

Bill Gibson

John Converse Professor of Economics-UVM

Education

1974-1977 **Ph.D.**, University of California, Berkeley, CA.

1971-1974 MBA, University of California, Berkeley, CA.

1966-1970 Aerospace Engineering, Georgia Institute of Technology, Atlanta, GA.

Experience

Academic

1986– John Converse Prof. of Econ., University of Vermont, Burlington, VT Present 05405 USA.

- Teaching and research in the areas of complex systems, development and the economics of space exploration.
- o Affiliated with Vermont Complex Systems Center-UVM
- o Member of Social Systems Team:BREE–Basin Resilience to Extreme Events In the Lake Champlain Basin: Vermont EPSCoR
 - 2007–2008 Visiting Professor of Public Policy and Economics, University of Massachusetts, Amherst, Amherst, MA.
 - Teaching and research in the areas of complex systems, development, nanotechnology and advanced quantitative methods
 - 1997 **Visiting Research Fellow**, Development Bank of Southern Africa, Johannesburg, South Africa.
 - Developed computable general equilibrium model for South Africa with emphasis on employment $\,$
 - 1995 **Visiting Research Fellow**, Development Bank of Southern Africa, Johannesburg, South Africa.
 - Developed computable general equilibrium model for South Africa with emphasis on employment
 - 1981 Visiting Assistant Professor, Department of Agricultural & Resource Economics, University of California, Berkeley, CA.

Teaching and Research in the areas of development and economic theory

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1977–1986 **Assistant Professor of Economics**, University of Massachusetts, Amherst, MA.

Teaching and research

Sept Visiting Assistant Professor, Department of Economics and Planning Uni-

1976-Jan versidad Nacional Agraria, Lima, Peru.

1977 Teaching and research in the areas of development and economic theory

Jan 1979 **Visiting Assistant Professor**, Faculty Colloquium on the Theory of Value, Centro de Estudios Económicos y Demográfico, El Colegio de México, México, D.F..

Lectures on the theory of value

Jan-Jun 1990 Visiting Assistant Professor, Department of Economics, University of Notre Dame, South Bend, IN.

Teaching and research on macroeconomic models

Consulting

2013-present Consultant, Crowd 2 Space, http://www.spacevault.world/.

2013-present $\$ Consultant, $\$ Government of $\$ Tabasco, Villahermosa, $\$ Mexico.

Regional computable general equilibrium model

2005-Present Consultant, International Labour Organization, Geneva.

Computable general equilibrium model with emphasis on labor market, informal sector, employment assessment models

2012-2014 **Consultant**, United Nations Industrial Development Organization, Geneva. Informal manufacturing

2010 Consultant, Central Bank of Nigeria, Abuja and Lagos.

Lectures on macroeconomics

2007-2011 **Consultant**, Department of Polymer Science, University of Massachusetts, Amherst, Amherst, MA.

InterNano web-site development

2008 **Consultant**, Department of Physics, University of Massachusetts, Amherst, MA.

Curriculum development for Economics for Scientists and Engineers

1994-1996 **Consultant**, Environmental Protection Agency, Washington, DC. Computable general equilibrium model for environmental policy

Apr 1992-Jul Consultant, African National Congress and Congress of South African Trade

1993 Unions, Durban and Johannesburg, South Africa.

Computable general equilibrium model with emphasis on employment and financial interactions $\,$

1989 **Consultant**, *Harvard Institute for International Development*, La Paz, Bolivia. Computable general equilibrium model for environmental policy

1983-1985 **Consultant**, Food and Agricultural Organization of the United Nations, Rome, Italy.

Computable general equilibrium model with emphasis on agricultural sector

1982 **Consultant**, Sistema Alimentario Mexicano, México, DF. Computable general equilibrium model with emphasis on agricultural sector

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Jan 1976-Jan Consultant, Ford Foundation, Lima, Peru.

1977 Econometric model for the Socio-Economic Study Group, Cajamarca-La Libertad Pilot Project

Recent Research

- 2017 Review of The Politics and Perils of Space Exploration: Who Will Compete, Who Will Dominate? By Linda Dawson, J. Of Econ. Lit., (55)3, Sept., pp. 1139-1143.
- 2020 Climate change-legacy phosphorus synergy hinders lake response to aggressive water policy targets, (et al., under review).
- 2020 Modeling functional and juridical informality: a guide for data-driven policy, (with Diane Flaherty, under review).
- 2020 Efecto regional de la reforma energetica en Mexico: un modelo de equilibrio general regional, (et al.), Estudios Económicos del Colegio de México, pp. 71-153.
- 2018 Real and financial crises in the Keynes-Kalecki structuralist model: An agent-based approach, *Metroeconomica*, (with Mark Setterfield), *Metroeconomica* **69**, pp. 566-592.
- 2016 Juridical and functional informality: from theory to practical policy, (with Diane Flaherty), Margin-The Journal of Applied Economic Research (10)4, pp. 409-445 (lead article).

