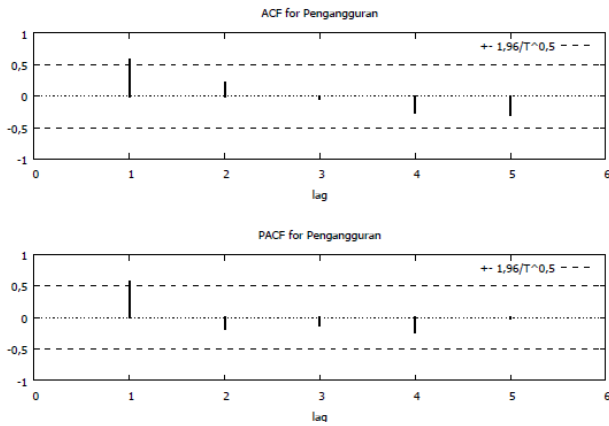


Lampiran 1. Pengangguran di 38 Kabupaten dan Kota Jawa Timur Tahun 2006 - 2015

Kabupaten atau Kota	Tahun	Pengangguran	Angkatan Kerja	UMK	Pertumbuhan Ekonomi	PDRB	Inflasi
KABUPATEN PACITAN	2006	209310	378500	345700	6	12583	1
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
KABUPATEN PACITAN	2015	37697	349055	1150000	5	19106	1
KABUPATEN PONOROGO	2006	425702	554300	338500	6	10461	1
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
KABUPATEN PONOROGO	2015	181698	496443	1150000	5	15525	1
KABUPATEN SUMENEP	2006	426972	627900	425000	6	15137	2
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
KABUPATEN SUMENEP	2015	62868	622460	1253500	14	26555	2
KOTA KEDIRI	2006	133500	172215	501000	4	57551	1
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
KOTA KEDIRI	2015	111396	145426	1339750	5	315396	1
KOTA SURABAYA	2006	1400000	1689800	578500	7	231205	4
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
KOTA SURABAYA	2015	1015592	1465502	2710000	6	128820	3
KOTA BATU	2006	79381	97400	578300	7	34089	1
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
KOTA BATU	2015	25946	106777	1817000	7	51611	1

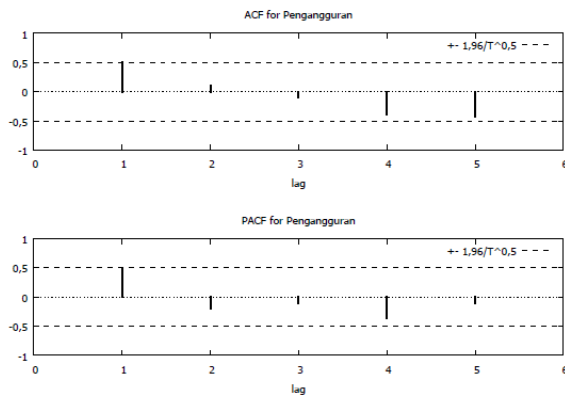
## Lampiran 2. Correlogram untuk 38 Kabupaten atau Kota

### Kabupaten Bangkalan



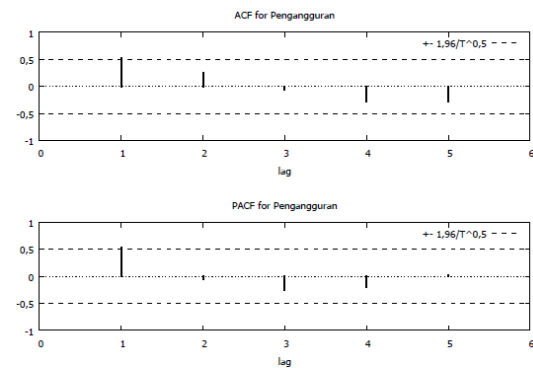
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,5750	0,5750	4,4081	0,036
2	0,2131	-0,1755	5,0892	0,079
3	-0,0408	-0,1294	5,1178	0,163
4	-0,2652	-0,2280	6,5249	0,163
5	-0,2917	-0,0063	8,5676	0,128

### Kabupaten Banyuwangi



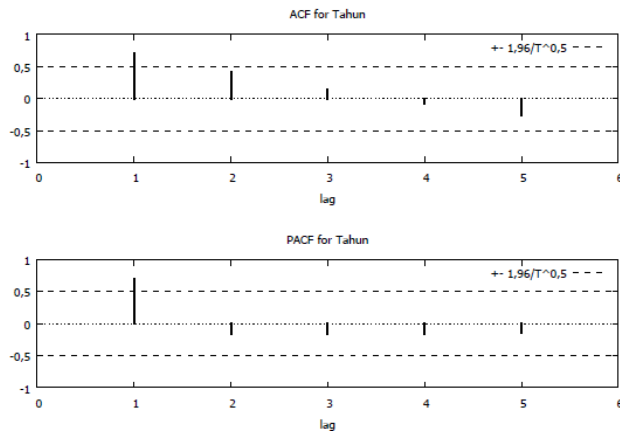
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,5042	0,5042	3,3898	0,066
2	0,1121	-0,1906	3,5782	0,167
3	-0,1049	-0,1058	3,7667	0,288
4	-0,3821	-0,3570	6,6873	0,153
5	-0,4238	-0,1064	10,9977	0,051

### Kabupaten Blitar



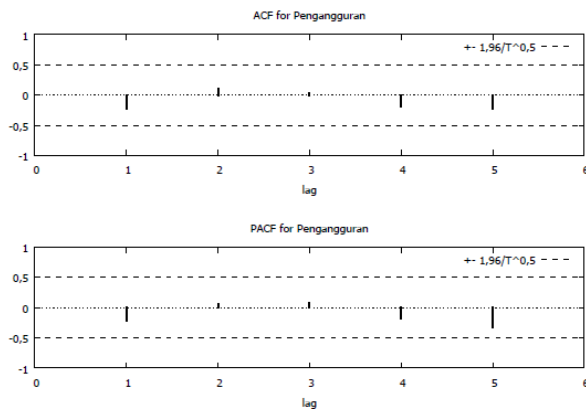
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,5299	0,5299	3,7443	0,053
2	0,2499	-0,0431	4,6808	0,096
3	-0,0642	-0,2501	4,7515	0,191
4	-0,2768	-0,1979	6,2833	0,179
5	-0,2741	0,0156	8,0678	0,152

### Kabupaten Bojonegoro



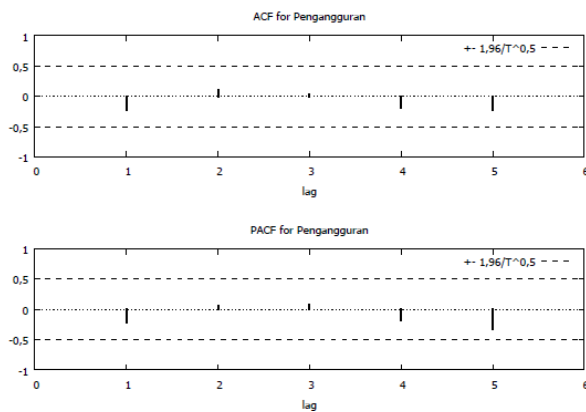
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,7000	0,7000	6,5333	0,011
2	0,4121	-0,1527	9,0810	0,011
3	0,1485	-0,1549	9,4590	0,024
4	-0,0788	-0,1547	9,5831	0,048
5	-0,2576	-0,1492	11,1754	0,048

### Kabupaten Bondowoso



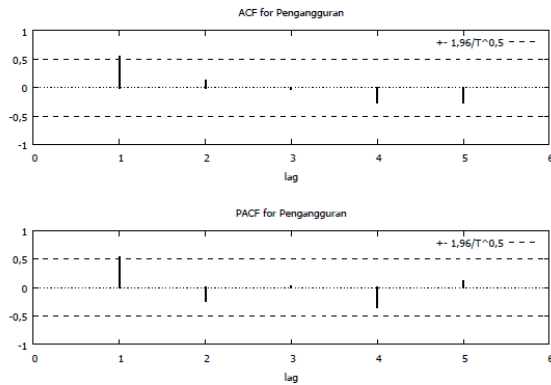
Lag	ACF	PACF	Q-Stat	nilai-p
1	-0,2182	-0,2182	0,6349	0,426
2	0,1021	0,0572	0,7914	0,673
3	0,0404	0,0779	0,8194	0,845
4	-0,1799	-0,1716	1,4667	0,833
5	-0,2185	-0,3267	2,6129	0,759

### Kabupaten Gresik



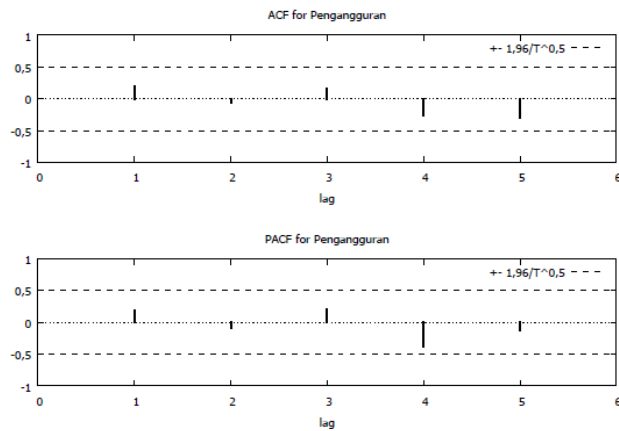
Lag	ACF	PACF	Q-Stat	nilai-p
1	-0,2182	-0,2182	0,6349	0,426
2	0,1021	0,0572	0,7914	0,673
3	0,0404	0,0779	0,8194	0,845
4	-0,1799	-0,1716	1,4667	0,833
5	-0,2185	-0,3267	2,6129	0,759

