

1	1
---	---

1	1
1	1 1/4

1	1
1	1

2	2
1	1
1	1 1/4
1	1

1	1
2	1

1	
1	
1	
1	
1	

1	1/2
1	3/4

1	3/4
1	1
1	1
1	3/4

1	1/2
---	-----

1. State your claim

2. Summary statistics.

- summary statistics in writeup

- discussion of summary stats

3. Determine relationships & format data set

a) dependent variable formatted appro

b) explanatory variables formatted?
squares, interactions or binary

4. Do a correlation analysis

a) do scatter plots

b) weird patterns (squares, etc)

c) Correlation tests

d) drop & re-specify

5. Run a regression on data set

Regression output

Drop, re-run, repeat

Interpret the final regression output:

Analysis of variance

R-squared

Adjusted R-squared

Coefficient estimate

Estimate of intercept

6. Residuals

a. Standard Residual plot

b. Residual issues

7. Fitted equation

a) write out estimated model

b) Add trend line. Consistent?

c) Predict a couple values

d) model work as predictor?

8. Comment on your model.

TOTAL

did a H do!!

only for 1st one.

Need for FINTU!

not a final so can't tell

critique what was good.
what was bad

$$11 + 1/2 + 1 + 2 1/4 = 14 3/4$$

Skewness	2.033254888	1.407991953	1.807493772	1.083516	6.749408202
Range	614	2709	509.9	5	91681
Minimum	111	1171	198.7	2	1000
Maximum	725	3880	708.6	7	92681
Sum	25828	177205	27785.2	314	793748
Count	88	88	88	88	88

