

# Regression

## Notes

Output Created	21-máj.-2014 08:48:54	
Comments		
Input	Data	C:\Users\oktato\Documents\stat_en_2013Autumn\Ex14_ch16_21May2014.sav
	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	16
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax	<pre> REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT PperE /METHOD=ENTER Gross_profit_margin Sales_growth d_health_drog d_other_industry. </pre>	
Resources	Processor Time	00 00:00:00,016
	Elapsed Time	00 00:00:00,035
	Memory Required	2308 bytes
	Additional Memory Required for Residual Plots	0 bytes

[DataSet0] C:\Users\oktato\Documents\stat\_en\_2013Autumn\Ex14\_ch16\_21May2014.sav

### Variables Entered/Removed<sup>b</sup>

Model	Variables Entered	Variables Removed	Method
1	d_other_industry, Sales_growth, Gross_profit_margin, d_health_drog	.	Enter

a. All requested variables entered.

b. Dependent Variable: PperE

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,747 <sup>a</sup>	,559	,398	5,42105

a. Predictors: (Constant), d\_other\_industry, Sales\_growth, Gross\_profit\_margin, d\_health\_drog

### ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	409,015	4	102,254	3,479	,045 <sup>a</sup>
	Residual	323,265	11	29,388		
	Total	732,280	15			

a. Predictors: (Constant), d\_other\_industry, Sales\_growth, Gross\_profit\_margin, d\_health\_drog

b. Dependent Variable: PperE

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9,532	5,141		1,854	,091
	Gross_profit_margin	,136	,490	,130	,278	,786
	Sales_growth	,407	,213	,441	1,910	,083
	d_health_drog	8,994	7,737	,644	1,162	,270
	d_other_industry	,115	3,923	,008	,029	,977

a. Dependent Variable: PperE

## Regression

**Notes**

Output Created	21-máj.-2014 09:15:44	
Comments		
Input	Data	C:\Users\oktato\Documents\stat_en_2013Autumn\Ex14_ch16_21May2014.sav
	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	16
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax	<pre> REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.10) POUT(.20) /NOORIGIN /DEPENDENT PperE /METHOD=FORWARD Gross_profit_margin Sales_growth d_health_drog d_other_industry.                     </pre>	
Resources	Processor Time	00 00:00:00,016
	Elapsed Time	00 00:00:00,042
	Memory Required	2308 bytes
	Additional Memory Required for Residual Plots	0 bytes

[DataSet0] C:\Users\oktato\Documents\stat\_en\_2013Autumn\Ex14\_ch16\_21May2014.sav

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	Gross_profit_margin	.	Forward (Criterion: Probability-of-F-to-enter <= , 100)

a. Dependent Variable: PperE

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,625 <sup>a</sup>	,390	,347	5,64827

a. Predictors: (Constant), Gross\_profit\_margin

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	285,639	1	285,639	8,953	,010 <sup>a</sup>
	Residual	446,641	14	31,903		
	Total	732,280	15			

a. Predictors: (Constant), Gross\_profit\_margin  
 b. Dependent Variable: PperE

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10,052	3,736		2,691	,018
	Gross_profit_margin	,656	,219	,625	2,992	,010

a. Dependent Variable: PperE

**Excluded Variables<sup>b</sup>**

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Sales_growth	,287 <sup>a</sup>	1,415	,180	,365	,986
	d_health_drog	,252 <sup>a</sup>	,617	,548	,169	,274
	d_other_industry	-,140 <sup>a</sup>	-,638	,535	-,174	,942

a. Predictors in the Model: (Constant), Gross\_profit\_margin  
 b. Dependent Variable: PperE

**Regression**

**Notes**

Output Created		21-máj.-2014 09:19:21
Comments		
Input	Data	C:\Users\oktato\Documents\stat_en_2013Autumn\Ex14_ch16_21May2014.sav
	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	16
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.20) POUT(.25) /NOORIGIN /DEPENDENT PperE /METHOD=FORWARD Gross_profit_margin Sales_growth d_health_drog d_other_industry.
Resources	Processor Time	00 00:00:00,047
	Elapsed Time	00 00:00:00,038
	Memory Required	2308 bytes
	Additional Memory Required for Residual Plots	0 bytes

[DataSet0] C:\Users\oktato\Documents\stat\_en\_2013Autumn\Ex14\_ch16\_21May2014 .sav

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	Gross_profit_margin	.	Forward (Criterion: Probability-of- F-to-enter <= , 200)
2	Sales_growth	.	Forward (Criterion: Probability-of- F-to-enter <= , 200)
3	d_health_drog	.	Forward (Criterion: Probability-of- F-to-enter <= , 200)

a. Dependent Variable: PperE

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,625 <sup>a</sup>	,390	,347	5,64827
2	,687 <sup>b</sup>	,472	,390	5,45614
3	,747 <sup>c</sup>	,559	,448	5,19046

- a. Predictors: (Constant), Gross\_profit\_margin  
 b. Predictors: (Constant), Gross\_profit\_margin, Sales\_growth  
 c. Predictors: (Constant), Gross\_profit\_margin, Sales\_growth, d\_health\_drog

**ANOVA<sup>d</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	285,639	1	285,639	8,953	,010 <sup>a</sup>
	Residual	446,641	14	31,903		
	Total	732,280	15			
2	Regression	345,277	2	172,638	5,799	,016 <sup>b</sup>
	Residual	387,003	13	29,769		
	Total	732,280	15			
3	Regression	408,990	3	136,330	5,060	,017 <sup>c</sup>
	Residual	323,290	12	26,941		
	Total	732,280	15			

