



INTELLIGENCE CONSULTING

PIVOTING SURVEY DATA

For Tableau

INNOVATIVE. CREATIVE. EFFECTIVE.

www.vizualintelligence.com

Intro

Survey data is one of the most difficult data types to work with. There are many survey platforms which all export data differently. One thing that most survey software do is export the data at respondent row level where there is one respondent per row with all the questions as columns. If you are going to bring that data in Tableau it is always a good practice to pivot the survey data beforehand.

Why Pivot Survey Data?

Pivoting the data before putting it into Tableau is going to make it much easier to work with when creating visualizations. When you get the original data file from your survey platform, you're going to have respondent row level data. This means each respondent has its own row and several different columns with all of the different questions. When this data is brought into Tableau, there will be a dimension for each of these columns. You could possibly have hundreds of different dimensions depending on the length of the survey. This makes the data very difficult to work with! Now if you pivot the data, there will only be three dimensions; *respondent ID*, *questions*, and *answers*. This will make creating the visualization much easier and much more efficient. It will also allow you to do things that you otherwise wouldn't be able to do with the original format.

2 Tableau Tools to Help You Pivot Your Survey Data

There are two different Tableau tools that you can use to pivot the data. There is a plug-in that is available for Microsoft Excel and there is also the option to pivot the data right in Tableau.

Tableau Excel Add-In

Tableau has its own Excel add-in that you can use to pivot the data right in Excel. You can download the add-in by clicking the Tableau Icon here:



help resolve this issue, do the following:

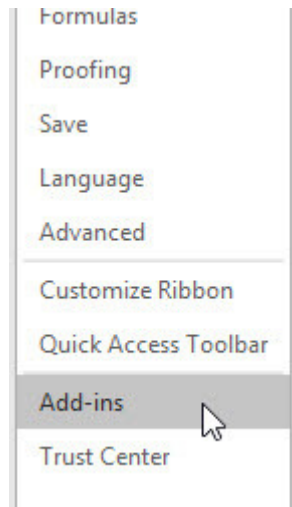
1. Click the Microsoft Office button, click Excel Options
2. From the Manage drop-down list, select Disabled Items
3. Select the Tableau add-in, and click Enable.

Your use of this software add-in for Tableau Desktop [is provided "AS IS"](#), **except that Tableau makes no warranty and provides no** WARRANTIES OF TITLE, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT.

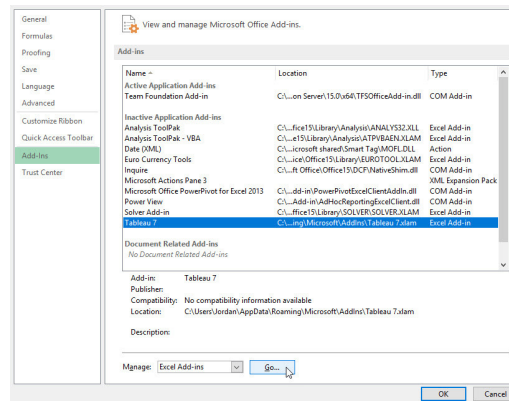


tableau_data_tool.zip
341.9 KB

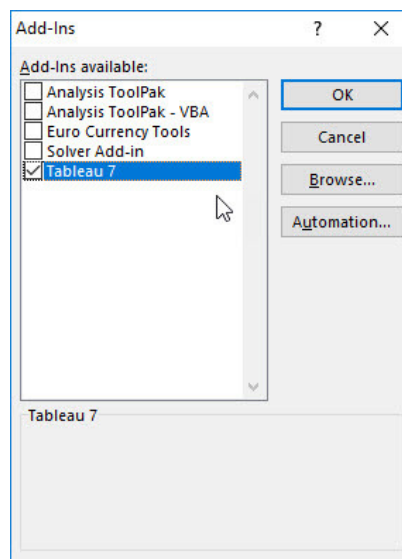
Once it has downloaded, find the file and double-click to install it. After it is done installing, open Excel. Then click *File, Options*, and then click *Add-Ins*.



