

RATA-RATA SWASITIRAN TERBITAN CIFOR

Tahun	Jumlah Terbitan	Jumlah Swasitiran Terbitan CIFOR
2002	11	20
2003	21	137
2004	19	220
2005	25	200
2006	28	214
2007	11	183
Total	115	974

- Rata-rata swasitiran terbitan CIFOR per terbitan:

$$x = \frac{\Sigma \text{Swasitiran terbitan CIFOR}}{\Sigma \text{Terbitan}}$$

$$x = \frac{974}{115}$$

$$x = 8,469565217$$

$$\approx 8,47$$

- Rata-rata swasitiran terbitan CIFOR per tahun:

$$x = \frac{\Sigma \text{Swasitiran terbitan CIFOR}}{\Sigma \text{Tahun}}$$

$$x = \frac{974}{6}$$

$$x = 162,3333333$$

$$\approx 162,3$$

**RATA-RATA JUMLAH SWASITIRAN TERBITAN CIFOR
PER TAHUN**

Tahun	Jumlah Terbitan	Jumlah Swasitiran Terbitan CIFOR	Rata-rata Swasitiran Terbitan CIFOR
2002	11	20	$= \frac{20}{11}$ $= 1,8$
2003	21	137	$= \frac{137}{21}$ $= 6,5$
2004	19	220	$= \frac{220}{19}$ $= 11,57$
2005	25	200	$= \frac{200}{25}$ $= 8$
2006	28	214	$= \frac{214}{28}$ $= 7,64$
2007	11	183	$= \frac{183}{11}$ $= 16,64$
Total	115	974	

RATA-RATA SWASITIRAN PENGARANG

Tahun	Jumlah Terbitan	Jumlah Swasitiran Pengarang
2002	11	28
2003	21	293
2004	19	390
2005	25	315
2006	28	350
2007	11	144
Total	115	1520

- Rata-rata swasitiran pengarang per terbitan:

$$x = \frac{\Sigma \text{Swasitiran Pengarang}}{\Sigma \text{Terbitan}}$$

$$x = \frac{1520}{115}$$

$$x = 13.2173913$$

$$\approx 13.21$$

- Rata-rata swasitiran pengarang per tahun:

$$x = \frac{\Sigma \text{Swasitiran Pengarang}}{\Sigma \text{Tahun}}$$

$$x = \frac{1520}{6}$$

$$x = 253.3333333$$

$$\approx 253,33$$

**RATA-RATA JUMLAH SWASITIRAN PENGARANG
PER TAHUN**

Tahun	Jumlah Terbitan	Jumlah Swasitiran Pengarang	Mean Swasitiran Pengarang
2002	11	28	$= \frac{28}{11}$ $= 2,55$
2003	21	293	$= \frac{293}{21}$ $= 13,95$
2004	19	390	$= \frac{390}{19}$ $= 21,67$
2005	25	315	$= \frac{315}{25}$ $= 12,60$
2006	28	350	$= \frac{350}{28}$ $= 11,67$
2007	11	144	$= \frac{144}{11}$ $= 14,40$
Total	115	1520	

TINGKAT SWASITIRAN TERBITAN CIFOR

Tahun	Jumlah Terbitan	Jumlah Swasitiran terbitan CIFOR	% Swasitiran terbitan CIFOR
2002	521	20	$= \frac{20}{521} \times 100 \%$ = 4 %
2003	2.782	137	$= \frac{137}{2782} \times 100 \%$ = 5 %
2004	3.213	220	$= \frac{220}{3213} \times 100 \%$ = 7 %
2005	2.969	200	$= \frac{200}{2969} \times 100 \%$ = 7 %
2006	2.431	214	$= \frac{214}{2431} \times 100 \%$ = 9 %
2007	1.216	183	$= \frac{183}{1216} \times 100 \%$ = 15 %
Total	13.132	974	47%

