

This outline illustrates the “levels” reflected the workshop sessions in terms of exemplary policy contexts and research questions. It is not intended to be complete or to mandate topics for the sessions – which will be driven by the provocations and the ensuing discussion in each panel.

knowledge

[Policy context:]

When and to what extent should innovators be expected to conduct searches for patents and prior art for the purpose of application or avoiding infringement? What should be the threshold for willful infringement?

Should independent invention be a (partial) defense to infringement? A factor in determining obviousness?

How can the disclosure function of the patent system be improved?

Should the inventive step standard be raised to improve patent quality and reduce the demands for patent awareness faced by knowledge workers?

[Possible research questions:]

What effects have the high incidence and cost of litigation had on R&D? Can causal mechanisms be identified?

What have been the consequences for research of policies for the commercialization of university science and other publicly funded research? (E.g., Bayh-Dole and state-supported agencies) Has disclosure suffered as a consequence of universities' commercial orientation?

How does learning from patents vary across disciplines and according to the task or problem at hand? How does this vary according to context (e.g., science-based exploration vs. engineering solutions to problems; university vs. startup vs. large firm)?

How does knowledge gained from patents compare with knowledge derived from other sources? How much do different forms of knowledge complement each other?

How do scientists/engineers/managers become aware of patents relevant to their work? Once made aware, do they read the patents? What value do they realize from reading patents?

When do scientists/engineers/research managers proactively search for or browse patents? Are there expectations of learning, licensing, designing around, risk assessment, or simply avoidance? How are motivation and expectations affected by perceptions of quality?

When does knowledge of patents trigger referral to lawyers? How does this change if in-house counsel is available? How are next steps determined: e.g., assuming risk, evaluating validity, designing around, investigating a license...?

patents

[Policy context:]

Should the standards for patent issue be changed (as the Supreme Court has begun to do lately) with respect to (a) size of the inventive step (b) obviousness; (c) how the invention was made; or other factors?

Should patent standards reflect the availability of other means of appropriating returns from innovation in different fields? From practices for generating and implementing new knowledge?

Are there classes of technology for which patents should normally be denied, e.g., business methods, software, genome sequences, basic scientific discoveries? If so, why in each instance? If not, why not?

[Possible research questions:]

In what situations do patents provide an essential incentive for investment in R&D? To what extent do non-patent first-mover advantages (or other means such as complexity, secrecy, copyright) function as an alternative incentive in motivating investment in innovation? How do they affect patent propensity? How might alternatives affect the strength and duration of patents?

What drives the propensity to patent in different technology and market environments? To what extent do motivations to patent elicit new resources and participants vs. merely reinforcing existing market positions and industry structure?

When and how do patent issues arise in collaboration with outside researchers? Are patent-related decisions made without consulting lawyers?

What are the needs for investment in different fields of technology and different market environments? (Can investments be rationally apportioned to reflect the relative contribution of the particular technology to whole products?) How

is investment related to motivation and patent propensity?

How are patents in different fields perceived in terms of technical quality, legal quality (validity), and economic value? How does this perception vary among scientists, engineers/programmers, R&D managers, and lawyers? What is the variance in perception among peers and within groups? Do different classes of professionals consider themselves (and patent offices) good judges of patentability? How have these perceptions changed over time or with experience?

How do perceptions of quality and value translate into respect for patents as legal rights? To what extent are individual patents well-known or viewed as landmarks in the field (“beacons of light”)?

What incentives are needed for effective third-party review and comment on published applications in different fields? What are innovators’ views on the desirability of more expansive peer review from third parties and higher standards of inventiveness?

What is the effect of PTO’s fee structure (maintenance fees subsidizing application processing and examination)? What motivates decisions to search – or not – prior to applying for a patent?

legal and business practice

[Policy context:]

Should firms be treated differently based on age or size (as is the case for application fees)? In what contexts should such factors be determinative?

Should patent challengers be required to pay respondents' litigation costs if they do not prevail? What would be the advantages and disadvantages, and what would be the decision criteria? How should such insights apply to administrative challenges?

Should governments require reporting by patentees and then publish (a) notice of patent transfers; and (b) notice of licensing agreements?

Should there be a presumption of compulsory licensing for patents that block or inhibit the development of superior follow-on inventions?

Should non-operating firms be held to different standards? If so, in what contexts?

What forms of collusion are acceptable business practice? E.g., pay for delay, suppression of prior art, privateering...?

[Possible research questions:]

What benefits – and adverse consequences – would result from the publication of patent transactions?

To what extent do motivations to patent elicit new resources and participants vs. merely reinforcing existing market positions and industry structure?

Are smaller firms and (partly synonymous) startups disadvantaged relative to large incumbents by the risks and costs of patent litigation?

How is *evidence of use* (anecdotally the main driver of patent value in secondary markets) gathered, marketed, and exploited?

How do firms make decisions about the different kinds of patent insurance? Why has a robust market for insurance or hedging failed to materialize?

How much does knowledge transfer accompany licensing? What is the breakdown between ex ante (carrot) licensing and ex post (stick) licensing in different fields?