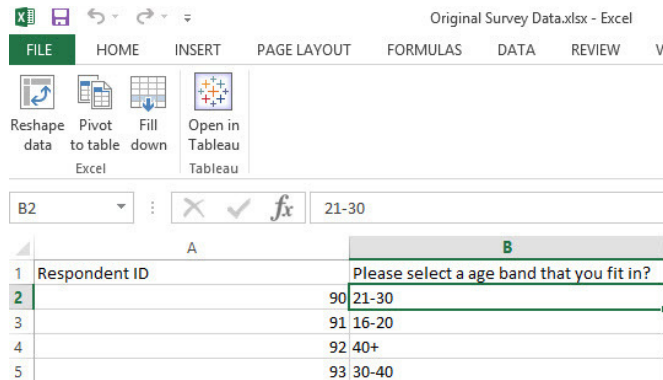
From there, click *Manage* and select *Excel Add-ins*. Confirm your choice by clicking *Go*.



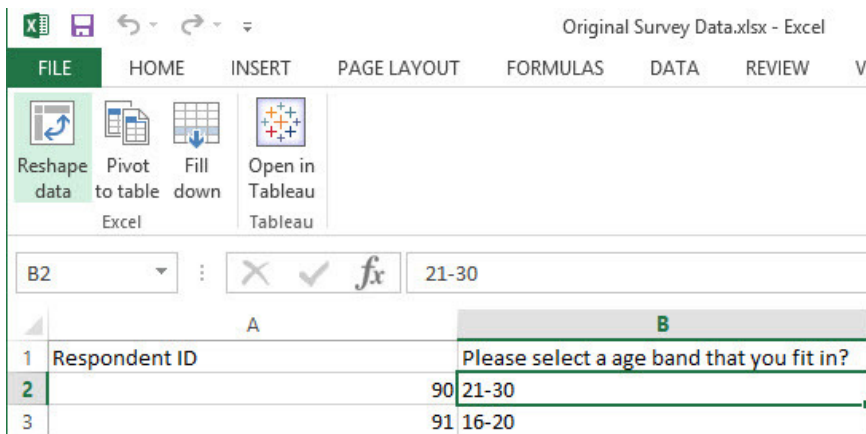
In the Add-ins box, make sure the box beside Tableau Add-in is selected and then click *Ok*.



Now that the Tableau Add-in is available, you can now pivot the survey data right in Excel. Once you have imported the data, the process is easy. To start the pivot process, you must always select the first piece of data. Click on B2, as it is the first answer to the first question.



Then click *Re-shape Data*.

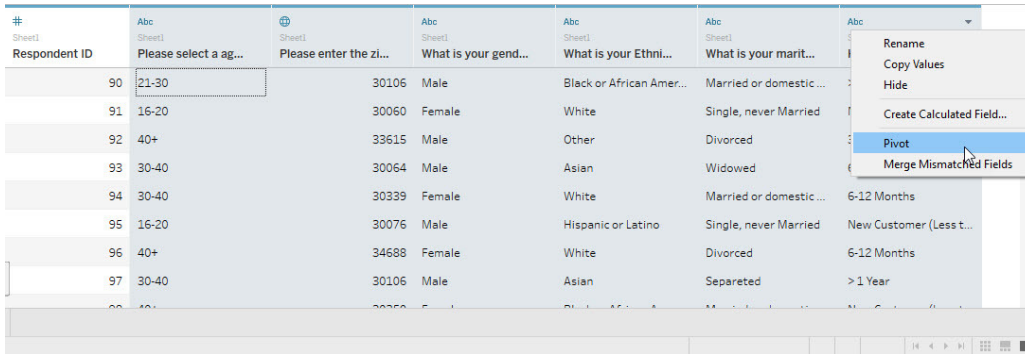


From there go and re-name the columns; *respondent ID*, *question*, and *answers*. Each row will be duplicated for as many questions as they answered. For example Respondent 90 answered six questions so there are six row. Now the data is ready to be used in Tableau!

