LSE RICAFE 2

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RICAFE2 Newsletter

Welcome to the fifth and final edition of RICAFE2 newsletter.

This newsletter aims to keep you informed of the recent developments in the RICAFE2 project.

http://www.lse.ac.uk/RICAFE

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RICAFE2 - Regional Comparative Advantage and Knowledge Based Entrepreneurship

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RICAFE2 Research Summary

Our research provides a deeper and better understanding of the entrepreneurial process along several important dimensions, structured along two separate over-arching themes.

<u>Theme 1: The effects of societal, legal and economic factors on knowledge-based entrepreneurship</u>

This first theme explores the interplay between societal, legal and economic factors, with views taken from economics, sociology and psychology. We adopt individual behaviour as the primary level of analysis. Our main findings are:

1. Earnings alone cannot explain why individuals start own businesses, especially given the lower (average) earnings derived from entrepreneurial activities or self-employment. We show how over-confidence, risk aversion, social capital and networks can explain this puzzle and the existence of regional disparity in knowledge-based entrepreneurship.

2. Through a large sample of French companies we document that many entrepreneurs fail to predict properly their success chances in early years. Between 30-45% of them end up with realizations below expectation. This finding provides support of the view that entrepreneurs are over-confident, and make biased decisions between self-employment and employment with an established company.

3. Over-confidence is strongest among well-educated people, indicating that higher education may lead to more confidence.

4. Large and small companies differ markedly in their ability to spawn entrepreneurial activity. Over the years small companies have become able to generate more innovative activity in the US because of a relaxation of the liquidity constraints in the 1990s. This suggests that deepening of financial structure in Europe should encourage this source of entrepreneurship and to overcome risk-aversion to prevent individuals to work for riskier, but more innovative start-ups.

5. Evidence from Dutch companies suggests that education is a key element for successful entrepreneurship. We provide quantitative estimates of the effect of human capital on entrepreneurial performance. They show that an additional year of schooling, on average, increases the entrepreneur's gross annual business profit by 7.2%, an economically significant effect.

6. Human capital is important also because it reduces the effects of financial constraints on entrepreneurial activity and on the returns to it, so that the overall return to an additional year of schooling can reach up to 18%.

7. We examine a French loan guarantee program in order to assess the consequences of credit constraints for new ventures. We show that such a loan guarantee program may indeed alleviate credit constraints of new companies. However, most of the impact is on helping existing new firms to grow, rather by allowing more new firms to be created.

8. We looked into which conditions are more likely to enable the circulation of ideas among individuals, and therefore to generate innovation either within firms or outside them (i.e., in the market). Innovation entails trying new combinations of existing production factors. Potential entrepreneurs working in an environment that facilitates interaction are more likely to succeed in finding other individuals who can contribute to generating innovation. This helps explaining why many new ideas start in established firms but are then realized outside them (in the market), where creating new combinations may be easier and incentives of those contributing to making innovation a commercial product (financiers, suppliers, customers) are better aligned.

9. The quality of intellectual property rights (IPRs) and corporate regulations are found to be key drivers for building successful companies and improve their performance. They also shape the evolution of innovative industries.

10. When it is costly to enforce IPRs, newcomers are less likely to enter, since they find it difficult to obtain the financial resources to become able to offer innovative products and enforce their own intellectual

property against well-established, cash-rich incumbents that may aggressively protect their own intellectual property.

11. A difficult balance need to be made in the writing of IPRs regulations for mitigating its impact on innovation. While strong IPR promotes first-generation innovations, it discourages follow-up innovation by newcomers.

12. Many employees leave their company to pursue their innovations and implementation activities in newly created companies. This has implications for industry dynamics. Firms whose production is focused on few products absorb new start-ups less often than unfocused firms, and when they do they do it in a way to remain focused. Moreover, they are able to create more synergies with the absorbed firms by sharing a larger basis and depth of intellectual property.

13. Last but not least, access to finance is of great importance for knowledge-based entrepreneurship. We document that trust between financiers and entrepreneurs is an important way to promote investments in start-up firms. Trust is a mechanism that allows parties to resolve future problems for which they must rely on information with little objectivity content. We also find that complex contracting cannot compensate for a lack of trust. This implies that both are complements and not substitutes, and can be explained by the fact that writing sophisticated contracts requires a common understanding, which is the basis of trust.

Theme 2: The contribution of knowledge-based entrepreneurship to shifting patterns of regional comparative advantage

The second theme analyses the link between knowledge-based entrepreneurship with regional dynamics in economic activity and with regional structural change. For this we look into the experience of knowledge-based entrepreneurship in Western Europe but also in accession countries, as well as three fast growing emerging economies: Israel, India, and Brazil. This allows us to provide a detailed assessment of various policies and their impact on the local and regional development of knowledge-based entrepreneurship.

In a first step we address the link between local factors affecting the development of knowledge-based entrepreneurship and hence, in turn, the development of a regional technological base.

1. Empirical evidence for the Indian software industry reveals a pattern which is of general interest and teaches an important lesson for the European case as well: Differences in software exports are strongly related to the stock of local human capital. The latter is affected by the size and growth of the educational sector, in particular of private institutions. This points to the crucial importance of the educational sector for creating a strong local basis of regional comparative advantage and of regional export dynamics.

2. Latvian survey data show that small firms often tend to outperform larger ones with respect to local knowledge creation. This, in turn, improves the local technological basis and hence leads to stronger exports.

3. A unique European dataset of venture capital contracts clearly points to the importance of geographical proximity for the financing and sound corporate governance of knowledge-based entrepreneurship. Hence, a broad and well developed local venture capital industry not only facilitates financing of knowledge-based entrepreneurial firms, but also improves their corporate governance practices, as measured by the covenants of the contract between the venture capital firm and the innovative company.

4. Our research reveals centripetal forces that determine regional dynamics through the locational choices of high-tech firms. The main agglomerative forces that attract entrepreneurial activity are the existence of educational institutions, of supporting formal networks and of specialized sources of finance like venture capital.

