

Seek Project 2010:

# The Research Use Exemption from Patent Infringement – Boon or Bane?

## Motivation

- Our project is motivated by the ongoing discussion regarding the effects of a research use exemption from patent infringement on the R&D activity of firms.
- Most recently Belgium and Switzerland amended their statutory patent law to include a research use exemption.
- In countries, where a statutory research use exemption does (de facto) not exist, e.g. the U.S., Australia, New Zealand, or where its application is not clearly defined, e.g. U.K., a continuous discussion about the usefulness of the introduction (or extension/clarification) of a research use exemption is taking place.

## Research Questions

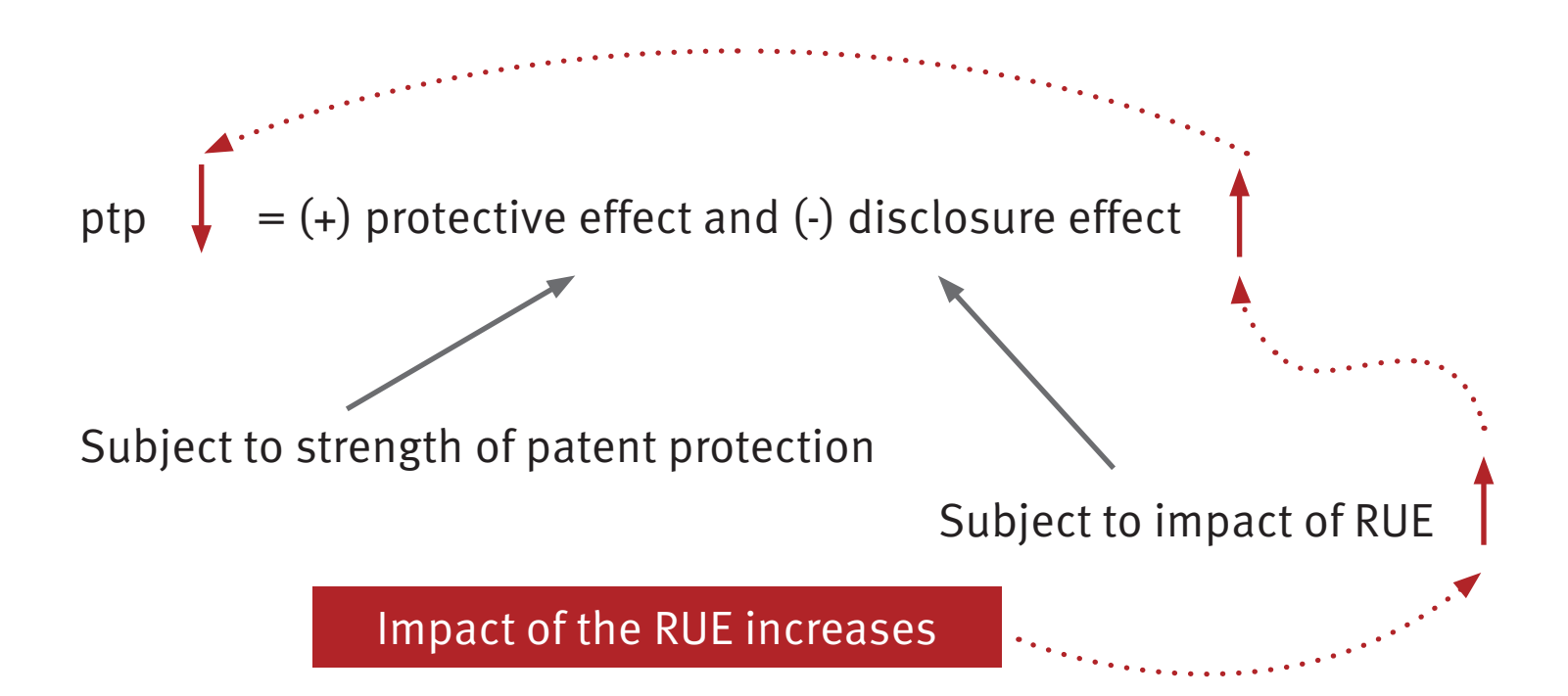
- Does the existence of a research use exemption have a detrimental effect on the propensity to patent pioneer inventions?
  - The introduction of exemptions from patent infringement reduces the protective effect of patents in areas for which the exemption is applicable.
- Does the existence of a research use exemption actually foster technological progress?
  - The lack of a research use exemption reduces the diffusion of innovative knowledge, as patented innovations eventually cannot be used by non-patentees for research purposes.

