Survey Analysis Workshop

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Block 3: Analysing two variables (and sometimes three)

3.1.4.2 Income differences - Build a working file [Draft only: 22 July 2013]

Research question:

Is there a difference between the earnings (from paid work) of men and women?

What other variables might account for differences in earnings?

What effect do they have by themselves?

What happens to any differences in earnings between men and women when controlling for these other variables?

Previous session: <u>3.1.4.1 Income differences work-through</u>

Exemplar: British Social Attitudes 1989

		Question	record	column(s)	Name
Dependent variable	: Personal gross earnings	Q.918b	17	27	v1727
Independent variab	le: Sex	Q.901a	14	11	v1411
Test variables:	Work Employee or self-employed Hours worked, employee Hours worked, self-employed Public or private sector Level of work Education Terminal Education Age	Q.23 Q.24 Q.46a Q.908f Q.908a	2 2 4 16 23	71 75 61 17-18 61 30	v271 v275 v461 v1617 v2361 v1530
	Level of education [derived]	Q.907b	23	74	v2374
	Other Age last birthday	Q.901b	14	12-13	v1412

We are now going to build up a working file from scratch with the variables we want.

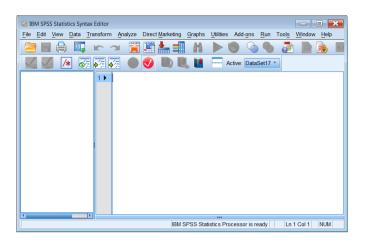
Raw data file: bs

bsa89.txt

[Download and save to e:weebly downloads\bsa89\]

Step 1: Read in raw data

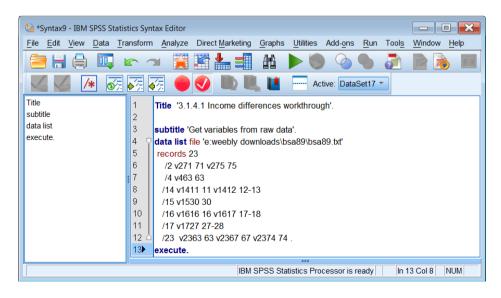
Open SPSS and click on Cancel, then File > New > Syntax:



This exercise is **not a typing test**: it will take you through all stages of building up a working file from scratch by defining variables, reading in raw data from a major survey, adding dictionary information, performing data checks and finally saving your *.sav and *.sps files. It will be good practice for you to type out the syntax line-by-line, but if you feel confident working in syntax, just copy/paste the syntax direct into your **Syntax Editor**, then run the commands in stages.

Title '3.1.4.1 Income differences workthrough'.

```
subtitle 'Get variables from raw data'.
data list file 'e:weebly downloads\bsa89\bsa89.txt'
records 23
/2 v271 71 v275 75
/4 v463 63
/14 v1411 11 v1412 12-13
/15 v1530 30
/16 v1616 16 v1617 17-18
/17 v1727 27-28
/23 v2363 63 v2367 67 v2374 74 .
execute.
```



Place the cursor in the title line, then click on $\frac{\text{Run}}{\text{Run}} > \rightarrow \frac{1}{\text{To End}}$

🔄 *Syntax2 - IBM SPSS Statis	tics Syn	tax Editor	
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Your syntax is repeated in the viewer:

data list file records 23 /2 v271 71 /4 v463 63 /14 v1411 1 /16 v1616 1 /17 v1727 2 /23 v2363	v275 75 1 v1412 1 6 v1617 1 7-28 63 v2367	2-13 7-18 67 v2374	74.	a89\bsa89.txt' :\weebly downloads\bsa89\bsa89.dat	
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v463	4	63	63	F1.0	
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v1412	14	12	13	F2.0	
v1616	16	16	16	F1.0	
v1617	16	17	18	F2.0	
v1727	17	27	28	F2.0	
v2363	23	63	63	F1.0	
v2367	23	67	67	F1.0	
v2374	23	74	74	F1.0	
execute.					

When reading data from 80-column ASCII files, this display is an essential and very useful check to make sure the variables are read in correctly: the positional variable names can clearly be seen to tally exactly with the correct records and fields. This run creates a new *Untitled data editor with an incremental number, in this case *Untitled 2

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	Name	Туре	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
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5	v1412	Numeric	2	0		None	None	7	■ Right	🛷 Scale	🔪 Input
6	v1530	Numeric	1	0		None	None	7	■ Right	\delta Nominal	🔪 Input
7	v1616	Numeric	1	0		None	None	7	■ Right	\delta Nominal	🔪 Input
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9	v1727	Numeric	2	0		None	None	7	■ Right	\delta Nominal	🔪 Input
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11	v2367	Numeric	1	0		None	None	7	■ Right	\delta Nominal	💊 Input
12	v2374	Numeric	1	0		None	None	7	■ Right	\delta Nominal	💊 Input

[!Warning!]

The new working file may disappear if you do anything else in SPSS, so it has to be **saved immediately**. It doesn't display automatically: you have to look for it by hovering over the SPSS icon in the Task Bar. You do not need to open a new **Data Editor** before running this job: if you do it will remain empty and there will be a second **Data Editor** containing the data. Even I found this confusing, especially when I was trying to merge data from two SPSS ***.sav** files. However if you work with it from scratch, as now, it seems to be OK, but it's probably safer to save it temporarily, even as **Untitled41**! If you had another ***.sav** file open, make sure you switch to the new ***Untitled** one first.