### Kabupaten Jember



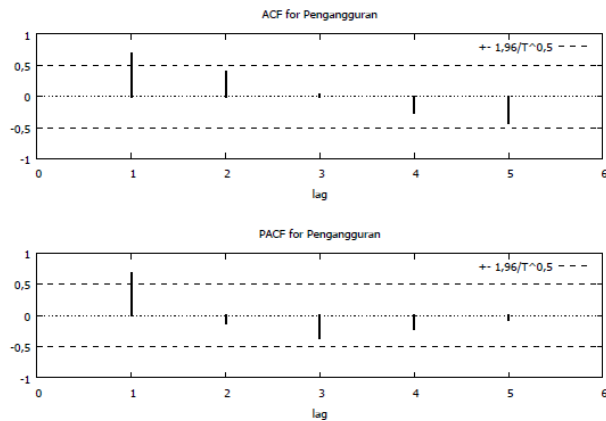
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,5349	0,5349	3,8145	0,051
2	0,1213	-0,2308	4,0352	0,133
3	-0,0255	0,0267	4,0464	0,256
4	-0,2645	-0,3431	5,4457	0,245
5	-0,2595	0,1054	7,0617	0,216

### Kabupaten Jombang



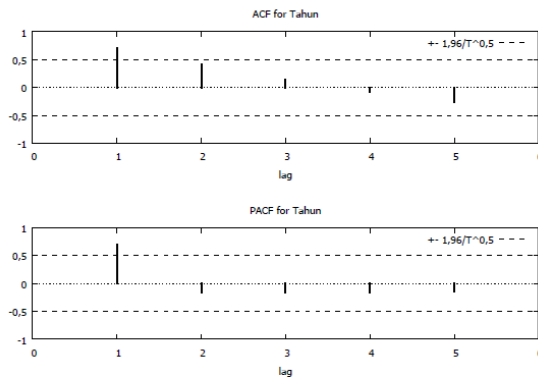
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,1944	0,1944	0,5037	0,478
2	-0,0517	-0,0930	0,5439	0,762
3	0,1586	0,1968	0,9753	0,807
4	-0,2639	-0,3771	2,3687	0,668
5	-0,2902	-0,1173	4,3903	0,495

### Kabupaten Kediri



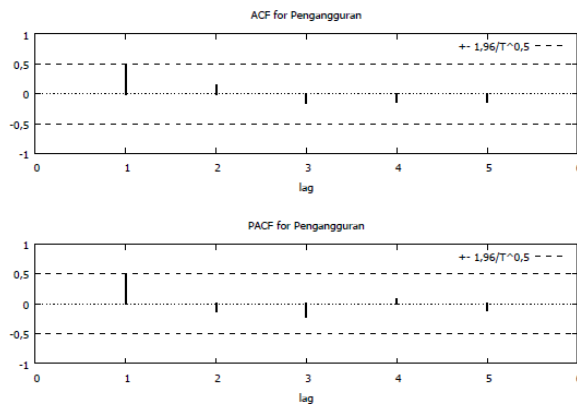
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,6821	0,6821	6,2032	0,013
2	0,3955	-0,1305	8,5491	0,014
3	0,0282	-0,3571	8,5627	0,036
4	-0,2651	-0,2165	9,9686	0,041
5	-0,4217	-0,0645	14,2360	0,014

### Kabupaten Lamongan



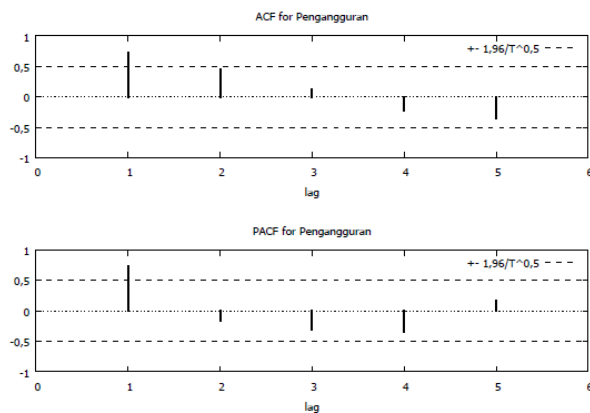
Lag	ACF	PACF	Q-Stat	nilai $-p$
1	0,7000	0,7000	6,5333	0,011
2	0,4121	-0,1527	9,0810	0,011
3	0,1485	-0,1549	9,4590	0,024
4	-0,0788	-0,1547	9,5831	0,048
5	-0,2576	-0,1492	11,1754	0,048

### Kabupaten Lumajang



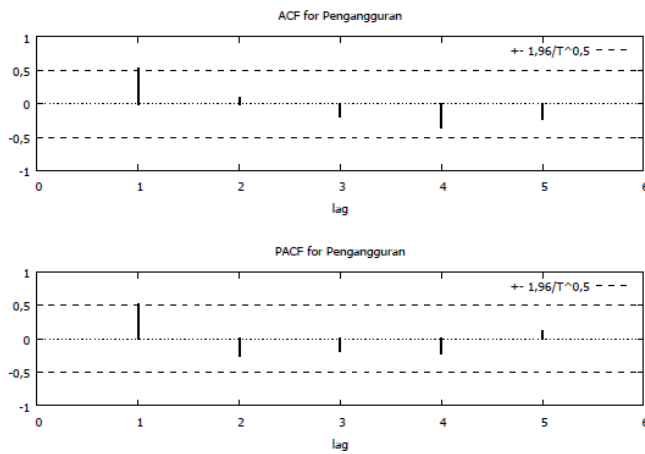
Lag	ACF	PACF	Q-Stat	nilai $-p$
1	0,4790	0,4790	3,0586	0,080
2	0,1364	-0,1207	3,3376	0,188
3	-0,1456	-0,2120	3,7011	0,296
4	-0,1243	0,0726	4,0099	0,405
5	-0,1382	-0,1033	4,4686	0,484

### Kabupaten Madiun



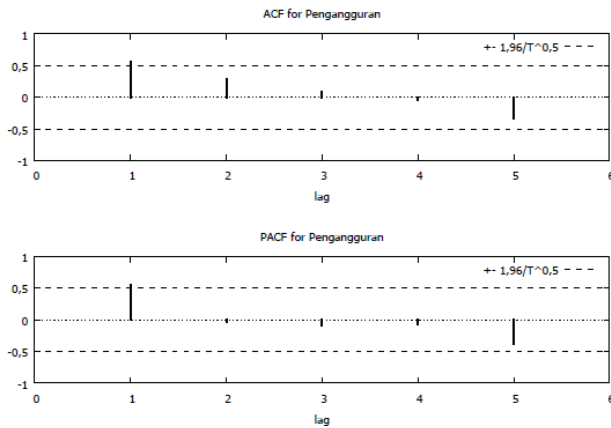
Lag	ACF	PACF	Q-Stat	nilai $-p$
1	0,7304	0,7304	7,1138	0,008
2	0,4551	-0,1682	10,2203	0,006
3	0,1230	-0,3143	10,4797	0,015
4	-0,2274	-0,3472	11,5141	0,021
5	-0,3492	0,1716	14,4400	0,013

### Kabupaten Magetan



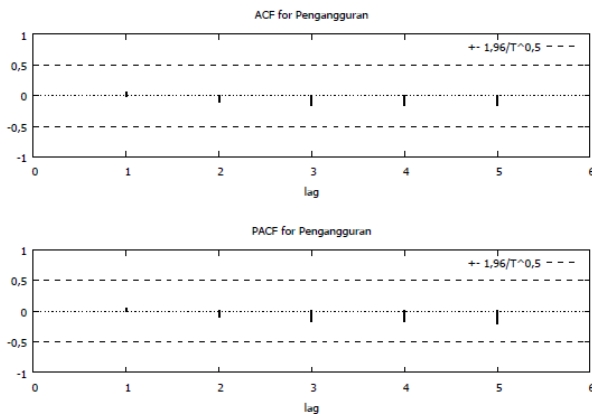
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,5221	0,5221	3,6348	0,057
2	0,0885	-0,2531	3,7524	0,153
3	-0,1906	-0,1710	4,3755	0,224
4	-0,3594	-0,2135	6,9587	0,138
5	-0,2193	0,1103	8,1132	0,150

### Kabupaten Malang



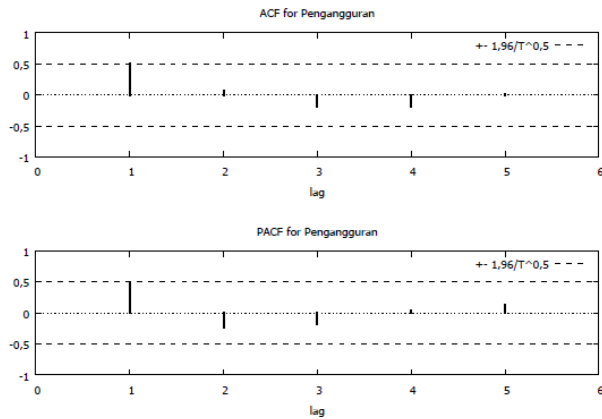
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,5531	0,5531	4,0786	0,043
2	0,2855	-0,0294	5,3009	0,071
3	0,0899	-0,0813	5,4394	0,142
4	-0,0415	-0,0758	5,4738	0,242
5	-0,3410	-0,3891	8,2645	0,142