5. We also find that firms' demand for outsourcing activities is an important factor for the intensity of regional economic activity, and hence for the creation of regional comparative advantage. Outsourcing demand is beneficial to firms when technology is changing rapidly because it enables firms to purchase from suppliers that use the latest technology and manage more efficiently production costs. Therefore, outsourcing becomes more critical in a rapidly changing environment, and may lead to quick shifts of regional comparative advantage.

6. Technological transfer from universities to firms is often considered to be a crucial aspect in creating regional comparative advantage. Our empirical analysis, based on data on US universities, reveals an important trade-off: pursuing local development objectives leads to significant reduction in licensing income. Furthermore, public universities may obtain the same results – in terms of technological transfer and licensing income - as their private peers only when they choose to implement the same incentive scheme adopted by private universities.

7. Using a broad European panel dataset between 1997 and 2004 we find a strong statistically and economically significant influence of corporate taxation on firm entry. Entry and exit behaviour, in turn, enhances regional economic activity. We find that economic dynamism depends on the expansion of the more productive firms, the emergence of new enterprises and the exit of weaker units in all sectors.

8. We also find that differences in firm productivity growth between the EU and US are the outcome of differences in the intensity of firm-level experimentation. We also find that firm experimentation declines in the cost of labour insurance. Together with the results on taxation, this points to the importance of the political process for the determination of the quantity and quality of entrants.

9. We show that high exit costs have a particularly damaging effect on firm-level experimentation and therefore on innovation in sectors or processes close to the technological frontier.

<u>Our main policy conclusions and indications are the following:</u>

- Policies for entrepreneurship entail complex trade-offs that need to be studied in depth to provide informed advice to policy-makers.

- Financial development and better access to capital reduces the amount of risk that individuals bear when starting their own entrepreneurial activities. This, in turn, fosters entrepreneurship and motivates risk averse individuals to work in smaller firms where generating new ideas is often more likely.

- Flexible and well-functioning labor markets, which would make it easier for an unsuccessful entrepreneur to reintegrate the labor market, are critical to avoid the stigma of failure problem which characterizes European economies.

- Efficient labor market play an important role in providing implicit job-back guarantees, just like financial markets. The provision of unemployment insurance may also help small firms compete for talent, and therefore, stimulate innovations and entrepreneurship in the economy.

- Intellectual property rights must balance protection of innovators with incentives for further innovation, especially in markets where patents are important. Well functioning capital markets for newcomers may help mitigate partially this problem (but not fully), by offering a better level-playing field for entrants.

- From an industry perspective, any policy aiming at promoting innovation and competition must cope with differences between focused and unfocused companies. Industries with more focused participants may be more prone at acquiring cutting-edge technology ventures as they can make better use of intellectual property sharing.

- Programs offering loan guarantees have been found to reduce credit constraints of new ventures, in that it reduces the cost of financing of companies. Most of the effect however takes place by helping existing new firms to grow, rather by allowing more new firms to be created.

- One of the main sources of a sound and dynamic regional technological base is the fast accumulation of local human capital. A crucial aspect in this process is the presence of an adequate educational system. Our research suggests that private institutions are a very sensible and effective substitute for public sector institutions especially in areas in which individuals can appropriate the main benefits of education (e.g. in the software sector).

- A related policy implication points to the availability of local VC financing for knowledge-based entrepreneurship. Our findings show that a strong local venture capital industry not only improves the financing base for knowledge-based entrepreneurial firms, but also improves their governance.

- Strong venture capital clusters lead also to clusters of knowledge-based entrepreneurial firms, thereby creating a propeller for regional dynamics.

- Our findings on the causality running from local knowledge creation (by especially small firms) to exports imply that strengthening the local technological basis via supporting small knowledge-based entrepreneurial firms also seems to be more adequate for creating sustainable regional comparative advantage than trying to attract large firms from outside.

- The locational choice of high-tech firms is crucial for regional dynamics. Our findings for locational choice of high-tech firms in Israeli metropolitan areas point to policy option which aim to attract such firms fostering regional dynamics and growth: creating conditions for technological innovativeness (developed infrastructure, skilled local labour force), establishing local formal networks and fostering informal ones and attracting local sources of financing such as venture capital.

- Pursuing local development objectives, i.e. aiming at the creation of local comparative advantage via the restriction of technological spillovers from universities to local firms, comes at the cost of a significant reduction of licensing income for universities.

- Our findings imply that there are no structural differences between the potential gains from technological transfers between private and public universities only if policy-makers are willing to adopt the same incentive schemes in both types of institutions.

- Our analysis points to the importance of corporate taxation to stimulate regional dynamics via the inducement of firm entry and exit.

- Our findings show that not only entry costs but also exit costs hamper technological innovation and hence regional dynamics. This implies that policy-makers should focus on reducing these exit costs in order to induce economic dynamism and productive technological change.

Third RICAFE2 Conference

The third annual RICAFE2 conference covered both theoretical and empirical papers on various topics relating to knowledge-based entrepreneurship. These included incentives, organisational designs and governance mechanisms to promote innovation and different financing sources such as venture capital and private equity. Some of the papers suggested relevant policy implications and showed significant effects in terms of a firm's valuation.

The conference was opened by **Armin Schwienbacher** (University of Amsterdam) who welcomed the conference participants and briefly discussed the RICAFE project. **Uwe Walz** (Centre for Financial Studies, Frankfurt) chaired the first academic session.