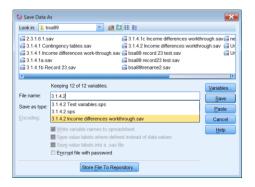
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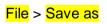




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Now save your syntax file:

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Step 2: Add dictionary information

2.1 Specify variable labels

subtitle 'Add variable labels'. variable labels /v271 'Q23: Employee or self-employed' /v275 'Q24: Hours worked per week [Employee]' /v463 ' Q.46a Hours worked per week [self-employed]' /v1411 'Q901a: Sex of respondent' /v1412 'Q.901b: Age last birthday of respondent' /v1530 'Age completed full time education' /v1616 'Q908e: Employee or self-employed' /v1617 'Q908f: Private or public sector' /v1727 'Q918b: Gross earnings of R before tax' /v2363 ' Social Class of work [Derived from Q.908a]' /v2367 ' Industrial sector of work [Derived from Q.908f]' /v2374 ' Highest educational qualification [Derived from Q.907a]'.

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variable labels 19 /v463 ' Q.46a Hours worked per week [self-employed]'	
20 /v1411 'Q901a: Sex of respondent'	
21 /v1412 'Q.901b: Age last birthday of respondent'	
22 /v1530 'Age completed full time education' 23 /v1616 'Q908e: Employee or self-employed'	
 23 /v1616 'Q908e: Employee or self-employed' 24 /v1617 'Q908f: Private or public sector' 	
25 /v1727 'Q918b: Gross earnings of R before tax'	
26 /v2363 ' Social Class of work [Derived from Q.908a]'	
27 /v2367 ' Industrial sector of work [Derived from Q.908f]'	
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Variable labels will have been entered in the Data Editor

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2	v275	Numeric	1	0	Q24: Hours w	None	None	6	≡ Right	\delta Nominal	💊 Input
3	v463	Numeric	1	0	Q.46a Hours	None	None	6	≡ Right	\delta Nominal	💊 Input
4	v1411	Numeric	1	0	Q901a: Sex of	None	None	7	≡ Right	\delta Nominal	💊 Input
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6	v1530	Numeric	1	0	Age completed	None	None	7	端 Right	\delta Nominal	🖒 Input
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8	v1617	Numeric	2	0	Q908f: Private	None	None	7	≡ Right	\delta Nominal	ゝ Input
9	v1727	Numeric	2	0	Q918b: Gross	None	None	7	≡ Right	\delta Nominal	💊 Input
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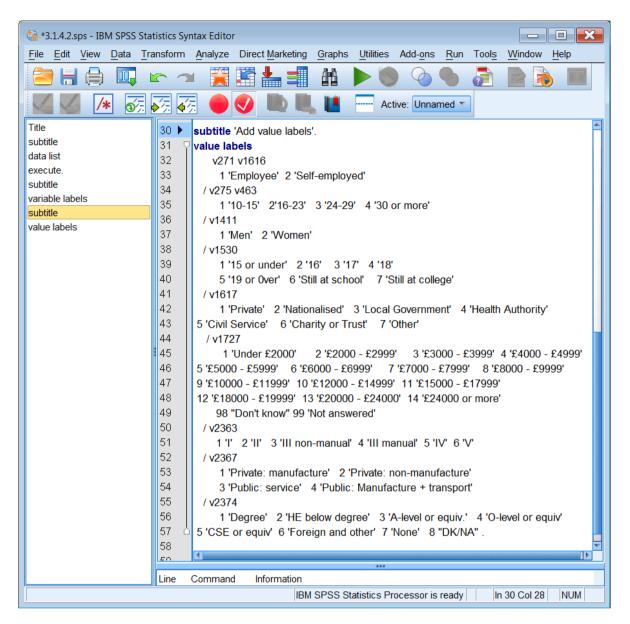
Slide the column separators aside to see the labels more clearly:

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1	v271	Numeric	1	0	Q23: Employee or self-employed	None	None	6	Right	\delta Nominal	ゝ Input
2	v275	Numeric	1	0	Q24: Hours worked per week [Employee]	None	None	6	■ Right	🚓 Nominal	ゝ Input
3	v463	Numeric	1	0	Q.46a Hours worked per week [self-employed]	None	None	6	酒 Right	🚓 Nominal	S Input
4	v1411	Numeric	1	0	Q901a: Sex of respondent	None	None	7	■ Right	🚓 Nominal	ゝ Input
5	v1412	Numeric	2	0	Q.901b: Age last birthday of respondent	None	None	7	■ Right	🛷 Scale	💊 Input
6	v1530	Numeric	1	0	Age completed full time education	None	None	7	■ Right	🚓 Nominal	S Input
7	v1616	Numeric	1	0	Q908e: Employee or self-employed	None	None	7	■ Right	🚓 Nominal	S Input
8	v1617	Numeric	2	0	Q908f: Private or public sector	None	None	7	■ Right	🙈 Nominal	S Input
9	v1727	Numeric	2	0	Q918b: Gross earnings of R before tax	None	None	7	≡ Right	🚓 Nominal	S Input
10	v2363	Numeric	1	0	Social Class of work [Derived from Q.908a]	None	None	7	■ Right	🚓 Nominal	S Input
11	v2367	Numeric	1	0	Industrial sector of work [Derived from Q.908f]	None	None	7	Right	\delta Nominal	S Input
12	v2374	Numeric	1	0	Highest educational qualification [Derived from Q.907a]	None	None	7	■ Right	\delta Nominal	S Input
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2.2 Specify value labels

```
subtitle 'Add value labels'.
value labels
   v271 v1616
      1 'Employee' 2 'Self-employed'
 / v275 v463
      1 '10-15' 2'16-23' 3 '24-29' 4 '30 or more'
 / v1411
      1 'Men' 2 'Women'
 / v1530
      1 '15 or under' 2 '16' 3 '17' 4 '18'
      5 '19 or 0ver' 6 'Still at school' 7 'Still at college'
 / v1617
      1 'Private' 2 'Nationalised' 3 'Local Government' 4 'Health Authority'
      5 'Civil Service' 6 'Charity or Trust' 7 'Other'
  / v1727
      1 'Under £2000'
                         2 '£2000 - £2999'
                                             3 '£3000 - £3999' 4 '£4000 - £4999'
      5 '£5000 - £5999' 6 '£6000 - £6999' 7 '£7000 - £7999' 8 '£8000 - £9999'
      9 '£10000 - £11999' 10 '£12000 - £14999' 11 '£15000 - £17999'
      12 '£18000 - £19999' 13 '£20000 - £24000' 14 '£24000 or more'
      98 "Don't know" 99 'Not answered'
 / v2363
      1 'l' 2 'll' 3 'lll non-manual' 4 'lll manual' 5 'lV' 6 'V'
 / v2367
      1 'Private: manufacture' 2 'Private: non-manufacture'
       3 'Public: service' 4 'Public: Manufacture + transport'
 / v2374
      1 'Degree' 2 'HE below degree' 3 'A-level or equiv.' 4 'O-level or equiv'
      5 'CSE or equiv' 6 'Foreign and other' 7 'None' 8 "DK/NA" .
```

Note the double primes for "DK/NA": If you use single primes SPSS will report an error when it finds the forward slash instead of a closing single prime.



Place the cursor on the next subtitle command, then click on $\frac{Run}{V} > \rightarrow 1$ To End

Value labels will have been entered in the Data Editor

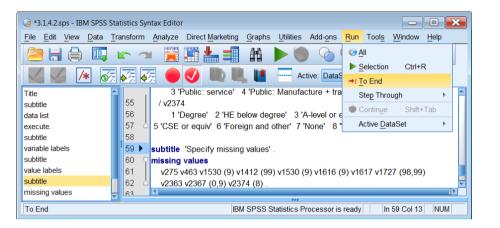
Slide the column separators aside again to see the labels more clearly:

we Width rric 1 rric 1 rric 1 rric 1 rric 1 rric 2	0 0 0 0	Label Q23: Employee or self-employed Q24: Hours worked per week [Employee] Q.46a Hours worked per week [self-employed] Q901a: Sex of respondent	Values {1, Employee} {1, 10-15} {1, 10-15} {1, 10-15 {1, Men}	Missing None None None None	Columns 6 6 6 6 7	≣ Right ≣ Right ≣ Right	Measure Nominal Nominal Nominal	Role Input Input Input Input
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ric 2	0	· · · · · · · · · · · · · · · · · · ·		None	7			
		Q.901b: Age last birthday of respondent				署 Right	🙈 Nominal	ゝ Input
ric 1			None	None	7	≡ Right	🛷 Scale	ゝ Input
	0	Age completed full time education	{1, 15 or under}	None	7	■ Right	🚓 Nominal	ゝ Input
ric 1	0	Q908e: Employee or self-employed	{1, Employee}	None	7	Right	\delta Nominal	ゝ Input
ric 2	0	Q908f: Private or public sector	{1, Private}	None	7	■ Right	\delta Nominal	ゝ Input
ric 2	0	Q918b: Gross earnings of R before tax	{1, Under £2000}	None	7	≡ Right	🙈 Nominal	ゝ Input
ric 1	0	Social Class of work [Derived from Q.908a]	{1, I}	None	7	≡ Right	🚓 Nominal	ゝ Input
ric 1	0	Industrial sector of work [Derived from Q.908f]	{1, Private: manufacture}	None	7	■ Right	🗞 Nominal	💊 Input
ric 1	0	Highest educational qualification [Derived from Q.907a]	{1, Degree}	None	7	≡ Right	🚓 Nominal	ゝ Input
	ric 2 ric 2 ric 1 ric 1	ric 2 0 ric 2 0 ric 1 0 ric 1 0	ic 2 0 Q908f: Private or public sector ic 2 0 Q918b: Gross earnings of R before tax ic 1 0 Social Class of work [Derived from Q.908a] ic 1 0 Industrial sector of work [Derived from Q.908f]	ic 2 0 Q908f: Private or public sector {1, Private} ic 2 0 Q918b: Gross earnings of R before tax {1, Under £2000} ic 1 0 Social Class of work [Derived from Q.908a] {1, 1} ic 1 0 Industrial sector of work [Derived from Q.908f] {1, Private: manufacture}	C 2 0 Q908f: Private or public sector {1, Private} None 2 0 Q918b: Gross earnings of R before tax {1, Under £2000} None ric 1 0 Social Class of work [Derived from Q.908a] {1, 1} None ric 1 0 Industrial sector of work [Derived from Q.908a] {1, Private: manufacture} None	Initial Sector Initia Sector Initial Sector Initial	C 2 0 Og98f: Private or public sector (1, Private) None 7 ≣ Right icit 2 0 Og98f: Srivate or public sector (1, Private) None 7 ≣ Right icit 1 0 Oscial Class of work [Derived from Q.908a] (1, 1) None 7 ≣ Right icit 1 0 Industrial sector of work [Derived from Q.908a] (1, Private: manufacture) None 7 ≣ Right	Image: Constraint of the sector None 7 Right Nominal Constraint of the sector 0 Q908f: Private or public sector (1, Private) None 7 Right Nominal Constraint of the sector 0 Q918b: Gross earnings of R before tax (1, Under £2000) None 7 Right Nominal Constraint of the sector 0 Social Class of work [Derived from Q.908a] (1, I) None 7 Right Nominal Constraint of the sector of work [Derived from Q.9088] (1, Private: manufacture) None 7 Right Nominal

