

CURRICULUM VITAE

NAME: Makoto Yano

DATE OF BIRTH: May 27, 1952

CITIZENSHIP: JAPAN

EMAIL: yano@kier.kyoto-u.ac.jp

CURRENT POSITIONS:

- Specially Appointed Professor, Institute of Economic Research, Kyoto University
- Visiting Professor, Graduate School of Medicine, Kyoto University
- Specially Appointed Professor, Sophia University
- Emeritas Professor, Kyoto University

OFFICE ADDRESS:

Institute of Economic Research, Kyoto University, Yoshida-honmachi, Sakyo-ku, Kyoto
606-8501, Japan

FIELD OF SPECIALIZATION:

Market Quality Theory
International Economics
Macro Dynamics
Innovation
Industrial Revolution

PROFESSIONAL SERVICE:

Current:

Member, The Japan Academy, Dec 2021 -

Associate Council Member, Science Council of Japan, 2011 -

Past:

Executive Council, IEFS Japan, 1995-2018.

President, IEFS Japan, 2013-2018.

Council, Japanese Economic Association, 1996-2002.

Executive Council, Japanese Economic Association, 1996-1999.

Executive Council, Japan Law and Economics Association, 2003-2008.

Council, Japanese Economic Association, 2005-2008.

Vice President, Japanese Economic Association, 2007-2008.

President, Japanese Economic Association, 2008-2009.

Academic Director, Western Economic Association International, 2011-2015

ACADEMIC EDITORSHIP:

Current:

Book Series Editor, *Economics, Law, and Institution in Asia Pacific*, Springer 2015 -

Past:

Associate Editor, Japanese Economic Review, 1995-1997.
Associate Editor, Economic Studies Quarterly, 1991-1994.
Associate Editor, Economic Theory, 1995-2001.
Reviewer, Mathematical Reviews, 1995-
Coeditor, Japanese Economic Review, 1997-1999.
Coeditor, Keio Economic Studies, 1997-2003.
Member of Editorial Board, Annals of Mathematical Economics, 1998-2017.
Managing Editor, Japanese Economic Review, 1999-2003.
Editor, Law and Economics Review, 2003-2008.
Editor (Founder), International Journal of Economic Theory, 2005-2019.
Editor, Pacific Economic Review, 2011-2019.

HISTORY OF EDUCATION:

March 1977 ---- B.A., Faculty of Economics, University of Tokyo
February 1980-- M.A., Department of Economics, University of Rochester
November 1981 ----- Ph.D., Department of Economics, University of Rochester

Ph.D. Thesis:

Title: “Trade, Capital Accumulation and Competitive Markets”
Advisers: Professors Lionel McKenzie and Ronald Jones

HISTORY OF EMPLOYMENT:

Permanent:

July 1981 - December 1981 -- Instructor
Department of Economics, Cornell University
January 1982 - June 1985 ---Assistant Professor
Department of Economics, Cornell University
July 1985 - May 1986 --Assistant Professor
Department of Economics, Rutgers University
June 1986 - March 1994 -- Associate Professor
Faculty of Economics, Yokohama National University
April 1994 - September 1996 -- Professor
Faculty of Economics, Yokohama National University
October 1996 - March 2007 ---Professor
Faculty of Economics, Keio University
April 2007 - March 2018 ---Professor
Institute of Economic Research, Kyoto University
April 2010 - March 2012 --- Chair
June 2011 - March 2018 --- Head, Center for Advanced Policy Studies

April 2016 - March 2020 --- President, Chief Research Officer
Research Institute of Economy, Trade and Industry
April 2020 – December 2022 --- Chairman
Research Institute of Economy, Trade and Industry
April 2018 --- Emeritus Professor, Kyoto University
December 2021 --- Member
Japan Academy

Temporary:

April 2007 - March 2010 -- Visiting Professor
Faculty of Economics, Keio University
September 1990 - August 1992 -- Visiting Associate Professor
Department of Economics, University of Southern California
April 1993 - March 1994 -- Visiting Associate Professor
Institute of Economic Research, Kyoto University
April 2015 - March 2016 --- Senior Research Adviser
Research Institute of Economy, Trade and Industry
April 2016 - March 2020 --- Visiting Professor
Chobu University
January 2019 --- Specially Appointed Professor
Institute of Economic Research, Kyoto University
April 2019 --- Specially Appointed Professor
Jochi University

