DAFTAR PUSTAKA

Aravind M. (2019). *Economic Performance and Human Development: A Critical Examination on SAARC Region*.

Arbia, G. (2014). *Palgrave Texts In Econometrics A Primer for Spatial Econometrics With Applications in R*.

Astriani, A., Muchtolifah, M., & Sishadiyati, S. (2021). Pengaruh Kemiskinan, Pengangguran, Pertumbuhan Ekonomi, dan Belanja Modal Terhadap IPM Di Kabupaten Nganjuk Tahun 2010-2019. *Syntax Idea*, *3*(7), 1523. https://doi.org/10.36418/syntax-idea.v3i7.1331

Avrom, B.-V. (1991). *Regional and Local Economic Analysis for Practitioners* (4th ed.). Praeger.

Badan Pusat Statistik Provinsi Sulawesi Selatan. (n.d.). *Produk Domestik Regional Bruto Kabupaten/Kota Se-Sulawesi Selatan Menurut Pengeluaran 2018-2022*.

Bado, B., Alam, S., & Idris, A. (2019). *The Impact Of Spillover And Spatial Interaction Of Growth Center Metropolitan " Mamminasata " In South Sulawesi , Indonesia*. *8*(09), 2030–2035.

Box, P. O., Haven, N., & Ranis, G. (2004). *Human Development And Economic Growth*.

Brian J. Berry. (1999). he growth of regional consciousness. *Progress in Human Geography*, *14*, 186–209.

Capello R, N. P. (2011). *Regional Growth and Development Theories Revisited*. Edward Elgar Publishing Inc.

Cheshire PC, M. E. (2004). Growth, Development, and Innovation: A Look Backward and Forward. *Regoinal Science*, 249–267.

Christina, M., Pratiwi, Y., & Kuncoro, M. (2017). *Analisis Pusat Pertumbuhan dan Autokorelasi Spasial di Kalimantan : Studi Empiris di 55 Kabupaten / Kota , 2000 – 2012 Analysis of Growth Poles and Spatial Autocorrelation in Kalimantan : An Pendahuluan*. *16*(2), 81–104.

Fitriani, R., & Efendi, A. (2019). *Ekonometrika Spasial Terapan Dengan R* (1st ed., Vol. 1). UB Press.

Fujita, N. (2007). Myrdal's Theory of Cumulative Causation. *Evolutionary and Institutional Economics Review*, *3*(2), 275–284. https://doi.org/https://doi.org/10.14441/eier.3.275

Gordon, D., Irving, M., Nandy, S., & Townsend, P. (2005). Multidimensional measures of child poverty. *Social Policy*, *0*. http://www.undp-povertycentre.org/md-poverty

(1975). *Introduction to Regional Science*. Prentice-Hall.

D. (2015). *Ketimpangan Pendapatan Antar Kabupaten/Kota Dan umbuhan Ekonomi di Propinsi Jawa Timur*. *4*(1), 41–66.

Johnston, R. J. (1976). *Classification in Geography (Concepts & Techniques in Modern Geography)*. Geo Abstracts Ltd.

Joseph Stiglitz. (2002). *Globalization and its Discontents*. W. W. Norton & Company.

Kartika, & Yoli. (2007). Pola Penyebaran Spasial Demam Berdarah Dengue Di Kota Bogor Tahun 2005. *Library of IPB University*.

Kasikoen, K. M. (2011). Keterkaitan Antar Wilayah (Studi Kasus : Kabupaten Cilacap). *Jurnal Planesa*, *2*(2), 146–153.

Laksono, H., Rustiadi, E., & Siregar, H. (2018). *Spillover Spasial Negatif Pertumbuhan Ekonomi Antar Kabupaten / Kota Di Provinsi Negative Spatial Spillover Of Economic Growth Inter*. 266–277.

Lamba, A., Novan, R., Lamba, R. A., & Patma, K. (n.d.). *The International Journal of Social Sciences World The Impact of Economic Growth and Capital Expenditures in Supporting Quality Human Development*. https://doi.org/10.5281/zenodo.4067803

Lesage, J. P. (1999). *The Theory and Practice of Spatial Econometrics*.