2.3 Specify missing values

subtitle 'Specify missing values' . missing values v275 v463 v1530 (9) v1412 (99) v1530 (9) v1616 (9) v1617 v1727 (98,99) v2363 v2367 (0,9) v2374 (8) .

Place the cursor on the subtitle command and press Run > \rightarrow | To End

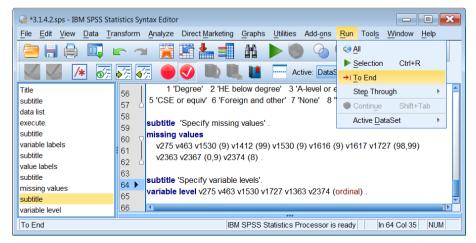


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	Name	Туре	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	v271	Numeric	1	0	Q23: Employee or self-employed	{1, Employee}	None	6	a Right	🚓 Nominal	> Input
2	v275	Numeric	1	0	Q24: Hours worked per week [Employee]	{1, 10-15}	9	6	🖀 Right	🚓 Nominal	> Input
3	v463	Numeric	1	0	Q.46a Hours worked per week [self-employed]	{1, 10-15}	9	6	Right	🚓 Nominal	> Input
4	v1411	Numeric	1	0	Q901a: Sex of respondent	{1, Men}	None	7	a Right	🚓 Nominal	> Input
5	v1412	Numeric	2	0	Q.901b: Age last birthday of respondent	None	99	7	🖀 Right	🖋 Scale	> Input
6	v1530	Numeric	1	0	Age completed full time education	{1, 15 or under}	9	7	Right	🚓 Nominal	> Input
7	v1616	Numeric	1	0	Q908e: Employee or self-employed	{1, Employee}	9	7	a Right	🚓 Nominal	> Input
8	v1617	Numeric	2	0	Q908f: Private or public sector	{1, Private}	98, 99	7	Right	🚓 Nominal	> Input
9	v1727	Numeric	2	0	Q918b: Gross earnings of R before tax	{1, Under £2000}	98, 99	7	Right	🚓 Nominal	> Input
10	v2363	Numeric	1	0	Social Class of work [Derived from Q.908a]	{1, I}	0, 9	7	≡ Right	🚓 Nominal	> Input
11	v2367	Numeric	1	0	Industrial sector of work [Derived from Q.908f]	{1, Private: manufacture}	0, 9	7	≡ Right	🚓 Nominal	> Input
12	v2374	Numeric	1	0	Highest educational gualification [Derived from Q.907a]	{1, Degree}	8	7	≡ Right	Nominal	> Input

Note that, in the Measure column, SPSS has set the measurement levels at Nominal for all variables except age [v1412] which has been set at Scale. This is because the SPSS default is Nominal unless the number of values found exceeds a minimum (which can be changed by altering your SPSS settings). For now we can use the VARIABLE LEVEL command to change the measurement levels of the ordinal variables:

variable level v275 v463 v1530 v1727 v1363 v2374 (ordinal) .

