



CESIS ACTIVITY REPORT

2012

Centre of Excellence for Science and Innovation Studies (CESIS),
Royal Institute of Technology
Lindstedtsvägen 30, 100 44 Stockholm
www.cesis.se



Centre of Excellence
for Science and Innovation Studies

Introduction

This report documents some of the key developments and accomplishments of CESIS - the Centre of Excellence for Science and Innovation Studies – during the full year 2012. As the first half of that year has already been documented in the previous annual report and the entire funding period 2010-2012 is documented in a separate report prepared in the context of centre evaluation, this report is designed to briefly summarise new research (working papers produced during the year and conference organisation), report on graduation of PhD students associated with the centre and comment on outreach activities during the year.

Academic activities

The hallmarks of CESIS research is the ambition to

- allow for controlled, systematic quantitative analyses of innovation systems at different levels, as well as interaction effects between levels, primarily using register and survey data on firms, sectors and regions
- provide fundamental understanding about the evolution of firms, sectors and regions over time, and the role of dynamic interdependence in these processes
- develop knowledge that enhances the prerequisites for research-based decisions about innovation policy in the Swedish society

Thematically, CESIS' research interests are defined by five focal work areas. A key strategy for CESIS has been (and continues to be) to organize international conference events within the themes of each of the five work areas, complementing on-going research within CESIS and enabling CESIS to tie internationally leading researchers closer to our activities. CESIS also prioritises to arrange special publications (special issues of academic journals, books) in association with these events.

Work Area 1: Dynamics of firms' innovation efforts – strategies, resource bases and evolution

CESIS research within this work area seeks to deliver knowledge about how firms develop resource bases over time, and the role of R&D and network assets (links, nodes and their attributes) in these processes. Among the topics investigated here are transitions from non-persistent to persistent innovation efforts and the evolution of innovation activities through processes of heritage.

Research output during 2012:

WP 279: Entrepreneurial Catch Up And New Industrial Competence Bloc Formation In The Baltic Sea Region by Eliasson, Gunnar & Braunerhjelm, Pontus

WP 282: Patenting and Entrepreneurial Spawning: An Innovation Strategy Approach by Lööf, Hans & Nabavi, Pardis & Bazzazian, Navid

WP 287: Are Research Spin-Offs More Innovative? Evidence from a Matching Analysis by Stephan, Andreas

WP 291: Is innovative firm behavior correlated with age and gender composition of the workforce? Evidence from a new type of data for German enterprises by Pfeifer, Christian & Wagner, Joachim

Activities and special projects during 2012:

A new book entitled *Innovation and Growth – From R&D Strategies of Innovating Firms to Economy-Wide Technological Change* was published by Oxford University Press. This volume, which gathers contributions from several leading international researchers in the economics of innovation, represents a major undertaking of CESIS researchers within this work area during 2009-2012.

Work Area 2: International networks, export performance and innovation of firms and sector-grouped firms

Under this theme, CESIS research assesses the interplay between international networks created for and through international trade activities affect firm performance and innovation activities.

Research output during 2012:

WP 262: Exporters, Spin-outs and Firm Performance by Lööf, Hans & Nabavi, Pardis

WP 267: Up in the Air: The Role of Airports for Regional Economic Development by Florida, Richard & Mellander, Charlotta & Holgersson, Thomas

WP 268: External finance, collateralizable assets and export market entry by Halldin, Torbjörn

WP 269: Born global firms – do they perform differently? by Halldin, Torbjörn

WP 286: Credit constraints and exports: Evidence for German manufacturing enterprises by Wagner, Joachim

WP 288: The Great Export Recovery in German Manufacturing Industries, 2009/2010 by Wagner, Joachim

WP 293: The Impact of R&D Activities on Exports of German Business Services Enterprises: First evidence from a continuous treatment approach by Vogel, Alexander & Wagner, Joachim

Activities and special projects during 2012:

International workshop on in September at KTH, Stockholm, organised in collaboration with the International Study Group on Export and Productivity (ISGEP). In association with the workshop, a special issue of the *World Economy* has been arranged by CESIS, due for publication during 2013.

Work Area 3: Knowledge flow networks and innovation results for different sectors

The third work area manifests CESIS' ambition to study the correspondences between different types of knowledge flow networks. In this work area, the interplay between different network indicators such as patent citations, international trade networks, mobility of people and spatial accessibility measures is analysed.

