

# Curriculum Vitae di Giulio Bottazzi

**Autore:** Giulio Bottazzi  
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**Data:** 1 Novembre 2013

**Data di Nascita:** 30 Gennaio 1969

**Nazionalita':** Italiana

## **Ruolo e incarichi accademici**

*da Novembre 2013* Preside della Classe Accademica di Scienze Sociali, Scuola Superiore Sant'Anna, Pisa.

*da Giugno 2013* Professore Ordinario di Politica Economica, Scuola Superiore Sant'Anna, Pisa.

*2010-213* vice presidente del master in Scienze Economiche organizzato congiuntamente da Scuola Sant'Anna e Università di Pisa.

*dal 2008* Ricercatore associato, BRICK Center, Collegio Carlo Alberto, Torino.

*2007-212* Professore invitato presso l'Università Parigi II, Pantheon-Assas.

*2004* Professore Associato di Politica Economica, Scuola Superiore Sant'Anna, Pisa.

*dal 2002* Direttore del 'Center for the Analysis of Financial and Economic Dynamics (CAFED)', Scuola Superiore Sant'Anna, Pisa.

*1999-2004* Ricercatore a tempo determinato, Scuola Superiore Sant'Anna, Pisa.

*1998-1999* Assegno di ricerca presso il Settore di Economia, Scuola Superiore Sant'Anna, Pisa.

## **Educazione**

*1989* Diploma di Maturità Scientifica, Liceo L.Spallanzani, Reggio Emilia.

*1993* Laurea in Fisica, Università di Parma.

*1998* Dottorato in Fisica Teorica, Università di Milano.

## **Scuole internazionali frequentate**

*1998* School on the mathematics of economics, SISSA, Trieste, Italy.

*1997* Cracow School of Theoretical Physics XXXVII Course, Zakopane, Poland.

*1995* CTEQ-DESY School on Theory and Phenomenology, Bad Lauterberg, Germany.

*1995* International School of Physics 'Enrico Fermi', CXXX Course 'Selected Topics in Non Perturbative QCD', Varenna, Italy.

*1994* International School of Subnuclear Physics, 32nd Course, Erice, Italy.

*1994* St.Petersburg Winter School in theoretical physics, San Petersburg, Russia

## **Attività di insegnamento**

*1998-1999* Esercitatore di Matematica presso la Facoltà di Scienze Alimentari dell'Università di Parma, Italia.

*1998-1999* Esercitatore di Matematica presso la Classe di Scienze Sociali, Scuola Superiore Sant'Anna, Italia.

*2000-2001* Esercitatore di Matematica presso la Facoltà di Ingegneria della Università di Modena e Reggio, Italia.

*1999-2003* Coordinatore dei corsi di Matematica e Statistica del Dottorato Sperimentale in Economia e Management, Scuola Superiore Sant'Anna.

*dal 2004* Docente di Dinamica Industriale, Econometria e Sistemi Dinamici applicati all'Economia, Scuola Superiore Sant'Anna.

*2007-2012* Docente di Economia, Università Parigi II, Pantheon-Assas.

*2007 e 2009* Docente di Economia Internazionale per il programma DIMETIC, Pecs University, Hungary.

*dal 2008* Docente di Metodi Matematici, International PhD Program in Economics, Scuola Superiore Sant'Anna.

*2010-2011* Microeconomia (corso in inglese), Laurea Magistrale in Scienze Economiche, Università di Pisa.

*dal 2011* Economia Finanziaria (corso in inglese), Laurea Magistrale in Scienze Economiche, Università di Pisa.

## **Affiliazioni e incarichi**

Dal 2003 membro della Società Italiana Caos e Complessità

Dal 2004 membro della Società Italiana degli Economisti

Dal 2005 membro della International Schumpeterian Society.

Dal 2006 membro della European Economic Association.

2007 Membro della Commissione Scientifica della 'Società Italiana di Statistica' per le ricerche economiche ed ambientali.