### Kabupaten Mojokerto



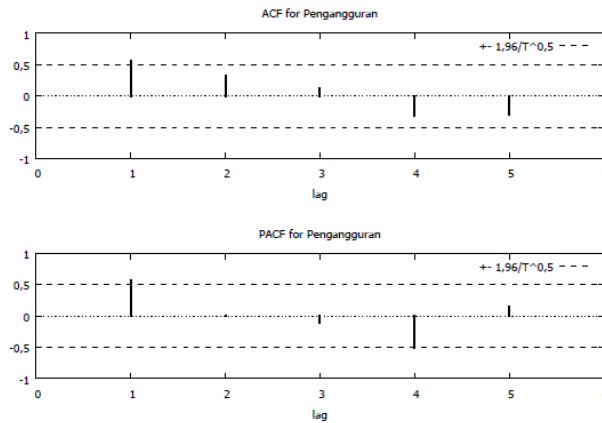
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,0418	0,0418	0,0233	0,879
2	-0,0889	-0,0908	0,1418	0,932
3	-0,1591	-0,1528	0,5760	0,902
4	-0,1600	-0,1614	1,0881	0,896
5	-0,1586	-0,1905	1,6920	0,890

### Kabupaten Nganjuk



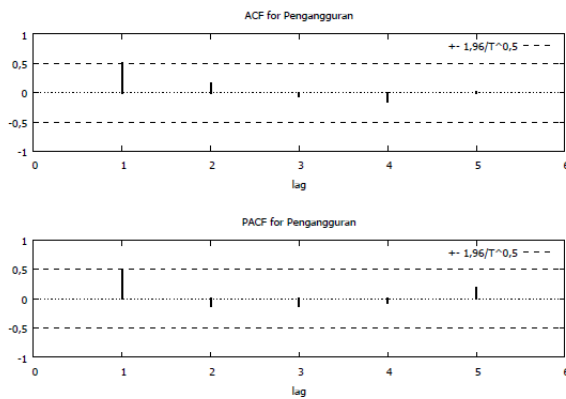
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,5055	0,5055	3,4065	0,065
2	0,0760	-0,2411	3,4932	0,174
3	-0,1960	-0,1737	4,1516	0,246
4	-0,1908	0,0321	4,8793	0,300
5	0,0087	0,1395	4,8811	0,431

Kabupaten Ngawi



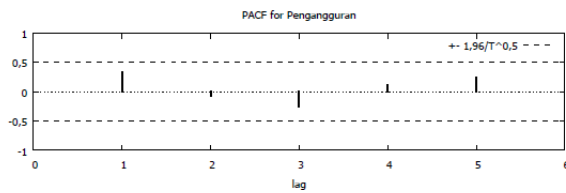
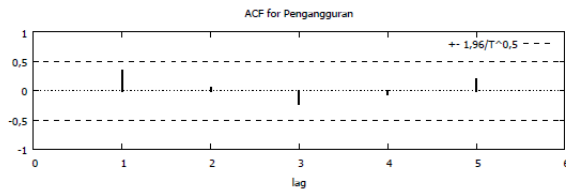
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,5658	0,5658	4,2689	0,039
2	0,3266	0,0095	5,8690	0,053
3	0,1154	-0,1074	6,0973	0,107
4	-0,3178	-0,5128	8,1168	0,087
5	-0,3021	0,1571	10,3076	0,067

Kabupaten Pamekasan



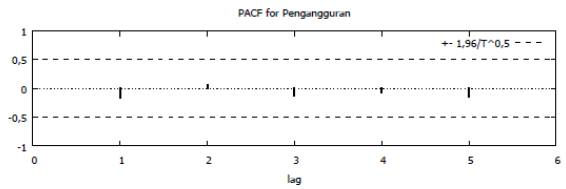
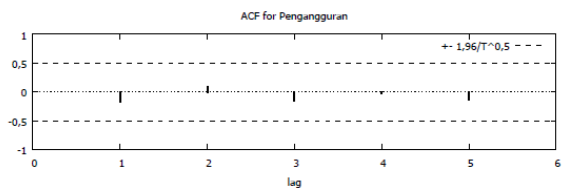
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,5046	0,5046	3,3947	0,065
2	0,1594	-0,1277	3,7758	0,151
3	-0,0629	-0,1216	3,8436	0,279
4	-0,1509	-0,0628	4,2988	0,367
5	0,0124	0,1896	4,3025	0,507

Kabupaten Pasuruan



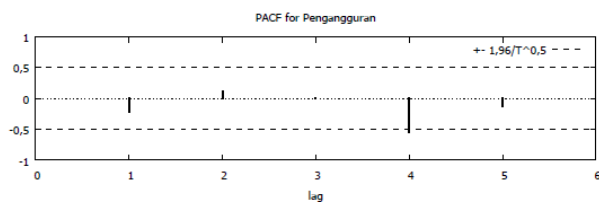
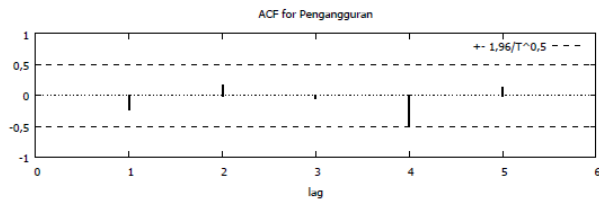
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,3345	0,3345	1,4919	0,222
2	0,0534	-0,0659	1,5346	0,464
3	-0,2242	-0,2501	2,3960	0,494
4	-0,0637	0,1146	2,4771	0,649
5	0,1900	0,2387	3,3437	0,647

Kabupaten Probolinggo



Lag	ACF	PACF	Q-Stat	nilai-p
1	-0,1691	-0,1691	0,3814	0,537
2	0,0941	0,0674	0,5143	0,773
3	-0,1537	-0,1318	0,9193	0,821
4	-0,0218	-0,0751	0,9288	0,920
5	-0,1362	-0,1389	1,3740	0,927

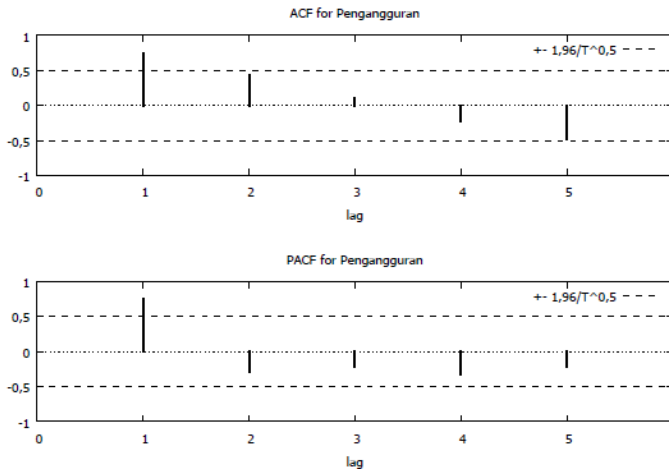
Kabupaten Sampang



Lag	ACF	PACF	Q-Stat	nilai-p
1	-0,2251	-0,2251	0,6756	0,411
2	0,1517	0,1064	1,0207	0,600
3	-0,0469	0,0081	1,0584	0,787
4	-0,4801	-0,5372	5,6692	0,225
5	0,1148	-0,1169	5,9854	0,308

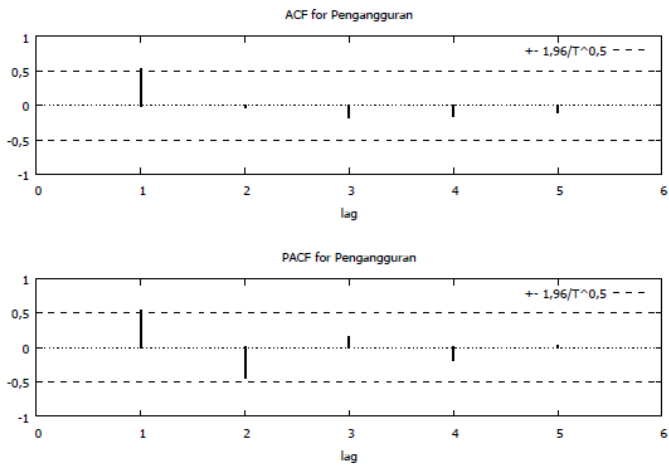
Kabupaten Sidoarjo





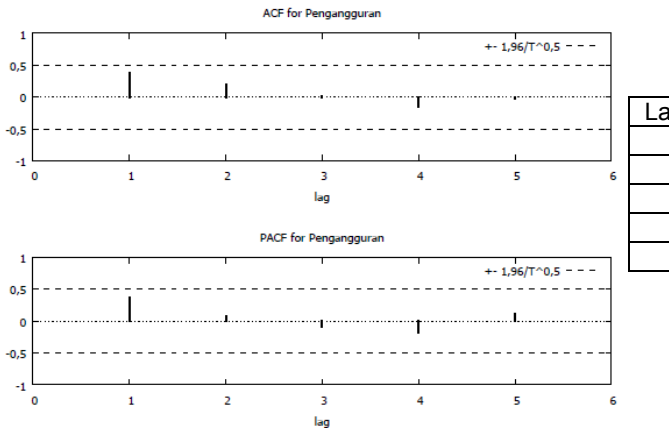
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,7451	0,7451	7,4014	0,007
2	0,4258	-0,2906	10,1212	0,006
3	0,1027	-0,2215	10,3021	0,016
4	-0,2287	-0,3170	11,3480	0,023
5	-0,4814	-0,2077	16,9092	0,005

Kabupaten Situbondo



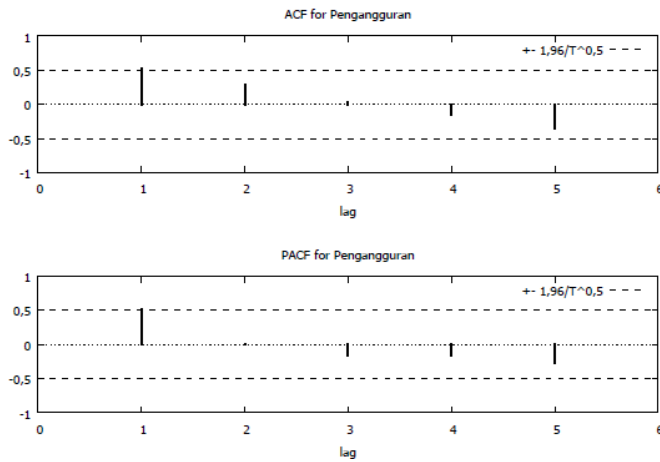
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,5344	0,5344	3,8084	0,051
2	-0,0313	-0,4436	3,8230	0,148
3	-0,1735	0,1529	4,3389	0,227
4	-0,1424	-0,1714	4,7443	0,315
5	-0,1015	0,0156	4,9918	0,417

