

## Erik den Hartigh - Curriculum Vitae

### Personal Information

First name and initials	Erik (E.)
Last name	Den Hartigh
Title	Dr. (business economics)
Date of birth	September 20, 1971
Place of birth	Terneuzen, The Netherlands
Marital status	Married to Özden Savaş-Den Hartigh Father of Arman and Artun
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## Work experience

Mid 2009- present:

- Assistant professor at the Business School of Özyeğin University, Istanbul. Involved in academic and applied research, education, management and accreditation.

Begin 2003 – mid 2013:

- Assistant professor at the department of Technology, Strategy and Entrepreneurship of the Faculty of Technology, Policy and Management of the Delft University of Technology (TU Delft). Involved in academic and applied research, education, management, and guidance of PhD candidates.

Mid 2002 – mid 2009:

Senior consultant with TVA developments bv (part-time). Involved in project acquisition, project implementation, and fundamental and applied research.

TVA developments, which was founded in 1991, is a small, specialized consulting company in the field of strategic policy and transformation. On the basis of (to a large extent) own research it advises the management of large businesses and public organizations on complex strategic issues. TVA is best regarded as a high-level think-tank that assists managers and policy makers with the redefinition of their business processes and management tasks. TVA developments has a leading role in developing and implementing the concepts of Mass-individualization, Knowledge Productivity and Complex systems in the Netherlands.

Mid 1998 – mid 2002:

- Researcher / PhD candidate at the Department of Marketing & Organization of the Faculty of Economics of the Erasmus University Rotterdam. Involved in own PhD research and (to a limited extent) teaching.

Mid 1998 – mid 2002:

- Junior consultant with TVA developments bv. Involved in project implementation, and fundamental and applied research.

Begin 1997 – mid 1998:

- Assistant to the editorial staff of M&O journal with Samsom BV (Publisher, currently part of Kluwer). Involved in editing, reviewing and copy acquisition for the journal Management & Organisatie, a bi-monthly journal in Dutch on issues of Organization, Management, HRM and Strategy, focusing on policy makers, managers and scientists.

Begin 1997 – mid 1998:

- Research assistant to a PhD project at TVA developments bv.

End 1996 – end 1999:

- Owner and director of Den Hartigh, Onderzoeksbureau voor Supply Chain Management, my own research / consulting company for supply chain management.

Begin 1996 – begin 1997:

- Free-lance researcher / junior consultant with FIER (Foundation for Industrial Economic Research, affiliated with the Department of Industrial Economics, Faculty of Economics, Erasmus University Rotterdam). Involved in the management and implementation of contract research projects.

Mid 1995 – begin 1996:

- Various jobs through a temporary staffing agency.

## **Education & Training**

Mid 1998 – end 2005:

- PhD on Increasing Returns and Firm Performance at the Erasmus Research Institute of Management (ERIM) of the Erasmus University Rotterdam.

Mid 1998 – mid 1999:

- PhD courses on Advanced Research Methodology jointly organized by the University of Groningen and the Erasmus University Rotterdam.

Mid 1989 – mid 1995:

- Undergraduate and Graduate study of Business Economics at the Faculty of Economics of the Erasmus University Rotterdam. Specializations: industrial economics and sociological economics.

Mid 1983 – mid 1989:

- Secondary school: 6 years of preparatory academic education (VWO, atheneum) at Zeldenrust College, city of Terneuzen (Netherlands)

Mid 1977 – mid 1983:

- Primary school: 6 years at De Hille, city of Terneuzen (Netherlands).

## **Teaching experience**

*Özyeğin University*

At Özyeğin University, I am or have been involved in the following education programs:

- The Undergraduate programs of the Faculty of Business program
- The MBA program
- The Executive MBA program
- The PhD in Business program
- Executive teaching

At Özyeğin University, I am or have been responsible for the following courses:

