

From the Lisbon agenda to the economics of patents

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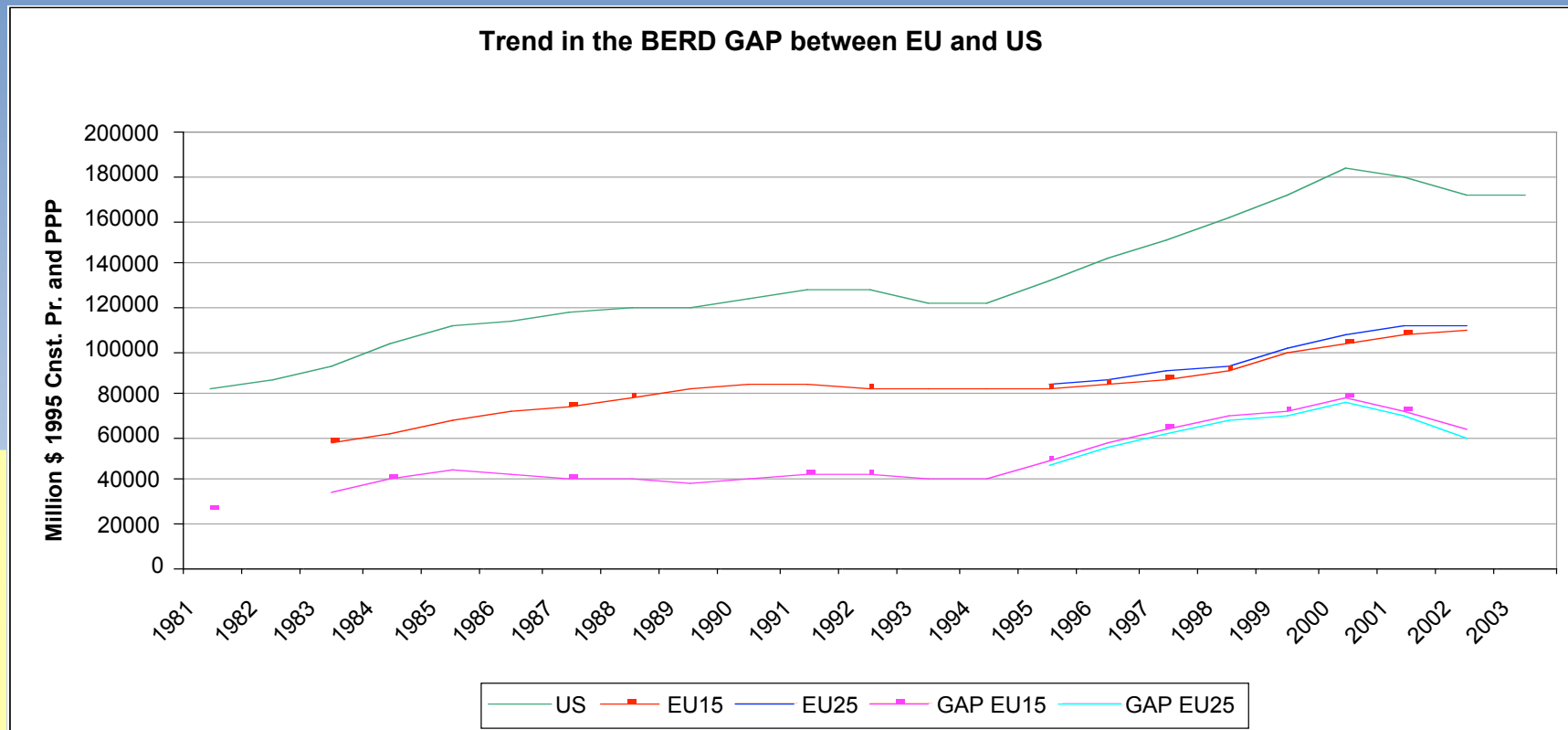
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Software patent Conference, Brussels, 10th November 2004.

