Model 1: log(PRICE) ~ log(PROPERTYSQFT) + BEDS + BATH

This model explains about 58.9% of the variance in housing prices (Adjusted $R^2 = 0.5884$).

- Property size (log-transformed) is strongly and positively associated with price ($\beta = 1.081$, $p < 0.001$).
- Beds show a small but negative effect on price ($\beta = -- 0.050$, $p < 0.001$).
- Baths have a positive effect on price ($\beta = 0.068$, $p < 0.001$).
  Residuals are fairly tight ($SE \approx 0.27$), and all predictors are statistically significant.

Model 2: log(PRICE) ~ log(PROPERTYSQFT) + BEDS

This simpler model explains about 57.0% of the variance (Adjusted $R^2 = 0.5699$).

- Property size remains highly significant ($\beta = 1.240$, $p < 0.001$).
- Beds is again negative ($\beta = -- 0.031$, $p < 0.001$), but its effect size is smaller.
  The model fit is slightly weaker than Model 1, with a higher residual error ($SE \approx 0.28$).

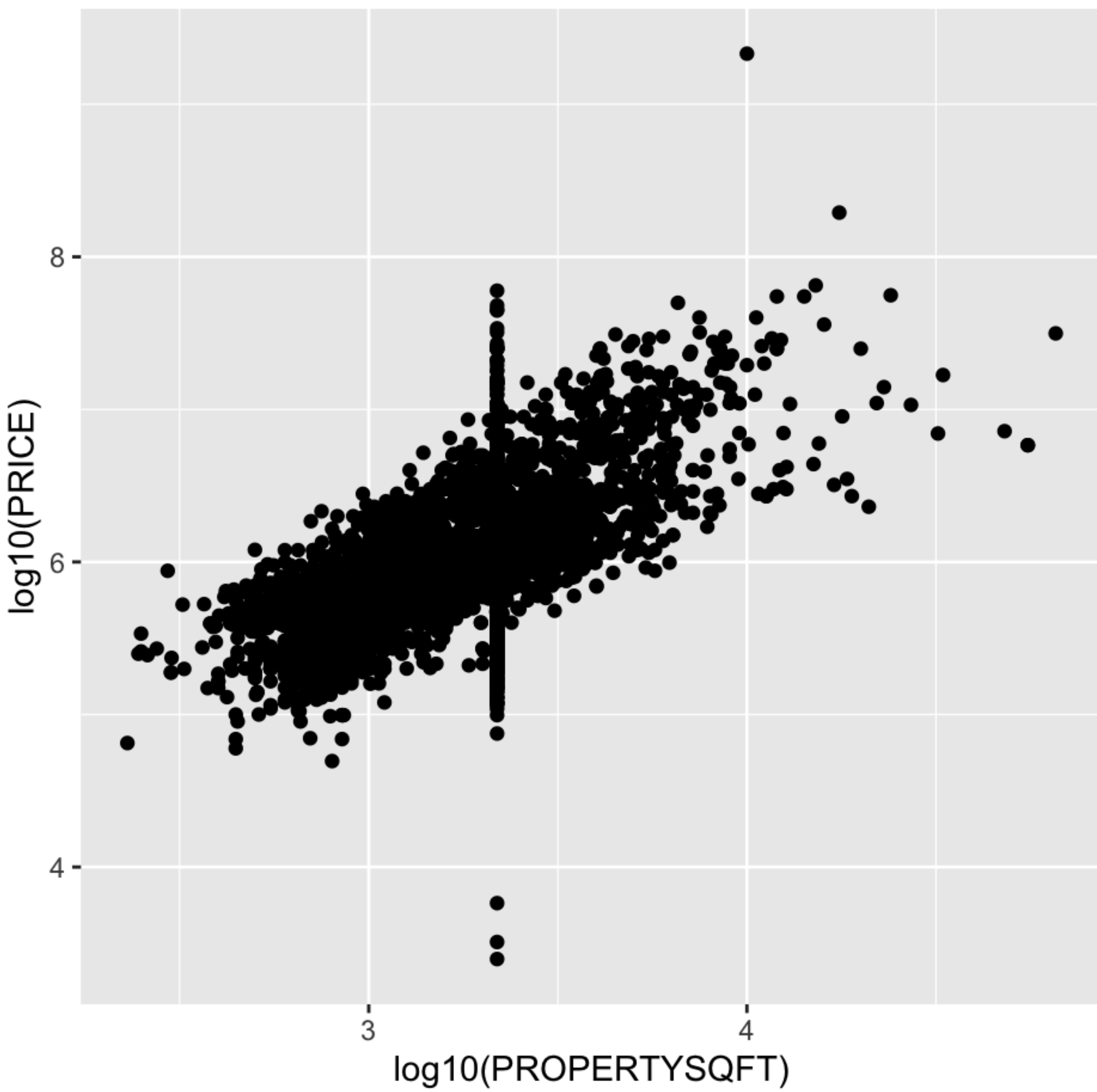
Model 3: log(PRICE) ~ BEDS + BATH

This model explains only 37.3% of the variance (Adjusted $R^2 = 0.3731$).

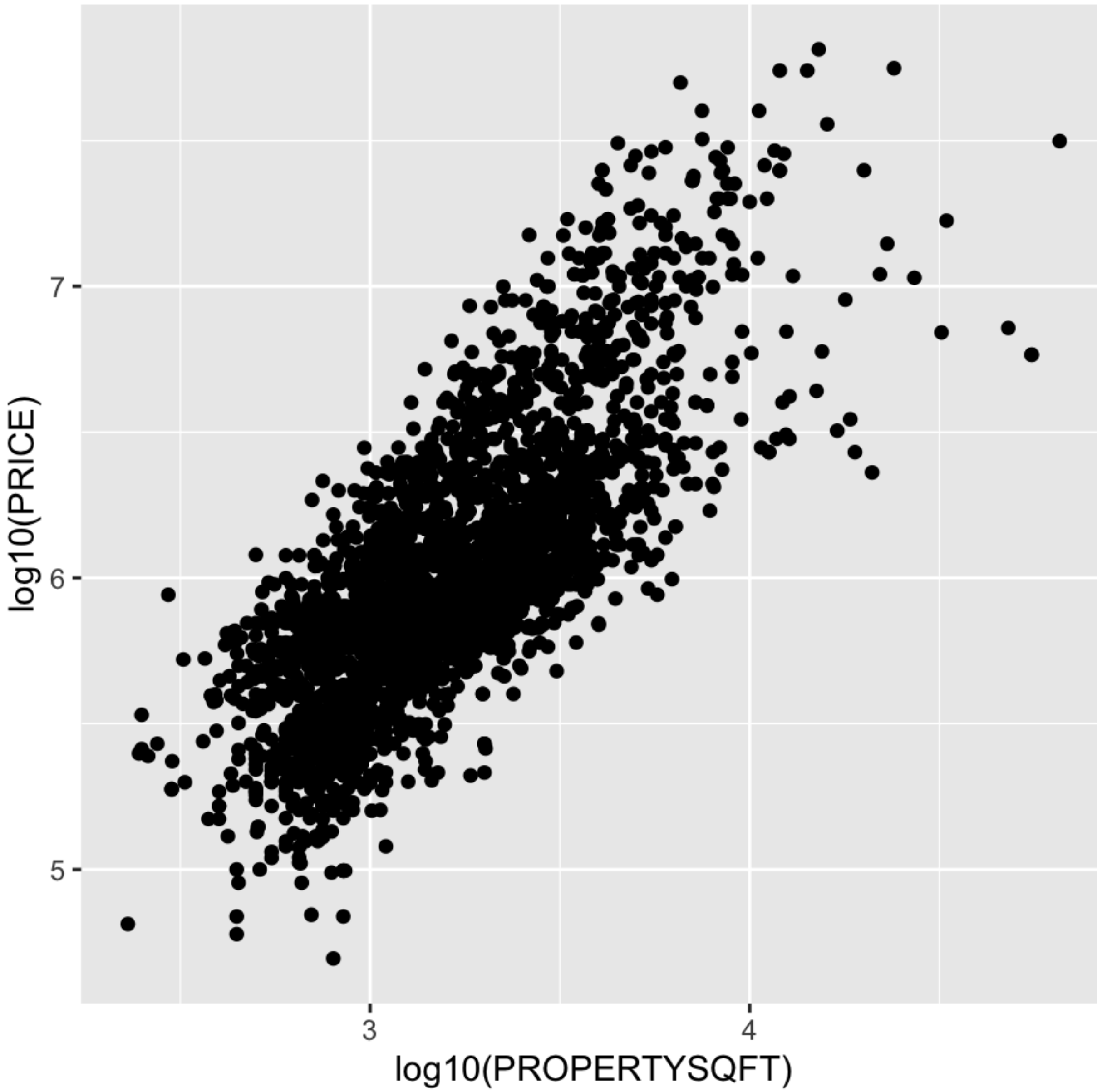
- Beds are not significant ($\beta \approx 0$, $p = 0.948$).
- Baths are strongly positive ($\beta = 0.183$, $p < 0.001$).
  Model 3 fits the data noticeably worse than the other two, with the largest residual error ($SE \approx 0.34$).

