

Besaran-besaran untuk Menguji Keberartian Regresi

Y	X ₁	X ₂	X ₃	X ₄	X ₅
10,227	112,000	121,300	776,800	4,890	79,367
10,872	111,000	125,300	839,600	4,550	82,153
11,350	111,100	133,100	949,800	7,380	85,064
8,775	117,500	147,700	1038,400	8,610	86,794
8,539	127,600	161,200	1142,800	6,160	85,846
9,994	135,700	170,500	1252,600	5,220	88,752
11,046	142,900	181,500	1379,300	5,500	92,017
11,164	153,800	195,300	1551,200	7,780	96,048
10,559	166,000	217,700	1729,300	10,250	98,824
8,979	179,300	247,000	1918,000	11,280	99,303
8,535	190,200	272,300	2127,600	13,730	100,397
7,980	197,600	286,600	2261,400	11,200	99,526
9,179	202,600	297,400	2428,100	8,690	100,834
10,394	208,500	307,600	2670,600	9,650	105,005
11,039	215,200	318,500	2841,100	7,750	107,150
11,450	224,400	323,400	3022,100	6,310	109,597
10,223	213,500	310,200	3109,200	3,430	112,300
11,922	225,700	315,600	3150,500	5,340	135,600
9,129	201,300	299,800	3175,900	5,300	140,300
8,999	219,900	305,200	3289,900	6,730	147,800
10,234	222,700	317,900	3318,600	7,200	152,600
11,239	225,100	328,500	3357,500	7,890	155,600
12,991	229,900	336,500	3425,500	8,200	175,900
11,670	240,700	339,500	3479,900	9,450	160,400
10,120	246,300	345,600	3561,100	12,340	177,300
11,276	261,900	359,900	3599,900	10,230	186,300
8,781	269,100	362,800	3629,800	16,290	183,400
10,658	271,200	365,800	3658,800	16,300	192,500
9,349	275,400	372,500	3728,900	16,980	193,500
12,891	270,900	380,200	3800,000	17,560	201,600
309,564	5969,000	8246,400	76214,200	272,190	3831,777

X ₁ Y	X ₂ Y	X ₃ Y	X ₄ Y	X ₅ Y
1145,424	1240,535	7944,334	50,010	811,686
1206,792	1362,262	9128,131	49,468	893,167
1260,985	1510,685	10780,230	83,763	965,476
1031,063	1296,068	9111,960	75,553	761,617
1089,576	1376,487	9758,369	52,600	733,039
1356,186	1703,977	12518,480	52,169	886,988
1578,473	2004,849	15235,750	60,753	1016,420
1717,023	2180,329	17317,600	86,856	1072,280
1752,794	2298,694	18259,680	108,230	1043,483
1609,935	2217,813	17221,720	101,283	891,642
1623,357	2324,081	18159,070	117,186	856,888
1576,848	2287,068	18045,970	89,376	794,218
1859,665	2729,835	22287,530	79,766	925,555
2167,149	3197,194	27758,220	100,302	1091,422
2375,593	3515,922	31362,900	85,552	1182,829
2569,380	3702,930	34603,050	72,250	1254,886
2182,611	3171,175	31785,350	35,065	1148,043
2690,795	3762,583	37560,260	63,663	1616,623
1837,668	2736,874	28992,790	48,384	1280,799
1978,880	2746,495	29605,810	60,563	1330,052
2279,112	3253,389	33962,550	73,685	1561,708
2529,899	3692,012	37734,940	88,676	1748,788
2986,631	4371,472	44500,670	106,526	2285,117
2808,969	3961,965	40610,430	110,282	1871,868
2492,556	3497,472	36038,330	124,881	1794,276
2953,184	4058,232	40592,470	115,354	2100,719
2362,967	3185,747	31873,270	143,043	1610,435
2890,450	3898,696	38995,490	173,725	2051,665
2574,715	3482,503	34861,490	158,746	1809,032
3492,172	4901,158	48985,800	226,366	2598,826
61980,850	85668,500	795592,700	2794,073	39989,550