TEACHING EXPERIENCES:

Undergraduate Level:

Introductory Microeconomics (Jochi, Yokohama)
Intermediate Microeconomics (Keio, Yokohama, USC, Rutgers, Cornell)
International Trade (USC, Rutgers, Cornell)
Mathematical Economics (Keio, Yokohama, Cornell)
Public Economics (Keio)
Markets and Law (Keio)

Graduate Level:

International Finance (USC)
International Trade (Yokohama, USC, Rutgers, Cornell)
Introductory Microeconomics (Keio, Yokohama)
Mathematical Economics (Yokohama, Cornell)
General Equilibrium Theory (Cornell)
Market Quality Economics (Kyoto, Keio)
Nonlinear Macroeconomic Dynamics (Kyoto, Hokkaido, Keio)
Law and Economics (Keio Law School)

Others

Applied Microeconomic and Law (Ministry of Finance)

RESEARCH GRANTS:

Science Grant:

Ministry of Education Science Grant S --- Principal Investigator
“Globalization and the Japanese Economy-People, Goods, Money, and Social
Overhead Capital-” 2007-2010 (\$450,000).

Ministry of Education Specially Promoted Grant --- Principal Investigator
“Complex Dynamic Analysis on Economic Crisis and Social Infrastructure”
2011-2015 (\$4,300,000).

Ministry of Education Science Grant A --- Principal Investigator
“Building and Analyzing High-Resolution Consumption Bigdata toward Evidence-
Based Policy Making,” 2016-2020 (\$250,000).

Center of Excellence Programs:

Keio University 21 Century Center of Excellence Program --- Subleader
“Development of a Theory of Market Quality and an Empirical Analysis Using Panel
Data” at Keio University Economics and Commerce Department, 2003-2008
(\$12,000,000).

Keio University-Kyoto University Joint Global Center of Excellence Program 2008 - 2014
--- Kyoto University Leader
“Raising Market Quality - Integrated Design of “Market Infrastructure”, ”
2009-2014 (\$150,000,000 Total, \$4,000,000 for Kyoto).

PUBLICATIONS

Book Edited:

The Japanese Economy - A Market Quality Perspective, Keio University Press, 2008.

*Nonlinear Dynamics in Equilibrium Models: Chaos, Cycles and Indeterminacy, Collected
Essays of Kazuo Nishimura*, John Stachurski, Alain Venditti and Makoto Yano (eds),
Springer, 2012.

Blockchain and Crypto Currency: Building A High-Quality Marketplace for Crypt Data,
Makoto Yano, Chris Dai, Kenichi Masuda and Yoshio Kishimoto, eds., Springer 2020.

Socio-Life Science and the COVID-19 Outbreak: Public Health and Public Policy, Makoto
Yano, Fumihiko Matsuda, Anavaj Sakuntabhai and Shigeru Hirota, eds., Springer 2022.

Academic Papers (Refereed Journal) :

1. “Turnpike Theory: Some Corrections,” *Econometrica* 48-7, 1839-1840, November

1980 (Lionel McKenzie and Makoto Yano).