Lucas, R. E. (1988). On The Mechanics Of Economic Development*. In *Journal of Monetary Economics* (Vol. 22).

Maneepong C. (2012). *Urbanization in Southeast Asia: Issues and Impacts* (T. M. Sheng YK, Ed.; 1st ed.). ISEAS Publishing.

Muhammad Tariq Majeed dan Saima Batool. (2018). Impact of Poverty on Human Development: Evidence from Rural Punjab, Pakistan. *Journal of Rural Development*, *37*, 1–19.

Mundra, S., & Singh, M. (2017). Inter-linkages between human development and economic growth: a sustainable development analysis across Indian states. In *Int. J. Indian Culture and Business Management* (Vol. 15, Issue 2).

Murty, S. (2000). *Regional Disparities: Need and Measures for Balanced Development. In Shukla, A (Ed.), Regional Planning and Sustainable Development*. Kanishka Publisers, Distributors.

Novitasari, D., & Khikmah, L. (2019). *Penerapan Model Regresi Spasial pada Indeks Pembangunan Manusia (IPM) di Jawa Tengah* (Vol. 19, Issue 2).

Olatunji Abdul Shobande dan Adeyemi A. Ogundipe. (2017). Capital Expenditure and Human Development Nexus in Sub-Saharan Africa. *International Journal of Economics and Financial Issues*, *7*, 469–476.

Olivier Blanchard. (2017). *Macroeconomics*. Pearson. http://lccn.loc.gov/2016001144

Omodero, C. O. (2019). Government General Spending and Human Development: A Case Study of Nigeria. *Academic Journal of Interdisciplinary Studies*, *8*(1), 59. https://doi.org/10.2478/ajis-2019-0005

, E. et al. (2014). *Dampak Spillover Pusat Pertumbuhan di Kalimantan*. *2019*. https://doi.org/10.22212/jekp.v5i2.90

Pasaribu, E., Priyarsono, D. S., Siregar, H., & Rustiadi, E. (2015). Multipolarity Effects of Growth Centers Between Kalimantan and Other Major Islands in Indonesia: Can it Diminish Inter-Island Disparity? *International Journal of Sciences: Basic and Applied Research*, *24*(2), 403–415. http://gssrr.org/index.php?journal=JournalOfBasicAndApplied

Paul A. Samuelson. (1958). The Pure Theory of Public Expenditure. *The Review of Economics and Statistics*, *36*, 387–389. meta data Samuelson, P. A. (1954). The pure theory of public expenditure. The Review of Economics and Statistics, 36(4), 387-389. https://www.jstor.org/stable/1925895

Paul A. Samuelson dan William D. Nordhaus diterjemahkan oleh Yati Sumiharti. (1996). *Paul A. Samuelson dan William D. Nordhaus* (Yati Sumiharti, Ed.; 14 (keempatbelas)). Erlangga.

Perroux, F. (1955). *Note sur la notion de pole de croissance? Economic Appliqee*. The Free Press.

Persaulian, B. H. A. A. A. (2013). Analisis Konsumsi Masyarakat Di Indonesia. *Kajian Ekonomi*, *I*(02), 1–23. https://media.neliti.com/media/publications/7109-ID-analisis-konsumsi-masyarakat-di-indonesia.pdf

Pramesti, W., & Indrasetianingsih, A. (2020). *East Java Human Development Index Modeling with Spatial Regression Approach*. *226*(Icss), 1494–1498. https://doi.org/10.2991/icss-18.2018.312

Pratama, A. D., & Ciptawaty, U. (2022). Economic Spatial Patterns and Human Development Index Districts and Cities in Five Southern Sumatera Provinces. *Jurnal Pembangunan Wilayah Dan Kota*, *18*(2), 192–208. https://doi.org/10.14710/pwk.v18i2.36430

Pristiawan, W., & Kuncoro, M. (2016). *Efek Limpahan Pertumbuhan Antar-Kabupaten / Kota di Provinsi Jawa Timur Tahun 2001 – 2013 Growth Spillover E ff ects Among Districts / Municipalities in East Java Province*. *16*(1), 31–46.

