

# Erol Taymaz

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## Experience

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- 1998-Present Professor, Department of Economics, Middle East Technical University, Ankara
- 1993-1998 Associate Professor, Department of Economics, Middle East Technical University, Ankara
- 1992-1993 Assistant Professor, Department of Economics, Middle East Technical University, Ankara
- 1993-2006 Visiting Professor, Department of Economics, Université Panthéon-Assas (Paris II), Paris  
Winter
- 1996-1997 Visiting Scholar, Department of Industrial Economics, Royal Institute of Technology, Stockholm  
Summer
- 2005-2006 Advisor, The Central Bank of Turkey
- 2001-2004 Advisor, The Scientific and Technological Research Council of Turkey
- 1999-2000 Advisor, State Institute of Statistics, Turkey
- 1989-1992 Research Fellow, Industrial Institute for Economic and Social Research (IUI), Stockholm
- 1985-1989 Research Assistant, Department of Economics, Case Western Reserve University, Cleveland, USA
- 1982-1985 Research Engineer, Aselsan Electronics Industries, Inc., Ankara

## Education

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- 1989 Ph.D., Department of Economics, Case Western Reserve University, Cleveland, USA  
Thesis: *Technological Capabilities and International Competitiveness: A Study on the Machine Tool Industry*
- 1985 M.S., Department of Economics, Middle East Technical University, Ankara  
Thesis: *The Role of the Machine Tool Industry in Industrial Development with Special Reference to Turkey*
- 1982 B.S., Department of Mechanical Engineering, Middle East Technical University, Ankara

## Research projects and papers

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- 2006-2007 *Dynamics of Structural Change, Productivity and Technological Change in Turkish Manufacturing Industry*, TUBITAK
- 2006-2007 *From FDI-Based Productivity to Wage Spillovers in The Mena Region: The Case of Turkey*, GDN and ERF
- 2006-2007 *How does Trade Liberalisation Affect Entry and Exit Costs: A Comparison of the Spanish and Turkish Experience using Firm-level Data*, FEMISE
- 2007 *Strategic Plan for HAVELSAN*, HAVELSAN
- 2005-2006 *Pricing Behavior in Turkish Manufacturing*, the Central Bank of the Republic of Turkey
- 2005-2006 *Structural Business Statistics and Short Term Statistics*, State Institute of Statistics and the European Commission
- 2004-2006 *Joint Assessment of the Employment Policy Priorities of Turkey (JAP)*, the Employment Agency of Turkey and the European Commission
- 2000-2006 *Turkey: Monitoring and Evaluation of the Industrial Technology Project*, TTGV, Turkey, and the World Bank
- 2006 *Labor Demand in Turkey*, the World Bank
- 2004-2005 *Country Profiles Project: Turkey Trade Issues Chapter*, FEMISE and ERF
- 2004-2005 *Competitiveness, Attraction of FDI, and the Role of Competition Policy in Turkey*, World Bank Group-TOBB-Competition Authority of Turkey
- 2003-2004 *Manufacturing Visions: Integrating Diverse Perspectives into Pan-European Foresight*, 6th Framework Programme SSA (coordinated by the Fraunhofer-Insitute)
- 2001-2004 *Vision 2023: Science and Technology Policies in Turkey and the National Foresight Study*, TUBITAK
- 2003 *Evaluation of the Utility and Impact of S&T Research Mapping*, Support action to the Directorate DG Research B “Open Coordination of Research Policies” by JRC/IPTS & ESTO”
- 2003 *Labor Markets in Turkey* (with Sule Ozler, UCLA, USA), the World Bank
- 2002 *Mapping of (Technology) Foresight Competencies in Europe*, the European Commission
- 2002 *Competitiveness of the Turkish Textile Industries*, the World Bank
- 2001 *GAP Bölgesinde İmalat Sanayiinin Konumu ve Gelişme Perspektifleri, 2010*, GAP Administration, Turkey
- 2001-2002 *Technological Change and SME Dynamics*, METU, Turkey
- 2001-2002 *Liberalization and Regulation in the Turkish Electricity Market*, METU, Turkey
- 1998-2000 *Ulusal Yenilik Sistemi: Türkiye İmalat Sanayiinde Teknolojik Değişim ve Yenilik Süreçlerinin İzlenmesi (National Innovation System: An Evaluation of the Processes of Technological Change and Innovation in Turkish Manufacturing Industry)*, TUBITAK and TTGV, Turkey
- 2000 *TÜBİTAK-MAM Tekstil Enstitüsü Değerlendirme Raporu (Evaluation of the TUBITAK-MAM Textile Institute)*, TUBITAK, Turkey.
- 2000-2001 *Subcontracting Relationships in Turkish Textile and Engineering Industries*, METU, Turkey

- 1998-1999 *The Macroeconomic Effects of Computer and Communications Technology*, Swedish Transport and Communications Research Board (Kommunikationsforskningsberedningen), Sweden
- 1998 *Türkiye'de Bilişim, Tekstil ve Sayısal Kontrol Teknolojilerinin Yaygınlaşması*, Türkiye Ulusal Enformasyon Altyapısı Projesi (TUENA), Ministry of Transportation, Turkey
- 1997-1998 *Human Capital Accumulation and Economic Performance*, ERMES, Paris II University, France
- 1997-1998 *Demand for Telecommunications Services in Swedish Manufacturing Industries*, Royal Institute of Technology (KTH), Sweden
- 1997 *The New Strategy of Technology Development Foundation of Turkey for the Next Century*, TDF, Turkey
- 1997 *Measurement of Total Factor Productivity Project*, State Institute of Statistics, Turkey
- 1997 *Performance of State Economic Enterprises in Turkey*, KIGEM, Turkey
- 1997 *Microfinance Feasibility Study*, UNDP, Turkey
- 1996 *Flexible Automation in Developing Countries: The Case of Turkish Engineering Industries*, METU, Turkey
- 1995-1996 *Small and Medium-sized Industry Project*, State Institute of Statistics, Turkey
- 1995-1996 *Sweden's Technological Systems and Future Development Potential*, The National Board for Industrial and Technical Development, Sweden

