

Advanced Excel V-LOOK UP

Download the data

1. Go to <https://stats.oecd.org/qwids/> This is the main data portal for the [Organization for Economic Co-operation and Development](#). The main interface for its database is [Query Wizard for International Development Statistics](#). Check the links to read more about where the data comes from.
2. As you began to use a new data source, take some time to get familiar with the way the data is organized in the portal.

The screenshot shows the OECD QWIDS Query Wizard interface. At the top, there is a navigation bar with links: About, Demo, Help, Popular queries, Glossary, Contact Us, and OECD.Stat. Below this, the main heading is "What type of Aid data are you looking for?". The interface is divided into six main columns for selection: Donor(s), Recipient(s), Flow(s), Flow Type(s), Sector(s), and Time Period. Each column has a list of options with checkboxes. For example, in the Donor(s) column, "DAC Countries" is selected. In the Recipient(s) column, "All Recipients, Total" is selected. In the Flow(s) column, "ODA" is selected. In the Flow Type(s) column, "Disbursements" is selected. In the Sector(s) column, "All Sectors, Total" is selected. In the Time Period column, "6 Selected" is shown. At the bottom left, there is a "Reset All Selections" button. At the bottom right, there is a "Display the Data" button. The footer includes the OECD logo and copyright information.

3. Please watch the video on the Demo or https://stats.oecd.org/qwids/qwids_demo.html
4. Also the database is very technical so check the definitions in the glossary <http://www.oecd.org/dac/stats/dac-glossary.htm>
5. For this exercise we are going to investigate official development assistance by Sector, so please read the description of the sectors in [THE LIST OF CRS PURPOSE CODES](#)
6. Let's begin. Click on Reset All Section
7. Donors dimension:
 - a. Click on Browse Donors
 - b. Select All Donors Group.
 - c. Deselect everything that is not a country (WB, EU Institutions, etc.) for a total of 49 countries (Notice when you finish, there will be 48 countries selected because the system deselects Azerbaijan automatically)

Advanced Excel V-Look Up

OECD
BETTER POLICIES FOR BETTER LIVES

What type of Aid data are you interested in?
Hide Data Selection

Donor(s)

DAC Countries

☐ All Donors, Total
☒ DAC Countries
☐ Non-DAC Countries
☐ Multilateral Agencies

Browse Donors

Enter Donor:

Reset All Selections

Show Additional Data Selections

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Browse Donors

All Donors (49)
DAC Countries (28)
G7 Countries (7)
DAC-EU Countries (19)
Non-DAC Countries (21)
Multilateral Agencies
Memo: Private Donors

☐ G7 Countries, Total
☐ DAC EU Members, Total

☒ Australia
☒ Austria
☒ Belgium
☒ Canada
☒ Czech Republic
☒ Denmark
☒ Finland
☒ France
☒ Germany
☒ Greece
☒ Iceland
☒ Ireland
☒ Italy
☒ Japan
☒ Korea
☒ Luxembourg
☒ Netherlands
☒ New Zealand
☒ Norway
☒ Poland
☒ Portugal
☒ Slovak Republic
☒ Slovenia
☒ Spain
☒ Sweden
☒ Switzerland
☒ United Kingdom
☒ United States

Clicking on a grouping allows you to further refine your selection to specific members of that grouping or select the entire grouping as your data selection

Some groupings/members of groupings are not available due to the combination of choices that you have made. Learn more about how to make grayed out data selectable by [visiting the help section](#).

OK

8. Recipient dimension:

- Deselect All Recipient, Total
- Click on Enter Recipient and write Pakistan and Enter

Recipient(s)

Pakistan

☐ All Recipients, Total
☐ All Developing Countries, Total
☐ All Multilateral Recipients, Total

Browse Recipients

Pakistan
Pakistan

- For Flow(s) and Flow Type(s) dimension just leave it as it is ODA and Disbursements selected. Please check definitions in case you don't know what they mean.

What type of Aid data are you looking for?

Hide Data Selection

Donor(s)	Recipient(s)	Flow(s)	Flow Type(s)
49 Selected <ul style="list-style-type: none"> <input type="checkbox"/> All Donors, Total <input type="checkbox"/> DAC Countries <input type="checkbox"/> Non-DAC Countries <input type="checkbox"/> Multilateral Agencies <p><u>Browse Donors</u></p> <p>Enter Donor:</p>	Pakistan <ul style="list-style-type: none"> <input type="checkbox"/> All Recipients, Total <input type="checkbox"/> All Developing Countries, Total <input type="checkbox"/> All Multilateral Recipients, Total <p><u>Browse Recipients</u></p> <p>Pakistan</p>	ODA <ul style="list-style-type: none"> <input checked="" type="checkbox"/> ODA <input type="checkbox"/> OOF <input type="checkbox"/> Private <input type="checkbox"/> Total Flows (ODA+OOF+Private) <input type="checkbox"/> Total Official Flows Net (ODA+OOF) 	Disbursements <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Disbursements <input type="checkbox"/> Commitments

[Reset All Selections](#)

10. Sector dimension:

- a. Deselect All sectors, Total
- b. Click on Browse Detailed Sector Codes
- c. For this exercise, we need to select all sector total without including subsectors or variables that will lead to double counting. Check [THE LIST OF CRS PURPOSE CODES](#). We want to include mostly all three digits DAC 5 Codes but not Sector Group Totals. I will provide the list: For a total of 37 sectors
 1. I.1.a. Education, Level Unspecified, Total
 2. I.1.b. Basic Education, Total
 3. I.1.c. Secondary Education, Total
 4. I.1.d. Post-Secondary Education, Total
 5. I.2.a. Health, General, Total
 6. I.2.b. Basic Health, Total
 7. I.3. Population Policies/Programmes & Reproductive Health, Total
 8. I.4. Water Supply & Sanitation, Total
 9. I.5.a. Government & Civil Society - general, Total
 10. I.5.b. Conflict, Peace & Security, Total
 11. I.6. Other Social Infrastructure & Services, Total
 12. II.1. Transport & Storage, Total
 13. II.2. Communications, Total
 14. II.3. Energy, Total
 15. II.4. Banking & Financial Services, Total
 16. II.5. Business & Other Services, Total
 17. III.1.a. Agriculture, Total
 18. III.1.b. Forestry, Total
 19. III.1.c. Fishing, Total
 20. III.2.a. Industry, Total
 21. III.2.b. Mineral Resources & Mining, Total

Advanced Excel V-Look Up

22. III.2.c. Construction, Total
23. III.3.a. Trade Policies & Regulations, Total
24. III.3.b. Tourism, Total
25. IV.1. General Environment Protection, Total
26. IV.2. Other Multisector, Total
27. VI.1. General Budget Support, Total
28. VI.2. Developmental Food Aid/Food Security Assistance, Total
29. VI.3. Other Commodity Assistance, Total
30. VII. ACTION RELATING TO DEBT, Total
31. VIII.1. Emergency Response, Total
32. VIII.2. Reconstruction Relief & Rehabilitation, Total
33. VIII.3. Disaster Prevention & Preparedness, Total
34. IX. ADMINISTRATIVE COSTS OF DONORS, Total
35. X. SUPPORT TO NGOs, Total
36. XI. REFUGEES IN DONOR COUNTRIES, Total
37. XII. Unallocated / Unspecified, Total

Browse Detailed Sector Codes [Close]