Veikko Thiele (Sauder School of Business, University of British Columbia) presented the first paper entitled 'Incentives and Innovation: A Multi-tasking Approach' jointly with Thomas Hellmann (Sauder School of Business, University of British Columbia). Veikko Thiele presented a model on the firms' choice between planned and unplanned activities: exploration and exploitation. This model offers an optimal contract to promote innovation by employees in the context of information asymmetries and difficult performance measurement. It finds that if innovation is highly firm-specific, firms provide lower incentives for standard tasks to encourage innovation, though in equilibrium, employees undertake too few innovations. In addition, the model also derives an optimal tolerance for failure by employees depending on innovation probabilities and an optimal level of investment in innovation depending on the level of innovation appropriability. The discussant **Ulrich Hege** (HEC Paris) made some detailed comments on the model, namely on the choices for the participation constraint, the exogenous nature of the benefits from innovation and on the bargaining power of the agents. He then suggested some extensions on the relationship between remuneration, R&D and spawning and the introduction of innovation property rights (IRP). The audience suggested the benefits of introducing more structure on the definition of 'innovation' tasks and on the managers' characteristics.

The second paper entitled 'Employee Incentives and Teamwork in Human Capital Intensive Firms' was presented by **Paolo Fulghieri** (UNC, CEPR, and ECGI). This paper, co-authored with Meri Sevilir (UNC), studies the effect of a firm's size and focuses on the employees' incentives to exert effort. In human capital intensive firms, value creation depends crucially on innovations generated by its employees, however firms extract rents from employees, reducing their incentives to innovate. The paper models the choice of firms to hire substitute versus complement employees to promote the competition between them or to benefit from synergies. As a result, they found that for high levels of human capital, the firm remains small to promote employees' incentives while it expands in size for high levels of employees' complementarity. In addition, when synergies are low the firm hires substitute employees, while when synergies are high the firm hires complementing employees. The discussion of this paper was by **Bauke Visser** (Erasmus University Rotterdam) who pointed out the need for clarification of some concepts, namely the firm-specific human capital versus general human-capital and the innovative effort performed by employees. He also suggested some clarification on the impact of complementarity of employees on their outside options value.

Eren Inci (Sabanci University) presented 'Occupational Choice and the Quality of Entrepreneurs'. This paper focussed on the choice between entrepreneurship and wage-earning by individuals with different entrepreneurial ability. Depending on the level of taxation or subsidies, the model predicts different levels of entrepreneurship quality on the economy. This model extends the contracts to a general equilibrium framework where the wage rate and the interest rate are endogenously determined. **Rasa Karapandza** (University of Belgrade) was the discussant and shared some concerns about the different risk premium for workers and entrepreneurs. He also suggested a clarification on the environment in terms of taxes and policy implications.

The first paper of the second session, 'How Do Corporate Venture Capitalists Create Value for Entrepreneurial Firms?' was presented by **Thomas Chemmanur** (Boston College). This paper is joint work with Elena Loutskina. They investigate whether corporate venture capital (CVC) creates value in a different way from independent venture capital (IVC) arguing that this difference should arise from three sources: investment choices, the extent of product market value created and the ease of accessing the equity market. They found that CVC creates

value by investing in younger and riskier firms, but did not find significant evidence that CVC creates greater product market value compared to IVC. The discussion of this paper was given by **Ludovic Phalippou** (University of Amsterdam) who pointed out some econometric issues, namely the interpretation of the model and the possible existence of mechanical effects between the size of companies and their exit. In addition he criticized the notion of value creation as being vague and difficult to link to CVC.

Krishnamurthy Subramanian (Emory University) presented the paper: 'Firm Boundaries in the New Economy: Theory and Evidence'. This paper includes both a theory model and corresponding empirical tests, and aims to answer the following questions: how do knowledge-intensive firms decide among M&A, joint ventures, alliances, and arms-length contracts; how is knowledge shared among knowledge-intensive firms; and how do arrangements differ between knowledge-intensive firms and firms in traditional industries. The empirical evidence is consistent with the model predictions, and shows that license, R&D agreement and cross-technology transfers become less likely in a strategic alliance when both firms' ability to expropriate each other increases; and that a majority joint venture becomes more likely than an alliance when one firm's ability to expropriate increases while the other firm's decreases. **Zacharias Sautner** (University of Amsterdam), who discussed the paper, showed some concerns regarding the proxy the author uses for ex-post expropriability and suggested some extensions to the paper. Namely, to better explore the data given its quality and to use alternative econometric methods.

Thomas Chemmanur (Boston College) presented a second paper: 'IPO Waves, Product Market Competition, and the Going Public Decision: Theory and Evidence' a joint work with Jie He (Boston College). This paper offers a new rationale for IPO waves and timings to go public, pointing out which industries are more likely to generate IPO waves and its impact on firm's performance. The main findings suggest that firms going public in hot rather than cold periods, or going public later than earlier on a wave have, on average, poorer post-IPO performance and a greater amount of cash at hand. The model provides theoretical foundations for these results. The discussant of this paper was **Amit Bubna** (Indian School of Business) who offered alternative explanations for the results. He pointed out that firms going public in cold markets might perform better simply because they have more cash at hand and that the cost of capital might be lower in hot IPO times.

Merih Sevilir (Kenan-Flagler Business School) presented 'Going Public To Acquire: The Acquisition Motive for IPOs', jointly with Ugur Celikyurt (Kenan-Flagler Business School) and Anil Shivdasani (Kenan-Flagler Business School). The authors empirically test three hypotheses connecting IPOs to M&A using US data on IPOs from 1994 to 2004. The first, according to the capital infusion hypothesis, is that financing events provide capital, allowing companies to grow. This would imply more cash financed M&A activity and investments in CAPEX and R&D after IPOs. Secondly, according to the acquisition currency hypothesis, IPOs create public stock that can be used to pay for M&A and therefore, stock financed M&A should be higher when bidder equity is more overvalued. Finally, the uncertainty resolution hypothesis suggests that IPO resolves uncertainty regarding bidder valuation, allowing the optimal acquisition and investment strategy post- IPO. The empirical results show evidence supporting all three hypotheses. **Uwe Walz** (Centre for Financial Studies, Frankfurt) suggested it was difficult to test if M&A activity was a motive for IPO or an opportunity after the IPO. For instance, since overvaluation is only realized after the IPO it cannot be a motive. He recommended further investigation of firm characteristics such as age and growth opportunities and a comparison with non-IPOs firms. Finally, he pointed out the relation between ownership and concentration, since big shareholders might make cash financed acquisitions more difficult.