Priyadi, U., & Atmadji, E. (2017). Identifikasi Pusat Pertumbuhan Dan Wilayah Hinterland Di Provinsi Daerah Istimewa Yogyakarta. *Ajie*, *2*(2), 193–219. https://doi.org/10.20885/ajie.vol2.iss2.art9

Priyarsono, D. S. (2017). Membangun dari Pinggiran: Tinjauan dari Perspektif Ilmu Ekonomi Regional. *Journal of Regional and Rural Development Planning*, *1*(1), 42. https://doi.org/10.29244/jp2wd.2017.1.1.42-52

Richardson, H. W. (1976). Growth Pole Spillovers: The Dynamics of Backwash and Spread. *Regional Studies*, *10*(1), 1–9. https://doi.org/10.1080/09595237600185011

Robert Chambers. (2011). *PT Gramedia Pustaka Utama*.

Romer, P. M. (1994). American Economic Association The Origins of Endogenous Growth. In *Source: The Journal of Economic Perspectives* (Vol. 8, Issue 1). [illegible]er.

[illegible]E, Saefulhakim HRS, P. D. (2022). *Perencanaan Dan Pengembangan [illegible]yah*. Yayasan Pustaka Obor Indonesia.

Saikia, B. (2019). *Impact of Urban Centre on Countryside in Assam : A Case Study of Tezpur and Its Periphery*. *09*(6), 18–26.

Samallo, F., Lesnussa, Y. A., Wattimena, A. Z., & Matdoan, M. Y. (2018). Pemodelan Spatial Error Model (SEM) Untuk Mengidentifikasi Indeks Pembangunan Manusia di Provinsi Maluku Tahun 2016. *Jurnal Matematika*, *8*(1), 75. https://doi.org/10.24843/jmat.2018.v08.i01.p99

Sangkala, Darmawan, S., Nursini, Andi, A., Agussalim, & Sultan, S. (2019). *Perencanaan Pembangunan Daerah* (Sangkala, Salman Darmawan, Agussalim, & Suhab Sultan, Eds.; 1st ed.). Diandra Kreatif.

Sjafrizal. (2008). *Ekonomi Regional, Teori dan Aplikasi* (Pertama). Baduose Media.

Sukmawati, A. (2022). Analisis Determinan Indeks Pembangunan Manusia di Indonesia Tahun 2019 dengan Spatial Error Model (SEM). *Seminar Nasional Official Statistics*, *2022*(1), 1305–1314. https://doi.org/10.34123/semnasoffstat.v2022i1.1532

Sun, C., Yang, Y., & Zhao, L. (2015). Economic spillover effects in the Bohai Rim Region of China: Is the economic growth of coastal counties beneficial for the whole area? *China Economic Review*, *33*, 123–136. https://doi.org/10.1016/j.chieco.2015.01.008

Suprapto, H. A., Sumaryoto,), & Saleh, S. (2022). The Effect Of Investment On Economic Growth And Human Development Index And Community Welfare (Case Study In Bekasi Regency). Business and Accounting Research (IJEBAR) Peer Reviewed-International Journal, 6. https://jurnal.stie-aas.ac.id/index.php/IJEBAR

Syofya, H., Sakti, S., & Kerinci, A. (2018). Effect of Poverty and Economic Growth on Indonesia Human Development Index. In *Jurnal Ilmiah Universitas Batanghari Jambi* (Vol. 18, Issue 2).

Tarigan, R. (2003). *Ekonomi Regional Teori dan Aplikasi, Bumi Aksara*. Bumi Aksara.