## Research Team

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- Elizabeth Webster, Melbourne University, Melbourne Institute of Applied Economic and Social Research and Intellectual Property Research Institute of Australia (IPRIA)
- Alexandra Zaby, University of Tübingen

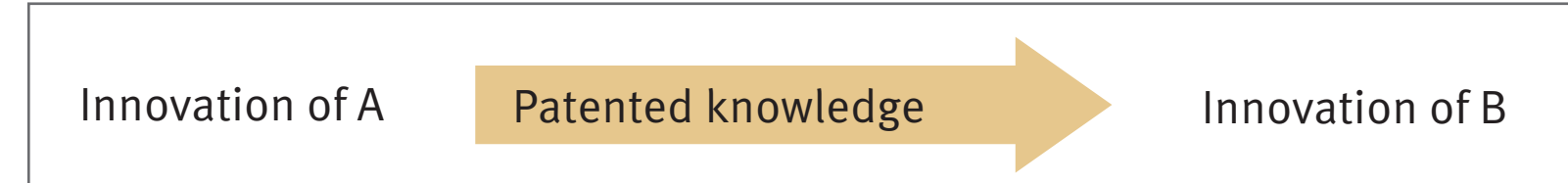
## Objectives

The Effect of a Research Use Exemption (RUE) on the Propensity to Patent (ptp)

