



DAFTAR PUSTAKA

- Ahdika, A., Rosadi, D., Effendie, A. dan Gunardi (2020), ‘Household margin insurance of agricultural sector in Indonesia using a farmer exchange rate index’, *Agricultural Finance Review* **81**(2), 169–188.
- Ahdika, A., Rosadi, D., Effendie, A. R. dan Gunardi (2018), ‘Copula Modeling to Identify the Dependency Structure of Agricultural Production and Its Environment Indicators in Indonesia’, *International Journal of Supply Chain Management* **7**(4), 172–179.
- Ahdika, A., Rosadi, D., Effendie, A. R. dan Gunardi (2019a), ‘Modeling indemnity of revenue-based crop insurance in Indonesia using time-varying copula models’, *AIP Conference Proceedings* **2192**(December).
- Ahdika, A., Rosadi, D., Effendie, A. R. dan Gunardi (2019b), The impact of weather risk on the estimation of yield-based agricultural losses and value at risk using copula models, in ‘62nd ISI World Statistics Congress’, pp. 216–224.
- Ahdika, A., Rosadi, D., Effendie, A. R. dan Gunardi (2021a), ‘An improved agricultural household margin insurance scheme with insured–insurer risk protection using a time-varying copula approach’, **Submitted**.
- Ahdika, A., Rosadi, D., Effendie, A. R. dan Gunardi (2021b), ‘Conditional Expectation Formula of Copulas for Higher Dimensions and Its Application’, *Journal of Mathematical and Computational Science* **11**(4), 4877–4904.
- Ahdika, A., Rosadi, D., Effendie, A. R. dan Gunardi (2021c), Determining the optimal window length of the time-varying copula parameter : a simulation study, in ‘Journal of Physics: Conference Series’, Vol. 1821 01201.
- Ahdika, A., Rosadi, D., Effendie, A. R. dan Gunardi (2021d), ‘Measuring Dynamic Dependency using Time-Varying Copulas with Extended Parameters : Evidence from Exchange Rates Data’, *MethodsX* **8**(101322).



- Almeida, C. dan Czado, C. (2012), ‘Efficient Bayesian inference for stochastic time-varying copula models’, *Computational Statistics and Data Analysis* **56**(6), 1511–1527.
- Ang, A. dan Bekaert, G. (2002), ‘International Asset Allocation with Time-Varying Correlations’, *Review of Financial Studies* **15**(4), 1137–1187.
- Ashenbrenner, C. X. (2010), ‘Crop Insurance Reserving’, *E-Forum Casualty Actuarial Society*.
- Ausin, M. C. dan Lopes, H. F. (2010), ‘Time-Varying Joint Distribution Through Copulas’, *Computational Statistics and Data Analysis* **54**(11), 2383–2399.
- Barnett, B. J., Black, J. R., Hu, Y. dan Skees, J. R. (2005), ‘Is Area Yield Insurance Competitive with Farm Yield Insurance ?’, *Journal of Agricultural and Resource Economics* **30**(2), 285–301.
- Barnett, B. J. dan Mahul, O. (2007), ‘Weather Index Insurance for Agriculture and Rural Areas in Lower-Income Countries’, *American Journal of Agricultural Economics* **89**(5), 1241–1247.
- Bartram, S. M., Taylor, S. J. dan Wang, Y.-h. (2007), ‘The Euro and European Financial Market Dependence’, *Journal of Banking and Finance* **31**, 1461–1481.
- Blosser, R. (1965), ‘Corn-hog ratio is poor indicator of hog profits’, *Journal of Farm Economics* **47**(2), 467–468.
- Bokusheva, R. (2011), ‘Measuring dependence in joint distributions of yield and weather variables’, *Agricultural Finance Review* **71**(1), 120–141.
- BPS-Statistics, I. (2020), Statistik Nilai Tukar Petani 2019, Technical report, Badan Pusat Statistik, Jakarta.
- Buhlmann, H. (1970), *The Mathematical Methods in Risk Theory*, Springer Verlag.
- Buhlmann, H. (1980), ‘An Economic Premium Principle’, *Astin Bulletin* **11**, 52–60.