TOTAL ALL SECTORS	(37)
TOTAL SECTOR ALLOCABLE	(26)
AID NOT ALLOCABLE BY SECTOR	(11)

- ☐ Education, Level Unspecified Grouping
- ☒ Education, Level Unspecified, Total
- ☐ Education policy & administrative management (11110)
- ☐ Education facilities and training (11120)
- ☐ Teacher training (11130)
- ☐ Educational research (11182)
- ☐ Basic Education Grouping
- ☒ Basic Education, Total
- ☐ Primary education (11220)
- ☐ Basic life skills for youth & adults (11230)
- ☐ Early childhood education (11240)
- ☐ Secondary Education Grouping
- ☒ Secondary Education, Total
- ☐ Secondary education (11320)
- ☐ Vocational training (11330)
- ☐ Post-Secondary Education Grouping
- ☒ Post-Secondary Education, Total
- ☐ Higher education (11420)
- ☐ Advanced technical & managerial training (11430)
- ☐ Health Grouping
- ☐ Health, Total
- ☐ Health, General Grouping
- ☒ Health, General, Total
- ☐ Health policy & administrative management (12110)
- ☐ Medical education/training (12181)
- ☐ Medical research (12182)
- ☐ Medical services (12191)
- ☐ Basic Health Grouping
- ☒ Basic Health, Total
- ☐ Basic health care (12220)

Clicking on a grouping allows you to further refine your selection to specific members of that grouping or select the entire grouping as your data selection

Some groupings/members of groupings are not available due to the combination of choices that you have made. Learn more about how to make grayed out data selectable by [visiting the help section](#).

OK

Sector(s)
37 Selected

☒ All Sectors, Total

Browse Broad Sector Categories

Browse Detailed Sector Codes

Time Period
6 Selected

☐ Most recent year only (2015)

Browse Time Period

☐ Show project-level data (commitments or gross disbursements) and/or detailed sector level data (CRS)

Display the Data

11. Time Period dimension: select the 2010 to 2015 period

Advanced Excel V-Look Up

Hide Additional Data Selection Options

Flow(s) Details:
No Selection

Channels:
All Channels

Type of Aid:
All Types

Amount:
Constant Prices (2014 USD millions)
☐ Current Prices (USD millions)
☒ Constant Prices (2014 USD millions)

12. Click on Show Additional Data Selection Options – Go to Amount – deselect Current Prices (USD millions) and select Constant Prices (2014 USD millions), leaving all additional data selections as they are.
13. Now Click on Display the Data and QWIDS will display the data result
14. Go to Change Data Layout
 - a. Click on Sector and change to Horizontal
 - b. Click on Up (sector) to prioritize sector by donor.
 - c. The rest dimensions will continue on filter because all of them have just one variable
 - d. Click OK. Wait for the data load.

What type of Aid data are you looking for?

Show Data Selection

Donor(s): 48 Selected Recipient(s): Pakistan Flow(s): ODA Flow Type(s): Disbursements Sector(s): 37 Selected Time Period: 6 Selected

Reset All Selections

Show Additional Data Selection Options

Data Results

Recipient(s): Pakistan Flow(s): ODA

Time Period: Donor(s):

Australia Austria Belgium Canada Czech Republic Denmark Finland France Germany Greece Iceland

Change Data Layout

Filter: Recipient(s) Filter Flow(s) Filter Amount Filter Type of Aid Filter Flow Type(s) Filter Channels Filter

Vertical (Column) Time Period Vertical (Column)

Horizontal (Row) Sector(s) Horizontal (Row) Up Down Click to modify

Hide rows with no data

Cancel OK

Use the dropdown menu to choose where a particular data selection appears within the dataset.

Use the up or down arrows next to each data selection to set the order in which they appear in the dataset.

Preview

Export As CSV Bookmark Data Change Data Layout Print Data

Channels: All Channels

	2014	2015
2.18792	12.321991	13.224134
0.002555	..	..
..	0.003317	..
3.122675	2.761558	2.527561
..	..	0.01215
6.231195	3.538185	5.947802
..
..
..	0.118695	0.038843
..	0.111396	0.079276
..	0.063228	0.063228
0.555205	0.896114	0.728818
..	1.14196	1.628974
..	..	1.49478
..
..	0.144666	..

15. Click on Export as CSV and wait for download data. Rename file as **QWIDS Pakistan.csv** also save in a proper folder.

Advanced Excel V-Look Up

OECD QWIDS Query Wizard for International Development Statistics

About | Demo | Help | Popular queries | Glossary | Contact Us | OECD.Stat

What type of Aid data are you looking for? [See All Datasets](#)

Show Data Selection

Donor(s)	Recipient(s)	Flow(s)	Flow Type(s)	Sector(s)	Time Period
48 Selected	Pakistan	ODA	Disbursements	37 Selected	8 Selected

Reset All Selections

☐ Show project-level data (commitments or gross disbursements) and/or detailed sector level data (CRS)

Show Additional Data Selection Options

Refresh Data

Data Results [Export As CSV](#) [Bookmark Data](#) [Change Data Layout](#) [Print Data](#)

Recipient(s)	Flow(s)	Amount	Type of Aid	Flow Type(s)	Channels
Pakistan	ODA	Current Prices (USD m)	All Types	Disbursements	All Channels

Sector(s)	Time Period	2010	2011	2012	2013	2014	2015
Donor(s)							
Australia		12.266586	3.945992	16.364409	2.16792	12.321991	13.224134
Austria		--	--	--	0.002655	--	--
Belgium		--	--	0.012853	--	0.003317	--
Canada		6.515172	4.86682	2.001091	3.122675	2.761558	2.527561
Czech Republic		--	--	0.014331	--	--	0.01215
Denmark		0.889295	4.560108	3.454291	6.231195	3.538185	5.947502
Finland		0.011258	0.011819	--	--	--	--
France		--	0.118092	0.030843	0.111396	0.079225	0.063228

16. For the purpose of this exercise, we need to download another data set.
 - a. In [QWIDS](#) go to See All Datasets
 - b. In the See All Dataset - **Aid (ODA) by sector and donor [DAC5]** – Download CSV, wait for download.
 - c. The dataset is downloaded as Table5_Data.csv, rename as **QWIDS Sector-Donor.csv** and relocate in a proper folder.

Advanced Excel V-Look Up

OECD QWIDS Query Wizard for International Development Statistics

What type of Aid data are you looking for?

