



**COINVEST**

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Dissemination level

PU	Public	x
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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All materials relating to this project such as data, meetings, publications, working papers etc. are all to be found on [www.coinvest.org.uk](http://www.coinvest.org.uk).

Summaries of our papers and scientific findings are to be found in the abstract of each paper and the covering notes of the deliverables. Thus summaries here are kept very short and the interested reader can find more details in these sources, all of which are on [www.coinvest.org.uk](http://www.coinvest.org.uk)

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### **1. ABOUT THE COINVEST PROJECT, [www.coinvest.org.uk](http://www.coinvest.org.uk)**

The COINVEST project, COINVEST- Competitiveness, Innovation and Intangible Investments in Europe was a 30 month collaborative research project funded under the European Commission Seventh Framework Programme (Theme 9, Socio-economic Sciences and Humanities). It was co-ordinated by Imperial College Business School London, under the leadership of the principal investigator Professor Jonathan Haskel.

The project aimed to understand the contribution of intangible investments to innovation, competitiveness, growth and productivity in Europe. Researchers, experts in the new field of

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intangible investments in economics came together to examine whether Europe has been performing very well in the knowledge economy. It was necessary to do this, because most intangible investments are “hidden” in national accounts and micro data. In national accounts this is because they are treated as intermediate inputs and so do not show up as part of investment either in GDP or as creating an asset that might account for changes in GDP. Similarly, intangibles are often not reported in micro work or are so reported in only an occasional way across countries. Researchers in the UK, Belgium, Bulgaria, France, Germany, Portugal and Sweden came together to investigate both micro and macro (market economy and industry) data in these countries.

Our lead investigator for Bulgaria died suddenly near the end of this project. We mourn his passing and thank co-investigators who took over from him.

### **What are intangible investments and how are these defined?**

An intangible asset or intangible investment is defined as identifiable non-monetary assets that cannot be seen, touched or physically measured, which are created through time and/or effort and produce an enduring knowledge asset that provides a flow of knowledge services (for example, a databank). Some knowledge assets are protected by formal means e.g. trade secrets (e.g., customer lists), copyrights, patents, and trademarks. Others are not, such as know-how, knowledge, collaboration activities, leverage activities, and structural activities.

## **2. AIMS OF THE PROJECT**

### *Work Package 1: Scoping of the data*

Work package 1 was concerned with the scoping of the available data on intangible assets for our countries and other countries too. It was also tasked with developing guidelines for harmonization of the data across countries with the aim of establishing consistent definitions and applying the data to all other Member States and Associated Countries. So, for example, the meeting in May 2009 was at the OECD whom also have an interest in this work. During the COINVEST Policy Maker briefing, Sofia,

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July 13<sup>th</sup> 2010, methods were shared with the Eastern European delegates on how to adopt the guidelines for future use.

#### ***Work Package 2: Investment in Intangible Assets in the EU***

We planned to develop estimates for the most recent year possible of investment in intangible assets by each country and to compare and contrast countries to see in what intangible assets areas they invest most. Each country in the Consortium developed estimates for as long a time-series as possible of investment in intangible assets by each country. The results can be seen in the papers under WP3 (D3-D9). In these papers, we compared and contrasted countries to see in what intangible assets areas they invest most and how this has changed. The results suggested both significant investment in intangibles and a significant increase in such investment over the period. In these deliverables, we also generated the time series to then fit into the growth accounting programme.

#### ***Within Country Analyses for whole economy***

We used the data collected above to examine within country output and how the capitalisation of intangibles affects the calculation of output. We also used the data collected above to explain their contributions to within-country output, and how the inclusion of intangibles affects the explanation of how country productivity grows. These results were compared and contrast across counties, UK, Belgium, Bulgaria, France, Germany, Portugal and Sweden. Additional results have also been evaluated by The Conference Board Europe for Spain , Italy and Greece. This involved, as well as new data, a new programme to generate the estimates which we have created.