- Bunyasiri, I. N. dan Sirisupluxana, P. (2018), ‘The Possibility of Implementing the Area Yield Index Rice Insurance Product in Thailand’.
- Chalise, L., Coble, K. H., Barnett, B. J. dan Miller, J. C. (2017), ‘Developing Area-Triggered Whole-Farm Revenue Insurance’, *Journal of Agricultural and Resource Economics* **42**(1), 27–44.
- Chantarat, S., Mude, A. G., Barrett, C. B. dan Carter, M. R. (2012), ‘Designing Index-Based Livestock Insurance for Managing Asset Risk in Northern Kenya’, *The Journal of Risk and Insurance* **80**(0), 1–33.
- Chollete, L., Heinen, A. dan Valdesogo, A. (2009), ‘Modeling International Financial Returns with A Multivariate Regime-Switching Copula’, *Journal of Financial Econometrics* **7**(4), 437–480.
- Cossette, H., Côté, M.-p., Marceau, E. dan Moutanabbir, K. (2013), ‘Multivariate distribution defined with Farlie Gumbel Morgenstern copula and mixed Erlang marginals : Aggregation and capital allocation’, *Insurance: Mathematics and Economics* **52**(3), 560–572.
- Crane, G. J. dan Hoek, J. V. D. (2008), ‘Conditional expectation formulae for copulas’, *Australian and New Zealand Journal of Statistics* **50**(1), 53–67.
- Creal, D. dan Koopman, S. J. A. N. (2013), ‘Generalized autoregressive score models with applications’, *Journal of Applied Econometrics* **28**(January 2012), 777–795.
- Dalhaus, T., Musshoff, O. dan Finger, R. (2018), ‘Phenology Information Contributes to Reduce Temporal Basis Risk in Agricultural Weather Index Insurance’, *Scientific Reports* (January 2018), 1–10.
- Darsow, W. F., Nguyen, B. dan Olsen, E. T. (1992), ‘Copulas and Markov Processes’, *Illinois Journal of Mathematics* **36**(4), 600–642.
- Deng, X., Barnett, B. J. dan Vedenov, D. V. (2007), ‘Is There a Viable Market



- for Area-Based Crop Insurance?’, *American Journal of Agricultural Economics* **89**(2), 508–519.
- Dias, A. dan Embrechts, P. (2010), ‘Modeling exchange rate dependence dynamics at different time horizons’, *Journal of International Money and Finance* **29**(8), 1687–1705.
- Direktorat Jenderal Anggaran (2016), Analisis Strategi Pencapaian Efektivitas Pelaksanaan Anggaran Asuransi Pertanian dalam APBN Melalui Analisis SWOT, Technical report, Direktorat Anggaran Bidang Perekonomian dan Kemaritiman.
- Duarte, G. V. dan Ozaki, V. A. (2019), ‘Pricing Crop Revenue Insurance Using Parametric Copulas*’, *Revista Brasileira de Economia* **73**(3), 325–343.
- Embrechts, P., Lindskog, F. dan Mcneil, A. (2001), Modelling dependence with copulas and applications to risk management, in S. Rachev, ed., ‘Handbook of Heavy Tailed Distributions in Finance’, Elsevier Science B.V., Switzerland, pp. 357 – 371.
- Embrechts, P., McNeil, A. dan Straumann, D. (1999), ‘Correlation Pitfalls and Alternatives’, *Risk Magazine* pp. 69–71.
- Feng, L. (2017), ‘The Feasibility Analysis and Scheme Design of Raw Milk Price Index Insurance in China’, *Archive of Business Research* **5**(11), 147–158.
- Fisher, N. I. (2004), ‘Copulas’, *Encyclopedia of statistical sciences* **2**, 1–5.
- Frahm, G., Junker, M. dan Schmidt, R. (2005), ‘Estimating the tail-dependence coefficient : Properties and pitfalls’, *Insurance: Mathematics and Economics* **37**, 80–100.
- Galton, F. (1889), ‘Co-relations and Their Measurement’, *Proceedings of the Royal Society of London* **45**(273-279), 135–145.
- Goodwin, B. K. dan Hungerford, A. (2014), ‘Copula-Based Models of Systemic Risk in U.S. Agriculture: Implications for Crop Insurance and Reinsurance Contracts’, *American Journal of Agricultural Economics* **97**(3), 879–896.