Research output during 2012:

WP 263: The Inventive, the Educated, and the Creative: How Do They Affect Metropolitan Productivity? by Lobo, José & Mellander, Charlotta & Stolarick, Kevin & Strumsky, Deborah

WP 264: Human Capital in Cities and Suburbs by Stolarick, Kevin & Mellander, Charlotta & Florida, Richard

WP 266: The Rise of Skills: Human Capital, the Creative Class and Regional Development by Mellander, Charlotta & Florida, Richard

WP 272: The Creative Class And The Crisis by Gabe, Todd & Florida, Richard & Mellander, Charlotta

WP 274: Increasing Return To Smart Cities by Lööf, Hans & Nabavi, Pardis

WP 276: Knowledge flows, knowledge externalities and regional economic development by Karlsson, Charlie & Gråsjö, Urban

WP 277: Urban Regions in Europe – Preconditions and Strategies for Growth and Development in the Global Economy by Gråsjö, Urban & Karlsson, Charlie

WP 280: Spatial Knowledge Spillovers in Europe: A Meta-Analysis by Karlsson, Charlie & Warda, Peter & Gråsjö, Urban

WP 294: Cross-country difference in R&D productivity: Comparison of 11 European economies by Lööf, Hans & Savin, Maxim

Activities and special projects during 2012:

International conference in December, organised in collaboration with the Division of Economics, Gothenburg university, held in Gothenburg. Special issues of *Economics of Innovation and New Technology* and the *Journal of Productivity Analysis* are under preparation.

During 2012, a survey on innovation activities specially designed for small firms in the Jönköping county was conducted. The survey complements existing innovation surveys, allowing CESIS researchers to research the innovation activities and networks of very small firms.

Work Area 4: The role of knowledge-intensive service sectors in innovation networks

Reflecting the increasingly central role of KIBS firms in modern economies and within innovation networks in particular, CESIS devotes special interest to investigation of how knowledge-intensive business-service suppliers interact with the innovation activities of all type of firms, including manufacturing, household services and business services.

Research output during 2012:

WP 270: Born global firms in knowledge intensive business services (KIBS) by Halldin, Torbjörn

WP 283: How can firm benefit from access to knowledge-intensive producer services? by Johansson , Börje & Lööf , Hans & Nabavi, Pardis

WP 285: Innovation and Exports of German Business Services Enterprises: First evidence from a new type of firm data by Vogel, Alexander & Wagner, Joachim

Activities and special projects during 2012:

Work Area 5: Entrepreneurship and innovation networks

CESIS approaches the broad topic of entrepreneurship with an emphasis on promoting our understanding of institutional arrangements as an explanation of why the frequency of entrepreneurship varies between different, places, regions and countries.

Research output during 2012:

WP 265: Spin-off: Individual, Firm, Industry and Regional Determinants by Baltzopoulos, Apostolos & Braunerhjelm, Pontus & Tikoudis, Ioannis

WP 271: Survival of born global firms – do employee characteristics matter for survival? by Halldin, Torbjörn

WP 278: Entrepreneurship, Social Capital, Governance and Regional Economic Development by Karlsson, Charlie

WP 281: Entrepreneurial employees: Are they different from independent entrepreneurs? By Nyström, Kristina

WP 284: The Evolving Domain of Entrepreneurship Research by Carlsson, Bo & Braunerhjelm, Pontus & McKelvey, Maureen & Olofsson , Christer & Persson , Lars & Ylinenpää, Håkan

WP 289: Does Academic Entrepreneurship Pay? by Braunerhjelm, Pontus & Broström, Anders & Åstebro, Thomas

WP 290: Entrepreneurship, Institutions and Economic Dynamism: Lessons from a Comparison of the United States and Sweden by Braunerhjelm , Pontus & Henrekson, Magnus

WP 292: University choice and entrepreneurship by Daghbashyan, Zara & Hårsman, Björn

WP 295: Entrepreneurship and Arts Related Education by Daghbashyan, Zara & Hårsman, Björn

Activities and special projects during 2012:

International conference (“Uddevalla symposium”) organised in June, in collaboration with University West and University of Algarve, in Faro, Portugal. A special issue from the conference is forthcoming in *Small Business Economics* during 2013.

Other WPs published during 2012

WP 273: Does fiscal decentralization foster regional investment in productive infrastructure? by Kappeler, Andreas & Solé-Ollé, Albert & Stephan, Andreas & Välilä, Timo

WP 275: Time and Capital in Dynamic and Spatial Economic Theory by Andersson, Åke E.

