# *On "Colocation and Knowledge Diffusion: Evidence from Million Dollar Plants" by Fons-Rosen, Scrutinio, Szemeredi*

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# Multimillion Dollar Plants

Greenstone and Moretti (2004), Greenstone, Hornbeck and Moretti (2010)

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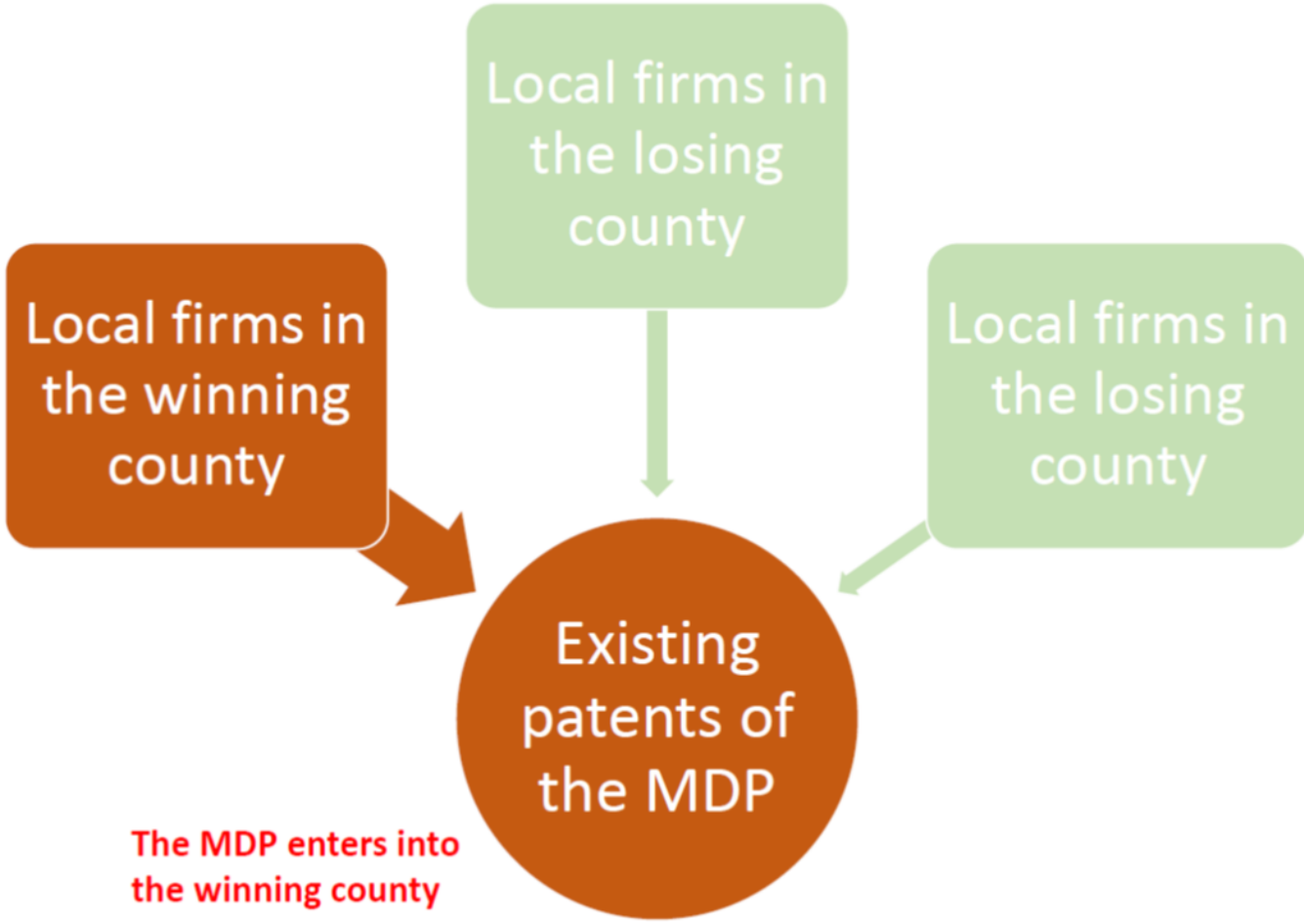
knowledge flow?

- Knowledge diffuses across local plants (inventors) where the MDP firm enters.
- Local plants (inventors) may be able to assimilate knowledge from the MDP firm through observation, imitation and interaction.