Y^2	X_1^2	X_2^2	X_3^2	X_4^2	X_5^2
104,592	12544,000	14713,690	603418,200	23,912	104,592
118,200	12321,000	15700,090	704928,200	20,703	118,200
128,823	12343,210	17715,610	902120,000	54,464	128,823
77,001	13806,250	21815,290	1078275,000	74,132	77,001
72,915	16281,760	25985,440	1305992,000	37,946	72,915
99,880	18414,490	29070,250	1569007,000	27,248	99,880
122,014	20420,410	32942,250	1902468,000	30,250	122,014
124,635	23654,440	38142,090	2406221,000	60,528	124,635
111,493	27556,000	47393,290	2990478,000	105,063	111,493
80,622	32148,490	61009,000	3678724,000	127,238	80,622
72,846	36176,040	74147,290	4526682,000	188,513	72,846
63,680	39045,760	82139,560	5113930,000	125,440	63,680
84,254	41046,760	88446,760	5895670,000	75,516	84,254
108,035	43472,250	94617,760	7132104,000	93,123	108,035
121,860	46311,040	101442,300	8071849,000	60,063	121,860
131,103	50355,360	104587,600	9133088,000	39,816	131,103
104,510	45582,250	96224,040	9667125,000	11,765	104,510
142,134	50940,490	99603,360	9925650,000	28,516	142,134
83,339	40521,690	89880,040	10086341,000	28,090	83,339
80,982	48356,010	93147,040	10823442,000	45,293	80,982
104,735	49595,290	101060,400	11013106,000	51,840	104,735
126,315	50670,010	107912,300	11272806,000	62,252	126,315
168,766	52854,010	113232,300	11734050,000	67,240	168,766
136,189	57936,490	115260,300	12109704,000	89,303	136,189
102,414	60663,690	119439,400	12681433,000	152,276	102,414
127,148	68591,610	129528,000	12959280,000	104,653	127,148
77,106	72414,810	131623,800	13175448,000	265,364	77,106
113,593	73549,440	133809,600	13386817,000	265,690	113,593
87,404	75845,160	138756,300	13904695,000	288,320	87,404
166,178	73386,810	144552,000	14440000,000	308,354	166,178
3242,764	1266805,000	2463897,000	224000000,000	2912,909	3242,764

$$\sum y^2 = \sum Y^2 - \frac{(\sum Y)^2}{n} = 3242,76 - \frac{309,564^2}{30} = 48,431$$

$$\sum x_1y = \sum X_1Y - \frac{(\sum X_1)(\sum Y)}{n} = 61980,9 - \frac{5969 \times 309,564}{30} = 387,983$$

$$\sum x_2y = \sum X_2Y - \frac{(\sum X_2)(\sum Y)}{n} = 85668,5 - \frac{8246,4 \times 309,564}{30} = 575,548$$

$$\sum x_3y = \sum X_3Y - \frac{(\sum X_3)(\sum Y)}{n} = 795593 - \frac{76214,2 \times 309,564}{30} = 9153,913$$

$$\sum x_4y = \sum X_4Y - \frac{(\sum X_4)(\sum Y)}{n} = 2794,07 - \frac{272,19 \times 309,564}{30} = -14,604$$

$$\sum x_5y = \sum X_5Y - \frac{(\sum X_5)(\sum Y)}{n} = 39989,5 - \frac{3831 \times 309,564}{30} = 450,129$$

$$\begin{aligned} Jk(Reg) &= 0,00129 \times 387,9827 + 0,00079 \times 575,5477 + 0,0000068 \\ &\quad \times 9153,913 - 0,00583 \times 14,604 + 0,008125 \times 450,1287 \\ &= 40,325 \end{aligned}$$

