Adjusted Sale Price

Quantitative Methods 1 (Tutorial)

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Table 1: Sale Prices by SqFtTotLiving, BldgGrade, ZipGroup and YrBuiltGroup

	Dependent variable:		
	AdjSalePrice		
	(1)	(2)	(3)
SqFtTotLiving	186.830***	182.369***	187.072***
	(3.007)	(3.184)	(3.003)
BldgGrade	77,330.470***	114,662.900***	80,520.830***
	(2,433.808)	(2,521.320)	(2,471.995)
ZipGroup	70,723.630***		71,369.320***
	(1,415.145)		(1,416.346)
YrBuiltGroup		−4,832.125***	−8,870.211***
		(1,321.599)	(1,248.695)
Constant	−641,383.100***	−680,140.400***	−641,150.900***
	(13,798.250)	(14,593.240)	(13,781.540)
Observations	20,340	20,340	20,340
R^2	0.583	0.532	0.584
Adjusted R^2	0.583	0.532	0.584
Residual Std. Error	250,083.700 (df = 20336)	264,909.400 (df = 20336)	249,780.100 (df = 20335)
F Statistic	9,477.072*** (df = 3; 20336)	7,708.477*** (df = 3; 20336)	7,137.707*** (df = 4; 20335)

Note: *p<0.1; **p<0.05; ***p<0.01

Table 2: Sale Prices by SqFtTotLiving, BldgGrade, ZipGroup and NbrLivingUnits

	Dependent variable:		
	AdjSalePrice		
	(1)	(2)	(3)
SqFtTotLiving	186.830***	180.691***	186.143***
	(3.007)	(3.222)	(3.043)
BldgGrade	77,330.470***	114,089.000***	78,041.290***
	(2,433.808)	(2,494.099)	(2,462.248)
ZipGroup	70,723.630***		70,673.330***
	(1,415.145)		(1,415.461)
as.factor(NbrLivingUnits)2		86,050.600***	67,508.930***
		(16,951.480)	(16,003.740)
as.factor(NbrLivingUnits)3		−1,456.539	−50,873.280
		(33,321.200)	(31,465.340)
as.factor(NbrLivingUnits)4		−316,516.700*	−360,918.400**
		(187,462.600)	(176,936.300)
Constant	−641,383.100***	−688,132.400***	−645,892.600***
	(13,798.250)	(14,737.640)	(13,935.630)
Observations	20,340	20,340	20,340
R^2	0.583	0.532	0.584
Adjusted R^2	0.583	0.532	0.583
Residual Std. Error	250,083.700 (df = 20336)	264,822.300 (df = 20334)	249,949.000 (df = 20333)
F Statistic	9,477.072*** (df = 3; 20336)	4,631.200*** (df = 5; 20334)	4,747.794*** (df = 6; 20333)

Note: $^*p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$

Table 3: Sale Prices by SqFtTotLiving, BldgGrade, and propertytype

	Model 1
(Intercept)	−652457.19***
	(21814.58)
SqFtTotLiving	178.18***
	(3.39)
BldgGrade	115513.19***
	(2579.86)
propertytypeSingle Family	−39092.79*
	(17717.17)
propertytypeTownhouse	−61917.57**
	(19238.06)
R^2	0.53
Adj. R^2	0.53
Num. obs.	20340