#### ***Cross Country Analysis***

In Workpackage 5, we analysed cross-county productivity levels and the proximate reasons for their differences using the new output levels from the capitalisation of intangibles and the new input levels from the additional intangible asset input. Software in STATA was written to establish relative productivity calculations. Whilst the program can be applied to all countries, due to time and data availability we have carried out the analysis for the US and UK as pilot for future work.

#### ***Exploration of micro data***

The results of these can be seen in Deliverable 12 and Deliverable 13. We analysed the micro-data within and across countries, depending on the sources in each country to shed light on a variety of

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assumptions underlying the macro work and to see if a similar exercise on the micro-data gives consistent answers with the macro data. In the reports, we tried to determine the impact of intangible expenditures on TFP, looked at accounting data to see if valuing intangibles helped account for the market and book value gap and developed a systematic questionnaire to help form a quantitative assessment of what companies spend on intangible asset building.

### **3. PARTNERS INVOLVED**

Imperial College of Science, Technology and Medicine, UK, [www.imperial.ac.uk](http://www.imperial.ac.uk)

The Conference Board in Europe, Belgium, [www.conference-board.org](http://www.conference-board.org)

Instituto Superior Técnico Lisboa, Portugal, [www.ist.utl.pt/](http://www.ist.utl.pt/)

Institutet för Näringslivsforskning, Sweden, [www.ifn.se](http://www.ifn.se)

Club Ekonomika 2000, Bulgaria, [www.club2000.org](http://www.club2000.org)

Zentrum fuer Europäische Wirtschaftsforschung GmbH, Germany, [www.zew.de](http://www.zew.de)

GRECSTA/INSEE, France, [www.crest.fr/grecsta](http://www.crest.fr/grecsta), [www.insee.fr](http://www.insee.fr)

Queen Mary and Westfield College, University of London, UK, [www.qmul.ac.uk](http://www.qmul.ac.uk)

### **4. RESEARCH CARRIED OUT AND MAIN FINDINGS**

All of the corresponding papers can be accessed via our website, <http://www.coinvest.org.uk/bin/view/CoInvest/CoinvestPub> and are categorised under workpackage number, deliverable number, title and aggregation level.

We believe we have produced a number of innovations on the macro and micro side.

#### **1. Macro**

We believe we have produced the first:

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- comparable study of the effects of intangibles on productivity and growth across different countries at macro level by extending the Corrado et al method with cross-country data with specific new data drawn from National Accounts and other sources, testing different approaches and drawing on information from within statistical agencies, with accompanying software
- comparable study of the effects of intangibles on productivity and growth across different countries at industry level (and the industry level studies outside of Japan for any country, with accompanying software)
- cross-country analysis of effect of institutions and regulations on intangible investment
- cross-country work on design and financial services using the OECD software method for the UK, Sweden and France.

#### Micro

- study using accounting data of the extent to which intangibles can account for the market/book value puzzle for a group of German and US firms
- comparison of German and Portuguese innovation systems.
- for the UK, micro-level survey specifically for spending on the CHS intangible assets range
- analysis, after Israel, of life-lengths for R&D intangible assets: but the first analysis of life lengths for range of intangible assets for the UK

Our work and findings can be arranged around our Work Packages as follows.

1. *To find out what data are available on intangible assets in different countries (Work Package 1, Macro data)*

This deliverable was an initial scoping exercise to survey data availability in different countries. More work was needed need to do to see what could be found at the industry level and how comparable such data are.

2. *To find out what intangible assets EU economies invest in and how much they spend (Work Package 2, Macro data)*

Workpackage 2 involved co-ordinating the collection of data on the categories of intangible assets set out by Corrado, Hulten and Sichel (2005, 9). We looked at comparability of data, depreciation methods for intangibles, the measurement of the output of those items, etc., deserve more research and

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harmonization. Based on available data, the approach was extended to an industry level, in the first instance between manufacturing and market services, with a more detailed disaggregation wherever possible. All this has allowed the first step of making a cross-country comparison, for the most recent year available, of investing in intangible assets.