$$JK(S) = 48,431 - 40,325 = 8,106$$

$$R = \begin{bmatrix} 1 & 0,988 & 0,976 & 0,606 & 0,89 \\ 0,988 & 1 & 0,98 & 0,544 & 0,84 \\ 0,976 & 0,98 & 1 & 0,469 & 0,891 \\ 0,606 & 0,544 & 0,469 & 1 & 0,619 \\ 0,89 & 0,84 & 0,891 & 0,619 & 1 \end{bmatrix}$$

$$R^{-1} = \begin{bmatrix} 104,79 & -87,69 & 3,27 & -5,50 & -19,10 \\ -0,88 & 165,05 & -113,06 & -13,72 & 48,63 \\ 3,27 & -113,06 & 138,00 & 22,57 & -44,87 \\ -5,50 & -13,72 & 22,57 & 5,66 & -7,19 \\ -19,10 & 48,63 & -44,87 & -7,19 & 21,59 \end{bmatrix}$$

$$R_1 = R_{1.2345} = 1 - \frac{1}{104,79} = 0,99046$$

$$R_2 = R_{2.1345} = 1 - \frac{1}{165,05} = 0,99394$$

$$R_3 = R_{3.2145} = 1 - \frac{1}{138} = 0,99394$$

$$R_4 = R_{4.2315} = 1 - \frac{1}{5,66} = 0,88230$$

$$R_5 = R_{5.2341} = 1 - \frac{1}{21,59} = 0,95369$$

$$S_{Y.12345}^2 = \frac{JK(S)}{(n - k - 1)} = \frac{8,106}{24} = 0,33775$$

$$S_{Y.12345} = 0,58116$$

$$\sum x_1^2 = \sum X_1^2 - \frac{(\sum X_1)^2}{n} = 1266805 - \frac{5969^2}{30} = 79173$$

$$\sum x_2^2 = \sum X_2^2 - \frac{(\sum X_2)^2}{n} = 2463897 - \frac{8246,4^2}{30} = 197127$$

$$\sum x_3^2 = \sum X_3^2 - \frac{(\sum X_3)^2}{n} = 2,2E + 08 - \frac{76214,2^2}{30} = 3,1E + 07$$

$$\sum x_4^2 = \sum X_4^2 - \frac{(\sum X_4)^2}{n} = 2912,91 - \frac{272,19^2}{30} = 443,329$$

$$\sum x_5^2 = \sum X_5^2 - \frac{(\sum X_5)^2}{n} = 536669 - \frac{3831,78^2}{30} = 47251,6$$

$$S_{b_1}^2 = \frac{(0,58116)^2}{(79173)(1 - 0,99046)} = 0,00045 \text{ sehingga } S_{b_1} = 0,2114$$

$$S_{b_2}^2 = \frac{(0,58116)^2}{(197127)(1 - 0,99394)} = 0,00028 \text{ sehingga } S_{b_2} = 0,1682$$

$$S_{b_3}^2 = \frac{(0,58116)^2}{(3,1E + 07)(1 - 0,99275)} = 1,5E - 06 \text{ sehingga } S_{b_3} = 0,00123$$

$$S_{b_4}^2 = \frac{(0,58116)^2}{(443,329)(1 - 0,82359)} = 0,00432 \text{ sehingga } S_{b_4} = 0,0657$$

$$S_{b_s}^2 = \frac{(0,58116)^2}{(47251,6)(1 - 0,95369)} = 0,00015 \text{ sehingga } S_{b_s} = 0,0124$$

RIWAYAT HIDUP



Nama : Edi Purwanto
 Tempat Tanggal Lahir : Sukoharjo, 23 Desember 1990
 Alamat : Jalan Antapani Nomor 7 RT:06 RW:03 Cicaheum
 Email : ediii.purwanto@gmail.com
 Golongan Darah : B

Riwayat Pendidikan :

- SD CICAHEUM II (1997-2003)
- SMP NEGERI 49 BANDUNG (2003-2006)
- SMA NEGERI 27 BANDUNG (2006-2009)
- Universitas Pendidikan Indonesia (2009-2014)