

## Reading tables 101

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 2007/02/02  
 OLA Super Conference 2007  
 <http://www.chass.utoronto.ca/datalib/misc/ola07\_stat\_literacy.ppt>

Take a table, one that Statistics Canada publishes like this:

Table 7  
Average usual hours and wages of employees by selected characteristics, Canada, unadjusted for seasonality

	Employees				Full-time			Part-time		
	Number	Average	Average	Average	Number	Average	Average	Number	Average	Average
		weekly	weekly	hourly	weekly	weekly	weekly	weekly	weekly	weekly
	hours	hours	wages	wages	hours	hours	wages	hours	hours	wages
	'000		\$		'000		\$	'000		\$
December 2006										
15 years and over	14,046.7	35.3	731.18	19.86	11,430.7	38.5	841.40	2,616.0	17.0	249.55
15 to 24 years	2,406.4	27.3	342.88	11.61	1,225.8	39.2	530.49	1,180.7	15.0	147.70
25 years and over	11,640.3	37.0	611.45	21.68	9,204.9	38.5	679.75	2,385.4	16.7	333.34
Men	7,029.9	38.0	845.83	21.68	6,289.1	40.8	925.18	790.9	16.1	215.01
Women	6,986.8	32.6	615.53	18.21	5,161.6	38.0	736.65	1,825.2	17.5	264.53

Source: STC cat no. 71-001-XIE200612

We can now make part of the table look like...

...this (note, it's a different date, and therefore different numbers from the previous slide):

### Full vs part-time employment by gender, Canada, 2005

Sex	Males	Females
Type of work		
Full-time	41,846.9	22,792.6
Part-time	1,933.7	4,293.8

Source: Labour force historical review: table cd1115an. [computer file] 2006 ed.

And compute some percentages to make it look like...

...this:

### Full vs part-time employment by gender, Canada, 2005

Sex	Males	Females
Type of work		
Full-time	95.6	84.1
Part-time	4.4	15.9

Source: Labour force historical review: table cd1115an. [computer file] 2006 ed.

More males work full-time than part-time: True/False  
 More females work full-time than part-time: True/False  
 Three times as many women as men work part-time: True/False  
 Women are three times more likely to work part-time than men: True/False

### Full vs part-time employment by gender, Canada, 2005

Sex	Males	Females
Type of work		
Full-time	64.7	35.3
Part-time	31.1	38.9

100%  
100%

Source: Labour force historical review: table cd1115an. [computer file] 2006 ed.

Of those who work full-time, 2/3 are men: True/False  
 Of those who work part-time, 2/3 are women: True/False  
 Almost twice as many women work part-time as full-time: True/False

...but the table behind the numbers is...

	Sex	Males	Females
Distributions	Type of work		
Data Value	Full-time	41,846.9	22,792.6
	Part-time	1,933.7	4,293.8
Percentage of Row Total	Full-time	64.7	35.3
	Part-time	31.1	68.9
Percentage of Column Total	Full-time	95.6	84.1
	Part-time	4.4	15.9

Source: Labour force historical review: table cd1115an. [computer file] 2006 ed.

**Do you agree with this Toronto Star reporter?**

**How support varies across the country**

Q: If a federal election were held tomorrow, which party would you vote for? A: It depends on where you live.

Region: The Liberals are the leading party in Ontario, the Atlantic provinces, the Prairies and B.C.

Gender: More women support the Liberals, more men the Conservatives.

Age: Conservatives are the preferred party of Canadians 65 and over.

ALL FIGURES IN PERCENTAGES

	B.C.	Alta.	Prairies	Ont.	Que.	Atlantic	Male	Female	25 and below	25 to 44	45 to 64	65 and above
Liberal	47.5	25.7	47.1	46.9	26.1	52.4	38.0	42.2	40.7	38.7	42.1	39.8
Con.	29.8	59.5	37.0	37.4	18.3	31.5	35.7	31.2	23.6	30.3	36.8	45.3
NDP	16.5	7.5	10.8	9.1	8.8	12.6	9.2	11.3	12.6	11.6	8.1	8.5
Bloc				34.7			8.6	8.5	9.7	9.8	8.8	3.2
Green party	6.3	7.2	5.1	6.6	12.1	3.4	8.6	6.7	13.5	9.6	4.2	3.2

Source: Toronto Star, Dec. 9, 2006

**Now for a slightly more complex table:**

Type of work	Males		Females	
	Full-time	Part-time	Full-time	Part-time
Age group				
15-24 years	9.7	45.3	10.3	28.0
25-54 years	75.6	34.8	78.2	57.4
55-64 years	12.9	12.7	10.6	12.1
65 years and over	1.8	7.2	0.9	2.5

Source: Labour force historical review: table cd1115an. [computer file] 2006 ed

Less than 15% of males who work full time are over 55: True/False  
 Of males who work part time, the largest number are youth: True/False  
 Fewer women 25-54 work part-time than full-time: True/False

**Same table – but where’s the 100% now?**

Type of work	Males		Females	
	Full-time	Part-time	Full-time	Part-time
Age group				
15-24 years	82.1	17.9	69.1	30.9
25-54 years	97.9	2.1	89.1	10.9
55-64 years	95.6	4.4	84.1	15.9
65 years and over	84.4	15.6	67.2	32.8

Source: Labour force historical review: table cd1115an. [computer file] 2006 ed

Twice as many young women as young men work part-time: True/False  
 Twice as many women as men over 65 work part-time: True/False  
 Women over 65 are twice as likely to work part-time as men: True/False  
 Most of the men who work part time are under 24 or over 65: True/False