Place the cursor on the subtitle command and press Run > \rightarrow To End



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	Name	Туре	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	v271	Numeric	1	0	Q23: Employee or self-employed	{1, Employee}	None	6	Right	🙈 Nominal	ゝ Input
2	v275	Numeric	1	0	Q24: Hours worked per week [Employee]	{1, 10-15}	9	6	■ Right	📲 Ordinal	ゝ Input
3	v463	Numeric	1	0	Q.46a Hours worked per week [self-employed]	{1, 10-15}	9	6	■ Right	📶 Ordinal	💊 Input
4	v1411	Numeric	1	0	Q901a: Sex of respondent	{1, Men}	None	7	遭 Right	🗞 Nominal	ゝ Input
5	v1412	Numeric	2	0	Q.901b: Age last birthday of respondent	None	99	7	■ Right	🛷 Scale	ゝ Input
6	v1530	Numeric	1	0	Age completed full time education	{1, 15 or under}	9	7	■ Right	📲 Ordinal	ゝ Input
7	v1616	Numeric	1	0	Q908e: Employee or self-employed	{1, Employee}	9	7	■ Right	🙈 Nominal	ゝ Input
8	v1617	Numeric	2	0	Q908f: Private or public sector	{1, Private}	98, 99	7	■ Right	🙈 Nominal	ゝ Input
9	v1727	Numeric	2	0	Q918b: Gross earnings of R before tax	{1, Under £2000}	98, 99	7	■ Right	📶 Ordinal	ゝ Input
10	v2363	Numeric	1	0	Social Class of work [Derived from Q.908a]	{1, I}	0, 9	7	≡ Right	📶 Ordinal	💊 Input
11	v2367	Numeric	1	0	Industrial sector of work [Derived from Q.908f]	{1, Private: manufacture}	0, 9	7	■ Right	🙈 Nominal	ゝ Input
12	v2374	Numeric	1	0	Highest educational qualification [Derived from Q.907a]	{1, Degree}	8	7	■ Right	📲 Ordinal	> Input
	4										

At this point save the working file with [CTRL]S

Go back to the Syntax Editor

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data list	⁶⁰ v275 v463 v1530 (9) v1412 (99) v1530 (9) v1616 (9) v1617 v1727 (98,99)
execute.	61 v2363 v2367 (0,9) v2374 (8) .
subtitle	62 subtitle 'Specify variable levels'.
variable labels	63 ► variable level v275 v463 v1530 v1727 v1363 v2374 (ordinal).
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value labels	65 🖪
subtitle	
missing values	Line Command Information
	IBM SPSS Statistics Processor is ready In 63 Col 35 NUM

. . and save the syntax file with [CTRL]S

Step 3: Check the file contents

File > New > Syntax:

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title '3.1.4.2 Check file contents' . display labels .

[NB: The DISPLAY command is not available from the drop-down menus]

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		Variable Labels
Variable	Position	Label
v271	1	Q23: Employee or self-employed
v275	2	Q24: Hours worked per week [Employee]
v463	3	Q.46a Hours worked per week [self-employed]
v1411	4	Q901a: Sex of respondent
v1412	5	Q.901b: Age last birthday of respondent
v1530	6	Age completed full time education
v1616	7	Q908e: Employee or self-employed
v1617	8	Q908f: Private or public sector
v1727	9	Q918b: Gross earnings of R before tax
v2363	10	Social Class of work [Derived from Q.908a]
v2367	11	Industrial sector of work [Derived from Q.908f]
v2374	12	Highest educational qualification [Derived from Q.907a]

Variables in the working file

Run frequencies for all variables except age [v1412]

frequencies v271 to v1411 v1530 to v2374.

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display 2	display labels .
frequencies 3 >	frequencies v271 to v1411 v1530 to v2374.

	IBM SPSS Statistics Processor is ready In 3 Col 10 NUM

Place the cursor on the frequencies command and press the green triangle:

The **Statistics** table in the viewer is far too wide to display when copied direct to a Word page:

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Active Dataset		N Valid	1685	1457	225	3025	3023	2877	2562	1560	2846	2467	3016		
🗃 Variable Labels		Missing	1340	1568	2800	0	2	148	463	1465	179	558	9		
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Notes	N	Valid Missing	1685 1340	1457 1568	225 2800	3025	3023	Copy		[1560 1465	2846	2467 558	3016			
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			Statis	tics				
		v271 Q23: Employee or self-employed	v275 Q24: Hours worked per week [Employee]	v463 Q.46a Hours worked per week [self-employed]	v1411 Q901a: Sex of respondent	v1530 Age completed full time education		
	Valid N Missing	1685 1340	1457 1568	225 2800	3025 0	3023 2		
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		v1616 Q908e: Employee or self-employed	v1617 Q908f: Private or public sector	v1727 Q918b: Gross earnings of R before tax	v2363 Social Class of work [Derived from Q.908a]	v2367 Industrial sector of work [Derived from Q.908f]		
	Valid N Missing	2877 148	2562 463	1560	2846 179	2467 558		
- -								
-			Statist	tics				
			Statis		lucational qualification[[Derived from Q.907a]		

from which you can copy the tables, as here:

			Statist	tics		
		v271 Q23: Employee or self-employed	v275 Q24: Hours worked per week [Employee]	v463 Q.46a Hours worked per week [self-employed]	v1411 Q901a: Sex of respondent	v1530 Age completed full time education
N	Valid	1685	1457	225	3025	3023
	Missing	1340	1568	2800	0	2
			Statist	tics		
		v1616 Q908e: Employee or self- employed	v1617 Q908f: Private or public sector	v1727 Q918b: Gross earnings of R before tax	v2363 Social Class of work [Derived from Q.908a]	v2367 Industrial sector of work [Derived from Q.908f]
N	Valid	2877	2562	1560	2846	2467
IN	Missing	148	463	1465	179	558
			Statis	tics		
				v2374 Highest ed	ducational qualification [[Derived from Q.907a]
N		Valid				3016
Ľ		Missing				9