Kabupaten Sumenep



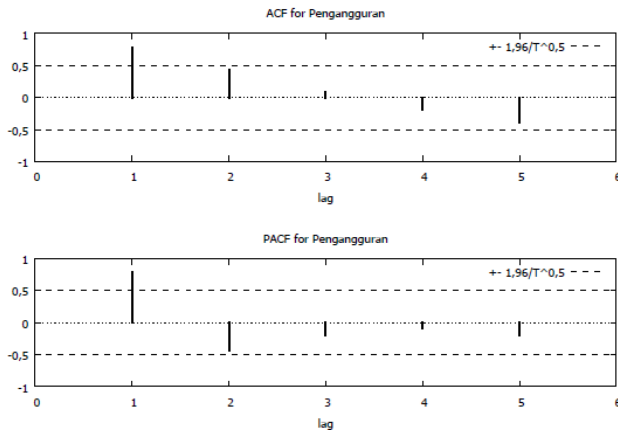
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,3705	0,3705	1,8302	0,176
2	0,2019	0,0749	2,4417	0,295
3	0,0183	-0,0917	2,4474	0,485
4	-0,1564	-0,1766	2,9366	0,568
5	-0,0234	0,1189	2,9497	0,708

Kabupaten Tuban



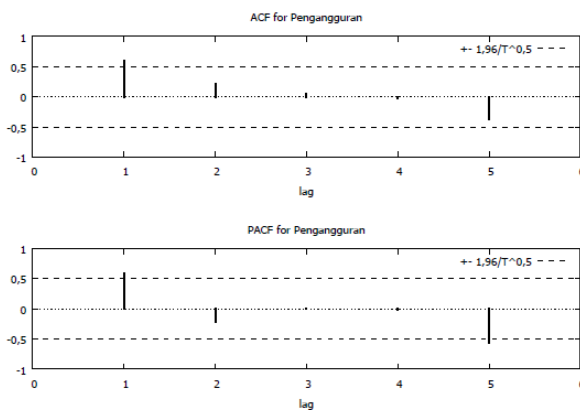
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,5219	0,5219	3,6321	0,057
2	0,2817	0,0127	4,8221	0,090
3	0,0403	-0,1532	4,8499	0,183
4	-0,1473	-0,1605	5,2838	0,259
5	-0,3536	-0,2627	8,2843	0,141

Kota Batu



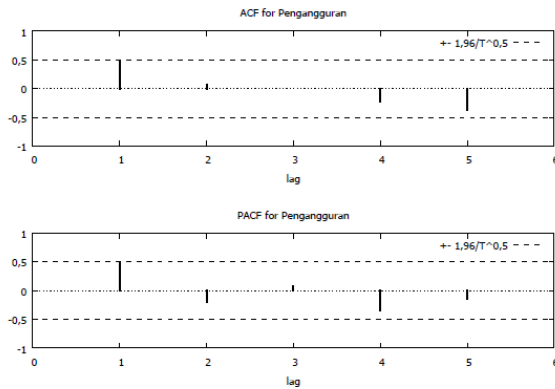
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,7792	0,7792	8,0963	0,004
2	0,4345	-0,4398	10,9278	0,004
3	0,0824	-0,1968	11,0442	0,011
4	-0,1915	-0,0929	11,7774	0,019
5	-0,3905	-0,1986	15,4378	0,009

Kota Blitar



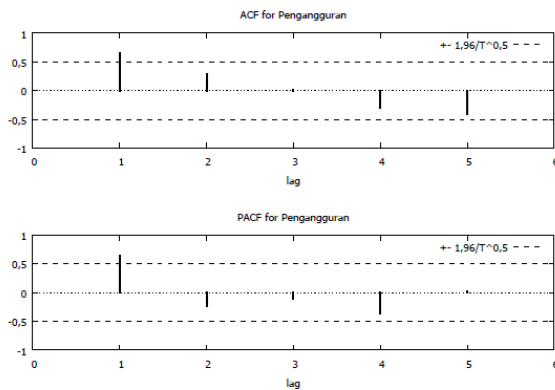
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,5956	0,5956	4,7293	0,030
2	0,2209	-0,2074	5,4610	0,065
3	0,0427	0,0120	5,4922	0,139
4	-0,0167	-0,0113	5,4978	0,240
5	-0,3658	-0,5542	8,7095	0,121

Kota Kediri



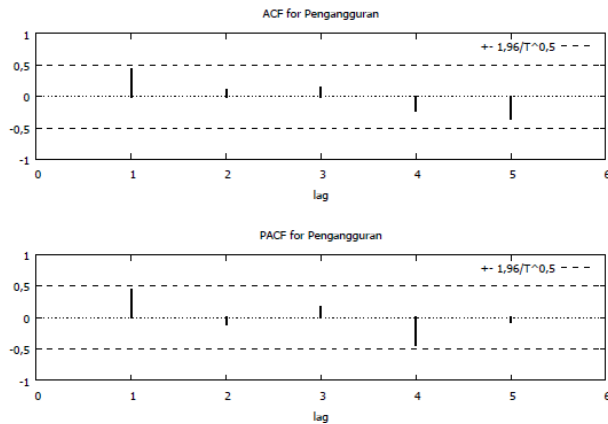
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,4754	0,4754	3,0139	0,083
2	0,0662	-0,2066	3,0796	0,214
3	0,0005	0,0820	3,0796	0,380
4	-0,2265	-0,3384	4,1060	0,392
5	-0,3737	-0,1399	7,4568	0,189

### Kota Madiun



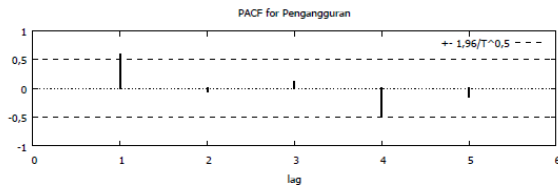
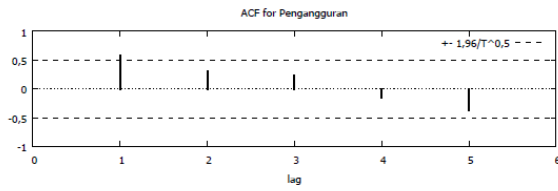
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,6464	0,6464	5,5714	0,018
2	0,2785	-0,2394	6,7345	0,034
3	0,0098	-0,1066	6,7361	0,081
4	-0,3025	-0,3655	8,5664	0,073
5	-0,4009	0,0235	12,4234	0,029

### Kota Malang



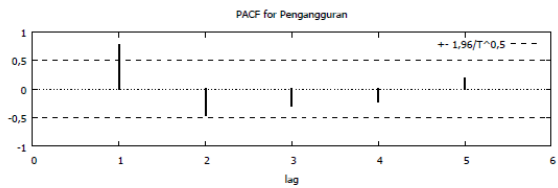
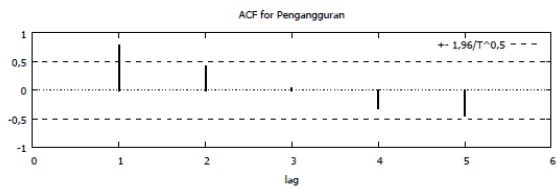
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,4393	0,4393	2,5732	0,109
2	0,1122	-0,1001	2,7621	0,251
3	0,1407	0,1633	3,1013	0,376
4	-0,2188	-0,4381	4,0587	0,398
5	-0,3568	-0,0732	7,1137	0,212

### Kota Mojokerto



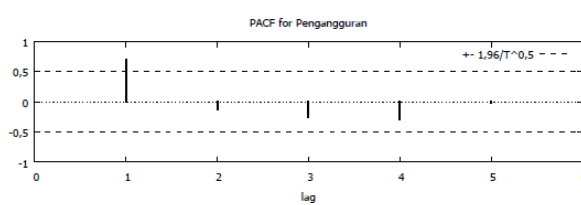
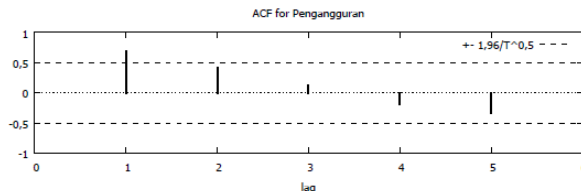
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,5833	0,5833	4,5369	0,033
2	0,3018	-0,0583	5,9035	0,052
3	0,2255	0,1113	6,7755	0,079
4	0,1466	-0,4834	7,2051	0,125
5	0,3708	-0,1441	10,5058	0,062

Kota Pasuruan



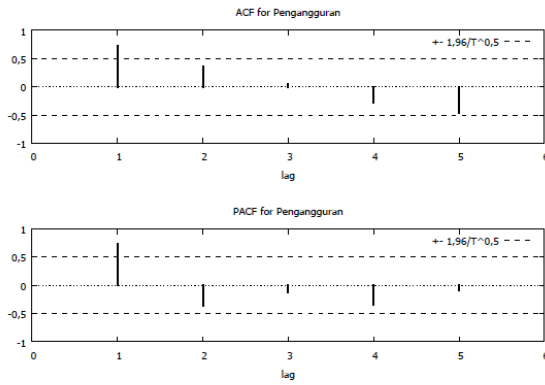
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,7781	0,7781	8,0718	0,004
2	0,4235	-0,4609	10,7622	0,005
3	0,0348	-0,2831	12,7829	0,013
4	-0,3076	-0,2217	12,6750	0,013
5	-0,4418	0,1921	17,3595	0,004