- a. Predictors: (Constant), Gross\_profit\_margin  
 b. Predictors: (Constant), Gross\_profit\_margin, Sales\_growth  
 c. Predictors: (Constant), Gross\_profit\_margin, Sales\_growth, d\_health\_drog  
 d. Dependent Variable: PperE

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10,052	3,736		2,691	,018
	Gross_profit_margin	,656	,219	,625	2,992	,010
2	(Constant)	6,038	4,589		1,316	,211
	Gross_profit_margin	,692	,213	,658	3,242	,006
	Sales_growth	,265	,187	,287	1,415	,180
3	(Constant)	9,527	4,920		1,936	,077
	Gross_profit_margin	,143	,410	,137	,350	,733
	Sales_growth	,406	,200	,440	2,026	,066
	d_health_drog	8,851	5,756	,633	1,538	,150

- a. Dependent Variable: PperE

**Excluded Variables<sup>d</sup>**

Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics	
					Tolerance	
1	Sales_growth	,287 <sup>a</sup>	1,415	,180	,365	,986
	d_health_drog	,252 <sup>a</sup>	,617	,548	,169	,274
	d_other_industry	-,140 <sup>a</sup>	-,638	,535	-,174	,942
2	d_health_drog	,633 <sup>b</sup>	1,538	,150	,406	,217
	d_other_industry	-,189 <sup>b</sup>	-,891	,390	-,249	,920
3	d_other_industry	,008 <sup>c</sup>	,029	,977	,009	,555

a. Predictors in the Model: (Constant), Gross\_profit\_margin

b. Predictors in the Model: (Constant), Gross\_profit\_margin, Sales\_growth

c. Predictors in the Model: (Constant), Gross\_profit\_margin, Sales\_growth, d\_health\_drog

d. Dependent Variable: PperE

## Regression

**Notes**

Output Created		21-máj.-2014 09:34:07
Comments		
Input	Data	C:\Users\oktato\Documents\stat_en_2013Autumn\Ex14_ch16_21May2014.sav
	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	16
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.10) POUT(.20) /NOORIGIN /DEPENDENT PperE /METHOD=BACKWARD Gross_profit_margin Sales_growth d_health_drog d_other_industry.
Resources	Processor Time	00 00:00:00,000
	Elapsed Time	00 00:00:00,038
	Memory Required	2604 bytes
	Additional Memory Required for Residual Plots	0 bytes

[DataSet0] C:\Users\oktato\Documents\stat\_en\_2013Autumn\Ex14\_ch16\_21May2014  
 .sav

**Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	d_other_industry, Sales_growth, Gross_profit_margin, d_health_drog	.	Enter
2	.	d_other_industry	Backward (criterion: Probability of F-to-remove >= ,200).
3	.	Gross_profit_margin	Backward (criterion: Probability of F-to-remove >= ,200).

- a. All requested variables entered.  
 b. Dependent Variable: PperE

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,747 <sup>a</sup>	,559	,398	5,42105
2	,747 <sup>b</sup>	,559	,448	5,19046
3	,744 <sup>c</sup>	,554	,485	5,01218

- a. Predictors: (Constant), d\_other\_industry, Sales\_growth,  
 Gross\_profit\_margin, d\_health\_drog  
 b. Predictors: (Constant), Sales\_growth, Gross\_profit\_margin,  
 d\_health\_drog  
 c. Predictors: (Constant), Sales\_growth, d\_health\_drog



**ANOVA<sup>d</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	409,015	4	102,254	3,479	,045 <sup>a</sup>
	Residual	323,265	11	29,388		
	Total	732,280	15			
2	Regression	408,990	3	136,330	5,060	,017 <sup>b</sup>
	Residual	323,290	12	26,941		
	Total	732,280	15			
3	Regression	405,695	2	202,847	8,075	,005 <sup>c</sup>
	Residual	326,585	13	25,122		
	Total	732,280	15			

a. Predictors: (Constant), d\_other\_industry, Sales\_growth, Gross\_profit\_margin, d\_health\_drog

b. Predictors: (Constant), Sales\_growth, Gross\_profit\_margin, d\_health\_drog

c. Predictors: (Constant), Sales\_growth, d\_health\_drog

d. Dependent Variable: PperE

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9,532	5,141		1,854	,091
	Gross_profit_margin	,136	,490	,130	,278	,786
	Sales_growth	,407	,213	,441	1,910	,083
	d_health_drog	8,994	7,737	,644	1,162	,270
	d_other_industry	,115	3,923	,008	,029	,977
2	(Constant)	9,527	4,920		1,936	,077
	Gross_profit_margin	,143	,410	,137	,350	,733
	Sales_growth	,406	,200	,440	2,026	,066
	d_health_drog	8,851	5,756	,633	1,538	,150
3	(Constant)	10,817	3,143		3,441	,004
	Sales_growth	,430	,181	,466	2,370	,034
	d_health_drog	10,600	2,750	,759	3,855	,002

a. Dependent Variable: PperE

**Excluded Variables<sup>c</sup>**

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
2	d_other_industry	,008 <sup>a</sup>	,029	,977	,009	,555
3	d_other_industry	,044 <sup>b</sup>	,196	,848	,057	,727
	Gross_profit_margin	,137 <sup>b</sup>	,350	,733	,100	,241

a. Predictors in the Model: (Constant), Sales\_growth, Gross\_profit\_margin, d\_health\_drog

b. Predictors in the Model: (Constant), Sales\_growth, d\_health\_drog

c. Dependent Variable: PperE