

The Output of R&D activities: Harnessing the Power of Patent Data

'Measuring Uncertainty in the Patenting Process'

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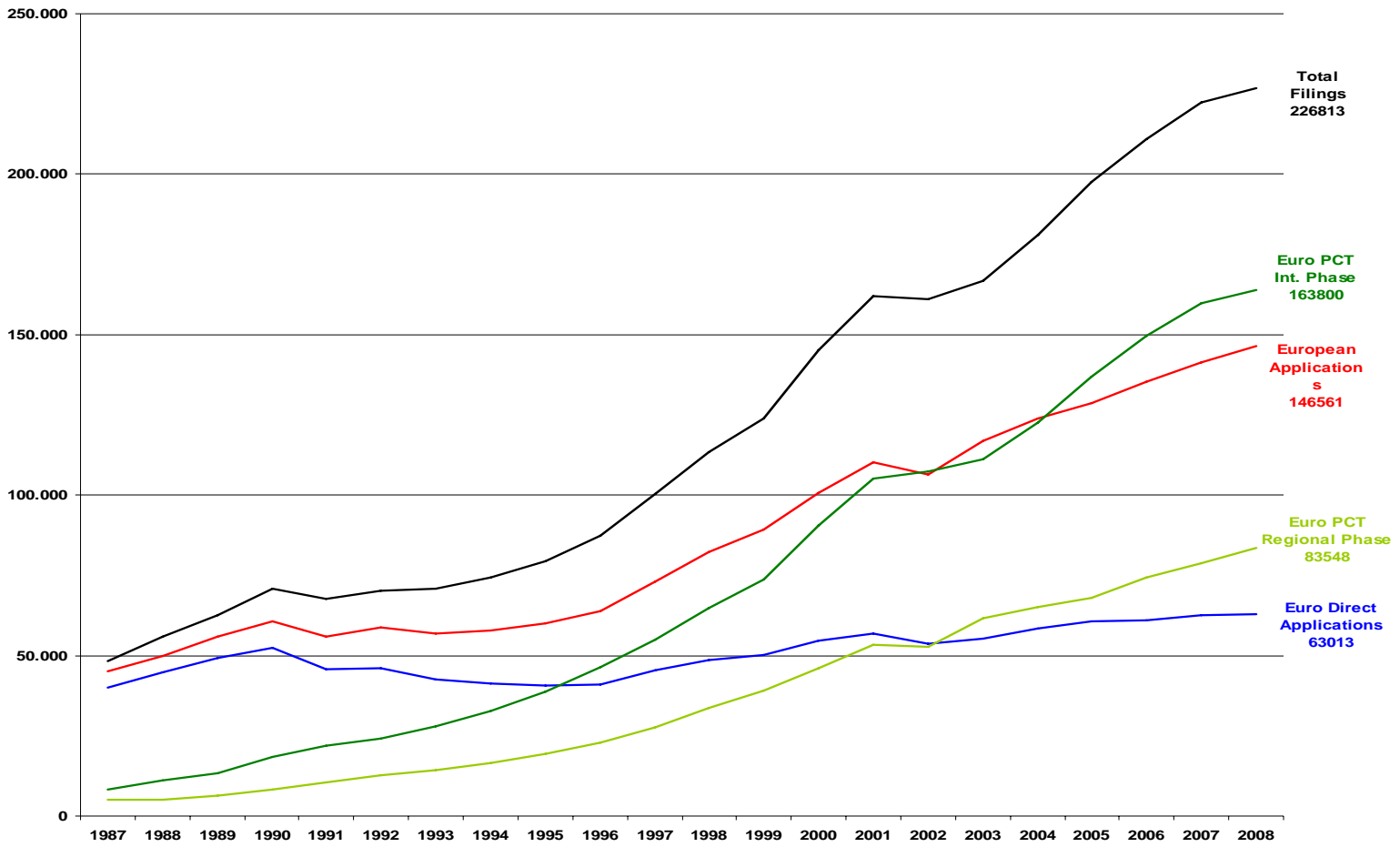


EPA Mission:

'As the Patent Office for Europe, we support innovation, competitiveness and economic growth across Europe through a commitment to high quality and efficient services delivered under the European Patent Convention.'

Innovation?