See All Datasets

Hide Data Selection

Donor(s)

DAC Countries

All Donors, Total

☒ DAC Countries

Non-DAC Countries

Multilateral Agencies

Browse Donors

Enter Donor:

Reset All Selections

Show Additional Data Selection Options

Search Aid Activities

Search

From QWIDS

From OECD.Stat

Total flows by donor (ODA+OOF+Private) [DAC1]

Aid (ODA) disbursements to countries and regions [DAC2a]

Other official flows (OOF)-disbursements [DAC2b]

Aid (ODA) commitments to countries and regions [DAC3a]

Private flows [DAC4]

Aid (ODA) by sector and donor [DAC5]

Total receipts by country and region (ODA+OOF+private)

Total official flows by country and region (ODA+OOF)

Creditor Reporting System (CRS)

View Dataset

Download CSV

Time Period

6 Selected

Most recent year only (2015)

2010 to 2015

Browse Time Period

Cancel

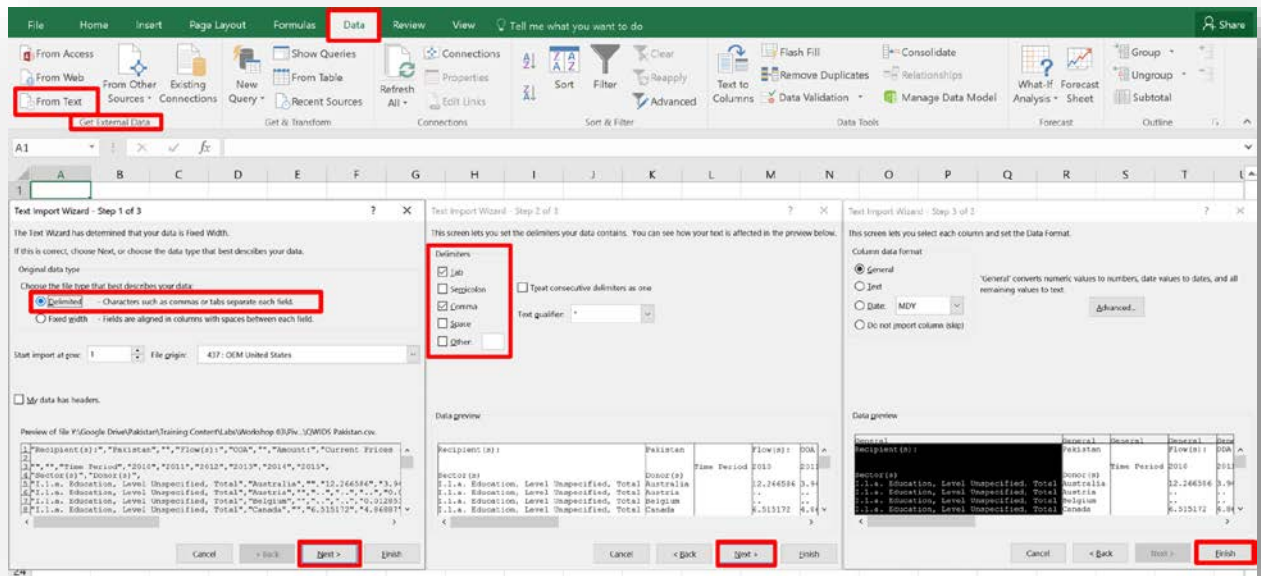
Display the Data

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Cleaning the data

17. Import the **QWIDS Pakistan.csv** file into Excel
 - a. Open Excel and a blank workbook
 - b. Go to Data – Get External Data – From Text
 - c. Locate and Import **QWIDS Pakistan.csv**
 - d. In Text Import Wizard – Step 1 of 3 window check Delimited and Next
 - e. In Text Import Wizard – Step 2 of 3 window in Delimiters check Tab and Comma and Next
 - f. In Text Import Wizard – Step 3 of 3 window click on Finish
 - g. Click OK in Import Data window
 - h. Save the file as **QWIDS Pakistan.xlsx** in a proper folder

Advanced Excel V-Look Up



18. As always prepare the data for cleaning and analysis
 - a. Rename Sheet1 as ORIGINAL and make a copy
 - b. Rename the ORIGINAL (2) as COPY
 - c. Add a New Sheet, rename it as SOURCE and put all source information including QWIDS source, abbreviations, concept meanings and notes. Move the SOURCE sheet after the ORIGINAL sheet.
19. Go to the COPY Sheet and cut row 1 and 2 paste them in the SOURCE sheet for reference. Then delete row 1 and 2 from COPY sheet