| | A | B | C |
|---|---------------|---|---------------------------|
| 1 | Respondent ID | Questions | Answers |
| 2 | 90 | Please select a age band that you fit in? | 21-30 |
| 3 | 90 | Please enter the zip code you live in? | 30106 |
| 4 | 90 | What is your gender? | Male |
| 5 | 90 | What is your Ethnicity? | Black or African American |

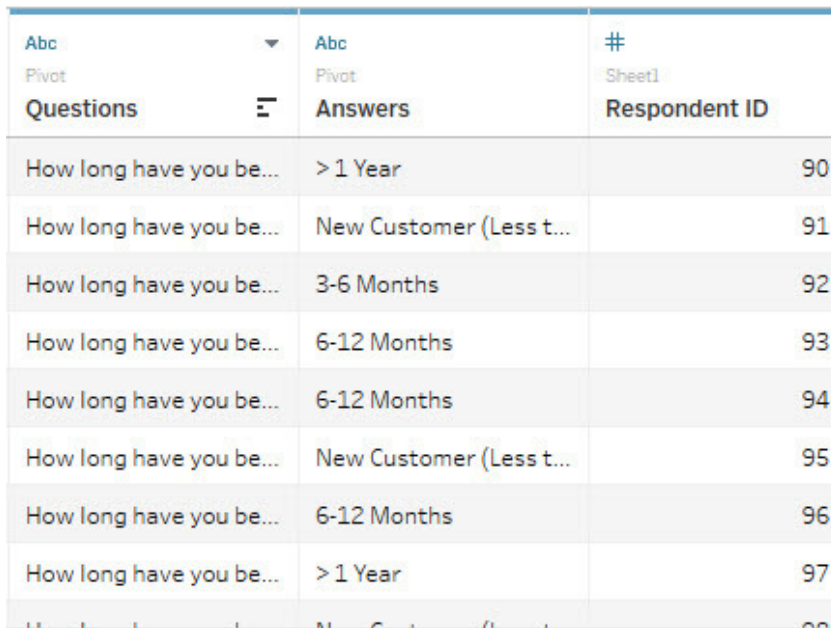
Tableau Pivot Option

Tableau also has its own built-in pivot option. In Tableau, select the first question, hold *shift*, and select the last question. Next *right-click* and choose *Pivot*.



| # | Abc | Abc | Abc | Abc | Abc | Abc |
|---------------|-----------------------|------------------------|---------------------|--------------------------|-------------------------|-------------------------|
| Sheet1 | Sheet1 | Sheet1 | Sheet1 | Sheet1 | Sheet1 | Sheet1 |
| Respondent ID | Please select a ag... | Please enter the zi... | What is your gen... | What is your Ethni... | What is your marit... | |
| 90 | 21-30 | 30106 | Male | Black or African Amer... | Married or domestic ... | |
| 91 | 16-20 | 30060 | Female | White | Single, never Married | |
| 92 | 40+ | 33615 | Male | Other | Divorced | |
| 93 | 30-40 | 30064 | Male | Asian | Widowed | |
| 94 | 30-40 | 30339 | Female | White | Married or domestic ... | 6-12 Months |
| 95 | 16-20 | 30076 | Male | Hispanic or Latino | Single, never Married | New Customer (Less t... |
| 96 | 40+ | 34688 | Female | White | Divorced | 6-12 Months |
| 97 | 30-40 | 30106 | Male | Asian | Separated | > 1 Year |

Tableau will do all the work the same way Excel did! Don't forget to rename the columns *Questions* and *Answers*! Simply *right-click* the column and click *Rename*.

