

**DAFTAR PUSTAKA**

Anisa, R., Anang, K., & Indahwati. (2014). Cluster information of non-sampled area in small area estimation. *IOSR Journal of Mathematics*, 15-19.

Anisada, S., & Astuti, E. T. (2019). *Pengembangan Aplikasi SAE Dengan Metode SEBLUP*. Jakarta Timur: Program Studi Komputasi Statistik Program Diploma IV.

Apriliansyah, & Wulansari, I. Y. (2021). Implementasi Spatial EBLUP pada Estimasi Tingkat Pengangguran Terbuka Provinsi Banten Tahun 2018. *Seminar Nasional Official Statistics* (pp. 1-6). Jakarta Timur: Sekolah Tinggi Ilmu Statistik.

Asfar, Kurnia, A., & Sadik, K. (2016). Optimum Spatial Weighted in Small Area Estimation. *Global Journal of Pure and Applied Mathematics*, 3977-3989.

Chandra, H., Salvati, N., & Chambers, R. (2007). Small Area Estimation for Spatially correlated populations a comparison of direct and indirect model-based . *Statistics in transition*, 887-906.

Cressie, N. (1991). Small area prediction of undercount using the general linear model, proceedings of statistics symposium 90: measurement and improvement of data quality. *Ottawa: Statistics Canada*, 93-105.

Fay RE dan Herriot RA. (1979). Estimates of income for small places an application of James-Stein procedures to census data. *Journal of the American Statistical Association*, 269-277.

Ito, T., & Kubokawa, T. (2020). Corrected Empirical Bayes Confidence Region in a Multivariate Fay–Herriot Model. *Journal of Statistical Planning and Inference*, 12-32.

Kubacki, J., & Jedrzejczak, A. (2016). SMALL AREA ESTIMATION OF INCOME. *STATISTICS IN TRANSITION*, 367-370.



Kurnia, A. (2009). *Prediksi Terbaik Empirik untuk Model Transformasi Logaritma di Dalam Pendugaan Area Kecil dengan Penerapan pada Data SUSENAS*. Bogor: Pasca Sarjana, Institut Pertanian Bogor.

Kurnia, A., Kusumaningrum, D., Soleh, A., Handayani, D., & Anisa, R. (2015). Small area estimation with winsorization method for poverty alleviation at a sub-district level. *International Journal of Applied Mathematics and Statistics*, 77-84.

Luthfatul, A. (2012). Manfaat Penaksiran Parameter Dengan Metode EBLUP Pada Model Fay-Herriot Untuk Penelitian Konseling. *Jurnal Bimbingan dan Konseling "PSIKOPEDAGOGIA"*, 157-164.

Matualage, D. (2012). *METODE PREDIKSI TAK BIAS LINIER TERBAIK EMPIRIS SPASIAL PADA AREA KECIL UNTUK PENDUGAAN PENGELUARAN PER KAPITA (Studi kasus : Kabupaten Jember Provinsi Jawa Timur)* . Disertasi, Sekolah Pascasarjana. Bogor:Institut Pertanian Bogor.

Mauro, F., Monleon, V. J., Temegen, H., & Ford, K. (2017). Analysis of area level and unit level models for small area estimation in forest inventories assisted with LiDAR auxiliary information. *PLoS ONE*, 1-14.

N, P. M. (2008). Small area estimation: the EBLUP estimator based on spatially correlated random area effects. *Statistical methods and applications Stat. Meth*, 113-141.

N, S. (2004). Small area estimation by spatial models: the spatial empirical best linear unbiased prediction (Spatial EBLUP). *Dipartimento di Statistica "G. Parenti" viale morgagni*, 59-50134.

Nusrang, M., Annas, S., Asfar, Hastuty, & Jajang. (2017). Spatial EBLUP dalam Pendugaan Area Kecil. *Jurnal Sainsmat*, 59-66.



A., & Salvati, N. (2004). Small Area Estimation Considering Spatially correlated Errors: The Unit Level Random Effects Model. *Dipartimento di statistica*, 2-7.

- Petrucci, A., & Salvati, N. (2004). Small Area Estimation Using Spatial Information. The Rathbun Lake Watershed Case Study. *Dipartimento di Statistica*, 2-5.
- Petrucci, A., & Salvati, N. (2004). Small Area Estimation by Spatial Models: the Spatial Empirical Best Linear Unbiased Prediction (Spatial EBLUP). *Dipartimento di Statistica*, 1-10.
- Pratesi, M., & Salvati, N. (2004). Small Area Estimation the EBLUP estimator based on spatially correlated random area effects. *Springer*, 114-118.
- Pusponegoro, N. H., & Rachmawati, R. N. (2018). Spatial Empirical Best Linear Unbiased Prediction in Small Area Estimation of Poverty. *Procedia Computer Science*, 713-714.
- Rao JNK. (2003). *Small Area Estiamtion*. London: Wiley.
- Risal, A. (2021). EXPENDITURE PER CAPITA MODEL WITH SPATIAL SMALL AREA ESTIMATION. *Journal of Statistics*, 38-47.
- Singh, B., Shukla, K., & Kundu, D. (2005). Spatial-temporal models in small area estimation. *Survey Methodology*, 183-195.