- MGMT311 Project management: 6ects undergraduate elective course, covering all aspects of basic project management; students write a groupwise project plan, applying the theory to a real-world project (2010-2012)
- MGMT322 Sustainability in business: 4ects undergraduate course on sustainability, in which I provide the strategy for sustainability perspective (2013-now)
- MGMT401 Technology and innovation management: 6ects undergraduate mandatory course; students write a groupwise analysis, applying the theory to a specific technological innovation (2011-now)
- MGMT402 Strategy: 6ects undergraduate mandatory course, 6ects undergraduate mandatory course (2013)
- SEC401 Sectoral practicum I: 6ects undergraduate mandatory practicum; students work in groups to solve a real management, marketing, financial and/or operations problem for a company; in the first year (2011) I was the course coordinator and project coach for all groups; later (2012-2015) I was project coach for a select number of groups
- SEC402 Business Integration / Sectoral practicum II: 6ects undergraduate mandatory practicum; this is an integration course, featuring a business simulation in which students apply knowledge from innovation, marketing, operations, organization, finance, sustainability and strategy courses (2013-2016)
- MGMT500 Introduction to general management: 3ects mandatory MBA course; students work in groups to analyze all management aspects of their own business environment (2009-2014)
- MGMT701 Strategic management: 4ects mandatory MBA course; students work in groups to strategically analyze various strategy aspects of a chosen company (2018)
- PROJ700/PROJ710/PROJ720 Capstone project MBA: final project for MBA students, in which they integrate the knowledge from the MBA program, helping them to advance their career; I was the course coordinator and the supervisor of some students/groups (2010-2018)
- PROJ850 Capstone project Executive MBA: final project for Executive MBA students, in which they integrate the knowledge from the Executive MBA program, helping them to advance their career; I was the course coordinator and the supervisor of some students/groups (2011-2018)
- MGMT906/MGMT910 Strategy / Marketing Strategy: 7.5ects PhD course on foundations of strategy and organization theory (2011-2012)
- MGMT907 Management theory: 7.5ects PhD course on the foundations of management theory (2015-now)
- Various courses on Innovation, Strategy and Capstone projects in executive programs

#### *Delft University of Technology*

At the Delft University of Technology, I was involved in different education programs:

- Management of Technology (MOT): a 2-year full-time masters course for students who have completed a technical bachelors degree
- Electives program to provide students of technical faculties with business, management and strategy courses
- Masters and bachelors programs of different technical faculties

During my period at Delft, I was responsible for the following courses:

- Profile Innovation strategy and systems: 14ects Masters profile, covering innovation strategy, technology development and innovation systems of technology-based companies; the profile

includes capita selecta and a 6 or 9ects assignment (theoretical and/or in-company) applying the theoretical principles

- Technology and strategy: 6ects Masters course, covering advanced strategy of technology-based companies; as a test for this course, students write an individual company report, applying the theory to a specific company
- Corporate strategy: 6ects elective Bachelor course, covering the basics of corporate strategy; as a test for this course, students write a groupwise company report, applying the theory to a specific company
- Corporate strategy for Aerospace Engineering; 3ects Masters course, covering advanced strategy of aerospace companies; as a test for this course, students write a groupwise company report, applying the theory to a specific company
- Business economics: 3ects bachelors course for students from Electronics and IT systems engineering, covering the basics of business economics and business administration
- Advanced project management: 6ects Masters course, covering advanced topics in project management; as a test for this course, students write a groupwise professional project plan for a major technological project
- Shell Project Academy: I was involved in the design of a course on Project Scoping, Planning and Control for advanced project managers in the Shell organization (cooperative program of Shell (worldwide) and the Technology, Policy and Management faculty of the Delft University of Technology)
- Research on innovation systems from a management perspective: a contribution to the PhD program of the Technology, Policy and Management faculty of the Delft University of Technology
- Research assignments: supervisor of all kinds of students assignments
  - o 6 or 16ects Bachelor internships and research assignments, national and international
  - o 6, 9 or 12ects Master research and/or in-company assignments
- Master thesis: supervisor or co-supervisor of over 30 Master thesis projects, often in-company projects

Students positively or very positively reviewed all the courses mentioned above. All of the courses mentioned above were (co-)developed by me and all course were subject to continuous change and optimization.