Goodwin, B. K., Roberts, M. C. dan Coble, K. H. (2000), ‘Measurement of Price Risk in Revenue Insurance : Implications of Distributional Assumptions’, *Journal of Agricultural and Resource Economics* **25**(1), 195–214.

Hafner, C. M. dan Manner, H. (2012), ‘Dynamic Stochastic Copula Models: Estimation, Inference, and Applications’, *Journal of Applied Econometrics* **27**(July 2010), 269–295.

Hafner, C. M. dan Reznikova, O. (2010), ‘Efficient estimation of a semiparametric dynamic copula model’, *Computational Statistics and Data Analysis* **54**(11), 2609–2627.

Hendiawan, M. (2019), ‘Tren Positif Realisasi AUTP, Buktikan Banyak Lahan Terlindungi Asuransi’.

URL: <https://tabloidsinartani.com/detail/indeks/agri-sarana/7911-Tren-Positif-Realisasi-AUTP-Buktikan-Banyak-Lahan-Terlindungi-Asuransi>

Hernández, L., Tejero, J. dan Vinuesa, J. (2014), Maximum Likelihood Estimation of the correlation parameters for elliptical copulas.

URL: <http://arxiv.org/abs/1412.6316>

Hess, U. dan Syroka, J. (2005), ‘Weather-based Insurance in Southern Africa The Case of Malawi’, *Agriculture and Rural Development Discussion Paper* **13**.

Hu, X., He, J. dan Ly, H. (2007), ‘Generating Multivariate Nonnormal Distribution Random Numbers Based on Copula Function’, *Journal of Information and Computing Science* **2**(3), 191–196.

Jasindo, A. (2020), ‘Jasindo Agri’.

URL: <http://www.jasindo.co.id/product/ritel/agri>

Joe, H. (1997), *Multivariate Models and Dependence Concepts*, Chapman & Hall, London.



Johnson, L., Wandera, B., Jensen, N. dan Banerjee, R. (2019), ‘Competing Expectations in an Index-Based Livestock Insurance Project’, *The Journal of Development Studies* **55**(6), 1221–1239.

Johnson, N. L. dan Kott, S. (1975), ‘On some generalized farlie-gumbel-morgenstern distributions’, *Communications in Statistics* **4**(5), 415–427.

Jondeau, E. dan Rockinger, M. (2006), ‘The Copula-GARCH Model of Conditional Dependencies: An International Stock Market Application’, *Journal of International Money and Finance* **25**(5), 827–853.

Kahane, Y. (1979), ‘The Theory of Insurance Risk Premiums - A Re-Examination in the Light of Recent Development in Capital Market Theory’, *The Astin Bulletin* **10**, 223–239.

Kang, M. G. (2007), *Innovative agricultural insurance products and schemes*, Food and Agriculture Organization.

Kementerian Pertanian Republik Indonesia (2015), ‘Asuransi Usaha Tani Padi, Solusi Kegagalan Panen’.

URL: <http://www.pertanian.go.id/home/?show=news&act=view&id=1609>

Kendall, M. G. (1955), ‘Rank Correlation Methods’.

Klugman, S. A., Panjer, H. H. dan Willmot, G. E. (2012), *Loss Models, From Data to Decisions*, fourth edn, John Wiley & Sons, Inc., New Jersey.

Kolev, N. dan Paiva, D. (2009), ‘Copula-based regression models: A survey’, *Journal of Statistical Planning and Inference* **139**(11), 3847–3856.

Kotz, S., Balakrishnan, N. dan Johnson, N. L. (2000), *Continuous Multivariate Distributions Volume 1: Models and Applications*, second edn, John Wiley & Sons, Inc., Canada.

Lema, D., Gastaldi, L., Gallacher, M. dan Galetto, A. (2019), ‘Willingness to Pay for Weather-Based Index Insurance in Milk Production’, *Revista de Investigacion en Modelos Financieros* **1**(8), 52–69.



Leong, Y. K. dan Valdez, E. A. (2005), ‘Claims Prediction with Dependence using Copula Models’.

Mahul, O. dan Wright, B. D. (2003), ‘Designing Optimal Crop Revenue Insurance’, *American Journal of Agricultural Economics* **85**(3), 580–589.