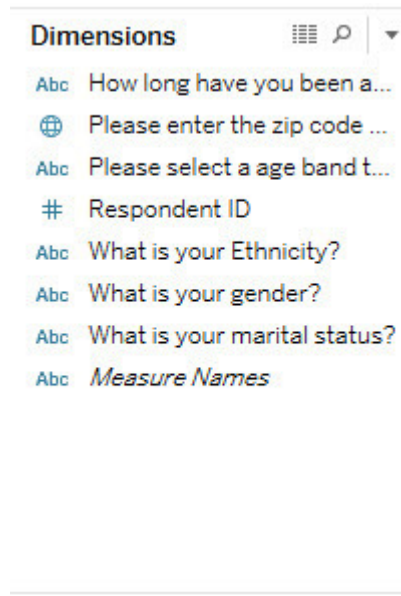


| Abc | Abc | # |
|-------------------------|-------------------------|---------------|
| Sheet1 | Sheet1 | Sheet1 |
| Pivot | Pivot | Respondent ID |
| Questions | Answers | |
| How long have you be... | > 1 Year | 90 |
| How long have you be... | New Customer (Less t... | 91 |
| How long have you be... | 3-6 Months | 92 |
| How long have you be... | 6-12 Months | 93 |
| How long have you be... | 6-12 Months | 94 |
| How long have you be... | New Customer (Less t... | 95 |
| How long have you be... | 6-12 Months | 96 |
| How long have you be... | > 1 Year | 97 |

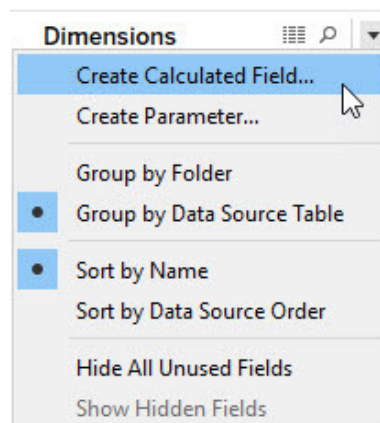
The reason you may want to pivot the data in Tableau instead of Excel is that if you make changes to the data, Tableau will automatically update when you click refresh. In Excel, you would have to re-pivot the data each time the data is updated and then bring it into Tableau.

Analyzing Survey Data in Original Format

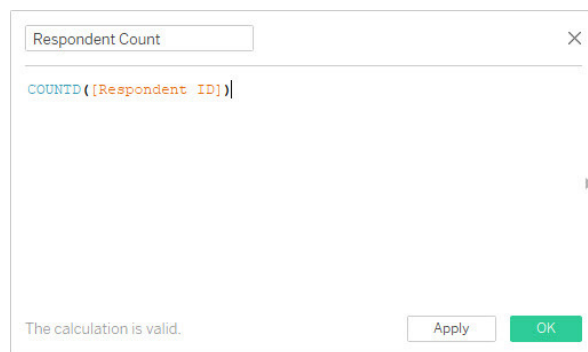
If you bring survey data into Tableau in its original format, Tableau will create a dimension for each column (questions).



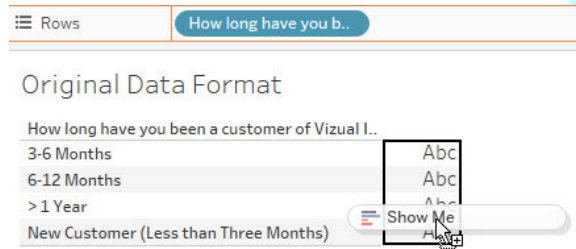
The first thing you will want to do is create a respondent count that will count distinct respondent ID's. Click on the node to the right of *Dimensions*, then *Create Calculated Field*.



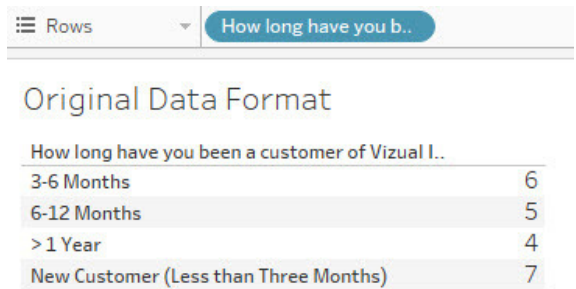
Name the calculated field *Respondent Count* and type in the equation `COUNTD ([Respondent ID])`.