How do patent assertion entities identify and choose targets? To what extent do IPOs trigger action by patent assertion entities?

How often do small businesses face assertions from large firms? How do small firms react? Do they perceive asserted patents as legitimate? How frequently do they face “peddler’s bag” tactics (asserting patents seriatim)? How do answers differ when facing trolls?

How frequently and to what extent do large portfolio owners engage in portfolio-shedding? What motivates sales into the secondary market? Is evidence of use offered – either against competitors (as in privateering) or others?

thickets, markets, industries

[Policy context:]

Are the gross benefits in many fields exceeded by the legal costs, as argued by Bessen and Meurer?

Should damages (or compulsory licensing) at "reasonable" royalties be the norm for all patents, except perhaps those in specific firm size or technology classes?

Is the 20-year patent life justifiable in all cases on economic grounds? What should be the criteria for exceptions?

[Possible research questions:]

In what areas of technology are secondary markets more active? In what areas are thickets a major structural feature, and how can they be measured (UKIPO research)?

Do firms actually "hack their way through" patent thickets, or is the density of overlapping or low-quality patents additional reason to avoid looking for and evaluating patents?

How can "secondary markets" be measured (and distinguished from primary markets)? Can markets be distinguished based on use – i.e., markets for technology, markets for enforcement, and markets for pooling or nonassertion? How do these markets reflect the functional difference between exclusive rights and nonexclusive licensing?

Does market activity reveal information about the scale of overpatenting and independent invention?

national institutions

[Policy context:]

Is the USPTO doing an acceptable job sorting out the wheat from the chaff? What does the high rate of ultimate approval imply about the rigor of the examination process? What improvements should be made?

How can administrative challenges be improved? Should some form of bounty or loser pays be instituted, perhaps treating small entities more leniently?

What limitations should be placed upon patents originating from government-sponsored R&D? Government-sponsored patenting? Who should apply them and how?

Given that U.S. juries have been shown to favor domestic litigants, how can

this be addressed?

[Possible research questions:]

What consequences have administrative validity challenges had? How do the costs and risks compare for patentees and challengers?

How has changing interest group politics influenced the development of patent policy?

The PTO is charged with providing policy advice to the executive branch, but how does it do so without an empirical base beyond its internal operations? How does the PTO respond to external developments such as the growth of patent assertion entities? What role do particular interest groups play?

How has the composition of policy-related input changed in recent years? Can this be measured in terms of amicus briefs and comments in administrative proceedings? What role do administrative agencies other than patent offices play?

Is there evidence of bias for or against different classes of applicants?

What role have chief economists played for the various patent offices?

What are the implications of the PTO's fee structure for patent quality?

international/global

[Policy context:]

Should governments be able to limit the power of patents in extreme cases of market power or dominance? What state interests should be at stake in order to invoke such limitations? Should the constraint be applied under patent abuse, antitrust law, or industry-specific regimes (such as Hatch-Waxman)?

Given that ICT standards are developed globally by international organizations/consortia, should guidelines for reasonable royalties under FRAND commitments be based on global consensus? Should arbitrators be expected to adhere to such criteria and publish decisions based on FRAND commitments?

Should developing nations be permitted to establish different (i.e., weaker) standards of patent protection? In what contexts? On inventions not made and/or developed within their boundaries?

[Possible research questions:]

What do the historical experiences of the United States, Netherlands, Switzerland, Japan, and Korea reveal about the appropriateness of policies that differentiate among applicants, litigants, and fields of technology?

What has been the practical effect of different forms of compulsory licensing in diverse jurisdictions? What extra-territorial effects have resulted?

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How do gross disparities in the number of active patents (relative to the size of national economies) affect global patenting practices – for large vs small firms, for complex vs discrete products....?

Do relatively underpatented jurisdictions serve as safe harbors for certain products? Are there value chains linking underpatented jurisdictions and serving small markets?

Even among the largest patent offices, patenting in multiple jurisdictions seems to have stabilized. Why?

What are the prospects for sovereign/state-supported patent funds? Can financialization of patents and the development of secondary markets be linked to national investment in patents as (sovereign) assets?

What is the practical effect of diverse national standards for the patent-eligibility of abstract subject matter?

What are the practical effects of multicountry litigation? Do different results for the same patent families illuminate understanding of national differences?

What is the practical effect of language differences – and the costs of patenting or operating under a foreign language?

What are the extra-territorial effects of patents as territorial rights in global markets? How do they affect technical standards development in global industries? What are the implications for the competitiveness of SMEs?

How can/will patents be used by “strategic” industries or sectors with important public policy implications? What role will states play in setting the terms of commercialization – or managing patents directly? Or indirectly through state-owned/supported enterprises? Or (even less directly) via sovereign wealth funds?

To what extent are ambivalent terms in TRIPS defined or interpreted in ways that reflect national economic interests?

Are standards such as “ordinary skill in the art” interpreted so as to reflect national levels of development?

At the global level, it has been assumed that other national systems would eventually be harmonized along the lines of U.S. and Europe, but substantive harmonization has stalled. Can the effects of differences be documented?