Klaus Schaek (Bangor Business School, University of Wales) presented 'Small and Medium Enterprises, Banking Relationships and the Use of Venture Capital', joint work with Allen Berger (Moore School of business, University of South Carolina). This paper formulates and tests the hypothesis about the determinants and performance effects of venture capital (VC) using data for Small and Medium Enterprises (SME) in the UK, Italy and Germany. They found that younger and larger SMEs are more likely to use VC and that multiple bank relationships are a substitute for VC. Finally they found that VC funded firms exhibit higher growth and invest more in R&D. **Christoph Zott** (INSEAD) discussed the paper and shared major concerns with respect to VC and multiple bank relationships being really substitutes. He argued that for some firms VC and banks are the only source available, and not alternatives. Finally he recommended the authors boost the literature review and to add information on the survey.

The last paper presented on the first day of the conference was 'Connections and Information Acquisition in Capital Allocation' by **Mariassunta Giannetti** (Stockholm School of Economics) and Xiaoyun Yu (Kelley School of Business, Indiana University). The authors developed an equilibrium theory to investigate the relationship between financiers and entrepreneurs. Depending on the level of development financiers allocate capital on the basis of prior connections instead of collecting information on the potential quality of alternative entrepreneurs. In this model, entrepreneurs with different quality levels compete to attract capital and financiers decide when it is optimal to collect information about these players. The more distant the entrepreneurs are, the more costly it will be to acquire information about their quality. The model predicts both underinvestment and overinvestment in information acquisition. The results have implications for formal financial markets, namely the characteristics that are more likely to attract entrepreneurs' capital raising activities. The discussant of this paper was **Javier Suarez** (CEMFI). He commented on some assumptions he found unusual including the decreasing returns to scale as general technology and constant returns to scale as entrepreneurial technology; the scarcity of capital with respect to entrepreneurs' demand and the absence of entry decisions by entrepreneurs and the nonattendance of endogenous capital accumulation.

The first paper of the second day of the conference was presented by **Julia Hirsh** (Universidad Iberoamericana & CFS) titled: 'Why do Contracts Differ Between VC Types? Market Segmentation Versus Corporate Governance.' This paper is coauthored with Uwe Walz (CFS). The paper consists of a theoretical model and corresponding empirical tests explaining the differences between types of VC contracts: local independent, international independent, bank dependent and public. These four types of contracts correspond to the four different treatments for analysis of the average treatment effect on the treated. The empirical test is run using a dataset of VC contracts in Germany. The authors found that different VC types provide significantly different contracts to their portfolio firms, including both important selection effects and substantial differences in corporate governance approaches of different VC types. The results carry significant implications for the comparison of corporate governance and contract design across different countries. In discussing the paper **Vyacheslav Dombrovsky** (BICEPS) showed some concerns regarding the sample representatives and suggested the authors include more stylized facts on the different types of VC contracts.

Gustavo Manso (MIT) presented 'Are Incentives Detrimental to Innovation', a joint work with Florian Ederer (MIT). The paper consists of a controlled laboratory experiment where players are subject to different incentive schemes while performing an innovation task. The authors provide evidence that a combination of tolerance for failure, and reward for long term success, is effective while motivating innovation. They also found that the threat of termination can undermine incentives for innovation, while golden parachutes can alleviate these innovation-reducing problems. **Enrico Perotti (**Amsterdam Business School) discussed the paper. He focused on the definition of innovation, saying that it is not clear as to what an innovative process is and if it always necessarily creates value.

'Corporate Governance and Innovation: Theory and Evidence', by Haresh Sapra (The University of Chicago), Ajay Subramaniam (Georgia State University) and **Krishnamurthy Subramaniam** (Emory University), was presented by the last author. They developed a theory on the effects of both external and internal corporate governance mechanisms on innovation. The models predict a U-shape relationship between innovation and takeover pressure; a positive relationship between monitoring intensity and innovation and finally a negative relationship between the sensitivity of innovation to changes in takeover pressure and monitoring intensity. The empirical tests using both time series and cross-sectional difference-in-differences methods show strong evidence supporting the model. The discussion of this paper was by **Riccardo Calcagno** (VU University of Amsterdam and Tinbergen Institute) who pointed out that innovative projects might not be always the most profitable ones and that this might be a driving part of the innovation 'smile'. He also showed major concerns regarding the signal on the quality of the project saying that this is difficult to interpret.

Alexander Popov (Tilburg University) presented 'On the Real Effects of Private Equity Investment: Evidence From Firm Entry', a joint paper with Peter Roosenboom (RSM). This empirical paper analyses the relation between the volume of private equity (PE) and firm entry in European economies using merged Amadeus datasets and EVCA databases. The US-industry entry rate is used as a benchmark due to it's friction free financial markets. The authors found significant heterogeneity across countries with respect to entry, as well as private equity levels with respect

to GDP and firm stages at which private equity is used. They also found that PE investment benefits firm entry, especially at competitive, R&D intensive and capital intensive industries. Finally they found some evidence that PE is relevant while promoting the development of larger firms and employment, but only for the period 2004-2005. The paper was discussed by **Eric Nowak** (University of Lugano, Swiss Finance Institute) who pointed out that the paper has very relevant policy implications for the EU, although, he was not fully convinced with the data quality and with some of the results. The proof of causality is an issue because alternative hypotheses were not excluded and time variations remained to be explained.