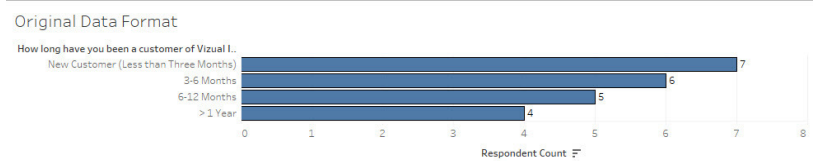
Then bring over a dimension (question) on rows and then *Respondent Count* on to the visualization.



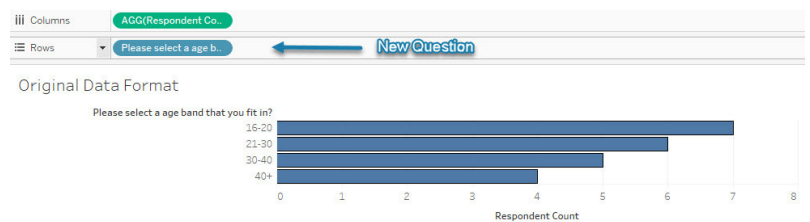
You can then see how many respondents have answered each of the answer choices within the question.



You can then go ahead and create a bar chart. After a bit of formatting, it will look like this.



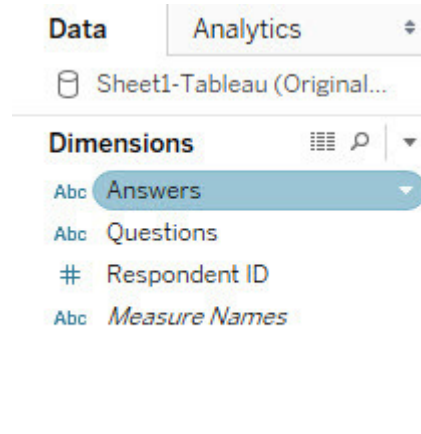
For each of the following questions, you need to replace the dimension in the worksheet by grabbing each dimension and dropping it on rows. Therefore you will need to create a new worksheet for each question.



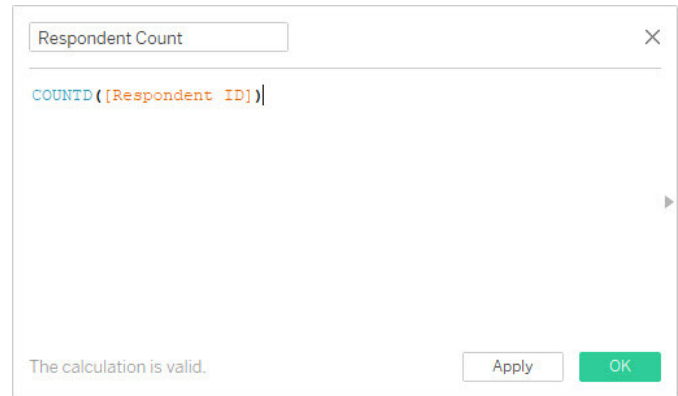
That's quite a bit of work. Alternatively, you can create a parameter to flip through each of these dimensions which would be the best option if you are going to use the original data format.

Analyzing Survey Data in New Pivoted Format

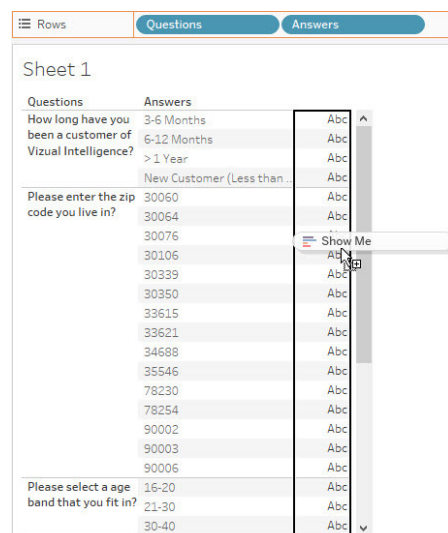
With the new pivoted data, you will only have three dimensions; *respondent ID*, *questions*, and *answers*.



