

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

ATP Mission ...

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