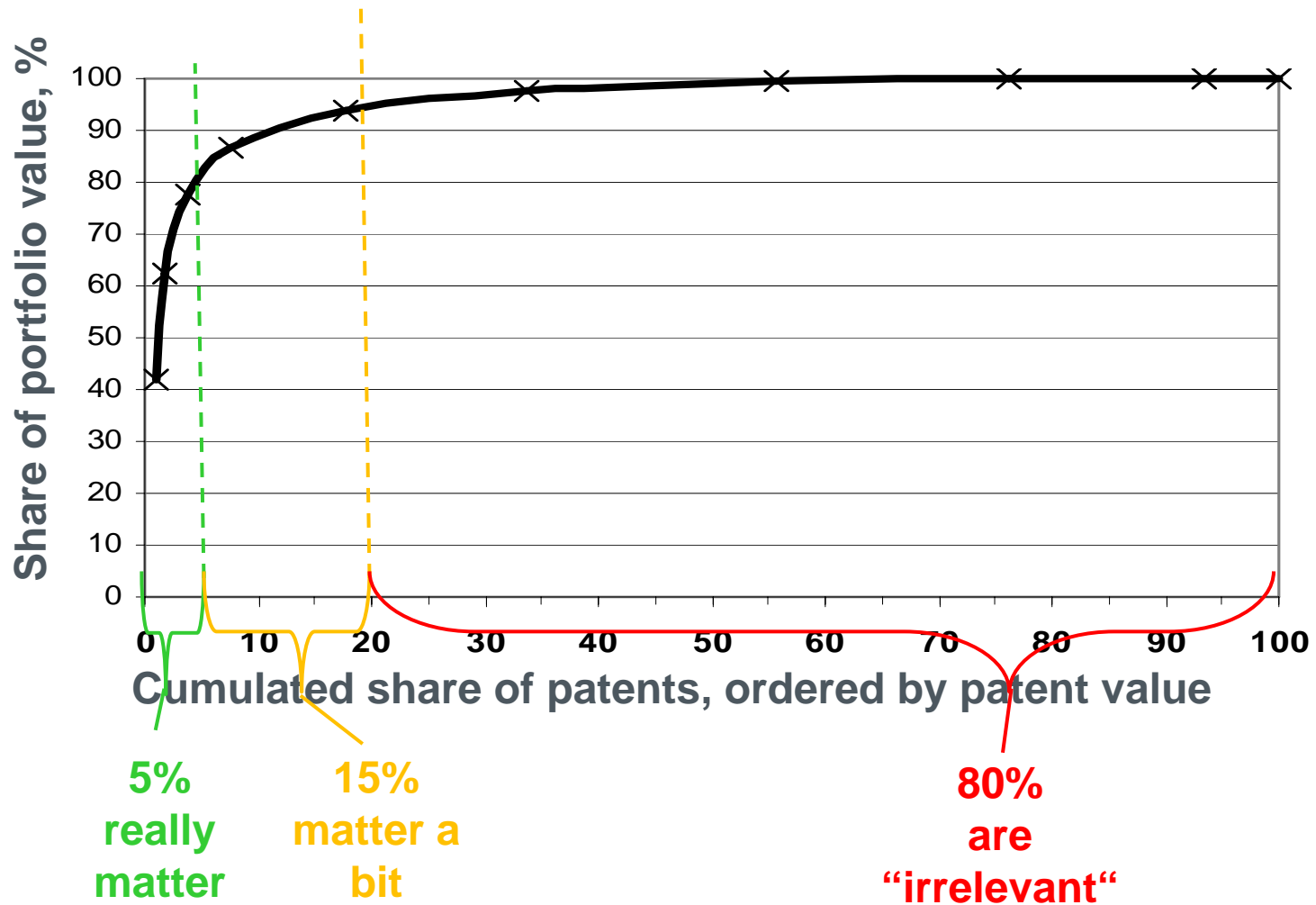
European Filings



Value of Patents

- **Private Value (excl. externalities)**
 - Inventor surveys (Scherer et al. 1999)
 - Financial data (Hall et al. 2004)
 - Patent data (renewals, citations ...)
 - Product/market related data
- **Social Value (incl. externalities)**
 - NPOs, EPO, WIPO, EC, nat.

Private Value of Patents



The Concept of Uncertainty

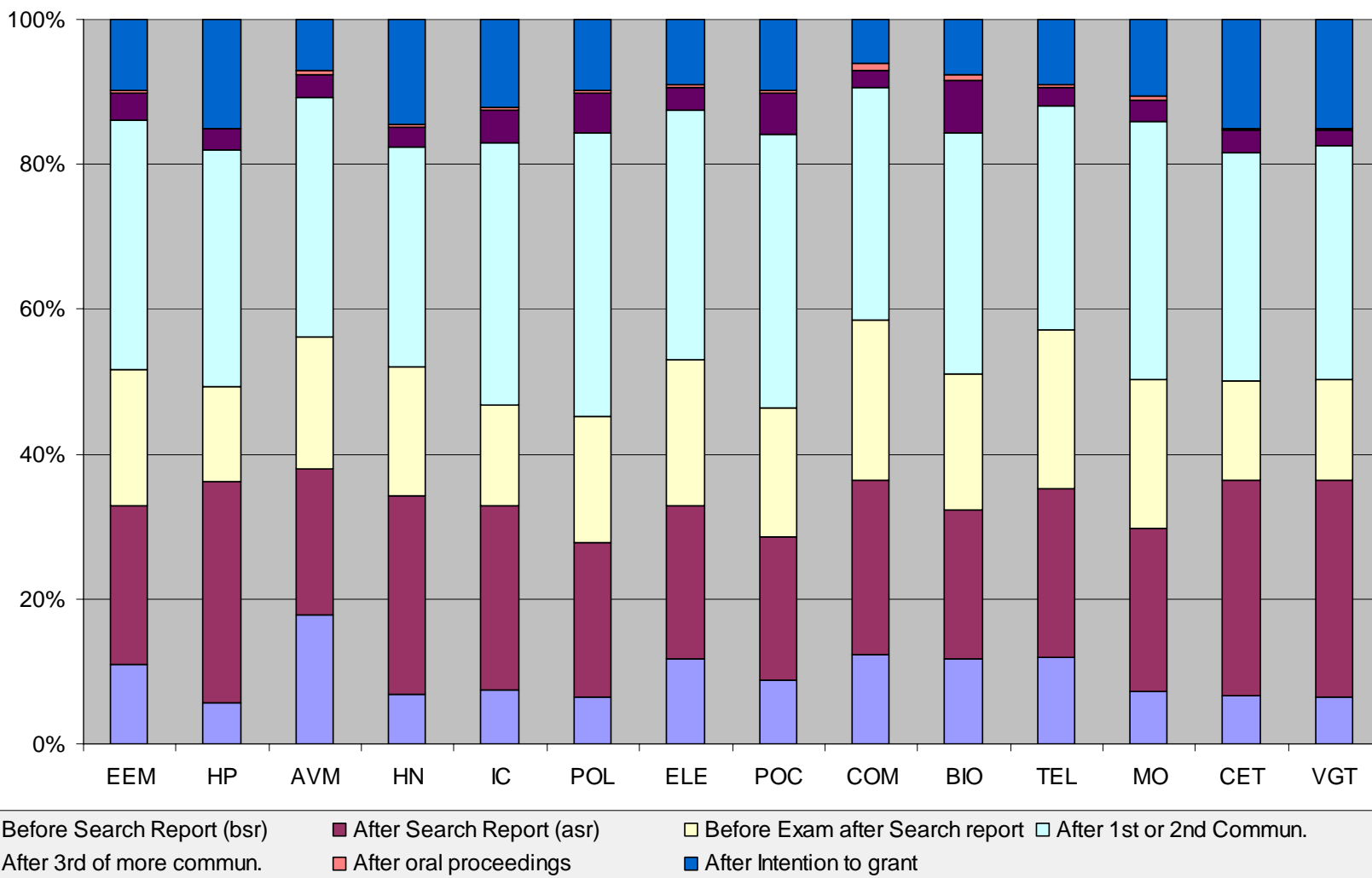
- **Applicants strategically**
 - increase pendency time
 - enlarge the scope of the claims
- **Results in:**
 - More work for the office
 - Higher uncertainty for third parties
 - Consumption of considerable EPO resources