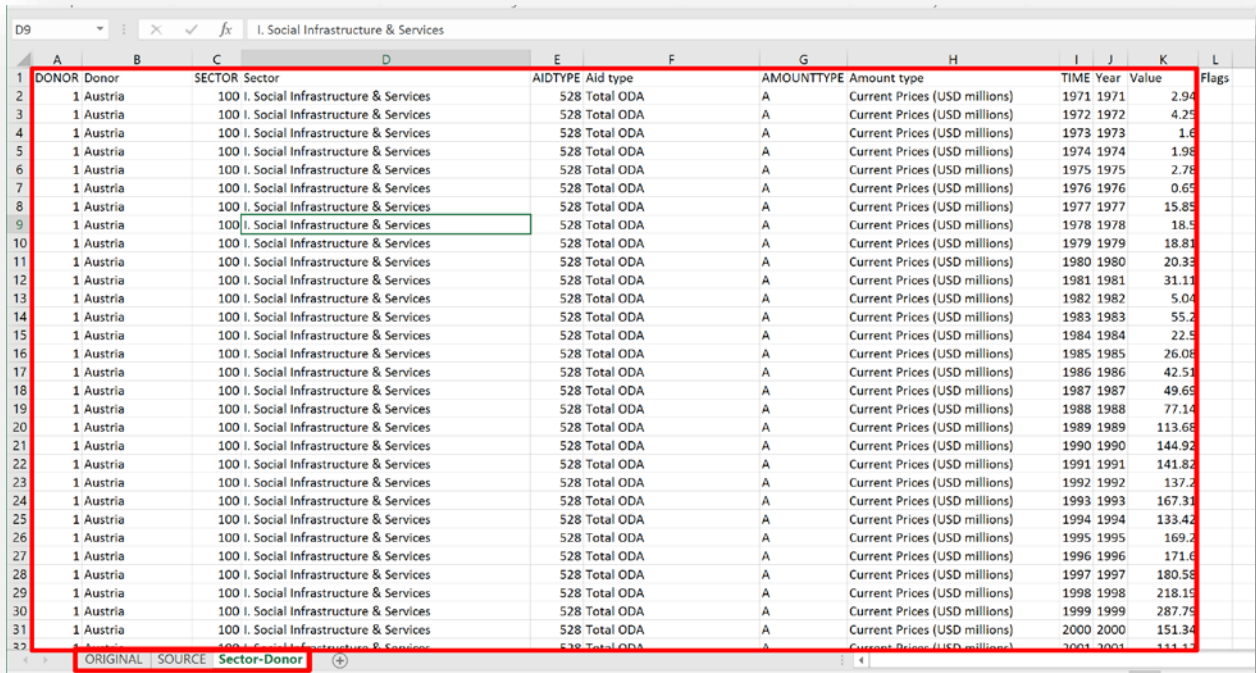
Advanced Excel V-Look Up

20. Move up row one data in Column A and B. Delete Column C "Time Period".

Sector(s)	Donor(s)	2010	2011	2012	2013	2014	2015
I.1.a. Education, Level Unspecified, Total	Australia	12.733051	3.488651	14.477834	2.050616	12.321991	15.990715
I.1.a. Education, Level Unspecified, Total	Austria	..	..	..	0.002696	..	..
I.1.a. Education, Level Unspecified, Total	Belgium	..	..	0.013537	..	0.003317	..
I.1.a. Education, Level Unspecified, Total	Canada	6.57629	4.565424	1.867837	2.964554	2.761558	2.927348
I.1.a. Education, Level Unspecified, Total	Czech Republic	..	..	0.014009	..	..	0.014245
I.1.a. Education, Level Unspecified, Total	Denmark	0.940609	4.561954	3.642242	6.276705	3.538185	7.01947
I.1.a. Education, Level Unspecified, Total	Finland	0.012417	0.012102	..	..	..	..
I.1.a. Education, Level Unspecified, Total	France	..	0.116181	0.040644	0.11197	0.079276	0.074832
I.1.a. Education, Level Unspecified, Total	Germany	0.592869	0.901615	0.781646	1.161912	1.628974	1.741635
I.1.a. Education, Level Unspecified, Total	Greece	..	..	..	..	..	..
I.1.a. Education, Level Unspecified, Total	Iceland	..	..	..	0.157458	..	..
I.1.a. Education, Level Unspecified, Total	Ireland	..	0.130613	..	..	..	..
I.1.a. Education, Level Unspecified, Total	Italy	0.242635	..	0.096216	0.093677	0.025251	0.092524
I.1.a. Education, Level Unspecified, Total	Japan	2.019883	1.622382	1.303487	2.378706	2.464376	2.406945
I.1.a. Education, Level Unspecified, Total	Korea	1.325294	0.107353	0.809565	0.569483	1.034891	0.734322
I.1.a. Education, Level Unspecified, Total	Luxembourg	..	..	..	..	..	..
I.1.a. Education, Level Unspecified, Total	Netherlands	8.80506	2.673319	5.306953	..	..	..
I.1.a. Education, Level Unspecified, Total	New Zealand	..	..	..	..	..	..
I.1.a. Education, Level Unspecified, Total	Norway	5.998953	0.136303	0.159618	0.157078	0.079341	..
I.1.a. Education, Level Unspecified, Total	Poland	..	..	..	0.024899	..	0.022497
I.1.a. Education, Level Unspecified, Total	Portugal	..	..	..	..	..	..
I.1.a. Education, Level Unspecified, Total	Slovak Republic	..	..	..	..	..	..
I.1.a. Education, Level Unspecified, Total	Slovenia	..	..	..	..	..	..
I.1.a. Education, Level Unspecified, Total	Spain	..	0.029724	0.018171	..	..	..
I.1.a. Education, Level Unspecified, Total	Sweden	..	..	..	..	..	..
I.1.a. Education, Level Unspecified, Total	Switzerland	..	..	..	..	..	..
I.1.a. Education, Level Unspecified, Total	United Kingdom	20.833663	81.563227	61.381218	158.854473	142.973943	83.725806

21. Import data from the **QWIDS Sector-Donor.csv** file into Excel. Save the file as **QWIDS Sector-Donor.xlsx** in a proper folder.
22. As always, prepare the data for cleaning and analysis.
- Rename Sheet1 as ORIGINAL and make a copy
 - Rename the ORIGINAL (2) as Sector-Donor
 - Add a New Sheet, rename it as SOURCE and put all source information for QWIDS source.

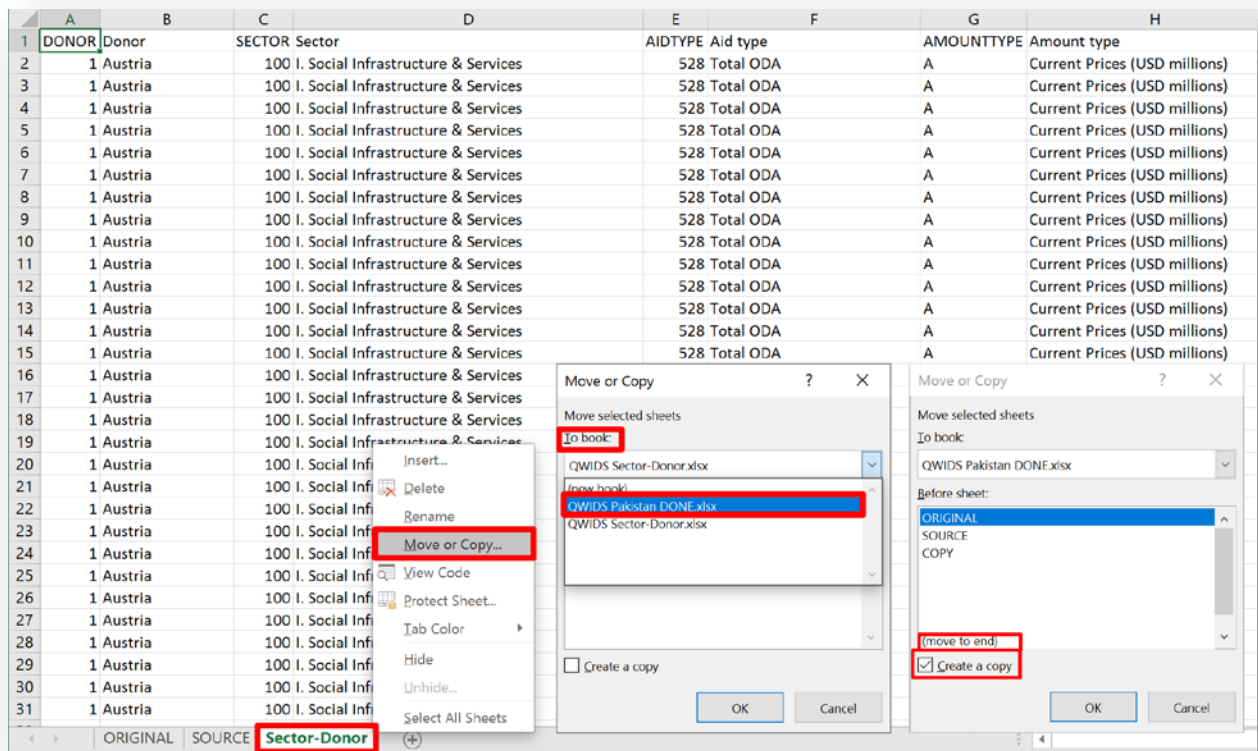
Advanced Excel V-Look Up



DONOR	SECTOR	AIDTYPE	AMOUNTTYPE	TIME	Year	Value	Flags
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1971	1971	2.94	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1972	1972	4.25	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1973	1973	1.6	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1974	1974	1.98	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1975	1975	2.78	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1976	1976	0.65	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1977	1977	15.85	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1978	1978	18.5	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1979	1979	18.81	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1980	1980	20.33	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1981	1981	31.11	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1982	1982	5.04	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1983	1983	55.2	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1984	1984	22.5	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1985	1985	26.08	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1986	1986	42.51	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1987	1987	49.69	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1988	1988	77.14	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1989	1989	113.68	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1990	1990	144.92	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1991	1991	141.82	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1992	1992	137.2	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1993	1993	167.31	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1994	1994	133.42	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1995	1995	169.2	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1996	1996	171.0	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1997	1997	180.58	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1998	1998	218.15	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	1999	1999	287.79	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	2000	2000	151.34	
1 Austria	100 I. Social Infrastructure & Services	528 Total ODA	A Current Prices (USD millions)	2001	2001	111.1	

23. It is possible to make copy of a sheet(s) and move it to another **open Excel file**. In *QWIDS Pakistan.xlsx* – Sector-Donor sheet make a copy of this sheet by right click on the sheet in the Move or Copy window select:
- To book – Select QWIDS Pakistan.xlsx
 - Select Create a copy and (move to the end)