Languages

Spanish Intermediate

Computer skills

Java basic

NetLogo intermediate

Python intermediate

Ph.D. Supervised

James Farrell, "A Computable General Equilibrium Model of the Hungarian Economy" Bruce Kelly, "The Informal Sector in Peru"

Mario DeFranco, "The Black Market for Dollars in Nicaragua: A Computable General Equilibrium Model"

Carlos Murillo, "A Computable General Equilibrium Model for Costa Rica" Michael Martin, "A Hypothetical Model of the Reforms in China"

Jon Goldstein, "A Dynamic Mark-up Pricing Model"

Journal Referee

ECONOMIC JOURNAL
JOURNAL OF COMPARATIVE ECONOMICS
JOURNAL OF DEVELOPMENT STUDIES

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Journal of Development Economics
Cambridge Journal of Economics
Zeitschrift für Nationalökonomie
World Scientific
Metroeconomica
Economia
Review of Political Economy
International Journal of Financial Studies

Presentations

- May 2019 Compact computable general equilibrium models for development policy, International Labour Organization, Geneva, Switzerland.
- April 2018 Integrating the Informal Sector into Computable General Equilibrium Models, International Labour Organization, Geneva, Switzerland.
- June 2018 Compact Computable General Equilibrium Models Lectures and Lab exercises, Central Bank of Honduras, Ministry of Labor and the International Labour Organization, Comayagua, Honduras.
- June 2018 Computable General Equilibrium Models Lectures and Lab exercises, Central Bank of Guatemala, Ministry of Labor and the International Labour Organization, Guatemala City, Guatemala.
- Nov 2018 Cheap and Easy: Compact computable general equilibrium models for development policy, Florida International University, Department of Economics, Miami. FL
- Feb 2017 A multi-agent systems approach to public and private sector collaboration in the emerging space industry, Eastern Economics Association, NewYork, NY.
- Feb 2017 A multi-agent systems approach to public and private sector collaboration in the emerging space industry, Eastern Economics Association, NewYork, NY.
- Aug 2016 Computable General Equilibrium Modeling, Universidad Jaurez Autonoma de Tabasco, Villahermosa, MX.
- July 2016 Integrating computable general equilibrium and agent-based models, SWARMFEST 2016: 20th Annual Meeting on Agent Based Modeling & Simulation, Burlington, VT.
- Dec 2015 Assessment Methods for Employment Impact, Geneva.
- Jun 2015 Intermediation Money Creation and Keynesian Macrodynamics in Multi-agent Systems, Economski Institute, Zagreb, Croatia.
- May 2015 Assessment Methods for Labor Protection Clauses in FTAs, ILO Roundtable on Trans-Pacific Partnership (TPP), Washington, D.C..
- Jan 2015 Real and Financial Crises, Florida International University, Miami, FL.

- Oct 2015 La reforma energetica mexicana y sus efectos regionales: un modelo computable y compacto para Tabasco, Banco Central/World Bank CGE Conference, Bogota, Colombia.
- May 2010 Real Foundations of the Financial Crisis, Analytical Political Economy Workshop, University of East London, London, UK.
- Mar 2008 A Multi-Agent Systems Approach to Microfoundations, Department of Economics, University of Massachusetts, Amherst, MA.
- Jue 2008; A Multi-Agent Systems Approach to the Microfoundations of Macro, Analytical Political Economy Workshop, University of East London, London, UK.
- July 2008 **Economics of Nanotech**, Department of Physics, University of Massachusetts, Amherst, MA.
- Mar 2008 A Multi-Agent Systems Approach to Microfoundations, Department of Economics, University of Massachusetts, Amherst, MA.
- Feb 2008 The Economic Impact of Nanotechnological Development, Lab To Market Seminar, Center for Hierarchical Manufacturing-UMass, Amherst, MA.
- Nov 2007 A Multi-Agent Systems Approach to MicrofoundationsFordham University, Department of Economics, University of Vermont, Burlington, VT.
- Oct 2007 Visualizing Economic Systems, Interdisciplinary Seminar in the Humanities and Fine Arts Other Words Series, University of Massachusetts, Amherst, MA.
- Oct 2007 **Agent-Based Models**, Conference in Honor of James Crotty. University of Massachusetts, Amherst, MA.
- Aug 2007 An Agent-Based Macro Model, University of Natal-Durban, Natal, RSA.
- June 2007 Coherence of Macro and Labor Market Policies in Argentina, Analytical Political Economy Conference, University of East London, London, UK.
- Sept 2006 A Virtual-Life Simulation, Center for Public Policy and Administration, University of Massachusetts, Amherst, MA.
- Dec 2005 A Virtual Life Simulation of the Argentine Labor Market, Department of Economics, Fordham, Bronx, NY.
- Dec 2005 Two Models for Analyzing the Impact of Economic Policies, Isenberg School of Management-University of Massachusetts, Amherst, MA.
- Aug 2005 Two Models for Analyzing the Impact of Economic Policies, ILO conference on Globalization and National Development. Toward Greater Coherence of Between Employment and Macroeconomic Policies, Buenos Aires, Argentina.
- Nov 2004 **The Transition to a Globalized Economy**, Latin American and Caribbean Economics Association, SanJose, CostaRica.
- Sept 2002 Anlisis de la Estructura Fiscal y Comercial y los Impactos Ambientales Asociados en la Republica Dominicana, Ministry of Environment of the Dominican Republic, Santo Domigo, DR.
- Nov 2000 The Transition to a Globalized Economy: Poverty, Human Capital and the Informal Sector in a Structuralist CGE Model, *University of Western Sydeny*, Sydney, Australia.