- Rata-rata persentase swasitiran terbitan CIFOR:

$$x = \frac{\Sigma \% \text{ Swasitiran terbitan CIFOR}}{\Sigma \text{ Tahun}}$$

$$x = \frac{47}{6}$$

$$x = 7,833333$$

$$\approx 7,83$$

TINGKAT SWASITIRAN PENGARANG

Tahun	Jumlah Terbitan	Jumlah Swasitiran Pengarang	% Swasitiran Pengarang
2002	521	28	$= \frac{28}{521} \times 100 \%$ = 5 %
2003	2.782	293	$= \frac{293}{2782} \times 100 \%$ = 11 %
2004	3.213	390	$= \frac{390}{3213} \times 100 \%$ = 12 %
2005	2.969	315	$= \frac{315}{2969} \times 100 \%$ = 11 %
2006	2.431	350	$= \frac{350}{2431} \times 100 \%$ = 14 %
2007	1.216	144	$= \frac{144}{1216} \times 100 \%$ = 14 %
Total	13.132	1520	67%

- Rata-rata persentase swasitiran :

$$x = \frac{\Sigma \% \text{ Swasitiran Pengarang}}{\Sigma \text{ Tahun}}$$

$$x = \frac{67}{6}$$

$$x = 11,16666667$$

$$\approx 11,17$$

**UJI KORELASI PEARSON ANTARA SWASITIRAN
TERBITAN CIFOR DENGAN PRODUKTIVITAS
TERBITAN**

tahun	Y	X	XY	X²	Y²
2002	11	1.82	20	3.31	121
2003	21	6.52	137	42.56	441
2004	18	11.58	208.42	134.07	324
2005	25	8.00	200	64.00	625
2006	28	7.64	214	58.41	784
2007	10	16.64	166.36	276.77	100
	113	52.20	945.78	579.12	2395

Y = jumlah terbitan

X = rata-rata swasitiran terbitan CIFOR

Dari tabel diperoleh:

$$\begin{aligned}\Sigma Y &= 113 \\ \Sigma X &= 52.2 \\ \Sigma XY &= 945.78 \\ \Sigma X^2 &= 579.12 \\ \Sigma Y^2 &= 2395\end{aligned}$$

$$r = \frac{n \Sigma XY - \Sigma X \Sigma Y}{\sqrt{n \Sigma X^2 - (\Sigma X)^2} \sqrt{n \Sigma Y^2 - (\Sigma Y)^2}}$$

$$r = \frac{(6)(945.78) - (52.2)(113)}{\sqrt{(6)(579.12) - (52.2)^2} \sqrt{(6)(2395) - (113)^2}}$$

$$r = \frac{-223.9098884}{\sqrt{1200528.901}}$$

$$\begin{aligned}r &= -0.20436 \\ &\approx -0,2\end{aligned}$$

ANALISIS REGRESI ANTARA SWASITIRAN TERBITAN CIFOR DENGAN PRODUKTIVITAS TERBITAN

tahun	Y	X	XY	X ²	Y ²
2002	11	1.82	20	3.31	121
2003	21	6.52	137	42.56	441
2004	18	11.58	208.42	134.07	324
2005	25	8.00	200	64.00	625
2006	28	7.64	214	58.41	784
2007	10	16.64	166.36	276.77	100
	113	52.20	945.78	579.12	2395

Y = jumlah terbitan

X = rata-rata swasitiran terbitan CIFOR

Dari tabel diperoleh:

$$\begin{aligned}\Sigma Y &= 113 \\ \Sigma X &= 52.2 \\ \Sigma XY &= 945.78 \\ \Sigma X^2 &= 579.12 \\ \Sigma Y^2 &= 2395\end{aligned}$$

menentukan nilai a dan b:

$$a = \frac{(\Sigma Y)(\Sigma X^2) - (\Sigma X)(\Sigma XY)}{n \Sigma X^2 - (\Sigma X)^2}$$

$$a = \frac{(113)(579.12) - (52.2)(945.78)}{(6)(579.12) - (52.2)^2}$$

$$a = \frac{16070.42108}{749.8618993}$$

$$a = 21.43117433 \\ \approx 21.43$$

$$b = \frac{n \sum XY - (\sum X)(\sum Y)}{n \sum X^2 - (\sum X)^2}$$

$$b = \frac{(6)(945.78) - (52.2)(113)}{(6)(579.12) - (52.2)^2}$$

$$b = \frac{-223.9098884}{749.8618993}$$

$$b = -0.298601501$$

$$\approx -0.30$$

Maka persamaan regresi rata-rata swasitiran terbitan CIFOR dengan produktivitas peneliti adalah:

$$\hat{Y} = a + bX$$

$$Y = 21,43 - 0,3 X$$

Perhitungan koefisien determinasi:

$$r^2 = \left(\frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{(n \sum X^2 - (\sum X)^2)(n \sum Y^2 - (\sum Y)^2)}} \right)^2$$

$$r^2 = \left(\frac{(6)(945.78) - (52.2)(113)}{\sqrt{((6)(579.12) - (52.2)^2)((6)(2395) - (113)^2)}} \right)^2$$

$$r^2 = \left(\frac{-223.9098884}{\sqrt{1200528.901}} \right)^2$$

$$r^2 = 0.041761292$$

$$\approx 0,042$$

**UJI KORELASI PEARSON ANTARA SWASITIRAN
PENGARANG DENGAN PRODUKTIVITAS TERBITAN**

tahun	Y	X	XY	X ²	Y ²
2002	11	2.55	28.05	6.5025	121
2003	21	13.95	292.95	194.6025	441
2004	18	21.67	390.06	469.5889	324
2005	25	12.6	315	158.76	625
2006	28	12.5	350	156.25	784
2007	10	14.4	144	207.36	100
	113	77.67	1520.06	1193.0639	2395

Y = jumlah terbitan

X = rata-rata swasitiran - pengarang

Dari tabel diperoleh:

$$\begin{aligned}\Sigma Y &= 113 \\ \Sigma X &= 77.67 \\ \Sigma XY &= 1520.06 \\ \Sigma X^2 &= 1193.0639 \\ &\approx 1193.06 \\ \Sigma Y^2 &= 2395\end{aligned}$$

$$r = \frac{n \Sigma XY - \Sigma X \Sigma Y}{\sqrt{n \Sigma X^2 - (\Sigma X)^2} \sqrt{n \Sigma Y^2 - (\Sigma Y)^2}}$$

$$r = \frac{(6)(1520.06) - (77.67)(113)}{\sqrt{(6)(1193.06) - (77.67)^2} \sqrt{(6)(2395) - (113)^2}}$$

$$r = \frac{343.65}{\sqrt{1125.755} \sqrt{1601}}$$

$$r = 0.255976$$

$$\approx 0,26$$

ANALISIS REGRESI ANTARA SWASITIRAN PENGARANG DENGAN PRODUKTIVITAS TERBITAN

tahun	Y	X	XY	X ²	Y ²
2002	11	2.55	28.05	6.5025	121
2003	21	13.95	292.95	194.6025	441
2004	18	21.67	390.06	469.5889	324
2005	25	12.6	315	158.76	625
2006	28	12.5	350	156.25	784
2007	10	14.4	144	207.36	100
	113	77.67	1520.06	1193.0639	2395

Y = jumlah terbitan

X = rata-rata swasitiran pengarang

Dari tabel diperoleh:

$$\begin{aligned}\Sigma Y &= 113 \\ \Sigma X &= 77.67 \\ \Sigma XY &= 1520.06 \\ \Sigma X^2 &= 1193.0639 \\ &\approx 1193.06 \\ \Sigma Y^2 &= 2395\end{aligned}$$

menentukan nilai a dan b:

$$a = \frac{(\Sigma Y)(\Sigma X^2) - (\Sigma X)(\Sigma XY)}{n \Sigma X^2 - (\Sigma X)^2}$$

$$a = \frac{(113)(1193.06) - (77.67)(1520.06)}{(6)(1193.06) - (77.67)^2}$$

$$a = \frac{16753.1605}{1125.7545}$$

$$a = 14.88171755$$

$$\approx 14,88$$

$$b = \frac{n \sum XY - (\sum X)(\sum Y)}{n \sum X^2 - (\sum X)^2}$$

$$b = \frac{(6)(1520.06) - (77.67)(113)}{(6)(1193.06) - (77.67)^2}$$

$$b = \frac{343.65}{1125.7545}$$

$$b = 0.305261938 \\ \approx 0.31$$

Maka persamaan regresi rata-rata swasitiran terbitan CIFOR dengan produktivitas peneliti adalah:

$$\hat{Y} = a + bX \\ Y = 14,88 + 0,31 X$$

Perhitungan koefisien determinasi:

$$r^2 = \left(\frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{(n \sum X^2 - (\sum X)^2)(n \sum Y^2 - (\sum Y)^2)}} \right)^2$$

$$r^2 = \left(\frac{(6)(1520.06) - (77.67)(113)}{\sqrt{((6)(1193.06) - (77.67)^2)((6)(2395) - (113)^2)}} \right)^2$$

$$r^2 = \left(\frac{343.65}{\sqrt{1802332.955}} \right)^2$$

$$r^2 = 0.065523588 \\ \approx 0,066$$

**UJI KORELASI PEARSON ANTARA SWASITIRAN
TERBITAN CIFOR DENGAN SWASITIRAN PENGARANG**

tahun	Y	X	XY	X ²	Y ²
2002	2.55	1.82	4.636363636	3.31	6.5025
2003	13.95	6.52	91.00714286	42.56	194.6025
2004	21.67	11.58	250.92	134.07	469.5889
2005	12.6	8.00	100.8	64.00	158.76
2006	12.5	7.64	95.53571429	58.41	156.25
2007	14.4	16.64	239.56	276.77	207.36
	77.67	52.20	782.46	579.12	1193.0639

Y = rata-rata swasitiran pengarang

X = rata-rata swasitiran terbitan CIFOR

Dari tabel diperoleh:

$$\Sigma Y = 77.67$$

$$\Sigma X = 52.2$$

$$\Sigma XY = 782.46$$

$$\Sigma X^2 = 579.12$$

$$\Sigma Y^2 = 1193.06$$

$$r = \frac{n \Sigma XY - \Sigma X \Sigma Y}{\sqrt{n \Sigma X^2 - (\Sigma X)^2} \sqrt{n \Sigma Y^2 - (\Sigma Y)^2}}$$

$$r = \frac{(6) (782.46) - (52.2) (77.67)}{\sqrt{(6) (579.12) - (52.2)^2} \sqrt{(6) (1193.06) - (77.67)^2}}$$

$$r = \frac{640.3655}{\sqrt{1200528.901} \sqrt{1125.755}}$$

$$r = 0.696972$$

$$\approx 0,7$$

ANALISIS REGRESI ANTARA SWASITIRAN TERBITAN CIFOR DENGAN PRODUKTIVITAS TERBITAN

* swasitiran terbitan CIFOR sebagai variabel independen dan swasitiran pengarang sebagai variabel dependen

tahun	Y	X	XY	X ²	Y ²
2002	2.55	1.82	4.636363636	3.31	6.5025
2003	13.95	6.52	91.00714286	42.56	194.6025
2004	21.67	11.58	250.92	134.07	469.5889
2005	12.6	8.00	100.8	64.00	158.76
2006	12.5	7.64	95.53571429	58.41	156.25
2007	14.4	16.64	239.56	276.77	207.36
	77.67	52.20	782.46	579.12	1193.06

Y = rata-rata swasitiran terbitan pengarang

X = rata-rata swasitiran terbitan CIFOR

Dari tabel diperoleh:

$$\Sigma Y = 77.67$$

$$\Sigma X = 52.2$$

$$\Sigma XY = 782.46$$

$$\Sigma X^2 = 579.12$$

$$\Sigma Y^2 = 1193.06$$

menentukan nilai a dan b:

$$a = \frac{(\Sigma Y) (\Sigma X^2) - (\Sigma X) (\Sigma XY)}{n X^2 - (\Sigma X)^2}$$

