

The second newsletter of the SIMPATIC project



## SIMPATIC Update

Welcome to the second issue of SIMPATIC News to keep you updated on the research development and upcoming events of the European project “Social Impact Policy Analysis of Technological Innovation Challenges”.

More information can be found on the website ([www.simpatic.eu](http://www.simpatic.eu)) which offers in-depth project results, all project publications, as well as information on the research partners.

### Events

#### Past events

##### **25-26 March 2013 – First SIMPATIC Annual Policy Conference in Brussels, Belgium (public event)**

The two days conference gathered around sixty EU officials, representatives of international corporations, members of academia and the SIMPATIC research partners.

Organised around scientific sessions the event was also an opportunity to show case the project to a larger public, with two keynote speeches during lunch seminars and a policy panel.

Philippe Aghion, Bruegel fellow, Professor of Economics at Harvard University and member of the SIMPATIC Scientific Advisory Committee, gave the first keynote speech focusing on the links between micro and macro analyses and examining the impact of green innovation. He presented some of his current research of relevance for SIMPATIC, with one strand of his research dealing with finding the optimal taxation level for innovation and growth. There is indeed an important link between innovation and fiscal policy over the business cycle: both labour and capital should be taxed, but capital should be at a lower rate than labour. There are also links that can be made between innovation and industrial and competition policy, so to the broader SIMPATIC work. Notably, exploring the effects of tax policy on innovation next to the R&D tax (credits). He also mentioned that there could also be scope to run the NEMESIS model (<http://www.nemesis-model.net>) with optimal taxation results.

Describing some of his current work handled at the OECD Directorate for Science, Technology & Industry, Dirk Pilat, Head of the Science and Technology Policy Division - and also a member of the Policy Advisory Committee - intervened as a second keynote

speaker. He drew insights from three projects: knowledge- based capital as a new source for growth, business dynamics and resource allocation as well as the role of knowledge in Global value Chains. He explained how strongly connected they are and the huge effort needed in terms of data gathering and measurement.

### **27 September 2013- SIMPATIC “Micro-Macro” workshop N°2 in Sevilla, Spain (internal event)**

Partners had the opportunity to meet with their counterparts at the Institute for Prospective Technological Studies- IPTS, presenting them the results so far produced on the micro area as well as subsidies and tax credits. Two working papers were presented by Katholieke Universiteit of Leuven- K.U.Leuven, “Applying for R&D Subsidies: An international comparison”, and “Granting R&D Subsidies: An International Comparison”. Both of them got valuable feedback from IPTS officials.

## Upcoming events

### **Save the date!**

### **3-4 April 2014- Second SIMPATIC Annual Conference in The Hague, The Netherlands (public event)**

This conference is the annual flagship of the three years project and is the second one organised so far (the first one was held in Brussels, <http://simpatic.eu/first-simpatic-conference/>). The Central Planning Bureau – CPB will host three days of scientific and policy sessions. Interim results will be presented to the political and academic communities in all research areas (micro, macro, green and social), as well as a draft report on the calibration of micro-economic effects conducted by Reinhilde Veugelers, Scientific Coordinator of SIMPATIC and Senior Research Fellow at Bruegel (to be published in February 2015).

The full programme of the conference is available on the SIMPATIC website ([www.simpatic.eu](http://www.simpatic.eu)).

## Research progress

The research outcomes of the last months have focused on subsidies and tax credits and green innovations, as well as on the social dimension of innovation and will be used as inputs in the macro-modelling.

### **How firms apply for R&D subsidies, and how governments grant them, using data from five EU countries (research conducted by K.U.Leuven, Maastricht University- The Netherlands and Universidad Complutense de Madrid UCM- Spain).**

A micro-econometric analysis of how firms apply for R&D subsidies, and how governments grant them, using common methods and data from five member states (Belgium-Flanders, Finland, Germany, The Netherlands and Spain), proves that the firm age has a negative impact on the probability of a firm applying for a R&D subsidy in all those five countries. Sales per employee (a measure of productivity) have likewise a negative impact in all these countries but the Netherlands. In contrast, in Flanders these firm characteristics have a positive impact on the probability to apply for a subsidy.