## Publications

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- 2007, “The Impact of Electricity Market Liberalization in Turkey: ‘Free Consumer’ vs Distributional Monopoly Cases” (with S. Bahçe), *Energy Economics* (forthcoming).
- 2007, “Vision 2023: Turkey’s National Technology Foresight Program – A Contextualist Description and Analysis” (with O. Saritas and T. Tumer), *Technological Forecasting and Social Change* (forthcoming).
- 2007, “Productivity and Trade Orientation: Turkish Manufacturing Industry Before and After the Customs Union” (with K. Yilmaz), *Journal of International Trade and Diplomacy* (forthcoming).
- 2006, “El espíritu emprendedor, el tamaño de lanzamiento y la supervivencia de los pequeños empresarios” [Entrepreneurship, Start-up Size and Selection: Why do Small Entrepreneurs Fail?] (with M.Y. Köksal), *Ekonomiaz: Basque Economics Journal* (62/2): 70-99.
- 2006, “Who Benefits from Training and R&D, the Firm or the Workers?” (with G. Ballot and F. Fakhfakh), *British Journal of Industrial Relations* (44): 473-495.
- 2006, “To Innovate or to Transfer? A Study on Spillovers and Foreign Firms in Turkey” (with A. Lenger), *Journal of Evolutionary Economics* (16): 137-153.
- 2006, “Transferring the Risks of Failure: Entrepreneurship and Firm Dynamics in Turkish Manufacturing” (with K. Orhan and A. Güneş), in E. Santarelli (ed.), *Entrepreneurship, Growth, and Innovation: The Dynamics of Firms and Industries*, International Studies in Entrepreneurship, Vol. 12, Springer, 243-260.

- 2006, “Sınai Yapı, Yapısal Değişim ve Üretkenlik” (with Y. Kılıçaslan), *İktisat, İşletme ve Finans* (247): 5-23.
- 2005, *Fast Moving Consumer Goods: Competitive Conditions and Policies* (with A. Çelen and T. Erdoğan), Ankara: TEPAV.
- 2005, “Are Small Firms Really Less Productive? An Analysis of Productivity Differentials and Firm Dynamics”, *Small Business Economics* (25): 429-445.
- 2005, “Determinants of Subcontracting and Regional Development : An Empirical Study on Turkish Textile and Engineering Industries” (with Y. Kilicaslan), *Regional Studies* (39): 633-645.
- 2005, “Firm Turnover and the Rate of Macro Economic Growth – Simulating the Macroeconomic Effects of Schumpeterian Creative Destruction” (with G. Eliasson and D. Johansson), in G. Eliasson (ed.), *The Birth, the Life and the Death of Firms*, Stockholm: Ratio Institute, pp. 305-356.
- 2005, “Dynamic Capability, Innovation Networks and Foreign Firms: The Turkish Case” (with A. Lenger), in G. Santangelo (ed.), *Technological Change and Economic Catch-up: The Role of Science and Multinationals*, Edward Elgar, pp. 125-150.
- 2005, “Labor Market Policies and EU Accession: Problems and Prospects for Turkey” (with Ş.Özler), in B. Hoekman and S. Togan (eds.), *Turkey: Economic Reform and Accession to the European Union*, Washington, DC: World Bank and CEPR, pp.223-260.
- 2005, *Türkiye’de Verimlilik, Büyüme ve Kriz* (with H. Suiçmez), 4. Verimlilik Raporu, Ankara: MPM.
- 2005, “ODTÜ Bilimsel Araştırma Yetenekleri ve Potansiyeli” [METU Scientific Research Capabilities and Potential] (with D. Üner ve T. Tümer), *İktisat, İşletme ve Finans*, 227 (February): 34-50.
- 2004, “Simulating the New Economy” (with G. Eliasson and D. Johansson), *Structural Change and Economic Dynamics* (15): 289-314.
- 2004, “Does Innovativeness Matter for Competitiveness in Developing Countries? The Case of Turkish Manufacturing Industries” (with E. Özçelik), *Research Policy* (33): 409-424.
- 2004, “Tekstil ve Hazır Giyim Sanayiilerinde Uluslararası Rekabet” [International Competitiveness in Textile and Clothing Industries] (with O. Eruygur and E. Özçelik), *İktisat, İşletme ve Finans*, 217 (April): 5-23.
- 2003, “Unutulan Bir Toplumsal Amaç: Sanayileşme Ne Oluyor? Ne Olmalı? [A Forgotten Social Objective: Industrialization]” (with F. Şenses), in A.H. Köse, F. Şenses and E. Yeldan (eds.), *İktisadi Kalkınma Kriz ve İstikrar*, İstanbul: İletişim.
- 2002, “KOBİ’ler ve İhracata Dayalı Sanayileşme [SMEs and Export-led Industrialization]”, *Tes-İş Dergisi*, No 4, 41-45.
- 2001, *Ulusal Yenilik Sistemi: Türkiye İmalat Sanayiinde Teknolojik Değişim ve Yenilik Süreçleri [National System of Innovation: Processes of Innovation and Technological Change in Turkish Manufacturing Industry]*, Ankara: TUBITAK/TTGV/SIS.
- 2001, “Privatization, Ownership and Technical Efficiency: A Study on Turkish Cement Industry” (with Ş. Saygılı), *Annals of Public and Cooperative Economics*, 72: 581-605.
- 2001, “Firms’ Human Capital, R&D and Performance: A Study on French and Swedish

