

# PIVOTING SURVEY DATA For Tableau

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### 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: [+++]



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1. Click the Microsoft Office button, click Excel Option

2. From the Manage drop-down list, select Disabled If

3. Select the Tableau add-in, and click Enable.

Your use of this software add-in for Tableau Deskt PROVIDED "AS IS". NEITHER TABLEAU NOR ITS S EXPRESS OR IMPLIED, STATUTORY OR OTHERWIS WARRANTIES OF TITLE, MERCHANTABILITY, FIT

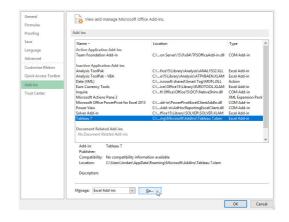
tableau\_data\_tool.zip 341,9 KB



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*.

Formulas
Proofing
Save
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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*.

dd-Ins available: Analysis ToolPak	~	OK	8
Analysis ToolPak - VBA Euro Currency Tools Solver Add-in		Cano	el:
Tableau 7		Brows	ie
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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.

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F	ILE HOME INSERT F	AGE LAYOUT	FORMULAS	DATA	REVIEW	V
Res	hape Pivot Fill tata to table down Excel Den in Tableau Tableau	fr 21-30				
82		<i>fx</i> 21-30				
24	A			В		
1	Respondent ID	PI	ease select a a	ge band th	nat you fit ir	n?
2		90 21	L-30	202	0564	
3		91 16	5-20			
4		92 40	)+			
			0-40			

#### Then click *Re-shape Data*.

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F	FILE	HOM	E	INSERT	PAGE LAYOUT	Г	FORMULAS	DATA	REVIEW	VI
Res	shape lata	Pivot to table of Excel	Fill	Open in Tableau						
B	2	Ŧ	: [	XV	$f_x$ 21-	30				
1				А				В		
1	Resp	ondent	ID			Ple	ase select a a	ge band th	nat you fit in	n?
2					90	21-	30			
3					91	16-	20			

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!

1	A	В	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*.

ŧa	Abc	•	Abc	Abc	Abc	Abc 🔻
Respondent ID	Sheet1 Please select a ag	Sheet! Please enter the zi	Sheet! What is your gend	Sheet! What is your Ethni	Sheet1 What is your marit	Rename Copy Values
90	21-30	30106	Male	Black or African Amer	Married or domestic	Hide
91	16-20	30060	Female	White	Single, never Married	Create Calculated Field
92	40+	33615	Male	Other	Divorced	E Pivot
93	30-40	30064	Male	Asian	Widowed	( Merge Mismatched Field
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	Separeted	>1 Year
~~	40.	20250		DI 1 AF. A		

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 Pivot	-	Abc Pivot	# Sheet1
Questions	F	Answers	Respondent ID
How long have yo	ou be	>1 Year	90
How long have yo	bu be	New Customer (Less t	91
How long have yo	bu be	3-6 Months	92
How long have yo	bu be	6-12 Months	93
How long have yo	ou be	6-12 Months	94
How long have yo	bu be	New Customer (Less t	95
How long have yo	ou be	6-12 Months	96
How long have yo	bu be	>1 Year	97
110 OLO 10		N. C. I. D. I.	

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).

Dim	ensions		Q	-
Abc	How long have	you be	en a	a

- Please enter the zip code ...
- Abc Please select a age band t...
- # Respondent ID
- Abc What is your Ethnicity?
- Abc What is your gender?
- Abc What is your marital status?
- Abc Measure Names

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*]).

D	imensions III ₽
	Create Calculated Field
	Create Parameter
	Group by Folder
•	Group by Data Source Table
•	Sort by Name
	Sort by Data Source Order
	Hide All Unused Fields
	Show Hidden Fields

Respondent Count		$\times$
COUNTD([Respondent ID])		
		Þ
The calculation is valid.	Apply	ОК

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.

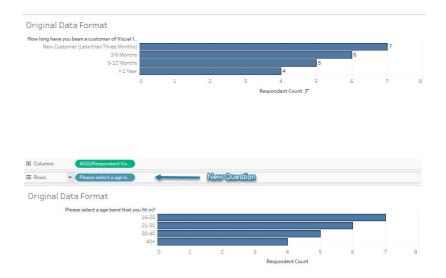
# Rows How long have you b.. Original Data Format How long have you been a customer of Vizual I...



#### E Rows How long have you b..

#### Original Data Format

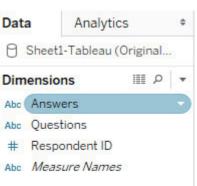
3-6 Months	6
6-12 Months	5
>1Year	4
New Customer (Less than Three Months)	7



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.

Respondent Count		$\times$
COUNTD([Respondent ID])		
The calculation is valid.	Apply	ОК

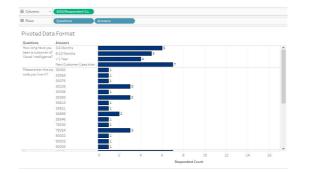
This time, drop the *Questions* dimension and the *Answers* dimension on rows. Then grab *Respondent Count* and drop it on the visualization where you see *Abc*.

Rows	Questions	Answers	
Sheet 1			
Questions	Answers		
How long have you been a customer of Vizual Intelligence?	3-6 Months	Abc	^
	6-12 Months	Abc	
	>1Year	Abc	
	New Customer (Less than	Abc	
Please enter the zip code you live in?	30060	Abc	
	30064	Abc	
	30076	= Show	Me
	30106	AHN	-
	30339	Abc	(Ħ
	30350	Abc	
	33615	Abc	
	33621	Abc	
	34688	Abc	
	35546	Abc	1
	78230	Abc	
	78254	Abc	
	90002	Abc	
	90003	Abc	
	90006	Abc	
Please select a age band that you fit in?	16-20	Abc	
	21-30	Abc	
	30-40	Abc	

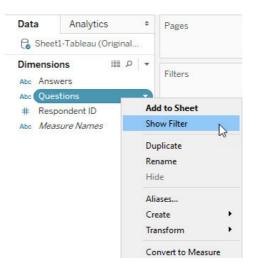
You can then create a bar chart and format it.

**VIZUAL** 

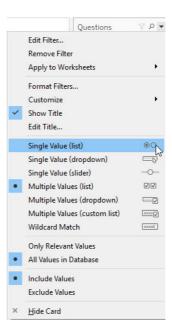
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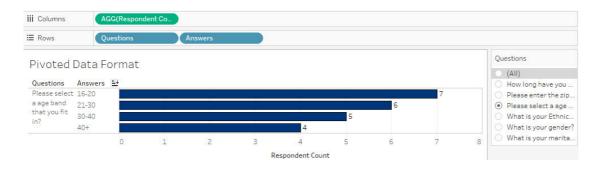
Then *right-click Questions* and make it a quick filter by clicking *Show Filter*.



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 with get you in the right direction. If you're going to look at survey data in Tableau, always pivot your data first!