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$

Table 4: Sale Prices by SqFtTotLiving, Bedrooms, and zhvi_idx

	Mod 1	2.Add reconvert bedrooms	3.1.Add Zhvi interval	3.2.Add Zhvi cluster
(Intercept)	-47126.10^{***}	13946.28	39564.94	-19164.16
	(4843.07)	(22597.37)	(23444.54)	(23295.86)
SqFtTotLiving	294.36^{***}	339.98^{***}	339.43^{***}	338.99^{***}
	(2.13)	(2.66)	(2.66)	(2.66)
Bedrooms_2(1,2]		-17043.19	-18485.81	-15465.31
		(23086.00)	(23056.10)	(23043.56)
Bedrooms_2(2,3]		-132543.04^{***}	-134413.69^{***}	-131267.91^{***}
		(22742.83)	(22713.89)	(22700.64)
Bedrooms_2(3,4]		-225529.89^{***}	-226674.54^{***}	-223809.95^{***}
		(23098.66)	(23068.47)	(23056.77)
Bedrooms_2(4,5]		-231789.80^{***}	-233263.88^{***}	-229441.76^{***}
		(24366.43)	(24336.23)	(24319.98)
Bedrooms_2(5,6]		-242997.63^{***}	-240931.93^{***}	-236839.17^{***}
		(30017.41)	(29981.49)	(29962.98)
Bedrooms_2(6,33]		-315636.60^{***}	-314813.77^{***}	-309753.46^{***}
		(43319.29)	(43264.20)	(43234.89)
zhvi_idx2(0.757,0.797]			1559.09	
			(10311.70)	
zhvi_idx2(0.797,0.838]			1546.56	
			(8642.55)	
zhvi_idx2(0.838,0.878]			-14956.94	
			(11496.76)	
zhvi_idx2(0.878,0.919]			-40379.57^{***}	
			(8097.74)	
zhvi_idx2(0.919,0.959]			-23981.79^{**}	
			(7551.94)	
zhvi_idx2(0.959,1]			-34166.91^{***}	
			(7304.85)	
as.factor(ZhviGroup)2				20212.61^{**}
				(7332.40)
as.factor(ZhviGroup)3				35356.81^{***}
				(7475.35)
as.factor(ZhviGroup)4				47219.63^{***}
				(7863.29)
as.factor(ZhviGroup)5				66565.76^{***}
				(8457.58)
R^2	0.48	0.51	0.51	0.51
Adj. R^2	0.48	0.51	0.51	0.51
Num. obs.	20340	20340	20340	20340

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$
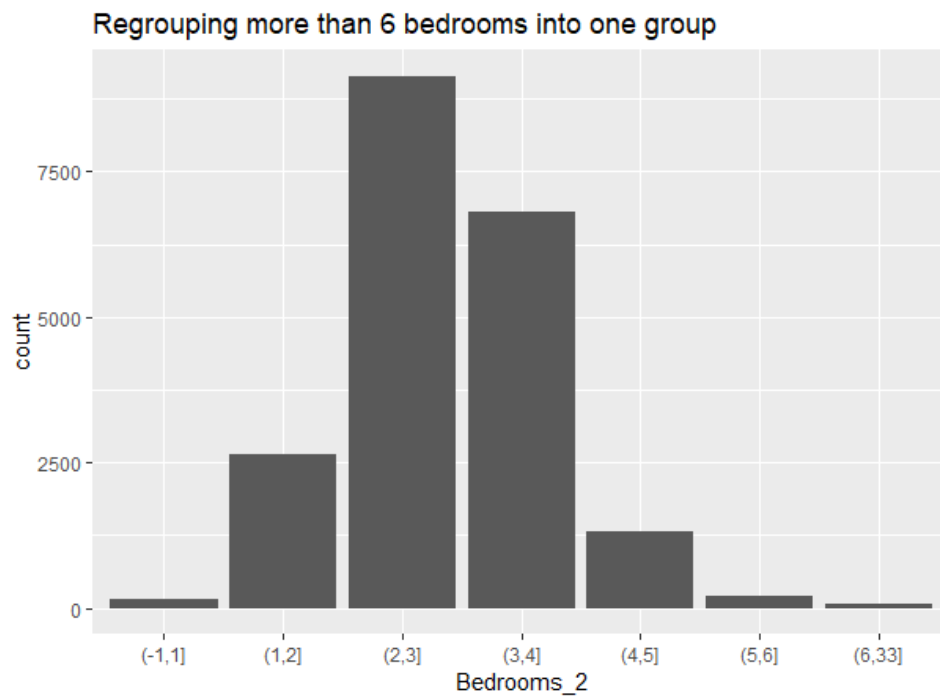
Figure 1: Regrouping more than 6 bedrooms into one group
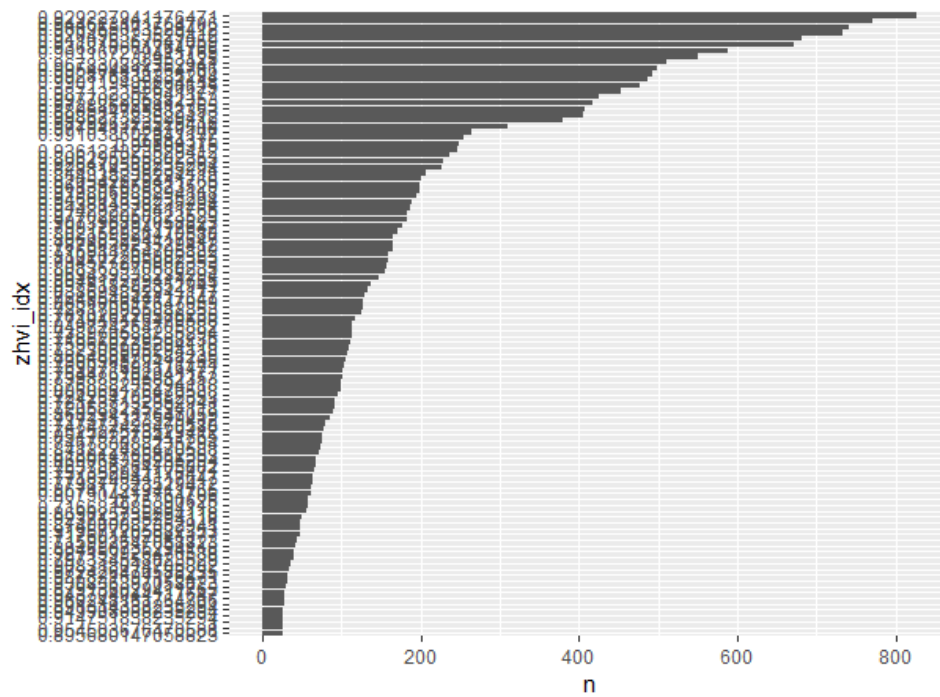