Advanced Excel V-Look Up



VLOOKUP

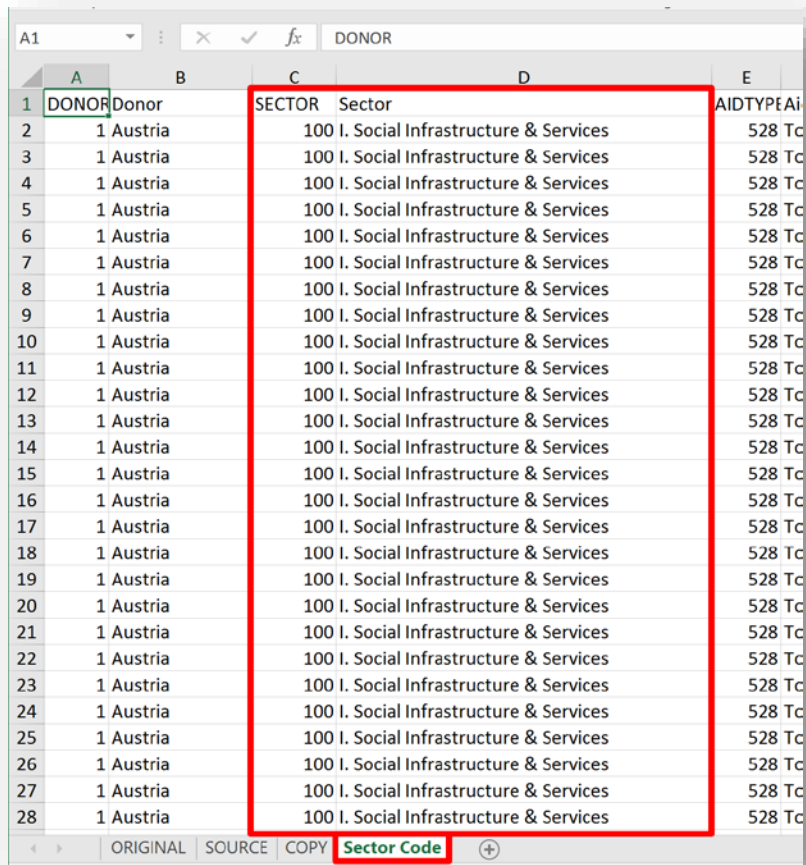
24. VLOOKUP is a very useful function on Excel it looks for a value in a leftmost column, and then returns a value in the same row from a column you specify. By default, the table must be sorted in ascending order.
25. Working in *QWIDS Pakistan.xlsx*
 - a. Go to COPY sheet in Column A – Sectors there are all sectors downloaded

Advanced Excel V-Look Up

A		B	
1	Sector(s)	Donor(s)	
2	I.1.a. Education, Level Unspecified, Total	Australia	12
3	I.1.a. Education, Level Unspecified, Total	Austria	..
4	I.1.a. Education, Level Unspecified, Total	Belgium	..
5	I.1.a. Education, Level Unspecified, Total	Canada	..
6	I.1.a. Education, Level Unspecified, Total	Czech Republic	..
7	I.1.a. Education, Level Unspecified, Total	Denmark	0
8	I.1.a. Education, Level Unspecified, Total	Finland	0
9	I.1.a. Education, Level Unspecified, Total	France	..
10	I.1.a. Education, Level Unspecified, Total	Germany	0
11	I.1.a. Education, Level Unspecified, Total	Greece	..
12	I.1.a. Education, Level Unspecified, Total	Iceland	..
13	I.1.a. Education, Level Unspecified, Total	Ireland	..
14	I.1.a. Education, Level Unspecified, Total	Italy	0
15	I.1.a. Education, Level Unspecified, Total	Japan	2
16	I.1.a. Education, Level Unspecified, Total	Korea	1
17	I.1.a. Education, Level Unspecified, Total	Luxembourg	..
18	I.1.a. Education, Level Unspecified, Total	Netherlands	..
19	I.1.a. Education, Level Unspecified, Total	New Zealand	..
20	I.1.a. Education, Level Unspecified, Total	Norway	5
21	I.1.a. Education, Level Unspecified, Total	Poland	..
22	I.1.a. Education, Level Unspecified, Total	Portugal	..
23	I.1.a. Education, Level Unspecified, Total	Slovak Republic	..
24	I.1.a. Education, Level Unspecified, Total	Slovenia	..
25	I.1.a. Education, Level Unspecified, Total	Spain	..
26	I.1.a. Education, Level Unspecified, Total	Sweden	..
27	I.1.a. Education, Level Unspecified, Total	Switzerland	..
28	I.1.a. Education, Level Unspecified, Total	United Kingdom	20

- b. In the same file but in Sector Code sheet there is a column with sector information (Column D) also with the code of the sectors (Column C)

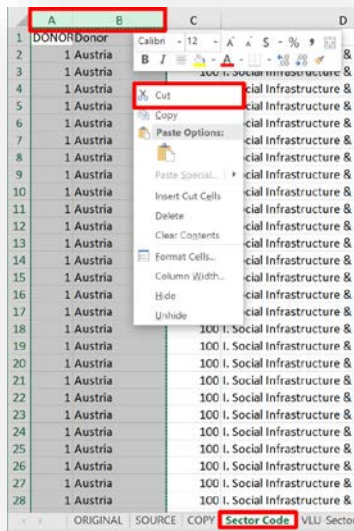
Advanced Excel V-Look Up



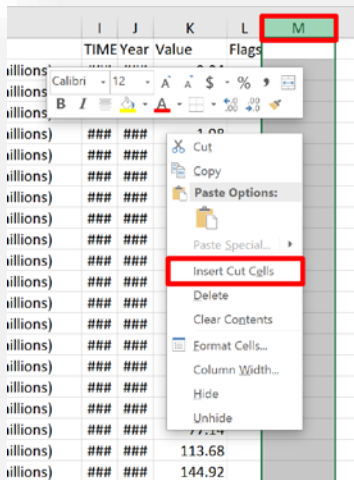
DONOR		SECTOR	Sector	AIDTYPEAi
1	DONOR	100	I. Social Infrastructure & Services	528
2	1 Austria	100	I. Social Infrastructure & Services	528
3	1 Austria	100	I. Social Infrastructure & Services	528
4	1 Austria	100	I. Social Infrastructure & Services	528
5	1 Austria	100	I. Social Infrastructure & Services	528
6	1 Austria	100	I. Social Infrastructure & Services	528
7	1 Austria	100	I. Social Infrastructure & Services	528
8	1 Austria	100	I. Social Infrastructure & Services	528
9	1 Austria	100	I. Social Infrastructure & Services	528
10	1 Austria	100	I. Social Infrastructure & Services	528
11	1 Austria	100	I. Social Infrastructure & Services	528
12	1 Austria	100	I. Social Infrastructure & Services	528
13	1 Austria	100	I. Social Infrastructure & Services	528
14	1 Austria	100	I. Social Infrastructure & Services	528
15	1 Austria	100	I. Social Infrastructure & Services	528
16	1 Austria	100	I. Social Infrastructure & Services	528
17	1 Austria	100	I. Social Infrastructure & Services	528
18	1 Austria	100	I. Social Infrastructure & Services	528
19	1 Austria	100	I. Social Infrastructure & Services	528
20	1 Austria	100	I. Social Infrastructure & Services	528
21	1 Austria	100	I. Social Infrastructure & Services	528
22	1 Austria	100	I. Social Infrastructure & Services	528
23	1 Austria	100	I. Social Infrastructure & Services	528
24	1 Austria	100	I. Social Infrastructure & Services	528
25	1 Austria	100	I. Social Infrastructure & Services	528
26	1 Austria	100	I. Social Infrastructure & Services	528
27	1 Austria	100	I. Social Infrastructure & Services	528
28	1 Austria	100	I. Social Infrastructure & Services	528

- c. The exercise is to put all sector codes from the Sector Code sheet into the Copy sheet. Of course doing this manually would take too much time and most probably will introduce many mistakes. So VLOOKUP takes as a reference I.1.a. Education, Level Unspecified, Total in COPY sheet and LOOKS for it in the Sector and Code sheet then retrieves data that we specify, in this case sectors codes.
- 26.** First there are some conditions to run VLOOKUP correctly
- a. Make a new sheet to work on. Make a copy of COPY sheet, rename it as VLU-Sectors
 - b. For the column or text that I want to LOOK for (in this case I.1.a. Education, Level Unspecified, Total) it has to be in the first column on the sheet. This condition is not met in our Sector Code sheet, so move it:
 1. Go to the Sector Code sheet
 2. Select Column A and B (DONOR and Donor Columns)
 3. Right click on the selected area and click on Cut

Advanced Excel V-Look Up



4. Select Column M, right click on the selected area and click on Insert Cut Cells. This allows us to move columns very quickly without affecting its contents or changing the data.