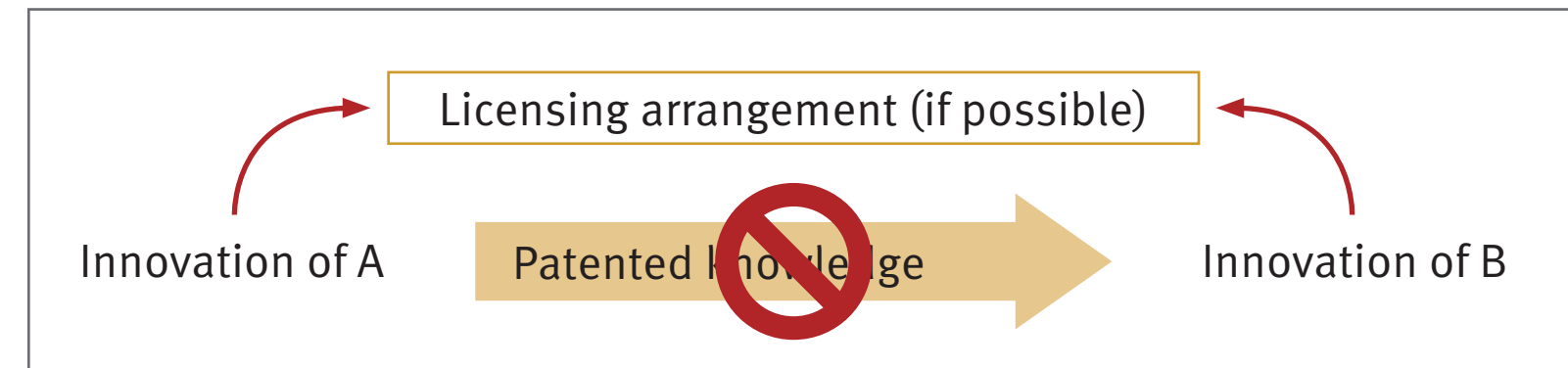


The Effect of a Research Use Exemption on R&D Activity of Follow-up Inventors

RUE Exists

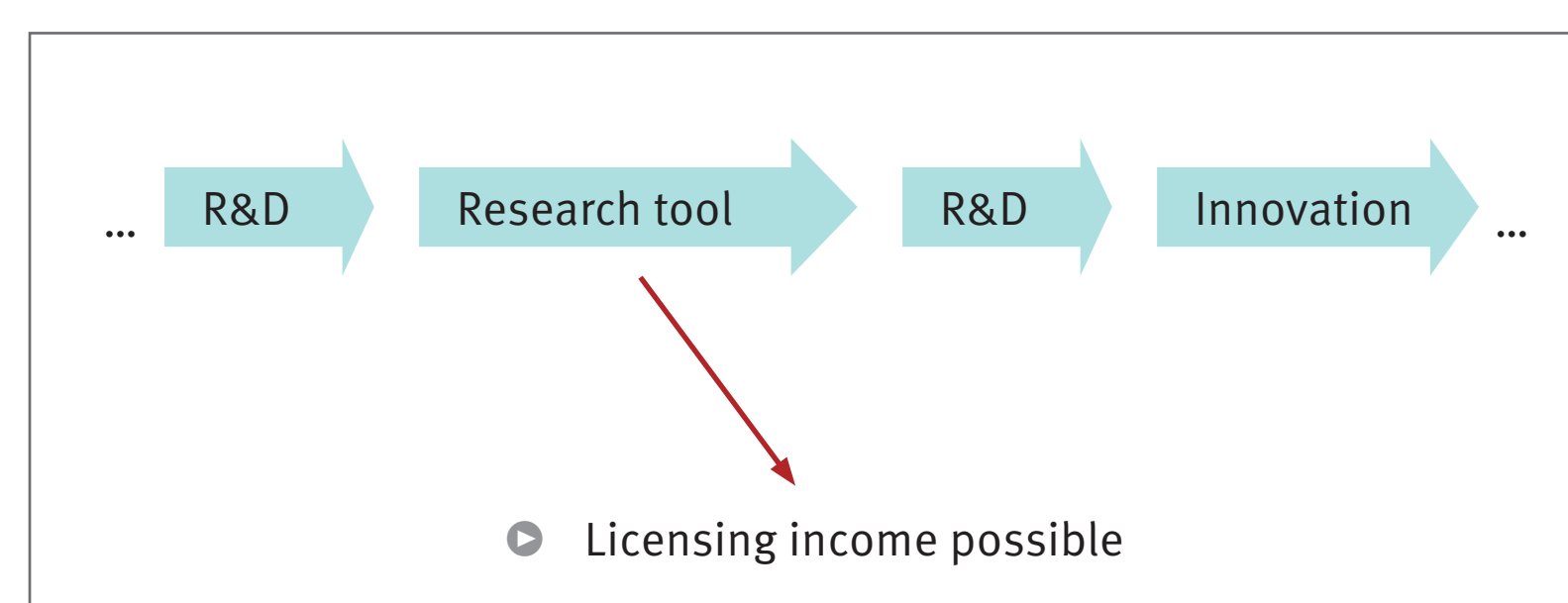


RUE Does not Exist

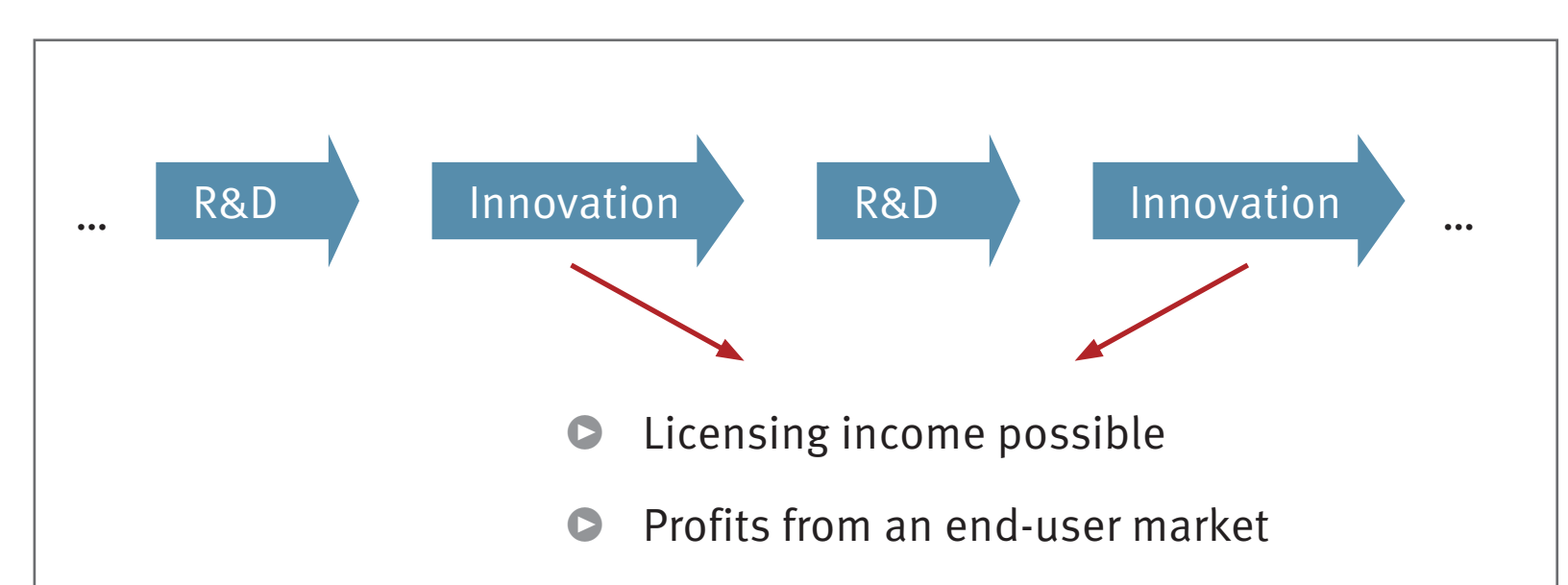


## Explanatory Note

Research Tools



Cumulative Innovations



## Research Agenda

- The research project consists of theoretical and empirical analyses.
- The research project's four fields and the respective starting points:

	Propensity to patent pioneer inventions	R&D investments of follow-up inventors
Research tools	Firm interviews	Scotchmer (2004), Nagaoka, Aoki (2006)
Cumulative innovations	Zaby (2009) Heger, Zaby (2009) Zaby, Heger (2009)	Patent races Erkal (2005)

## Project Description

RUE → ptp

	Research tools	Cumulative innovations
Theoretical analysis	No previous theoretical work exists Profitability of research tools: <ul style="list-style-type: none"><li>Input for own further research</li><li>Licensing income</li></ul> Effect of RUE: decrease of licensing income	Adapt own previous work Pioneer innovation is either horizontally or vertically differentiated version of previous innovation Differentiation strategies of competitors restricted by strength of patent protection
Empirical analysis	Structured firm interviews in order to clarify motivation of research entities to patent their research tools Conduct own survey focusing on life sciences Focus of empirical analysis: ptp of pioneer inventors Country comparison: Germany (broad statutory research use exemption) vs. Australia (no statutory research use exemption)	Build on own previous work with German CIS data

RUE → R&D

	Research tools	Cumulative innovations
Theoretical analysis	Adapt Scotchmer (2004) and Nagaoka/Aoki(2005) <ul style="list-style-type: none"><li>Modify their assumption that the pioneer inventor realises profits on an end-user market</li></ul>	Adapt Erkal (2005) Two-stage patent race including the stages "research" and "development" <ul style="list-style-type: none"><li>Without RUE: Asymmetric hazard rates</li><li>With RUE: Symmetric hazard rates</li></ul>
Empirical analysis	Build on survey conducted in Australia; two waves available Conduct survey for Germany Focus of empirical analysis <ul style="list-style-type: none"><li>Inclination to perform R&amp;D of follow-up innovators</li></ul> Country comparison: Germany (broad statutory research use exemption) vs. Australia (no statutory research use exemption)	

## First Results: Impact RUE → ptp