## **Attività' Scientifica**

### **Referee**

Dal 1998 collabora con le seguenti riviste:

- Empirical Economics
- Europhysics Journal-B
- International Journal of Industrial Organization
- Industrial and Corporate Change
- Information Sciences
- Journal of Business and Economic Statistics
- Journal of Economic Dynamics and Control
- Journal of Evolutionary Economics
- Journal of Econometrics
- Journal of Mathematical Economics
- Physica A
- Research Policy
- Review of Social Studies
- Review of Industrial Organization
- Regional Studies
- Small Business Economics
- Structural Change and Economic Dynamics

### **Organizzazione di incontri e consulenza scientifica**

October 2013, "The growth of firms and countries", PRIN final workshop, Rome, Italy.

September 2013, Summer School of Mathematics for Economics and Social Sciences, Second Edition, San Miniato, Italy

December 2012, "The growth of firms and countries: distributional properties and economic determinants", PRIN mid-term workshop, Pisa, Italy.

September 2012 "Summer School of Mathematics for Economics and Social Sciences", San Miniato, Italy.

October 2011, "The growth of firms and countries", PRIN Project kick-off meeting, Pisa, Italy.

February 2011, “EMAAE 2011: 7th European Meeting on Applied Evolutionary Economics”, Pisa, Italy.

December 2009, “Markets and firms dynamics: from micro patterns to aggregate behaviors”, Université des Antilles et de la Guyane, Pointe-à-Pitre, Guadelupe, France.

October 2009 “Evolution and market behavior in economics and finance”, Mathematics Research Center “Ennio De Giorgi”, Pisa, Italy.

October 2008 “The dynamics of firm evolution: productivity, profitability and growth”, Scuola Superiore Sant’Anna, Italy.

June 2008 “ENTREPRENEURSHIP AND INNOVATION”, 25th DRUID Celebration Conference 2008, Copenhagen Business School, Denmark.

July 2007 ‘The Emergence and Impact of Market : The Case of Fish Markets’, Tromsø, Norway.

September 2007 ‘Agent Based Models for Spatial Systems in Social Sciences & Economic Science with Heterogeneous Interacting Agents’, La Londe les Maures, France.

September 2006 ‘Artificial Economics 2006’, Aalborg, Denmark.

May 2006 ‘Complexity 2006’, Aix-en-Provence, France.

August 2004 IWAMEM -- ‘Data Mining and Adaptive Modelling Methods for Economics and Management’, University of Pisa, Pisa, Italy.

April-July 2002 ‘Financial Markets: mathematical, statistical and economic analysis’, Centro di Ricerca Matematica E. De Giorgi, Pisa, Italy.

## **Principali presentazioni dei lavori**

May 2013 speaker and tutorial teacher, 18th Annual Workshop on Economic Heterogeneous Interacting Agents, University of Reykjavik, Island.

June 2012 speaker and tutorial teacher, 17th Annual Workshop on Economic Heterogeneous Interacting Agents, University of Pantheon-Assas, Paris II, France.

February 2012 invited speaker, Financing Innovation and Growth: Reforming a Dysfunctional System, London, UK

February 2012 invited speaker, External Developments Division of the European Central Bank, Frankfurt, Germany.

June 2011 invited speaker, SAET Conference, Ancao, Portugal.

June 2011 invited speaker, International Conference STOCHASTIC ECONOMICS AND FINANCE, University of Bergen, Bergen, Norway.

January 2011 invited speaker, Second International Meeting of TOM Society, Universitat Pompeu Fabra, Barcelona, Spain.

October 2010 invited speaker “Quantifying and Understanding Dysfunctions of Financial Markets”, Luvein, Belgium

September 2010 invited speaker “Toward an Alternative Macroeconomic Theory” Central European University, Budapest

June 2010 “11th Workshop on Optimal Control, Dynamic Games and Nonlinear Dynamics”, University of Amsterdam, The Netherlands.

June 2010 “International Schumpeter Conference”, Aalborg University, Denmark.

June 2009 invited speaker “Common Complex Collective Phenomena: implications for economic and social policy making”, Cracow, Poland.

January 2009 invited speaker at the Workshop “Ten Years of CeNDEF”, University of Amsterdam, The Netherlands.

November 2008 invited speaker at the Workshop “Revolving Doors: Entrepreneurial Survival and Exit”, Rotterdam School of Management, The Netherlands.

October 2008 invited speaker at the 3rd Toyota CRDL Workshop “Mathematical Methods in Complex Systems”, Gemenos, France.

August 2008 EEA-ESEM 2008, Milano, Italy.