Objective: -reduction of uncertainty in the system
-put dis/incentives right!

Means to extend the granting procedure

- Request extension of the time limit to respond to office actions. Typically the statutory 4 month time limit can be extended by at least 2 months. Further extensions can be obtained under certain conditions.¹
- Request that no office action is taken. In this case a valid reason must be given, such as serious illness, death or bankruptcy.
- File cascading divisional applications, provided that the parent application is still pending.
- No answer to EPO communications.
- No reply within the time limit and then ask for further proceedings.
- Delay the filing of translations.
- Delay the payment of fees.

Drop out stages by JC (1990-2000)



Uncertainty by filing practice (1)

1. EPO internal workshop (Oct 2008)

2. Economic Advisory Group (Nov 2008)

Practice	Description
1. Drafting of applications with too broad claims from the start	<ul style="list-style-type: none"> Applications are drafted with claims that are non-inventive and unclear. Basis is created in the description that can establish inventive step/clarity, if necessary.
2. Amendment(s) creating new deficiencies / Multiple amendments	<ul style="list-style-type: none"> In reply to the examiner's communication, amendments are filed that meet the objection but that create new deficiencies such as lack of clarity or new deficiencies under Art. 123(2) EPC. The examiner has to write another communication in reply to which another amendment is filed that may give rise to yet other deficiencies (multiple amendments).
3. No constructive reaction until summoned for oral proceedings	<ul style="list-style-type: none"> Frequently, constructive responses, such as claim restrictions or the filing of experimental data are not submitted until oral proceedings are summoned.
4. Filing of divisional applications with similar scope than parent	<ul style="list-style-type: none"> One or more divisionals are filed claiming subject-matter similar to that of the parent application. Very often, the divisional creates problems with Article 76(1) EPC (not supported entirely on parent). Often, the parent is withdrawn before a final decision is taken (often a day before the oral proceedings for the parent). Alternatively the parent is not withdrawn and therefore refused, and goes to the Board of Appeals. That means that the same subject matter is treated in parallel by the Board of Appeals (the refused parent) and the Examining Division (the divisional, filed before refusal). Proceedings for the divisionals are very often delayed by the applicant.

Uncertainty by filing practice (2)

Practice	Description
5. Auxiliary request(s) in examination and opposition proceedings	<ul style="list-style-type: none"> ▪ Auxiliary requests are filed in examination and opposition proceedings. The filing of auxiliary requests occurs very late, typically after summons to oral proceedings. ▪ The number of requests is felt by examiners to be high and very often without reasoning. ▪ The requests are very often filed by the attorney while knowing that his main request is not allowable.
6. Appeal against refusal and immediately filing of new/amended claims	<ul style="list-style-type: none"> ▪ First instance is not considered. Some applicants do not bring all arguments in the examination phase. They go for a straight refusal and an appeal. ▪ At appeal, amendments are submitted for the first time.
7. Filing of a bundle of similar to overlapping applications in parallel and such that spread among many directorates	<ul style="list-style-type: none"> ▪ Filing of applications with similar but not identical scope or appearing to relate to different technical fields due to wording.