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- Mar 2000 The Transition to a Globalized Economy: Poverty, Human Capital and the Informal Sector in a Structuralist CGE Model, Department of Economics, University of Massachusetts, Amherst, MA.
- June 1999 Globalization and Poverty: The Case of Paraguay, Secretaria Técnica de Planificación, Asuncion, Paraguay.
- Feb 1999 Globalization and Poverty: The Case of Paraguay, UNDP Conferenceon Current and Capital Account Liberalization, Rio de Janeiro, Brazil.
- Aug1998 Liberalization and Financial Crisis in Paraguay, Central Bank and Ministry of Finance of Paraguay, Asuncion, Paraguay.
- Feb 1997 Real Wages Employment and Macroeconomic Policy in South Africa, National Labour and Economic Development Office, Johannesburg, RSA.
- Jun 1996 A Structuralist Analysis of the Interplay of Macro and labor Market Policies in South Africa, Development Bank of Southern Africa, Midrand, RSA.
- Nov 1995 The Macroeconomic Effects of Restructuring Government Expenditure by Function in South Africa, African Economic Research Consortium, Johannesburg, RSA.
- Dec 1994 A Dynamic Model of the South African Economy, Economics Deparrment, University of Notre Dame, NotreDame, Indiana.
- Nov 1990 **The Distributive Effects of Bolivia's Drug Dependence**, Regional Science Association, Cambridge, MA.
- Apr 1990 **The Inflation-Devaluation-Inflation Hypothesis**, Deptment of Economics, Roosevelt University, Chicago, IL.
- Apr 1990 Nicaragua in the Medium Term, WIDER conference on Structural Adjustment, Stockhold, Sweden.
- Mar 1990 A Dynamic Model of a Foreign Exchange Constrained Economy, Department of Economics, University of Notre Dame, Notre Dame, Indiana.
- Dec 1989 The Break-up of the Mixed Economy, Latin American Studies Association, Miami, FL.
- July 1989 Commentator in Conference on Stabilization and Growth, UDAPE, LaPaz, Bolivia.
- Mar 1989 The Effects of Macroeconomic Policies on Bolivian Agriculture, Harvard Institute for International Development, Cambridge, MA.
- Aug 1988 Medium Term Prospects in Nicaragua, WIDER conference on Structural Adjustment in the Medium Term, Helsinki, Finland.
- Mar 1988 Two-week Lecture Series on Mathematical Models for Developing Countries, INCAE, Managua, Nicaragua.
- Jun 1987 Discussant of paper by Raul Hinjosa CIDE-CEPAL Conference on Economic Relations between the U.S. and Mexico, Fordham University, Brox, NY.
- Nov 1986 **Discussant of papers by David Ruccio and Carlos Vilas**, Latin American Studies Association Annual Meetings, Boston, MA.