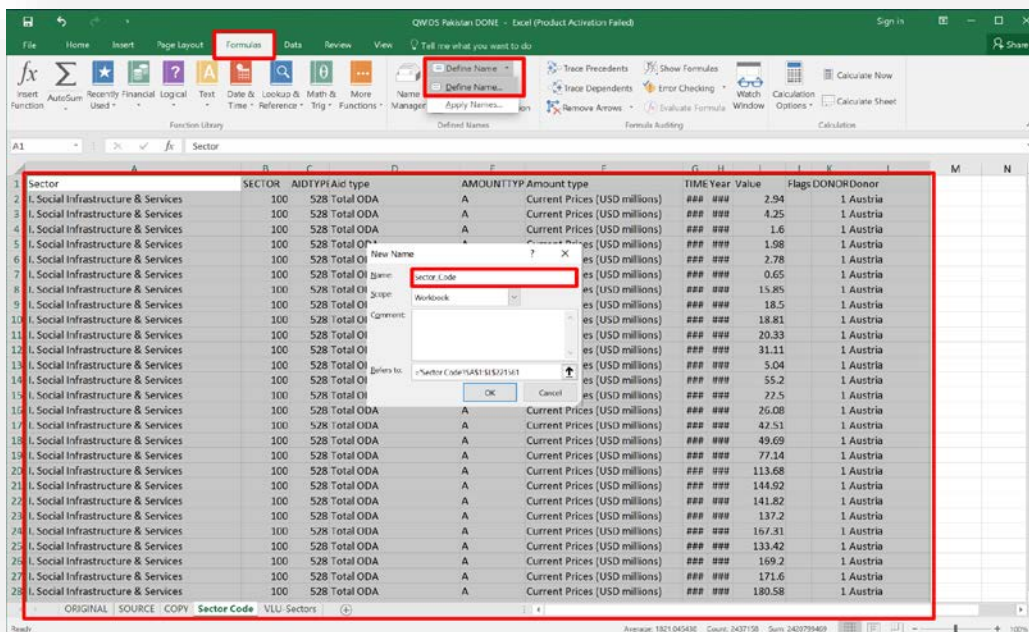


5. Move Column A (SECTOR) in the same way. As result, the Sector column is in column A and SECTOR is in column B

Advanced Excel V-Look Up

1	Sector	SECTOR	AIDTYPE	Aid type	AMOUNT	Amount type	TIME	Year	Value	Flag	DONOR	Donor
2	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	2.94	1	Austria	
3	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	4.25	1	Austria	
4	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	1.6	1	Austria	
5	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	1.98	1	Austria	
6	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	2.78	1	Austria	
7	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	0.65	1	Austria	
8	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	15.85	1	Austria	
9	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	18.5	1	Austria	
10	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	18.81	1	Austria	
11	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	20.33	1	Austria	
12	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	31.11	1	Austria	
13	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	5.04	1	Austria	
14	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	55.2	1	Austria	
15	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	22.5	1	Austria	
16	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	26.08	1	Austria	
17	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	42.51	1	Austria	
18	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	49.69	1	Austria	
19	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	77.14	1	Austria	
20	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	113.68	1	Austria	
21	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	144.92	1	Austria	
22	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	141.82	1	Austria	
23	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	137.2	1	Austria	
24	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	167.31	1	Austria	
25	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	133.42	1	Austria	
26	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	169.2	1	Austria	
27	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	171.6	1	Austria	
28	I. Social Infrastructure & Services	100	528	Total ODA	A	Current Prices (USD millions)	###	###	180.58	1	Austria	

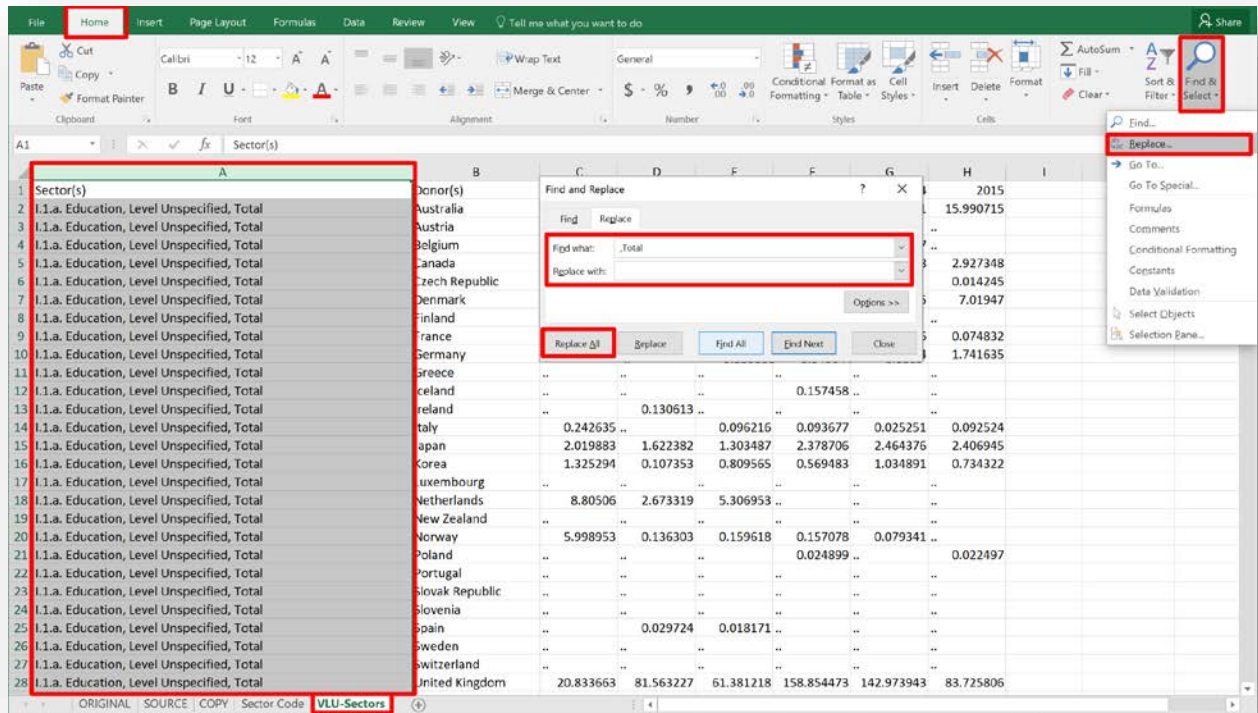
- c. Define name: Define name in Excel helps to Name a specific selection of data in order to be able to use it in a formula later. Select all data (just data, not blank columns or rows) in the Sector Code sheet. Use the Ctr down arrow to jump to the end of the data. Go to Formulas – Defined names – Define Name and in the New Name window type Sector_Code in Name¹. (Define name is an optional step but is really useful for big data)



¹ NOTE: Define Name does not allow spaces in the names use () symbol.