- Firms” (with G. Ballot and F. Fakhfakh), *Labour Economics*, 8: 443-462.
- 2001, “Training Policies and Economic Growth in an Evolutionary World” (with G. Ballot), *Structural Change and Economic Dynamics*, 12: 311-329.
- 2001, “Small and Medium-Size Enterprises in Turkish Manufacturing Industries”, *Journal of Economic Cooperation* (22): 43-72.
- 2000, “Competition, Training, Heterogeneity Persistence, and Aggregate Growth in a Multi-agent Evolutionary Model” (with G. Ballot), *Applications of Simulation to Social Sciences*, Paris: Hermes, pp.335-351.
- 2000, “Institutions, Entrepreneurship, Economic Flexibility and Growth” (with G. Eliasson), in S. Klepper, H. Hanusch and U. Cantner (eds.) *Economic Evolution, Learning, and Complexity*, Heidelberg: Springer/Physica, pp.265-286.
- 2000, “Teknolojik Gelişme ve Piyasa Yapısı: İmalat Sanayii Üzerine Bir İnceleme”, *Perşembe Konferansları 6*, Ankara: Rekabet Kurumu.
- 2000, “Türkiye’de AR-GE Destek Programları: Bir Değerlendirme”, *III: Teknoloji Kongresi Bildirileri*, Ankara: TÜBİTAK, TTGV, TÜSİAD, pp. 165-174.
- 1999, “Technological Change, Learning, and Macro-economic Coordination: An Evolutionary Model” (with G. Ballot), *Journal of Artificial Societies and Social Simulation*, 4 (2) [<http://www.soc.surrey.ac.uk/JASSS/JASSS.html>].
- 1999, “Yerel Gelişme ve Teknik Etkinlik”, *İçel Sanayisini Geliştirme Sempozyumu*, Ankara: DİE and Mersin Ticaret ve Sanayi Odası, pp. 277-292.
- 1999, “Trade Liberalization and Employment Generation: The Experience of Turkey in the 1980s”, in Ana Revenga (ed.), *Turkey: Economic Reforms, Living Standards, and Social Welfare Study*, Vol II Technical Papers, Washington, D.C.: World Bank.
- 1998, “Human Capital, Technological Lock-in and Evolutionary Dynamics” (with G.Ballot), in G.Eliasson and C.Green (eds.), *Microfoundations of Economic Growth: A Schumpeterian Perspective*, Ann Arbor: The University of Michigan Press, 301-330.
- 1998, “Formation Continue, Recherche et Développement et Performance des Entreprises” (with G.Ballot and F.Fakhfakh), *Formation Emploi*, n.64, 43-58.
- 1998, “Règles D'Allocation des Ressources aux Investissements Immatériels par les Entreprises et Coordination Macroéconomique: Un Modèle S'Apprentissage” (with G. Ballot), *Mélanges Vincens*, Toulouse: Presses de l'Université des Sciences Sociales de Toulouse, 235-248.
- 1998, *KİT Sisteminin İktisadi Değerlendirilmesi: Nicel İrdeleme, Özelleştirme Sorunları ve Politika Seçenekleri* (with K. Boratav, Y. Kepenek, T. Bali, M.A. Candan ve İ. Ertuğrul), Ankara: KİGEM.
- 1998, “Kamu İşletmeleri ve Özelleştirme Deneyimi: Sorunlar ve Politika Seçenekleri” (with K. Boratav, Y. Kepenek, T. Bali, M.A. Candan ve İ. Ertuğrul), *Toplum ve Bilim*, n.77, 100-134.
- 1998, “Türkiye İmalat Sanayiinde Teknolojik Değişme ve İstihdam”, in T.Bulutay (ed.), *Teknoloji ve İstihdam*, Ankara: DİE, pp. 179-217 (Also published as “Technological Change and Employment in Turkish Manufacturing Industries”, in T.Bulutay (ed.), *Technology and Employment*, Ankara: SIS, pp. 185-223).
- 1997, “The Dynamics of Firms in a Micro-to-macro Model with Training, Learning, and Innovation” (with G.Ballot), *Journal of Evolutionary Economics* (7), 435-457.

- 1997, "Technical Change and Efficiency in Turkish Manufacturing Industries" (with G.Saatçi), *Journal of Productivity Analysis* (8), 461-475.
- 1997, "Micro-Macro Simulation of Technological Systems: Economic Effects of Spillovers" (with B.Carlsson and G.Eliasson), in B.Carlsson (ed.), *Technological Systems and Industrial Dynamics*, Boston: Kluwer, 255-278.
- 1997, *Small and Medium-sized Industry in Turkey*, Ankara: SIS.
- 1997, "Esnek Üretime Dayalı Bir Rekabet Stratejisi Geliştirilebilir mi? Türkiye'de Fason Üretim", *Petrol İş Yıllığı, 1996*, İstanbul: Petrol İş, 707-715.
- 1996, "Firm Sponsored Training, Technical Progress and Aggregate Performance" (with G.Ballot), in A.Harding (ed.), *Microsimulation and Public Policy*, Amsterdam: North Holland, 421-451.
- 1996, "Türkiye Mühendislik Sanayilerinde Teknolojik Yapı", *Cumhuriyet Dönemi Türkiye Ansiklopedisi*, vol 15, İstanbul: İletişim, 374-378.
- 1995, "Türkiye Çimento Sanayiinde Özelleştirme ve Teknik Etkinlik [Privatization and Technical Efficiency in Turkish Cement Industry]" (with Ş.Saygılı), *METU Studies in Development* (23): 405-426.
- 1995, "Emek ve Üretim Sürecindeki Değişmeler [Labor and Changes in Production Systems]", *Değişim Sürecinde Türkiye Sanayii Sempozyumu*, Ankara: TMMOB, 62-70.
- 1995, "The Importance of Economic Competence in Economic Growth: A Micro-to-Macro Analysis" (with B.Carlsson), in B.Carlsson (ed.), *Technological Systems and Economic Performance: The Case of Factory Automation*, Dordrecht: Kluwer, 359-390.
- 1994, "Factory Automation and Economic Performance: A Micro-to-macro Analysis" (with B.Carlsson and K.Tryggestad), in O.Granstrand (ed.), *Economics of Technology*, Amsterdam: Elsevier, 37-64.
- 1994, "Flexible Technology and Industrial Structure in the US" (with B.Carlsson), *Small Business Economics* (6): 193-209.
- 1993, "Technological Capabilities and International Competitiveness in the Engineering Industries" (with B.Carlsson), *Review of Industrial Organization* (8): 293-313.
- 1993, "Teknoloji ve Kriz [Technology and the Crisis]", *Toplum ve Bilim* (56): 5-41.
- 1993, "Sanayi ve Teknoloji Politikaları [Industrial and Technology Policies]", *METU Studies in Development* (20): 549-80.
- 1992, "A Description of the Initial 1982 and the 1990 Databases", in J.W.Albrecht *et al.*, *MOSES Database*, Stockholm: IUI, 137-80.
- 1992, "Initial State Dependency", in J.W.Albrecht *et al.*, *MOSES Database*, Stockholm: IUI, 325-41.
- 1992, "The Minimum Data Requirements to Start and Run MOSES" (with J.Nielsen), in J.W.Albrecht *et al.*, *MOSES Database*, Stockholm: IUI, 343-53.
- 1991, "Flexible Automation in the US Engineering Industries", *International Journal of Industrial Organization* (9): 557-72.
- 1991, "The Impact of Trade Unions on the Diffusion of Technology: The Case of NC Machine Tools", *British Journal of Industrial Relations*, (29): 305-311.
- 1991, *MOSES on PC - Manual, Initialization, and Calibration*, Stockholm: IUI.