The last one above can be edited on this [Word] page by sliding the column edges, thus:

Statistics					
		v2374 Highest educational qualification [Derived from Q.907a]			
Ν	Valid Missing	3016 9			

I've reduced the following tables to single spacing which makes it look as if the missing values are not properly aligned, but all values seem to be in range. **[NB:** Be careful of missing values: they're not always the same in the raw data and the published versions of the main SPSS saved files distributed by the <u>UK Data Service</u> (UKDS) for <u>British Social Attitudes 1983 onwards.</u>]

	v271 Q23: Employee or self-employed								
		Frequency	Percent	Valid Percent	Cumulative Percent				
	1 Employee	1458	48.2	86.5	86.5				
Valid	2 Self-employed	227	7.5	13.5	100.0				
, and	Total	1685	55.7	100.0					
Missing	System	1340	44.3						
Total		3025	100.0						

	v275 Q24: Hours worked per week [Employee]						
		Frequency	Percent	Valid Percent	Cumulative Percent		
	1 10-15	88	2.9	6.0	6.0		
	2 16-23	119	3.9	8.2	14.2		
Valid	3 24-29	74	2.4	5.1	19.3		
i ana	4 30 or more	1176	38.9	80.7	100.0		
	Total	1457	48.2	100.0			
	9	1	.0				
Missing	System	1567	51.8				
	Total	1568	51.8				
Total		3025	100.0				

v463	Q.46a Hours v	vorked per	week [self-	employed
V403		voi keu pei	Week [Sell-	empioyeuj

		Frequency	Percent	Valid Percent	Cumulative Percent
	1 10-15	12	.4	5.3	5.3
	2 16-23	19	.6	8.4	13.8
Valid	3 24-29	5	.2	2.2	16.0
i ana	4 30 or more	189	6.2	84.0	100.0
	Total	225	7.4	100.0	
	9	2	.1		
Missing	System	2798	92.5		
	Total	2800	92.6		
Total		3025	100.0		

	v1411 Q901a: Sex of respondent								
		Frequency	Percent	Valid Percent	Cumulative Percent				
	1 Men	1393	46.0	46.0	46.0				
Valid	2 Women	1632	54.0	54.0	100.0				
	Total	3025	100.0	100.0					

v1530 A	Age completed full tin	ne education
---------	------------------------	--------------

		Frequency	Percent	Valid Percent	Cumulative Percent
	1 15 or under	1421	47.0	47.0	47.0
	2 16	753	24.9	24.9	71.9
	3 17	219	7.2	7.2	79.2
	4 18	198	6.5	6.5	85.7
Valid	5 19 or 0ver	370	12.2	12.2	97.9
	6 Still at school	7	.2	.2	98.2
	7 Still at college	55	1.8	1.8	100.0
	Total	3023	99.9	100.0	
Missing	9	2	.1		
Total		3025	100.0		

	v1616 Q908e: Employee or self-employed							
		Frequency	Percent	Valid Percent	Cumulative Percent			
	1 Employee	2567	84.9	89.2	89.2			
Valid	2 Self-employed	310	10.2	10.8	100.0			
Valia	Total	2877	95.1	100.0				
	9	24	.8					
Missing	System	124	4.1					
	Total	148	4.9					
Total		3025	100.0					

v1617 Q908f: Private or public sector						
		Frequency	Percent	Valid Percent	Cumulative Percent	
	1 Private	1633	54.0	63.7	63.7	
	2 Nationalised	179	5.9	7.0	70.7	
	3 Local Government	340	11.2	13.3	84.0	
	4 Health Authority	161	5.3	6.3	90.3	
Valid	5 Civil Service	146	4.8	5.7	96.0	
	6 Charity or Trust	33	1.1	1.3	97.3	
	7 Other	70	2.3	2.7	100.0	
	Total	2562	84.7	100.0		
	98	1	.0			
	99	4	.1			
Missing	System	458	15.1			
	Total	463	15.3			
Total		3025	100.0			

	v17	27 Q918b: Gross ear			
		Frequency	Percent	Valid Percent	Cumulative Percent
	1 Under £2000	81	2.7	5.2	5.2
	2 £2000 - £2999	89	2.9	5.7	10.9
	3 £3000 - £3999	91	3.0	5.8	16.7
	4 £4000 - £4999	93	3.1	6.0	22.7
	5 £5000 - £5999	115	3.8	7.4	30.1
	6 £6000 - £6999	112	3.7	7.2	37.2
	7 £7000 - £7999	126	4.2	8.1	45.3
Valid	8 £8000 - £9999	181	6.0	11.6	56.9
	9 £10000 - £11999	174	5.8	11.2	68.1
	10 £12000 - £14999	191	6.3	12.2	80.3
	11 £15000 - £17999	111	3.7	7.1	87.4
	12 £18000 - £19999	58	1.9	3.7	91.2
	13 £20000 - £24000	29	1.0	1.9	93.0
	14 £24000 or more	109	3.6	7.0	100.0
	Total	1560	51.6	100.0	
	98 Don't know	17	.6		
	99 Not answered	108	3.6		
Missing	System	1340	44.3		
	Total	1465	48.4		
Total		3025	100.0		

v2363 Social Class of work [Derived from Q.908a]