The Lisbon agenda

- Lisbon anno 2004: more relevant than ever: lack of internal growth dynamics in Europe
 - macro-economic sound policies but...
 - little growth incentives with respect to enhancing structural reform
 - holds for common agricultural policy, regional social cohesion policy but also RTD support policies
- Impression of a European paradox: strength in scientific and technological performance, weakness in innovation
 - Focus on R&D input side (Barcelona 3% target) which major role to be played by private sector
 - Focus on output side, dominated by output indicators such as patents
 - Little focus though on innovation process itself: the EU has 70,000 PhDs a year, US 40,000: knowledge related diffusion/growth should be much higher in Europe...

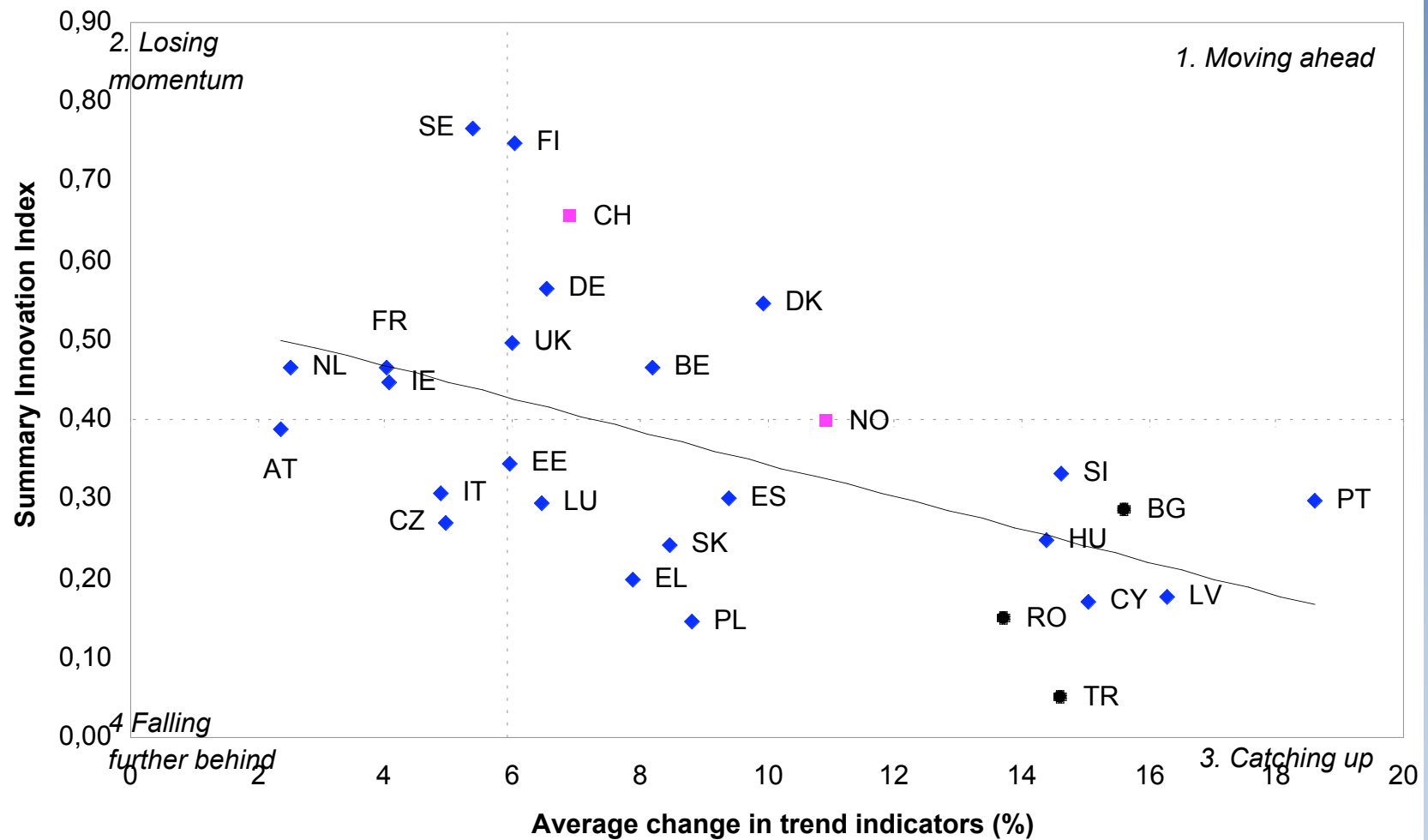
Figure 1: US-EU gap in BERD



Growth and innovation

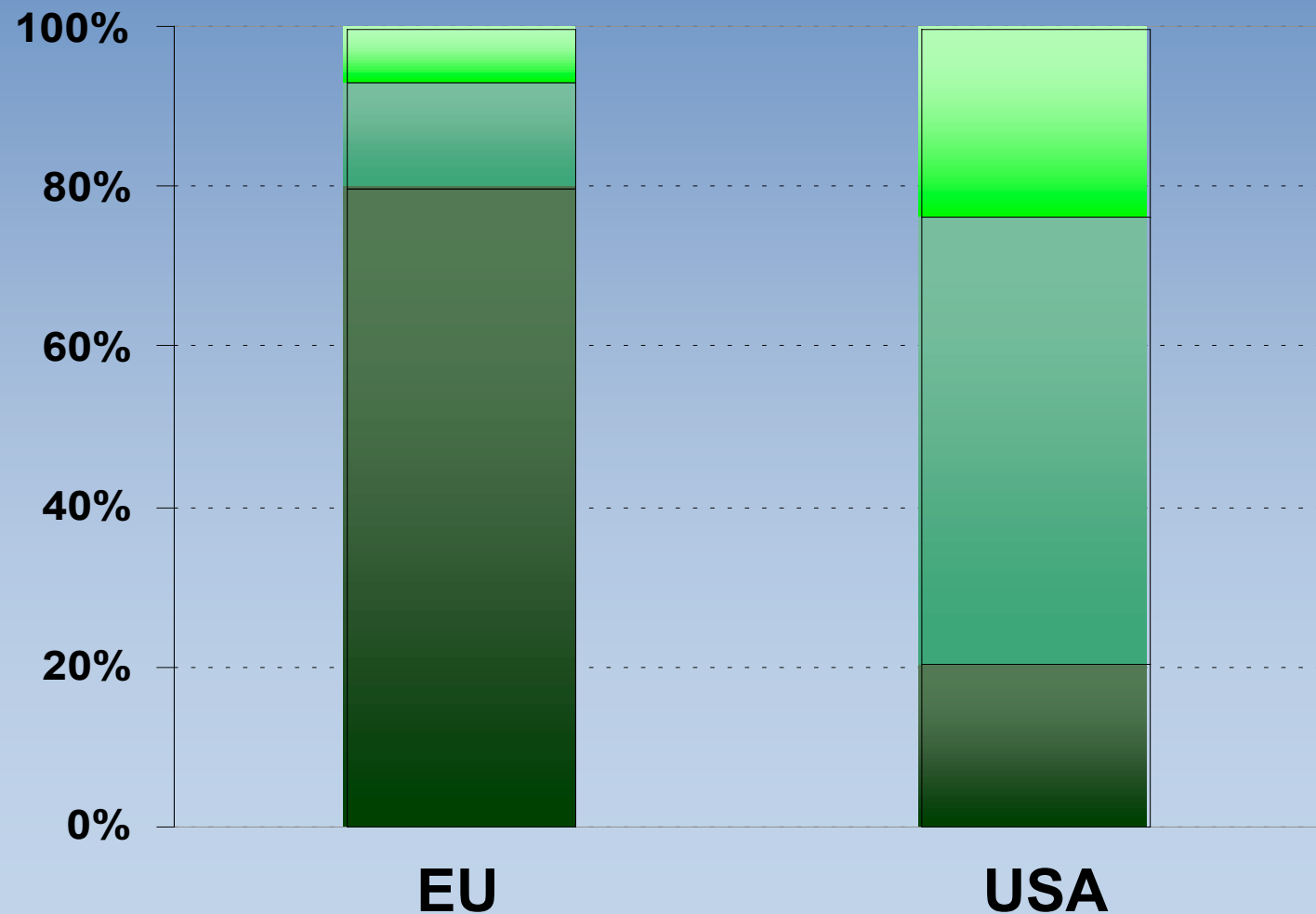
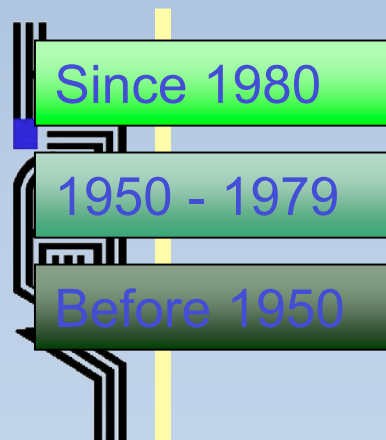
- EU-25 consists of a wide diversity of growth performances including technological catching up, technological leading and rapidly technology diffusing
- Complexity of growth process barely recognized in simple policy targets and proposed technology policies
- Crucial importance of renewal of firms (innovation as process of creative destruction) and growth and consolidation (mergers and acquisition)