2. "A Note on the Existence of an Optimal Capital Accumulation in the Continuous Time Horizon," *Journal of Economic Theory* 27-2, 421-429, August 1982.
3. "Welfare Aspects of the Transfer Problem," *Journal of International Economics* 15, 277-289, 1983.
4. "Competitive Equilibria on Turnpikes in a McKenzie Economy, I: A Neighborhood Turnpike Theorem," *International Economic Review* 25-3, 695-717, October 1984.
5. "The Primal Route to the Turnpike and Asymptotic Stability," *Journal of Mathematical Economics* 13, 225-234, 1984.
6. "The Turnpike of Dynamic General Equilibrium Paths and Its Insensitivity to Initial Conditions," *Journal of Mathematical Economics* 13, 235-254, 1984.
7. "Competitive Equilibria on Turnpikes in a McKenzie Economy, II: An Asymptotic Turnpike Theorem," *International Economic Review* 26-3, 661-669, October 1985.
8. "Forward Exchange, Futures Trading and Spot Price Variability: A General Equilibrium Approach," *Econometrica* 55-6, 1433-1450, November, 1987 (Paul A. Weller and Makoto Yano).
9. "Voluntary Export Restraints and Expectations: An Analysis of Export Quotas in Oligopolistic Markets," *International Economic Review* 30-4, 707-723, November 1989.
10. "Comparative Statics in Dynamic Stochastic Models: Differential Analysis of a Stochastic Modified Golden Rule State in a Banach Space," *Journal of Mathematical Economics* 18, 169-185, 1989.
11. "A Local Theory of Cooperative Games," *International Journal of Game Theory* 19, 301-324, 1990.
12. "Von Neumann Facets and the Dynamic Stability of Perfect Foresight Equilibrium Paths in Neo-Classical Trade Models," *Journal of Economics* 51-1, 27-69, 1990.
13. "Teoria del Equilibrio con Sendas Convertentes," *Cuadernos Economicos* 46-3, 27-59, 1990.
14. "International Transfers: Strategic Losses and the Blocking of Mutually Advantageous Transfers," *International Economic Review* 32-2, 371-382, May 1991.
15. "Temporary Transfers in a Simple Dynamic General Equilibrium Model," *Journal of Economic Theory* 54-2, 372-388, August 1991.
16. "Business Cycles and Complex Non-Linear Dynamics," *Chaos, Solitons and Fractals* 2, 95-102, 1992 (Kazuo Nishimura and Makoto Yano).

17. "Interlikage in the Endogenous Real Business Cycles of International Economies," *Economic Theory* 3, 151-168, 1993 (Kazuo Nishimura and Makoto Yano).
18. "Optimal Chaos, Non-Linearity and Feasibility Conditions," *Economic Theory* 4, 689-704, 1994 (Kazuo Nishimura and Makoto Yano).
19. "Ergodic Chaos in Optimal Growth Models with Low Discount Rates," *Economic Theory* 4, 705-717, 1994 (Kazuo Nishimura, Gerhard Sorger and Makoto Yano).
20. "Social Capital as Public Goods and Business Cycles," *Ricerche Economiche* 18, 185-193, 1994 (Kazuo Nishimura and Makoto Yano).
21. "Pecuniary Externalities of Futures Trading and Constrained Suboptimality," *Financial Economics* 1-1, 67-87, December 1994.
22. "Durable Capital and Chaos in Competitive Business Cycles," *Journal of Economic Behavior and Organization* 27, 165-181, 1995 (Kazuo Nishimura and Makoto Yano).
23. "Non-Linearity and Business Cycles in a Two-Sector Equilibrium Model: An Example with Cobb-Douglas Production Functions," *Non-Linear Analysis in Mathematics and Economic Theory*, T. Maruyama and W. Takahashi, eds., Springer-Verlag, 1995 (Kazuo Nishimura and Makoto Yano).
24. "Non-Linear Dynamics and Chaos in Optimal Growth: An Example," *Econometrica* 63-4, 981-1001, July 1995 (Kazuo Nishimura and Makoto Yano).
25. "On the Least Upper Bound of Discount Factors that are Compatible with Optimal Period-Three Cycles," *Journal of Economic Theory* 69-2, 306-333, May 1996 (Kazuo Nishimura and Makoto Yano).
26. "Chaotic Solutions in Dynamic Linear Programming," *Chaos, Solitons and Fractals* 7-11, 1941-1953, 1996 (Kazuo Nishimura and Makoto Yano).
27. "On the Existence of Chaotic Solutions in Dynamic Linear Programming," *Proceeding on the International Congress on Modelling and Simulation*, ed. by D. McDonald and M. McAleer, Modelling an Simulation Society, 1997.
28. "On the Dual Stability of a von Neumann Facet and the Inefficacy of Temporary Fiscal Policy," *Econometrica* 66-2, 427-452, March 1998.
29. "Interior Optimal Chaos with Arbitrarily Low Discount Rates," *Japanese Economic Review* 49-3, 223-233, September 1998 (Kazuo Nishimura, Tadashi Shigoka and Makoto Yano).
30. "The Role of Capital Depreciation in Multi-Sector Models," *Journal of Economic Behavior and Organization* 33, 467-479, 1998 (Gary Baierla, Kazuo Nishimura and Makoto Yano).