3. *To measure the effects within each country of intangible asset expenditure on economic performance (Work Package 3 and 4, Macro data, see papers in deliverable 10 and 11)*

We looked at the consequence for a number of key variables. First, we looked to see the consequences for GDP. GDP potentially rises since more of what is currently regarded as intermediate spending is investment. Second, we also looked at the consequences for investment, where we expect the investment share to increase. Third, we looked too at the labour share, which will fall since the extra GDP goes to compensating the extra capital in the economy. Fourth, we looked at the consequences for labour productivity growth (LPG) and total factor productivity growth (MFPG). The level of labour productivity rises, but LPG only rises if the level of GDP rises increasingly over the period. The level of MFP falls, since there is an extra input in the economy, namely an intangible capital stock, though it is not clear if MFP growth (MFPG) rises or not, since we need to see how much the change in the intangible capital stock contributed to growth and productivity growth along with other inputs. Extending the growth accounting framework in order to include intangible capital, we found that LPG mostly rose and TFP fell. This was particularly the case in the late 1990s where many economies were investing strongly in intangible investment, with the internet boom, which is omitted in standard national accounting conventions.

We also looked at industry findings. This was possible for Germany, Sweden and UK. Some information could be presented on the distribution of intangible investment across sectors for France; we refer to D10 for further details.

Our overall comparative findings are as follows (as above, see the covering report for deliverable D10 and the papers therein for more details):

- a) At an aggregate level, the UK and Sweden are relatively intangible intensive, at around 14% of market sector value added (excluding real estate, including intangibles) in 2005. Germany, France and Portugal are just over 10%. Sweden and Germany are relative high investors in R&D, whilst the UK invests relatively heavily in “economic competencies”

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- b) Intangible investment in the UK is 30% in manufacturing and 70% in services. For Germany it is the opposite and in Sweden/France, it is about 50%, 50%.
- c) In manufacturing, intangible investment exceeds tangibles in all countries. In finance and business services the reverse is the case, but the UK is a particularly intensive intangible spender in these sectors.
- d) For growth accounting, industry by industry we have the following:
  - i. Manufacturing. Germany has the highest LPG, followed by Sweden and the UK. The key drivers of this high LPG in Germany are intermediate deepening, with TFP low and the use of intangibles similar to the UK. Sweden has much higher deepening from intangibles, whilst the UK has about the same use of intangibles as Germany but much higher TFP. The high contribution of intangibles in Sweden is consistent with their high R&D intensity. The high TFP in the UK is consistent with the UK having relatively low technology manufacturing that might benefit disproportionately from TFP spillovers.
  - ii. Retailing. Sweden has the highest LPG, driven by higher TFP and somewhat higher use of intangibles: the contribution of intangibles and TFP is very similar in both the UK and Germany.
  - iii. Financial and business services. The notable economy here is the UK, with a lead in TFP and intangible contributions, followed by Sweden.

Finally, we explored policy. In deliverable 11, the paper by Hao, with Haskel, rather than taking investment in intangibles as a given looks at the correlation between the share of intangible investment in GDP for 16 countries from 2001-2004 with various measures of product and employment market regulations. The main finding is that intangible investment (as a proportion of GDP) is negatively and significantly correlated with all variables of product market regulation and employment market

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regulation. Thus countries with regulation suffer low intangible investment levels. As the paper discusses, if causal, this is an important finding for policy.

4. *To see how comparative cross-country economic performance is affected by intangible investment (Work Package 5, Macro data).*

The idea was as follows. If intangible investment is counted as such then it raises GDP. This then potentially changes cross-country productivity and performance comparisons. Of course, if all countries invest a similar fraction of GDP in intangibles then relative rankings will not change, but we need to undertake the work to find this out. We similarly wanted to compare cross-country MFP which will change with the addition of intangibles. We looked at comparisons of GDP investment across countries by intangible asset and the impact on GDP levels for the UK and USA.