Frequency

Effect on
Pendency Time

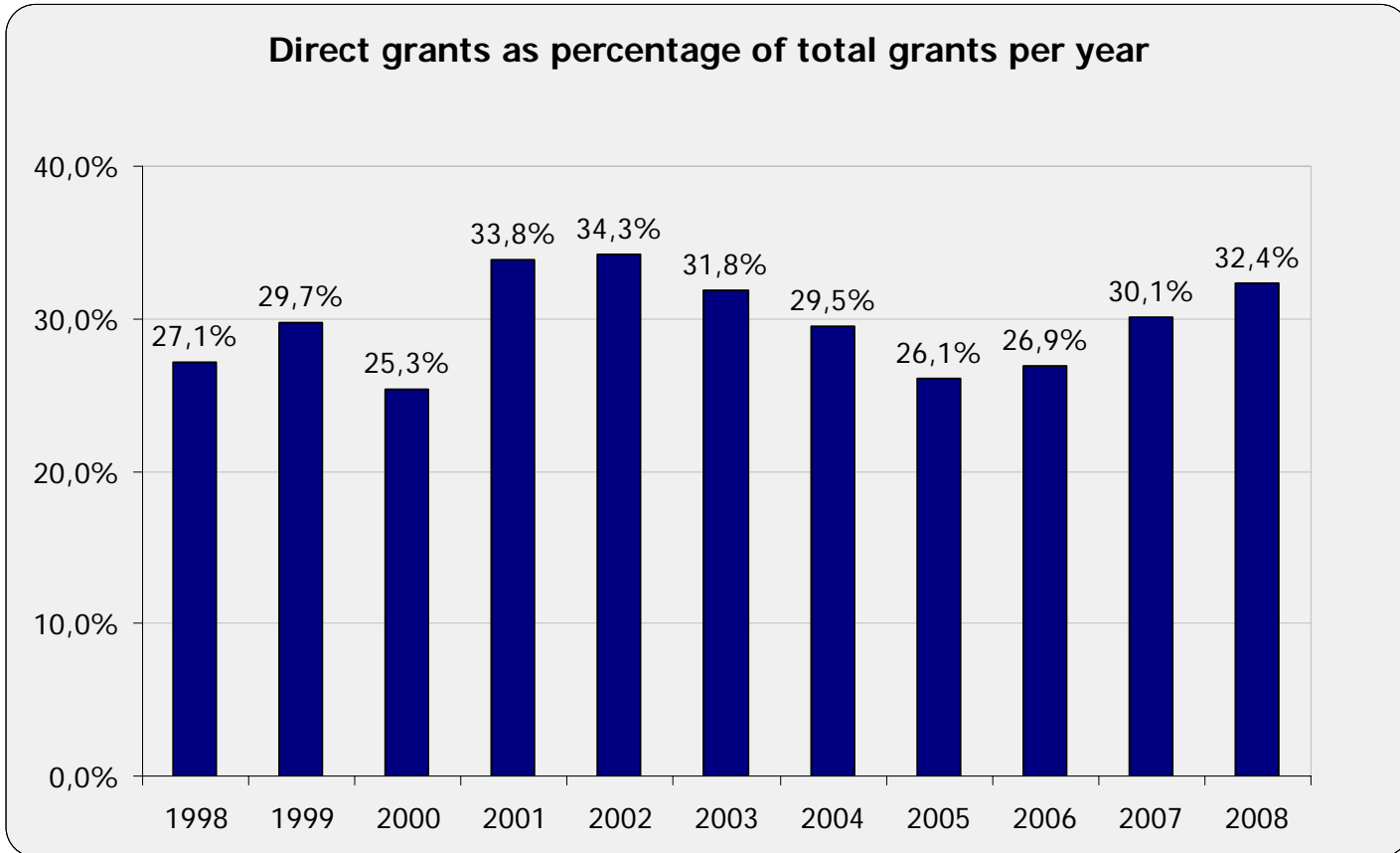
Effect on
Office Resources

Development
over time

Creation of new data sample:

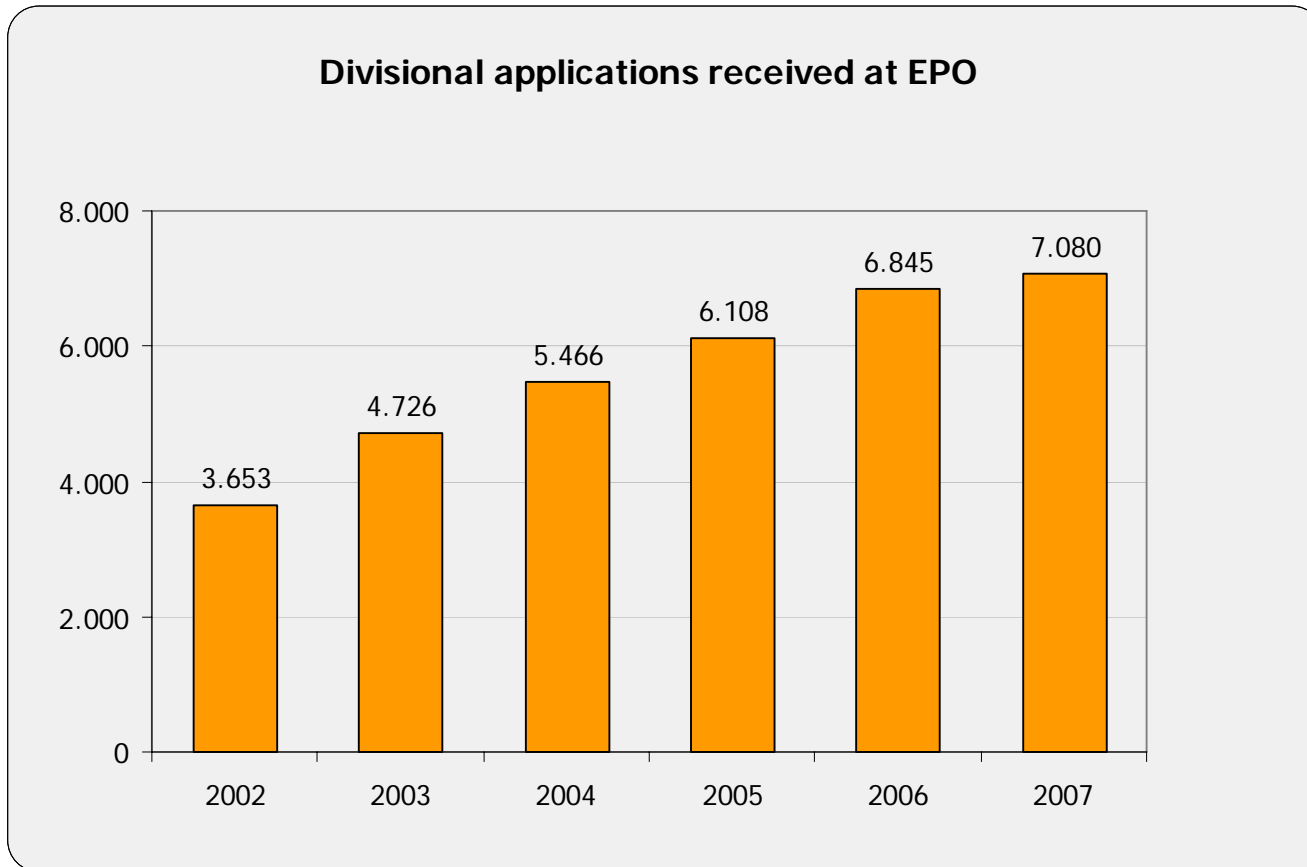
- sources: several EPO databases (data assembled by PD Business Services)
- all files active between 1998 and 2008 (1,529,007 files)
- detailed information on
 - **status of application, date of filing, examination**
 - **relevant time information (filing, search, examination, intention/decision to grant, refusal, oral proceedings etc)**
 - **number of claims, cited X/Y documents, amendments made by applicant, communications during examination**