In addition to the above, I have some experience from my jobs as a consultant with TVA developments, as a guest researcher at Erasmus University Rotterdam and as a free-lance entrepreneur into:

- Mass Individualization: chain reversal, management implications of consumer individualism (in MSc and in-company programs)
- Emergence: applying complexity theory to business and management issues (in MSc and in-company programs)
- Industrial Economics (in MSc programs)
- Supply Chain Management (in MSc programs)
- Lean Production (in MSc and postdoc programs)

## Academic management experience

### *Özyeğin University*

At Özyeğin University, I am or have been involved in the following academic management activities:

- Faculty quality coordination, main responsible person for:
  - o *AACSB accreditation* of the Business School, which involves organizing the AACSB process and the various committees that feed into this process, preparing and finalizing the relevant ACSB documentation
  - o Faculty implementation of the *Bologna process*, which involves coordinating and facilitating the making and maintenance of Program goals, Course descriptions and Course learning outcomes, and the mapping of Courses to Programs, in line with the EU Bologna process
  - o Member of the university-wide Bologna committee
- Member of Faculty Strategy committee
- Coordinator of the Management Track of the PhD in Business Program (2014-2017)
- Organizing Management group research seminars
- Involved in faculty recruiting

### *Delft University of Technology*

At the Delft University of Technology, I was involved in the following academic management activities:

- Establishing and continuing relations with technology-based companies and companies using technology to provide services:
    - o Carrying out meaningful applied research in cooperation with companies
    - o Providing Master thesis students and Master Profile students with attractive internship and company assignment possibilities
      - Companies with which those relationships were maintained included: IBM, Microsoft, ABN-Amro Bank, ING Group, Accenture and Booz&Co.
  - Member of the board of the European Complexity and Chaos in Organisations Network (ECCON): responsible for the annual conference theme and conference paper reviewing process
  - Member of the advisory board of ProvenModels.com, a company that makes proven management models on-line available to a wide public of students, researchers and managers
  - Master thesis coordination: this involves guiding Master thesis students towards the topic that suits them best, e.g., though talking with them, commenting on first proposal drafts, keeping track of their progress, solving problems, coordinating with other departments, presenting my department at faculty Master thesis fairs
  - Master profile coordination: this involves guiding Master students in composing the right portfolio of courses and assignment for their profile choice
  - Education coordination: this involves making and monitoring the department's portfolio of educational activities, monitoring the time and effort spent on those activities, monitoring the financial compensation, monitoring the balance of work between different department members
  - Member of a committee to review the quality of Master thesis projects at the faculty and recommend on future improvements in the guiding and grading process.
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- Establishing a series of faculty-wide lunch meetings on methodology issues
- Initiating improved access to management and economic literature (which was problematic as the TU Delft library is mainly technical oriented): contacts with TU Delft library, other university libraries
- Development of a system for peer-evaluation of group wise projects: in group work, normally all students get the same grade; this system enables them to review each others' performance and differentiate grades, so that good and hard-working students get higher grades and shirkers get lower grades. This system was pioneered by me and is currently used in multiple courses involving group work. It is also currently proposed to implement this system university-wide.

## Research interests and activities

### *Main research interests*

My research interests focus around the theme of **innovation systems**, specifically the structure, development, performance (innovativeness, productivity) and governance of company innovation systems and business ecosystems / technology platforms. Business ecosystems are networks of suppliers and customers around a core technology platform, who depend on each other for their success and survival. Such networks, consisting of multiple firms performing different roles, are not unlike biological ecosystems. Research in this field comprises, but is not limited to:

- Structure of company innovation systems and business ecosystems / company position within ecosystems
- Company innovation strategy
- Governance / management of company innovation systems and business ecosystems
- Performance impact of innovation, innovation systems and business ecosystems

### *PhD students at Özyeğin University*

On the topics mentioned above, I supervise the following PhD candidates:

- Mrs. Neriman Gökçay, PhD track in Management (dissertation stage, main advisor)

### *PhD students at Delft University of Technology*

On the topics mentioned above, I co-supervised 2 PhD projects:

- The influence of the network and resource structure of business ecosystems on the performance of focal firms in these systems (PhD student Ms. Elisa Anggraeni, defended 2014)
- The relation between the evolution of technologies and the networks around focal firms developing and commercializing these technologies (PhD student Ms. Claire Stolwijk, defended 2012)

### *Other research interests and experience*

Additional to the above, I am interested in and I have research experience on the following topics:

- *Increasing Returns economics*: self-reinforcing mechanisms in markets and firms and their influence on firms' performance. Increasing returns means that a company can produce higher levels of output with relatively lower levels of input. This can be due to external causes (network effects and/or social interaction effects in the market) or to internal causes (realization of scale effects and/or leaning effects within the firm), or a combination of those. This was my PhD subject (promotor Prof. Dr. H.R. Commandeur, Erasmus University Rotterdam).
- *Mass Individualization*: this is about how firms can shape their business processes (strategy and operations) to cope with extreme heterogeneity and unpredictability in their markets. It involves the production and delivery of tailor-made goods and services without extra cost as compared to mass-produced standard products.
- *Emergence/complex systems*: this is about applying principles from complexity science to business, economic and social problems. Traditionally we have been inclined to solve complex problems by improving systems' central management and predictive power. This is a dead-end road. The self-evident alternative - leaving the system to itself - is equally flawed as this will lead to chaos. Yet, examples from complexity, e.g., flocking behavior of birds, food foraging by ants, clearly show that this kind of problems can be solved through the recursive and distributed application of simple rules. The research question is what principles underlie these solutions and how they can be applied to complex business and social systems.

## Publications

### *Work in progress*

Apaydin, M., E. den Hartigh, M. Crossan & I. Bou-Hamad. Investigating the determinants of innovation ambidexterity. Writing and data analysis in progress.

Hartigh, E. den. Company Innovation System. Writing in progress.

Stolwijk, C.C.M., Hartigh, E. den, Punter, L.M. & Ortt, J.R. The impact of digital platforms on the implementation of Industry 4.0. Starting up.

### *ISI articles (refereed)*

Hartigh, E. den, J.R. Ortt, G. van de Kaa & C.C.M. Stolwijk (2016); Platform control during battles for market dominance: The case of Apple versus IBM in the early personal computer industry. *Technovation*, vol.48-49, pp.4-12.

Stolwijk, C.C.M., E. den Hartigh, W.P.M. Vanhaverbeke, J.R. Ortt and C. van Beers (2015); Cooperating with technologically (dis)similar alliance partners: the influence of the technology life cycle and the impact on innovative and market performance. *Technology Analysis & Strategic Management*, vol.27, no.8, pp.925-945.



Stolwijk, C.C.M., J.R. Ortt & E. den Hartigh (2013); The joint evolution of alliance networks and technology. A survey of the empirical literature; *Technological Forecasting and Social Change*, vol.80, pp.1287-1305.

Stolwijk, C.C.M., W.P.M. Vanhaverbeke, J.R. Ortt, M.W. Pieters, E. den Hartigh & C. van Beers (2012); The effect of internal and external technology sourcing on firm performance throughout the technology life cycle; *Technology Analysis & Strategic Management*, vol.24, no.10. pp.1013-1028.

Van der Duin, P.A. & E. den Hartigh (2009); Keeping the balance: exploring the link of futures research with innovation and strategy processes. *Technology Analysis & Strategic Management*, vol.21, no.3, pp 333-351 (ISSN 0953-7325)

Hartigh, E. den & F. Langerak (2002); Monitoring self-reinforcing mechanisms: a case study; *European Management Journal*; vol.20, no.5, pp.495-504 (ISSN 0263-2373)

Hartigh, E. den & F. Langerak (2001); Managing increasing returns; *European Management Journal*; vol. 19, no.4, pp. 370-378. (ISSN 0263-2373)

*Non-ISI articles (refereed)*

Hartigh, E. den & M.A. Zegveld (2007); Productiviteitsgroei van dienstverlenende ondernemingen; *Economisch Statistische Berichten*; 92e jaargang, nr. 4512, 15 juni 2007, pp.363-365 (ISSN 0013-0583)

Hartigh, E. den & F. Langerak (2004); De wet van Verdoorn en ondernemingen; *Economisch Statistische Berichten*; 89e jaargang, nr. 4423, 9 januari 2004, pp.11-13 (ISSN 0013-0583)

*Book chapters (refereed)*

Hartigh, E. den, C.C.M. Stolwijk, J.R. Ortt & W.P.M. Vanhaverbeke (2018); ASIC commercialization analysis: Technology portfolios and the innovative performance of ASIC firms during technology evolution. In: Fisher, E.M.D. (ed.), *Application Specific Integrated Circuits - Technologies, Digital Systems and Design Methodologies*. InTech Open.

[NB note that although there is discussion on the status of this publisher, the book editor, Dr. Edward M.D. Fisher, is a respected scholar in his field (microelectronics systems design)]

Den Hartigh, E., W. Visscher, M. Tol & A. Jiménez-Salas (2013); Measuring the health of a business ecosystem. In Jansen, S., M. Cusumano & S. Brinkkemper (Eds.), *Software Ecosystems: Analyzing and Managing Business Networks in the Software Industry*, pp.221-246. Edward Elgar Publishing: Cheltenham (UK).