5. *To relate our findings to micro data analysis (Work Package 7, Micro data, Deliverable 12 to 13)*

This macro data work can be complemented by micro analysis. Thus our final step, we have examined the effects of intangible investment in firms and between firm differences in such investment. The major problem here is that the official statistics hardly collect information on intangibles systematically and hence few firms record such investments. Thus In some work we have used the EU Community Innovation Survey which does ask a number of firm-level questions about a range of intangible asset spending by firms (in the UK, for example, spending on training, branding, design etc.). We were able to do this for Germany and Portugal where we had good access to the micro data and the spending questions are relatively well answered. We did look in detail at the UK and found that the questions were generally not well answered. We therefore undertook our own questionnaire and were able to find different data and produces concrete recommendations for other questionnaires. The Conference Board looked at knowledge-intensive businesses, in particularly pharmaceuticals, comparing the results across countries and looking to see how much the market/book ratio was accounted for by intangible assets.

Thus some of our findings in the bundle of Deliverable 12-13 papers, were as follows.

On the accounting data, Hulten et al uses accounting data to explore if intangibles, capitalised in the way in macro data, can help understand the book/value puzzle and finds they can.

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On the micro CIS-type data, German and Portuguese data was used to compare intangibles investment across hi-tech environments and IPR regimes, as well as to use CIS data to explore the relation with productivity, where this relationship was found to hold.

Finally, regarding measurement issues we have done quite a lot of work. We have piloted and implemented an extended R&D survey to ask about spending and life lengths. We find support for intangibles lasting longer than a year, thus supporting the capitalisation notion. And we have support too for the depreciation rates typically assumed. We compare spending with other questionnaires and concluded with suggestions for improving them in particular pointing respondents to own account spending. We compared UK with US results and found high intensity of intangible spending in small firms, especially start ups. This suggests that in understanding small firms it is particularly important to understand their intangible assets. Finally, we looked at new price indices for R&D and found that R&D prices have been falling very substantially in the UK, as opposed to the conventional method which assumes they have been rising. We have been invited by the Chief Economists at BEA and BLS to present this paper to their staff, following a presentation at the NBER Summer Institute, 2010.

## **5. ENGAGEMENT AND DISSEMINATION**

All details are on [www.coinvest.org.uk](http://www.coinvest.org.uk), follow the right panel for meetings and presentations. Among other things:

We have completed all eight promised meetings, and co-organised 3 other meetings with COST, including the 2010 CAED meeting in London (with 179 attendees over three days).

The OECD has adopted COINVEST data and methods for its Innovation Strategy.

We have held meetings joint with OECD to ensure dissemination of the work and briefed the OECD, EU, UK Department of Business Innovation and Skills, UK Office of National Statistics and US Bureau of Economic Analysis.

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COINVEST work has been written up in a column in the Financial Times and Economist.

1. COINVEST work was directly quoted by , David Willetts, Minister of State for Universities and Science, in a speech called “Science, Innovation and the Economy”, 9 Jul 2010, Royal Institution, London. This shows directly that COINVEST work has influenced policy. He said *“I was particularly interested to read the recent Imperial College Discussion Paper by Jonathan Haskel and Gavin Wallis, “Public support for Innovation, Intangible investment and Productivity Growth in the UK Market Sector”. It shows particularly strong spillover benefits from R&D spend on research councils. It shows a positive return from other forms of R&D too, but the spillover benefits seem to be greatest from the research councils. This is interesting evidence that research council spend is doing the job it should be doing – generating wider benefits across the economy as a whole.*

*These arguments about clusters, about absorptive capacity and the importance of basic research have already led me to a number of conclusions about the role of government in supporting science and innovation. I can't talk about levels of investment – that must await the CSR – but I do want to share my thinking on policy direction.”*

(<http://www.bis.gov.uk/news/speeches/david-willetts-science-innovation-and-the-economy>)

#### A) Dissemination

<b>Partner</b>	<b>Description</b>	<b>Date</b>
Miss Annarosa Pesole (QMUL)	Presentation of the COINVEST project at the EPROS, EUROSTAT conference in Luxembourg.	November 2008
Professor Jonathan Haskel, (QMUL)	Presentation of the COINVEST project, Sheffield, UK	October 2008
Catherine Edlin (QMUL)	COINVEST project, FP7 networking event, Budapest	December 2008
Dr Harald Edquist, (IFN)	Dr Harald Edquist informed Andrew Wyckoff , the Head of the Economic Analysis and Statistics (EAS) Division of the Directorate for Science, Technology and Industry at the OECD about the COINVEST project.	
Prof Jonathan Haskel, (Imperial College)	'How can the UK achieve sustainable economic growth in the future? This event was organised by The Strategy Unit and the Department for Business, Innovation and Skills, UK Cabinet Office.	
Prof Jonathan Haskel	Jonathan Haskel has surveyed a large group of companies	