Figure 2: Innovation Scoreboard



US firms grow faster

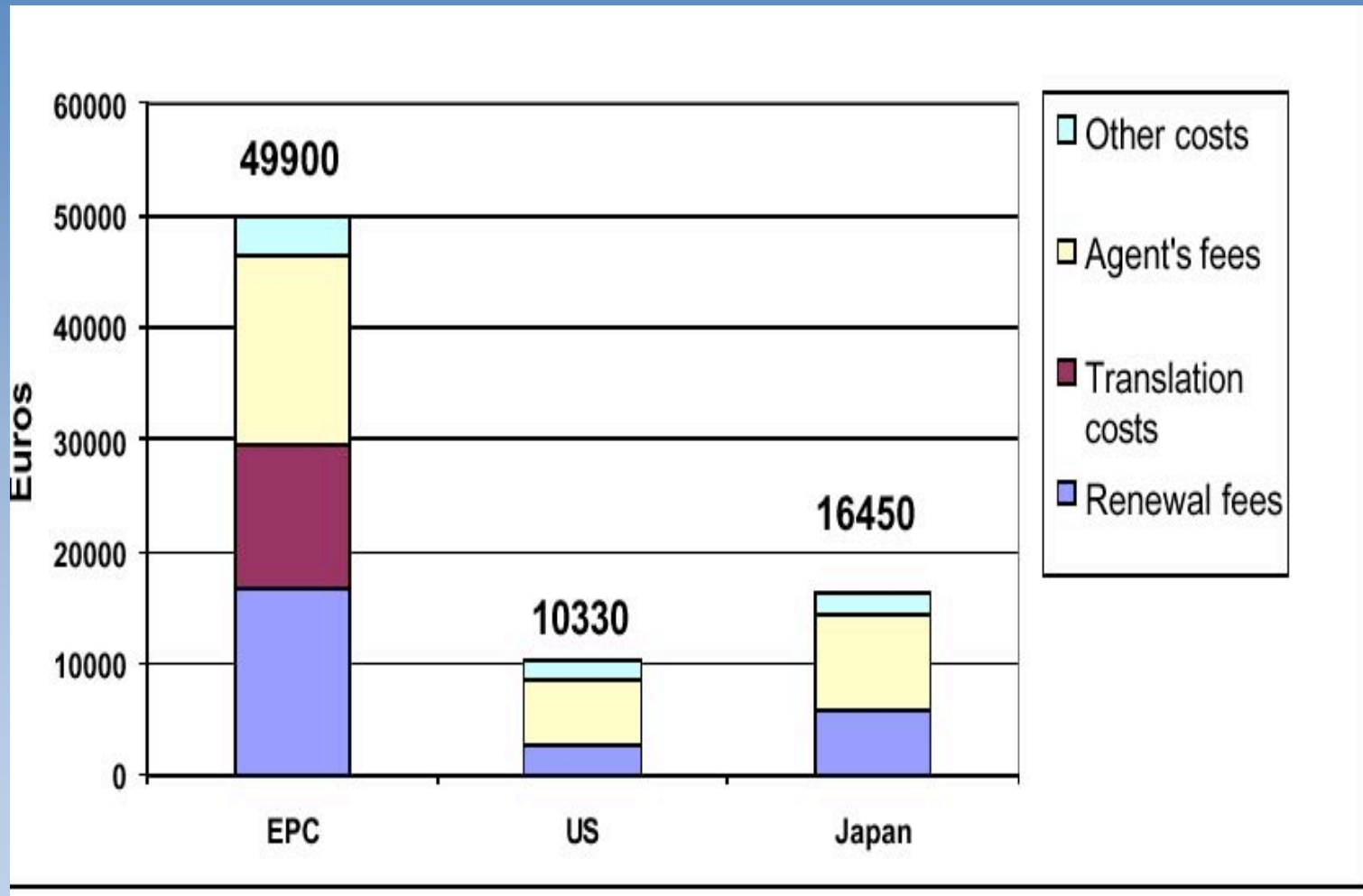
Creation of EU and US firms among the World top 1,000