31. "Chaotic Solutions in Infinite-Time Horizon Linear Programming and Economic Dynamics," *Advances in Mathematical Economics* 1, 115-126, 1999 (Kazuo Nishimura and Makoto Yano).
32. "Aid, Non-Traded Goods and the Transfer Paradox in Small Countries," *American Economic Review* 89-3, 431-449, June 1999 (Makoto Yano and Jeffrey B. Nugent).
33. "Stability and Turnpike Theorems in Dynamic Competitive Equilibrium," *Japanese Economic Review*, 50-4, 398-421, 1999.
34. "On the Existence of Chaotic Solutions in Dynamic Linear Programming," *Mathematics and Computers in Simulation* 48, 487-496, 1999 (Kazuo Nishimura and Makoto Yano).
35. "Trade Imbalance and Domestic Market Competition Policy," *International Economic Review*, 42-3, 929-950, 2001.
36. "Chaotic Equilibrium Dynamics in Endogenous Growth Models," *Journal of Economic Theory* 96, 97-132, 2001 (Michele Boldrin, Kazuo Nishimura, Tadashi Shigoka and Makoto Yano).
37. "Trade, Vertical Production Chain, and Competition Policy," *Review of International Economics* 11-2, 237-252, 2003 (Makoto Yano and Fumio Dei).
38. "Optimal Topological Chaos in Dynamic Economies," *Proceedings of the Sixth International Conference on Difference Equations*, Augsburg, Germany 2001, 189-198, 2004 (Kazuo Nishimura, Tadashi Shigoka and Makoto Yano).
39. "Working and Training: A Nonlinear Dynamic Analysis of Human Capital Development," *Japanese Economic Review* 55-2, 119-140, 2004 (Kazuo Nishimura and Tadashi Yagi and Makoto Yano).
40. "Discrete-Time in Economics: An Introduction," *Journal of Difference Equations and Applications* 10-5, 449-451, 2004 (Kazuo Nishimura and Makoto Yano).
41. "Short-Run Trade Surplus Creation," *Journal of Difference Equations and Applications* 10-5, 453-461, 2004.
42. "Coexistence of Large Firms and Less Efficient Small Firms under Price Competition with Free Entry," *International Journal of Economic Theory* 1-3, 167-188, 2005.
43. "Welfare Losses From Non-Tariff Barriers: The Japanese Beef Quota Case," *Japanese Economic Review* 56-4, 457-468, 2005 (Makoto Yano, Rika Takahashi and Hideo Mizuno).
44. "The Bertrand Equilibrium in a Price Competition Game," *Advances in Mathematical Economics* 8, 449-465, 2006.

45. "Network Externalities, Discrete Demand Shifts, and Sub-Marginal-Cost Pricing," *Canadian Journal of Economics* 39-2, 455-476, 2006 (Makoto Yano and Fumio Dei).
46. "Short-Run Trade Surplus Creation in a Two-Sector Setting," *Japanese Economic Review* 57-4, 476-482, 2006 (Takakazu Honryo and Makoto Yano).
47. "A Price Competition Game under Free Entry," *Economic Theory* 29-2, 395-414, 2006.
48. "International Game of Domestic Competition Policies," *Journal of Economics of Kwansai Gakuin University* 60-3, 15-27, March 2007 (Makoto Yano and Fumio Dei).
49. "Network Externalities, Lexicographic Demand Shifts, and Marginal Cost Dumping," *Keio Economic Studies* 42 (1-2), 115-130, 2005 (Makoto Yano and Fumio Dei).
50. "Introduction to the Special Issue in Honor of Professor Michihiro Ohyama," *Keio Economic Studies* 42 (1-2), 1-4, 2006 (Wilfred J. Ethier and Makoto Yano).
51. "Endogenous Price Leadership and Technological Differences," *International Journal of Economic Theory* 2 (3-4), 365-383, 2006 (Makoto Yano and Takashi Komatsubara).
52. "Introduction to the Special Issue in Honor of Jean-Michel Grantmont," *International Journal of Economic Theory* 2 (3-4), 171-173, 2006 (Kazuo Nishimura and Makoto Yano).
53. "Competition Policy or Tariff Policy: Which is More Effective?," *Asia-Pacific Journal of Accounting and Economics* 13-2, 163-170, 2006 (Makoto Yanp, Rika Takahashi and Jin Kenzaki).
54. "Endogenous Fluctuations in Two-Country Models," *The Japanese Economic Review* 57-4, 516-532, 2006 (Kazuo Nishimura, Alain Venditti and Makoto Yano).
55. "Necessity of a Transversal Condition in a Firm's Intertemporal Optimization," *Journal of Difference Equations and Applications* 13-2, 99-106, 2007.
56. "Altruism as a Motive for Intergenerational Transfers," *International Journal of Economic Theory* 4-1, 2008, 95-114 (Hiroshi Fujiu and Makoto Yano).
57. "Introduction to the Special Issue on Nonlinear Macroeconomic Dynamics," *International Journal of Economic Theory* 4-1, 1-2, 2008 (Kazuo Nishimura and Makoto Yano).
58. "Competitive Fairness and the Concept of a Fair Price under Delaware Law on M&A," *International Journal of Economic Theory* 4-2, 175-190, 2008.