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	including those in the financial services sector piloting the innovation survey on intangibles. 2000 companies are taking part in the questionnaire. Jonathan Haskel presented the results to the NESTA group.	
Prof Jonathan Haskel (Imperial College)	' A taxpayer punt, a venture for fund for innovation',	
Prof Jonathan Haskel (Imperial College)	Options for improving medium to long-run growth, Professor Jonathan Haskel, HMT meeting, March 12th 2010. Fiscal Consolidation Seminar, presentation made by Jonathan Haskel	March 2010
Prof Jonathan Haskel (Imperial College)	Does innovation produce economic growth? Presentation by Professor Jonathan Haskel Joint British Academy and Economic and Social Research Council Event, 16th March	March 2010
Prof Jonathan Haskel (Imperial College)	"Public Support for Innovation, Intangible Investment and Productivity Growth in the UK Market Sector", Jonathan Haskel et al was recently listed on SSRN's Top Ten download list for ERN: Infrastructures; Other Public Investment & Capital Stock (Topic), ERPN: International (Topic) and ERPN: Public Policy (Innovation) (Topic).	
Dr Annarosa Pesole (Imperial College)	Results of the COINVEST project, presented by Dr Annarosa Pesole, Imperial College London, at the 'Results of the innovation-related projects from the Socio-economic Sciences and Humanities Programme (SSH)' for EU-2020 strategy, January 28th 2010, Brussels.	January 2010
Prof Jonathan Haskel (Imperial College)	Productivity and Innovation in UK Financial Services: An Intangible Asset Approach, Professor Jonathan Haskel and Dr Annarosa Pesole, presented by Jonathan Haskel at the workshop on Innovation and firm performance: are we measuring them correctly? Organized by Nottingham University Business School, February 3rd 2010	February 2010
Prof Jonathan Haskel (Imperial College London)	Presentation of 'EUKLEMS' cluster of projects in the context of the exploitation of results for the impact assessment of FPs 6 and 7 and the Innovation Union Communication	
Dr Janet Hao (The Conference Board)	Hao, Janet Xiaohui, Vlad Manole and Bart van Ark (2009): Intangible Capital and Growth – an International Comparison	
Dr Charles Hulten (The Conference Board)	Hulten, Charles, Janet Xiaohui Hao, and Kirsten Jaeger (2009): Intangible Capital and the Valuation of Companies: A Comparison of German and U.S. Corporations	
Dr Janet Hao (The Conference Board)	Conference on "R&D and the financing of innovation in Europe" European Investment Bank, Luxembourg 22 October 2009.	01/10/09
Dr Carol Corrado (The Conference Board)	Intangibles, Productivity, and Growth: Current Projects Potpourr, OECD/COINVEST conference, June 2009	01/06/09
Dr Kirsten Jaeger	What is a Company Really Worth? Intangible Capital and the "Market to Book Value" Puzzle in Germany	
Dr Pedro Faria and Dr Francisco Lima (IST)	Faria, P. and F. Lima (2009), Firm Decision on Innovation Types: Evidence on Product, Process and	01/08/09

