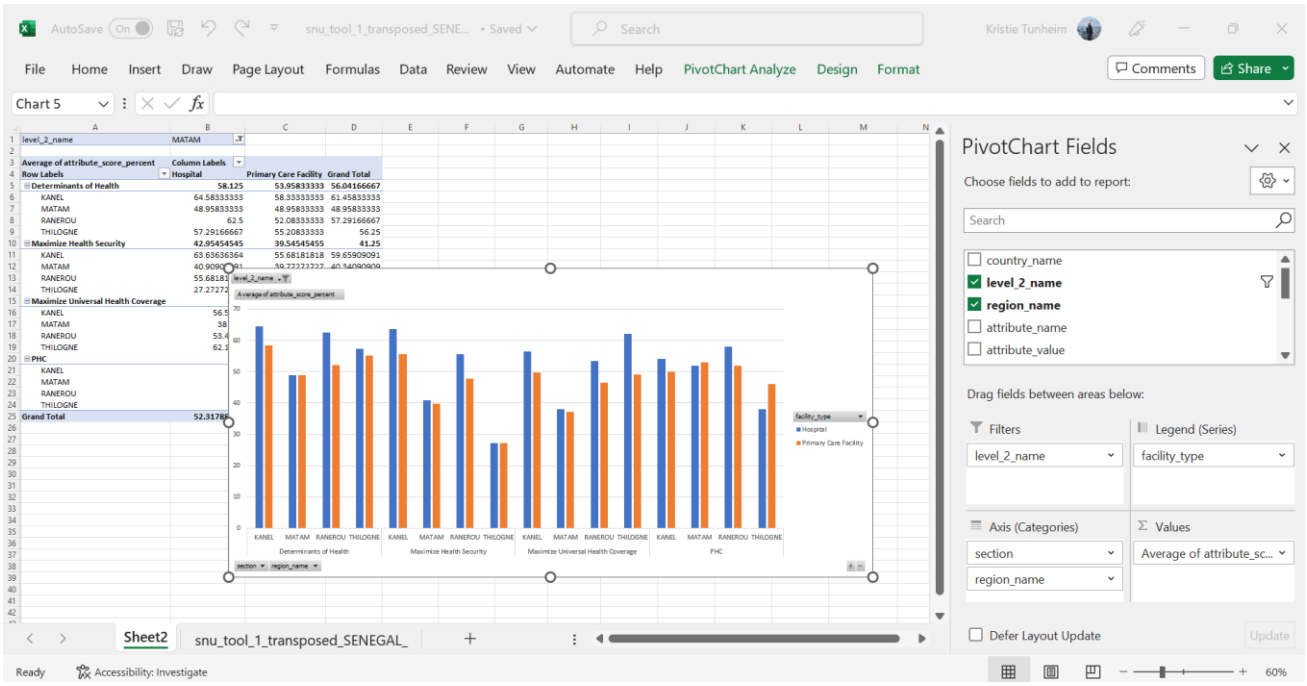
Next, let's drill down to the service areas of Primary health care (PHC) application within one region comparing by facility type. This can be organized by grabbing fields and organizing them in the "Rows" and "Columns". Notice how this shows the scoring differences between Hospitals and Primary Care Facilities.

You can see on the right how I organized these fields to develop this table. I again went to Insert > Recommended Charts > Clustered Column to generate this graph.

