

- Greenaacre, M. J., *Biplots in Practice*. Barcelona: BBVA Foundation, The Pompeu Fabra University Barcelona, 2010.
- Hair, J. F., Anderson, R. E., Tatham, R. L., and Black, Inc., W.C., *Multivariate Data Analysis*, Seven Edition. Prentice Hall, New Jersey, 2010.
- Badan Pusat Statistik, <https://www.bps.go.id>.
- Johnson, W., *Applied Multivariate Statistical Analysis*, Sixth Edition, Prentice Hall, New Jersey, 2007.
- Jolliffe, I. T., *Principal Component Analysis*, Second Edition, Springer, New York, 2010.
- Jolliffe, I. T., and Cadima, J., Principal component analysis: a review and recent developments. *Phil. Trans. R. Soc. A.374*: 20150202, 2016.
- Machfoedz, I., and Suryani, E., *Pendidikan Kesehatan Bagian Dari Promosi Kesehatan*, Fitrayama, Yogyakarta, 2007.
- Mattjik, A. A., and Sumertajaya, I. M., *Sidik Variabel Ganda*, IPB Press, Bogor, 2011.
- Rifkhatussa, E. F., Yasin, H., and Rusgiyono, A., Analisis Biplot Komponen Utama pada Bank Umum (*Commercial Bank*) yang Beroperasi di Jawa Tengah, *Jurnal Gaussian*, 61-70, 2014.
- Ukalski, K., and Klisz, M., Application of GGE biplot graphs in multi-environment trials on selection of forest trees, *Folia Forestaia Polonica, Series A – Forestry*, Vol. 58 (4), pp. 228-239, 2016.

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