- 1990, "A Micro-simulation Analysis of Manufacturing Firms' Demand for Telecommunication Services", in G.Eliasson *et al.*, *The Knowledge Based Information Economy*, Stockholm: IUI, 157-82.
- 1989, "Types of Flexibility in a Single-machine Production System", *International Journal of Production Research* (27): 1891-9.
- 1989, "İmalat Teknolojisindeki Gelişmeler ve Mühendislik Sanayileri [New Manufacturing Technologies and the Engineering Industries]", *1989 Sanayi Kongresi Bildirileri*, 1989, Cilt 1, Ankara: MMO, 72-76 [Reprinted in *Endüstri Mühendisliği* (1): 10-4].
- 1986, "Sınai Kalkınmada Takım Tezgahları Sanayinin Rolü ve Türkiye Örneği [The Role of the Machine Tool Industry in Industrial Development: The Turkish Case]", (with E.Özmen), in *III. Teknoloji Kongresi Bildirileri*, Ankara: The Ministry of Technology and Industry.

### Research reports

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- 2005, *Unbinding Prometheus, An Assessment of the World Bank's Technology Development Projects in Turkey* (with S. Lall), Ankara: World Bank and TTGV.
- 2004, *Monitoring and Evaluation of the Industrial Technology Project, Interim Report 2004* (with S. Lall), Ankara: World Bank and TTGV.
- 2004, *Türkiye İmalat Sanayiinde Teknolojik Yetenek* [Technological Capability in Turkish Manufacturing Industries], Ankara: TUBITAK.
- 2004, *ODTÜ Bilimsel Araştırma Yetenekleri ve Potansiyeli* [Scientific Research Capabilities and Potential at METU] (with D. Üner and T. Tümer), Ankara: METU.
- 2003, *Monitoring and Evaluation of the Industrial Technology Project, Second Report 2003*, Ankara: World Bank and TTGV.
- 2002, *Competitiveness of the Turkish Textile and Clothing Industries*, the World Bank.
- 2001, *Ulusal Yenilik Sistemi: Türkiye İmalat Sanayiinde Teknolojik Değişim ve Yenilik Süreçlerinin İzlenmesi*, Ankara: TUBITAK, TTGV, and SIS.
- 2001, *GAP Bölgesinde İmalat Sanayiinin Konumu ve Gelişme Perspektifleri, 2010*, Ankara: GAP Administration.
- 2000, *TÜBİTAK-MAM Tekstil Enstitüsü Değerlendirme Raporu* (with S. Turgut Tümer), Ankara: TUBITAK.
- 2000, *Monitoring and Evaluation of the Industrial Technology Project, First Report 2000*, Ankara: World Bank and TTGV.
- 1998, *Türkiye'de Bilişim, Tekstil ve Sayısal Kontrol Teknolojilerinin Yaygınlaşması*, Ankara: Türkiye Ulusal Enformasyon Altyapısı Projesi (TUENA), Ministry of Transportation.

### Conference presentations

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- 2006, "Labour Market Institutions and Industrial Performance: An Evolutionary Study" (with Y. Kilicaslan), Conference on Innovating Labour Market Policies: Transitional Labour Markets and Flexicurity, Amsterdam, November 30- December 1.
- 2006, "Productivity and Trade Orientation: Turkish Manufacturing Industry Before and

- After the Customs Union” (with K. Yilmaz), 2<sup>nd</sup> Fall Workshop on Economics in Granada, Universidad de Granada, November 17-18.
- 2006, “Productivity and Trade Orientation: Turkish Manufacturing Industry Before and After the Customs Union” (with K. Yilmaz), Undersecretariat for Foreign Trade, Conference on Current Issues in International Trade and Diplomacy, Ankara, November 3.
- 2006, “Entrepreneurship, Start-up Size and Selection: Why do Small Entrepreneurs Fail?”, Invited Seminar, Doctoral school of Economic Policy, Catholic University of Piacenza, Piacenza, October 11.
- 2006, “Yenilik, Rekabet Gücü ve Doğrudan Yabancı Yatırımlar”, 2. Rekabet Çalıştayı, Rekabet Forumu, Sabancı Üniversitesi, İstanbul, September 6-7.
- 2006, “Geography of Firm Demography: An Explanatory Analysis” (with M.Y. Koksall), CEPA Conference, Chicago, September 18-19.
- 2006, “Self-selection, Adverse Selection and Market Selection: The Role of Finance in Industrial Dynamics”, 11<sup>th</sup> International Schumpeter Society Conference, Sophia-Antipolis, June 21-24.
- 2006, “Labor Market Institutions and Industrial Performance: An Evolutionary Study” (with Y. Kilicaslan), 11<sup>th</sup> International Schumpeter Society Conference, Sophia-Antipolis, June 21-24.
- 2006, “R&D Support and the Demand for Researchers: The Turkish Experience” (with Y. Üçdoğruk), EUNIP Conference, Dublin, June 20-22.
- 2006, “The Role of Commercialization Competence in Endogenous Economic Growth” (with G. Ballot and G. Eliasson), DRUID Summer Conference, Copenhagen, June 18-20.
- 2006, “The Structure of Structural Change” (with Y. Kilicaslan), DRUID Summer Conference, Copenhagen, June 18-20.
- 2006, “Teknolojik Gelişme, Yapısal Dönüşüm ve Büyüme: Türkiye, Kore ve Çin”, Boğaziçi Üniversitesi Demirgil Semineri, May 8.
- 2005, “Sanayileşmeye Genel bir Bakış”, TMMOB Sanayi Kongresi 2005, Ankara, December 16-17.
- 2005, “Trade Issues: Turkey”, ERF-FEMISE Country Profile Conference, Ankara, August 13.
- 2005, “Hızlı Tüketim Malları: Rekabet Koşulları ve Politikalar” [Fast Moving Consumer Goods: Competitive Conditions and Policies] (with A. Çelen and T. Erdoğan), Conference on Competition Policy and the Improvement of Investment Environment in Turkey, Competition Authority-TOBB-World Bank-FIAS, Ankara, March 4.
- 2004, “How Flexible are Small Firms? An Analysis on the Determinants of Flexibility” (with G. Sak), ERF 11th Annual Conference, Beirut, December 14-16.
- 2004, “Structural Change, Productivity and Competitiveness in MENA Countries” (with Y. Kılıçaslan), ERF 11th Annual Conference, Beirut, December 14-16.
- 2004, “Export Decision – Sunk Costs, Plant Characteristics and Externalities: Evidence from Turkish Manufacturing Industry” (with S. Ozler and K. Yilmaz), ASSET 2004 Conference, Barcelona, November 4-6.
- 2004, “Productivity Growth and Structural Change” (with Y. Kılıçaslan), Asia-Pacific Productivity Conference, Brisbane, July 14-16.
- 2004, “To Innovate or to Transfer? A Study on Innovation Networks and Ownership” (with A. Lenger), the 10th International J.A. Schumpeter Conference, Milan, June 9-12.
- 2004, “Innovation Networks and Foreign Firms in Developing Countries: The Turkish