Makki, S. S. (2002), Crop Insurance: Inherent Problems and Innovative Solutions, in L. Tweeten dan S. R. Thompson, eds, ‘Agricultural Policy for the 21st Century’, Iowa State Press, Ohio, USA, pp. 109–126.

Manner, H., Alavi Fard, F., Pourkhanali, A. dan Tafakori, L. (2019), ‘Forecasting the joint distribution of Australian electricity prices using dynamic vine copulae’, *Energy Economics* **78**, 143–164.

Manner, H. dan Reznikova, O. (2012), ‘A Survey on Time-Varying Copulas: Specification, Simulations, and Application’, *Econometric Reviews* **31**(6), 654–687.

Masarotto, G. dan Varin, C. (2017), ‘Gaussian Copula Regression in R’, *Journal of Statistical Software* **77**(8), 1–26.

Meilke, K. D. (1977), ‘Another Look at the Hog-Corn Ratio’, *American Journal of Agricultural Economics* **59**(1), 216–219.

Merritt, M. G., Griffith, A. P., Boyer, C. N. dan Lewis, K. E. (2017), ‘Probability of Receiving an Indemnity Payment from Feeder Cattle Livestock Risk Protection Insurance’, *Journal of Agricultural and Applied Economics* **49**(3), 363–381.

Miranda, M. J. (1991), ‘Area-Yield Crop Insurance Reconsidered’, *American Journal of Agricultural Economics* **73**(2), 233–242.

Miranda, M. J. dan Glauber, J. W. (1997), ‘Systemic Risk, Reinsurance, and the Failure of Crop Insurance Markets’, *American Journal of Agricultural Economics* **79**(1), 206–215.

Mishra, A. K. dan Goodwin, B. K. (2006), ‘Revenue Insurance Purchase Decisions of Farmers’, *Applied Economics* **38**(2), 149–159.



- Mude, A., Chantarat, S., Barrett, C. B., Carter, M., Ikegami, M. dan Mcpeak, J. (2010), ‘Insuring Against Drought Related Livestock Mortality : Piloting Index Based Livestock Insurance in Northern Kenya’, *Available at SRRN 1844745* pp. 1–25.
- National Crop Insurance Services (2011), Crop Insurance Plan Comparison, Technical report.
- URL:** <http://www.eqgroup.com/Pdf/ACE/CropInsurancePlanComparison.pdf>
- Nelsen, R. B. (2006), *An Introduction to Copulas*, second edn, Springer Science+Business Media, Inc., New York.
- Noh, H., El Ghouch, A. dan Bouezmarni, T. (2013), ‘Copula-based regression estimation and inference’, *Journal of the American Statistical Association* **108**(502), 676–688.
- Nugraha, J. (2017), Highlight of Agriculture Insurance in Indonesia, Technical Report November, ACA Asuransi.
- Pai, J. dan Ravishanker, N. (2020), ‘Livestock Mortality Catastrophe Insurance using Fatal Shock Process’, *Insurance: Mathematics and Economics* **90**, 58–65.
- Parsa, R. A. dan Klugman, S. A. (2011), ‘Copula Regression’, *Variance* **5**(1), 45–54.
- Patton, A. J. (2006), ‘Modelling Asymmetric Exchange Rate Dependence’, *International Economic Review* **47**(2), 527–556.
- Pearson, K. (1895), ‘Note on regression and inheritance in the case of two parents’, *Proceedings of the Royal Society of London* **58**(347-352), 240—242.
- Pelletier, D. (2006), ‘Regime switching for dynamic correlations’, *Journal of Econometrics* **131**(1-2), 445–473.
- Quiggin, J. (1994), The Optimal Design of Crop Insurance, in D. L. Hueth dan W. H. Furtan, eds, ‘Economics of Agricultural Crop Insurance: Theory and Evidence’, Springer Science+Business Media, Inc., New York, pp. 115–133.