$$a = \frac{(77.67) (579.12) - (52.2) (782.46)}{(6) (579.12) - (52.2)^2}$$

$$a = \frac{4135.765482}{749.8618993}$$

$$a = 5.515369545 \\ \approx 5,52$$

$$b = \frac{n \sum XY - (\sum X)(\sum Y)}{n \sum X^2 - (\sum X)^2}$$

$$b = \frac{(6)(782.46) - (52.2)(77.67)}{(6)(579.12) - (52.2)^2}$$

$$b = \frac{640.3654921}{749.8618993}$$

$$b = 0.853977903 \\ \approx 0.85$$

Maka persamaan regresi rata-rata swasitiran terbitan CIFOR dengan produktivitas peneliti adalah:

$$\hat{Y} = a + bX \\ Y = 5,52 + 0,85 X$$

Perhitungan koefisien determinasi:

$$r^2 = \left(\frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{(n \sum X^2 - (\sum X)^2)(n \sum Y^2 - (\sum Y)^2)}} \right)^2$$

$$r^2 = \left(\frac{(6)(782.46) - (52.2)(77.67)}{\sqrt{((6)(579.12) - (52.2)^2)((6)(1193.06) - (77.67)^2)}} \right)^2$$

$$r^2 = \left(\frac{640.3654921}{\sqrt{844160.4075}} \right)^2$$

$$r^2 = 0.485770192 \\ \approx 0,49$$

ANALISIS REGRESI ANTARA SWASITIRAN PENGARANG DENGAN PRODUKTIVITAS TERBITAN

* swasitiran pengarang sebagai variabel independen dan swasitiran terbitan CIFOR sebagai variabel dependen

tahun	Y	X	XY	X ²	Y ²
2002	1.82	2.55	4.636363636	6.50	3.30578512
2003	6.52	13.95	91.00714286	194.60	42.5600907
2004	11.58	21.67	250.92	469.59	134.072022
2005	8.00	12.6	100.8	158.76	64
2006	7.64	12.5	95.53571429	156.25	58.4132653
2007	16.64	14.4	239.56	207.36	276.768595
	52.20	77.67	782.46	1193.06	579.12

Y = rata-rata swasitiran terbitan CIFOR

X = rata-rata swasitiran pengarang

Dari tabel diperoleh:

$$\Sigma Y = 52.20$$

$$\Sigma X = 77.67$$

$$\Sigma XY = 782.46$$

$$\Sigma X^2 = 1193.06$$

$$\Sigma Y^2 = 579.12$$

menentukan nilai a dan b:

$$a = \frac{(\Sigma Y) (\Sigma X^2) - (\Sigma X) (\Sigma XY)}{n X^2 - (\Sigma X)^2}$$

$$a = \frac{(52.20) (1193.06) - (77.67) (782.46)}{(6) (1193.06) - (77.67)^2}$$

$$a = \frac{1504.562779}{1125.7545}$$

$$a = 1.336492795$$

$$\approx 1,34$$

$$b = \frac{n \sum XY - (\sum X)(\sum Y)}{n \sum X^2 - (\sum X)^2}$$

$$(6) (782.46) - (77.67) (52.20)$$

$$b = \frac{(6) (1193.06) - (77.67)^2}{(6) (1193.06) - (77.67)^2}$$

$$b = \frac{640.3654921}{1125.7545}$$

$$b = 0.568832274$$

$$\approx 0,57$$

Maka persamaan regresi rata-rata swasitiran terbitan CIFOR dengan produktivitas peneliti adalah:

$$\hat{Y} = a + bX$$

$$Y = 1,34 + 0,57 X$$

Perhitungan koefisien determinasi:

$$r^2 = \left(\frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{(n \sum X^2 - (\sum X)^2)(n \sum Y^2 - (\sum Y)^2)}} \right)^2$$

$$r^2 = \left(\frac{(6) (1520.06) - (77.67) (52.20)}{\sqrt{((6) (1193.06) - (77.67)^2)((6) (579.12) - (52.20)^2)}} \right)^2$$

$$r^2 = \left(\frac{640.3654921}{\sqrt{844160.4075}} \right)^2$$

$$r^2 = 0.485770192$$

$$\approx 0,49$$