Van der Duin, P.A. & E. den Hartigh (2011); Keeping the balance: exploring the link of futures research with innovation and strategy processes. In: Mendonça, S & B. Sapio (eds.); *Foresight for dynamic organisations in unstable environments: a search for new frameworks*. Routledge: London; Chapter 4, pp.47-65 (ISBN 978-0-415-67223-8)

Den Hartigh, E. & M.A. Zegveld (2011); Service productivity: how to measure and improve it. In: Demirkan, H., J.C. Spohrer & V. Krishna (eds.); Service Systems Implementation. Springer: New York; pp.183-198 (ISBN 978-1-4419-7904-9).

Zegveld, M.A. & E. den Hartigh (2009); Dual innovation strategies: empirical modeling; in: Van Geenhuizen, M., D.M. Trzmielak, D.V. Gibson & M. Urbaniak (eds.); Value-added Partnering and Innovation in a Changing World; Purdue University Press, West Lafayette (IN); pp.344-357 (ISBN 978-1-55753-513-9)

Hartigh, E. den, F. Langerak & M.A. Zegveld (2009); The Verdoorn law, firm strategy and firm performance; in: Van Geenhuizen, M., D.M. Trzmielak, D.V. Gibson & M. Urbaniak (eds.); Value-added Partnering and Innovation in a Changing World; Purdue University Press, West Lafayette (IN); pp. 358-373 (ISBN 978-1-55753-513-9)

Hartigh, E. den & M. Tol (2008); Business ecosystem; in: Encyclopedia of Networked and Virtual Organizations; Putnik, G. & M.M. Cunha (eds.); IGI Global, Information Science Reference, Hershey (NY); Vol. I, pp. 106-111 (ISBN 978-1-59904-885-7)

Hartigh, E. den (2008); Extent of Network Effects and Social Interaction Effects; in: Encyclopedia of Networked and Virtual Organizations; Putnik, G. & M.M. Cunha (eds.); IGI Global, Information Science Reference, Hershey (NY); Vol. I, pp. 587-592 (ISBN 978-1-59904-885-7)

Asseldonk, T. van, E. den Hartigh & L. Berger (2008); Morphology and Entropy in Networks; in: Encyclopedia of Networked and Virtual Organizations; Putnik, G. & M.M. Cunha (eds.); IGI Global, Information Science Reference, Hershey (NY); Vol. II, pp. 957-963 (ISBN 978-1-59904-885-7)

Hartigh, E. den (2008); Network Effects; in: Encyclopedia of Networked and Virtual Organizations; Putnik, G. & M.M. Cunha (eds.); IGI Global, Information Science Reference, Hershey (NY); Vol. II, pp. 1007-1013 (ISBN 978-1-59904-885-7)

Hartigh, E. den (2008); Network Effects and Market Outcomes; in: Encyclopedia of Networked and Virtual Organizations; Putnik, G. & M.M. Cunha (eds.); IGI Global, Information Science Reference, Hershey (NY); Vol. II, pp. 1014-1021 (ISBN 978-1-59904-885-7)

Hartigh, E. den (2008); Social Interaction Effects; in: Encyclopedia of Networked and Virtual Organizations; Putnik, G. & M.M. Cunha (eds.); IGI Global, Information Science Reference, Hershey (NY); Vol. III, pp. 1454-1458 (ISBN 978-1-59904-885-7)

Van der Duin, P. & E. den Hartigh (2007); Managing the future. In: Knowing tomorrow: How science deals with the future; Van der Duin, P. (ed.); Eburon Academic Publishers, Delft; Chapter 9, pp. 149-166 (ISBN 978-90-5972-229-3)

Zegveld, M.A. & E. den Hartigh (2002); De productiviteit van kennis. in: Kennis en Management; Baalen, P. van, M. Weggeman & A. Witteveen (red.); Scriptum Management, Schiedam; pp. 104-127. (ISBN 90-5594-248-0)