59. "Introduction to the Special Issue in Honor of Takashi Negishi," *International Journal of Economic Theory* 4-2, 135-136, 2008 (Jean-Michel Grandmont, Kazuo Nishimura and Makoto Yano).
60. "On Professor Takashi Negishi's Contributions to Economic Theory," *International Journal of Economic Theory* 4-2, 137-149, 2008 (Jean-Michel Grandmont, Kazuo Nishimura and Makoto Yano).
61. "The Foundation of Market Quality Economics," *The Japanese Economic Review* 60-1, 1-32, 2009.
62. "Introduction to the Special Issue in Memory of Professor Koji Shimomura," *Review of International Economics* 17-2, 207-208, May 2009.
63. "Koji Shimomura: A memoir," *Review of International Economics* 17-2, 209-229, May 2009 (Ngo Van Long and Makoto Yano).
64. "Optimal Growth and Competitive Equilibrium Business Cycles under Decreasing Returns in Two-Country Models," *Review of International Economics* 17-2, 371-391, May 2009 (Kazuo Nishimura, Alain Venditti and Makoto Yano).
65. "Expectation-Driven Fluctuations and Welfare Loss under Free Trade in Two-Country Models," *International Journal of Economic Theory* 6-1, 97-125, March 2010 (Kazuo Nishimura, Alain Venditti and Makoto Yano).
66. "Trade Imbalances and Harmonization of Competition Policies," *Journal of Mathematical Economics* 46- 4, 438-452, July 2010 (Makoto Yano and Takakazu Honryo).
67. "The 2008 World Financial Crisis and Market Quality Theory," *Asian Economic Papers* 9- 3, 172–192, 2010.
68. "Fundamental Difficulty Underlying International Harmonization of Competition Policies," *International Journal of Economic Theory* 7-1, 111-118, March 2011 (Makoto Yano and Takakazu Honryo).
69. "A Two-Country Game of Competition Policies," *Review of International Economics* 19-2, 207–218, May 2011 (Makoto Yano and Takakazu Honryo).
70. "Private Defense Of Intellectual Properties And Economic Growth," *International Journal of Development and Conflict* 1-3, 355-364, 2011 (Taro Akiyama, Yuichi Furukawa and Makoto Yano).
71. "Comparative Dynamics in Stochastic Models with Respect to the L^∞ - L^∞ Duality: a Differential Approach," *Macroeconomic Dynamics* 16, 127-138, April 2012 (Kenji Sato and Makoto Yano).