The last paper of the conference, 'Venture Capital Conflicts of Interest: Evidence from Acquisitions of VC-backed Firms' was presented by **Rajarishi Nahata** (Baruch College). The paper is co-authored with Ron Masulis (Vanderbilt University) and focuses on the costs of venture capital (VC) and its implications for companies. The authors identified four potential sources for conflicts of interest in VC: illiquidity, inexperience, self dealing and CVCs strategic focus. Specifically they addressed the following questions: can VC participation in many private targets be an explanation for the higher profitability of acquisitions of privately held firms? Are VC-backed target deals different from other private firm acquisitions? Are acquirer shareholder wealth effects different for VC-backed targets? Lastly, are purchase price to book value ratios different for VC-backed targets? The data in use corresponds to completed acquisitions of privately held firms from 1991 to 2006 available at Thomson Financial's M&A and VentureXpert databases. The main results provided evidence consistent with the 'VC Liquidity Pressure' Hypothesis (lower target purchase price to book value ratios); the 'VC Self Dealing' Hypothesis (higher acquirer CARs and lower target purchase price to book value ratios) and with the 'CVC Strategic Focus' Hypothesis (higher acquirer CARs). **Marco Da Rin** (Tilburg University, ECGI, IGIER–Bocconi) discussed the paper, classifying it as an ambitious paper engaging in a difficult analysis. Regarding the sample construction and data, he showed some concerns with the existence of a non-listed acquirers bias and possible industry-specific acquisition waves that might be reflected in the VC-backed sample. He also suggested alternative econometric methods in order to deal with causality and some possible extensions focusing on self dealing problems, and by exploiting the variation in acquisition/ firm/ VC characteristics.

The afternoon session started with the Keynote speech by **Amar Bhidé** (Columbia Business School). The main topic of the keynote speech was innovation and globalisation. Amar started by sharing his optimistic view on globalisation, pointing out the usual argument that the growth of India and China offers larger markets for high tech companies in the West like Boeing Microsoft and Intel, but also that benefits will be realised in the purely domestic untraded sectors like the retail trade, insurance and health care. To support his view throughout his speech he used the results of an in-depth study of 106 VC-backed businesses and some known facts of modern economy and technostructure. He continued by pointing out some evidence for the limits of globalization for innovative firms:

- The limited number of truly multinational firms 'being everywhere', since the great majority of firms sell only in the US. The complexity of innovative products makes it difficult to sell outside the US.
- Uncertainty and costs affect decisions – firms tend to choose countries where English is spoken.
- Companies tend to choose highly developed countries in terms of technology
- Europe tends to be chosen more than Japan, because of cultural and other practical issues
- Sales and marketing support costs are an issue – development requires regular interaction with the client and therefore the sales force should be close to the development team.

In addition to this evidence he argued that offshoring is not an imminent threat: the North can benefit from Chinese and Indian innovations, since high level innovations are also mobile. At the same time, he expects growth and innovation to happen in the services economy in the US, which is un-traded, and accounts for 70% of the GDP/ employment. Finally he focused on the idea of non-destructive creation, which he believes to be an essential feature of technological progress. New products, even if manufactured off-shore, should generate domestic service employment and add value. He finished by saying that Technostructure evolved in such a way that development in China and India will certainly have a positive effect on the rest of the world.

Amar's presentation was followed by a panel discussion, chaired by **David Webb** (FMG/ LSE). The general theme of the panel discussion was 'Globalization and Entrepreneurship' with the following participants:

1 Peter Cornelius (Alpinvest)
2 Boris Veldhuijzen van Zanten (a Serial Internet Entrepreneur)
3 David Webb (FMG/LSE)
4 Tsvi Vinig (Amsterdam Business School & Director of the Science Park
Amsterdam Center of Entrepreneurship)
5 Amar Bhidé (Columbia Business School)

Boris Veldhuijzen van Zanten first introduced himself as having already sold several companies, mostly startups. He illustrated an example of the difficulty of communication between different teams that partly explains why cross-border outsourcing is still not common in the VC industry. It is easier and better to develop something new with general foundations.

According to **Peter Cornelius**, the two biggest Dutch pension funds invest heavily in the VC industry. The most important factors for VC firms are to build networks, to get ideas and invest in opportunities. Cross-broader VC investments are still relatively rare in terms of either transaction number or investment value. There still exists severe home biases when it comes to VC investment. There is nevertheless a significant heterogeneity among VCs. When choosing the investment target in foreign countries, what matters most is the entrepreneurial environment. Peter gave many examples. Many cross-border VC investments are particularly difficult due to the lack of local players, next to legal enforcement problems. He finally concluded by saying that, under current circumstances, it is difficult to predict future business models.

Tsvi Vinig developed several ideas around measurement problems pertaining to entrepreneurship and globalisation. There is no unique definition for both terms. In order to view the whole picture, it is important to 'measure' what the current situation is. Moreover, the pattern over time and across countries needs further understanding as well. He described some databases; but he expressed concerns about the data quality and comparability across databases. He mentioned the GEM index and the World Bank data that both use different methodologies. The OECD has been trying to address these problems though. The bottom line is that we don't have the data for measurement, let alone data to understand the impact that globalisation brings to entrepreneurship. Finally it limits our capability to give sound policy recommendations.

Based on these introductory speeches by the panel participants, **David Webb** then opened the discussion to the floor.

Peter Cornelius mentioned that in general, there is little foreign exposure by VC funds. Due to the fact that the US VC market is getting mature, harsh competition makes firms consider cross-border investments very recently, despite the risk. One way is to co-invest with their European counterparts. He argueed however that even then is it difficult to succeed in foreign countries. Risks are presumably even greater for countries such as China.

One concern expressed by the audience was that exporting innovation offshore might jeopardize the US edge. **Amar Bhidé** replied that this depended on what level of innovations are exported. But so far this does not seem to have happened, and the answer relies on the assumptions made. Networking is nevertheless critical. A factor facilitating access to US investors is a relocation to the US.

Another issue raised by participants was the fact that soft information is generated through innovation that cannot easily be exported and thus remains in the producing country. This limits the degree of outsourcing of innovation activities. Another limitation may come from the "learning-by-doing" procedure of several innovation activities, making the human factor a critical element.