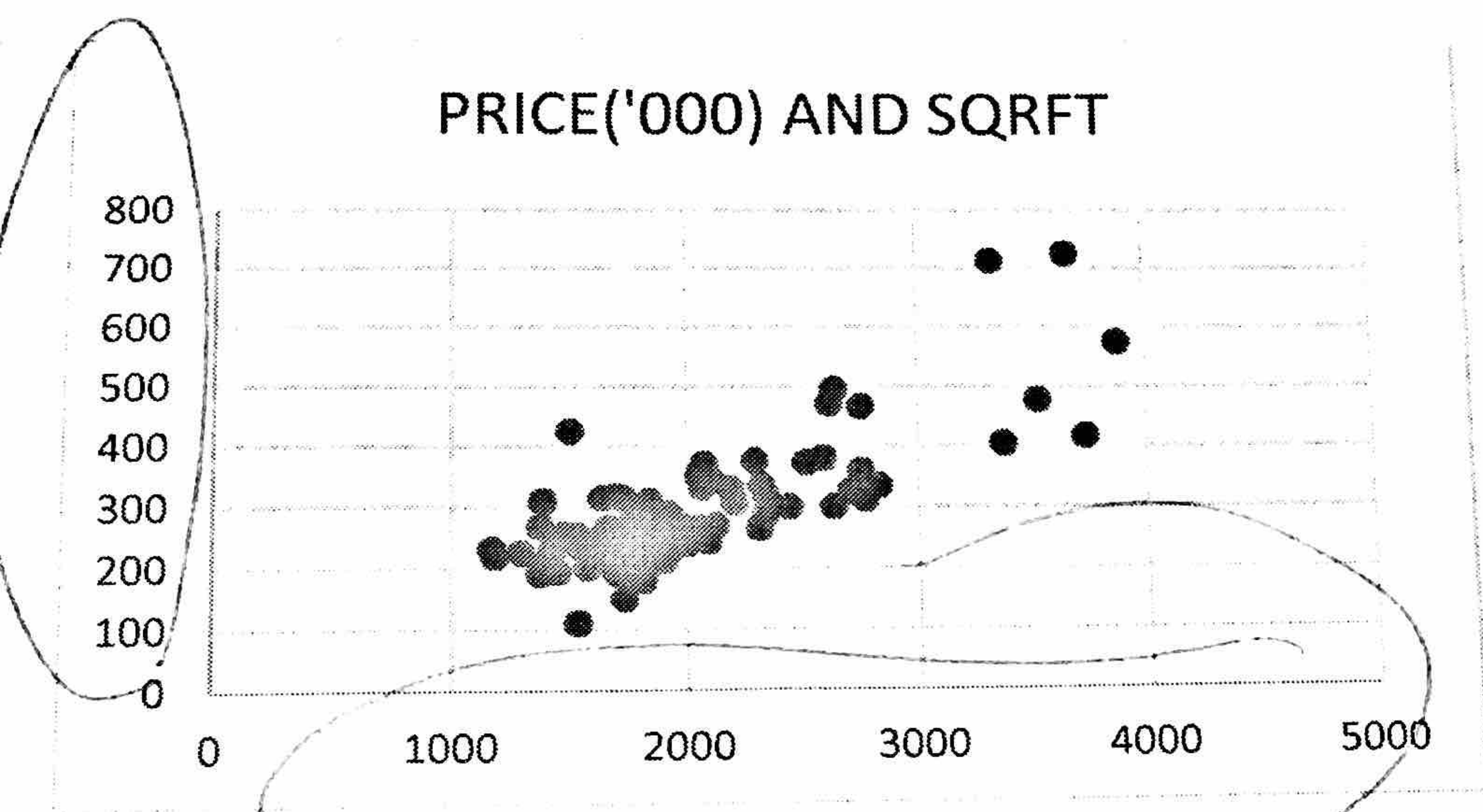
Table 1. Summary statistics

The minimum house price is 111,000 dollars while the maximum is 725,000 dollars with a mean of 293500 dollars with a standard deviation of 102669.54. The minimum size of a house is 1171 square feet while the maximum size of a house is 3880 square feet with a mean of 2013.69 and a standard deviation of 577.192 square feet. The living room size of the house range between 198.7 and 708.6 square feet with a mean of 315.74 and a standard deviation of 95.32 square feet. The number of bedrooms in the houses studied range between 2 and 7 with a mean of 3.57 bedrooms and a standard deviation of 0.8414. The size of land for the houses studied range between 1000 and 92681 square meters with a mean of 9019.86 and a standard deviation of 10174.15.

*I can see these.
Can you add some insight?*

price is the dependent variable with house size, living room size, number of bedrooms and size of land as the explanatory variables. The price of the houses is in thousands of dollars, house size and living room size are measured in square feet, land size is measured in square meters and the number of bedrooms is a real number.

CORRELATION ANALYSIS



Bedrooms
→ disute

Figure 1. Scatter plot of price vs size of the house

From the scatterplot above, it shows a strong positive correlation between price and size of the house.