Upoyo Trisno, T., & Oktarina, Y. (n.d.). Pengaruh kemiskinan terhadap indeks pembangunan manusia (ipm) di provinsi sumatera selatan tahun 2016-2020. *Jurnal Ilmiah Akuntansi Dan Keuangan*, *4*(8), 2022. https://journal.ikopin.ac.id/index.php/fairvalue

Vildzah, N., & Muhammad, S. (2016). Faktor-Faktor Yang Mempengaruhi Indeks Pembangunan Manusia di Negara Miskin Asia Dan Afrika. In *JIM) Ekonomi Pembangunan Fakultas Ekonomi dan Bisnis Unsyiah* (Vol. 1, Issue 2).

W. Arthur Lewis. (1954). Economic Development with Unlimited Supplies of Labour. *The Manchester School*, *22*, 139–191.

Wahyu Safitri, D., Darsyah, M. Y., & Wahyu Utami, T. (2016). Pemodelan Spatial Error Model (Sem) Untuk Indeks Pembangunan Pemodelan Spatial Error Model (Sem) Untuk Indeks Pembangunan Manusia (Ipm) Di Provinsi Jawa Tengah. *Statistika*, *2*(November 2014), 9.

. (2014). *Growth Pole Theory As A Concept Based On Innovation Activity Development And Knowledge Diffusion*. Uniwersytet Gdans.

Zaidatul Khikmah, Sudati Nur Sarfiah, & Panji Kusuma Prasetyanto. (n.d.). Pengaruh Kemiskinan, Pertumbuhan Ekonomi Dan Belanja Modal Terhadap IPM di Pulau Sulawesi Tahun2011-2018. *Directory Journal Of Economic*.