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	Organizational Innovation, Academy of Management 2009 Annual Meeting, Chicago, US, August.	
Dr Pedro Faria and Dr Francisco Lima (IST)	Faria, P. and W. Sofka (2009), Formal and Strategic Appropriately Strategies of Multinational Firms - A Cross Country Comparison, Academy of Management 2009 Annual Meeting, Chicago, US, August.	01/08/09
Dr Pedro Faria and Dr Francisco Lima (IST)	Faria, P. and F. Lima (2009), Firm Decision on Innovation Types: Evidence on Product, Process and Organizational Innovation, DRUID Society Summer Conference 2009 on Innovation, Strategy and Knowledge, Copenhagen, Denmark, June.	01/06/09
Dr Pedro Faria (IST) and Dr Wolfgang Sofka (Zew)	Faria, P. and W. Sofka (2009), Knowledge Protection Capabilities and their Effects on Knowledge Creation and Exploitation in High- and Low-tech Environments, Advancing the Study of Innovation and Globalization in Organizations (ASIGO) Conference, Nuremberg, Germany, May.	01/05/09
Dr Pedro Faria and Dr Francisco Lima (IST)	Faria, P. and F. Lima (2009), Firm Decision on Innovation Types Evidence on Product, Process and Organizational Innovation, 7th Annual International Industrial Organization Conference, Boston, USA. - Mendonça, J, R. Baptista, and F. Lima (2009), "Differentiating the Role Played by Founders' Human Capital in the Performance of Firms", 29th Annual International Conference Strategic Management Society (SMS), Washington, US, October 11-14.	01/10/09
Dr Pedro Faria and Dr Francisco Lima (IST)	Faria, P. and F. Lima (2009), Firm Decision on Innovation Types Evidence on Product, Process and Organizational Innovation, 7th Annual International Industrial Organization Conference, Boston, USA.	
Dr J Mendonca, Dr R Baptista and Dr F Lima (IST)	Mendonça, J, R. Baptista, and F. Lima (2009), "Differentiating the Role Played by Founders' Human Capital in the Performance of Firms", 29th Annual International Conference Strategic Management Society (SMS), Washington, US, October 11-14.	01/10/09
Dr Wolfgang Sofka (ZEW) and Dr Pedro Faria (IST)	Sofka, Wolfgang and Pedro Faria (2010), "Knowledge Protection Capabilities and their Effects on Knowledge Creation and Exploitation in High and Low-tech Environments", COINVEST Conference -Intangible Investments at Macro and Micro Levels and Their Role in Innovation, Competitiveness and Growth, Lisbon, IST, March 18-19.	01/03/10
Dr Francisco Lima (IST)	Lima, Francisco (2010) "Intangible investments in Portugal," COINVEST Conference - Intangible Investments at Macro and Micro Levels and Their Role in Innovation, Competitiveness and Growth, Lisbon, IST, March 18-19. Included also the presentation of "The value of training" co-authored with Susana Neves from Statistics Portugal.	01/03/10
Dr Harald Edquist (IFN)	Harald Edquist attended the 2009 EIB Conference in Economics & Finance "R&D and the financing of innovation in Europe", Luxembourg, October 22, 2009.	01/10/09
Dr Harald Edquist and	Harald Edquist and Henrik Jordahl presented the	01/10/09