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- Aug 1986 (de) Stabilization Policy in Nicaragua, WIDER conference on Stabilization Policy in the Third World, Helsinki, Finland.
- Feb-1986 Short-Term Macro Policy in Nicaragua, Non-neoclassical Seminar–MIT-Harvard, Cambridge, MA.
- Aug 1985 Macroeconomic Planning and Policy, Office of the President, Managua, Nicaragua.
- Aug 1985 Preliminary Results of Simulations of Food Security v. 'Desarrollo Hacia Afuera', Food and AgricultureOrganization, Managua, Nicaragua.
- Jan 1985 A Social Accounting Matrix for Nicaragua IV, Centro de Investigaciones y Estudios de la Reform Agraria, Managua, Nicaragua.
- Dec 1985 Macropolicy and Planning in Nicaragua, Ekonomski Institute, Zagreb, Yugoslavia.
- Nov 1985 Currency Devaluation in the Nicaraguan Economy, Centro de Investigaciones y Estudios de la Reform Agraria, Managua, Nicaragua.
- Jun 1984 A Comment on Dixit and Norman's 'Gains from Trade without Lump Sum Compensation', Institute for Mathematics and Its Applications, University of Minnesota, Minneapolis, MN.
- Mar 1984 The Construction of Social Accounting Matrices for Macromodels Nicaragua I and III, Centro de Investigaciones y Estudios de la Reform Agraria, Managua, Nicaragua.
- Jan 1984 Round Table Discussion on Macromodels Nicaragua I and II, Food and AgricultureOrganization, Managua, Nicaragua.
- Aug 1983 A Computable General Equilibrium Model for Nicaragua, Interministerial Commission on Economic Policy of the Government of Nicaragua, Managua, Nicaragua.
- Apr 1983 Profit and Rent in a neo-Marxian Theory of Exhaustible and Renewable Resources, Five College Seminar, University of Massachusetts, Amherst, MA.
- Dec 1982 Contractionary Effects of the Mexican Devaluation, Symposium on the Longer Term Implications of Mexico's Current Financial Crisis, University of San Francisco, San Francisco, CA.
- Nov 1982 The Distribution of Income in Mexico, World Bank, Washington, DC.
- Oct 1982 Simulating Class Conflict in the Nicaraguan Economy, Banco Central de Nicaragua, Managua, Nicaragua.
- Sept 1982 **The Current Crisis in Nicaragua**, New England Congress of Latin American Scholars, Amherst, MA.
- July 1982 Market StructureClass and Exploitation, Banco Central de Nicaragua, Managua, Nicaragua.
- July 1982 Class Conflict and Terms-of-Trade Policy in a Marxian Computable General Equilibrium Model for Mexico, Latin American Econometric Society, Mexico, DF, MX.

- July 1982 Unequal Exchange in a Model with Nonproduced Means of Production, U.S.D.A.-Universities Trade Consortium, St.Louis, MO.
- Sept 1981 A Computable General Equilibrium Model for Mexico, First Conference on Terms-of-Trade Policy in Developing Countries of the Sistema Alimentario Mexicano, Mexico, DF, MX.
- Jun 1981 Sraffa's Theory of Rent, ElColegio de Mexico, Mexico, DF, MX.
- Feb 1981 On Sraffa's Fundamental Contribution, Department of Economics, Stanford University, PaloAlto, CA.
- Feb 1981 **Effective Demand in Sraffa's System**, Department of Economics, University of California, Berkeley, CA.
- Jan 1981 Social Accounting Matrices and Computable General Equilibrium Models, Ministerio de Coordinación Agro-Industrial de Mexico, Mexico, DF, MX.
- Jan 1979 The Theory of Unequal Exchange: An Empirical Approach, Third World Conference, New School for Social Research, New York, NY.
- July 1975 La Economia Polotica de los Proyectos de Desarollo Rural, Rural Development Workshop Universidad Nacional Agraria de Chapingo, Mexico, DF, MX.
- May 1975 The Simple Analytics of Unequal Exchange, Department of Economics, University of California, Berkeley, CA.

Publications

- [1] Bill Gibson. A structuralist model for post-revolutionary Nicaragua. Cambridge Journal of Economics, 9(4):347–69, 1985.
- [2] Bill Gibson and Bruce Kelley. A classical theory of the informal sector. *Manchester School*, 62(1):81–96, 1994.
- [3] Bill Gibson and Dirk Ernst van Seventer. A tale of two models: Comparing structuralist and neoclassical computable general equilibrium models for South Africa. *International Review of Applied Economics*, 14(2):149–71, 2000.
- [4] Bill Gibson. An essay on late structuralism. In Amitava Dutt and Jaime Ros, editors, Development Economics and Structuralist Macroeconomics: Essays in Honor of Lance Taylor, chapter 2, pages 52–76. Edward Elgar, Cheltenham, UK, 2003.
- [5] Bill Gibson. Thinking outside the Walrasian box. *International Journal of Political Economy*, 33(2):36–46, 2003.
- [6] Bill Gibson. Monitoring labor standards in a macroeconomic context. In Mark Setterfield, editor, *Interactions in Analytical Political Economy: Theory, Policy, and Applications*, chapter 5, pages 67–102. M.E. Sharpe, 2005.
- [7] Bill Gibson. The transition to a globalized economy: Poverty, human capital and the informal sector in a structuralist CGE model. *Journal of Development Economics*, 78(1):60–94, 2005.