Figure 2: Exploration of zhvi_idx

Figure 3: zhvi_idx grouped by dividing into intervals of 7
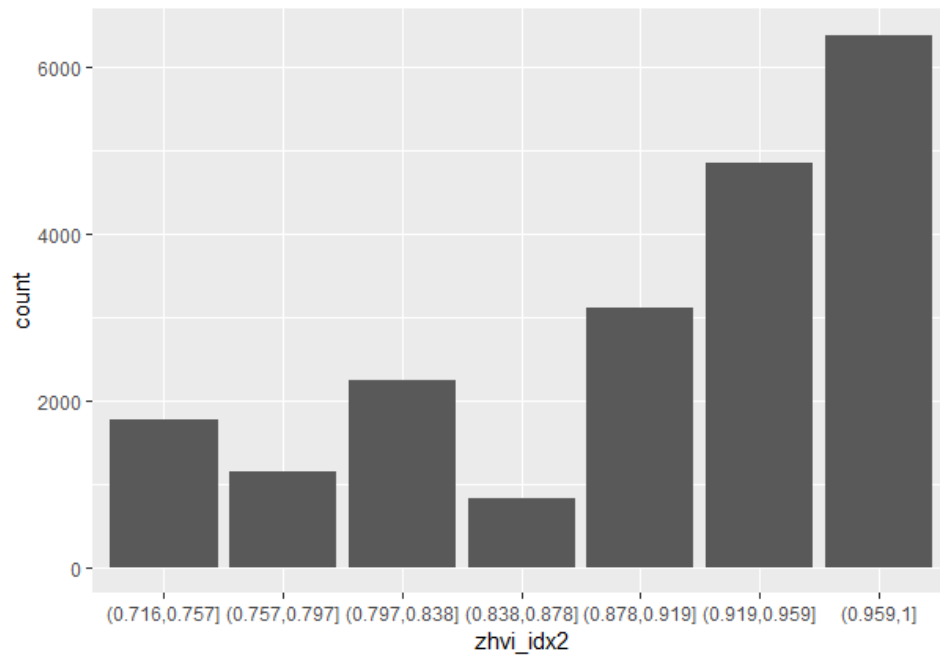

zhvi_index grouped by dividing into intervals of 7

Figure 4: zhvi_idx grouped by cluster

zhvi_index grouped by cluster