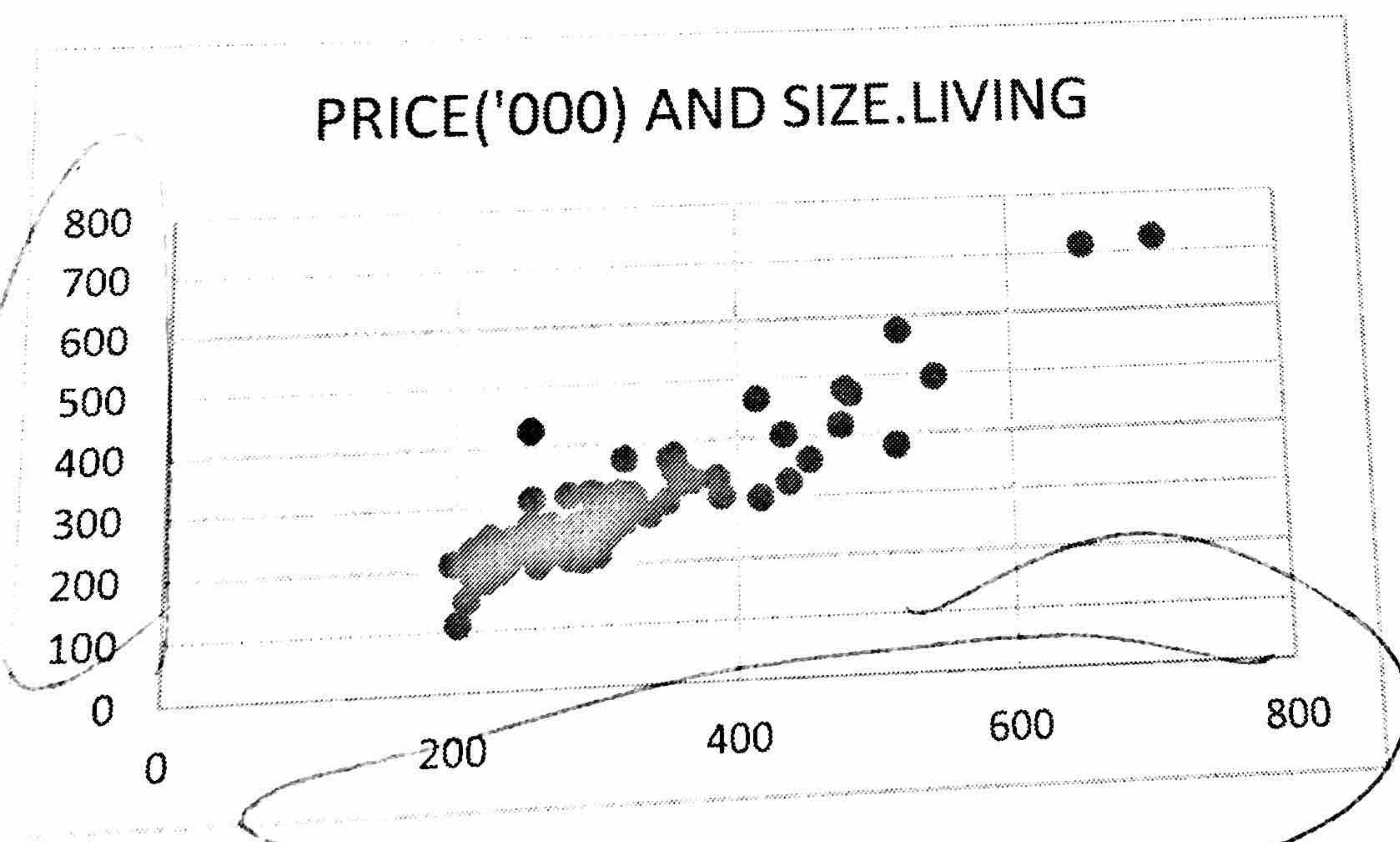


Figure 2. Scatterplot of price vs size of living room

From the scatterplot above, there is a strong positive correlation between price and size of room of a house.