Dissertations written by PhD students associated with CESIS

During the year, five PhD students associated with CESIS has successfully defended their theses.

Bjerke, Lina (2012): “Knowledge Flows Across Space and Firms” (JIBS)

Halldin, Torbjörn (2012): “Firm Internationalization and Born Global Firms” (KTH)

Högberg, Andreas (2012): “Corporate Governance, Legal Origin and Firm Performance: An Asian Perspective” (JIBS)

Karlson, Hyunjoo Kim (2012): “Dynamics of Macroeconomic and Financial Variables in Different Time Horizons” (JIBS)

Månson, Kristoffer (2012): “Issues of Multicollinearity and Conditional Heteroscedasticity in Time Series Econometrics” (JIBS)

Outreach activities

A key objective for CESIS research is to provide decision support for the design and implementation of innovation policy. CESIS researchers are constantly engaging in exchange with stakeholders in industry and (various levels of) government. Below, a non-exhaustive list of such activities during 2012 is presented, to illustrate how CESIS research and research expertise contribute to knowledge creation processes at a broad set of stakeholders.

A key challenge for outreach activities is and has been to strike a balance between push- and pull mechanisms, i.e. to balance between actively organizing events and communication activities and to respond to demands from stakeholders. Largely, the latter mechanism has been prioritized within CESIS. For CESIS, this is a strategic decision with two components:

- To actively shape prioritizations about research areas and research questions as well as recruitment to the CESIS community by the ambition to produce new research knowledge of high relevance for CESIS stakeholders.
- To build an academic culture in which interaction with stakeholders and responsiveness towards stakeholder needs are natural ingredients.

At CESIS, research expertise and competence are considered at least as important means for total impact as the creation of research results per se. In view of this philosophy, temporary

engagements of CESIS researchers on committees, in projects and as expert consultants are encouraged and regarded as important activities. Recent examples include Gustav Martinsson's (who left a position as CESIS researcher for another university during the evaluation period but remains a CESIS associate) engagement on the government committee on corporate taxation and Anders Broström's engagement as project leader for the high-level research policy forum of the Swedish Academy of Engineering Sciences. Both these processes have – and/or are expected to have when finalized – significant impact on public policy design in areas investigated by CESIS.

While the centre also initiates activities (and hopes to increase the frequency of such activities during 2014-2016), it has primarily done so in partnership with stakeholders and/or intermediary organisations. Matching CESIS research expertise with expertise in communication and event management in partner organisations has been found an effective way to reach out to a wider audience. Collaboration with the Swedish Entrepreneurship Forum and Esbri, two organisations dedicated to providing platforms for research-based dialogues on issues of innovation, entrepreneurship and economic policy, deserves particular mention. An example of such collaboration during 2012 was the open seminar arranged by CESIS and the Swedish Entrepreneurship Forum on October 17th where the new CESIS book *Innovation and Growth – From R&D Strategies of Innovating Firms to Economy-Wide Technological Change* was presented, with invited comments from Urban Bäckström (CEO, the Confederation of Swedish Enterprise), Göran Marklund (director, VINNOVA) and Per Bolund (spokesperson for economic issues, the Green party). As further illustration, examples of invited presentations given by CESIS researchers during 2012 are presented below.

Charlotta Melander: Executive Master of Strategy, Stockholm (March); Skanska Framtidsdag, Malmö (March); Stora Tillväxtdagen, Stockholm (April); Invest Gävleborg, Gävle (June); Näringslivets dag, Piteå (November); Swedish Chamber of Commerce, London (November)

Börje Johansson: Handelskammaren i sydvästra Skåne (Februari); Sveriges byggindustrier (January); Tudelat land, Sveriges Radio (2012)

Hans Lööf: The 7th International Symposium on Soft Science (7th ISSS), Beijing, China (October)

Anders Broström: Royal Academy of Engineering Sciences, Workshop on graduate education (September) and Conference on research policy (November)

Johan Klaesson: Investeringar för näringslivs och samhällsutveckling, Linköping; Tudelat land, Sveriges Radio; Dynamiska effekter av förändrad tillgänglighet, Linköping

Johanna Palmberg: Reglab research forum (November).

CESIS research continues to feature in media. During the year, we note among other things the discussion of Per Thulin's research by The Economist, an interview with Anders Broström on the subject of research policy in Swedish radio and debate articles in major Swedish newspapers by Hans Lööf, Pontus Braunerhjelm and Per Thulin.