# LAMPIRAN



**Lampiran 1.** Data Aktual Untuk  $m = 25$  dan  $\rho = 0,05$ 

	<b>Jumlah Area</b>	<b>Y Actual</b>
$\rho = 0,05$	1	12,601
	2	14,646
	3	11,776
	4	18,972
	5	14,962
	6	12,253
	7	16,477
	⋮	⋮
	18	16,732
	19	17,446
	20	16,213
	21	16,796
	22	17,420
	23	14,671
	24	8,218
	25	16,224



**Lampiran 2.** Data Aktual untuk  $m = 25$  dan  $\rho = 0,25$ 

	<b>Jumlah Area</b>	<b>Y Actual</b>
$\rho = 0,25$	1	12,589
	2	14,561
	3	12,211
	4	19,098
	5	15,372
	6	12,497
	7	16,508
	⋮	⋮
	18	16,584
	19	17,350
	20	16,039
	21	17,051
	22	17,706
	23	14,779
	24	8,558
	25	16,116



**Lampiran 3.** Data Aktual Untuk  $m = 25$  dan  $\rho = 0,50$ 

	<b>Jumlah Area</b>	<b>Y Actual</b>
$\rho = 0,50$	1	12,673
	2	14,594
	3	12,851
	4	19,455
	5	16,046
	6	12,907
	7	16,690
	⋮	⋮
	18	16,578
	19	17,304
	20	15,890
	21	17,696
	22	18,293
	23	15,064
	24	9,775
25	16,254	



**Lampiran 4.** Data Aktual Untuk  $m = 25$  dan  $\rho = 0,75$ 

	<b>Jumlah Area</b>	<b>Y Actual</b>
$\rho = 0,75$	1	13,312
	2	15,216
	3	14,054
	4	20,483
	5	17,363
	6	13,909
	7	17,489
	⋮	⋮
	18	17,208
	19	17,693
	20	16,123
	21	19,308
	22	19,704
	23	15,965
	24	9,775
	25	16,254





**Lampiran 5.** Data Aktual Untuk  $m = 64$  dan  $\rho = 0,05$ 

	<b>Jumlah Area</b>	<b>Y Actual</b>
$\rho = 0,05$	1	13,599
	2	14,892
	3	11,546
	4	19,114
	5	15,091
	6	12,375
	7	14,638
	⋮	⋮
	57	12,708
	58	11,984
	59	15,519
	60	13,214
	61	21,259
	62	13,120
	63	16,429
	64	14,149



**Lampiran 6.** Data Aktual Untuk  $m = 64$  dan  $\rho = 0,25$ 

	<b>Jumlah Area</b>	<b>Y Actual</b>
$\rho = 0,25$	1	13,732
	2	15,004
	3	12,021
	4	19,272
	5	14,930
	6	12,254
	7	14,503
	⋮	⋮
	57	12,657
	58	12,141
	59	15,511
	60	13,601
	61	21,162
	62	13,623
	63	16,856
	64	15,092



**Lampiran 7.** Data Aktual Untuk  $m = 64$  dan  $\rho = 0,50$ 

	<b>Jumlah Area</b>	<b>Y Actual</b>
$\rho = 0,50$	1	14,101
	2	15,399
	3	12,858
	4	19,678
	5	14,847
	6	12,105
	7	14,178
	⋮	⋮
	57	12,614
	58	12,354
	59	15,630
	60	14,184
	61	21,297
	62	14,527
	63	17,892
	64	16,767



**Lampiran 8.** Data Aktual Untuk  $m = 64$  dan  $\rho = 0,75$ 

	<b>Jumlah Area</b>	<b>Y Actual</b>
$\rho = 0,75$	1	15,299
	2	16,662
	3	14,498
	4	20,747
	5	15,210
	6	12,201
	7	14,447
	⋮	⋮
	57	12,723
	58	12,748
	59	16,105
	60	15,241
	61	22,267
	62	16,578
	63	20,554
	64	20,199



**Lampiran 9.** Data Aktual Untuk  $m = 100$  dan  $\rho = 0,05$ 

	<b>Jumlah Area</b>	<b>Y Actual</b>
$\rho = 0,05$	1	13,369
	2	14,700
	3	11,752
	4	18,920
	5	14,668
	6	9,152
	7	15,178
	⋮	⋮
	93	18,333
	94	15,957
	95	19,013
	96	15,357
	97	10,361
	98	12,548
	99	9,873
	100	12,497



**Lampiran 10.** Data Aktual Untuk  $m = 100$  dan  $\rho = 0,25$ 

	<b>Jumlah Area</b>	<b>Y Actual</b>
$\rho = 0,25$	1	13,828
	2	14,715
	3	11,651
	4	18,620
	5	14,611
	6	9,375
	7	15,320
	⋮	⋮
	93	18,575
	94	16,362
	95	19,158
	96	15,649
	97	10,486
	98	12,355
	99	9,730
	100	12,323



**Lampiran 11.** Data Aktual Untuk  $m = 100$  dan  $\rho = 0,50$ 

	<b>Jumlah Area</b>	<b>Y Actual</b>
$\rho = 0,50$	1	14,569
	2	14,850
	3	11,481
	4	18,138
	5	14,469
	6	9,648
	7	15,627
	⋮	⋮
	93	19,101
	94	17,036
	95	19,511
	96	16,078
	97	10,638
	98	12,040
	99	9,419
	100	11,969

**Lampiran 12.** Data Aktual Untuk  $m = 100$  dan  $\rho = 0,75$

	<b>Jumlah Area</b>	<b>Y Actual</b>
$\rho = 0,75$	1	15,835
	2	15,346
	3	11,305
	4	17,433
	5	14,132
	6	9,934
	7	16,298
	⋮	⋮
	93	20,334
	94	18,282
	95	20,324
	96	16,746
	97	10,851
	98	11,641
	99	8,923
	100	11,424

