

# How Can Patent Markets Enable Growth?

*Economic background for a discussion on current and emerging issues enabling an open market in patents*

E. Ullberg, PhD<sup>1</sup>

## What are the issues?

Myopia is a classic problem in marketing where current products are developed in a too narrow scope with respect to customer needs. Economic myopia is then when policies are too narrowly defined given the real economy's development and dynamics. This may have been the case for the role the patent system plays in the economy since long and for patent markets today. This workshop is an attempt to get out of a too myopic view of the patent, focusing on the *issues* facilitating a more open market in patents, what in turn would enable growth.

I will attempt to frame the economic question "how can patent markets enable growth?" hopefully useful to discuss the issues that will lead to a more open market in patents, and subsequent prioritization on what areas merit further investigation. Let's start with the big picture where patents are used today in the economic system and then narrow down to the topics of the workshop, focusing on mechanisms and transactions.

The international trade flows have changed direction in the last few years, where the South is now the net buyer of the products and services from the North<sup>2</sup>. This has happened thanks to opening of markets, trade negotiations, better economic policies, etc. However, when it comes to exchange in technology using patents, the markets are not as developed. An intense focus on enforcement has dominated the discussions, in a one-sided protection agenda more than trade, creating a litigation market with courts clearing prices. Assertion is of course the basis for a market – that you have an asset to trade – but mechanisms for negotiation are clearly lacking. This appears to be similar also at national levels between firms, especially large versus SME/individual or rent seeking firms abusing the patent system, hindering efficient trade in ideas between firms by raising costs for defendants (and litigants). Exchange has also grown rapidly over the past decades (especially since 1982 rule change in US, starting the "pro-patent" era), and now in telecom and other new and mature

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<sup>1</sup> Eskil Ullberg is a Senior Research Scholar at The Ratio Institute and Adjunct Professor at George Mason University. He is also the author of the book *Trade in Ideas: Performance and Behavioral Properties of Markets in Patents*, New York: Springer, (2012).

<sup>2</sup> Ref. to discussion with Michael Spence in 2010/2011. In GDP terms emerging markets and the developing world are slightly more than 50% of world GDP. GDP growth rate Q3 2015 of emerging markets 4.2% (with China at 6.2%) and developing world 1.6%, indicating that this trend will continue for years if not decades or a century given a population of 6b today compared to 1b of the North. Source: JP Morgan.

industries with high interoperability, licensing, cross-licensing, standards and securitization, and other mechanisms, have developed and been used. However, from a policy perspective, the discussion appears to have remained with enforcement (TRIPs, Doha, etc), with the exception of anti-trust problems in relation to particular industries. We need to have efficient enforcement that is accessible to all inventors, in order to make this asset accessible to all firms investing in technology (or more generally inventions), but we also need to better understand the more dynamic economic side of the coin: the market in patents and the *mechanisms* of negotiation available as well and their economic efficiency outcomes. The performance and behavioral properties of these “institutions” (or simply mechanisms) need a deeper understanding in order to inform policy on markets in patents. A discussion of *issues* would inevitably cover both the asset side (granting and enforcement of patents) and the market side. To remedy this apparent deficiency in the discussion of issues this workshop is focusing on what is important for transactions, in particular the *mechanisms for exchange* in patented technology. This is thus not only beneficial for today’s larger firms - already engaged in this market -, but facilitating a more inclusive environment for SME/individuals may add considerably to the gains in the transatlantic context we discuss here, and in a second step new markets, especially the mentioned North-South exchange and emerging markets.

How important could such a more performing market in patents be for growth? Experimental economic research on markets in patents indicate that a more impersonal market in patents with demand side bidding, intermediaries, and contracts that both transfer and share risk, may double the use of patented technology in the economy compared to today’s processes<sup>3</sup>. The market structure is here built around a contract market on patents (or patent portfolios) trading re-tradable contracts. The efficiency comes from a more efficient selection process using prices – the technology is sold to the firm that can deliver the highest value and high value technology is searched out – but also from the contract, which puts a price on “sit on “ (blocking) the technology, and intermediary traders (patent lawyers, patent pools, etc) who can sell the same technology to different markets, changing the incentives, making specialization more profitable. A focus on facilitating such an open market may therefore list ideas irrespective of firm size and creating a property rights based industrial policy (not focusing on a particular industry). As a matter of fact, this element is central in the Swiss’ economic policy, who claim they don’t have an industrial policy.

The workshop may therefore bring forth valuable input on *issues* - and their priorities - from practitioners, patent offices and EU and US policy makers, on how to facilitate such an open market in patents, aiming at creating a broad strategic transatlantic initiative.

