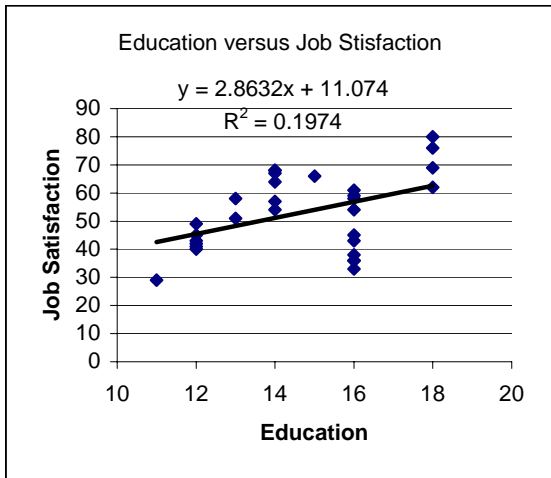


Forecasting Job Satisfaction Using Education: Formulas Method

Name	EDUCAT (X)	JOBSAT (Y)	y-ybar	x-xbar	y-ybar ²	(y-ybar)(x-xbar)	x-xbar ²	yhat	Error	Sq. Err
Alice	13	58	4.933	-1.667	24.338	-8.222	2.778	48.295	9.705	94.192
Allen	12	49	-4.067	-2.667	16.538	10.844	7.111	45.432	3.568	12.734
Betty	13	51	-2.067	-1.667	4.271	3.444	2.778	48.295	2.705	7.318
Bill	18	62	8.933	3.333	79.804	29.778	11.111	62.611	-0.611	0.373
Charlie	15	66	12.933	0.333	167.271	4.311	0.111	54.021	11.979	143.495
Cindy	18	76	22.933	3.333	525.938	76.444	11.111	62.611	13.389	179.278
Deborah	12	45	-8.067	-2.667	65.071	21.511	7.111	45.432	-0.432	0.186
Donald	16	36	-17.067	1.333	291.271	-22.756	1.778	56.884	-20.884	436.150
Edward	16	43	-10.067	1.333	101.338	-13.422	1.778	56.884	-13.884	192.771
Emily	14	64	10.933	-0.667	119.538	-7.289	0.444	51.158	12.842	164.920
Florence	12	40	-13.067	-2.667	170.738	34.844	7.111	45.432	-5.432	29.502
Frank	16	59	5.933	1.333	35.204	7.911	1.778	56.884	2.116	4.477
George	16	36	-17.067	1.333	291.271	-22.756	1.778	56.884	-20.884	436.150
Grace	11	29	-24.067	-3.667	579.204	88.244	13.444	42.568	-13.568	184.102
Henry	16	38	-15.067	1.333	227.004	-20.089	1.778	56.884	-18.884	356.613
Holly	16	45	-8.067	1.333	65.071	-10.756	1.778	56.884	-11.884	141.234
Imelda	16	61	7.933	1.333	62.938	10.578	1.778	56.884	4.116	16.940
Ivan	12	41	-12.067	-2.667	145.604	32.178	7.111	45.432	-4.432	19.639
Jane	12	43	-10.067	-2.667	101.338	26.844	7.111	45.432	-2.432	5.913
John	14	67	13.933	-0.667	194.138	-9.289	0.444	51.158	15.842	250.972
Karl	16	33	-20.067	1.333	402.671	-26.756	1.778	56.884	-23.884	570.456
Katherine	18	69	15.933	3.333	253.871	53.111	11.111	62.611	6.389	40.825
Larry	14	57	3.933	-0.667	15.471	-2.622	0.444	51.158	5.842	34.130
Lucy	16	58	4.933	1.333	24.338	6.578	1.778	56.884	1.116	1.245
Mary	18	80	26.933	3.333	725.404	89.778	11.111	62.611	17.389	302.394
Michael	14	68	14.933	-0.667	223.004	-9.956	0.444	51.158	16.842	283.657
Nancy	14	68	14.933	-0.667	223.004	-9.956	0.444	51.158	16.842	283.657
Olga	12	42	-11.067	-2.667	122.471	29.511	7.111	45.432	-3.432	11.776
Penelope	14	54	0.933	-0.667	0.871	-0.622	0.444	51.158	2.842	8.078
Ruth	16	54	0.933	1.333	0.871	1.244	1.778	56.884	-2.884	8.319

\bar{x} = 14.66667 \bar{y} = 53.06667 SS_{yy} = 5,259.867 SS_{xy} = 362.667 SS_{xx} = 126.667 Bias = 0.000 SSE = 4,221.495



$b_1 = \frac{SS_{xy}}{SS_{xx}} = 2.8632$
 $b_0 = \bar{y} - b_1 \cdot \bar{x} = 11.074$
 Regression Sum of Squares $SS_{yy} - SSE = 1,038.372$
 Proportion of Variance Explained $R^2 = \frac{SSR}{SS_{yy}} = 0.1974$
 df = 28
 Standard Error = 12.279

Forecasting Job Satisfaction Using Education:Excel Regression Tool

Name	JOBSAT	EDUCAT
Alice	58	13
Allen	49	12
Betty	51	13
Bill	62	18
Charlie	66	15
Cindy	76	18
Deborah	45	12
Donald	36	16
Edward	43	16
Emily	64	14
Florence	40	12
Frank	59	16
George	36	16
Grace	29	11
Henry	38	16
Holly	45	16
Imelda	61	16
Ivan	41	12
Jane	43	12
John	67	14
Karl	33	16
Katherine	69	18
Larry	57	14
Lucy	58	16
Mary	80	18
Michael	68	14
Nancy	68	14
Olga	42	12
Penelope	54	14
Ruth	54	16

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.444313084
R Square	0.197414116
Adjusted R Sq	0.168750335
Standard Error	12.27874868
Observations	30

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1038.372	1038.372	6.8872321	0.013901
Residual	28	4221.495	150.7677		
Total	29	5259.867			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	11.07368421	16.15754	0.685357	0.4987539	-22.02357	44.1709432	-22.023575	44.17094
EDUCAT	2.863157895	1.090995	2.624354	0.0139007	0.628353	5.09796328	0.62835251	5.097963

RESIDUAL OUTPUT

<i>Observation</i>	<i>predicted JOBSAT</i>	<i>Residuals</i>
1	48.29473684	9.705263
2	45.43157895	3.568421
3	48.29473684	2.705263
4	62.61052632	-0.61053
5	54.02105263	11.97895
6	62.61052632	13.38947
7	45.43157895	-0.43158
8	56.88421053	-20.8842
9	56.88421053	-13.8842
10	51.15789474	12.84211
11	45.43157895	-5.43158
12	56.88421053	2.115789
13	56.88421053	-20.8842
14	42.56842105	-13.5684
15	56.88421053	-18.8842
16	56.88421053	-11.8842
17	56.88421053	4.115789
18	45.43157895	-4.43158
19	45.43157895	-2.43158
20	51.15789474	15.84211
21	56.88421053	-23.8842
22	62.61052632	6.389474
23	51.15789474	5.842105
24	56.88421053	1.115789
25	62.61052632	17.38947
26	51.15789474	16.84211
27	51.15789474	16.84211
28	45.43157895	-3.43158
29	51.15789474	2.842105
30	56.88421053	-2.88421