Kota Probolinggo



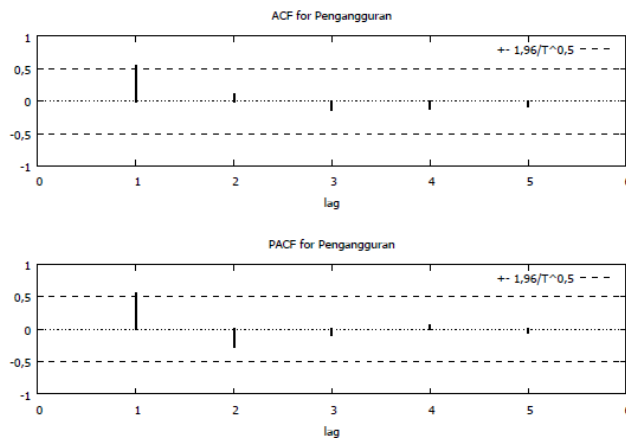
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,6938	0,6938	6,4186	0,011
2	0,4202	-0,1179	9,0678	0,011
3	0,1162	-0,2502	9,2992	0,026
4	-0,1890	-0,2797	10,0136	0,040
5	-0,3310	-0,0069	12,6438	0,027

Kota Surabaya



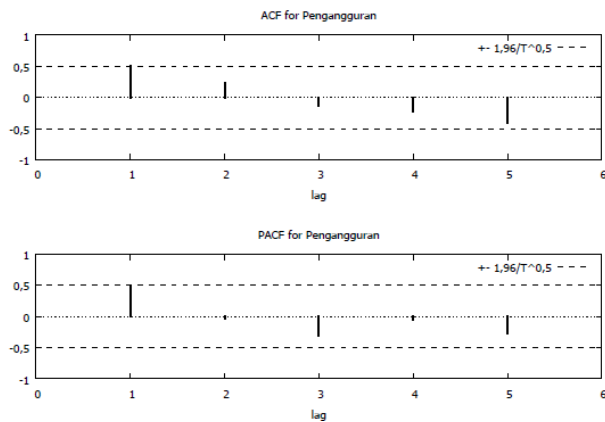
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,7263	0,7263	7,0331	0,008
2	0,3591	-0,3564	8,9671	0,011
3	0,0469	-0,1164	9,0047	0,029
4	-0,2704	-0,3520	10,4668	0,033
5	-0,4658	-0,0792	15,6737	0,008

Kabupaten Ponorogo



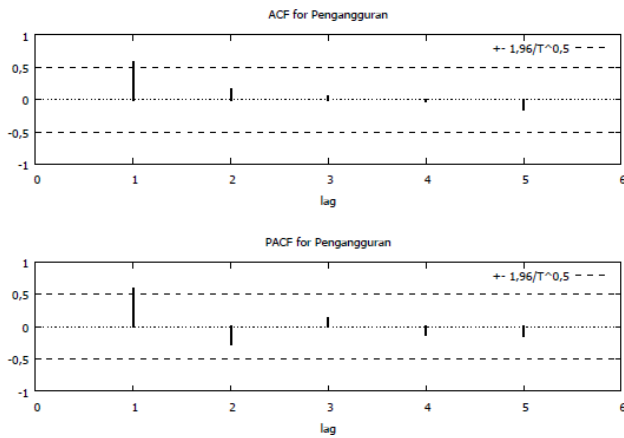
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,5498	0,5498	4,0299	0,045
2	0,1118	-0,2729	4,2175	0,121
3	-0,1292	-0,0889	4,5036	0,212
4	-0,1177	0,0656	4,7806	0,311
5	-0,0695	-0,0562	4,8964	0,429

Kabupaten Trenggalek



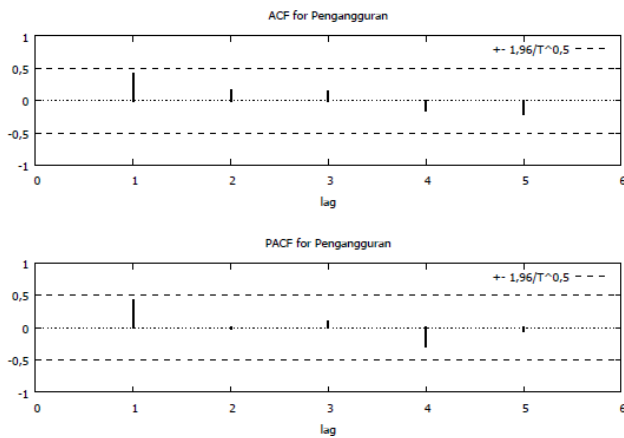
Lag	ACF	PACF	Q-Stat	nilai-p
1	0,5000	0,5000	3,3330	0,068
2	0,2240	-0,0346	4,0859	0,130
3	-0,1275	-0,3019	4,3647	0,225
4	-0,2295	-0,0605	5,4179	0,247
5	-0,3978	-0,2627	9,2154	0,101

Kabupaten Tulungagung



Lag	ACF	PACF	Q-Stat	nilai-p
1	0,5819	0,5819	4,5152	0,034
2	0,1580	-0,2731	4,8899	0,087
3	0,0414	0,1360	4,9193	0,178
4	-0,0237	-0,1265	4,9305	0,295
5	-0,1579	-0,1439	5,5287	0,355

### Kabupaten Pacitan



Lag	ACF	PACF	Q-Stat	nilai-p
1	0,4139	0,4139	2,2841	0,131
2	0,1599	-0,0137	2,6677	0,263
3	0,1346	0,0883	2,9781	0,395
4	-0,1533	-0,2899	3,4479	0,486
5	-0,2040	-0,0537	4,4464	0,487

### Lampiran 3. Uji Asumsi Model Efek Biasa

#### 1. Uji Normalitas

Test for null hypothesis of normal distribution:

Chi-square(2) = 50,979 with p-value 0,00000

#### 2. Multikolinearitas

```
> vif(LinearModel.1)
  X1    X2    X3    X4    X5
1.548056 1.085559 1.016190 1.209755 1.586296
> round(cov2cor(vcov(LinearModel.1)), 3) # Correlations of parameter estimates
(Intercept)  X1  X2  X3  X4  X5
(Intercept)  1.000 -0.114 -0.308 -0.849 0.069 -0.078
X1           -0.114 1.000 -0.152 -0.031 -0.088 -0.521
X2           -0.308 -0.152 1.000 -0.069 -0.177 0.050
X3           -0.849 -0.031 -0.069 1.000 -0.045 -0.020
X4           0.069 -0.088 -0.177 -0.045 1.000 -0.247
X5           -0.078 -0.521 0.050 -0.020 -0.247 1.000
```

#### Lampiran 4. Syntax Model Efek Biasa Menggunakan Software R

```
> panel <- read.table("G:/Data/Panel 7.txt", header=TRUE, sep="",
+   na.strings="NA", dec=".", strip.white=TRUE)

> LinearModel.1 <- lm(Y ~ X1 + X2 + X3 + X4 + X5, data=panel)

> summary(LinearModel.1)
```

#### Lampiran 5. Syntax Model Efek Biasa Menggunakan GLM dengan Software R

```
> panel <- read.table("G:/Data/Panel 7.txt", header=TRUE, sep="",
+   na.strings="NA", dec=".", strip.white=TRUE)

> GLM.1 <- glm(Y ~ X1 + X2 + X3 + X4 + X5, family=poisson(log),
data=panel)

> summary(GLM.1)
```

#### Lampiran 6. Syntax Model Efek Tetap Menggunakan GLM dengan Software R

```
> panel <- read.table("D:/Data/panel 8.txt", header=TRUE, sep="",
+   na.strings="NA", dec=".", strip.white=TRUE)

> GLM.2 <- glm(Y ~ X1 + X2 + X3 + X4 + X5 + D, family=poisson(log),
+   data=panel)

> summary(GLM.2)
```



## Lampiran 7. Syntax GLMM dengan Software R

```
> panel <- read.table("D:/Data/panel 8.txt", header=TRUE, sep="",
+   na.strings="NA", dec=".", strip.white=TRUE)
> library(trust, pos=16)

> library(mvtnorm, pos=16)

> library(Matrix, pos=16)

> library(glm, pos=16)

> library(FAMILY, pos=20)

> library(debug, pos=24)

T <- as.factor(T)

> GLMM.1 <- glm(Y ~ X1 + X2 + X3 +X4 + X5 + D + (1|T),
varcomps.names="T",data=panel,family.glm=poisson.glm,
m=10^4,debug=TRUE)

> summary(GLMM.1)
```

## Lampiran 8. Output Model Efek Biasa Menggunakan Software R

Call:

```
lm(formula = Y ~ X1 + X2 + X3 + X4 + X5, data = panel)
```

Residuals:

Min	1Q	Median	3Q	Max
-312814	-78308	-3805	59919	670941

Coefficients:	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	18223.07088	31262.15301	0.583	0.5603
X1	0.58714	0.02264	25.931	< 2e-16 ***
X2	-0.09915	0.01539	-6.441	3.64e-10 ***
X3	-3324.14556	4664.21404	-0.713	0.4765
X4	1.28668	0.14342	8.971	< 2e-16 ***
X5	15912.44048	7916.11296	2.010	0.0451 *

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 116400 on 374 degrees of freedom

Multiple R-squared: 0.7849, Adjusted R-squared: 0.782

F-statistic: 272.9 on 5 and 374 DF, p-value: < 2.2e-16

> Anova(LinearModel.2, type="II")