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<sup>3</sup> See *Trade in Ideas (2012)* : Chapter 3 (performance and behavioral properties of patent market institutions), 4 (coordination between specialized firms through markets with prices as signaling of technology investments) and 6 (policy conclusions and proposals).

Focusing on these *mechanisms* of exchange extant today would then be very helpful in understanding what we need to learn more about to facilitate an open market in patents. Then prioritizing them, in this broader scope of the global economy, would be even more helpful in informing where the deficiencies may be the most prohibitive for growth in productivity enhancing technology and economic growth. Next: an outline economic rationale of patent markets.

### **Why this workshop?**

This workshop invites to an open discussion on the issues inhibiting efficient transactions in patents, stimulating an increase in transactions. Such transactions enable specialization and collaboration between firms, facilitating an open market in patents carrying a promise of added economic growth.

There has been much policy focus on enforcement - which needs to continue and be better especially for SME/individuals - and rather less attention on facilitating transactions. The dynamics of technology development using patents and disclosed technology have been part of the industrial (and pre-industrial) dynamics from its start in Venice in (1474), but perhaps in particular since the international Paris convention of (1883) and more recently with TRIPS adding to this in (1994). The industrial structure has become less vertically integrated, resulting in new business models, and have also become much more collaborative over the past century, in which patents play an increasing center piece as tradable assets through licensing, cross-licensing, patent pools, standards setting, and other mechanisms. In economic terms such trade between firms, specialized in different technologies, must yield gains from trade to be sustained over time, carrying promises for increased wealth.

#### *A change in trade flows*

The trade flows have already shifted from North to South making the South the net buyers of the North's products and services, mainly due to globalization of markets and investments<sup>4</sup>. Although the workshop is not about North-South relations, it is the economic reality of firms in a transatlantic context. In this new global economic environment an increased understanding of the *mechanisms* for transactions then becomes necessary to capture the dynamic gains from trade in ideas. It is this second focus of dynamics of exchange between specialized firms that we see increasingly today that merits a workshop to list and prioritize issues on how to facilitate an open markets in patents. The workshop will thus be a possibly unique opportunity to systematically identify and prioritize these issues and mechanism in a EU-US transatlantic context with respect to economic growth for further policy discussions.

### **Economic policy and the patent system**

Today's use of the system in diverse old and new industries is clearly in a much more interconnected world of ideas than last time, now with Internet, even more global markets, and higher trade volumes. One could ask whether a system

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<sup>4</sup> Ibid foot note 2.

originating in 1474 and modernized in the 1800:ds is fit for purpose or needs to adapt to a global “knowledge economy” or not? Perhaps the system needs “repair” rather than “reform”, given its very stable principles, which are practically the same today as in 1474? Fostering more transactions and the market mechanisms, by which they are valued, negotiated, priced and enforced, the economic policy ought therefore to include a patent trade policy.

### **Emphasis on market transactions and specialization to understanding mechanisms of exchange**

Market transactions based on patents thus allow specialization to develop between firms, developing different, complementary or competing, technology. This is particularly important for growth firms, who often start with a very limited patented technology (if any patents at all) and then, for their further funding and product/service expansion, need more patented technology to compete and get market access (nationally and internationally). Facilitating this exchange between specialized firms thus appears to be critical in a knowledge economy. However, it is not widely known what mechanisms are most performing and have desirable behavioral properties to facilitate a more accessible market in patents.

#### *A dynamic process*

Economic development is not simply a question of more knowledge about patents, IPR, etc. as that does not result in a change of market rules and incentives. Only a more open economy can do that (North, 2006) in particular by becoming more accessible for SME/individual firms. Return on intellectual property assets are harder to characterize but may be around 11%, 1-2 times that of physical assets (7%) and 3-4 times financial assets (3.5%)<sup>5</sup>. Such a more inclusive market (less dependent on size of firms) enables specialized producers of technology, working with entrepreneurs and innovators of products/services making use of the new competitive technology, refuting the claim by Robinson in “What are the Questions?” (1977), that only large firms, having concentrated the capital in the economy, are the only ones making decisions on what technology to further invest in or not. A patent market is essential for such a shift - in which technology to invest in and understanding the mechanisms in use - a top priority for input to policy. From an economic perspective this means a potentially more efficient selection process of all patented technologies developed – anywhere.

Such a dynamic discussion means that the standard economic static approaches of Arrow (1962) and also Schumpeter (1942, 1934) only offer limited understanding of markets in patent and possibly may lead to the wrong policy conclusions. Examples would mean for example weakening such markets in favor of producer-inventor firms only; limiting gains from trade in the patent assets themselves. The *selection process* of which technology to further invest in is a dynamic process, changing the *structure* of the economic system. This change has accelerated over the past 100 years and understanding what issues are important today that may further its development, is the purpose of the workshop.