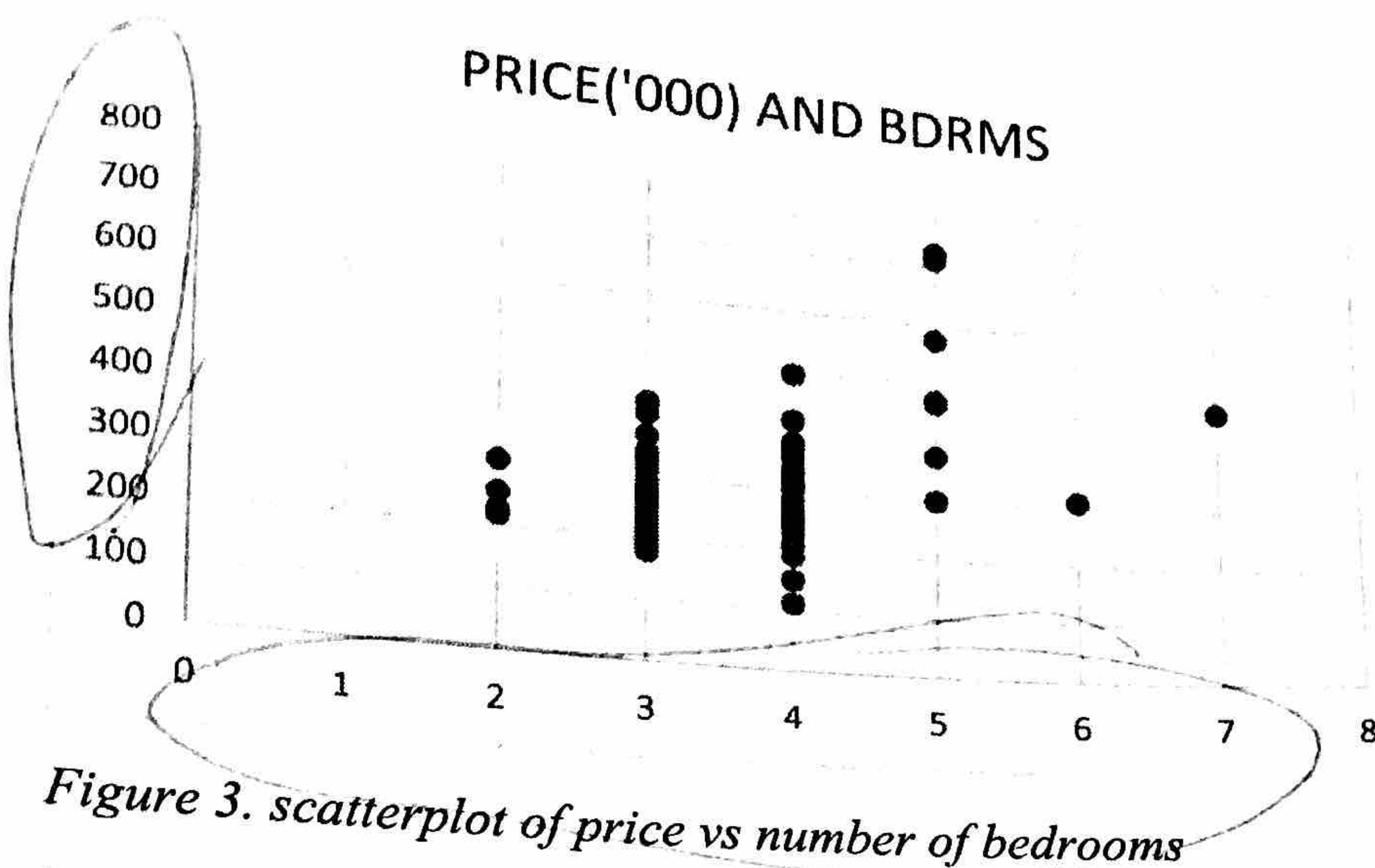


Figure 3. scatterplot of price vs number of bedrooms

The scatterplot above indicates moderate positive correlation between price and the number of bedrooms in a house.

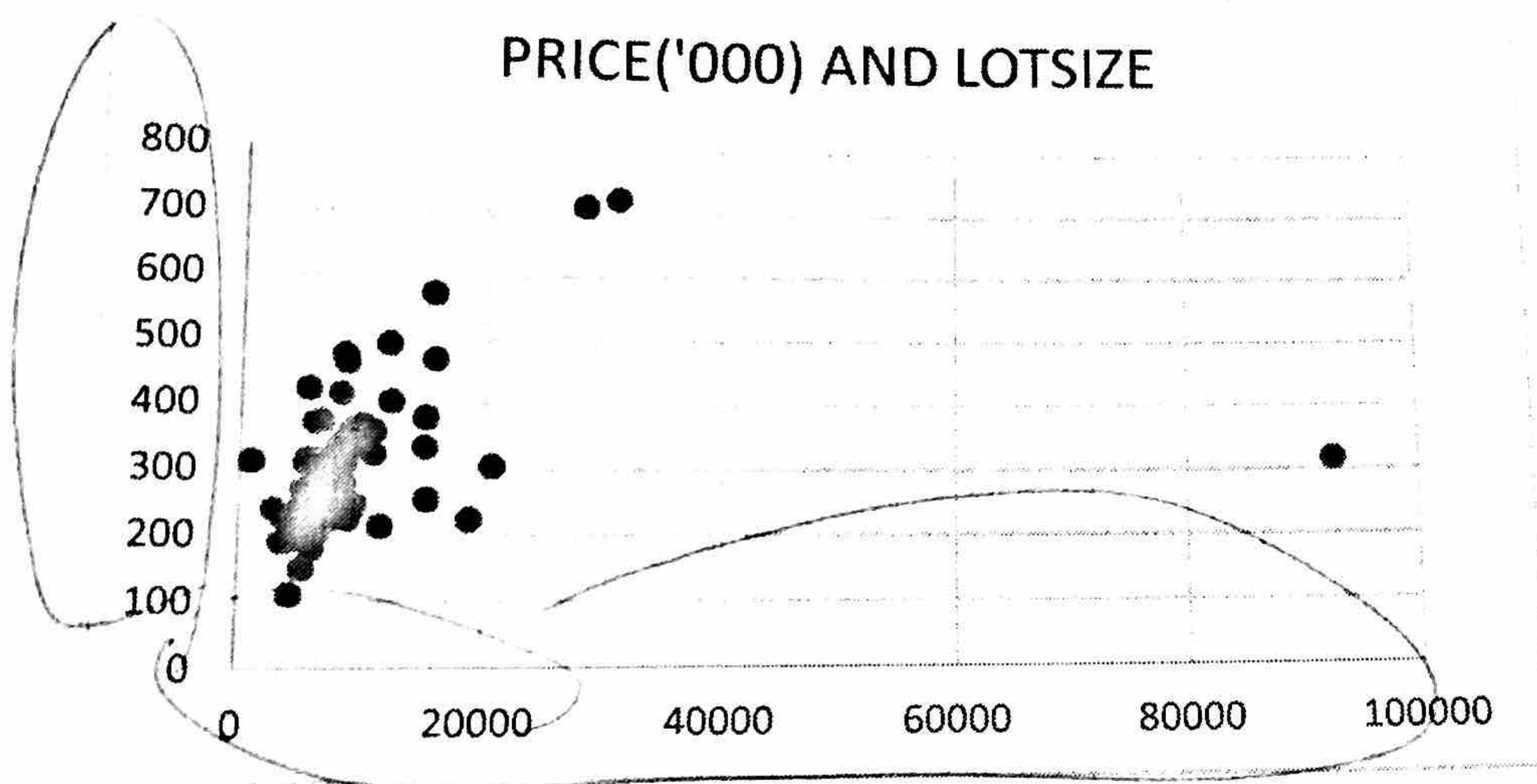


Figure 4. scatterplot of price vs land size

The scatterplot above shows a weak strong correlation between price of a house and the size of land that the house sits in.