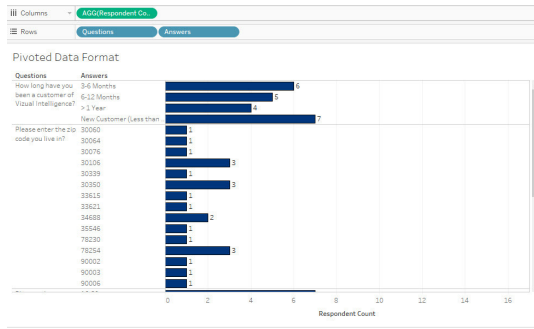
You will need to create a respondent count for this as well. This step is identical to what was shown in the previous example.



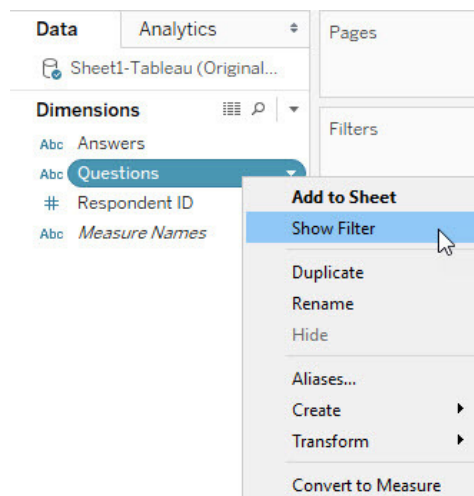
This time, drop the *Questions* dimension and the *Answers* dimension on rows. Then grab *Respondent Count* and drop it on the visualization where you see *Abc*.



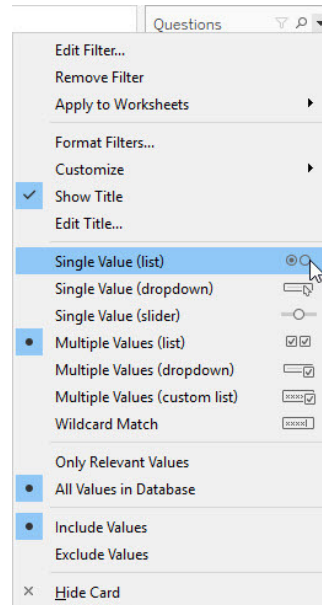
You can then create a bar chart and format it.



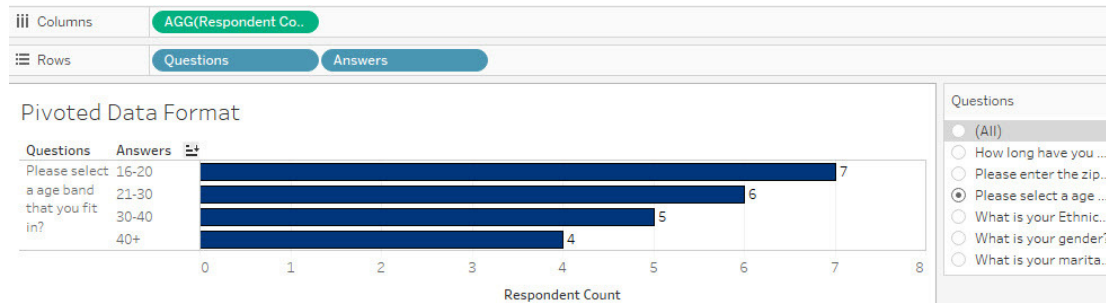
Then *right-click Questions* and make it a quick filter by clicking *Show Filter*.



Make it a single value list by clicking the carrot to the right in the filter pane and selecting *Single Value (List)*. This will allow the end-user to quickly filter through the questions.



The final chart is much easier to navigate through and requires less time to create!



So as you can see pivoting your data is a much simpler and a more efficient way of visualizing your survey data compared to the original data format! This is a very simple example, but pivoting your data before bringing it into Tableau will get you in the right direction. If you're going to look at survey data in Tableau, always pivot your data first!