



OECD Expert Workshop on Patent Practice and Innovation



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Growing market competition and rapid technological progress require innovators to make the most out of their intellectual assets. Protecting and exploiting inventions through Intellectual Property Rights (IPRs) has thus become crucial, as mirrored by the strategic use that economic agents make of IPR in general and patents in particular, and by the growing number and importance of IPR markets. Patents play a key role in cementing market leadership, generating revenues through sales and licensing, facilitating external financing and shaping horizontal and vertical collaborations.

The aim of this workshop is to assess the links between the innovative activities, patenting behaviours, and economic performance of firms, and to investigate the mechanisms by which patenting relates to companies' ability to innovate, compete and collaborate. The increasing use of patents for transaction and collaboration purposes is an important part of the OECD project on Knowledge Networks and Markets (KNM), which examines different mechanisms used by individuals and organisations to access and disseminate knowledge as part of their innovation activities. The generation and use of IPR by firms, and the way intellectual assets shape the competitiveness and performance of firms - including the measurement of patent quality and radicalness - is furthermore part of the work carried out by the Working Party on Industry Analysis.

The workshop seeks to review and discuss new evidence on:

- The determinants of patenting behaviours across firms, sectors and countries;
- The role of patents in entrepreneurship, and in particular the financing of young innovative enterprises;
- Firms' ability to monetise their IPR through market operations, including recent initiatives to foster the efficiency of IP markets;
- The strategic uses of patents, and the way patents shape firms' competitiveness and market structure.

The **first day** of this two-day workshop will be devoted to examining the role of patents as indicators of research productivity and innovation quality (Session 1) and to the financing of innovative enterprises (Session 2).

Patent counts have been used to assess innovative output and the returns to R&D at the level of the firm or the sector ever since the pioneering work of Zvi Griliches (Griliches 1979, 1981, 1984). To assess the quality of patents, information found in patent documents and external sources has also been used. Among the variables found to be correlated with patent quality and value there are: patent renewals (Pakes, 1986; Schankerman and Pakes, 1986); backward and forward citations (Trajtenberg, 1990; Hall et al. 2005); patent transfers (Serrano 2005); number of claims (Tong and Davidson, 1994; Lanjouw and Schankerman, 2004); patent family size (Putnam, 1996); and technology classes-based measures of

patent generality and scope (Hall and Trajtenberg, 2004; Lerner, 1994). *Session 1* will discuss new patent-related indicators and present survey-based evidence.

Patents may also help signalling the quality and prospect value of technologies and innovation developed by start-up ventures. These companies, which are typically liquidity constrained, may apply for patents to attract investment from external financiers. Recent studies have found start-ups' patenting to be correlated with a higher probability of securing venture-financing (Hauessler and Harhoff, 2009) and with higher valuations by venture-capitalists (Hsu and Ziedonis, 2007). *Session 2* will aim to shed light on these issues, drawing on research and professional experience.

The **second day** of the workshop will deal with the market for ideas (*Session 3*) and focus on the exploitation of intellectual assets, their strategic use (*Session 4*), and the effect that such behaviours may have on competition (*Session 5*).

Patents enable the separate transfer of knowledge and technologies from one entity to another (Arora et al. 2001). Although exact estimates of the volume of patents sales and licensing are hindered by the confidentiality of most agreements, studies suggest an upward trend (OECD, 2011a, 2011b, 2011c; World Bank, 2011). *Session 3* on patent transactions will address the current state of IP markets, and discuss recent initiatives to develop them further and their role in facilitating the diffusion and adoption of new technologies.