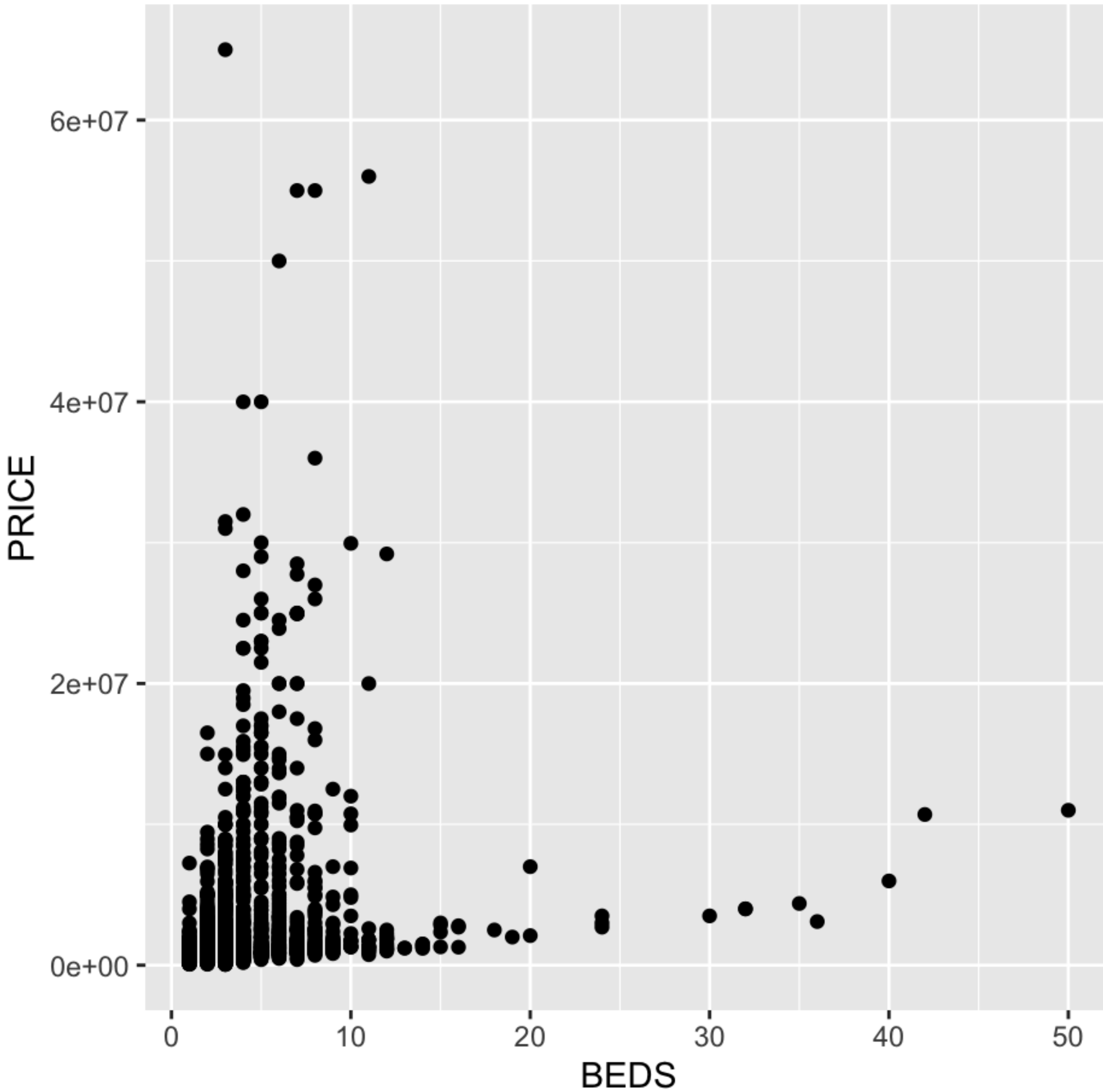
Comparison:

- Model 1 provides the best overall fit, balancing predictors and explaining the most variance.
- Model 2 is nearly as good but omits Baths, which appear to be an important predictor.
- Model 3 is weakest, as it excludes property size, which is clearly the dominant factor.