*Books*

Zegveld, M.A. & E. den Hartigh (2007); De winst van productiviteit: sturen op resultaat in dienstverlening. Publicatie in opdracht van Stichting Management Studies, Den Haag; Van Gorcum, Assen, 133p. (ISBN 978 90 232 4303 8)

Hartigh, E. den (2005); Increasing returns and firm performance: an empirical study. PhD Thesis Erasmus University Rotterdam; ERIM, Rotterdam, 530p. (ISBN 90-5892-20-984)

Zegveld, M.A., W.C.L. Zegveld & E. den Hartigh (2004); Sturen op productiviteit in de kenniseconomie: opmaat voor een nationale actieagenda. Stichting Maatschappij en Onderneming, Den Haag, 95p. (ISBN 90-6962-212-2)

Asseldonk, A.G.M. van, L. Berger & E. den Hartigh (2002); Complexiteit van alledag: voor bestuurders en managers; TVA developments bv, Veldhoven, 86p. (ISBN 90-802865-5-9)

Zegveld, M.A., L. Berger, A.G.M. van Asseldonk & E. den Hartigh (2002); Turning knowledge into cash-flow: governing knowledge-based productivity; TVA developments bv, Veldhoven, 122p. (ISBN 90-802865-4-0)

Asseldonk, A.G.M. van, L. Berger & E. den Hartigh (2001); Emergence: creating strength without central power; six cases in business and society; TVA developments bv, Veldhoven, 63p.

Asseldonk, A.G.M. van, with S. van Gelder & E. den Hartigh (2000); Massa-individualisering: maatwerk zonder meerkosten; Samsom, Deventer, 100p. (ISBN 90-14-06573-6)

Asseldonk, A.G.M. van, with S. van Gelder & E. den Hartigh (2000); Massa-individualisering: geld verdienen aan de grillige consument; Samsom, Deventer, 150p. (ISBN 90-14-06772-0)

Zegveld, M.A. & E. den Hartigh (eds.) (1998); Massa-individualisering: maatwerk in de praktijk; TVA developments bv, Veldhoven, 200p. (ISBN 90 802865 3-2)

*Conference papers (refereed)*

Hartigh, E. den (2018); Company Innovation System: a conceptualization. 27th International Conference on Management Of Technology. International Association on Management of Technology (IAMOT), 22-26 April, Birmingham.

Den Hartigh, E., H. Küçükönel & B. Verheij (2012); The Turkish Aviation System and the Strategy of Turkish Airlines. In: Curran, R., Fischer, L., Pérez, D., Klein, K., Hoekstra, J., Roling, P., Verhagen, W.J.C. (eds.) Air Transport and Operations – Proceedings of the third international air transport and operations symposium 2012. Amsterdam: IOS Press, p.231-246. (ISBN 978-1-61499-118-2 print 978-1-61499-119-9 online).

Den Hartigh, E., Ortt, J.R., van de Kaa, G., and Stolwijk, C.C.M. (2011); Technology standards battles and business networks during the technology life cycle: propositions and a plan for further research. In: Blind, K & K. Jakobs (eds.) Proceedings of the 7th international conference on standardization and innovation in information technology (SIIT), pp.91-99 (ISBN 978-1-4577-2020-8).

Den Hartigh, E., Ortt, J.R., van de Kaa, G., and Stolwijk, C.C.M. (2010); Technology Standards Battles and Business Networks During the Technology Life Cycle: A Comparative Case Study. 19th International Conference on Management of Technology (IAMOT), pp. 20.

Den Hartigh, E., J.R. Ortt, G. van de Kaa & C.C.M. Stolwijk (2009); Technology standards battles and networks during the technology life cycle: the battle between HD-DVD and Blu-Ray. International Product Development Management Conference (IPDM), 7-9 June 2009.

Van Asseldonk, A.G.M. van & E. den Hartigh (2008); Economic productivity and value creation under various organizational configurations of business processes: A toolkit for phase transitions. European Chaos/Complexity in Organisations Network (ECCON), Conference 17-19 October 2008.

Anggraeni, E., E. den Hartigh & M.A. Zegveld (2008); Firm strategic orientation in a business ecosystem. European Chaos/Complexity in Organisations Network (ECCON), Conference 17-19 October 2008.

Anggraeni, E., E. den Hartigh & M.A. Zegveld (2007); Business ecosystem as a perspective for studying the relations between firms and their business networks. European Chaos/Complexity in Organisations Network (ECCON), Conference 19-21 October 2007.