LAMPIRAN

SKRIP PENGOLAHAN DATA DALAM BAHASA R

HASIL ANALISIS DATA 2022

Memasukkan data

```
IPM <- read_excel("/Users/macbookpro/Documents/IPM.xlsx", sheet =
"DATA1")

mat<-as.matrix(Matbot15)
Matbot<-mat2listw(mat, style = "W")
class(Matbot)

[1] "listw" "nb"

Mat <-mat2listw(mat, style = "W")
ols<-lm(IPM~PE+BM+KON+PM,IPM)
summary(ols)
Call:
lm(formula = IPM ~ PE + BM + KON + PM, data = IPM)

Residuals:
    Min      1Q  Median      3Q     Max
-3.6411 -1.3767 -0.4414  1.9876  4.2247

Coefficients:
             Estimate Std. Error t value Pr(>|t|)
(Intercept) 60.1436063  8.9572479   6.715 2.04e-06 ***
PE          -0.5630030  0.9648219  -0.584 0.566400
BM           0.2242462  1.4335495   0.156 0.877346
KON          0.0014976  0.0003527   4.246 0.000437 ***
PM          -0.1772250  0.2275868  -0.779 0.445739
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 2.483 on 19 degrees of freedom
Multiple R-squared:  0.673, Adjusted R-squared:  0.6042
F-statistic: 9.776 on 4 and 19 DF,  p-value: 0.0001807

err.ols<-residuals(ols)
moran.test(IPM$IPM,Matbot, randomisation = T, alternative ="great
er")


an I test under randomisation

IPM$IPM
: Matbot
```

```
Moran I statistic standard deviate = 0.58971, p-value = 0.2777
alternative hypothesis: greater
sample estimates:
Moran I statistic       Expectation          Variance
       0.03548625       -0.04347826        0.01793031
```

```
moran.test(err.ols,Matbot, randomisation = T, alternative ="great
er")
```

```
    Moran I test under randomisation

data:  err.ols
weights: Matbot

Moran I statistic standard deviate = 1.9327, p-value = 0.02664
alternative hypothesis: greater
sample estimates:
Moran I statistic       Expectation          Variance
       0.23579317       -0.04347826        0.02087937
```

```
LM<-lm.LMtests(ols,mat2listw(mat,style="W"),test= c ("LMerr", "LM
lag","SARMA","RLMerr","RLMlag"))
summary(LM)
```

```
    Lagrange multiplier diagnostics for spatial dependence
data:
model: lm(formula = IPM ~ PE + BM + KON + PM, data = IPM)
weights: mat2listw(mat, style = "W")

       statistic parameter p.value
LMerr    2.28988         1 0.13022
LMlag    0.38486         1 0.53502
SARMA    3.56446         2 0.16826
RLMerr   3.17961         1 0.07456 .
RLMlag   1.27458         1 0.25891
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
sar<-lagsarlm(ols,data=IPM, mat2listw(mat))
```

```
Warning in mat2listw(mat): style is M (missing); style should be
set to a valid
value
```

```
summary(sar)
```

```
gsarlm(formula = ols, data = IPM, listw = mat2listw(mat))

ls:
```

```
     Min       1Q   Median       3Q      Max
-3.65861 -1.37296 -0.37627  1.92816  4.24048

Type: lag
Coefficients: (asymptotic standard errors)
               Estimate  Std. Error z value  Pr(>|z|)
(Intercept) 59.99116310  8.04753525  7.4546 9.015e-14
PE          -0.60195711  0.91159770 -0.6603    0.5090