72. “Legacy of Lionel McKenzie, 1,” The Legacy of Lionel W. McKenzie: Special Issue 1, *International Journal of Economic Theory* 8-1, 2012 (Ronald W. Jones, Kazuo Nishimura and Makoto Yano).
73. “Legacy of Lionel McKenzie, 2,” The Legacy of Lionel W. McKenzie: Special Issue 2, *International Journal of Economic Theory* 8-2, 2012 (Ronald W. Jones, Kazuo Nishimura and Makoto Yano).
74. “The von Neumann–McKenzie facet and the Jones Duality theorem in two-sector optimal growth,” The Legacy of Lionel W. McKenzie: Special Issue 2, *International Journal of Economic Theory* 8-2, 213-226, 2012.
75. “A Simple Condition for Uniqueness of the Absolutely Continuous Ergodic Measure and Its Application to Economic Models,” *AIP Conference Proceedings* 1479, 737-740, 2012 (Kenji Sato and Makoto Yano).
76. “Macroeconomic Dynamics and Its Micro Foundation: A special issue in honor of Cuong Le Van,” *International Journal of Economic Theory* 9-1, 1-3, March 2013 (Kazuo Nishimura, Myrna Wooders and Makoto Yano).
77. “Optimal Ergodic Chaos Under Slow Capital Depreciation,” *International Journal of Economic Theory* 9-1, 57-67, March 2013 (Kenji Sato and Makoto Yano).
78. “Capital Movements, Fragmentation, and Market Quality,” *Pacific Economic Review*, 18-5, 559-560, December 2013 (Makoto Yano and Fumio Dei).
79. “Market Infrastructure and the 2008 World Financial Crisis in Industrial Revolution Cycles,” *GCOE Report*, 2013.
80. “Destabilization Effect of International Trade in a Perfect Foresight Dynamic General Equilibrium Model,” *Economic Theory*, 55, 357-392, February 2014 (Kazuo Nishimura, Alain Venditti and Makoto Yano).
81. “Wilfred J. Ethier on Trade and Trade Policy,” *International Journal of Economic Theory* 10-1, 1-7, March 2014 (Henrik Horn, Kazuo Nishimura and Makoto Yano).
82. “Market Quality and Market Infrastructure in the South and Technology Diffusion,” *International Journal of Economic Theory* 10-1, 139-146, March 2014 (Yuichi Furukawa and Makoto Yano).
83. “Participation of Ordinary Investors and Stock Market Quality: A Comparison between Japanese and US Markets,” *Pacific Economic Review* 19-5, 531–677, December 2014 (Makoto Yano and Takashi Komatsubara).
84. “Introduction to Special Issue on Economic Theory on Mathematical Economics, Game Theory and Computation,” *International Journal of Economic Theory* 12-1, 3-5, 2016 (Hulya Eraslan, Kazuo Nishimura and Makoto Yano).

85. "Price competition or price leadership," *Economic Theory*, 66, 1023-1057, 2018 (Makoto Yano and Takashi Komatsubara).
86. "Trade and indeterminacy revisited," *International Journal of Economic Theory*, 15, 37-51, 2018, (Kazumichi Iwasa, Kazuo Nishimura and Makoto Yano).
87. "Two-Sided Altruism and Time Inconsistency," *Studies in Nonlinear Dynamics and Econometrics*, 23-4, 2019 (Takaaki Aoki, Kazuo Nishimura and Makoto Yano).
88. "Two-Sided Altruism as a Motive for intergenerational Transfer," *Studies in Nonlinear Dynamics and Econometrics*, 23-4, 2019 (Hiroshi Fujiu and Makoto Yano).
89. "Business cycles and indeterminacy in economic models: a special issue in Honor of Professor Kazuo Nishimura," *Studies in Nonlinear Dynamics and Econometrics*, 23-4, 2019 (Ippei Fujiwara and Makoto Yano).
90. "Ergodic chaos for non-expansive economic models," *International Journal of Economic Theory*, 15-3, 311-320, 2019 (with Makoto Yano and Kenji Sato).
91. "Corruption, Market Quality and Entry Deterrence in Emerging Economies," *International Journal of Economic Theory*, 17-1, 101-117, 2021 (Krishnendu Ghosh Dastidar and Makoto Yano).
92. "Idiosyncratic Information and Vague Communication," *American Political Science Review*, 115-1, 165-178, 2021 (Takakazu Honryo and Makoto Yano).
93. "Parenting methods in relation to norm awareness, social success, and perspectives of family in adulthood," *Journal of Computational Social Science*, 2020 (Kazuo Nishimura, Tadashi Yagi, and Makoto Yano).
94. "Introduction to a Special Issue in Honor of Professor Ronald W. Jones," *International Journal of Economic Theory*, 17-1, 3-5, 2021 (Fumio Dei, Sugata Marjit, Kazuo Nishimura, and Makoto Yano).
95. "Professor Ronald W. Jones and his influence on Asia Pacific economics," *Journal of Asian Economics*, 77, December 2021.
96. "Two-dimensional Constrained Chaos and Industrial Revolution Cycles," *Proceedings of the National Academy of Sciences*, 120 (5) (Makoto Yano and Yuichi Furukawa), 2023.