June 2008 “Computing in Economics and Finance”, Paris, France.

April 2008 session organizer “DIME Scientific Conference”, BETA/PEGE, Strasbourg, France.

February 2008 invited speaker “FIG workshop”, CIRCLE, Lund, Sweden.

November 2007 invited speaker ‘Second European PhD Complexity School’, Torino, Italy.

October 2007 invited speaker ‘S.I.E. Annual Conference’, Torino, Italy.

October 2007 invited speaker “Complexity in Economics and Finance”, Leiden University, the Netherland.

August 2007 EEA-ESEM 2007, Budapest, Hungary.

September 2006 invited speaker “Policy Implications from Recent Advances in the Economics of Innovation and Industrial Dynamics”, Open University, London.

June 2006 ‘International Schumpeter Conference’, Nice, France.

May 2006 ‘Complexity 2006’, Aix-en-Provence, France.

September 2005 ‘Artificial Economics 2005’, Lille, France.

May 2005 invited speaker ‘Third SPIE International Symposium Fluctuations and Noise’ Austin, Texas

November 2004 invited speaker ‘Workshop On Interactions and Markets’, Pisa, Italy.

June 2004 invited speaker ‘Workshop On Nonlinear Dynamics in Economics’ Trieste, Italy.

June 2004 ‘Schumpeter 2004 Conference’, Milano, Italy.

October 2003 invited speaker ‘Workshop on Economic Dynamics’, Bolzano, Italy.

October 2003 ‘Wild@Ace’ Torino, Italy.

September 2003 ‘13th European Colloquium on Quantitative and Theoretical Geography’, Lucca, Italy.

September 2003 ‘Clusters, Industrial Districts and Firms. The Challenge of Globalization’ Modena, Italy.

April 2003 ‘European Meeting on Applied Evolutionary Economics’, Augsburg, Germany.

April 2003 'Reinventing Regions in the Global Economy', Pisa, Italy.

March 2003 invited speaker 'The Evolution of Innovation and Market Structure in the Pharmaceutical and Biotech Industry: Alternative Models and Interpretations', Londra, United Kingdom.

March 2003 '11th Annual Symposium of the Society for Non Linear Dynamics and Econometrics' SNDE-2003, Firenze, Italy.

September 2002 EARIE'29 29-th Annual Conference of the European Association for Research in Industrial Economics' Madrid, Spain.

June 2002 'Evolutionary Finance Conference', Zurich, Switzerland.

May 2002 WHEIA2002 'Workshop on Economics with Heterogeneous Interacting Agents', Trieste, Italy.

April 2002 'Local Models of Development, Clusters of Firms and Local Innovative Systems' Varese, Italy.

September 2001 'European Meeting on Applied Evolutionary Economics', Vienna, Austria.

June 2001 'Society for Computational Economics 2001 Conference' Yale University, New Haven, Connecticut.

Giugno 2001 'Complexity and Industrial Clusters', Milan, Italy.

June 2001 WHEIA2001 'Workshop on Economics with Heterogeneous Interacting Agents', Maastricht, Netherland.

June 2000 'Third ESSY workshop', Berlin, Germany.

June 1999 WHEIA1999 'Workshop on Economics with Heterogeneous Interacting Agents', Genova, Italy.

Luglio 1998, 'ICHEP 98, XXIX International Conferend on High Energy Physics' Vancouver, Canada.

Giugno 1998, Congresso Internazionale 'Low x Physics at HERA', DESY Zheuten (Berlin), Germania.

Settembre 1996, V Seminario Nazionale di Fisica Teorica (V National Seminary of Theoretical Physics), Parma.

Maggio 1996, 'Cortona 96: Convegno Nazionale Informale di Fisica Teorica' ( Cortona 96: National Informal Conference of Theoretical Physics), Cortona.