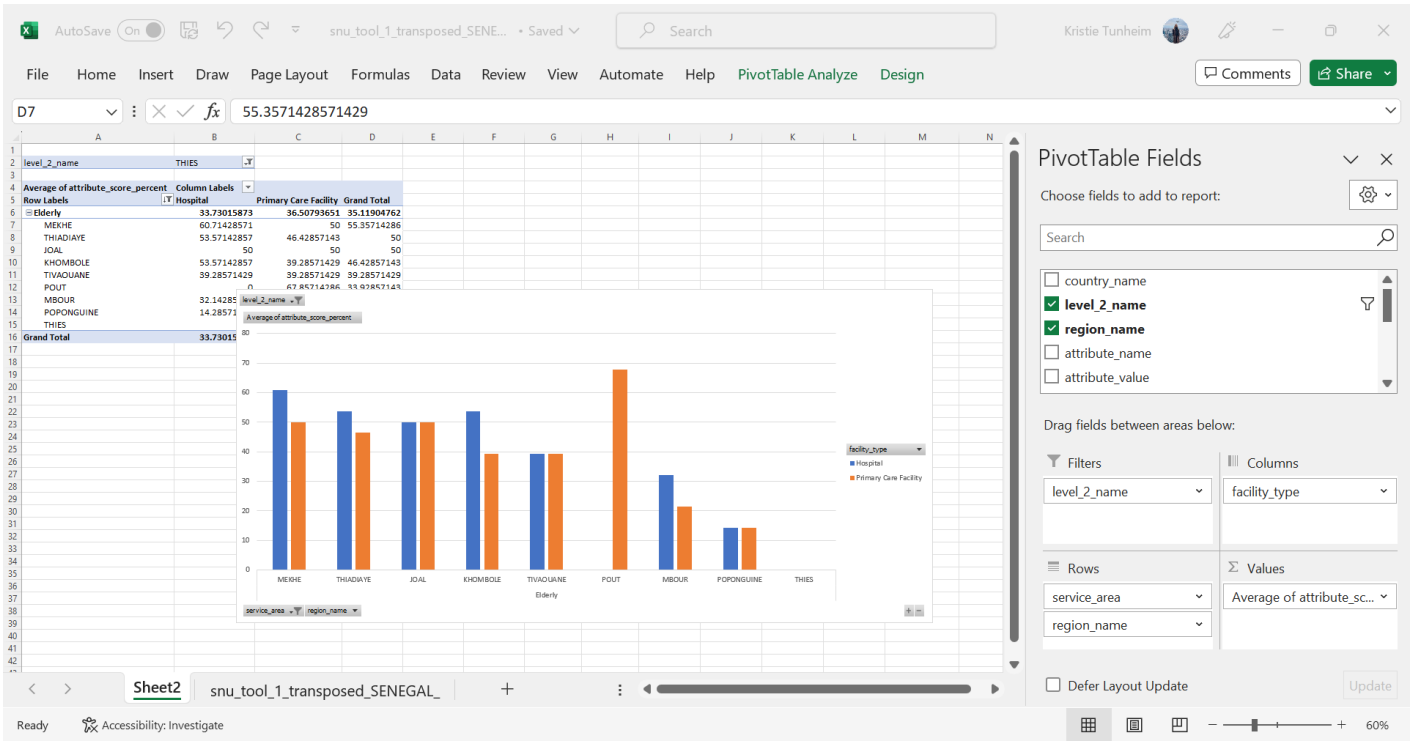


Here are a few more disaggregation possibilities to consider when organizing your analysis:

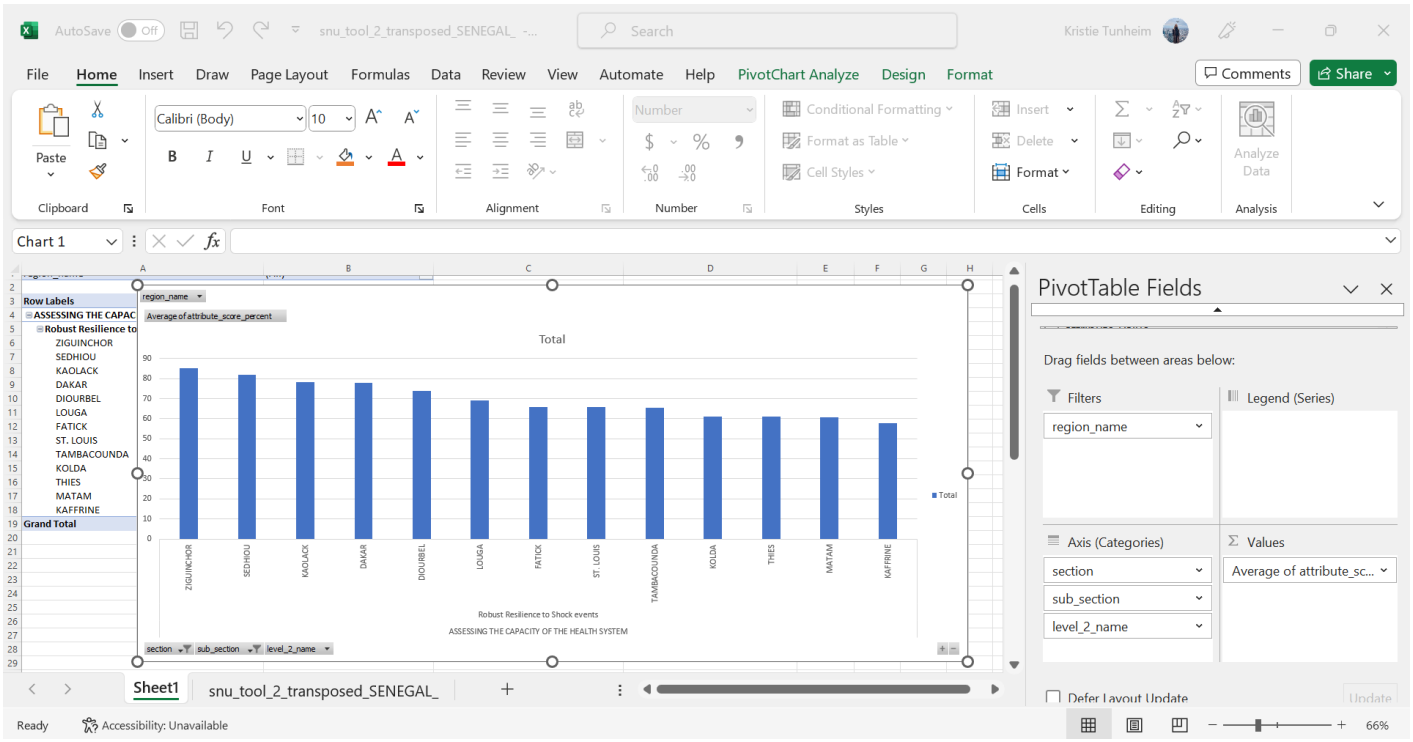
- Regional Health Outcomes within Matam's four districts (Data from one country is used for illustration here)