Anova Table (Type II tests)

Response: Y

	Sum Sq	Df	F value	Pr(>F)
X1	9103140680724	1	672.4153	< 2.2e-16 ***
X2	561722518686	1	41.4924	3.642e-10 ***
X3	6876330868	1	0.5079	0.47648
X4	1089549472871	1	80.4810	< 2.2e-16 ***
X5	54702006996	1	4.0406	0.04513 *

Residuals 5063201889788 374

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Call:

```
lm(formula = Y ~ X1 + X2 + X4 + X5, data = panel)
```

Residuals:

Min	1Q	Median	3Q	Max
-312905	-75511	-4931	58640	670684

Coefficients:	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	-697.77043	16496.82920	-0.042	0.9663
X1	0.58663	0.02262	25.938	< 2e-16 ***
X2	-0.09992	0.01535	-6.511	2.4e-10 ***
X4	1.28212	0.14319	8.954	< 2e-16 ***
X5	15798.51041	7909.30433	1.997	0.0465 *

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 116300 on 375 degrees of freedom

Multiple R-squared: 0.7846, Adjusted R-squared: 0.7823

F-statistic: 341.5 on 4 and 375 DF, p-value: < 2.2e-16

## Lampiran 9. Output Model Efek Biasa Menggunakan GLM dengan Software R

Uji Sebaran Peubah Respon

Test Statistics

Pengangguran

Chi-Square 1.979a

df 377

Asymp. Sig. 1.000

a. 378 cells (100,0%) have expected frequencies less than 5. The minimum expected cell frequency is 1,0.

Call:

```
glm(formula = Y ~ X1 + X2 + X3 + X4 + X5, family = poisson(log),
     data = panel)
```

Deviance Residuals:

Min	1Q	Median	3Q	Max
-507.69	-157.93	-63.25	97.16	1173.60

Coefficients:	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	1.186e+01	4.999e-04	23735.02	<2e-16 ***
X1	1.719e-06	3.051e-10	5632.83	<2e-16 ***
X2	-2.538e-07	2.314e-10	-1096.76	<2e-16 ***
X3	-3.559e-02	7.714e-05	-461.39	<2e-16 ***
X4	-6.282e-08	1.802e-09	-34.86	<2e-16 ***
X5	3.488e-02	8.945e-05	389.98	<2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for poisson family taken to be 1)

Null deviance: 67433535 on 379 degrees of freedom  
Residual deviance: 17877289 on 374 degrees of freedom  
AIC: 17882651

Number of Fisher Scoring iterations: 4

```
> exp(coef(GLM.1)) # Exponentiated coefficients(Intercept)
      X1                X2                X3                X4
```

```

142105.2885502  1.0000017      0.9999997      0.9650338  0.9999999
X5
1.0354975
> BIC(GLM.1)
[1] 17882674
> Anova(GLM.1, type="II", test="LR")
Analysis of Deviance Table (Type II tests)
Response: Y
      LR Chisq Df Pr(>Chisq)
X1 29247706  1 < 2.2e-16 ***
X2 1275145  1 < 2.2e-16 ***
X3 214030  1 < 2.2e-16 ***
X4 1217  1 < 2.2e-16 ***
X5 149813  1 < 2.2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

## Lampiran 10. Output Model Efek Tetap Menggunakan GLM dengan Software R

```
> GLM.2 <- glm(Y ~ X1 + X2 + X3 + X4 + X5 + D, family=poisson(log),  
+ data=panel)
```

```
> summary(GLM.2)
```

Call:

```
glm(formula = Y ~ X1 + X2 + X3 + X4 + X5 + D, family = poisson(log),  
data = panel)
```

Deviance Residuals:

Min	1Q	Median	3Q	Max
-359.39	-98.25	-9.74	58.93	1062.42

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )	
(Intercept)	1.257e+01	1.251e-03	10044.533	<2e-16	***
X1	1.151e-06	2.176e-09	528.917	<2e-16	***
X2	-3.986e-07	2.608e-10	-1528.538	<2e-16	***
X3	-3.151e-02	8.928e-05	-352.881	<2e-16	***
X4	-1.242e-09	2.842e-09	-0.437	0.662	
X5	5.741e-02	1.670e-04	343.748	<2e-16	***
D[T.BANYUWANGI]	-6.137e-02	1.145e-03	-53.588	<2e-16	***
D[T.BLITAR]	-5.304e-01	9.317e-04	-569.300	<2e-16	***
D[T.BOJONEGORO]	-2.147e-01	9.598e-04	-223.716	<2e-16	***
D[T.BONDOWOSO]	-8.767e-01	1.076e-03	-814.675	<2e-16	***
D[T.GRESIK]	2.663e-01	8.657e-04	307.637	<2e-16	***
D[T.JEMBER]	-1.943e-01	1.795e-03	-108.222	<2e-16	***
D[T.JOMBANG]	4.351e-02	8.715e-04	49.924	<2e-16	***
D[T.KBATU]	-1.057e+00	1.638e-03	-645.558	<2e-16	***
D[T.KBLITAR]	-1.422e+00	1.803e-03	-788.245	<2e-16	***
D[T.KEDIRI]	3.113e-02	1.037e-03	30.038	<2e-16	***
D[T.KKEDIRI]	-5.699e-01	1.376e-03	-414.078	<2e-16	***
D[T.KMADIUN]	-1.014e+00	1.548e-03	-654.912	<2e-16	***
D[T.KMALANG]	1.821e-01	8.260e-04	220.427	<2e-16	***

D[T.KMOJOKERTO]	-1.298e+00	1.764e-03	-735.857	<2e-16	***
D[T.KPASURUAN]	-1.011e+00	1.566e-03	-645.851	<2e-16	***
D[T.KPROBOLINGGO]	-9.334e-01	1.504e-03	-620.512	<2e-16	***
D[T.KSURABAYA]	5.599e-02	2.600e-03	21.533	<2e-16	***
D[T.LAMONGAN]	-6.001e-02	8.983e-04	-66.804	<2e-16	***
D[T.LUMAJANG]	-4.864e-01	9.025e-04	-538.907	<2e-16	***
D[T.MADIUN]	-2.218e-01	8.909e-04	-248.962	<2e-16	***
D[T.MAGETAN]	-6.633e-01	1.030e-03	-644.108	<2e-16	***
D[T.MALANG]	6.125e-02	1.952e-03	31.380	<2e-16	***
D[T.MOJOKERTO]	1.515e-01	8.441e-04	179.451	<2e-16	***
D[T.NGANJUK]	-2.852e-01	8.561e-04	-333.126	<2e-16	***
D[T.NGAWI]	-1.293e-01	8.351e-04	-154.812	<2e-16	***
D[T.PACITAN]	-1.224e+00	1.271e-03	-962.726	<2e-16	***
D[T.PAMEKASAN]	-5.715e-01	9.645e-04	-592.502	<2e-16	***
D[T.PASURUAN]	1.519e-01	1.091e-03	139.315	<2e-16	***
D[T.PONOROGO]	-4.110e-01	8.803e-04	-466.905	<2e-16	***
D[T.PROBOLINGGO]	-5.048e-01	9.428e-04	-535.464	<2e-16	***
D[T.SAMPANG]	-8.384e-01	1.005e-03	-834.182	<2e-16	***
D[T.SIDOARJO]	2.584e-01	1.498e-03	172.510	<2e-16	***
D[T.SITUBONDO]	-6.271e-01	1.021e-03	-614.073	<2e-16	***
D[T.SUMENEP]	-6.090e-01	1.021e-03	-596.699	<2e-16	***
D[T.TRENGGALEK]	-5.484e-01	9.630e-04	-569.440	<2e-16	***
D[T.TUBAN]	-2.440e-01	9.344e-04	-261.133	<2e-16	***
D[T.TULUNGAGUNG]	-4.472e-01	9.078e-04	-492.591	<2e-16	***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for poisson family taken to be 1)

Null deviance: 67433535 on 379 degrees of freedom  
 Residual deviance: 8894226 on 337 degrees of freedom  
 AIC: 8899662

Number of Fisher Scoring iterations: 5

> exp(coef(GLM.2)) # Exponentiated coefficients

(Intercept)	X1	X2	X3
287760.2093414	1.0000012	0.9999996	0.9689854
X4	X5	D[T.BANYUWANGI]	D[T.BLITAR]
1.0000000	1.0590905	0.9404725	0.5883678
D[T.BOJONEGORO]	D[T.BONDOWOSO]	D[T.GRESIK]	D[T.JEMBER]
0.8067603	0.4161612	1.3051374	0.8234373
D[T.JOMBANG]	D[T.KBATU]	D[T.KBLITAR]	D[T.KEDIRI]
1.0444703	0.3473511	0.2413287	1.0316243
D[T.KKEDIRI]	D[T.KMADIUN]	D[T.KMALANG]	D[T.KMOJOKERTO]
0.5656005	0.3628341	1.1997049	0.2730234
D[T.KPASURUAN]	D[T.KPROBOLINGGO]	D[T.KSURABAYA]	D[T.LAMONGAN]
0.3637398	0.3932317	1.0575846	0.9417567
D[T.LUMAJANG]	D[T.MADIUN]	D[T.MAGETAN]	D[T.MALANG]
0.6148568	0.8010669	0.5151604	1.0631664
D[T.MOJOKERTO]	D[T.NGANJUK]	D[T.NGAWI]	D[T.PACITAN]
1.1635399	0.7518661	0.8787292	0.2941885
D[T.PAMEKASAN]	D[T.PASURUAN]	D[T.PONOROGO]	D[T.PROBOLINGGO]
0.5646959	1.1640837	0.6629788	0.6036008
D[T.SAMPANG]	D[T.SIDOARJO]	D[T.SITUBONDO]	D[T.SUMENEP]
0.4323919	1.2948458	0.5341156	0.5439021
D[T.TRENGGALEK]	D[T.TUBAN]	D[T.TULUNGAGUNG]	
0.5778920	0.7834788	0.6394404	

> AIC (GLM.2)

[1] 8899662

> BIC (GLM.2)

[1] 8899831

Response: Y

	LR	Chisq	Df	Pr(>Chisq)
X1	275357	1	<2e-16	***
X2	2487401	1	<2e-16	***
X3	125547	1	<2e-16	***
X4	0	1	0.662	
X5	116404	1	<2e-16	***
D	8983063	37	<2e-16	***



---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Call:

```
glm(formula = Y ~ X1 + X2 + X3 + X5 + D, family = poisson(log),  
     data = panel)
```

Deviance Residuals:

Min	1Q	Median	3Q	Max
-359.39	-98.25	-9.73	58.92	1062.40

Coefficients:	Estimate	Std. Error	z value	Pr(> z )	
(Intercept)	12.569880916003	0.001251413604	10044.55	<2e-16	***
X1	0.000001150659	0.000000002142	537.17	<2e-16	***
X2	-0.000000398601	0.000000000256	-1556.90	<2e-16	***
X3	-0.031497764532	0.000087375780	-360.49	<2e-16	***
X5	0.057416068168	0.000166536060	344.77	<2e-16	***
D[T.BANYUWANGI]	-0.061348049572	0.001143871906	-53.63	<2e-16	***
D[T.BLITAR]	-0.530390685225	0.000931245027	-569.55	<2e-16	***
D[T.BOJONEGORO]	-0.214742570138	0.000959305488	-223.85	<2e-16	***
D[T.BONDOWOSO]	-0.876696493835	0.001075638686	-815.05	<2e-16	***
D[T.GRESIK]	0.266240144007	0.000851502047	312.67	<2e-16	***
D[T.JEMBER]	-0.194174648184	0.001782388388	-108.94	<2e-16	***
D[T.JOMBANG]	0.043515016926	0.000871436029	49.94	<2e-16	***
D[T.KBATU]	-1.057533323348	0.001617070005	-653.98	<2e-16	***
D[T.KBLITAR]	-1.421679985264	0.001793105937	-792.86	<2e-16	***
D[T.KEDIRI]	0.031166985191	0.001033859697	30.15	<2e-16	***
D[T.KKEDIRI]	-0.570100320282	0.001268788421	-449.33	<2e-16	***
D[T.KMADIUN]	-1.013915761070	0.001528836845	-663.19	<2e-16	***
D[T.KMALANG]	0.182020587467	0.000816376743	222.96	<2e-16	***
D[T.KMOJOKERTO]	-1.298288952938	0.001751801589	-741.12	<2e-16	***
D[T.KPASURUAN]	-1.011395245467	0.001555442981	-650.23	<2e-16	***
D[T.KPROBOLINGGO]	-0.933438475949	0.001492349415	-625.48	<2e-16	***
D[T.KSURABAYA]	0.055862009380	0.002584212265	21.62	<2e-16	***
D[T.LAMONGAN]	-0.060004989750	0.000898238522	-66.80	<2e-16	***
D[T.LUMAJANG]	-0.486369685151	0.000902461487	-538.94	<2e-16	***

```

D[T.MADIUN] -0.221827839189 0.000890093203 -249.22 <2e-16 ***
D[T.MAGETAN] -0.663298111486 0.001028631427 -644.84 <2e-16 ***
D[T.MALANG] 0.061349825613 0.001938961877 31.64 <2e-16 ***
D[T.MOJOKERTO] 0.151425807016 0.000838780711 180.53 <2e-16 ***
D[T.NGANJUK] -0.285189991774 0.000855969368 -333.18 <2e-16 ***
D[T.NGAWI] -0.129283129958 0.000834998157 -154.83 <2e-16 ***
D[T.PACITAN] -1.223558638375 0.001269720224 -963.64 <2e-16 ***
D[T.PAMEKASAN] -0.571471673935 0.000964458616 -592.53 <2e-16 ***
D[T.PASURUAN] 0.151910515949 0.001089220849 139.47 <2e-16 ***
D[T.PONOROGO] -0.411005819168 0.000880164373 -466.96 <2e-16 ***
D[T.PROBOLINGGO] -0.504834097890 0.000942631156 -535.56 <2e-16 ***
D[T.SAMPANG] -0.838417576410 0.001005006642 -834.24 <2e-16 ***
D[T.SIDOARJO] 0.258380527184 0.001497627879 172.53 <2e-16 ***
D[T.SITUBONDO] -0.627165212135 0.001020016666 -614.86 <2e-16 ***
D[T.SUMENEP] -0.608993626704 0.001020447110 -596.79 <2e-16 ***
D[T.TRENGGALEK] -0.548381687020 0.000962501642 -569.75 <2e-16 ***
D[T.TUBAN] -0.244035611164 0.000932765708 -261.63 <2e-16 ***
D[T.TULUNGAGUNG] -0.447165292811 0.000907738672 -492.62 <2e-16 ***

```

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for poisson family taken to be 1)

Null deviance: 67433535 on 379 degrees of freedom  
Residual deviance: 8894226 on 338 degrees of freedom  
AIC: 8899662

Number of Fisher Scoring iterations: 5

```

> exp(coef(GLM.6)) # Exponentiated coefficients
(Intercept)          X1          X2          X3
287759.6655177      1.0000012      0.9999996      0.9689931
      X5      D[T.BANYUWANGI]      D[T.BLITAR]      D[T.BOJONEGORO]
1.0590964      0.9404958      0.5883751      0.8067491
D[T.BONDOWOSO]      D[T.GRESIK]      D[T.JEMBER]      D[T.JOMBANG]

```

0.4161554	1.3050484	0.8235141	1.0444757
D[T.KBATU]	D[T.KBLITAR]	D[T.KEDIRI]	D[T.KKEDIRI]
0.3473115	0.2413083	1.0316578	0.5654687
D[T.KMADIUN]	D[T.KMALANG]	D[T.KMOJOKERTO]	D[T.KPASURUAN]
0.3627956	1.1996389	0.2729985	0.3637112
D[T.KPROBOLINGGO]	D[T.KSURABAYA]	D[T.LAMONGAN]	D[T.LUMAJANG]
0.3931994	1.0574518	0.9417598	0.6148545
D[T.MADIUN]	D[T.MAGETAN]	D[T.MALANG]	D[T.MOJOKERTO]
0.8010533	0.5151495	1.0632708	1.1634920
D[T.NGANJUK]	D[T.NGAWI]	D[T.PACITAN]	D[T.PAMEKASAN]
0.7518714	0.8787251	0.2941814	0.5646938
D[T.PASURUAN]	D[T.PONOROGO]	D[T.PROBOLINGGO]	D[T.SAMPANG]
1.1640561	0.6629831	0.6036057	0.4323942
D[T.SIDOARJO]	D[T.SITUBONDO]	D[T.SUMENEP]	D[T.TRENGGALEK]
1.2948314	0.5341037	0.5438980	0.5778843
D[T.TUBAN]	D[T.TULUNGAGUNG]		
0.7834597	0.6394382		

> BIC (GLM.6)

[1] 8899831

Chow test

Sum squared resid 3,18e+12

Sum squared resid 5,89e+12

F(37,337)= 5,89e+12

*p*-value = 0,000

## Lampiran 11. Output GLMM Menggunakan Software R

```

Family      : Poisson
Formula     : Y ~ X1 +X2 +X3 +X4 +X5 +D +(1|T)
Data       : panel
AIC        BIC
6282726    6282899
Scaled residuals:
      Min       1Q       Median       3Q      Max
-358.79   -97.97    -12.07     56.60   1056.62

Random effects:
Groups Name      Estimate      Variance      Std.Dev.
T (Intercept)   -0.1206      0.004612050   0.002895062