Academic Papers (Edited Volumes)

1. "An Introduction to the Theory of Hedging and Speculation in Futures Markets," *The Theory of Futures Markets*, ed. by P. Weller, Blackwell, Oxford, 15-35, 1992 (Paul A. Weller and Makoto Yano).

2. “Endogenous Real Business Cycles and International Specialization,” *Theory, Policy and Dynamics in International Trade: in Honor of Ronald W. Jones*, ed. by W. Ethier, E. Helpman, and P. Neary, Cambridge University Press, 213-236, 1993 (Kazuo Nishimura and Makoto Yano).
3. “Optimal Chaos when Future Utilities are Discounted Arbitrarily Weakly,” Institute of Mathematical Analysis, *Research in Non-Linear Analysis and Mathematical Economics, Lecture Note Series*, ed. by T. Maruyama and W. Takahashi, Kyoto University, 1993 (Kazuo Nishimura and Makoto Yano).
4. “International Transfers in Dynamic Economies,” *General Equilibrium, Growth and Trade, II: in Honor of Lionel W. McKenzie*, ed. by M. Boldrin, B. Becker, R. Jones and W. Thomson, Academic Press, 555-582, 1993.
5. “Non-linear dynamics and chaos in optimal growth: a constructive exposition,” *Optimization and Chaos*, ed. by Majumdar, M and Mitra, T, Springer-Verlag, Berlin, 258–295, 2000 (Kazuo Nishimura and Makoto Yano).
6. “Optimal Competition Policy in a Model of Vertical Production Chain,” *International Economic Policies in a Globalized World*, ed. by S. Katayama and H. Ursprung, Springer, Berlin, 163-176, 2004.
7. “Competition Policy as a Substitute for Tariff Policy,” *Contemporary and Emerging Issues in Trade Theory and Policy*, ed. by Sugata Marjit and Eden Yu, Elsevier, May 2008 (Rika Takahashi, Jin Kenzaki and Makoto Yano).
8. “On Yano's Price Leadership Game,” *International Trade and Economic Dynamics: Essays in Memory of Koji Shimomura*, ed. by T. Kamihigashi and L. Zhao, Springer, 513-523, 2008 (Makoto Yano and Takashi Komatsubara).
9. “Economic Analysis of Market Quality,” *The Japanese Market - A Market Quality Perspective*, ed. by M. Yano, Keio University Press, 2008.
10. “Law and Economics of M&A Markets,” *The Japanese Market - A Market Quality Perspective*, ed. by M. Yano, Keio University Press, 2008 (Takashi Komatsubara and Makoto Yano).
11. “Observability of Chaotic Economic Dynamics in the Matsuyama Model,” *Dimensions of Economic Theory and Policy: Essays in Honor of Anjan Mukherji*, ed. by Krishnendu G. Dastidar, Hiranya Mukhopadhyay and Uday B. Sinha, Oxford University Press, 83-93, 2011 (Makoto Yano, Kenji Sato and Yuichi Furukawa).
12. ““Antitrust Policy” Versus “Industrial Policy”,” Rajat Acharyya and Sugata Marjit (ed.), *Trade, Globalization and Development, Essays in Honour of Kalyan K. Sanyal*, Springer, 15-30, 2014 (Makoto Yano, Takakazu Honryo and Fumio Dei).