- Case” (with A.Lenger), Workshop on Innovation and Economic Growth, University of Catania, March 11-12.
- 2004, “Geography of Firm Demography: An Exploratory Analysis” (with M.Y. Köksal), EURETNIP Workshop on Local Development and Territorial Governance, Université de Toulouse I, Toulouse, March 11-13.
- 2004, “MNCs and Productivity Spillovers” (with A. Lenger), DRUID's Winter Conference, Aalborg, Denmark, January 22-24.
- 2003, “Does Foreign Ownership Matter for Survival and Growth? Dynamics of Competition and Foreign Direct Investment”, (with S. Ozler), the ERF 10th Annual Conference, Marrakesh, December 16-18.
- 2003, “Sunk Costs, Plant Characteristics and Externalities: Evidence from Turkish Manufacturing Industry” (with S. Ozler and K. Yilmaz), the ERF 10th Annual Conference, Marrakesh, December 16-18.
- 2003, “Innovation Networks and Foreign Countries in Developing Countries: The Turkish Case”, (with A. Lenger), What Do We Know About Innovation? Conference in Honour of Keith Pavitt, Brighton, November 13-15.
- 2003, “Türkiye İmalat Sanayiinde Teknolojik Yetenek: Kaynakları ve Etkileri” (with G.T. Durmaz and I. Erten), the 7th International ERC/METU Conference in Economics, Ankara, September 6-9.
- 2003, “Labor Market Flexibility in Turkey and EU” (with S. Ozler), the 7th International ERC/METU Conference in Economics, Ankara, September 6-9.
- 2002, “Are Small Firms Really Less Productive?”, International Workshop on the Post-entry Performance of Firms: Technology, Growth, and Survival, University of Bologna, Bologna, November 22-23.
- 2002, “Are Small Firms Really Less Productive? An Analysis of Productivity Differentials and Firm Dynamics”, the ERF 9th Annual Conference, Sharja, UEA, October 26-28.
- 2002, “Evolution of Financial Innovations: A Micro-simulation Analysis” (with G. Eliasson), International Workshop on Business Processes and Industrial Dynamics in the Experimentally Organized Economy: A RoundTable, Skaga, Denmark, October 24.
- 2002, “The Export Decision - Plant Characteristics, Externalities and Entry Costs: Evidence from Turkish Manufacturing Industry” (with S. Ozler and K. Yilmaz), the 6th International ERC/METU Conference in Economics, Ankara, September 11-14.
- 2002, “Evaluation of R&D Support Programs in Turkey”, EU Workshop on Innovation Policy in Candidate Countries: State of Play and Priorities for Community Action, Luxembourg, June 24-25.
- 2002, “Simulating the New Economy” (with G. Eliasson and D. Johansson), the 9th International Schumpeter Society Conference, Gainesville, Florida, March 28-30, DRUID Summer Conference 2002 on Industrial Dynamics of the New and Old Economy, Copenhagen, June 6-8, and the IARIW 27th General Conference, Djurhamn, August 18-24.
- 2002, “Labor Market Policies and EU Accession: Problems and Prospects for Turkey” (with S.Ozler), Conference on Turkey: Towards EU Accession, Ankara, May 10-11.
- 2002, “Kullanıcı Gözüyle 2002 Genel Sanayi ve İşyerleri Sayımından Beklentiler”, DİE 2002 Genel Sanayi ve İşyerleri Sayımı'nda Beklentiler Paneli, Ankara, May 9.
- 2002, “Does Innovativeness Matter for International Competitiveness in Developing Countries? The Case of Manufacturing Industries”, (with E. Ozcelik), the ERF 8th Annual Conference, Cairo, January 15-17.
- 2001, “Teknoloji ve Rekabet Gücü”, Gazi Üniversitesi Ekonomik Yaklaşım Kongreler