Finally, the panel discussion concluded with an interesting debate on the differences between Europe and the US. It was argued that when it came to the comparison between the US and Europe, differences were easy to find, but difficult to explain. One idea that was raised was that the cultural factor might explain the difference on entrepreneurship. For instance, individuals seem more proud to be an entrepreneur in US, which is not always the case in Europe.

The **Conference Programme Committee** included: Stefan Arping (Univ. Amsterdam), Amar Bhidé (Columbia Univ.), Bruno Biais (Toulouse Univ.), Patrick Bolton (Columbia Univ.), Mariassunta Gianetti (Stockholm Univ.), Thomas Hellmann (Univ. British Columbia), Gustavo Manso (MIT), William Megginson (Univ. Oklahoma), Eric Nowak (Univ. Lugano), Armin Schwienbacher (Univ. Amsterdam; Cath. Univ. Louvain; Committee Chair), Alessandro Sembenelli (Univ. Torino) and Christoph Zott (Insead).

The full prorgramme is available on the RICAFE2 website http://www.lse.ac.uk/ricafe.

Policy Workshop: Brussels, 28 January, 2009

The goal of the RICAFE 2 Policy Workshop was to present a summary of the output of RICAFE 2 research to the policy makers community, and to receive some input from these and other stakeholders in the project. The RICAFE 2 research project aims to study how knowledge-based entrepreneurship (KBE) can contribute to the creation of regional comparative advantages and to explain the changes in observed patterns in regional growth.

The opening remarks of the workshop were made by **Pierre Valette** (European Commission), who welcomed the participants to the meeting. Mr Valette focused his remarks on the importance of the link between research and innovation, and the need to speed up the movement between the two in the context of economic and financial crisis. He also placed the project in the broader context of the Lisbon 2010 strategy and its impact for the different European regions.

David Webb (FMG, LSE), the co-director of RICAFE 2, then introduced the project, focusing on its research partners, universities associated with it, main objectives, focus and research approach.

The first presentation, on societal, legal and economic factors that determine the shape of KBE was by **Ulrich Hege** (HEC School of Management). Professor Hege summarised the results of 25 working papers on the determinants of KBE which were part of RICAFE work package one. The working papers in this package take both theoretical and empirical approaches to the topic. It includes a wide array of issues such as behaviour, incentives, culture and institutions and its impact on KBE as well as the role of finance and law and its constraints to this process. The empirical work includes cross country analysis from within EU, but also non-EU based evidence from countries such as the US or China. The main results in this package conclude that behavioural factors like overconfidence, talent and risk aversion are important for KBE. Besides the individual dimension it also looks at the role of social networks, social capital and institutions for the creation of an environment that promotes entrepreneurship. At the firm level, it pays attention to the role of firm characteristics such as size, financial constraints, legal forms and governance models that either facilitate or impede the process of innovation.

The discussion of the first presentation was by **Georges Noel** (European Private Equity and Venture Capital Association). Georges presented some additional evidence that size and governance models matter for KBE. He cast doubt on the result that small firms have more efficient innovation processes, pointing to cases of large firms which have very active and effective corporate venture capital departments. Regarding the role of social trust, he criticised the scope of the study being limited to Europe, since 60 per cent of capital invested comes from non-European countries. Finally he pointed out that an investigation into the link between demographics and entrepreneurship is missing from the research done so far. we expect to find that countries with a greater proportion of young people to be more predisposed to entrepreneurship.

Uwe Waltz (Goethe University and CFS) then presented on government policy, KBE and shifting patterns of regional comparative advantage. The research focus has been on patterns of KBE in Western Europe and accession countries, but also in three fast going emerging economies: Israel, Brasil and India. This approach allows an assessment of how different policies affect the local and regional development of KBE. The main findings presented concluded that local venture capital industry is important for KBE corporate governance mechanisms. Regarding this issue, it was also argued that the right incentives could enhance the productivity of public entities without privatising them, suggesting that it is the not the type of institution that matters, but rather the incentive framework in place. On the determinants of KBE regional development the findings imply that accumulation of local human capital is one of the main sources of a sound and dynamic technological base. In addition, the mix of human capital, technological and societal infra-structure is crucial for attracting high-tech firms to an agglomeration. Finally, on the impact of differential views on entry and exit costs of experimentation and innovation, it was shown that exit costs can be more detrimental for firm growth and productivity.

Klaus Mark (Kreditanstalt fuer Wiederaufbau) discussed the second session. Mr Mark focused on the process of economic policy and on the role of theoretical and empirical research into this process. He discussed Belezon and Shankermann (2008), on incentives of technology transfers offices in greater detail. He argued that further research is needed on the profitability of licences, on slipover effects and macro economic effects.

Marina Di Giacomo (Collegio Carlo Alberto) presented the third session of the workshop. This last session focused on the links between KBE, regional dynamics in economic activity and regional structural change. The main results included relevant policy implications. The first implications were concerned with the flexibility of labour markets to facilitate the reintegration of unsuccessful entrepreneurs. Similarly, exits costs should be reduced to a minimum, since frequent exits allow for a more efficient reallocation of resources. In terms of entry barriers, it is shown that loan guaranties should be used to alleviate credit constraints and that corporate taxation cuts facilitate entry in a context of good institutional frameworks. Other policy implications relate to education and intellectual property (IP) protection. Education is a relevant way to accumulate human capital and constitutes a source of dynamic regional technological advantages. Research has shown evidence that education may increase entrepreneurs' earnings. IP protection policy should be implemented as a way to foster innovation and impede imitation. Finally, Dr Di Giacomo pointed out the importance of slow moving preferences across populations such as trust and social capital that are proven to be a determinant of venture capital investment decisions, especially across boarders. Overall the policy maker should take into account that more general policies seem to be more effective that focused ones, for inducing economic dynamism and facilitating successful KBE.

Gordon Murray (University of Exeter) was in charge of discussing the last session. Professor Murray focused his talk on the broader topic of interaction between researchers and policy makers. He suggested that there is a gap between the understanding of researchers and policy makers (consumers) and research makers (producers), and considered how this relation could be improved.

