SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.8328
R Square	0.6936
Adjusted R Square	0.6887
Standard Error	5131.5911
Observations	506

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	8	29628681421	3703585178	140.6430411	1.911E-122
Residual	497	13087613994	26333227.35		
Total	505	42716295415			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	29428.47	4804.73	6.12	0.00	19988.39	38868.56	19988.39	38868.56
AGE	32.93	13.09	2.52	0.01	7.22	58.65	7.22	58.65
INDUSTRY	13071.00	6307.78	2.07	0.04	677.79	25464.21	677.79	25464.21
NOX	-10272.71	3890.85	-2.64	0.01	-17917.25	-2628.16	-17917.25	-2628.16
DISTANCE	261.51	67.90	3.85	0.00	128.10	394.92	128.10	394.92
TAX	-14.45	3.90	-3.70	0.00	-22.12	-6.79	-22.12	-6.79
PTRATIO	-1071.70	133.45	-8.03	0.00	-1333.91	-809.50	-1333.91	-809.50
AVG_ROOM	4125.47	442.49	9.32	0.00	3256.10	4994.84	3256.10	4994.84
LSTAT	-605.16	52.98	-11.42	0.00	-709.25	-501.07	-709.25	-501.07

RESIDUAL OUTPUT

Observation	*Predicted AVG_PRICE*	*Residuals*
1	30048.89	-6048.89
2	27040.98	-5440.98
3	32698.96	2001.04
4	31143.07	2256.93
5	30588.09	5611.91
6	27850.95	849.05
7	25070.90	-2170.90
8	22635.88	4464.12
9	14008.83	2491.17
10	22847.44	-3947.44
11	22635.61	-7635.61
12	25087.03	-6187.03
13	21669.54	30.46
14	20648.32	-248.32

Variable	**Coefficients**
NOX	-10272.70508
PTRATIO	-1071.702473
LSTAT	-605.159282
TAX	-14.45234504
AGE	32.93496043
DISTANCE	261.506423
AVG_ROOM	4125.468959
INDUSTRY	13071.00067

CRIME_RATE being a insignificant variable, has been excluded in this model. The model explains the variation of the price of the house 0.03% less than the previous model.

This model is able to predict the price of the houses slightly better than the previous model. The adjusted R-square value is 0.6887 where as the previous model R-Square value was 0.6883

Increase in the NOX value, reduces the price of the house in the locailty very drastically. 1 unit increase in NOX value reduces the price by $10272

Regression equation of the mode is

Y = -10272.70X1 - 1071.70X2 - 605.15X3 - 14.45X4 + 32.93X5 + 261.50X6 + 4125.46X7 + 13071X8 + 29428.47

where
X1-NOX
X2-PTRATIO
X3-LSTAT
X4-TAX
X5-AGE
X6-DISTANCE
X7-AVG_ROOM
X8-INDUSTRY