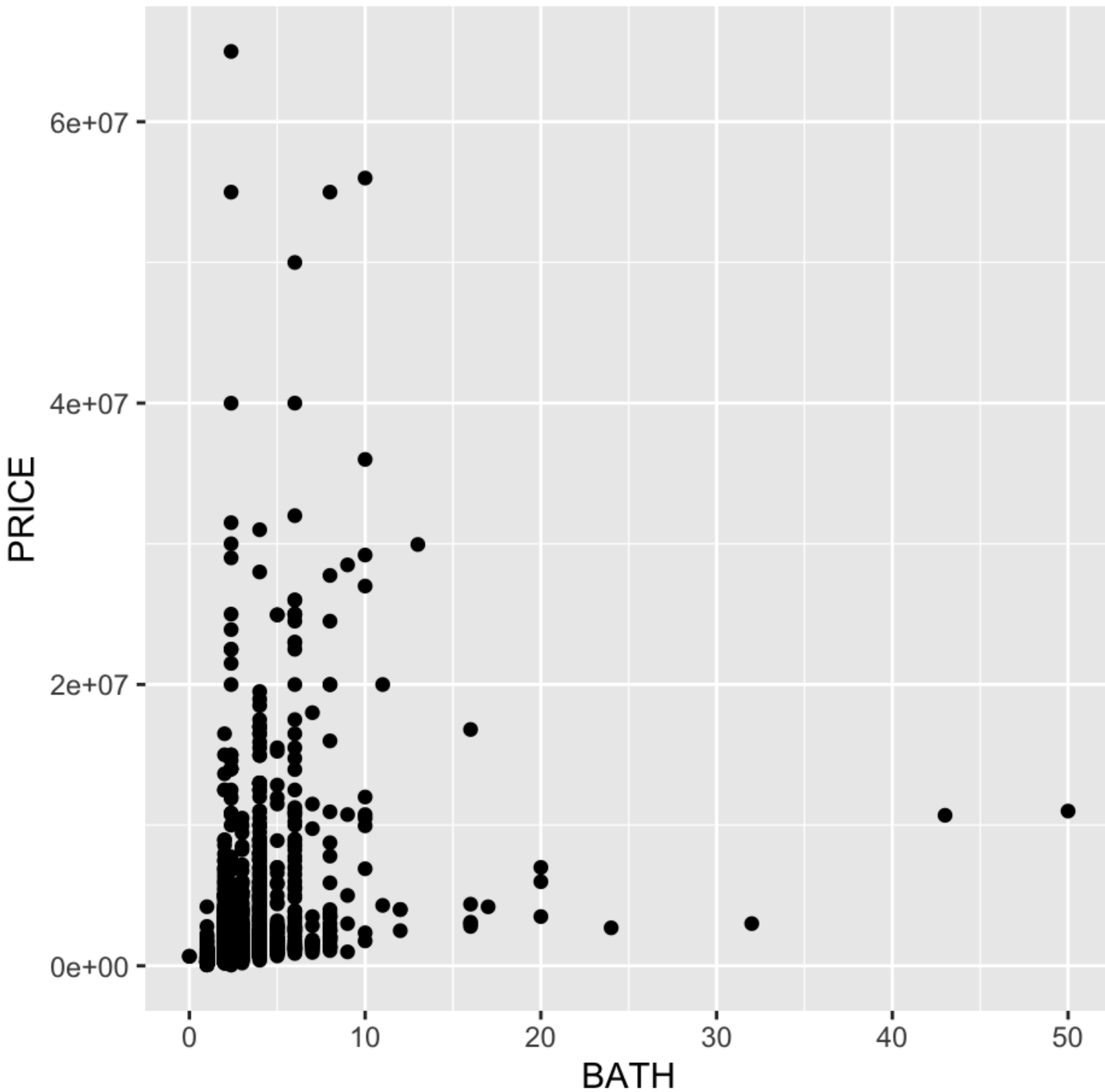


8
6
4
log10(PRICE)
3
4
log10(PROPERTYSQFT)