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Dr Henrik Jordahl (IFN)	COINVEST project and discussed intangibles in the National Accounts at Tjänstesektorn i Samverkan [Partnership in the service sector], Stockholm, October 8, 2009. 13	
Dr Harald Edquist (IFN)	Harald Edquist presented his report “Så skapas kunskapsintensiv tjänstetillväxt” (see Papers/publications produced above) at the Almedalen Week (see <a href="http://en.wikipedia.org/wiki/Almedalen_Week">http://en.wikipedia.org/wiki/Almedalen_Week</a> ), Visby, June 30, 2009.	01/06/09
Dr Harald Edquist (IFN)	Harald Edquist presented Swedish time series on intangibles at the joint COINVEST-OECD conference at the OECD, Paris, June 2, 2009.	01/06/09
Dr Harald Edquist (IFN)	Harald Edquist presented his IFN Working Paper No. 785 “How much does Sweden invest in intangible assets?” at the The 11th Annual SNEE European Integration Conference, Mölle, May 2009.	01/05/09
Dr Harald Edquist (IFN)	Policy seminar on intangible investment, IFN, Stockholm, April 2, 2009, Harald Edquist presented his IFN Working Paper No. 785 “How much does Sweden invest in intangible assets?”, (see <a href="http://www.ifn.se/web/Kan_man_alltid_ta_pa_en_investering.aspx">http://www.ifn.se/web/Kan_man_alltid_ta_pa_en_investering.aspx</a> )	01/04/09
Dr Harald Edquist and Dr Henrik Jordahl (IFN)	Interview with Harald Edquist and Henrik Jordahl on intangibles in the National Accounts to appear in Dagens Handel (published by The Swedish Trade Federation).”SCB underskattar tjänstesektorn” [Statistics Sweden underestimates the service sector], Op-ed by Harald Edquist and Henrik Jordahl in Svenska Dagbladet (daily national newspaper) September 23, 2009. Report in Swedish: Report in Swedish: “Hur viktiga är immateriella investeringar i tjänstesektorn och tillverkningsindustrin för näringslivets tillväxt?” (How important are intangible investments in the service sector and manufacturing for business sector growth?), policy report, Almega [Employer and trade organisation for the Swedish service sector].	01/09/09
Dr Harald Edquist (IFN)	COINVEST conference “Intangible investment at the macro and micro levels and their role for innovation, competitiveness and growth”, Lisbon	01/03/10
Dr Lubomir Dimitrov, Dr, Todor Gradev, Dr Spartak Keremidchiev (Club Ekonomika)	Lubomir Dimitrov, Todor Gradev, Spartak Keremidchiev, “Investment in intangible assets: the case of Bulgaria, 1991-2006”	
Dr Lubomir Dimitrov and Dr Todor Gradev (Club Ekonomika)	Lubomir Dimitrov and Todor Gradev, “Productivity, Technology Ladder and Optimal Product Mix” (preliminary)	
Dr Lubomir Dimitrov and Dr Todor Gradev (Club Ekonomika)	The paper “Productivity, Technology Ladder and Optimal Product Mix” by Dimitrov & Gradev was presented at the Annual Conference of the European Economic Association, Barcelona, August 2009.	01/08/09
Dr Lubomir Dimitrov	A shorter version of the paper with main results of time-	

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and Dr Todor Gradev (Club Ekonomika)	series estimates (Deliverable 5) to be submitted to the popular Bulgarian journal "Economica"	
Dr Lubomir Dimitrov and Dr Todor Gradev (Club Ekonomika)	Based on the macro-results for Bulgaria to be submitted to the academic journal of the Bulgarian Academy of Sciences "Economic Thought".	
Dr Spartak Keremidchiev and Dr Lyubomit Dimitrov (Club Ekonomika)	Spartak Keremidchiev and Lyubomit Dimitrov attended the conference: A COINVEST Conference: Intangible Investments at Macro and Micro Levels and Their Role in Innovation, Competitiveness and Growth, 18-19 March 2010, Lisbon, Portugal	01/03/10
Dr Dirk Crass (ZEW)	Presentation "Do Intangibles Enhance Productivity Growth? Microeconomic Evidence from Germany" at COINVEST Conference "Intangible Investments at Macro and Micro Levels and Their Role in Innovation, Competitiveness and Growth", Lisboa, March 19th 2010.	01/03/10
Dr Bettina Peters (ZEW)	Presentation "Do Intangibles Enhance Productivity Growth? Microeconomic Evidence from Germany" at COST MC Meeting and Workshop on Firm-level Micro Data, Amsterdam, May 28th 2010.	01/05/10
Dr Bettina Peters (ZEW)	The results of the ZEW (German) micro data analysis will be published as ZEW Discussion Paper "Do Intangibles Enhance Productivity Growth? Microeconomic Evidence from Germany" and will be submitted to a scientific journal.	
Dr Vincent Delbecque (INSEE/GRECSTA)	12th May, Vincent Delbecque presented the Coinvest project and preliminary results at the Centre d'Etudes pour l'Emploi (Paris)	01/05/10
Dr Vincent Delbecque (INSEE/GRECSTA)	28th and 29th May, Vincent Delbecque presented the Coinvest project and preliminary results at the IC5 Conference organised by the World Bank (Paris)	01/05/10
Dr Jacques Mairesse (INSEE/GRECSTA)	Jacques Mairesse presented an analysis on "Comparing the Contribution of R&D and ICT in the Growth Accounting Framework : Issues and Orders of Magnitude"	
Dr Jacques Mairesse (INSEE/GRECSTA)	2nd June Jacques Mairesse presented an analysis on "Comparing the Contribution of R&D and ICT in the Growth Accounting Framework : Issues and Orders of Magnitude" at the joint COINVEST/OECD conference	01/06/09
(INSEE/GRECSTA)	31st French COINVEST members submitted a paper for the IARIW Conference taking place in St Gallen in August 2010.	01/08/10
Dr Vincent Delbecque (INSEE/GRECSTA)	7th and 8th September, Vincent Delbecque presented results from WP2 and WP3 at the FIRB-RISC Conference at Bocconi University (Milan)	01/09/10
(INSEE/GRECSTA)	26th November 2009, French COINVEST members presented their work at the National Accounting seminar at the INSEE.	01/11/09
(INSEE/GRECSTA)	French COINVEST members, jointly with other COINVEST members, presented the project results at the IARIW conference in August 2010.	01/08/10