Number of obs: 380, groups: T, 10

Coefficients:
              Estimate Std. Error  z value Pr(>|z|)
(Intercept)    2.547e-02  1.477e-04  1724.27 <2e-16 ***
X1             6.075e-07  2.190e-09   277.44 <2e-16 ***
X2             3.680e-07  5.117e-10   719.07 <2e-16 ***
X3            -1.594e-02  8.963e-05  -177.88 <2e-16 ***
X4             8.665e-07  2.984e-09   290.39 <2e-16 ***
X5             3.127e-02  1.639e-04   190.75 <2e-16 ***
D[T.BANYUWANGI] 7.783e-02  1.144e-03   68.02 <2e-16 ***
D[T.BLITAR]    -3.815e-01  9.342e-04  -408.37 <2e-16 ***
D[T.BOJONEGORO] -1.189e-01  9.631e-04  -123.47 <2e-16 ***
D[T.BONDOWOSO] -8.807e-01  1.077e-03  -817.71 <2e-16 ***
D[T.GRESIK]    -8.296e-02  9.003e-04  -92.15 <2e-16 ***
D[T.JEMBER]    1.359e-01  1.806e-03   75.23 <2e-16 ***
D[T.JOMBANG]   3.082e-02  8.727e-04   35.31 <2e-16 ***
D[T.KBATU]     -1.505e+00  1.657e-03  -908.37 <2e-16 ***
D[T.KBLITAR]  -1.619e+00  1.802e-03  -898.47 <2e-16 ***
D[T.KEDIRI]    1.391e-01  1.031e-03   134.94 <2e-16 ***
D[T.KKEDIRI]  -9.584e-01  1.388e-03  -690.58 <2e-16 ***
D[T.KMADIUN]  -1.225e+00  1.546e-03  -792.24 <2e-16 ***

```

D[T.KMALANG]	-4.334e-02	8.363e-04	-51.82	<2e-16	***
D[T.KMOJOKERTO]	-1.619e+00	1.770e-03	-914.83	<2e-16	***
D[T.KPASURUAN]	-1.351e+00	1.574e-03	-858.19	<2e-16	***
D[T.KPROBOLINGGO]	-1.206e+00	1.508e-03	-799.39	<2e-16	***
D[T.KSURABAYA]	1.922e-01	2.584e-03	74.39	<2e-16	***
D[T.LAMONGAN]	-3.466e-02	8.984e-04	-38.58	<2e-16	***
D[T.LUMAJANG]	-4.275e-01	9.035e-04	-473.11	<2e-16	***
D[T.MADIUN]	-2.217e-01	8.897e-04	-249.18	<2e-16	***
D[T.MAGETAN]	-7.083e-01	1.029e-03	-688.49	<2e-16	***
D[T.MALANG]	2.525e-01	1.949e-03	129.58	<2e-16	***
D[T.MOJOKERTO]	-1.711e-01	8.745e-04	-195.64	<2e-16	***
D[T.NGANJUK]	-1.994e-01	8.589e-04	-232.12	<2e-16	***
D[T.NGAWI]	-9.448e-02	8.372e-04	-112.85	<2e-16	***
D[T.PACITAN]	-1.229e+00	1.270e-03	-967.94	<2e-16	***
D[T.PAMEKASAN]	-6.284e-01	9.668e-04	-650.01	<2e-16	***
D[T.PASURUAN]	-8.122e-02	1.109e-03	-73.26	<2e-16	***
D[T.PONOROGO]	-3.217e-01	8.840e-04	-363.90	<2e-16	***
D[T.PROBOLINGGO]	-4.786e-01	9.418e-04	-508.14	<2e-16	***
D[T.SAMPANG]	-8.098e-01	1.006e-03	-805.40	<2e-16	***
D[T.SIDOARJO]	1.781e-01	1.496e-03	119.05	<2e-16	***
D[T.SITUBONDO]	-6.562e-01	1.021e-03	-642.95	<2e-16	***
D[T.SUMENEP]	-5.305e-01	1.025e-03	-517.36	<2e-16	***
D[T.TRENGGALEK]	-5.222e-01	9.629e-04	-542.34	<2e-16	***
D[T.TUBAN]	-2.430e-01	9.295e-04	-261.46	<2e-16	***
D[T.TULUNGAGUNG]	-3.542e-01	9.108e-04	-388.92	<2e-16	***

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

> exp(coef(GLMM.1)) # Exponentiated coefficients

(Intercept)	X1	X2	X3
3.942833e+110	1.000001e+00	1.000000e+00	9.841828e-01
X4	X5	D[T.BANYUWANGI]	D[T.BLITAR]
1.000001e+00	1.031766e+00	1.080939e+00	6.828465e-01
D[T.BOJONEGORO]	D[T.BONDOWOSO]	D[T.GRESIK]	D[T.JEMBER]
8.878887e-01	4.145088e-01	9.203877e-01	1.145517e+00
D[T.JOMBANG]	D[T.KBATU]	D[T.KBLITAR]	D[T.KEDIRI]
1.031298e+00	2.219483e-01	1.980761e-01	1.149282e+00
D[T.KKEDIRI]	D[T.KMADIUN]	D[T.KMALANG]	D[T.KMOJOKERTO]

3.834939e-01	2.938511e-01	9.575896e-01	1.980924e-01
D[T.KPASURUAN]	D[T.KPROBOLINGGO]	D[T.KSURABAYA]	D[T.LAMONGAN]
2.589344e-01	2.994424e-01	1.211961e+00	9.659353e-01
D[T.LUMAJANG]	D[T.MADIUN]	D[T.MAGETAN]	D[T.MALANG]
6.521550e-01	8.011503e-01	4.924582e-01	1.287248e+00
D[T.MOJOKERTO]	D[T.NGANJUK]	D[T.NGAWI]	D[T.PACITAN]
8.427529e-01	8.192538e-01	9.098469e-01	2.924453e-01
D[T.PAMEKASAN]	D[T.PASURUAN]	D[T.PONOROGO]	D[T.PROBOLINGGO]
5.334436e-01	9.219904e-01	7.249241e-01	6.196791e-01
D[T.SAMPANG]	D[T.SIDOARJO]	D[T.SITUBONDO]	D[T.SUMENEP]
4.449278e-01	1.194981e+00	5.188127e-01	5.883115e-01
D[T.TRENGGALEK]	D[T.TUBAN]	D[T.TULUNGAGUNG]	
5.931969e-01	7.842489e-01	7.017231e-01	

Response: Y

	LR	Chisq	Df	Pr(>Chisq)
X1	76399	1	< 2.2e-16	***
X2	495852	1	< 2.2e-16	***
X3	31768	1	< 2.2e-16	***
X4	84063	1	< 2.2e-16	***
X5	36091	1	< 2.2e-16	***
D	6953398	37	< 2.2e-16	***
T	2616938	1	< 2.2e-16	***

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Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Lampiran 12. Hasil Peramalan Pengangguran di Jawa Timur Tahun 2016

Kabupaten atau Kota	$\ln\mu_{it} = 0,02547 + 6,075 \times 10^{-7}X_1 - 3,680 \times 10^{-7}X_2 - 0,01594X_3 + 8,665 \times 10^{-7}X_4 + 0,03127X_5 + D_i + Z_t$							
	0,02547	$6,075 \times 10^{-7}$	$-3,680 \times 10^{-7}$	-0,01594	$8,665 \times 10^{-7}$	0,03127	-0,1206	Hasil
Banyuwangi	0,10	0,53	-0,60	-0,09	0,03	0,03	-0,1206	-0,12%
Blitar	-0,36	0,38	-0,52	-0,08	0,02	0,06	-0,1206	-0,62%
Bojonegoro	-0,09	0,40	-0,54	-0,10	0,04	0,06	-0,1206	-0,35%
Bondowoso	-0,86	0,26	-0,52	-0,08	0,02	0,03	-0,1206	-1,99%
Gresik	-0,06	0,38	-1,12	-0,11	0,07	0,03	-0,1206	-0,93%
Jember	0,16	0,74	-0,60	-0,10	0,02	0	-0,1206	0,06%
Jombang	0,06	0,38	-0,71	-0,10	0,02	0,06	-0,1206	-0,41%
Kota Batu	-1,48	0,07	-0,75	-0,11	0,05	0,03	-0,1206	-2,31%
Kota Blitar	-1,59	0,05	-0,52	-0,10	0,03	0	-0,1206	-2,25%
Kediri	0,16	0,50	-0,54	-0,10	0,02	0,06	-0,1206	-0,02%
Kota Kediri	-0,93	0,08	-0,55	-0,08	0,03	0,03	-0,1206	-1,54%
Kota Madiun	-1,20	0,05	-0,51	-0,11	0,02	0,03	-0,1206	-1,86%
Kota Malang	-0,02	0,25	-0,77	-0,13	0,05	0,06	-0,1206	-0,78%
Kota Mojokerto	-1,59	0,04	-0,59	-0,10	0,03	0	-0,1206	-2,33%
Kota Pasuruan	-1,33	0,06	-0,65	-0,10	0,03	0	-0,1206	-2,11%
Kota Probolinggo	-1,18	0,07	-0,59	-0,11	0,03	0,03	-0,1206	-1,87%
Kota Surabaya	0,22	0,85	-1,12	-0,13	0,12	0,24	-0,1206	0,06%
Lamongan	-0,01	0,37	-0,58	-0,10	0,02	0,06	-0,1206	-0,36%
Lumajang	-0,40	0,30	-0,53	-0,10	0,02	0,03	-0,1206	-0,8%
Madiun	-0,20	0,21	-0,51	-0,11	0,02	0,03	-0,1206	-0,68%
Magetan	-0,68	0,23	-0,47	-0,10	0,02	0,03	-0,1206	-1,09%
Malang	0,28	0,76	-0,80	-0,13	0,06	0,03	-0,1206	0,08%
Mojokerto	-0,15	0,36	-1,12	-0,13	0,05	0,03	-0,1206	-1,08%

Nganjuk	-0,17	0,30	-0,52	-0,11	0,02	0,03	-0,1206	-0,57%
Ngawi	-0,07	0,25	-0,49	-0,10	0,02	0,03	-0,1206	-0,48%
Pacitan	-1,20	0,21	-0,47	-0,10	0,02	0,03	-0,1206	-1,63%
Pamekasan	-0,60	0,27	-0,50	-0,10	0,02	0,03	-0,1206	-1%
Pasuruan	-0,06	0,47	-1,12	-0,11	0,06	0,03	-0,1206	-0,85%
Ponorogo	-0,30	0,30	-0,47	-0,11	0,02	0,03	-0,1206	-0,65%
Probolinggo	-0,45	0,35	-0,59	-0,11	0,02	0,06	-0,1206	-0,84%
Sampang	-0,78	0,28	-0,51	-0,11	0,02	0,03	-0,1206	-1,19%
Sidoarjo	0,20	0,62	-1,12	-0,11	0,06	0,06	-0,1206	-0,41%
Situbondo	-0,63	0,23	-0,51	-0,10	0,02	0,03	-0,1206	-1,08%
Sumenep	-0,51	0,38	-0,51	-0,22	0,03	0,06	-0,1206	-0,89%
Trenggalek	-0,50	0,23	-0,47	-0,10	0,02	0,03	-0,1206	-0,91%
Tuban	-0,22	0,38	-0,65	-0,10	0,04	0,09	-0,1206	-0,58%
Tulungagung	-0,33	0,32	-0,52	-0,10	0,03	0,06	-0,1206	-0,66%
Bangkalan	0,03	0,28	-0,52	-0,08	0,02	0,03	-0,1206	-0,36%
Jawa Timur								-0,93%