13. "Creation of blockchain and a new ecosystem," in *Blockchain and Crypt Currency: A High-Quality Marketplace for Crypt Data*, Yano, Dai, Masuda and Kishimoto, eds., Springer 2020 (Yano, Dai, Masuda and Kishimoto).
14. "Market Quality Approach to IoT Data on Blockchain Big data Data," in *Blockchain and Crypt Currency: A High-Quality Marketplace for Crypt Data*, Yano, Dai, Masuda and Kishimoto, eds., Springer 2020 (Steven Pu and Yano).
15. "Theory of money: From ancient Japanese copper coins to virtual currencies," in *Blockchain and Crypt Currency: A High-Quality Marketplace for Crypt Data*, Yano, Dai, Masuda and Kishimoto, eds., Springer 2020.
16. "Blockchain business and its regulation," in *Blockchain and Crypt Currency: A High-Quality Marketplace for Crypt Data*, Yano, Dai, Masuda and Kishimoto, eds., Springer 2020 (Yano, Dai, Masuda and Kishimoto).
17. "Bitcoin and blockchain technology," in *Blockchain and Crypt Currency: A High-Quality Marketplace for Crypt Data*, Yano, Dai, Masuda and Kishimoto, eds., Springer 2020 (Kazuo Omote and Yano).
18. "COVID-19 Pandemic and Behavioural Change: The Cases of Florida and Ohio," in *Socio-Life Science and the COVID-19 Outbreak: Public Health and Public Policy*, Makoto Yano, Fumihiko Matsuda, Anavaj Sakuntabhai and Shigeru Hirota, eds., Springer 2022.
19. "Nagahama Survey on Social Science," in *Socio-Life Science and the COVID-19 Outbreak: Public Health and Public Policy*, Makoto Yano, Fumihiko Matsuda, Anavaj Sakuntabhai and Shigeru Hirota, eds., Springer 2022 (Makoto Yano, Shigeru Hirota, Masato Yodo, and Fumihiko Matsuda).
20. "Socio-Life Scientific Survey on COVID-19," in *Socio-Life Science and the COVID-19 Outbreak: Public Health and Public Policy*, Makoto Yano, Fumihiko Matsuda, Anavaj Sakuntabhai and Shigeru Hirota, eds., Springer 2022 (Shigeru Hirota, Kazuya Setoh, Masato Yodo, and Makoto Yano).
21. "Sharing of Research Data by Blockchain," in *Socio-Life Science and the COVID-19 Outbreak: Public Health and Public Policy*, Makoto Yano, Fumihiko Matsuda, Anavaj Sakuntabhai and Shigeru Hirota, eds., Springer 2022 (Chris Dai, Tadaaki Chigusa, and Makoto Yano).

Non-Academic Essays

1. "Law and Economics on Market Quality," *RIETI Highlight*, Vol.63, 2-6, 2016.
2. "Overcoming Silos and Kakines," *RIETI Highlight*, 2018 Special Edition, Vol.68, 18-20, 2018.

Recent Discussion Papers

1. “Obscurantism in the Fukushima Nuclear Accident and A Neologism-Proof Equilibrium,” *Market Quality Discussion Series*, No. 2015-004, March 2016 (Takakazu Honryo and Makoto Yano).
2. “Corruption, Market Quality and Entry Deterrence in Emerging Economies,” *RIETI Discussion Paper Series*, 17-E-010, February 2017 (Krishnendu Ghosh Dastidar and Makoto Yano).
3. “Household Income and the OECD’s Four Types of Social Capital,” *RIETI Discussion Paper Series*, 17-E-119, November 2017 (Masato Yodo and Makoto Yano).
4. “Two-dimensional Constrained Chaos and Time in Innovation: An analysis of industrial revolution cycles,” *RIETI Discussion Paper Series* 19-E-008, 2019 (Makoto Yano and Yuichi Furukawa).
5. “Market Quality Theory and the Coase Theorem in the Presence of Transaction Costs,” *RIETI Discussion Paper Series* 19-E-097, 2019 (Makoto Yano).
6. “Economic Black Holes and Labor Singularities in the Presence of Self-replicating Artificial Intelligence,” *RIETI Discussion Paper Series* 20-E009, 2020 (Makoto Yano and Yuichi Furukawa).
7. “Covid-19 Pandemic and Politics: The Cases of Florida and Ohio,” May 2020 20-E-040
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