BM           0.22878209  1.27547951  0.1794    0.8576
KON          0.00151961  0.00035797  4.2451 2.185e-05
PM          -0.17044856  0.20973187 -0.8127    0.4164

Rho: 0.00068505, LR test value: 0.017414, p-value: 0.89502
Asymptotic standard error: 0.0052124
    z-value: 0.13143, p-value: 0.89544
Wald statistic: 0.017273, p-value: 0.89544

Log likelihood: -53.072 for lag model
ML residual variance (sigma squared): 4.8783, (sigma: 2.2087)
Number of observations: 24
Number of parameters estimated: 7
AIC: 120.14, (AIC for lm: 118.16)
LM test for residual autocorrelation
test value: 1.6185, p-value: 0.2033
```

```
sem<-errorsarlm(ols,data=IPM, mat2listw(mat))
```

```
Warning in mat2listw(mat): style is M (missing); style should be
set to a valid
value
```

```
summary(sem)
```

```
Call:errorsarlm(formula = ols, data = IPM, listw = mat2listw(mat)
)

Residuals:
     Min       1Q   Median       3Q      Max
-3.65863 -1.61799 -0.52253  1.97808  3.36019

Type: error
Coefficients: (asymptotic standard errors)
               Estimate  Std. Error z value  Pr(>|z|)
(Intercept) 57.62345948  7.44439861  7.7405 9.992e-15
            -0.11026427  0.76987703 -0.1432    0.8861
             0.54849594  1.05596685  0.5194    0.6035
             0.00131201  0.00028831  4.5506 5.348e-06
            -0.30876658  0.18929249 -1.6312    0.1029
```

```
Lambda: 0.12721, LR test value: 2.5229, p-value: 0.11221
Asymptotic standard error: 0.052182
    z-value: 2.4377, p-value: 0.014781
Wald statistic: 5.9424, p-value: 0.014781

Log likelihood: -51.81928 for error model
ML residual variance (sigma squared): 4.1255, (sigma: 2.0311)
Number of observations: 24
Number of parameters estimated: 7
AIC: NA (not available for weighted model), (AIC for lm: 118.16)
```

```
gsm<-sacsarlm(ols,data=IPM, mat2listw(mat))
```

```
Warning in mat2listw(mat): style is M (missing); style should be
set to a valid
value
```

```
summary(gsm)


Call:sacsarlm(formula = ols, data = IPM, listw = mat2listw(mat))

Residuals:
    Min      1Q  Median      3Q     Max
-3.6387 -1.6011 -0.5166  2.1003  3.3258

Type: sac
Coefficients: (asymptotic standard errors)
               Estimate  Std. Error z value  Pr(>|z|)
(Intercept) 57.55503899  7.42171549  7.7550 8.882e-15
PE          -0.01580325  0.83775471 -0.0189 0.9849497
BM           0.56407506  1.05112740  0.5366 0.5915176
KON          0.00126757  0.00032939  3.8483 0.0001189
PM          -0.31858235  0.19119299 -1.6663 0.0956563

Rho: -0.0015086
Asymptotic standard error: 0.0058386
    z-value: -0.25839, p-value: 0.7961
Lambda: 0.12994
Asymptotic standard error: 0.051412
    z-value: 2.5274, p-value: 0.011492

LR test value: 2.5885, p-value: 0.2741

Log likelihood: -51.78644 for sac model
    dual variance (sigma squared): 4.1009, (sigma: 2.0251)
    of observations: 24
    of parameters estimated: 8
    9.57, (AIC for lm: 118.16)
```