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- [8] Bill Gibson. Two models for analyzing the impact of economic policies. Technical report, International Labor Organization, Buenos Aires, Argentina, 2005. Prepared for a workshop Between Globalization and National Development: Towards greater coherence between economic and labour policies, Buenos Aires, 8-9 August 2005.
- [9] James Lovinsky and Bill Gibson. A Robinson model for Argentina. In Bill Gibson, editor, Joan Robinson's Economics: A Centennial Celebration, chapter 11, pages 225–44. Edward Elgar, Cheltenham, UK, 2005.
- [10] Bill Gibson. A multi-agent systems approach to microeconomic foundations of macro. University of Massachusetts, Department of Economics Working Paper Series, 2007.
- [11] Bill Gibson. Data problems and empirical modeling in developing economies. In Amitava Krishan Dutt and Jaime Ros, editors, *International Handbook of Development Economics*, pages 83–96. Edward Elgar, London, 2008.
- [12] Bill Gibson. Economic planning in developing economies. In Amitava Krishna Dutt and Jaime Ros, editors, *International Handbook of Development Economics*, volume 2, chapter 57, pages 341–55. Edward Elgar, Cheltenham, UK and Northampton, MA, 2008.
- [13] Bill Gibson. Keynesian and neoclassical closures in an agent-based context. *METU Studies in Development*, 35(1):81–100, 2008.
- [14] Bill Gibson. The current crisis in macroeconomic theory. In Jonathan Goldstein and Michael Hilliard, editors, *Heterodox Macroeconomics: Keynes, Marx and globalization*. Routledge, 2009.
- [15] Bill Gibson. Trade and employment. http://www.uvm.edu/~wgibson/, 2009.
- [16] Bill Gibson. The structuralist growth model. In Mark Setterfield, editor, *Handbook of Alternative Theories of Economic Growth*, chapter 1. Edward Elgar, Cheltenham, UK, 2010.
- [17] Bill Gibson. Assessing the impact of trade on employment: Methods of analysis. In Marion Jansen, Ralf Peters, and Jose Manuel Salazar-Xirinachs, editors, *Trade and Employment: From Myths to Facts*, chapter 3, pages 61–124. International Labour Organization, Geneva, 2011.
- [18] Bill Gibson. Trade, employment and the informal sector: An agent-based analysis. *The Margin: The Journal of Applied Economic Research*, 6(2):277–306, 2012.
- [19] Bill Gibson and Diane Flaherty. Manufacturing informality. Working paper, UNIDO, Geneva, 2013.
- [20] Bill Gibson and Diane Flaherty. Un modelo de equilibrio general computable compacto para Tabasco. Working paper, Florida International University, Miami, 2014.
- [21] B. Gibson and Diane Flaherty. Employment impact assessment: A review of methodologies. Technical report, International Labour Organization, Geneva, 2016.
- [22] Bill Gibson and Diane Flaherty. Juridical and functional informality: from theory to practical policy. Margin: The Journal of Applied Economic Research, 10(4):1–37, 2016.

- [23] Aída Beatriz Armenta, Diane Flaherty, Bill Gibson, and Jorge Salazar-Carrillo. La reforma energética mexicana y sus efectos regionales: un modelo computable para tabasco. Working paper, University of Vermont, Burlington, VT, 2017.
- [24] B. Gibson and Lawrence DeGeest. A multi-agent systems approach to public and private sector collaboration in the emerging space industry. University of Vermont, 2017.
- [25] B. Gibson and M. Setterfield. Real and financial crises in the Keynes-Kalecki structuralist model: An agent-based approach. *Metroeconomica*, 69:566–592, 2018.
- [26] Bill Gibson and Mark Setterfield. Intermediation, money creation, and keynesian macrodynamics in multi-agent systems. *Review of Political Economy*, 30(2):154–171, 2018.
- [27] Aída R., Diane Flaherty, Bill Gibson, and Jorge Salazar-Carrillo. Efecto regional de la reforma energética en méxico: un modelo de equilibrio general computable regional. Estudios Económicos de El Colegio de México, pages 71–123, 2020.
- [28] Bill Gibson. Joan Robinson's Economics: A Centennial Celebration. Edward Elgar, 2005.