- Dizisi 2, Ankara, November 7-8.
- 2001, "Who benefits from training and R&D? The firm or the workers? A study on panels of French and Swedish firms" (with F. Fakhfakh, G. Ballot), the 14th Annual EALE Conference, Jyvaskylä, September 13-16.
- 2001, "Does Technology Matter for International Competitiveness in Developing Countries? The Case of Turkish Manufacturing Industries", (with E. Özçelik), the 5<sup>th</sup> International ERC/METU Conference in Economics, Ankara, September 10-13.
- 2001, "Survival and Post-entry Performance: Initial Conditions and Learning", (with Ş. Özler), the 5<sup>th</sup> International ERC/METU Conference in Economics, Ankara, September 10-13.
- 2001, "Is there Any Gender-biased Technical Change?" (with S. Ozler), the IAFFE Conference on Feminist Economics, Oslo, June 22-24.
- 2000, "Competition, Training, Heterogeneity Persistence, and Aggregate Growth in a Multi-agent Evolutionary Model" (with G.Ballot), 2<sup>nd</sup> International Conference on Computer Simulations and the Social Sciences, Paris, September 18-20.
- 2000, "Subcontracting: A Model for Industrial Development" (with Y. Kılıçaslan), the ERF 7<sup>th</sup> Annual Conference, Amman, October 26-29.
- 2000, "Trainers and Poachers: Friends or Foes? Competition and Aggregate Growth in a Multi-Agent Evolutionary Model" (With G.Ballot), Conference E3i "Politiques Technologiques: Fondements et Perspectives", IFREDE-E3i, Université Montesquieu Bordeaux IV, Pessac, September 27-29.
- 2000, "Türkiye'de AR-GE Destek Programları: Bir Değerlendirme", 3. Teknoloji Kongresi, TÜBİTAK, TTGV, TÜSİAD, Ankara, 11 Eylül.
- 2000, "Trainers and Poachers: Friends or Foes? Competition and Aggregate Growth in a Multi-Agent Evolutionary Model" (with G.Ballot), 8<sup>th</sup> International J.A. Schumpeter Conference, Manchester, June 28-July 1.
- 2000, "Turkish Manufacturing Industries in the 1990s", Conference on the Economy of Turkey, Tel Aviv University, Tel Aviv, June 15.
- 2000, "Small and Medium Sized Enterprises in Turkish Manufacturing Industries", Conference on Strengthening Small and Medium Enterprises Facing Globalisation and Trade Liberalisation, Abu Dahabi, U.A.E., May 21-22.
- 2000, "Teknolojik Gelişme ve Piyasa Yapısı: İmalat Sanayii Üzerine Bir İnceleme", Perşembe Konferansları, Rekabet Kurumu, Ankara, Mart 30.
- 1999, "Industrial Development in Turkey", TEAM Working Group Meeting on Industrial Development Strategy, IPTS, Seville, November 28-30.
- 1999, "Trade Liberalization and Employment Generation: The Experience of Turkey in the 1980s", 6<sup>th</sup> ERF Conference, Cairo, October 29-November 1.
- 1999, "Training Policies and Economic Growth in an Evolutionary World" (with G. Ballot), EALE Conference, Regensburg, September 23-26
- 1999, "Institutions, Entrepreneurship, Economic Flexibility and Growth" (with G. Eliasson), 26<sup>th</sup> EARIE Conference.
- 1999, "Yerel Gelişme ve Teknik Etkinlik: İçel Örneği", İçel Sanayisini Geliştirme Sempozyumu, Mersin, 24-25 Haziran.
- 1998, "Dynamics of Technical Change in Turkish Manufacturing Industries" (with Y. Kepenek), presented at the Conference on Industrial Structure, Innovation Dynamics and Technology Policy, Lisbon, Oct. 16-17.

- 1998, “Yerel Gelişme ve Teknik Etkinlik” (with A. Palas ve G. Saatçi), presented at the Conference on Local Industrial Development, State Planning Organization, Ankara, Sept. 23-25.
- 1998, “Technological Change, Firms Organisational Learning and Macroeconomic Coordination: An Evolutionary Model” (with G. Ballot), presented at the Conference on Modelling Economic Problems Using Computer-based Techniques, Centre for Economic Performance, London School of Economics, London, Sept. 17-18.
- 1998, “Economic Growth, Learning and Training Policies” (with G. Ballot), presented at the International Joseph A. Schumpeter Society Conference, Vienna, June 14-17.
- 1997, “Firm's Human Capital, R&D and performance: An International Comparative Study” (with G. Ballot and F. Fakhfakh), presented at the EALE Conference, Aarhus, Denmark, Sept. 25-28.
- 1997, “Teknik Etkinlik ve Kamu Mülkiyeti: Çimento ve Kağıt Sanayiileri Üzerine Bir İnceleme”, presented at the METU Conference on Economics, Sept. 18-20.
- 1997, “Choice of Technology in Developing Countries: The Case of Flexible Automation in Turkey” (with Y. Yaşar and A. Yılmaz), presented at the Sixth International Conference on Management of Technology, Göteborg, June 25-28.
- 1997, “Compétences des entreprises et performance: une comparaison France-Suède”, (with G. Ballot and F. Fakhfakh), presented at the Vingtième Anniversaire du Bilan Social, Toulouse, June 5-6.
- 1997, “The Dynamics of New Firms in Turkish Manufacturing Industries” (with A. Güneş and İ. Mintemur), presented at the 51th Session of the International Statistical Institute (ISI), Istanbul, August 18-26.
- 1997, “Economic Dynamics and Entry in an Evolutionary Model”, (with G. Eliasson), presented at the Workshop on Economic Evolution, Learning and Complexity, Augsburg, May 23-25.
- 1997, “Technological Change, Rule Generation by Firms and Macroeconomic Coordination: An Evolutionary Model” (with G. Ballot), presented at the Workshop on Economic Evolution, Learning and Complexity, Augsburg, May 23-25.
- 1997, “Firms' Human Capital, Innovation and Performance: An International Comparative Study” (with G. Ballot and F. Fakhfakh), presented at the Applied Econometrics Association Conference, Maastricht, May 15-17.
- 1996, “Türkiye İmalat Sanayiinde Teknolojik Değişme ve İstihdam [Technological Change and Employment in Turkish Manufacturing Industries]”, presented at the Seminar on Technology and Employment, State Institute of Statistics, Ankara, Dec. 10.
- 1996, “Human Capital, Technological Lock-in and Evolutionary Dynamics” (with G. Ballot), paper presented at the 23rd EARIE Conference, Vienna, Sept. 7-10.
- 1996, “Demand for Telecommunications Services in Swedish Manufacturing Industries” (with G. Eliasson), paper presented at the ITS 11th Biennial Conference, Seville, June 16-19.
- 1996, “The Diffusion of CNC Machine Tools in the Engineering Industries: The Case of Turkey”, paper presented at the 6th International Conference of the International J.A. Schumpeter Society, Stockholm, June 2-5.