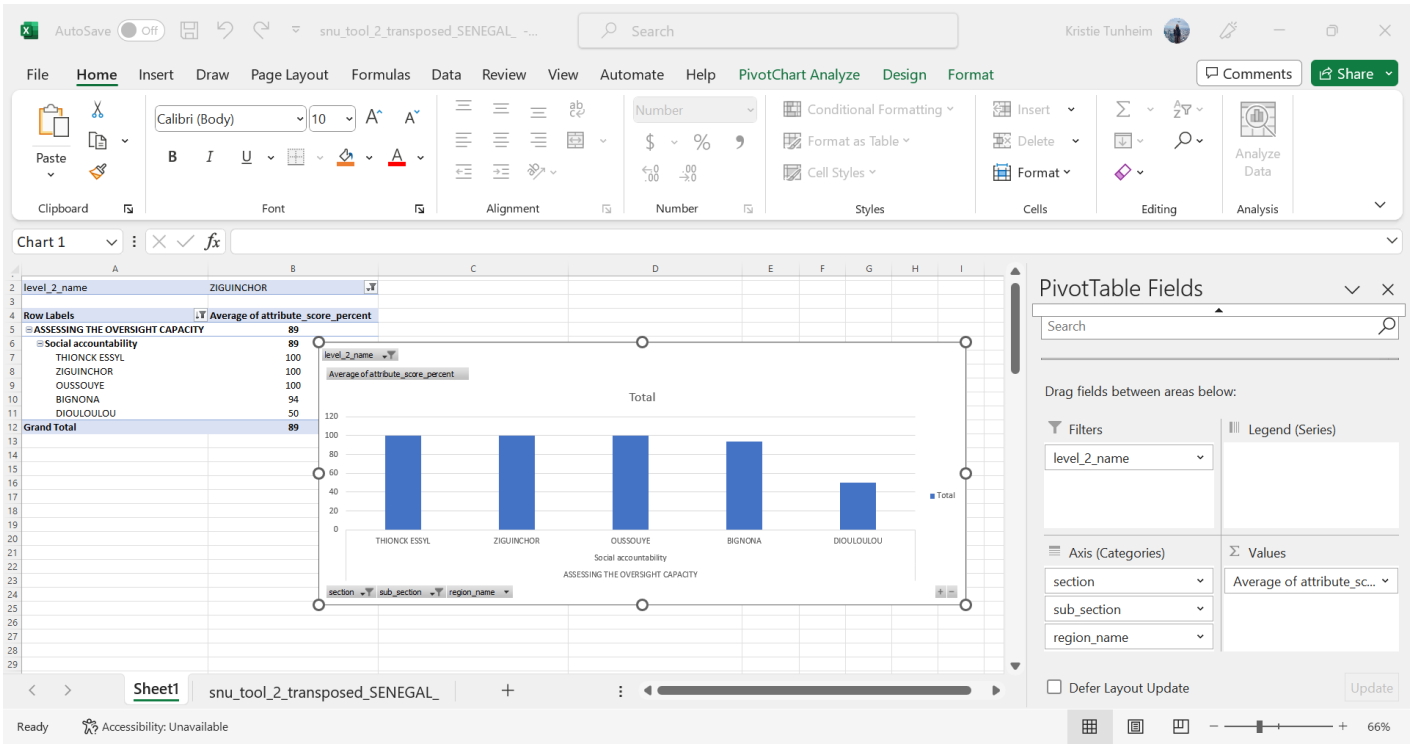
- Availability of Essential Services for the Elderly age cohort within Thies region