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<sup>5</sup> Ref. to work by B. Lev, NYU, Stern Business School.

## **State-of-play**

The state of play in patent markets can be characterized as a number of initiatives in selected areas, mainly focusing on enforcement, limiting the approach to establishing the patent as an “asset”. The few trade related initiatives are mainly on use of patents in standards setting, trade of products and services in an international setting of market access to countries, to expand such markets and similar “niche” initiatives. The following list of issues should be seen as a “starter” for a discussion towards an open market, more than a complete list, but do illustrate areas of issues. The overarching theme will then be the mechanisms for transactions – transfer, licensing, etc. The issues are listed under three headings, which are also the main themes of the workshop agenda questions. See enclosure 1 for a selected list of some key initiatives that shape the state of play today. Major international conference themes, EU and US policy documents on Single Market, SME etc., private intermediary initiatives, give a global outlook.

The face value the state of play appears to be very much focused on enforcement as already mentioned, a move towards Europe in litigation, focus on quality, patentability issues (in particular of software), i.e. patent system “performance” topics. On the patent system and economic issue, there are anti-trust issue debates for about a decade on patent-holdup issues, and attempts to deal with that, mostly by weakening the patent as a property right, by weakening injunctions. This policy may not be in the interest of a market in patents, demanding solid, quality patent rights (a tradable asset). Search costs in relation to patent hold-ups appears instead to be the problem attempted to be solved, possibly weakening the underlying patent right as an asset. A discussion on patent markets will take place as part of the IPBC 2016 program and NPE conferences in 2016 call for “responsible licensing”, all indicating that there is a discussion on trade in this field.

## **The results**

The results from the workshop will be considered as topics for possible further studies and depending on the outcome, policy proposals.

*Problem (mechanisms for trans.) → Issues (workshop) → Funding priority work*

## **Discussing the state of play**

Ultimately a market with public prices would thus enable a larger inclusion of SME/individual inventors, intrapreneurs in large firms and, in a second step, inclusion of new markets, especially North-South or emerging market (such as Singapore, Vietnam, India, etc.), forming the basis of an increased growth through specialization.

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*Eskil Ullberg*

## References:

(A very short list of references)

Arrow, J.K., 1962. Economic Welfare and the Allocation of Resources for Invention. Rand Corp.

Geneva, 1994. WTO/TRIPS Agreement.

North, D.C., 2006. Understanding the process of economic change. Academic Foundation.

Paris, 1883. The Paris Convention for the protection of industrial property. Int. Treaty.

Robinson, J., 1977. What Are the Questions? J. Econ. Lit. 15, 1318–1339.

Schumpeter, J.A., 1942. Capitalism, Socialism and Democracy.

Schumpeter, J.A., 1934. The Fundamental Phenomenon of Economic Development. Schumpeter Theory Econ. Dev. 57–94.

Ullberg, E., 2012. Trade in ideas: Performance and Behavioral properties of markets in patents. Springer Inc., New York.

Venice, 1474. Venice Patent Law of 1474.

## Enclosure 1: State of play examples

Identifying all mechanisms for transactions, shifting incentives towards a more inclusive (open) system towards SME/individuals as well as large firms. What rules changes are ongoing, anticipated that might change incentives to a more collaborative behavior of firms? The input is structured under economic incentives, institutional issues and corporate legislation and other legal issues.

### Economic incentives

*What are the differences between countries in EU Single Market and between EU and USA in a transatlantic approach to transactions?*

Many firms and nations discuss: South Korea, China, Vietnam, Singapore, etc. For example already in 2014 “Chinese companies are net buyers whereas Japanese companies are net sellers of IP assets... Koreans still buying”<sup>6</sup>. This indicates the discussed change in flows from “North” to “South” *What are the countries of current interest and transactions in “near term”?*

### Institutional issues

“Big-ticket” litigation trends in EU and US (related to Unified Patent Court) and impact on transactions between EU-US and with SME/individuals and their *behavior*, revealing the mechanisms behind. *What are the key issue in the litigation market?”*

*Access to patent courts* by SME/individuals may be an issue to discuss as court costs matter in pricing of technology in patent markets.

*Institutional learning*: What can we learn from current competition between the economies and respective patent and corporate systems? Is there such a process in place<sup>7</sup>?

Development of “*Best practices*” in *patent licensing* is done, such as the Licensing Executive Society’s (LES) initiative. Such an initiative appears clearly to be a move towards more standardized procedures and possibly contacts.