Statistics: Direct Grants



EPO data

Statistics: Divisional Applications (1)

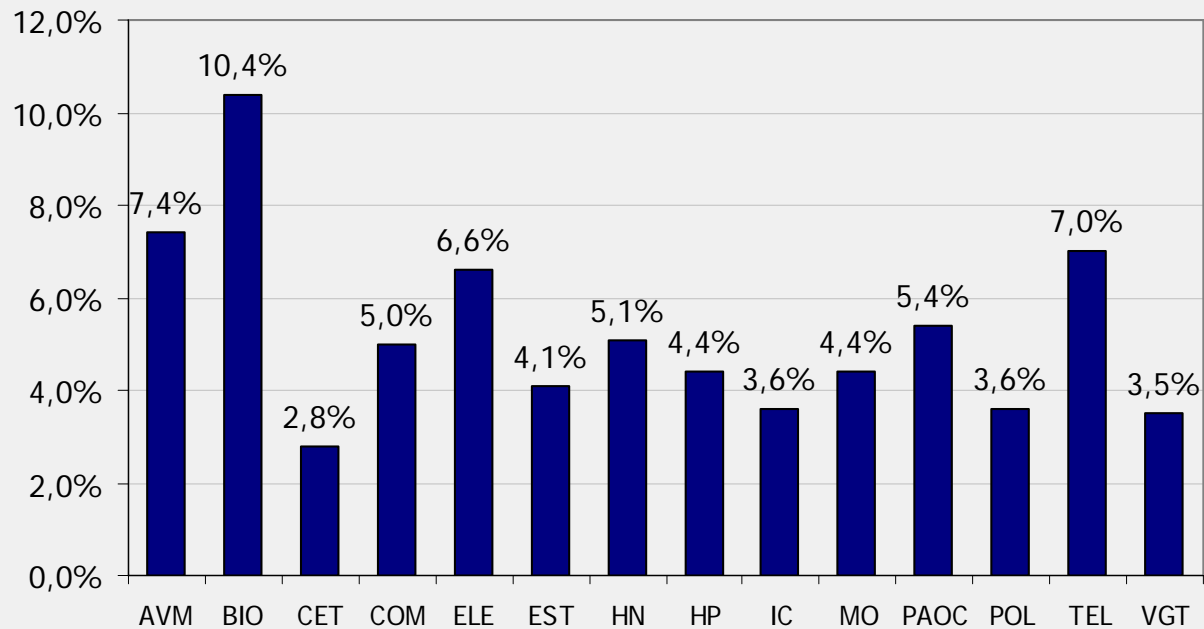


EPO data

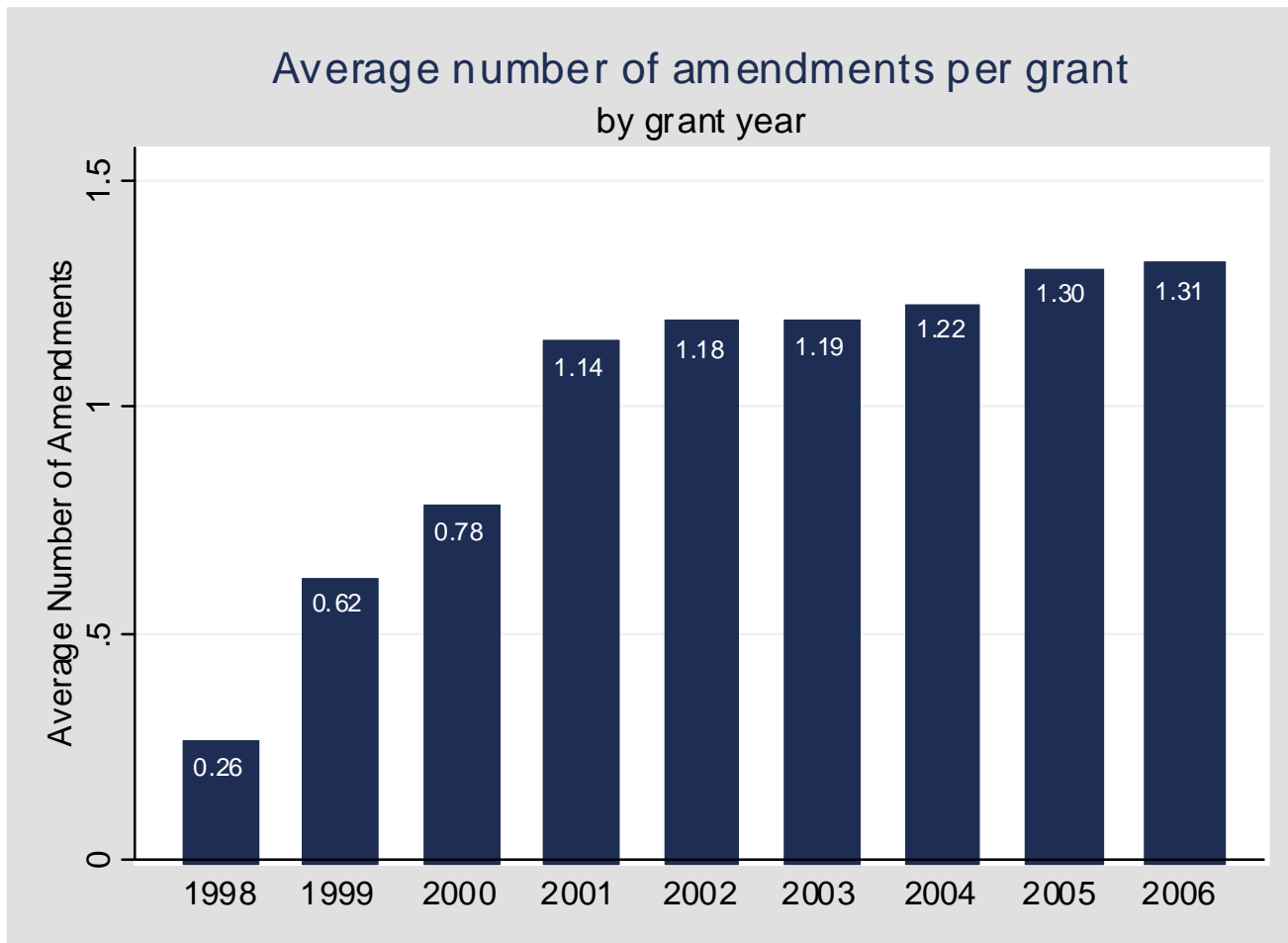
Statistics: Divisional Applications (2)