Technology diffusion and adoption can be also promoted by licensing groups of patents related to a certain standard or to complementary technologies. Examples are patent commons, which combine open innovation and patenting strategies to promote collaboration between patent owners and potential users and foster innovations in areas deemed important for social welfare (Hall and Helmers, 2011). Royalty-generating patent pools grouping complementary patents can also be welfare enhancing if the overall fees paid by a licensee to a group of licensors is lower than the sum of the amounts to be paid to each licensor upon individual negotiations. However, in the case of certain patent pools, particularly standard-setting ones, hold-up and royalty stacking can trigger problems unless properly regulated (Lemley and Shapiro, 2007; Regibeau and Rockett, 2011). In other cases, the owners of standard-essential patents may have incentives to act strategically when filing or amending their patent applications (Berger et al. 2012). *Session 4* on patents pools and commons will discuss various aspects of these IPR aggregating mechanisms and their regulation.

Finally, *Session 5* will address issues related to patents and market competition, and the various levels at which such intersection occurs. The concentration of patents in the hands of few market agents, as a result of patent-pooling or of mergers and acquisitions may result in market power and unequal bargaining positions when it comes to negotiating licensing agreements (Regibeau and Rockett, 2011). Furthermore, the business models used by non-practicing entities (NPEs or "patent trolls") may also affect market structure: despite facilitating technology markets and increasing rents for small inventors, they might stifle market entry by new innovators (Bessen and Meurer, 2011; Risch, 2012). This session will hence discuss the broad implications of potentially anti-competitive behaviours on incentives to innovate and on market structure.

Agenda

Thursday, May 10th		
12:30-13:45	<i>Networking Lunch</i>	
13:45-14:00	Opening remarks, Alessandra Colecchia, OECD	
14:00-15:30	Session 1: Patent Value	Chair: Stuart Graham, USPTO
	Karine Crepin, Sanofi-Aventis	"Valuing patents and IP portfolios: a business perspective"
	Alfonso Gambardella, Bocconi University	"The value of patent portfolios: number vs average quality"
	Mariagrazia Squicciarini, OECD	"Measuring patent 'quality' and radicalness: new indicators for cross-country evidence"
	<i>Discussant: Nikolaus Thumm, EPO</i>	
15:30-15:45	<i>Coffee Break</i>	
15:45-17:30	Session 2: Patents and Entrepreneurship	Chair: Dirk Pilat, OECD
	Bronwyn Hall, UC Berkeley and UNU-MERIT	"Patents and the financing of innovation"
	Stuart Graham, USPTO	"Patenting, entrepreneurship, and the USPTO response"
	Marc Lambrechts, Capricorn Venture Partners	"Patents and finance: affording patents, attracting investors – a VC perspective"
	<i>Discussant: Chiara Criscuolo, OECD</i>	
17:30-18:00	Summary of the first day	
19:00	<i>Dinner</i>	
Friday, May 11th		
9:00-10:50	Session 3: Patents and Markets	Chair: Fernando Galindo-Rueda, OECD
	Mark Schankerman, LSE	"Strategic Patenting and Software Innovation"
	Martin Bader, University of St. Gallen	"Creating a financial market for IPR"
	Thomas Astebro, HEC	"Business partners, financing, and the commercialisation of inventions"
	<i>Discussant: Laurence Joly, INPI</i>	
10:50-11:15	<i>Coffee Break</i>	
11:15-13:00	Session 4: Patent Aggregation	Chair: Mariagrazia Squicciarini, OECD
	Nikolaus Thumm, EPO	"Patents and standards"
	Michael Risch, Villanova Law School	"The securitisation of patent portfolios"
	Pascal Asselot, France Brevets	"Building critical mass and mutualising resources to better promote patent rights"
	<i>Discussant: Benjamin Mitra Kahn, UKIPO</i>	
13:00-14:15	<i>Lunch</i>	
14:15-16:00	Session 5: Patents and Competition	Chair: Dominique Guellec, OECD
	Pierre Régibeau, Imperial College and CRA	"IP and competition"
	Reinhilde Veugelers, KU Leuven	"Innovation in EU merger control : walking the talk"
	<i>Discussant: Jeremy West, OECD</i>	
16:00-16:30	Concluding Remarks	
	Patrick McCutcheon, European Commission	
	Alessandra Colecchia, OECD	

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