Studying the decisions of government agencies, SIMPATIC finds that, where available (Finland, Spain and The Netherlands), the marketing risk (or ranking of the project application in case of The Netherlands) has a negative impact on the subsidy rate, while the technological challenge has a positive impact on the subsidy rate. For most countries, the firm characteristics included in the analysis (age, sales per employee, number of employees, SME status) have no impact on the subsidy rate decisions of the government agency. SMEs are granted higher subsidies in Finland and The Netherlands, older firms, lower subsidies in Finland, larger firms, lower subsidies in Spain, and firms with higher sales per employee lower subsidies in Spain.

Taken together, these early comparisons and results already reveal a great deal of heterogeneity in 1) institutional structures, 2) firm behavior and 3) government subsidy decisions. In future work, partners will proceed in analysing in more detail how the differences in firm and agency behavior affect the differences in decisions by firms and agencies examined in different countries.

### **Evaluating green innovation policies (research conducted by Bruegel - Belgium and Mark Huberty, University of California)**

SIMPATIC has developed a new approach to disambiguation of large patent databases. Available international patent databases do not identify unique innovators. Record disambiguation poses a significant barrier to subsequent research. Present methods for overcoming this barrier couple ad-hoc rules for name harmonisation with labour-intensive manual checking. SIMPATIC presents instead a computational approach that requires minimal and easily automated data cleaning, learns appropriate record matching criteria from minimal human coding, and dynamically addresses both computational and data quality issues that have impeded progress. SIMPATIC shows that these methods yield accurate results at rates comparable to outcomes from more resource intensive hand coding.

SIMPATIC applies this approach to the Patstat database. Based on the deduplicated patent data, SIMPATIC linked data on European emitters to data on their innovation practices. Showing how that record linkage can be maintained with relatively minimal human input.

### **Impact of innovation on employment turnover and skill structure, service innovation and social innovation (research conducted by the Institute for Economic Research-Slovenia)**

The research carried out on the impact of innovations in the services sector and how they impact the employment and inequality in the services sector shows that, in view of the dominance of services in advanced economies, service innovation is predestined to have a substantial effect on employment dynamics, on skills composition, social inclusion, etc. Those issues are all the more important in view of the current crisis, high levels of unemployment in several European economies and public budget cuts that challenge present policy approaches and models of public services provision.

A study on the impact of firms' own technology and non-technology innovations, as well as of innovation spillovers shows a substantial heterogeneity of innovation effects on employment and skills composition of labour. This implies that first, the effects depend a

lot on the specific structure of each economy, whereby results can vary substantially across industries that generate spillovers and across firms that are potential beneficiaries of the spillovers. It also implies that innovations in service industries do not seem to have a different spillover effect on employment and skill structure when compared to innovations in manufacturing industries.

In the current debate on social innovation, SIMPATIC proposes a new definition which stresses the link between social innovation and changes in social capital. By referring to the economic analysis of social capital we improve the understanding of social innovation and the mechanisms through which it impacts the economy, as well as the differences between social and technological innovations. The new definition also enhances the measurement of social innovation thanks to established indicators of social capital, thus permitting to score countries in their social innovation performance.

## Publications

SIMPATIC publishes on an ongoing basis the working papers produced by the research teams.

Here below is a list of the publications released during this period. All the outcomes and publications of the project are available on the SIMPATIC website at [www.simpatic.eu](http://www.simpatic.eu)

### Working papers

#### November 2013

- [Innovation and employment in Spanish manufacturing firms](#) - UCM: Felipe Rojas Pizarro

#### August 2013

- [The impact of innovation on employment and skill upgrading of firms](#) - IE: Jože P. Damijan, Metka Stare, Mojca Lindič and Sašo Polanec
- [An overview and conceptual framework of social innovation](#) - IER: Joep Konings and Luca Marcolin
- [New socio-economic indicators in NEMESIS](#) - ISIS
- [The reference scenarios with “state of the art” modelling, NEMESIS and GEM-E3](#) - SEURECO, FEP and ICCS

#### May 2013

- [Inter-sectoral and international R&D spillovers](#) - UNU- MERIT: Rene Belderbos and Pierre Mohnen

#### April 2013

- [Innovation and Services](#) – IER: Metka Stare

## SIMPATIC partners

There are nine partners in the SIMPATIC consortium, coming from eight different European countries:



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