Percentage of divisional applications by joint cluster

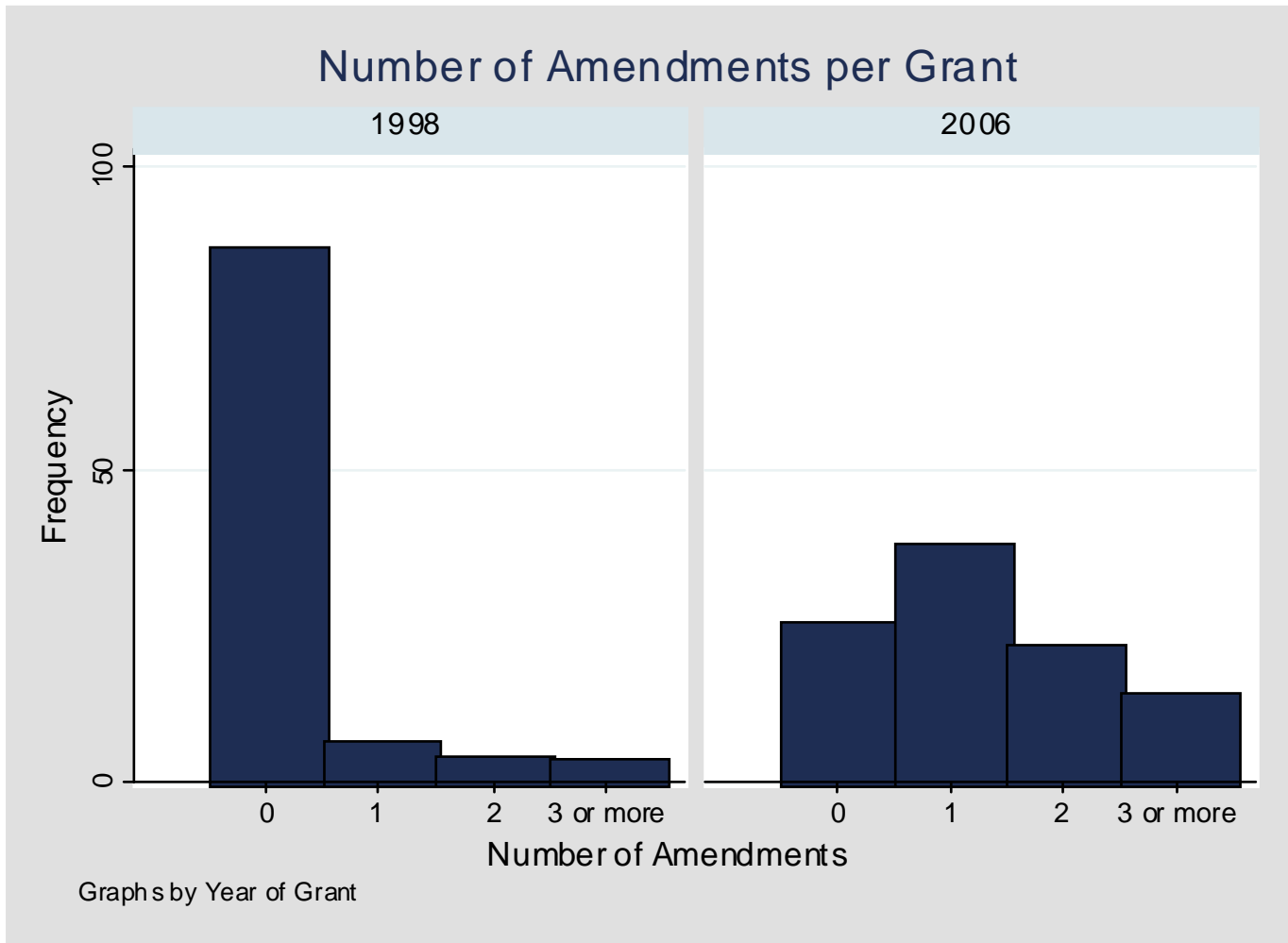
(2007)