*Initiatives* for “markets” have been tried in many colors for 10+ years (Oceantomo, IPIX, and many more), essentially “online portals” listing patents for sale and interest to buy, typically without negotiation and clearing, the latest IAM Market (launched Oct 20, 2015). These and other important initiatives may be seen as pre-stages for an open market with prices where meeting places for buyers and sellers are created to reduce search costs. They also appear to aim at creating transparency in the market of “deal making”: transfers, license, cross-license and pure tech transfer agreements (which cannot be that transparent) focusing on meeting environment, but typically not taking part in the actual deal.

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<sup>6</sup> IAM Magazine. IP Business Congress Asia 2014 <http://www.iam-media.com/Blog/Detail.aspx?g=602fab72-faca-4e4f-910f-2c0b0d5eafa5>

<sup>7</sup> Ref. to a discussion with Mr. Gurry in 2013 at GWU on harmonization versus competition, where he proposed a dynamic diplomacy rather than harmonization as the way forward.

*Transactions* in terms of transfers are down 78% from around 10,000 in 2013 to 2,000 in 2015 (Source: Flagship IP, P.C.). This may well be triggered by increased uncertainty regarding software and business method patents in the US after the *Alice* decision of the Supreme Court in 2014. This may indicate that most transactions took place in this area.

*The global IP leader event*, IPBC Global 2016 this year in Barcelona, themes are quite revealing: a lot of enforcement, quality, “patents as an asset class” but also some discussion on patent “peace not war”, new business models on collaboration and a shift towards Europe due to new regime and changes in patentability in the US, and finally a discussion on challenges for sellers and “the state of the market”. This indicates that most of the issues in the workshop are top priority in the future of patenting and markets in patents combining practitioners and policy makers framed by an economic perspective. A clear need to discuss and develop policy for open markets exist.

*Injunctive relief*, the centerpiece of defense for a patent holder has significantly been weakened in the US since a few years possibly moving litigations to EU. This move, clearly weakening the property rights, cannot be seen as conducive for collaboration between technology developers using the patent system. The underlying problem appears to be connected to search costs in patent hold-up cases, which increases transactions costs, but weakening injunctive relief makes the patent less of a tradable asset. The incentives created by weakening injunctions may therefore not be compatible with a more performing market in patents.

#### *Corporate legislation and other legal aspects*

*Anti-trust discussion* in EU-US regarding patent licensing practices, patent hold-ups in current policy have been intense the past decade(s). An event will be held days preceding the workshop in Liege with the emphasis of “regulating patent hold-ups” covering FRAND licensing of standard essential patents (SEPs), injunctive relief.

*Corporate regulation* with respect to patents, such as patent boxes, patent pools.

*Intangible assets discussions* with respect to SME/Individuals and large firms and implications on corporate law is done in most of the world trying to create a policy discussion on intangible assets, intellectual property rights, finance and growth.

*Special incentives such as the “inventive firm” approach* to manage systemic risk and uncertainty. Ref. to my own research (2012, Proposition 2, p153), proposes a new type of corporation where only technology is developed, patented and sold or licensed to intermediaries or innovators of products and services. The profits from such trades are exempt from tax but instead a high capitalization is required. This may increase the incentives for inventors to be more rational in investment decisions, shifting incentives in the economic system towards more invention. This initiative needs a patent market. Patent boxes, and other “solutions” may in fact mimic this business model but not explicitly supporting it.



## Questions

These questions are thus intended as a “starter” for the discussion and hopefully inspire thoughts on central issues to be further investigated.

### Economic incentives and patent market

What do we know and not know about economic incentives to patent and license in and out patents? These could include i.a.:

- RD&I tax incentives
- Patent boxes
- Role of intermediaries (in particular services for SMEs)
- Patent protection scope and duration
- [Limits on] Power to enforce patents

To what extent do these enable SME/individuals to engage in such transactions?

To what extent is relative lack of transparency (on e.g. uncertainties on ownership, patent valuation, validity, essentiality (in case of SEPs) and license terms or asymmetry of this information a problem?

### Institutional issues

What do we know about the effectiveness of *mechanisms* to facilitate [or hinder] patent transfer and licensing transactions? These could include i.a.:

- Trading platforms or patent pools
- Other forms of Intermediaries or Brokers

What is your view of the utility of these intermediaries, how are they functioning and not functioning?

To what extent do patent pools facilitate trade in patents?

To what extent do these enable SME/individuals to engage in such transactions?

### Regulatory/ legal issues

To what extent is it necessary to [avoid] regulating the conduct of *intermediaries*?

What is the impact of “*Big-ticket*” *litigation* trends on the market patent transactions?

To what extent are *SSO activities* including IPR policies facilitating patent licensing?

To what extent do the *different patent systems* facilitate technology transfer deals differently?