Evaluating the Impact of the Advanced Technology Program: What Can Patents Tell Us?

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Presentation Outline

- Familiarity Breeds Contempt
- Overview of ATP
- What Have We Learned?
- What Do We Still Hope to Learn?
Familiarity Breeds Contempt

- Pervasiveness of patent analysis highlights the limitation of patents as an R&D output
  - Multiple measures of knowledge creation
  - Sensitive to industry, IP strategy, financial health, and other factors
  - Limitations of citation analysis

- For government programs, use of patents has been institutionalized
To *accelerate* the development of *innovative* technologies for *broad* national *benefit* through partnerships with the private sector
A New Direction…

- On August 9, 2007, the President signed the America COMPETES Act which abolished ATP and created the Technology Innovation Program (TIP)
- Capture lessons learned from ATP evaluation to inform framework for TIP
- Unified government reporting to ease respondent offers new challenges
ATP has had much experience -- some basic facts

ATP received:
• 7,530 proposals submitted to 45 competitions, requesting $15.9 B

ATP awarded:
• 824 projects with 1,581 participants and as many subcontractors
• 227 joint ventures and 597 single companies
• $4.6 B of high-risk research funded
  – ATP share = $2.4 B
  – Industry share = $2.2 B
• Small businesses are thriving
  – 67% of projects led by small businesses

ATP documented:
• Over 1,500 issued patents
• Over 375 projects to date report new technologies under commercialization
• Survey of 36 projects generated revenues and cost savings of more than $2.7B, more than the ATP share of funding for the history of the program
What have we learned?

- Issued patents are a much better measure than patent applications, but you need program maturity for useful patent analysis.
- Quantitative underpinnings for “what we knew already”.
- Fuzzy relationship between patenting and ultimate commercial success.
- Useful benchmark between R&D programs.
What have we learned (cont’d)?

- Level of aggregation for analysis critical for establishing program’s impact
- Use of patents for future trends (just ask Tony)
- Established an impact from ATP funding
What’s Next?

- Matching efforts with NBER
  - Before/after funding analysis (More)
  - Expanded citation analysis (Higher Quality)
  - Expanded scope of patenting (Greater diversity)
  - Enriches JV analysis (Learning)

- Working with iEdison for future reporting

- Linking variables critical