There was then an open discussion on the topics presented. Uli Hege commented on the demand for more research on the impact of demographics on KBE, pointing out that if it is the case that there is a positive correlation between age and successful entrepreneurship, then this is bad news for Europe. Uwe Waltz remarked on the link between entrepreneurship and overall macro-economic benefits, providing some evidence from India. Alf Vanags criticised the lack of welfare analysis in the project's research approach and suggested more debt analysis of education as a determinant of success in KBE.

The final remarks were made by David Webb and Pierre Valette. David Webb concluded by saying that the main goals of the RICAFE 2 research project had been attained. The outcome being not only a significant set of high quality working papers but also important conclusions with relevant policy implications. Pierre Valette ended the conference by remarking on the usefulness and relevance of the research presented, and the potential for further research.

RICAFE2 Working Papers

The following working papers were included in the RICAFE2 Working Paper Series:

RICAFE Working Paper No. 076
Title: Valuing Legal Inefficiencies in Emerging Market Economies
Authors: **Milos Bozovic** (Universitat Pompeu Fabra, SECCF and Laboratory for Quantitative Finance, Institute of Physics), **Rasa Karapandza** (Universitat Pompeu Fabra, SECCF and Laboratory for Quantitative Finance, Institute of Physics) and **Branko Urosevic** (University of Belgrade, SECCF and Laboratory for Quantitative Finance, Institute of Physics)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP76-%20Bozovic.pdf

RICAFE Working Paper No. 075
Title: A Copula Approach to Cross-Market Diversification
Authors: **Milos Bozovic** (Universitat Pompeu Fabra, SECCF and Laboratory for Quantitative Finance, Institute of Physics), **Rasa Karapandza** (Universitat Pompeu Fabra, SECCF and Laboratory for Quantitative Finance, Institute of Physics) and **Branko Urosevic** (University of Belgrade, SECCF and Laboratory for Quantitative Finance, Institute of Physics)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP75-%20Bozovic.pdf

RICAFE Working Paper No. 074
Title: Innovations and Human Capital of Business Owners: Evidence from SIBiL
Authors: **Vyacheslav Dombrovsky** (Stockholm School of Economics in Riga and BICEPS)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP74-%20Dombrovsky.pdf

RICAFE Working Paper No. 073
Title: Is There Learning from Exporting? Firm-level Evidence from Latvia
Authors: **Vyacheslav Dombrovsky**(Stockholm School of Economics in Riga and BICEPS), **Boris Ginzburg**(BICEPS) and **Olga Rastrigina**(BICEPS)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP73-%20Dombrovsky.pdf

RICAFE Working Paper No. 072
Title: Market Risk Management in Emerging Markets: the Case of Western Balkans
Authors: **Branko Urosevic** (University of Belgrade, SECCF and Laboratory for Quantitative Finance, Institute of Physics), **Rasa Karapandza** (Universitat Pompeu Fabra, SECCF and Laboratory for Quantitative Finance, Institute of Physics) and **Milos Bozovic** (Universitat Pompeu Fabra, SECCF and Laboratory for Quantitative Finance, Institute of Physics)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP72-%20Urosevic.pdf

RICAFE Working Paper No. 071
Title: Financing Commitments and Investor's Incentives in Entrepreneurial Firms
Authors: **Armin Schwienbacher** (University of Amsterdam and Louvain School of Management)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP71-%20Schwienbache.pdf

RICAFE Working Paper No. 070
Title: If you are so smart, why aren't you an entrepreneur? Returns to cognitive and social ability: Entrepreneurs versus employees
Authors: **Joop Hartog** (University of Amsterdam, Tinbergen Institute and IZA) **Mirjam van Praag** (Amsterdam Center for Entrepreneurship, University of Amsterdam Tinbergen Institute, IZA and Max Planck Institute for Economics) and **Justin van der Sluis** (University of Amsterdam)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP70-%20Hartog.pdf

RICAFE Working Paper No. 069
Title: Venture Capital Funds: Performance Persistence and Flow- Performance Relation
Authors: **Ludovic Phalippou** (University of Amsterdam)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP69-%20Phalippou.pdf

RICAFE Working Paper No. 068
Title: Venture Capital and Sequential Investments
Authors: **Dirk Bergemann** (Yale University), **Ulrich Hege** (HEC School of Management) and **Liang Peng** (Leeds School of Business)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP67-Hirsch.pdf

RICAFE Working Paper No. 067
Title: Financing Choices and Corporate Governance along a Firm's Life Cycle
Authors: **Julia Hirscha** (Iberoamerican University Mexico City) and **Uwe Walz** (University Frankfurt and CFS)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP67-Hirsch.pdf

RICAFE Working Paper No. 066
Title: Geography and Contract Design in the Venture Capital Industry
Authors: **Julia Hirscha** (Iberoamerican University Mexico City) and **Azin Sharifzadehb** (Goethe University Frankfurt)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP66-Hirsch.pdf

RICAFE Working Paper No. 065
Title: R&D Competition and Strategic Trade Restrictions in the Market for Technology
Authors: **Patrick Herbst** (Goethe University Frankfurt) and **Eric Jahn** (Goethe University Frankfurt)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP65-Herbst.pdf

RICAFE Working Paper No. 064
Title: Silence is not Golden: Corporate Governance Standards, Transparency, and Performance
Authors: **Sridhar Arcot** (ESSEC Business School) and **Valentina G. Bruno** (Kogod School of Business)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP64-Arcot.pdf

RICAFE Working Paper No. 063
Title: Liquidity Constraints and Occupational Choice
Authors: **Mariassunta Giannetti** (Stockholm School of Economics, CEPR and ECGI)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP63-Giannetti.pdf

RICAFE Working Paper No. 062
Title: Entrepreneurship and Credit Constraints Evidence from a French Loan Guarantee Program
Authors: **C. Lelarge** (CREST-OECD) **D. Sraer** (University of California, Berkeley) **D. Thesmar** (HEC Paris and CEPR)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP62-Lelarge.pdf