## **Finanziamenti ricevuti nei seguenti progetti**

Economia dei Media Sociali: Informazione e Reputazione nella Rete

**period:** 2013-2015  
**type:** FORTEC Research Grant  
**sponsor:** Tuscany Regional Council  
**role:** Lead Scientist

Market Selection and Aggregate Economic Outcomes

**period:** 2013-2015  
**type:** MARIE CURIE INTERNATIONAL OUTGOING FELLOWSHIPS  
**sponsor:** European Commission  
**role:** Primary Coordinator

The growth of firms and countries

**period:** 2011-2013  
**type:** PRIN (Project of Relevant National Interest)  
**sponsor:** Italian Ministry of University and Research  
**role:** Coordinator

Micro-dyn

**period:** 2006-2010  
**type:** Integrated Project in FP 6  
**sponsor:** European Commission  
**role:** External Expert

Dissemination to and Interaction with Industry and other stakeholders

**period:** 2007-2009  
**type:** Work Package, DIME Network of Excellence  
**sponsor:** European Commission  
**role:** Coordinator

CO3 - Common Complex Collective Phenomena in Statistical Mechanics , Society, Economics and Biology

**period:** 2005-2009  
**type:** Specific Targeted Research Project  
**sponsor:** European Commission  
**role:** Member

Market Dynamics: analytical tools, empirical regularities and experimental results

**period:** 2006-2008  
**type:** Work Package, DIME Network of Excellence  
**sponsor:** European Commission  
**role:** Coordinator

Apprendimento e interazioni competitive nei modelli di evoluzione delle industrie

**period:** 2004-2006  
**type:** PRIN

**sponsor:** Italian Ministry of University and Research  
**role:** Member

Modelli dinamici dei mercati finanziari e analisi delle serie storiche ad alta frequenza:  
dai processi stocastici alla gestione del rischio

**period:** 2002-2003  
**type:** Programma di Ricerca di Rilevante Interesse  
**sponsor:** Scuola Superiore Sant'Anna  
**role:** Coordinator

Mercati ed istituzioni: dinamiche di apprendimento e strutture di interazione

**period:** 2001-2002  
**type:** Programma di Ricerca di Rilevante Interesse  
**sponsor:** Scuola Superiore Sant'Anna  
**role:** Member

Structures and dynamics of industries and markets

**period:** 2001-2002  
**type:** FIRB  
**sponsor:** Italian Ministry of University and Research  
**role:** Member

Metodi e modelli statistici per dati macroeconomici e industriali: analisi sezionali e  
temporali

**period:** 2002  
**type:** Coordinated project - AGENZIA 2000  
**sponsor:** CNR  
**role:** Member

Modelli dinamici per la crescita e diversificazione dell'impresa

**period:** 1999-2001  
**type:** Progetti Giovani Ricercatori  
**sponsor:** CNR  
**role:** Coordinator

## **Pubblicazioni principali in Economia**

### **Pubblicazioni su riviste internazionali**

G. Bottazzi and M. Grazzi, Dynamics of productivity and cost of labor: Evidence from  
Italian manufacturing firms, Bulletin of Economic Research, DOI:10.1111/boer.12014