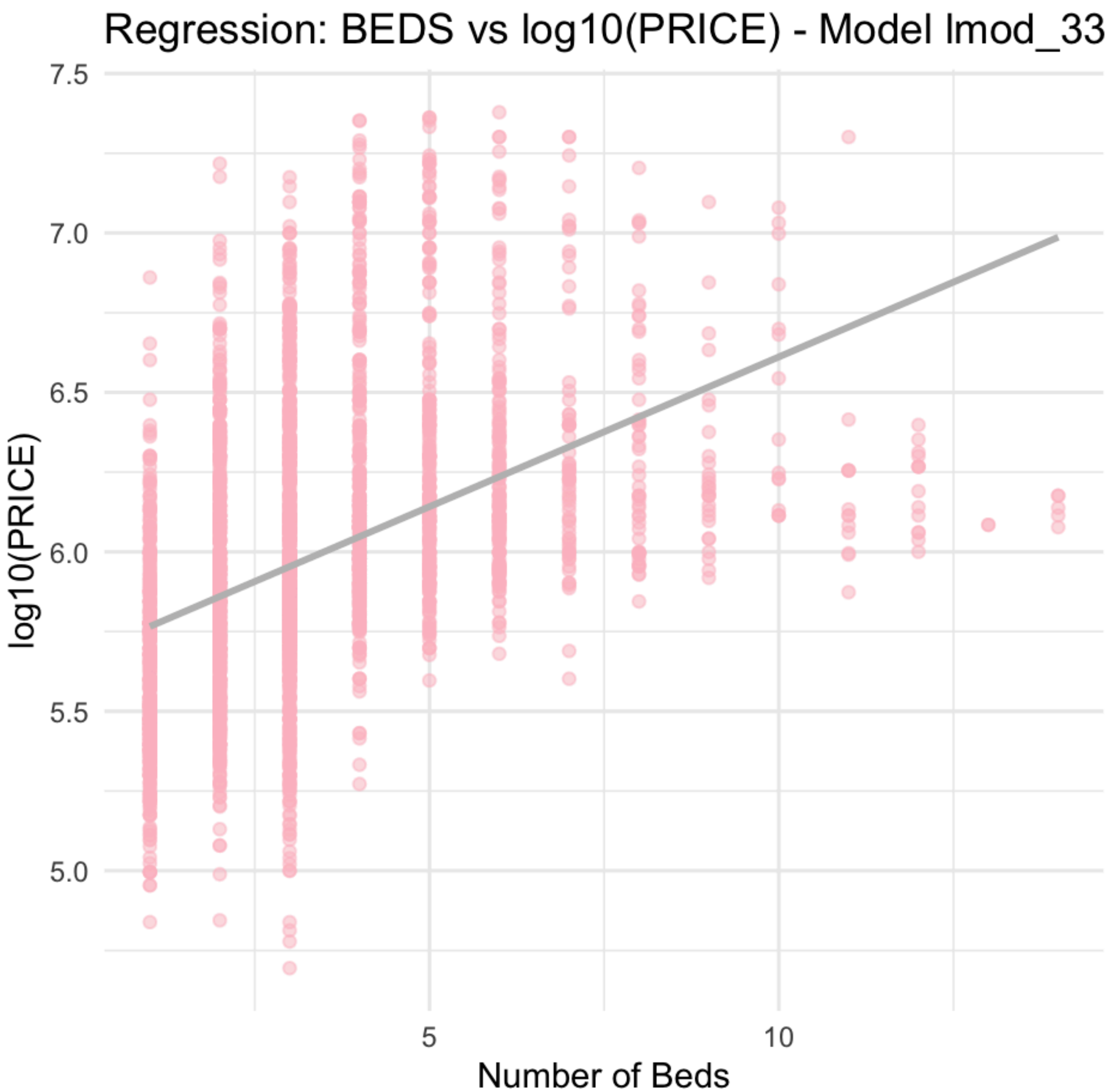

7
6
5
log10(PRICE)
3
4
log10(PROPERTYSQFT)