The table below shows the correlation analysis output.

	PRICE('000)	SQRFT	SIZE.LIVING	BDRMS	LOTSIZE
PRICE	1				
SQRFT	0.787801	1			
SIZE.LIVING	0.905185	0.865595	1		
BDRMS	0.507882	0.531474	0.48245	1	
LOTSIZE	0.347205	0.183842	0.328142	0.136326	1

Table 2. Correlation analysis results.

RESIDUALS VS FITTED VALUES

The plot of residuals vs fitted values is as shown below;

NOT Standard

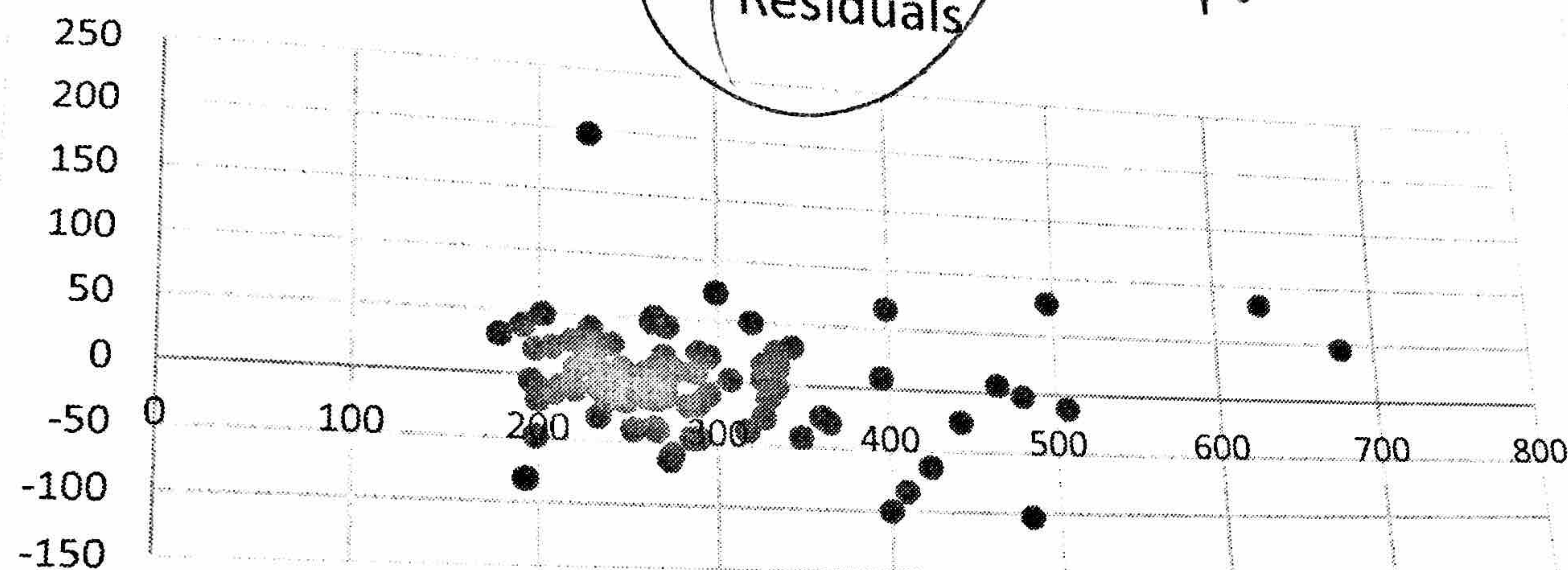


Figure 5. Residuals vs Fitted Values

In this plot, the residuals bounce randomly around the x-axis implying that the relationship is linear. Also, the residuals seem to form a horizontal band around the line residuals = 0. This suggests that the variances of the error terms are constant.

FITTED EQUATION

The resulting regression equation is as shown below;

$$PRICE = -38.689 - 0.000486 SQRFT + 0.9076 SIZE.LIVING + 11.573 BDRMS + 0.0005879 LOTSIZE$$

The table below shows some of the predicted values using this regression model;

SIZE	PRICE(000)	PREDICTED PRICE ('000)
------	------------	------------------------