- G. Bottazzi and P. Dindo, Globalizing knowledge: how technological openness affects output, spatial inequality and welfare levels, *Journal of Regional Science*, DOI:10.1111/jors.12034
- G. Bottazzi and U. Gragnolati, Cities and clusters: economy-wide and sector-specific effects in corporate location, *Regional Studies*, DOI:10.1080/00343404.2012.739281
- G. Bottazzi, A. Secchi, F. Tamagni, Financial Constraints and Firm Dynamics, *Small Business Economics*, DOI:10.1007/s11187-012-9465-5
- G. Bottazzi and P. Dindo, Selection in asset markets: the good, the bad, and the unknown, *Journal of Evolutionary Economics*, Volume 23, Issue 3, pp 641-661, July 2013.
- G. Bottazzi and P. Dindo, Evolution and Market Behavior in Economics and Finance: introduction to the special issue, *Journal of Evolutionary Economics*, Volume 23, Issue 3, pp 507-512, July 2013
- M. Anufriev and G. Bottazzi Asset Pricing with Heterogeneous Investment Horizons, *Studies in Nonlinear Dynamics & Econometrics*, *Studies in Nonlinear Dynamics & Econometrics*, 16(4), 2012..
- G. Bottazzi and F. Tamagni, Big and fragile: when size does not shield from defaults, *Applied Economics Letters*, 18(14), pp. 1401-1404, 2011.
- G. Bottazzi and A. Secchi, A New Class of Asymmetric Exponential Power Densities with Applications to Economics and Finance, *Industrial and Corporate Change*, *Industrial and Corporate Change*, 20(4), pp. 991-1030, 2011.
- G. Bottazzi, M. Grazzi, A. Secchi, F. Tamagni, Financial and Economic Determinants of Firm Default, *Journal of Evolutionary Economics*, 21(3), pp. 373-406, 2011.
- G. Bottazzi, G. Devetag, F. Pancotto, Does Volatility matter? Expectations of price return and variability in an asset pricing experiment, *Journal of Economic Behavior & Organization*, *Journal of Economic Behavior & Organization*, 77, pp. 124-146, 2011.
- G. Bottazzi, A. Coad, N. Jacoby and A. Secchi, Corporate growth and industrial dynamics: evidence from French manufacturing, *Applied Economics*, 43 (1), pp.103-116, 2011.
- M. Anufriev and G. Bottazzi, Market Equilibria under Procedural Rationality, *Journal of Mathematical Economics*, 46 (6), pp. 1140-1172, 2010.
- G. Bottazzi, G. Dosi, N. Jacoby, A. Secchi, F. Tamagni, Corporate performances and market selection. Some comparative evidence, *Industrial and Corporate Change*, 19 (6), pp. 1953-1996, 2010.
- G. Bottazzi and M. Grazzi, Wage-size relation and the structure of work-force composition in Italian Manufacturing Firms, *Cambridge Journal of Economics*, Volume 34, Number 4 pp. 649-669, 2010.
- G. Bottazzi, On the Irreconcilability of Pareto and Gibrat Laws, *Physica A*, 388, 7, pp. 1133-1136, 2009.
- G. Bottazzi, A. Secchi and F. Tamagni, Productivity, Profitability and Financial Performance, *Industrial and Corporate Change*, 17, pp.711-751, 2008.
- G. Bottazzi, G. Fagiolo, G. Dosi and A. Secchi, Sectoral and Geographical Specificities in the Spatial Structure of Economic Activities, *Structural Change and Economic Dynamics*, 19, pp. 189-202, 2008.

- G.Bottazzi, On the relationship between firms' size and growth rate, *Economics Bulletin*, 3, 8, pp. 1-7, 2008.
- G.Bottazzi, G. Fagiolo, G.Dosi and A. Secchi, Modeling Industrial Evolution in Geographical Space, *Journal of Economic Geography*, 7, pp. 651-672, 2007.
- G.Bottazzi and G.Devetag, Competition and Coordination in Experimental Minority Games, *Journal of Evolutionary Economics*, 17, pp. 241-275, 2007.
- G.Bottazzi, E.Cefis, G.Dosi and A.Secchi, Invariances and Diversities in the Evolution of Italian Manufacturing Industry, *Small Business Economics*, 29, pp. 137-159, 2007.
- G.Bottazzi and A.Secchi, Gibrat's Law and Diversification, *Industrial and Corporate Change*, 15, pp. 847-875, 2006.
- M.Anufriev, G.Bottazzi and F.Pancotto, Equilibria, Stability and Asymptotic Dominance in a Speculative Market with Heterogeneous Agents, *Journal of Economic Dynamics and Control*, 30, pp. 1787-1835, 2006.
- G.Bottazzi and A.Secchi, Explaining the Distribution of Firms Growth Rates, *Rand Journal of Economics*, vol. 37, no. 3, 2006.
- G.Bottazzi, M.Grazzi and A.Secchi, Characterizing the Production Process: A Disaggregated Analysis of Italian Manufacturing Firms, *Rivista di Politica Economica*, I-II, pp. 243-270, 2005.
- G.Bottazzi and A.Secchi, Growth and Diversification Patterns of the Worldwide Pharmaceutical Industry, *Review of Industrial Organization*, 26, pp. 195-216, 2005.
- G.Bottazzi, G.Dosi and I.Rebesco, Institutional Architectures and Behavioral Ecologies in the Dynamics of Financial Markets, *Journal of Mathematical Economics*, vol. 41, pp. 197-228, 2005.
- G.Bottazzi, M.Grazzi and A.Secchi, Input Output Scaling Relations in Italian Manufacturing Firms, *Physica A*, 355, pp. 95-102, 2005.
- G.Bottazzi, S.Sapio and A.Secchi, Some Statistical Investigations on the Nature and Dynamics of Electricity Prices, *Physica A*, 355, pp. 54-61, 2005.
- G.Bottazzi, A.Secchi, Common Properties and Sectoral Specificities in the Dynamics of U.S. Manufacturing Companies, *Review of Industrial Organization*, vol. 23, pp. 217-232, 2003.
- G.Bottazzi, A.Secchi, Why are distributions of firm growth rates tent-shaped , *Economic Letters* vol. 80 pp.415-420, 2003.
- G.Bottazzi, G. Devetag, A Laboratory Experiment on the Minority Game, *Physica A* vol. 324 pp. 124-132, 2003.
- G.Bottazzi, A. Secchi, A Stochastic Model of Firm Growth, *Physica A* vol. 324 pp. 213-219, 2003.
- G.Bottazzi, G.Devetag, G.Dosi, Learning and emergent coordination in speculative markets: some properties of "minority game" dynamics, *Simulation Modeling Practice and Theory*, 10, pp. 321-347, 2002.
- G.Bottazzi, E.Cefis, G.Dosi, Corporate Growth and Industrial Structure. Some Evidence from the Italian Manufacturing Industry, *Industrial and Corporate Change* 2, 4, 2002.