Patents and the costs of non-Europe

- Highly diversified patents systems across Europe (scope and height) reflection of long term institutional differences across Europe
- Patents as readily available output indicator of S&T performance: at country level, at technology class level, at firm level
- Costs of European patent reflection of institutional differences across Europe (languages used, even Kok report did give in)

Patent costs in EU, US and Japan



Patents and innovation

- Patents are only one means of appropriating returns from innovation. Particularly important when other entry barriers are absent.
- Rarely an important source of technical information
- Volume dominates over quality, yet patent value extremely skewed
- International pressure to harmonize: level playing field imposed on most trading countries through TRIPS (major implications for fields such as drugs and emerging economies such as India and Brazil)

Patents and software

- Strong pressure for patenting of software
 - Sector characterized by weak entry barriers, search for legal entry barriers
 - Broadening of technical inventions in the direction of “embedded software” (software enabled inventions)
 - IPR and national competitiveness (old Krugman North-South model)
 - International (TRIPS) and European (directive) harmonisation pressures from the perspective of level playing field

Policy Concerns

- On patents:
 - Trend towards “overprotection” of patent based intellectual property regime:
 - Dramatic growth also in areas, players
 - Imposition of international legal framework (see e.g. debate on TRIPS and HIV-related drugs)
 - Trend towards “cartel” formation of large players through cross-licensing of patent portfolios, i.e. use of volume of patents as strategic tool
 - Trend towards patents becoming increasingly entry barrier tool between incumbents versus new players
 - Revenues used in large firms as source for R&D, trend towards knowledge producing firms, interest from public knowledge institutions

Software patents

- On software IPR:
 - Copyright inappropriate, patents inappropriate, so what?
 - Changes in IPR regime likely to have significant effects on dynamism of the sector and beyond (network effects), on the structure of the industry (large vs small players), on costs (legal costs in research), on international competitiveness (international license payments)
 - Only sector in our economies with low entry barriers and small size opportunities
 - Tradition of information processing, hence free access, see “open source” versus proprietary standards