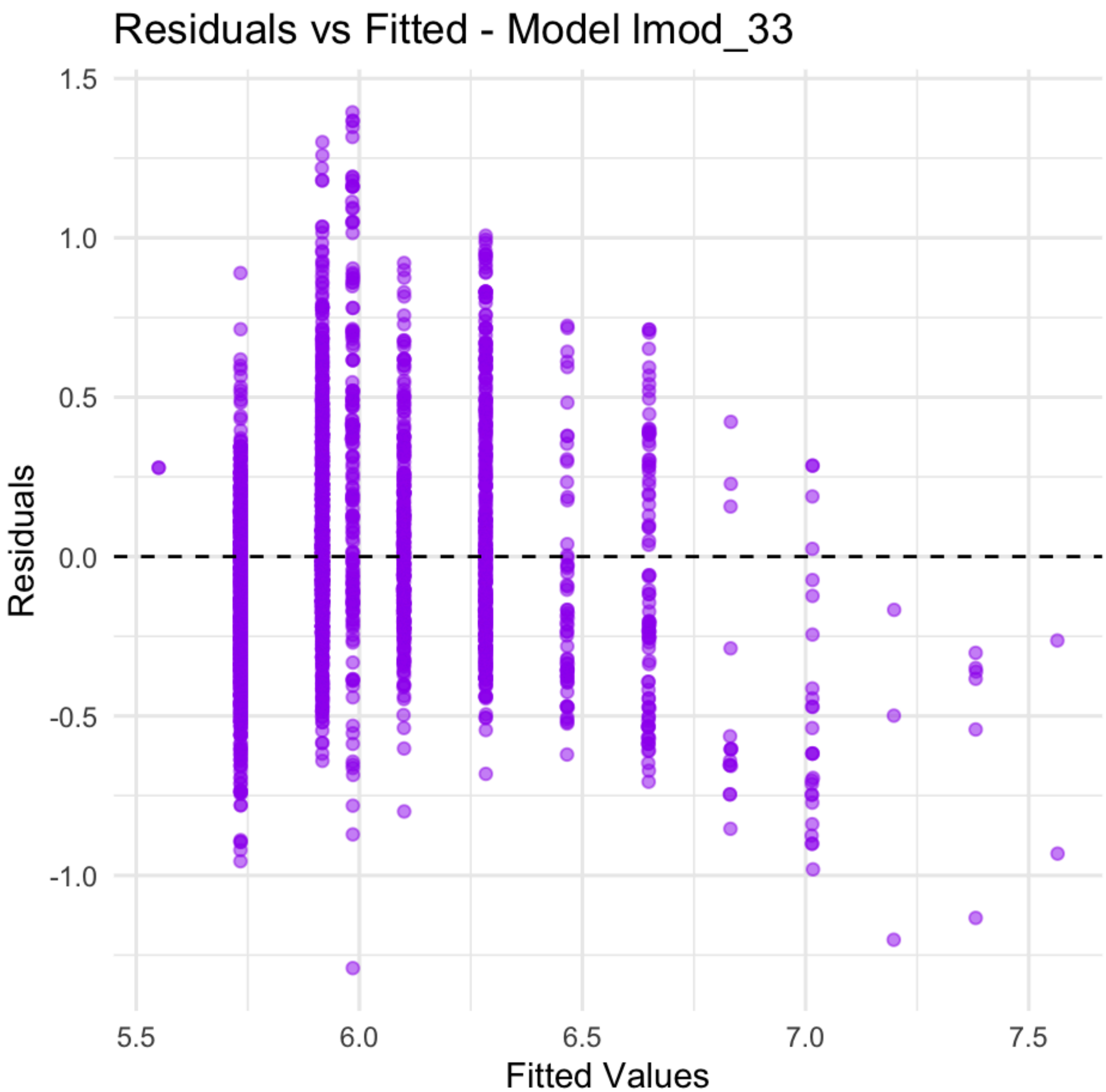


6e+07
4e+07
2e+07
0e+00
PRICE
0
10
20
30
40
50
BEDS



6e+07
4e+07
2e+07
0e+00
PRICE
0
10
20
30
40
50
BATH


Regression: BEDS vs log10(PRICE) - Model lmod_33
7.5
7.0
6.5
6.0
5.5
5.0
log10(PRICE)
5
10
Number of Beds


Residuals vs Fitted - Model lmod_33
1.5
1.0
0.5
0.0
-0.5
-1.0
Residuals
5.5
6.0
6.5
7.0
7.5
Fitted Values