RICAFE Working Paper No. 061
Title: The Intra-Metropolitan Competition for Attracting High-Tech Firms
Authors: **Amnon Frenkel** (Samuel Neman Institute, Technion - Israel Institute of Technology)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP61-Frenkel.pdf

RICAFE Working Paper No. 060
Title: IT and regional development: lessons from the growth of the software industry in India, Ireland, Israel, Brazil and China
Authors: **Ashish Arora** (Heinz School of Public Policy and Management, Carnegie Mellon University) and **Alfonso Gambardella** (Bocconi University)
Web address: http://www.lse.ac.uk/collections/RICAFE/pdf/RICAFE2-WP60-Arora.pdf

Presentations of RICAFE2 research

The members of our nodes presented their research under RICAFE2 at the following meetings:

Title: Leverage, Value and Firm Scope
Date: February 2009
Author: Giovanna Nicodano
Where: Bank of Italy (Turin)

Title: Outsourcing and Technological Innovations: A Firm Level Analysis
Date: February 2009
Author: Saul Lach
Where: Centro Studi Luca d'Agliano (Torino)

Title: Firm entry dynamics and the taxation of corporate profits: Evidence from Europe
Date: January 2009
Author: Marina Di Giacomo
Where: 3rd ICEEE conference (Ancona)

Title: Does debtor protection really protect debtors? Evidence from the small business credit market
Date: January 2009
Author: Maria Fabiana Penas
Where: American Finance Association (San Francisco)

Title: Venture Capital Exit Rights
Date: December 2008
Author: Carsten Bienz and Uwe Walz
Where: 9th Symposium on Finance (Karlsruhe)

Title: Venture Capital Exit Rights
Date: December 2008
Author: Carsten Bienz and Uwe Walz
Where: Cass Business School (London)

Title: Methods, techniques and theories in entrepreneurship and innovation
Date: December 2008
Author: Olga Rastrigina
Where: EIASM's Doctoral Education Network (Brussels)

Title: Family Interactions in the Making of Entrepreneurs in Latvia
Date: November 2008
Author: Olga Rastrigina
Where: Research In Entrepreneurship and Small Business Conference (Covilha)

Title: Does debtor protection really protect debtors? Evidence from the small business credit market
Date: October 2008
Author: Maria Fabiana Penas
Where: Financial Management Association (Dallas)

Title: Venture Capital Exit Rights
Date: October 2008
Author: Carsten Bienz and Uwe Walz
Where: 1St Essec Private Equity Conference (Paris)

Title: Is entrepreneurship only the entrepreneurs business?
Date: October 2008
Author: Harry Yuklea
Where: ORT University (Montevideo)

Title: Does debtor protection really protect debtors? Evidence from the small business credit market
Date: August 2008
Author: Maria Fabiana Penas
Where: Universidad de San Andrés (Buenos Aires)

Title: Does debtor protection really protect debtors? Evidence from the small business credit market
Date: August 2008
Author: Maria Fabiana Penas
Where: Entrepreneurial Finance Conference, Kauffman Foundation-Federal Reserve Bank of Cleveland

Title: The Dynamics of Venture Capital Contracts
Date: August 2008
Author: Carsten Bien, and Julia Hirsch
Where: European Finance Association (Athens)

Title: Does debtor protection really protect debtors? Evidence from the small business credit market
Date: July 2008
Author: Maria Fabiana Penas
Where: Universidad Torcuato Di Tella (Buenos Aires)

Title: Leverage, Value and Firm Scope
Date: July 2008
Author: Giovanna Nicodano
Where: European Summer Symposium in Financial Markets (Gerzensee)

Title: The Dynamics of Venture Capital Contracts
Date: July 2008
Author: Carsten Bien, and Julia Hirsch
Where: ESFFM (Gerzensee)

Title: The Role of Trust in Investment: Evidence from Venture Capital
Date: June 2008
Author: Marco Da Rin, Laura Bottazzi and Thomas Hellmann
Where: Financial Intermediation Research Society Third Conference (Anchorage)

Title: Firm Entry Dynamics and the Taxation of Corporate Profits: Evidence from Europe
Date: June 2008
Author: Marco Da Rin
Where: Fourth C6 Symposium on Economics and Institutions (Anacapri)

Title: Venture Capital Exit Rights
Date: June 2008
Author: Carsten Bienz and Uwe Walz
Where: The Economics of Privately Held Firms, BI (Oslo)

Title: Leverage, Value and Firm Scope
Date: May 2008
Author: Giovanna Nicodano
Where: National Bank of Austria (Vienna)

Title: Survey of Innovative Businesses in Latvia
Date: May 2008
Author: Vyacheslav Dombrovsky
Where: BICEPS workshop (Yalta)

Title: Survey of Innovative Businesses in Latvia
Date: May 2008
Author: Vyacheslav Dombrovsky
Where: Central European University (Budapest)

Title: Firm entry dynamics and the taxation of corporate profits: Evidence from Europe
Date: May 2008
Author: Marina Di Giacomo
Where: 6th IIO conference (Washington D.C)

Title: Venture Capital Exit Rights
Date: May 2008

Author: Carsten Bienz and Uwe Walz
Where: Conference on the Law and Economics of Entrepreneurship, Northwestern School of Law (Chicago)

Title: How to spell “financing innovations” in Hebrew (and why replicating the Israeli experience won’t always work…)
Date: April 2008
Author: Harry Yuklea
Where: UNECE (Geneva)

Title: Does debtor protection really protect debtors? Evidence from the small business credit market
Date: April 2008
Author: Maria Fabiana Penas
Where: Universidad Carlos III (Madrid)

Title: Firm entry dynamics and the taxation of corporate profits: Evidence from Europe
Date: March 2008
Author: Alessandro Sembenelli
Where: Tilburg Centre for Law and Economics (Tilburg)