Statistics: Amendments (1)



Statistics: Amendments (2)



Case study: Essential Patents with SDOs

■ Background:

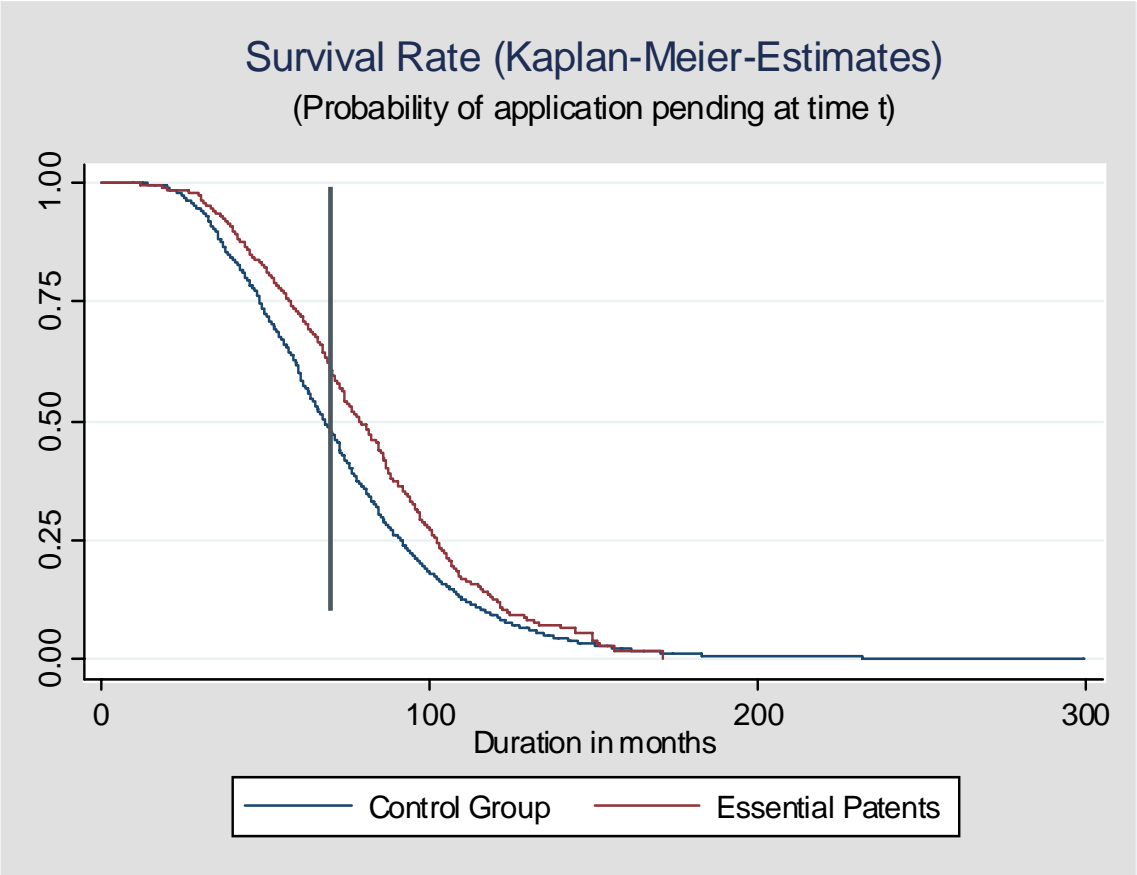
- Participants in SDO's have a strong incentive to have own patents included in a standard's list of essential patents (patents that are necessary to use a specific standard)
- The development of a standard within the committee is a dynamic matter, technology and standards developments carry an inherent uncertainty.

Essential Patents with SDOs

- **Data:**
 - **EPO dataset of all applications in IPC G/H (Physics/Electricity) active between 1998 and 2008 (583,241 files)**
 - **Database on patents declared to be essential in ETSI IPR database**
 - **Matching of information on essentiality with EPO data on claims, amendments, divisionals etc.**
 - **Comparison of "Treatment" and Control Group**