Duin, P.A. van der & E. den Hartigh (2007); Linking futures research with management science: improving innovation and strategy processes within companies. Paper presented at the Cost-A22 conference 'From oracles to dialogue: exploring new ways to discover the future', Athens, Greece, July 9 – 11 2007.

Hartigh, E. den, M. Tol & W. Visscher (2006); The health measurement of a business ecosystem. European Chaos/Complexity in Organisations Network (ECCON), Conference 20-21 October 2006.

Hartigh, E. den, M. Tol, J. Wei, W. Visscher & M. Zhao (2005); Modeling a business ecosystem: An agent-based simulation; European Chaos/Complexity in Organisations Network (ECCON), Conference 21-22 October 2005.

Zegveld, M.A. & E. den Hartigh (2005); Competing with dual innovation strategies: innovation, productivity and sustainability; Technology Policy and Innovation Conference 2005; Book of Abstracts, Technology Policy and Innovation: Value added partnering in a changing world?

Hartigh, E. den, F. Langerak & M.A. Zegveld (2005); The Verdoorn Law and Firm Performance; Technology Policy and Innovation Conference 2005; Book of Abstracts, Technology Policy and Innovation: Value added partnering in a changing world?

Hartigh, E. den & A.G.M. van Asseldonk (2004); Business ecosystems: A research framework for investigating the relation between network structure, firm strategy, and the pattern of innovation diffusion; European Chaos/Complexity in Organisations Network (ECCON), Conference 22-23 October 2004.

Hartigh, E. den, F. Langerak & H.R. Commandeur (2004); The impact of self-reinforcing mechanisms on performance; in: Cron, W.L. and G.S. Low (eds.); Marketing theory and applications: Marketing's role in creating value; Proceedings 2004 American Marketing Association Winter Educator's Conference 15, Chicago, pp.207-208.

Asseldonk, A.G.M. van, E den Hartigh & L. Berger (2003); Morphology, entropy, and stability in networked structures; Contribution to the European Chaos/Complexity in Organisations Network (ECCON) Conference, June 2003, Guimarães, Portugal; in: Putnik, G.D. & A. Gunasekaran (eds.) Business Excellence I: Performance Measures, Benchmarking and Best Practices in New Economy; University of Minho, Braga, pp.255-260 (ISBN 972 8692 08 0).

Zegveld, M.A. & E. den Hartigh (2002); The productivity of knowledge; Contribution to the Conference 'Knowledge and Management', 25-27 November 2002, Madrid.

Asseldonk, A.G.M. van, L. Berger & E. den Hartigh (2002); Emergence and Creativity: Creative Solutions to Governing Emergent Order in Complex Social Systems; European Chaos/Complexity in Organisations Network (ECCON), Conference 18-19 October 2002, paper 2.

Weken, H., E. den Hartigh, F. Langerak & E. Bal (1997); Exploratory results on supplier suggestion programmes as a means to improve supply chain relations; in: The Institute of Logistics, Proceedings of the Logistics Research Network Conference, held at the University of Huddersfield, 16th and 17th September 1997 (ISBN 1 870214 40 4).

Weken, H.A.M., P. van Kol, F. Langerak, E. den Hartigh & S.G. Verhagen (1997); Selection of suppliers for supply chain improvement: a tool for OEM's in transition towards lean supply, a case study in the Dutch truck industry; in: IPSERA; Proceedings of the 6th IPSERA conference, Naples.

*Conference papers (other)*

Den Hartigh, E., P. Uzun & A. Anwar (2017); Company Innovation System: An exploration based on examples from Arçelik and Vestel. Istanbul University 2nd World Conference on Technology, Innovation and Entrepreneurship, Istanbul, 12-14 May, In: Pressacademia Procedia, 2017, vol.4, pp.93-102 (ISSN 2459-0762; DOI: 10.17261/Pressacademia.2017.523).

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## **Skills & hobbies**

### Computer:

- All regular office applications
- Statistical analysis: R (various packages, specifically lavaan); SPSS (all standard to advanced statistical techniques); LISREL (structural equations modeling);

### Languages:

- Dutch: mother tongue
- English: fluent
- Turkish: beginner
- German: good
- French: reasonable

### Hobbies:

- Reading (literature; history; productivity)
- Gardening
- Photography