G.Bottazzi, G.Dosi and G.Rocchetti, Modes of Knowledge Accumulation, Entry Regimes and Patterns of Industrial Evolution, *Industrial and Corporate Change* 10, 3, 2001.

G.Bottazzi, G.Dosi, M.Lippi, F.Pammolli, M.Riccaboni, Innovation and Corporate Growth in the Evolution of the Drug Industry, *International Journal of Industrial Organization*, vol. 19, pp. 1161-1187, 2001.

### **Pubblicazioni in raccolte e antologie**

G.Bottazzi and A.Secchi, Financial fragility and the distribution of firm growth rates, in A.M.Ferragina and E. Taymaz (eds) "Innovation, Globalization and Firm Dynamics: Lessons for Enterprise Policy", in corso di pubblicazione.

G.Bottazzi and P.Dindo, An evolutionary model of firms location with technological externality, in R.A.Boschma and R.Martin (eds.) "Handbook on Evolutionary Economic Geography", Edward Elgar, Cheltenham, 2010.

G.Bottazzi and M.Grazzi, Dinamiche della produttività e del costo del lavoro nelle imprese manifatturiere italiane" in *Produttività e cambiamento nell'industria italiana*, Laura Rondi e Francesco Silva (eds.), il Mulino, 2009.

G.Bottazzi and P.Dindo, An evolutionary model of firms location with technological externality, in R.A.Boschma and R.Martin (eds.) "Handbook on Evolutionary Economic Geography", Edward Elgar, Cheltenham, 2009.

G.Bottazzi and S.Sapio, Power Exponential Price Returns in Day-ahead Power Exchanges, in A. Chatterjee and B. K. Chakrabarti (eds) "Econophysics of Markets and Business Networks", New Economic Windows, Springer Verlag, Berlin, 2007.

G.Bottazzi, M. Grazzi e A. Secchi, Characterizing the Production Process: A Disaggregated Analysis of Italian Manufacturing Firms, in M.Malgarini and G. Piga (eds) "Capital Accumulation, Productivity and Growth", Palgrave Macmillan, New York, 2006.

G.Bottazzi and A. Secchi, Self-reinforcing Dynamics and the evolution of business firms, in A.Pyka and H.Hanusch (eds.) "Applied Evolutionary Economics and the Knowledge-Based Economy", Edward Elgar, Cheltenham, 2006.

M.Anufriev and G. Bottazzi, Noisy Trading in the Large Market Limit, in P.Mathieu, B.Beaufils and O.Brandouy (eds.) "Artificial Economics: Agent-based Methods in Finance, Game Theory and Their Applications", Lecture Notes in Economics and Mathematical Systems vol.564, Springer-Verlag, Berlin, 2006.

G.Bottazzi, G Dosi, and G. Fagiolo, On Sectoral Specificities in the Geography of Corporate Location, in Breschi, S. and Malerba, F. (Eds.) "Clusters, networks and innovation", Oxford University Press, Oxford, U.K., 2006.

