

# ISYS3401 IT Evaluation

## Tutorial 11

### Multiple Regression

This tutorial assumes you have followed the demonstration of SPSS in the lecture. Otherwise, you have to go through the lecture notes for SPSS demonstration on Multiple Regression yourself.

#### Exercise

1. Use the results from Week 9 tutorial (**ISYS3401 Tutorial Dataset.xlsx**), or you can download **ISYS3401 Week 11 Tutorial Dataset.xlsx** from Week 9 Tutorial in Canvas. For this exercise, we assume, you have decided to drop off column vvlt1.

2. You need to average the variables or columns associated with each construct to create independent variables for the purpose of using Regression. Your columns should look like:

	A	B	C	D	E	F	G	H	I	J	K
1	veou1	veou2	<b>veouavg</b>	vvlt2	vvlt3	vvlt4	<b>vvltavg</b>	vint1	vint2	vint3	<b>vintavg</b>
2	6	6	<b>6.00</b>	7	1	6	<b>4.67</b>	7	6	8	<b>7.00</b>
3	6	6	<b>6.00</b>	1	1	1	<b>1.00</b>	7	7	10	<b>8.00</b>
4	5	4	<b>4.50</b>	1	4	1	<b>2.00</b>	4	4	4	<b>4.00</b>
5	5	3	<b>4.00</b>	5	7	7	<b>6.33</b>	1	1	1	<b>1.00</b>
6	6	6	<b>6.00</b>	6	6	6	<b>6.00</b>	5	4	4	<b>4.33</b>

3. You then copy the averaged columns to a new tab called DataAverage. Your columns should look like:

	A	B	C
1	veouavg	vvltavg	vintavg
2	6.00	4.67	7.00
3	6.00	1.00	8.00
4	4.50	2.00	4.00
5	4.00	6.33	1.00
6	6.00	6.00	4.33
7	5.00	3.00	4.33
8	6.50	4.67	8.00
9	5.00	3.67	5.33
10	7.00	2.33	8.00

4. You then run Regression, but this time you have two variables/columns:

Regression

?

×

Input

Input Y Range:

\$C\$1:\$C\$242

↑

Input X Range:

\$A\$1:\$B\$242

↑

☒ Labels

☐ Constant is Zero

☒ Confidence Level:

95

%

Output options

☐ Output Range:

↑

☒ New Worksheet Ply:

Multiple Regression

☐ New Workbook

Residuals

☐ Residuals

☐ Residual Plots

☐ Standardized Residuals

☐ Line Fit Plots

Normal Probability

☐ Normal Probability Plots

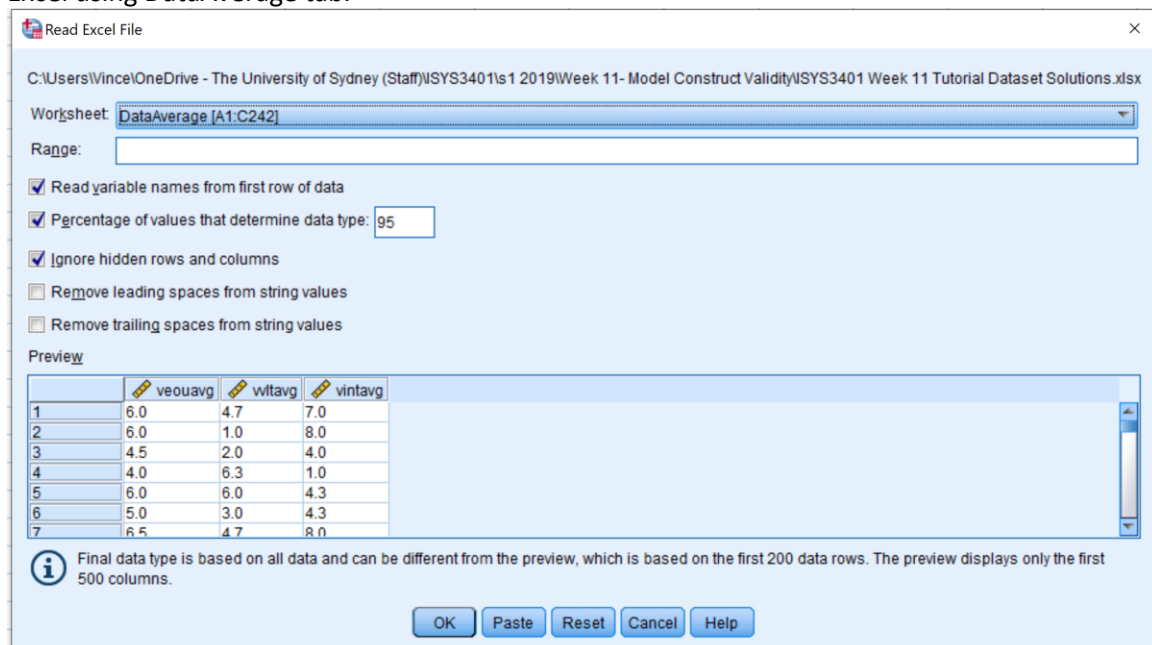
OK

Cancel

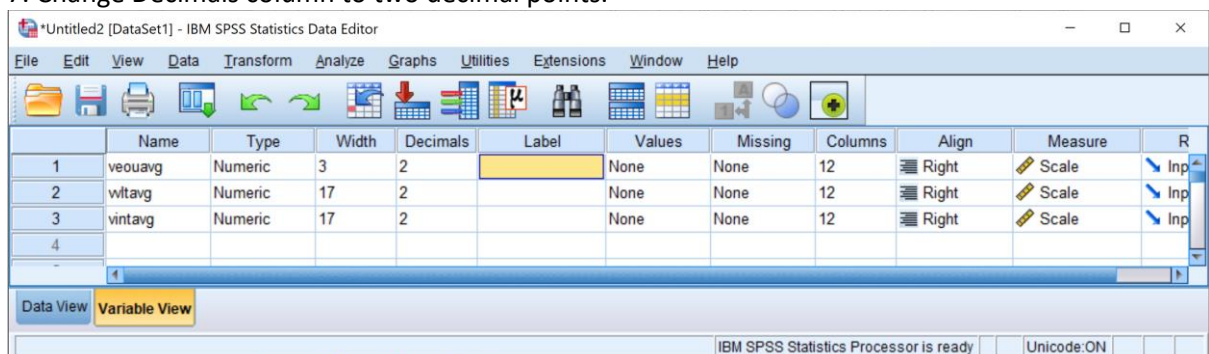
Help

5. Now, write down your regression equation for your model.

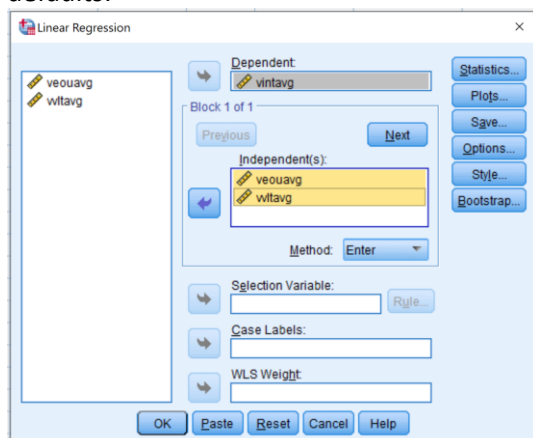
6. Repeat this again but this time using SPSS with the same Excel spreadsheet. Import the data into Excel using DataAverage tab.



7. Change Decimals column to two decimal points.



8. Run Regression, and dependent and independent variables should be similar to, and take the defaults:



9. Compare  $R^2$  and coefficients.