- 1996, "Human Capital, Technological Lock-in and Evolutionary Dynamics" (with G.Ballot), paper presented at the 6th International Conference of the International J.A.Schumpeter Society, Stockholm, June 2-5.
- 1996, "Human Capital, Technological Lock-in and Evolutionary Dynamics" (with G.Ballot), paper presented at the workshop on Techniques for Modeling Structural Change, Manchester University, Manchester, May 20-21.
- 1996, "Human Capital, Technological Lock-in and Evolutionary Dynamics" (with G.Ballot), paper presented at the workshop on The Multiple Linkages between Technological Change and the Economy, CEIS, Università di Roma Tor Vergata, Rome, March 14-16.
- 1996, "Changement Technologique, Génèse des Règles de Gestion des Entreprises et Coordination Macroéconomique: Un Modèle Évolutionniste" (with G.Ballot), ERMES Working Paper n.96-02, Paris II University, Paris.
- 1995, "Technical Change in Turkish Manufacturing Industries: An Exploratory Analysis" (with G.Saatçi), paper presented at the New England Conference on Productivity and Efficiency, Armidale, Nov.22-23.
- 1995, "Türkiye Çimento Sanayiinde Özelle\_tirme ve Teknik Etkinlik [Privatization and Technical Efficiency in Turkish Cement Industry]" (with Ş.Saygılı), paper presented at the Türk Sosyal Bilimler Derneği 3. Sosyal Bilimler Kongresi, Ankara, Nov. 2-3.
- 1995, "Firms, Rule Creation and Macroeconomic Effects in an Evolutionary Model" (with G.Ballot), paper presented at the 4th International Conference on the Cognitive Foundations of Economics and Management (CECOIA), Paris, Sept 6-9, 1995.
- 1995, "Human Capital and Endogenous Change in the Technological Paradigm" (with G.Ballot), paper presented at the 22nd EARIE Conference, Juan les Pins, Sept. 3-6.
- 1995, "Human Capital and Endogenous Change in the Technological Paradigm" (with G.Ballot), paper presented at the 12th Journées de Microéconomie Appliquée, Clermont-Ferrand, June 1-2.
- 1995, "Technical Progress and Efficiency in Turkish Manufacturing Industries" (with G.Saatçi and Y.Yardımcı), paper presented at the 50th Session of the International Statistical Institute, Beijing, August 21-29.
- 1994, "The Dynamics of Firms in a Micro-to-Macro Model with Training, Learning and Innovation" (with G.Ballot), paper presented at the EUNETIC Conference of Technological Change, Strasbourg, Oct. 6-8.
- 1994, "Training, Learning and Innovation: A Micro-to-Macro Model of Evolutionary Growth" (with G.Ballot), paper presented at the International Joseph A.Schumpeter Society Conference on Economic Dynamism, Münster, August 17-20.
- 1993, "Firm-sponsored Training, Technical Change and Aggregate Performance in a Micro-to-Macro Model" (with G.Ballot), paper presented at the IARIW Special Conference on Microsimulation and Public Policy, Canberra, Dec. 6-9.
- 1993, "Türkiye Petrokimya Sanayi'inde Kamu Girişimciliği: Petkim Örneği [The Public Entrepreneurship in Turkish Petro-chemical Industry: The Case of Petkim]", paper presented at the Congress on Industry, the Chamber of Mechanical Engineers, Ankara, November.
- 1993, "Firm-sponsored Training and Performance: A Comparison between French and Swedish Firms" (with G.Ballot), presented at the 5th EALE Congress, Maastricht, Sept. 30 - Oct. 3. [ERMES Working Paper n.93.9, Paris II University, Paris; IUI Working Paper n.387, Stockholm]

- 1993, “The Macroeconomic Effects of Technological Systems: Micro-Macro Simulations” (with B.Carlsson and G.Eliasson), paper presented at the EARIE Conference, Tel Aviv, Sept. 4-7.
- 1993, “Firm-sponsored Training and Performance: A Comparison between France and Sweden” (with G.Ballot), paper presented at the Communication aux Journees AFSE, Université de Bourgogne, Dijon, May 27-28.
- 1993, “A Calibration Algorithm for Micro-simulation Models”, paper prepared for the special course on “Microanalytic Simulation” at ERMES, Université de Paris II, Feb. 2 [ERMES Working Paper n.93.6, Paris II University, Paris, and IUI Working Paper, n. 374, Stockholm].
- 1992, “The Productivity Puzzle” (with B.Carlsson and G.Eliasson), IUI Working Paper n.289, Stockholm.
- 1992, “The Limits of Policy Making: An Analysis of the Consequences of Boundedly Rational Government using the Swedish Micro-to-Macro Model” (with G.Eliasson), paper presented at the International Symposium on Economic Modeling, Gothenburg, August 18-20.
- 1992, “Training and the Performance of Swedish Firms”, paper presented at the workshop on “Formation, Competence, Competitivite, et Croissance”, at ERMES, Université de Paris II, Paris, April 23.
- 1989, “Productivity Analysis: A Micro-to-Macro Perspective”, (with B.Carlsson), paper presented at IUI's 50th Anniversary Symposium, Stockholm, Nov. 15-17.
- 1989, “İmalat Teknolojisindeki Gelişmeler ve Mühendislik Sanayileri [New Manufacturing Technologies and the Engineering Industries]”, paper presented at the Congress on Industry, the Chamber of Mechanical Engineers, Ankara.
- 1986, “Sınai Kalkınmada Takım Tezgahları Sanayinin Rolü ve Türkiye Örneği [The Role of the Machine Tool Industry in Industrial Development: The Turkish Case], (with E.Özmen), paper presented at the 3rd Congress on Technology, The Ministry of Technology and Industry, Ankara.