G.Bottazzi, F.Pammolli and A.Secchi, The Dynamics of Growth and Diversification of the Large Pharmaceutical Companies, in M. Mazzucato and G. Dosi (Eds.) 'Knowledge Accumulation and Industry Evolution: the Case of Pharma-Biotech', Cambridge University Press, 2005.

G.Bottazzi, M. G. Devetag, Expectations structure in asset pricing experiments, in T.Lux, S.Reitz and E.Samanidou (Eds.) "Nonlinear Dynamics and Heterogeneous

Interacting Agents“ Lecture Notes in Economics and Mathematical Systems 550, Springer Verlag, Berlin, 2005.

G.Bottazzi, G.Devetag, G.Dosi, Adaptive Learning and Emergent Coordination in Minority Games, in R.Cowan and N.Jonard Eds. "Heterogeneous Agents, Interactions and Economic Performance“ Lecture Notes in Economics and Mathematical Systems 521, Springer Verlag, Berlin, 2003.

G.Bottazzi, E.Cefis, G.Dosi e A.Secchi, Crescita dell'impresa e struttura industriale: evidenze empiriche sull'industria manifatturiera italiana, in D. Delli Gatti e M.Gallegati (eds.) Eterogeneita' degli agenti economici ed interazione sociale: teorie e verifiche empiriche, Il Mulino, Bologna, 2003.

G.Bottazzi, G.Fagiolo, G.Dosi, On the ubiquitous nature of the agglomeration economies and their limits, in A. Quadro Curzio and M.Fortis eds. 'Complexity and Industrial Cluster', Physica-Verlag, Heidelberg, 2002.

G.Bottazzi, G.Fagiolo, G.Dosi, Sulla onnipresenza delle economie di agglomerazione e le loro diverse determinanti: alcune note, in A. Quadro Curzio and M. Fortis (a cura di) 'Complessita' e distretti industriali: dinamiche, modelli, casi reali', Il Mulino Collana della Fondazione Edison, pp. 265-298, Bologna, 2002.

### **Pubblicazioni in atti di congressi**

G.Bottazzi, A Simple Micro-Model of Market Dynamics. Part I: The 'Homogeneous Agents' Deterministic Limit, forthcoming on the Proceedings of the WEHIA 2002 Conference.

G.Bottazzi, M. G. Devetag, Coordination and Self-Organization in Minority Games: Experimental Evidence, forthcoming on the Proceedings of the WEHIA 2002 Conference.

M.Anufriev, G. Bottazzi and F. Pancotto, Speculative Equilibria and Asymptotic Dominance in a Market with Adaptive CRRA Traders, in Abbot, D., Bouchard, J.P., Gabaix, X., and McCauley, J.L. "Noise and Fluctuations in Econophysics and Finance“ SPIE Conference Proceedings, vol. 5848, SPIE, WA, 2005.

### **Curatele editoriali**

Evolution and market behavior in economics and finance, Giulio Bottazzi and Pietro Dindo (eds), Journal of Evolutionary Economics (special issue), in corso di pubblicazione.

Productivity, profitability and growth: the empiric of firm dynamics, Giulio Bottazzi and Angelo Secchi (eds.), Industrial and Corporate Change 23(4), 2012.

### **Working Papers**

M. Anufriev, G. Bottazzi, M. Marsili, P. Pin, Excess Covariance and Dynamic Instability in a Multi-Asset Model, CeNDEF Working Papers 11-09, (2011)

G. Bottazzi P. Dindo Selection in asset markets: the good, the bad, and the unknown, L.E.M. Working Paper n. 2010-20, Scuola Superiore Sant'Anna, (2011).

G. Bottazzi, P. Dindo, Evolution and market behavior with endogenous investment rules, L.E.M. Working Paper n. 2010-20, Scuola Superiore Sant'Anna, (2010).

G. Bottazzi, U. Gragnolati, Cities and clusters: economy-wide and sector-specific effects in corporate location, L.E.M. Working Paper n. 2010-16, Scuola Superiore Sant'Anna, (2010).

G. Bottazzi, D. Pirino, Measuring Industry Relatedness and Corporate Coherence, L.E.M. Working Paper n. 2010-10, Scuola Superiore Sant'Anna, (2010).