		Frequency	Percent	Valid Percent	Cumulative Percent
	11	121	4.0	4.3	4.3
	2 II	642	21.2	22.6	26.8
	3 III non-manual	724	23.9	25.4	52.2
Valid	4 III manual	658	21.8	23.1	75.4
	5 IV	545	18.0	19.1	94.5
	6 V	156	5.2	5.5	100.0
	Total	2846	94.1	100.0	
	0	124	4.1		
Missing	9	55	1.8		
	Total	179	5.9		
Total		3025	100.0		

v2367 Industrial sector of work [Derived from Q.908f] Frequency Percent Valid Percent Cumulative Percent 1 Private: manufacture 710 23.5 28.8 28.8 2 Private: non-manufacture 935 30.9 37.9 66.7 3 Public: service 682 22.5 27.6 94.3 Valid 4 Public: Manufacture + transport 4.6 5.7 100.0 140 2467 100.0 81.6 Total 124 4.1 0 434 14.3 Missing 9 558 18.4 Total 3025 100.0 Total

v2374 Highest educational qualification [Derived from Q.907a]

		Frequency	Percent	Valid Percent	Cumulative Percent
	1 Degree	216	7.1	7.2	7.2
	2 HE below degree	424	14.0	14.1	21.2
	3 A-level or equiv.	304	10.0	10.1	31.3
	4 O-level or equiv	536	17.7	17.8	49.1
Valid	5 CSE or equiv	242	8.0	8.0	57.1
	6 Foreign and other	11	.4	.4	57.5
	7 None	1283	42.4	42.5	100.0
	Total	3016	99.7	100.0	
Missing	8 DK/NA	9	.3		
Total		3025	100.0		

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2	v275	Numeric	1	0	Q24: Hours worked per week [Employee]	{1, 10-15}	9	6	≡ Right	J Ordinal	ゝ Input
3	v463	Numeric	1	0	Q.46a Hours worked per week [self-employed]	{1, 10-15}	9	6	≡ Right	🚮 Ordinal	ゝ Input
4	v1411	Numeric	1	0	Q901a: Sex of respondent	{1, Men}	None	7	■ Right	\delta Nominal	ゝ Input
5	v1412	Numeric	2	0	Q.901b: Age last birthday of respondent	None	99	7	≡ Right	🛷 Scale	ゝ Input
6	v1530	Numeric	1	0	Age completed full time education	{1, 15 or under}	9	7	≡ Right	🛃 Ordinal	ゝ Input
7	v1616	Numeric	1	0	Q908e: Employee or self-employed	{1, Employee}	9	7	■ Right	\delta Nominal	💊 Input
8	v1617	Numeric	2	0	Q908f: Private or public sector	{1, Private}	98, 99	7	■ Right	\delta Nominal	💊 Input
9	v1727	Numeric	2	0	Q918b: Gross earnings of R before tax	{1, Under £2000}	98, 99	7	■ Right	🛃 Ordinal	💊 Input
10	v2363	Numeric	1	0	Social Class of work [Derived from Q.908a]	{1, I}	0, 9	7	≡ Right	🚽 Ordinal	💊 Input
11	v2367	Numeric	1	0	Industrial sector of work [Derived from Q.908f]	{1, Private: manufacture}	0, 9	7	≡ Right	🙈 Nominal	S Input
12	v2374	Numeric	1	0	Highest educational qualification [Derived from Q.907a]	{1, Degree}	8	7	■ Right	🚽 Ordinal	💊 Input
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An alternative way of checking the file contents is:

Data > Define variable properties:

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		Define Variable Properties	h 🖩 🕱 🚍 🖧 🖷 🚚 🕗 🌑	AB6					
	N	3 Set Measurement Level for Unknown	Label	Values	Missing	Columns	Align	Measure	Role
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2	v275	New Custom Attribute	Q24: Hours worked per week [Employee]	{1, 10-15}	9	6	≡ Right	📲 Ordinal	🔪 Input
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4	v1411	Define Multiple Response Sets	Q901a: Sex of respondent	{1, Men}	None	7	a Right	\delta Nominal	ゝ Input
5	v1412	Validation •	Q.901b: Age last birthday of respondent	None	99	7	■ Right	🛷 Scale	💊 Input
6	v1530	Hentify Duplicate Cases	Age completed full time education	{1, 15 or under}	9	7	Right	Ordinal	🖒 Input
7	v1616	Identify Unusual Cases	Q908e: Employee or self-employed	{1, Employee}	9	7	Right	🚓 Nominal	💊 Input
8	v1617	Compare Datasets	Q908f: Private or public sector	{1, Private}	98, 99	7)温 Right	\delta Nominal	ゝ Input
9	v1727		Q918b: Gross earnings of R before tax	{1, Under £2000}	98, 99	7	Right	🛃 Ordinal	🥆 Input
10	v2363		Social Class of work [Derived from Q.908a]	{1, I}	0, 9	7	■ Right	Ordinal	ゝ Input
11	v2367	Sort Variables	Industrial sector of work [Derived from Q.908f]	{1, Private: manufacture}	0, 9	7	Right	🚓 Nominal	💊 Input
12	v2374	Transpose	Highest educational qualification [Derived from Q.907a]	{1, Degree}	8	7	🗏 Right	📲 Ordinal	ゝ Input
	4	Merge Files +							
ata View	Varia	Restructure							

If labels are displayed these can be confusing to navigate: it's much easier to work with variable names.