Local firms in the losing county
Local firms in the winning county
Local firms in the losing county
Existing patents of the MDP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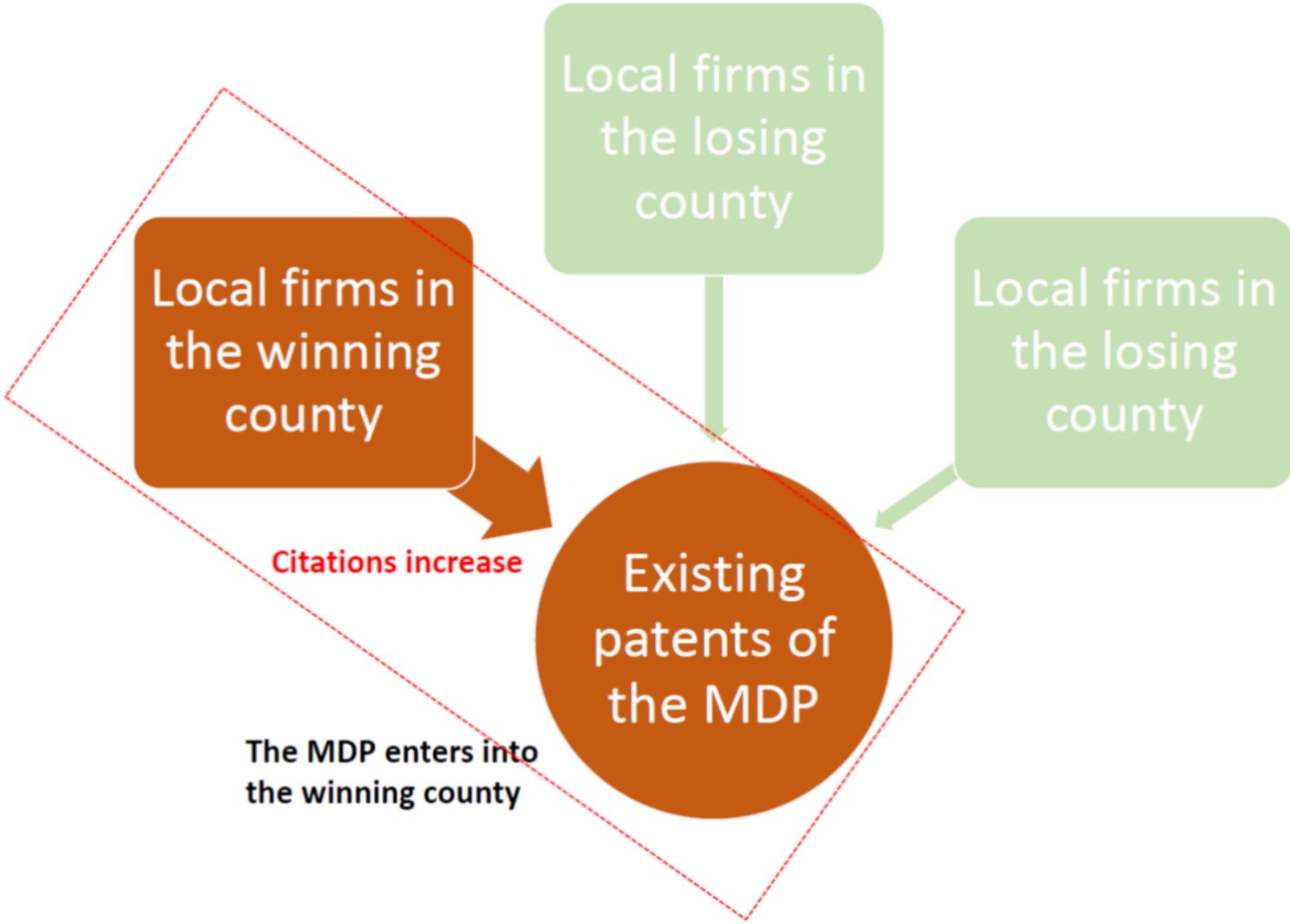
The MDP enters into the winning county