**And here’s what the table values/counts are:**

Type of work	Males		Females	
	Full-time	Part-time	Full-time	Part-time
Age group				
15-24 years	31,655.5	6,923.1	22,176.8	9,927.5
25-54 years	245,830.8	5,318.5	167,592.2	20,399.7
55-64 years	41,846.9	1,933.7	22,792.6	4,293.8
65 years and over	5,975.3	1,103.9	1,824.4	890.4

Source: Labour force historical review: table cd1115an. [computer file] 2006 ed

**In this table, where’s the 100% total?**

**Table 5.5 Seniors and non-seniors by visible minority status, Census Canada, 1996**

Visible minority status	Percent of age group		Percent of total population	
	0-64 %	65+ %	0-64 %	65+ %
Black	18.27	12.86	95.72	4.28
South Asian	21.08	19.33	94.49	5.51
Chinese	26.09	39.60	91.20	8.80
Other	34.56	28.20	95.07	4.93

Source: Chappell, N. et al / Aging in contemporary Canada. Toronto: Prentice Hall, 2003. Page 131.

**Lesson 1:**

- Can compare sizes of percentages and rates only **within** the row/column in which they have been computed (ie add up to 100%)
- Between rows/columns, can only compare relative proportions or likelihoods, or counts.

Sex (3)	Male	Female
Legal Marital S		
Never married (single)	49.5	43.0
Legally married (and not separated)	40.9	39.2
Separated, but still legally married	2.2	2.7
Divorced	5.5	6.8
Widowed	1.9	8.2

Source: Census of Canada, 2001: legal marital status, age groups, and sex for population (Topic based tabulations; 9710004xcb2001001)

**Why are these two numbers so different?**

Sex (3)	Male	Female
Legal Marital S		
Never married (single)	36.7	30.2
Legally married (and not separated)	51.6	48.8
Separated, but still legally married	2.7	3.3
Divorced	6.8	8.5
Widowed	2.2	9.2

Source: Census of Canada, 2001: legal marital status, common-law status, age groups, sex and household living arrangements for population 15 years and over (Topic based tabulations; 9710004xcb2001040)

**Religion Statistics > Islam > Percentage by country**

Rank	Countries	Amount (top to bottom)
#1	West Bank:	132.439%
#2	Saudi Arabia:	99.998%

**Lesson 2:** make sure you can identify what's in the denominator as well as what's in the numerator!

Here's what the academic called the table

**Table 4.2 MALE AND FEMALE LABOUR FORCE PARTICIPATION 1976-1999**

	Women aged 15 Years and Over		Men aged 15 Years and Over		Women as a % of total employment
	Total employed (000s)	% of all women employed	Total employed (000s)	% of all men employed	
1976	3,630.7	42.0	6,145.5	72.7	37.1
1977	3,716.3	42.1	6,198.4	72.0	37.4
1978	3,891.7	43.2	6,320.5	72.0	38.1
1979	4,131.3	45.0	6,526.4	73.0	38.8
1980	4,339.3	46.3	6,630.9	72.8	39.6
1981	4,546.9	47.6	6,749.9	72.8	40.2
1982	4,510.9	46.5	6,436.2	68.4	41.2

Source: Chappell, N. et al. / Aging in contemporary Canada. Toronto: Prentice Hall, 2003. Page 131.

And this is what the original Statistics Canada publication called the same table:

**Employment, 1976-1999**

	Women aged 15 and over		Men aged 15 and over		Women as a % of total employment
	Total employed (000s)	% of all women employed	Total employed (000s)	% of all men employed	
1976	3,630.7	42.0	6,145.5	72.7	37.1
1977	3,716.3	42.1	6,198.4	72.0	37.4
1978	3,891.7	43.2	6,320.5	72.0	38.1
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1980	4,339.3	46.3	6,630.9	72.8	39.6
1981	4,546.9	47.6	6,749.9	72.8	40.2
1982	4,510.9	46.5	6,436.2	68.4	41.2

Source: Women in Canada. STC cat no. 89-503, pl. 116

**Same table, different titles. Which one would you use?**

**Employment rate and participation rate are not the same thing:**

- participation rate =  $\frac{((\text{labour force}) * 100)}{(\text{total population 15 and over})}$
- employment rate =  $\frac{((\text{employed labour force}) * 100)}{(\text{total population 15 and over})}$

Sex		Females			Males		
Characteristics	Employment	Participation rate	Employment rate	Participation rate	Employment rate		
Year							
1976	3,630.7	45.7	42.0				
1977	3,716.3	46.3	42.1				
1978	3,891.7	47.7	43.2				
1979	4,131.3	49.2	45.0				
1980	4,339.3	50.4	46.3				
1981	4,546.9	51.9	47.6				
1982	4,510.9	52.1	46.5				
	1976	6,145.5	77.6	72.7			
	1977	6,198.4	77.6	72.0			
	1978	6,320.5	77.9	72.0			
	1979	6,526.4	78.3	73.0			
	1980	6,630.9	78.3	72.8			
	1981	6,749.9	78.4	72.8			
	1982	6,436.2	77.1	68.4			

This is the original table from the [Labour force historical Review cd-rom](#)

Source: Labour force historical review 1999 ed.: table tab01an.ivt.

**Lesson 3:** whenever possible, go back to the original data collector.