×

Labels ta Define Variable Properties 🔄 Define Variable Properties × Use this facility to label variable values and set other Use this facility to label variable values and set other 1 1 properties after scanning the data. properties after scanning the data Select the variables to scan. They should be categorical (nominal or ordinal) for best results. You Select the variables to scan. They should be categorical (nominal or ordinal) for best results. You Variables: Variables to Scan: Variables: Variables to Scan: <mark>& v271</mark> ∎ v275 🗞 Q23: Employe... 🖆 뤚 Q24: Hours ... 🚽 v463 💫 Q.46a Hours . 💑 v1411 🖧 Q901a: Sex of... 🖋 v1412 🔗 Q.901b: Age I... \$ 4 📲 v1530 💑 Q908e: Empl.. 💑 v1616 Regional Action of the Action 💑 v1617 🚴 Q918b: Gross.. 🚽 v1727 \delta Social Class .. 🚽 v2363 \delta Industrial sec. 뤚 v2367 Ŧ 휽 Highest educ.. 🚽 v2374 Limit number of cases scanned to: Limit number of cases scanned to: Limit number of values displayed to: 200 Limit number of values displayed to: 200 Continue Cancel Help Continue Cancel Help

Names

To do this we have to modify the SPSS settings with Edit > Options

Pivot Tables	File Locations	s So	ripts	Multiple Im	nputations	Syntax Editor
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. . then click on the General tab and change:

Display labels

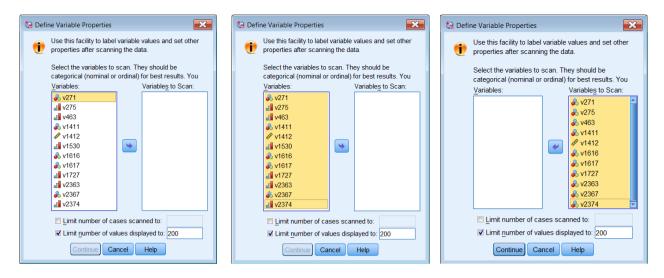
to Display names



Data > Define variable properties:

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-		Define Variable Properties	h 🖩 🔛 🚟 🛲 🐴 🚎 📑 🌝 🌑 .	ARG					
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4	v1411	Define Multiple Response Sets	Q901a: Sex of respondent	{1, Men}	None	7	≡ Right	🚓 Nominal	🔪 Input
5	v1412	Validation	Q.901b: Age last birthday of respondent	None	99	7	■ Right	🛷 Scale	🖒 Input
6	v1530	Hentify Duplicate Cases	Age completed full time education	{1, 15 or under}	9	7	■ Right	J Ordinal	💊 Input
7	v1616	Identify Unusual Cases	Q908e: Employee or self-employed	{1, Employee}	9	7	這 Right	🚓 Nominal	🥆 Input
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9	v1727	-	Q918b: Gross earnings of R before tax	{1, Under £2000}	98, 99	7	遭 Right	Ordinal	ゝ Input
10	v2363	Sort Cases	Social Class of work [Derived from Q.908a]	{1, I}	0, 9	7	署 Right	d Ordinal	🥆 Input
11	v2367	Sort Variables	Industrial sector of work [Derived from Q.908f]	{1, Private: manufacture}	0, 9	7	■ Right	🚓 Nominal	🥆 Input
12	v2374	Transpose	Highest educational qualification [Derived from Q.907a]	{1, Degree}	8	7	🗏 Right	📲 Ordinal	ゝ Input
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Highlight the variables you want and press 🕒 to transfer them to the Variables to scan box:



... then click on Continue:

🔄 Define Variable Properties					X
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□ al > v2374					
Cases scanned: 3025 Value list limit: 200	Copy Properties	ariable	To Other	Variables	Automatic Labels
(OK Paste	eset Cancel	Help		

Just click on any variable name to display its properties: if you want, you can change any or all of the properties from this dialog box.

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That's probably enough for one session, but use the tables above to think about appropriate cutting points to reduce the number of categories in the test variables. If your brain is not yet addled, you can continue straight to the next session <u>3.1.4.3</u> Income differences for test variables.

End of session 3.1.4.2: Income differences working file

Next sessions:

3.1.4.3: Income differences for test variables

Reduce gross earnings [v1727] to three categories: produce two-way contingency tables to investigate income differences for each of the test variables.

3.1.4.4: Income differences - Choose test variables and cutting points

Decide which test variables to use and choose cutting points; recode test variables into derived variables with fewer categories; produce two-way contingency tables to investigate income differences for the derived test variables.

3.2.4: Income differences - Elaboration

Three-way contingency tables to see what happens to income differences between men and women when controlling for test variables.

- Back to:
 Block 3 Analysing two variables (and sometimes three)

 3.1
 Two variables (CROSSTABS)

 3.1.4.1
 Income differences work-through
- Forward to: <u>3.1.4.3</u> Income differences for test variables [d]