- Health Systems Capacity: Robust Resilience to Shock Events comparing all regions

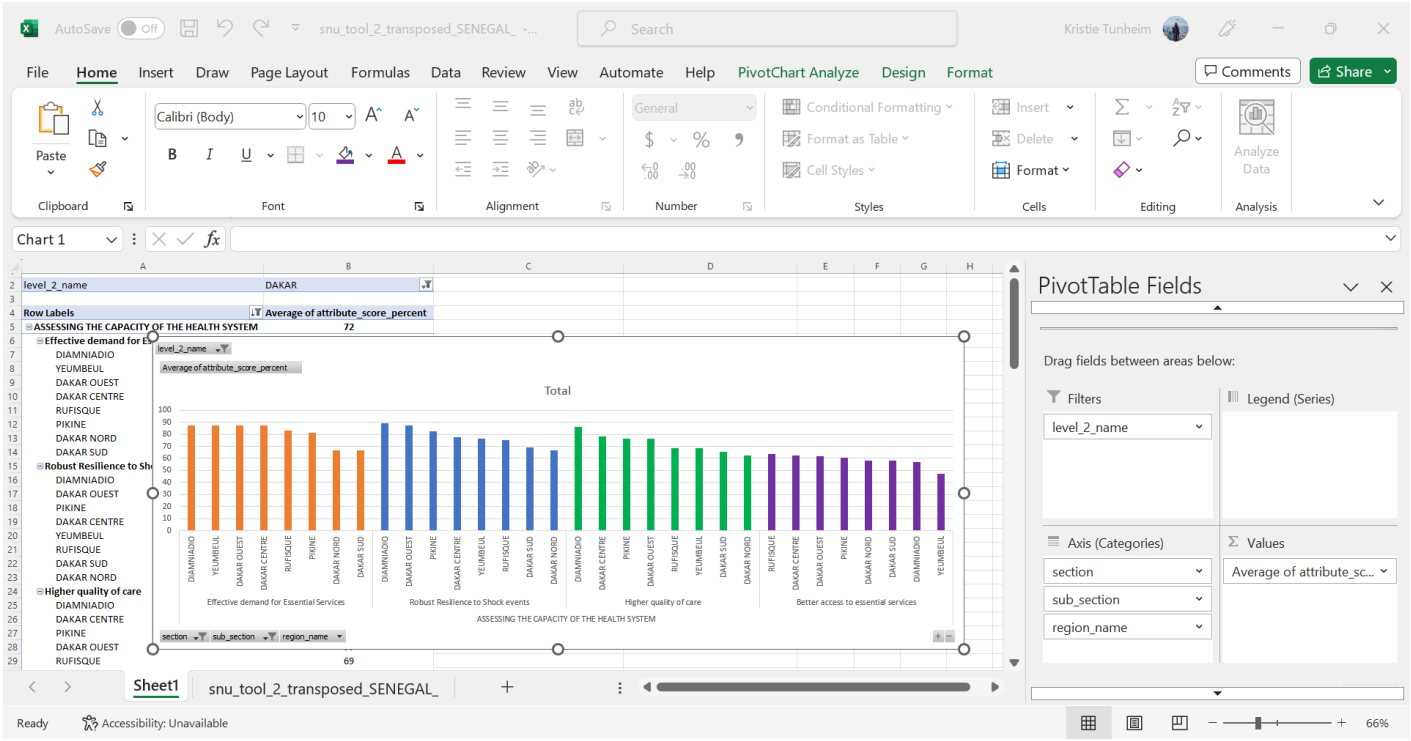


- Oversight Capacity: Social Accountability in Ziguinchor region



- Health Services Capacity by Districts in Dakar

(colors can be changed by double clicking on the bar and clicking the paint bucket to change the individual bars)



A pivot table is a versatile tool that empowers you to analyse, summarize, and interpret large datasets in a user-friendly manner. Here are a few more helpful tips when analysing and interpreting the SNU data:

When pasting charts into a presentation, we recommend that you paste them as an image, to avoid tables being modified live as they are created in Excel. Please also refer to the tool composition for recommended disaggregation and guidelines on specific analyses to be performed.