G. Bottazzi, F. Tamagni, Is Bigger Always Better ? The effect of Size on Defaults, L.E.M. Working Paper n. 2010-07, Scuola Superiore Sant'Anna, (2010).

G. Bottazzi, M. Grazi, A. Secchi, F. Tamagni, Financial and Economic Determinants of Firm Default, L.E.M. Working Paper n. 2009-06, Scuola Superiore Sant'Anna, (2009).

G. Bottazzi, G. Devetag and F. Pancotto, Does Volatility matter? Expectations of price return and variability in an asset pricing experiment, L.E.M. Working Paper n. 2009-2, Scuola Superiore Sant'Anna, (2009).

G. Bottazzi and P. Dindo, An evolutionary model of firms location with technological externalities, L.E.M. Working Paper n. 2008-27, Scuola Superiore Sant'Anna (2008).

G. Bottazzi and P. Dindo, Localized technological externalities and the geographical distribution of firms, L.E.M. Working Paper n. 2008-11, Scuola Superiore Sant'Anna (2008).

G. Bottazzi, M. Grazi, A. Secchi and F. Tamagni, Assessing the Impact of Credit Ratings and Economic Performance on Firm Default, L.E.M. Working Paper n. 2007-15, Scuola Superiore Sant'Anna (2007).

G. Bottazzi, A comment on the relationship between firms' size and growth rate, L.E.M. Working Paper n. 2007-11, Scuola Superiore Sant'Anna (2007).

G. Bottazzi, On the Irreconcilability of Pareto and Gibrat Laws, L.E.M. Working Paper n. 2007-10, Scuola Superiore Sant'Anna (2007).

G. Bottazzi, On the Pareto Type III Distribution, L.E.M. Working Paper n. 2007-08, Scuola Superiore Sant'Anna (2007).

G. Bottazzi, G. Dosi, G. Fagiolo and A. Secchi, Modeling Industrial Evolution in Geographical Space, L.E.M. Working Paper n. 2007-06, S. Anna School (2007).

G. Bottazzi and M. Grazi, Wage structure in Italian Manufacturing firms, L.E.M. Working Paper n. 2007-05, Scuola Superiore Sant'Anna (2007).

G. Bottazzi and A. Secchi, Maximum Likelihood Estimation of the Symmetric and Asymmetric Exponential Power Distribution, L.E.M. Working Paper n. 2006-19, Scuola Superiore Sant'Anna (2006).

G. Bottazzi, A. Secchi and F. Tamagni, Productivity, Profitability and Financial Fragility: Empirical Evidence from Italian Business Firms, L.E.M. Working Paper n. 2006-08, Scuola Superiore Sant'Anna (2006).

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## Software sviluppato per ricerca o didattica

Il software seguente e' libero ed e' distribuito sotto licenza GPL alla seguente pagina <http://www.sssup.it/~bottazzi/>

**gbutils** Un insieme di programmi statistici. Utile aiuto agli utilizzatori di gnuplot. Possono usarsi dalla riga di comando. Sono inclusi programmi per stimare densita', distribuzioni, regressioni semplici e robuste e numerosi test statistici. Titie i programmi sono scritti in C.

**subbotools** Un insieme di programmi per la stima e lo studio delle famiglie di distribuzioni di Subbotin, simmetriche ed asimmetriche, e simile.

**YAFiMM** Un ambiente simulativo per l'analisi di modelli finanziari. Per una descrizione si veda il Working Paper 'A Simple Micro-Model of Market Dynamics Part I: The Homogenous Agents Deterministic Limit'. Tutti i programmi sono scritti in C++.

**bose** Una collezione di programmi per l'analisi dei modelli di dinamica di impresa sviluppati a partire da Bottazzi G. and Secchi A. On the Laplace Distribution of Firms Growth Rates. I programmi sono scritti in Python e C.

**NAIF** NAIF (Numerical Analysis of Investment Functions) simula l'attivita' di scambio di un gruppo eterogeneo di agenti.

**bdr** Simulazioni del modello di dinamica industriale descritto in G.Bottazzi, G.Dosi and G.Rocchetti Modes of Knowledge Accumulation, Entry Regimes and Patterns of Industrial Evolution, Industrial and Corporate Change 10,3 (2001). I programmi sono scritti in Python.