Advanced Excel V-Look Up

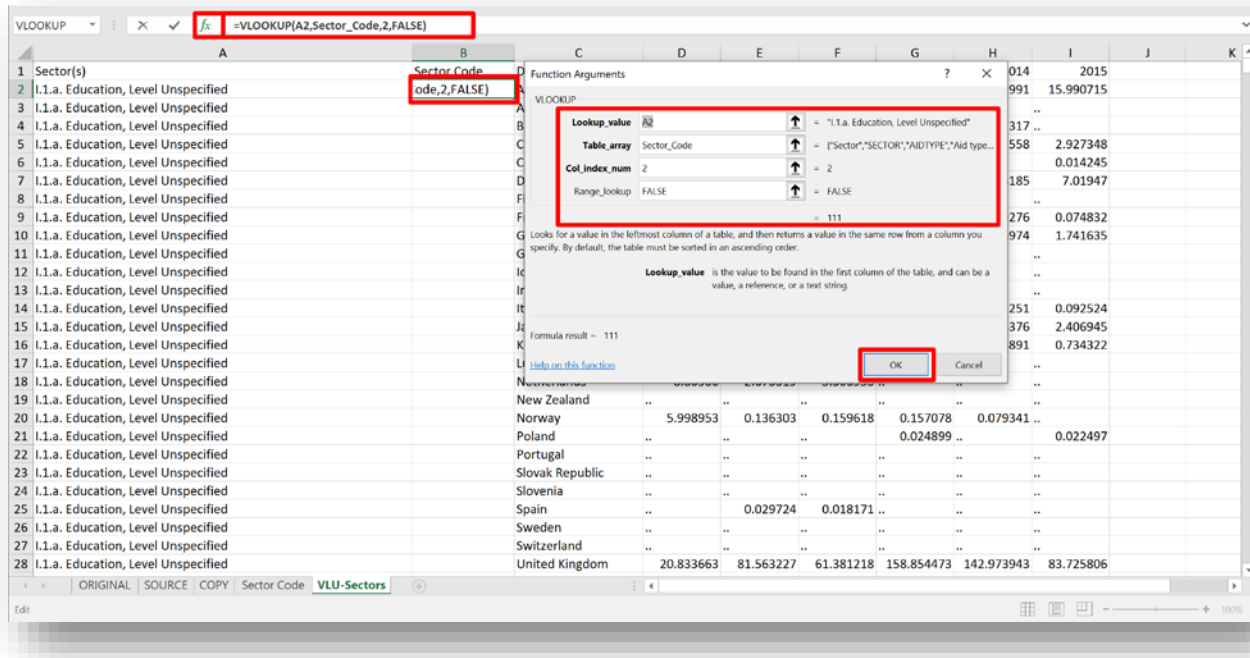
27. Go to the VLU-Sector and Sector Code sheets. There is a big difference in the sector name in both sheets. In the first one (VLU-Sector) is I.1.a. Education, Level Unspecified, Total and in the second one (Sector Code) is I.1.a. Education, Level Unspecified and VLOOKUP requires exactly the same data in this exercise (sometimes it can be similar text but I will explain that in 30.b). So, go to the VLU-Sector sheet select column A and use Find and Replace tool to delete ", Total" for all sectors.



28. In the VLU-Sector sheet, insert a column between A and B and type Sector Code as a header.
29. OK ready for VLOOKUP. As mentioned in previous labs Functions have a Syntax and a Arguments, for VLOOKUP will be
- Syntax: =VLOOKUP (value, table, col_index, [range_lookup])
 - Arguments:
 - value** - The value to look for in the first column of a table. (I.1.a. Education, Level Unspecified)
 - table** - The table from which to retrieve a value. (Define name : Sector_Code)
 - col_index** - The column in the table from which to retrieve a value. (Code are in the second column)
 - range_lookup** - [optional] TRUE = approximate match (default). FALSE = exact match. (It was mention in 28 in VLOOKUP is possible to look for text than match exactly as the one you are looking for or for similar text, the second one can bring more result but you have to double check of the result in case of mistakes).
30. In our example =VLOOKUP(A2,Sector_Code,2,FALSE) means:
- =VLOOKUP** - Function
 - Value** – A2 that is I.1.a. Education, Level Unspecified
 - col_index** – Sector_code is the define name that is all the data in Sector Code sheet
 - range_lookup** – FALSE, because we are looking for exact match

Advanced Excel V-Look Up

31. Type in VLU-Sector sheet cell B2 the Function =VLOOKUP(A2,Sector_Code,2,FALSE). Also by clicking on the Function Panel click on Fx you can enable a Function Argument window than will provide you more information about a function and help you enter information into fields correctly.



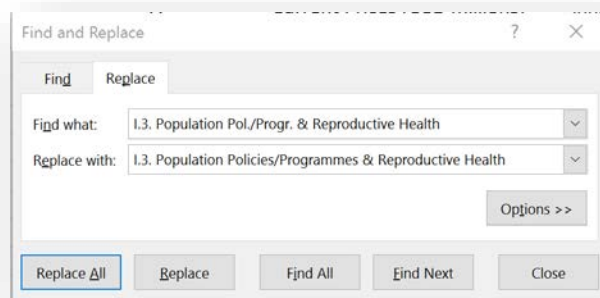
32. Our first result in A2 is 111 and if you check in Sector Code Sheet the code for I.1.a. Education, Level Unspecified is 111. Now just extent the formula for all column B in VLU-Sector

The screenshot shows the Excel spreadsheet with the VLOOKUP formula extended across column B. The formula bar displays the formula: `=VLOOKUP(A2,Sector_Code,2,FALSE)`. The spreadsheet shows the results of the VLOOKUP function for each row in column B, with the first result being 111 for 'I.1.a. Education, Level Unspecified'.