Local firms in the losing county
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Citations increase
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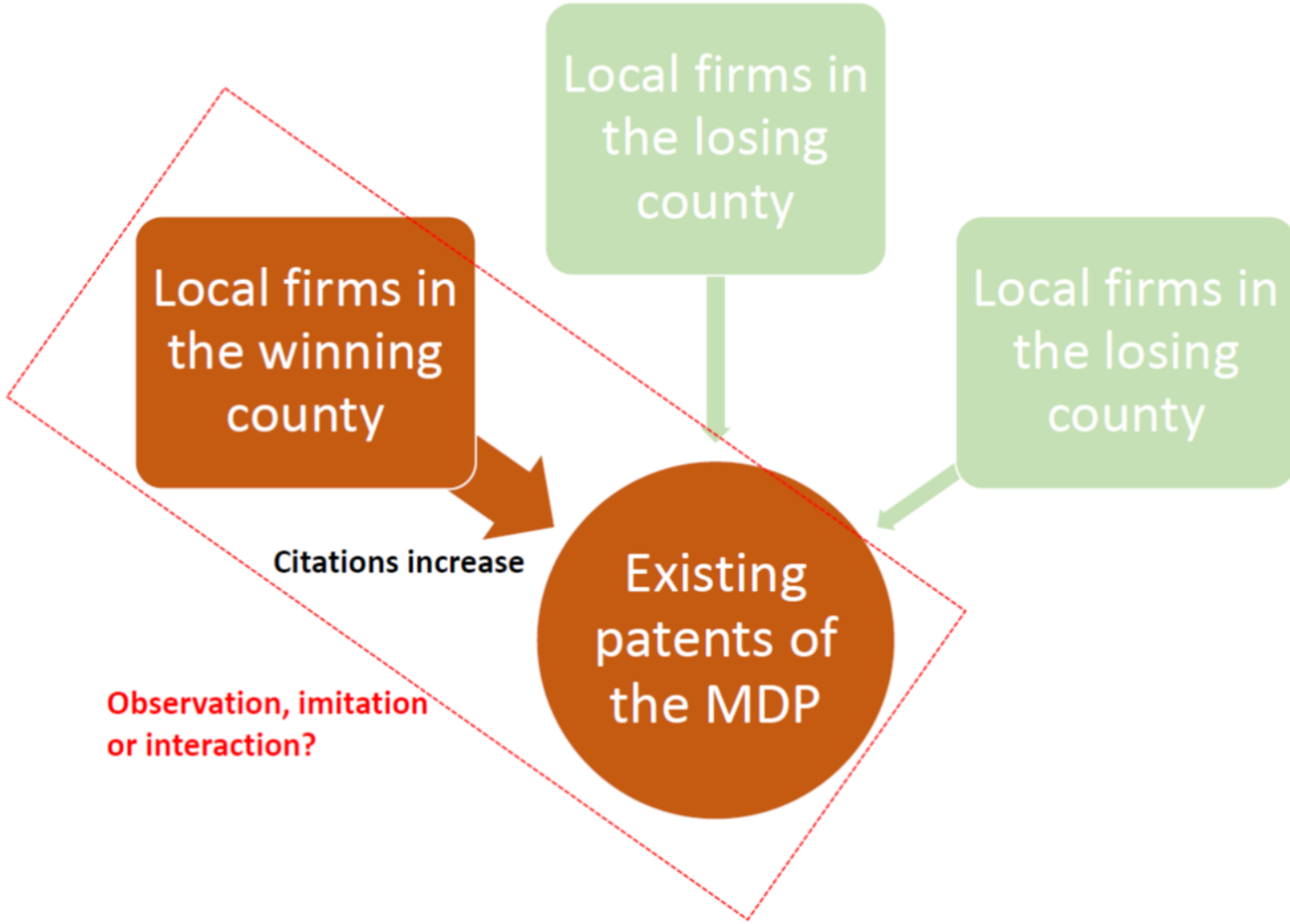
The MDP enters into the winning county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Local firms in the winning county
Local firms in the losing county
Citations increase
Existing patents of the MDP
Observation, imitation or interaction?

# 1: Identification

Rely on the reported location rankings (à la Greenstone and Moretti, 2004; Greenstone et al., 2010)

- treated county (*winner*): the MDP ultimately chose to enter.
- control counties (*losers*): the MDP considered but did not end up locating.

⇒ The authors provide much supporting evidence (pre-existing trends etc).

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Other research design (more random?):

- Abebe, McMillan, Seranelli (2018): assignment of land by government
- Inoue, Nakajima, Saito (2017): partial opening of high-speed rail

# 2: Channel

*A key contribution in our paper is to address a channel by which local firms can benefit from the entry of large corporations into their counties. (page 1)*

- For each MDP firms:
  - Stock of patents
  - How many citations they received
  - The location of the inventors citing the MDP firms stock of patents
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$\Rightarrow$ Is this through observation, imitation or interaction?

$\Rightarrow$ Is this a driver in increasing productivity of local incumbent plants?

# 3: Outcome

- *"Most patents are the result of collaborative work and produced by teams of heterogeneous sizes"* (Akcigit et al. 2018)
- Collaborative patents: 51 % among Japanese patent holding firms and 18 % among U.S. patent holding firms (Inoue et al. 2017)

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- The paper can go further in this direction, ideally with firm/plant level performance data.
- It can show the importance of geographical proximity in enhancing knowledge spillovers.

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Two components of the paper are:

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Nice data of firms/plants, inventors, patents and citations with geo. information

- merge with micro-level performance data?
- want to see a channel: "knowledge flow $\Rightarrow$ productivity improvement"