#### Awards and scholarships

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| 1998 | Research and Encouragement Award, Turkish Academy of Sciences (TÜBA)                    |
| 1994 | Research and Encouragement Award, METU Mustafa Parlar Research and Education Foundation |
| 1989 | Graduate Alumni Award, Case Western Reserve University                                  |
| 1978 | Young Scientist Scholarship, Scientific and Technical Research Council of Turkey        |
| 1975 | Young Scientist Scholarship, Scientific and Technical Research Council of Turkey        |

#### Thesis supervision

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- |      |   |
|------|---|
| 2005 | “R&D Support, Innovation and Employment Generation: The Turkish Experience”, Ph.D. Thesis by Yesim Ucdogruk |
|------|---|

- 2005 “Industrial Structure and Labour Markets: A Study on Productivity Growth”, Ph.D. Thesis by Yılmaz Kılıçaslan
- 2005 “The Diffusion of Financial Innovations: The Case of ATM in Turkey”, M.S. Thesis, Mine Şule Güner
- 2005 “Technological Change and Metrology Services: Medical Metrology and Its Effects on Society”, M.S. Thesis by Evren Bükülmez
- 2004 “Technological Capability and Economic Growth: A Study on the Turkish Manufacturing Industry”, Ph.D. Thesis by Aykut Lenger
- 2003 “Liberalization and Regulation in the Turkish Electricity Market”, Ph.D. Thesis by Serdal Bahçe
- 2003 “Technology Development Centers in Turkey: An Assessment”, M.S. Thesis by İ. Semih Akçomak
- 2002 “Technology Foresight: The Experiences of the US, Japan and the UK”, M.S. Thesis by Işık Özmen Erten.
- 2002 “Research Networks: The Case of Turkish Innovators”, M.S. Thesis by Oğuzhan Alparslan
- 2002 “R&D and Finance: An Empirical Study on Turkish Manufacturing Firms”, M.S. Thesis by Kurmaş Akdoğan
- 2001 “Efficiency Differentials in Turkish Manufacturing Industry”, M.S. Thesis by Önsel Gülbiten
- 2000 “Inequalities in the Labour Markets, Alternative Explanations and The Turkish Manufacturing”, M.S. Thesis by Mustafa Ulus
- 2000 “Technical Change and Efficiency in Turkish Thermal Power Plants (1983-1996)”, M.S. Thesis by Ayşegül Çelik
- 2000 “Working Capital Needs and the Short-term Debt Structure of Turkish Manufacturing Corporations, 1993-1999”, M.S. Thesis by Ayşe Eda Tin.
- 1998 “The European Union Research and Technological Development Policies”, M.S. Thesis by Aslıgül Gök
- 1998 “Technoeconomic Impact of the Defense Industry in Ankara Region”, M.S. Thesis by Erkan Gözpınar
- 1997 “Structural Change in the Automobile Industry: Policy Implications for Turkey”, M.S. Thesis by Can Sayar
- 1996 “Bounded Rationality and Complexity”, M.S. Thesis by Z.Önder Nomaler
- 1995 “Privatization and Efficiency: The Case of Turkish Cement Industry”, M.S. Thesis by Şeref Saygılı
- 1995 “Price-Cost Margins and Foreign Trade in Turkish Manufacturing Industry: A Panel Data Analysis”, M.S. Thesis by Cihan Yalçın
- 1994 “Flexible Automation Technologies and Work Organization: The Case of Turkish Engineering Industries”, M.S. Thesis by Funda Mendeş
- 1994 “Inter-Industry Wage Differentials in Turkish Manufacturing Industry, 1964-1989”, M.S. Thesis by Erkan Erdil

#### Teaching responsibilities

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ECON 411 Economics of Networks and the Internet

ECON 444	Economics of Innovation
ECON 448	Technology and Industrial Dynamics
ECON 451	Industrial Economics
ECON 498	Labor Economics
ECON 651	Advanced Industrial Organization
ECON 683	Applied Econometrics I
ECON 691	Economics of Technology Policy
ECON 692	Evolutionary Economics

### Professional activities and organizations

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2005-Present	Member of the Editorial Board, Journal of International Trade and Diplomacy
2003-Present	Member of the Editorial Board, Yapı Kredi Economic Review
2002-Present	Member of the Executive Board, the Faculty of Economics and Administrative Sciences, METU
2001-Present,	Member of the Executive Board, Research Center for Science and Technology Policies, METU
1999-Present	Member of the Editorial Board, the Electronic Journal of Evolutionary Modeling and Economic Dynamics
1997-Present	Research Associate, Economic Research Forum, Cairo
1996-Present	Treasurer, Economic Research Center, METU
2001-2006	Member, Advisory Board of the National Metrology Institute, Turkey
2003-2004	Member of the Working Group for the Commission on Science and Technology for Development, UNCTAD
2002-2004	Program Committee Member, Research for Policy Support, EU 6th Framework Programme
2001-2004	Member of the NATO Advisory Panel of Science and Technology Policy and Organization (STP) Sub-Programme
2000-2004	Member of the Advisory Committee on Humanities, Social and Administrative Sciences, the Council of Higher Education (Sosyal, Beşeri ve İdari Bilimler Temel Alan Danışma Komisyonu)
2003-2004	Member of the Steering Group, Futures Enlargement Project, JRC-IPTS, EU
1997-2003	Member of the Organization Committee, International METU Conference on Economics
1993-2002	Member of the Editorial Board, <i>Toplum ve Bilim</i> , Ankara, Turkey
1998-2002	Member of the Board of Management, International J.A.Schumpeter Society
1997-2001	Assistant Chair, Science and Technology Policy Studies Program, METU
1999-2001	Chairman, Department of Economics, METU
1997-1998	Member of the Faculty Board, the Faculty of Economics and Administrative Sciences, METU
1996-1998	Secretary, the Union of Academic Personnel, METU Branch

1996-1997 Assistant Chair, Department of Economics, METU  
1993-1995 Editor, *METU Studies in Development*

## Refereeing

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*Toplum ve Bilim*

*Turkish Studies*

*İktisat, İşletme ve Finans*

*Small Business Economics*

*Yapı Kredi Economic Review*

*Journal of Industrial Ecology*

*International Business Review*

*METU Studies in Development*

*Bulletin of Economic Research*

*Journal of Productivity Analysis*

*Industrial and Corporate Change*

*Journal of Comparative Economics*

*Journal of Evolutionary Economics*

*International Small Business Journal*

*Emerging Markets, Trade and Finance*

*Ekonomiaz, Basque Economics Journal*

*European Journal of Operations Research*

*International Journal of Production Research*

*Economics of Innovation and New Technology*

*Comparative Technology Transfer and Society*

*International Journal of Technology Management*

*Journal of Artificial Societies and Social Simulation*

*International Journal of Innovation and Technology Management*

*Electronic Journal of Evolutionary Modelling and Economic Dynamics*