HASIL ANALISIS DATA 2021-2022

```
IPM <- read_excel("/Users/macbookpro/Documents/IPM.xlsx", sheet =
"DATA2")

mat<-as.matrix(Matbot15)
Matbot<-mat2listw(mat, style = "W")
class(Matbot)

[1] "listw" "nb"

Mat <-mat2listw(mat, style = "W")
ols<-lm(IPM~PE+BM+KON+PM,IPM)
summary(ols)


Call:
lm(formula = IPM ~ PE + BM + KON + PM, data = IPM)

Residuals:
   Min     1Q Median     3Q    Max
-3.971 -1.357 -0.511  1.876  4.439

Coefficients:
             Estimate Std. Error t value Pr(>|t|)
(Intercept) 58.3489504  6.4013577   9.115 1.33e-11 ***
PE          -0.6647820  0.6371661  -1.043    0.303
BM           0.6081986  1.0718830   0.567    0.573
KON          0.0015272  0.0002356   6.481 7.29e-08 ***
PM          -0.1508720  0.1513418  -0.997    0.324
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 2.359 on 43 degrees of freedom
Multiple R-squared:  0.6721,    Adjusted R-squared:  0.6416
F-statistic: 22.04 on 4 and 43 DF,  p-value: 5.986e-10

err.ols<-residuals(ols)
      est(IPM$IPM,Matbot, randomisation = T, alternative ="great


      an I test under randomisation
```

```
data:  IPM$IPM
weights: Matbot

Moran I statistic standard deviate = 0.83156, p-value = 0.2028
alternative hypothesis: greater
sample estimates:
Moran I statistic       Expectation          Variance
      0.035968229      -0.021276596       0.004738932
```

```
moran.test(err.ols,Matbot, randomisation = T, alternative ="great
er")
```

```
    Moran I test under randomisation

data:  err.ols
weights: Matbot

Moran I statistic standard deviate = 3.5182, p-value = 0.0002172
alternative hypothesis: greater
sample estimates:
Moran I statistic       Expectation          Variance
      0.228759458      -0.021276596       0.005050782
```

```
LM<-lm.LMtests(ols,mat2listw(mat,style="W"),test= c ("LMerr", "LM
lag","SARMA","RLMerr","RLMlag"))
summary(LM)
```

```
    Lagrange multiplier diagnostics for spatial dependence
data:
model: lm(formula = IPM ~ PE + BM + KON + PM, data = IPM)
weights: mat2listw(mat, style = "W")

       statistic parameter  p.value
LMerr     8.7512         1 0.003094 **
LMlag     1.0683         1 0.301339
SARMA    10.9349         2 0.004222 **
RLMerr    9.8667         1 0.001683 **
RLMlag    2.1837         1 0.139475
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
sar<-lagsarlm(ols,data=IPM, mat2listw(mat))
```

```
Warning in mat2listw(mat): style is M (missing); style should be
set to a valid
```

```
(sar)
```

```
Call:lagsarlm(formula = ols, data = IPM, listw = mat2listw(mat))

Residuals:
     Min       1Q   Median       3Q      Max
-4.00752 -1.38034 -0.33978  1.69490  4.44929

Type: lag
Coefficients: (asymptotic standard errors)
               Estimate  Std. Error z value  Pr(>|z|)
(Intercept) 58.32797863  6.04561269  9.6480 < 2.2e-16
PE          -0.79452615  0.67036075 -1.1852    0.2359
BM           0.63322967  1.01372774  0.6247    0.5322
KON          0.00157506  0.00024778  6.3566 2.062e-10
PM          -0.13931991  0.14559086 -0.9569    0.3386

Rho: 0.00085541, LR test value: 0.20559, p-value: 0.65025
Asymptotic standard error: 0.0018895
    z-value: 0.45273, p-value: 0.65075
Wald statistic: 0.20496, p-value: 0.65075

Log likelihood: -106.5536 for lag model
ML residual variance (sigma squared): 4.9619, (sigma: 2.2275)
Number of observations: 48
Number of parameters estimated: 7
AIC: 227.11, (AIC for lm: 225.31)
LM test for residual autocorrelation
test value: 5.8166, p-value: 0.015875

sem<-errorsarlm(ols,data=IPM, mat2listw(mat))

Warning in mat2listw(mat): style is M (missing); style should be
set to a valid
value

summary(sem)


Call:errorsarlm(formula = ols, data = IPM, listw = mat2listw(mat)
)

Residuals:
     Min       1Q   Median       3Q      Max
-4.05140 -1.47860 -0.29998  1.77021  3.33385

ror
ients: (asymptotic standard errors)
               Estimate  Std. Error z value  Pr(>|z|)
ept) 54.31731624  5.87604337  9.2439 < 2.2e-16
     -0.06337057  0.56534473 -0.1121   0.91075
```

```
BM           1.10552450  0.85822238  1.2882   0.19769
KON          0.00129875  0.00020414  6.3622 1.989e-10
PM          -0.30728518  0.13597214 -2.2599   0.02383

Lambda: 0.082386, LR test value: 6.7895, p-value: 0.0091696
Asymptotic standard error: 0.019056
    z-value: 4.3234, p-value: 1.5365e-05
Wald statistic: 18.692, p-value: 1.5365e-05

Log likelihood: -103.2617 for error model
ML residual variance (sigma squared): 4.0542, (sigma: 2.0135)
Number of observations: 48
Number of parameters estimated: 7
AIC: NA (not available for weighted model), (AIC for lm: 225.31)
```

```
gsm<-sacsarlm(ols,data=IPM, mat2listw(mat))
```

```
Warning in mat2listw(mat): style is M (missing); style should be
set to a valid
value
```

```
summary(gsm)
```

```

Call:sacsarlm(formula = ols, data = IPM, listw = mat2listw(mat))

Residuals:
     Min       1Q   Median       3Q      Max
-4.04991 -1.47988 -0.31004  1.75842  3.33149

Type: sac
Coefficients: (asymptotic standard errors)
               Estimate  Std. Error z value  Pr(>|z|)
(Intercept) 54.37157562  6.04118767  9.0001 < 2.2e-16
PE          -0.07683909  0.65972051 -0.1165   0.90728
BM           1.10586526  0.85823677  1.2885   0.19756
KON          0.00130230  0.00022295  5.8413  5.18e-09
PM          -0.30730013  0.13597155 -2.2600   0.02382

Rho: 9.5611e-05
Asymptotic standard error: 0.0023889
    z-value: 0.040023, p-value: 0.96807
Lambda: 0.082369
Asymptotic standard error: 0.01909
    z-value: 4.3148, p-value: 1.5975e-05

    value: 6.7911, p-value: 0.033522

elihood: -103.2609 for sac model
dual variance (sigma squared): 4.0542, (sigma: 2.0135)
```

```
Number of observations: 48
Number of parameters estimated: 8
AIC: 222.52, (AIC for lm: 225.31)
```