- Ramchand, L. dan Susmel, R. (1998), ‘Volatility and Cross Correlation Across Major Stock Markets’, *Journal of Empirical Finance* **5**, 397–416.
- Ramsey, A. F., Goodwin, B. K. dan Ghosh, S. K. (2019), ‘How High the Hedge: Relationships between Prices and Yields in the Federal Crop Insurance Program’, *Journal of Agricultural and Resource Economics* **44**(2), 227–245.
- Rodriguez, J. C. (2007), ‘Measuring financial contagion: A Copula approach’, *Journal of Empirical Finance* **14**(3), 401–423.
- Shirsath, P., Vyas, S., Aggarwal, P. dan Rao, K. N. (2019), ‘Designing Weather Index Insurance of Crops for the Increased Satisfaction of Farmers, Industry and the Government’, *Climate Risk Management* **25**(June), 1–12.
- Sibiko, K. W., Veettill, P. C. dan Qaim, M. (2018), ‘Small Farmers’ Preferences for Weather Index Insurance: Insights from Kenya’, *Agriculture & Food Security* **7**(53), 1–14.
- Sibuya, M. (1960), ‘Bivariate Extreme Statistics, I’, *Annals of the Institute of Statistical Mathematics* **11**(3), 195–210.
- Skees, J. R. (2003), Risk Management Risk Management Challenges in Rural Financial Markets : Blending Risk Management Innovations with Rural Finance, in ‘Risk Management’, Presented in Paving the Way Forward for Rural Finance International Conference.
- Skees, J. R., Black, J. R. dan Barnett, B. J. (1997), ‘Designing and Rating an Area Yield Crop Insurance Contract’, *American Journal of Agricultural Economics* **79**(May), 430–438.
- Sklar, A. (1959), ‘Distribution functions of n dimensions and margins’, *Publications of the Institute of Statistics of the University of Paris* **8**, 229–231.
- Sumarno (2006), ‘Periodisasi Musim Tanam Padi Sebagai Landasan Manajemen Produksi Beras Nasional’.



- Tiwari, S., Coble, K. H., Harri, A. dan Barnett, B. J. (2017), Hedging the Price Risk of Crop Revenue Insurance Through the Options Market, Technical Report February.
- Torabi, S., Dourandish, A., Daneshvar, M., Kianirad, A. dan Mohammadi, H. (2019), ‘Weather-Based Index Insurance Pricing- Canonical Vine Copula Function Approach’, *Journal of Agricultural Science and Technology* **21**, 1–14.
- Turvey, C. G., Woodard, J. dan Liu, E. (2014), ‘Financial engineering for the farm problem’, *Agricultural Finance Review* **74**(2), 271–286.
- Url, T., Sinabell, F. dan Heinschink, K. (2018), ‘Addressing basis risk in agricultural margin insurances The case of wheat production in Austria’, *Agricultural Finance Review* **78**(2), 233–245.
- Vergara, O., Zuba, G., Doggett, T. dan Seaquist, J. (2008), ‘Modeling the Potential Impact of Catastrophic Weather on Crop Insurance Industry Portfolio Losses’, *American Journal of Agricultural Economics* **90**(5), 1256–1262.
- Wenner, M. dan Arias, D. (2003), ‘Agricultural Insurance in Latin America : Agricultural Insurance in Latin America : Where Are We?’.
- Wolf, C. A. (2010), ‘Understanding the milk-to-feed price ratio as a proxy for dairy farm profitability’, *Journal of Dairy Science* **93**(10), 4942–4948.
- Xu, D., Yuan, J. dan Xing, M. (2018), A Time-varying Vine Copula Model for Dependence Analysis of Failure System, in ‘IEEE’.
- Xu, W., Filler, G., Odening, M. dan Okhrin, O. (2010), ‘On the systemic nature of weather risk’, *Agricultural Finance Review* **70**(2), 267–284.
- Ye, T., Hu, W., Barnett, B. J., Wang, J. dan Gao, Y. (2020), ‘Area Yield Index Insurance or Farm Yield Crop Insurance ? Chinese Perspectives on Farmers ’ Welfare and Government Subsidy Effectiveness’, *Journal of Agricultural Economics* **71**(1), 144–164.



Young, V. R. (2014), ‘Premium Principles’, *Wiley StatsRef* pp. 1–11.

Zhu, Y., Ghosh, S. K. dan Goodwin, B. K. (2008), ‘Modeling Dependence in the Design of Whole Farm - A Copula-Based Model Approach’, *Selected Paper prepared for presentation at the American Agricultural Economics Association Annual Meeting, July 27 - 29* pp. 27–29.