All of the corresponding papers can be accessed via our website,

<http://www.coinvest.org.uk/bin/view/CoInvest/CoinvestPub> and are categorised under workpackage number, deliverable number, title and aggregation level.



**B) further dissemination**

We had a lunch time meeting with the EU Commissionre for Innovation, Mrs. Georgan Quinn in June 2010 were we presented her with COINVEST work.

[http://ec.europa.eu/commission\\_2010-2014/geoghegan-quinn/hlp/index\\_en.htm](http://ec.europa.eu/commission_2010-2014/geoghegan-quinn/hlp/index_en.htm)

This work was refereed to in the EU high level inquiry on innovation indices who noted that the EU should move in the direction of collecting intangibles data. [http://ec.europa.eu/commission\\_2010-2014/geoghegan-quinn/hlp/index\\_en.htm](http://ec.europa.eu/commission_2010-2014/geoghegan-quinn/hlp/index_en.htm)

**B) Some of our conferences**

(for all conference details visit

<http://www.coinvest.org.uk/bin/view/CoInvest/CoinvestMeetings>)

- COST/COINVEST- London, February 2009
- OECD/COINVEST, Paris, June 2009
- IFN Sweden/COINVEST, September 2009
- COINVEST, Lisbon, March 2010
- COINVEST Academic Conference, Lisbon, 18th & 19th March. This was an extremely successful event, 22 papers were presented and 48 people in attendance.
- COST/COINVEST, Amsterdam, June 2010
- COINVEST, Sofia, July 2010
- COINVEST final dissemination event, September 2010

Members of the COINVEST Consortium have attended events organised by the following organisations,, OECD (Organisation for Economic Development and Co-Operation), COST (European Co-operation in Science and Technology), NBER (National Bureau of Economic Research) and US National Academy of Sciences.

COST programme (European Cooperation in Science and Technology) and COINVEST workshop on Intangible investment and firm performance which took place on 20th February, 2009 at Imperial College London, (see appendix for report).

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In June, COINVEST hosted a joint conference with the OECD in Paris, at the OECD Conference Centre. Dr Yoshiaki Tojo, OECD and Professor Jonathan Haskel (Imperial College) hosted the event. We had expert guest speakers in the field of intangibles including, Carol Corrado, The Conference Board, USA. Chuck Hulten, University of Maryland, NBER, The Conference Board, USA and Jacques Mairesse, ENSAE, France. The title of the conference was 'Measuring Investment in Intangibles'. The conference was attended by 57 delegates (COINVEST members and others).

## **6. FOLLOW ON WORK AND ACTIVITIES**

We are involved in a number of follow on activities. We are attending the final meeting of the INNODRIVE Project to summarise our work and compare it with their findings. We gave talks at the INDICSER and SERVICEGAP project launch event and will do at the next INDISECER and have talked at the follow up meetings to EUKLEMS. We are involved in the ICTNET project too. We are in ongoing talks with NESTA, OECD and statistics bureaus and will be submitting papers to academic journals.

**All of the corresponding papers can be accessed via our website, <http://www.coinvest.org.uk/bin/view/CoInvest/CoinvestPub> and are categorised under workpackage number, deliverable number, title and aggregation level.**