




# STATISTICS (SPSS FOR BEGINNER)

## Chapter 11

### Regression

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- Regression is used when we want to predict the value of a variable based on the value of another variable.
- Simple regression  
\*regression\_basic.sav

	 SALES	 SELL	 COST
1	ANDREW	12800	1300
2	JOHN	16300	2100
3	RICK	9800	850
4	ELLE	11200	950
5	TOM	21100	5400
6	MACY	18900	4200
7	COLE	14600	2000
8	CLAY	8700	900
9	DALTON	10200	1000
10	WILLOW	13400	1100

How to:

1. Open regression\_basic.sav
2. Choose Analyze
3. Choose Regression
4. Choose Linear
5. Put Sell on the Dependent box
6. Put Cost on the Independent box
7. Put Sales on the Case Labels box
8. Choose Enter on the Method
9. Click Options
10. Follow tutorial
11. Click Continue
12. Click Statistics
13. Follow tutorial
14. Click Continue

15. Click Plots
16. Follow tutorial
17. Click Continue
18. Click OK

How to make decision for t-test (1):





- If the number of t (from the result) > t table number, Ho is accepted
- If the number of t (from the result) < t table number, Ho is not accepted

How to make decision (2):

- If probability (F number) > 0.025, Ho is accepted
- If probability (F number) < 0.025, Ho is not accepted

- Multiple regression (3 independent variables)

\*regression\_multiple.sav

	 SALES	 SELL	 COST	 LOCATI ON
1	ANDREW	12800	1300	2
2	JOHN	16300	2100	3
3	RICK	9800	850	1
4	ELLE	11200	950	2
5	TOM	21100	5400	5
6	MACY	18900	4200	3
7	COLE	14600	2000	2
8	CLAY	8700	900	1
9	DALTON	10200	1000	1
10	WILLOW	13400	1100	2

How to:

1. Open regression\_multiple.sav
2. Choose analyze
3. Choose regression
4. Choose linear
5. Put Sell on the dependent box
6. Put Cost and location on the independent box
7. Put Sales on the case labels box
8. Choose enter on the method
9. Click Statistics
10. Follow tutorial

11. Click Continue
12. Click Plots
13. Follow tutorial
14. Click Continue
15. Click Ok

- Multiple regression (4 independent variables)  
\*employee.sav

	Number	Gender	Fields_of_work	Status	Number_of_children	Education	Age	Period	Salary
1	156	Female	Marketing	Married	1	Bachelor	24	2	20500.00
2	157	Male	Marketing	Single	1	Vocational	27	5	26250.00
3	158	Female	Administration	Married	0	High School	25	1	17750.00
4	159	Male	Accounting	Married	3	High School	27	3	30750.00
5	160	Female	Production	Single	1	High School	28	4	31000.00
6	161	Female	Marketing	Single	1	Vocational	26	3	25750.00
7	162	Male	Marketing	Married	0	Bachelor	27	3	20750.00
8	163	Male	Accounting	Single	2	Vocational	28	5	26250.00
9	164	Male	Administration	Married	1	Vocational	29	4	21000.00
10	165	Female	Accounting	Single	1	High School	30	2	18000.00
11	166	Male	Administration	Single	0	Vocational	30	7	26750.00
12	167	Female	Production	Married	0	Bachelor	26	3	20750.00
13	168	Male	Accounting	Married	0	Vocational	27	4	21000.00
14	169	Female	Administration	Single	1	Vocational	29	5	31250.00
15	170	Female	Administration	Single	0	High School	27	3	25750.00
16	171	Female	Marketing	Married	0	Vocational	25	2	18000.00
17	172	Male	Accounting	Single	1	Vocational	24	1	30250.00
18	173	Male	Production	Married	2	Bachelor	26	1	25250.00
19	174	Female	Marketing	Single	0	High School	23	2	20500.00
20	175	Male	Accounting	Married	1	High School	27	3	30750.00
21	176	Male	Administration	Married	1	High School	29	5	21250.00
22	177	Male	Marketing	Single	1	High School	27	3	20750.00
23	178	Male	Administration	Single	0	Vocational	25	1	25250.00
24	179	Female	Administration	Married	2	Bachelor	24	1	30250.00
25	180	Male	Accounting	Married	3	Vocational	26	1	30250.00

	Number	Gender	Fields_of_work	Status	Number_of_children	Education	Age	Period	Salary
26	181	Female	Marketing	Single	2	Vocational	23	1	30250.00
27	182	Male	Marketing	Single	1	High School	26	2	20500.00
28	183	Female	Marketing	Married	1	Vocational	27	4	26000.00
29	184	Female	Administration	Single	2	Bachelor	29	5	18750.00
30	185	Female	Accounting	Married	1	Vocational	27	3	25750.00
31	186	Female	Production	Single	3	Vocational	25	4	21000.00
32	187	Female	Accounting	Married	1	High School	24	1	20250.00
33	188	Female	Administration	Married	0	Vocational	26	2	20500.00
34	189	Male	Administration	Single	0	Vocational	23	1	30250.00
35	190	Male	Administration	Single	1	Vocational	27	2	25500.00
36	191	Female	Marketing	Married	1	Bachelor	29	3	18250.00
37	192	Male	Accounting	Single	2	Vocational	27	4	31000.00
38	193	Male	Production	Married	1	Vocational	29	3	20750.00
39	194	Female	Marketing	Single	0	High School	27	2	20500.00
40	195	Male	Administration	Single	0	Vocational	25	4	26000.00
41	196	Female	Administration	Married	1	Bachelor	24	2	18000.00
42	197	Male	Accounting	Single	1	Vocational	26	4	31000.00
43	198	Female	Production	Married	0	Vocational	23	1	25250.00
44	199	Male	Marketing	Married	2	High School	27	5	21250.00
45	200	Male	Accounting	Single	1	Vocational	29	6	31500.00
46	201	Male	Administration	Single	1	Vocational	27	5	21250.00
47	202	Male	Marketing	Married	4	Bachelor	25	2	20500.00
48	203	Male	Administration	Single	0	High School	24	1	25250.00
49	204	Male	Administration	Single	1	High School	26	3	30750.00
50	205	Male	Accounting	Married	2	High School	23	1	20250.00

How to:

1. Open employee.sav
2. Choose Analyze
3. Choose regression
4. Choose linear
5. Put on the dependent box
6. Put number of children, age, period and salary to the independent box
7. Choose enter on the method
8. Click statistics
9. Follow tutorial
10. Click continue
11. Click Ok