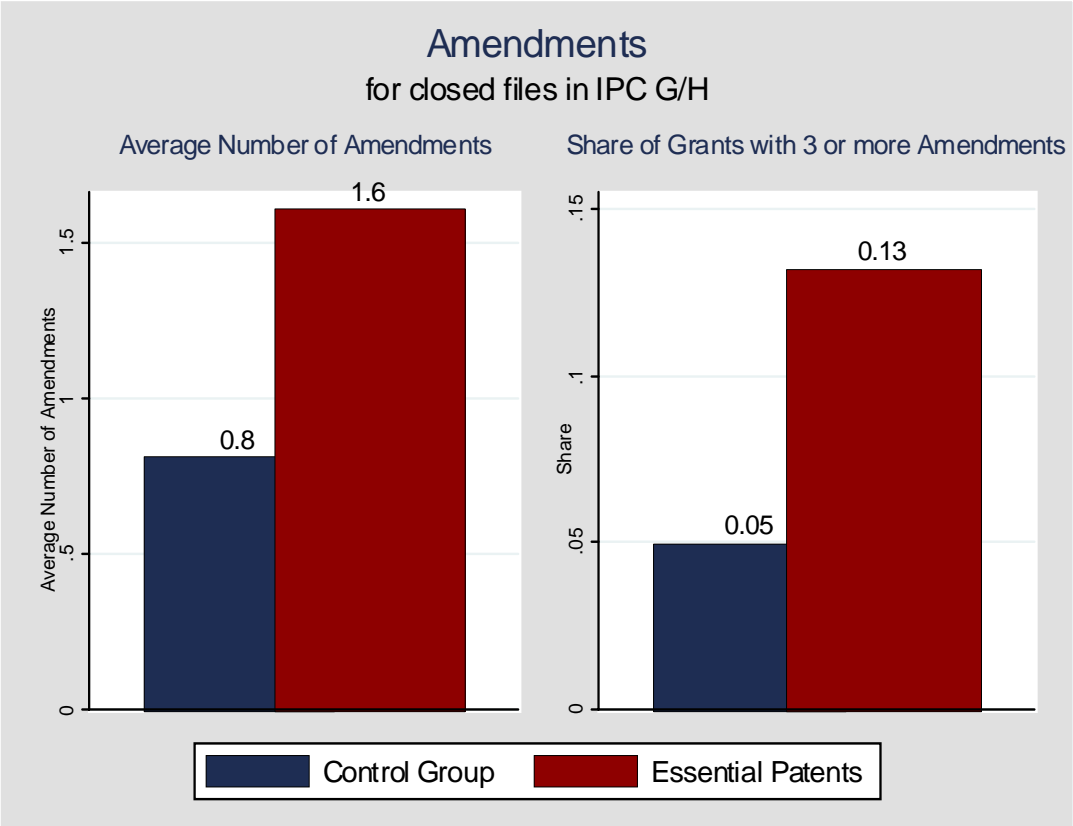
Essential Patents with SDOs

Parameter: Pendency Time



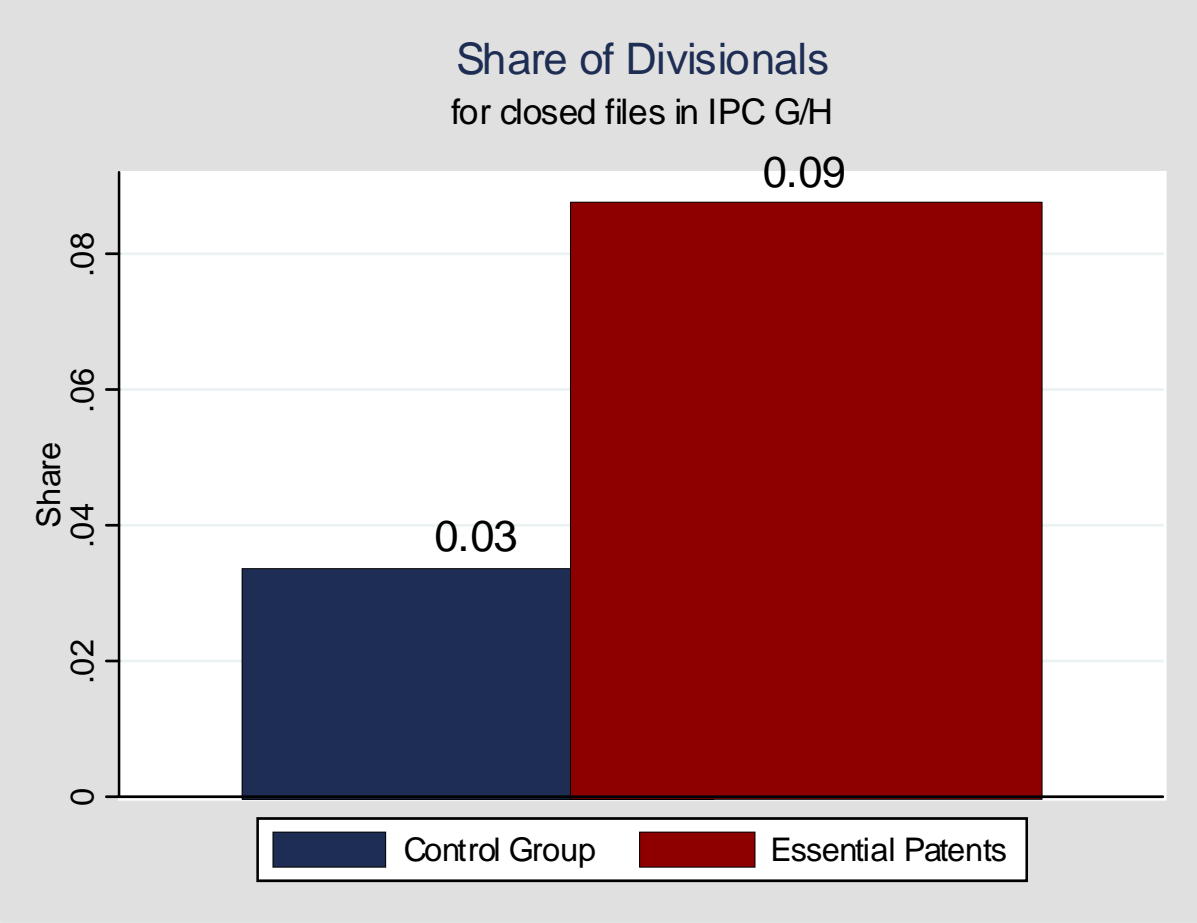
Essential Patents with SDOs

Parameter: Multiple Amendments



Essential Patents with SDOs

Parameter: Filing of Divisionals



Outlook

- Econometric analysis (Panel data, Survival time):
 - H1 probability of grant decreases with pendency time
 - H2 probability of grant decreases with number of amendments
 - H3 probability of grant decreases with escalation of oral proceedings
 - ...
- Questions:
 - Does pendency time differ by examiner/attorney?
 - How many days of delay by oral proceedings?
 - ...

Many thanks!

www.european-patent-office.org

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