Sector(s)	Sector Code	Donor(s)	2010	2011	2012	2013	2014	2015
I.1.a. Education, Level Unspecified	111	Australia	12.733051	3.488651	14.477834	2.050616	12.321991	15.990715
I.1.a. Education, Level Unspecified	111	Austria	..	..	..	0.002696	..	..
I.1.a. Education, Level Unspecified	111	Belgium	..	..	0.013537	..	0.003317	..
I.1.a. Education, Level Unspecified	111	Canada	6.57629	4.565424	1.867837	2.964554	2.761558	2.927348
I.1.a. Education, Level Unspecified	111	Czech Republic	..	..	0.014009	..	..	0.014245
I.1.a. Education, Level Unspecified	111	Denmark	0.940609	4.561954	3.642242	6.276705	3.538185	7.01947
I.1.a. Education, Level Unspecified	111	Finland	0.012417	0.012102	..	..	..	..
I.1.a. Education, Level Unspecified	111	France	..	0.116181	0.040644	0.11197	0.079276	0.074832
I.1.a. Education, Level Unspecified	111	Germany	0.592869	0.901615	0.781646	1.161912	1.628974	1.741635
I.1.a. Education, Level Unspecified	111	Greece	..	..	..	..	..	..
I.1.a. Education, Level Unspecified	111	Iceland	..	..	..	0.157458	..	..
I.1.a. Education, Level Unspecified	111	Ireland	..	0.130613	..	..	..	..
I.1.a. Education, Level Unspecified	111	Italy	0.242635	..	0.096216	0.093677	0.025251	0.092524
I.1.a. Education, Level Unspecified	111	Japan	2.019883	1.622382	1.303487	2.378706	2.464376	2.406945
I.1.a. Education, Level Unspecified	111	Korea	1.325294	0.107353	0.809565	0.569483	1.034891	0.734322
I.1.a. Education, Level Unspecified	111	Luxembourg	..	..	..	..	..	..
I.1.a. Education, Level Unspecified	111	Netherlands	8.80506	2.673319	5.306953	..	..	..
I.1.a. Education, Level Unspecified	111	New Zealand	..	..	..	..	..	..
I.1.a. Education, Level Unspecified	111	Norway	5.998953	0.136303	0.159618	0.157078	0.079341	..
I.1.a. Education, Level Unspecified	111	Poland	..	..	..	0.024899	..	0.022497
I.1.a. Education, Level Unspecified	111	Portugal	..	..	..	..	..	..
I.1.a. Education, Level Unspecified	111	Slovak Republic	..	..	..	..	..	..
I.1.a. Education, Level Unspecified	111	Slovenia	..	..	..	..	..	..
I.1.a. Education, Level Unspecified	111	Spain	..	0.029724	0.018171	..	..	..
I.1.a. Education, Level Unspecified	111	Sweden	..	..	..	..	..	..
I.1.a. Education, Level Unspecified	111	Switzerland	..	..	..	..	..	..
I.1.a. Education, Level Unspecified	111	United Kingdom	20.833663	81.563227	61.381218	158.854473	142.973943	83.725806

Advanced Excel V-Look Up

- 33.** Now if you go down in the table to row 290 I.3. Population Policies/Programmes & Reproductive Health there is a problem with the VLOOKUP formula that results in a #N/A. This is because it is spelled differently in the Sector Code sheet for I.3. Population Policies/Programmes & Reproductive Health.
- Go to the Sector Code sheet
 - Select column A – Sector
 - With the tool Find and Replace look for I.3. Population Pol./Progr. & Reproductive Health and replace with I.3. Population Policies/Programmes & Reproductive Health and click on Replace All. (I choose I.3. Population Policies/Programmes & Reproductive Health because is the one without abbreviations but it is an option and depends of the work)



- 34.** Now you see change are automatically make by the Function.
- 35.** There are a couple of mismatches that are easily fixable with the Find and Replace tool
- Row 386 - I.5.a. Government & Civil Society – general
 - Row 1298 - VI.2. Developmental Food Aid/Food Security Assistance
 - Row 1347 - VI.3. Other Commodity Assistance
 - Row 1730 - XII. Unallocated / Unspecified replace for IX. Unallocated / Unspecified
- 36.** Also the is some #N/A in IX. ADMINISTRATIVE COSTS OF DONORS, X. SUPPORT TO NGOs, and XI. REFUGEES IN DONOR COUNTRIES those ones are not un Sector Code Sheet but in [THE LIST OF CRS PURPOSE CODES](#) so we need to change it manually
- IX. ADMINISTRATIVE COSTS OF DONORS - 910
 - XI. REFUGEES IN DONOR COUNTRIES – 930
- 37.** For h X. SUPPORT TO NGOs I did not find a code.

VLOOKUP Exercise

- 38.** Each donor has a donor code. For example, Australia is 1. The exercise is very similar to the previous one.
- Make a new copy of the Sector-Donor sheet from *QWIDS Pakistan.xlsx* as indicated in 23. Rename the Sector-Donor sheet as a Donors
 - VLU-Sectors is the reference sheet and look for the donor codes in the Donors sheet, using VLOOKUP. Put donor codes in the VLU-Sectors sheet.

Advanced Excel V-Look Up

D2 fx =VLOOKUP(C2,Donor,2,FALSE)

	A	B	C	D	E	F	G	H	I	J	K	L
1	Sector(s)	Sector Code	Donor(s)	Donor Code	2010	2011	2012	2013	2014	2015		
2	I.1.a. Education, Level Unspecified	111	Australia	801	12.733051	3.488651	14.477834	2.050616	12.321991	15.990715		
3	I.1.a. Education, Level Unspecified	111	Austria	1	..	..	..	0.002696	..	..
4	I.1.a. Education, Level Unspecified	111	Belgium	2	..	..	0.013537	..	0.003317	..		
5	I.1.a. Education, Level Unspecified	111	Canada	301	6.57629	4.565424	1.867837	2.964554	2.761558	2.927348		
6	I.1.a. Education, Level Unspecified	111	Czech Republic	68	..	..	0.014009	..	..	0.014245		
7	I.1.a. Education, Level Unspecified	111	Denmark	3	0.940609	4.561954	3.642242	6.276705	3.538185	7.01947		
8	I.1.a. Education, Level Unspecified	111	Finland	18	0.012417	0.012102	..	..	..	..
9	I.1.a. Education, Level Unspecified	111	France	4	..	0.116181	0.040644	0.11197	0.079276	0.074832		
10	I.1.a. Education, Level Unspecified	111	Germany	5	0.592869	0.901615	0.781646	1.161912	1.628974	1.741635		
11	I.1.a. Education, Level Unspecified	111	Greece	40	..	..	..	..	..	..
12	I.1.a. Education, Level Unspecified	111	Iceland	20	..	..	..	0.157458	..	..
13	I.1.a. Education, Level Unspecified	111	Ireland	21	..	0.130613	..	..	..	..
14	I.1.a. Education, Level Unspecified	111	Italy	6	0.242635	..	0.096216	0.093677	0.025251	0.092524		
15	I.1.a. Education, Level Unspecified	111	Japan	701	2.019883	1.622382	1.303487	2.378706	2.464376	2.406945		
16	I.1.a. Education, Level Unspecified	111	Korea	742	1.325294	0.107353	0.809565	0.569483	1.034891	0.734322		
17	I.1.a. Education, Level Unspecified	111	Luxembourg	22	..	..	..	..	..	..
18	I.1.a. Education, Level Unspecified	111	Netherlands	7	8.80506	2.673319	5.306953	..	..	..
19	I.1.a. Education, Level Unspecified	111	New Zealand	820	..	..	..	..	..	..
20	I.1.a. Education, Level Unspecified	111	Norway	8	5.998953	0.136303	0.159618	0.157078	0.079341	..		
21	I.1.a. Education, Level Unspecified	111	Poland	76	..	..	..	0.024899	..	0.022497		
22	I.1.a. Education, Level Unspecified	111	Portugal	9	..	..	..	..	..	..
23	I.1.a. Education, Level Unspecified	111	Slovak Republic	69	..	..	..	..	..	..
24	I.1.a. Education, Level Unspecified	111	Slovenia	61	..	..	..	..	..	..
25	I.1.a. Education, Level Unspecified	111	Spain	50	..	0.029724	0.018171	..	..	..
26	I.1.a. Education, Level Unspecified	111	Sweden	10	..	..	..	..	..	..
27	I.1.a. Education, Level Unspecified	111	Switzerland	11	..	..	..	..	..	..
28	I.1.a. Education, Level Unspecified	111	United Kingdom	12	20.833663	81.563227	61.381218	158.854473	142.973943	83.725806		

ORIGINAL SOURCE COPY Sector Code Donors VLU-Sectors