DATA PENELITIAN

WILAYAH	TAHUN	IPM	PE	BM	PM	KON
Bantaeng	2021	68.99	8.72444311	4.96793654	9.41	11829
Bantaeng	2022	69.69	8.86813735	5.18099672	9.07	12133
Barru	2021	71.13	8.53109412	4.72072853	8.68	11017
Barru	2022	71.53	8.58097705	4.54488926	8.4	11275
Bone	2021	66.4	10.0550866	5.27058639	10.52	9030
Bone	2022	67.01	10.1060908	6.14356312	10.58	9277
Bulukumba	2021	69.62	9.10648761	5.43017862	7.43	10632
Bulukumba	2022	70.34	9.14389176	5.5414596	7.39	10941
Enrekang	2021	72.91	8.49379559	5.53038102	12.47	10973
Enrekang	2022	73.39	8.53018049	5.99861393	12.39	11183
Gowa	2021	70.29	9.61871458	5.83050323	7.54	9504
Gowa	2022	70.99	9.66363328	6.07504714	7.36	9812
Jeneponto	2021	64.56	8.86196659	5.05152129	14.28	9215
Jeneponto	2022	65.13	8.89939377	5.05490733	13.73	9425
Selayar	2021	67.76	8.23365187	5.13125874	12.45	9060
Selayar	2022	68.35	8.26970572	5.28162889	12.24	9446
Luwu	2021	70.85	9.25433333	5.50963122	12.53	10116
Luwu	2022	71.36	9.30970324	5.58754824	12.49	10308
Lutim	2021	73.34	9.68224844	5.64335992	6.94	12886
Lutim	2022	73.92	9.70195688	5.66898397	6.81	13058
Lutra	2021	69.75	9.04682094	5.21629353	13.59	11736
Lutra	2022	70.36	9.09121556	5.84189088	13.22	12105
Maros	2021	70.41	9.42550175	5.7385703	9.57	11032
Maros	2022	71	9.51288347	5.83205841	9.43	11403
Pangkep	2021	69.21	9.76999102	5.21905769	14.28	11519
Pangkep	2022	69.79	9.81812518	5.31826704	13.92	11817
Pinrang	2021	71.45	9.50840511	5.045745	8.81	11956
Pinrang	2022	71.97	9.5526548	5.38164697	8.79	12102
Sidrap	2021	71.54	9.08998691	5.56183481	5.04	12201
Sidrap	2022	72.06	9.1374492	5.44419103	5.11	12379
Sinjai	2021	67.75	8.93285019	5.62729732	8.84	9505
Sinjai	2022	68.33	8.98037611	5.1845886	8.8	9726
Soppeng	2021	68.99	8.93405709	5.35498121	7.53	9558
Soppeng	2022	69.7	8.99397629	5.91676794	7.49	9756
Takalar	2021	67.72	8.84044268	4.94006976	8.25	10543
	2022	68.31	8.88577299	6.03275043	8.25	10746
	2021	69.49	8.47240083	5.04600244	12.27	7434
	2022	69.88	8.52233594	4.95286493	12.18	7584
	2021	69.75	8.58618366	4.97196376	11.99	8134

Torut	2022	70.36	8.63752941	4.95286493	11.65	8494
Wajo	2021	69.62	9.51556369	5.66393223	6.46	12505
Wajo	2022	70.26	9.5390533	5.48292797	6.57	12729
Makassar	2021	82.66	11.7465169	5.77755944	4.82	17097
Makassar	2022	83.12	11.7991009	6.08269825	4.58	17406
Palopo	2021	78.38	8.66012922	5.33141359	8.14	13117
Palopo	2022	78.91	8.7168208	5.57942789	7.78	13404
Pare	2021	78.21	8.54909875	5.24886448	5.4	13786
Pare	2022	78.54	8.60674683	5.29370675	5.41	14027

Matriks Pembobot (24 x 24)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	1
3	0	1	0	0	0	1	0	0	0	0	0	1	1	0	0	1	1	0	0	0	1	0	0	0
4	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0
6	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0
7	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
8	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	0	1	0
10	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
12	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0
13	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1
15	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	1
16	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
18	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
19	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
	1	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0

Keterangan ;

NO	Wilayah
1	Bantaeng
2	Barru
3	Bone
4	Bulukumba
5	Enrekang
6	Gowa
7	Jeneponto
8	Kepulauan Selayar
9	Luwu
10	Luwu Timur
11	Luwu Utara
12	Maros
13	Pangkajene dan Kepulauan
14	Pinrang
15	Sidenreng Rappang
16	Sinjai
17	Soppeng
18	Takalar
19	Tana Toraja
20	Toraja Utara
21	Wajo
22	Makassar
23	Palopo
24	Parepare