

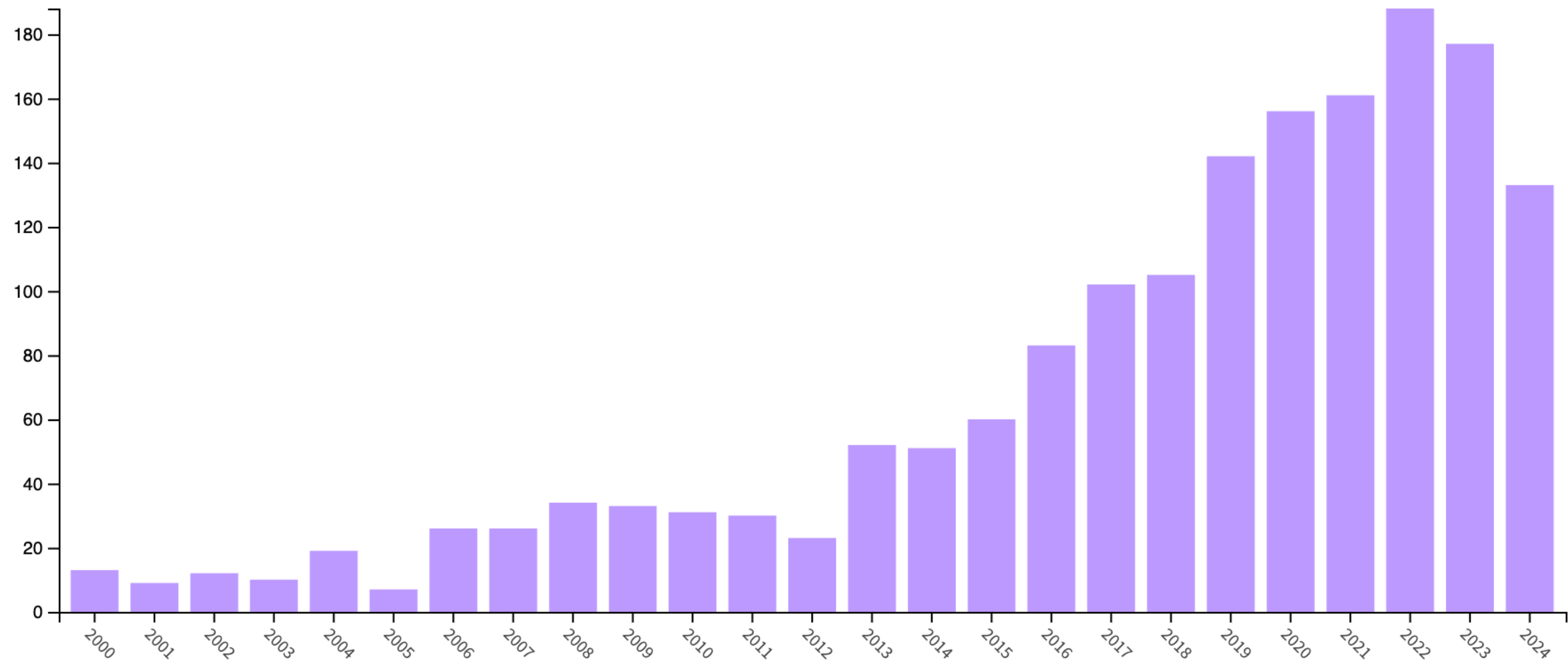
CAUSALITY IN SMALL-N

QUALITATIVE RESEARCH:

INTRODUCTION TO PROCESS-TRACING

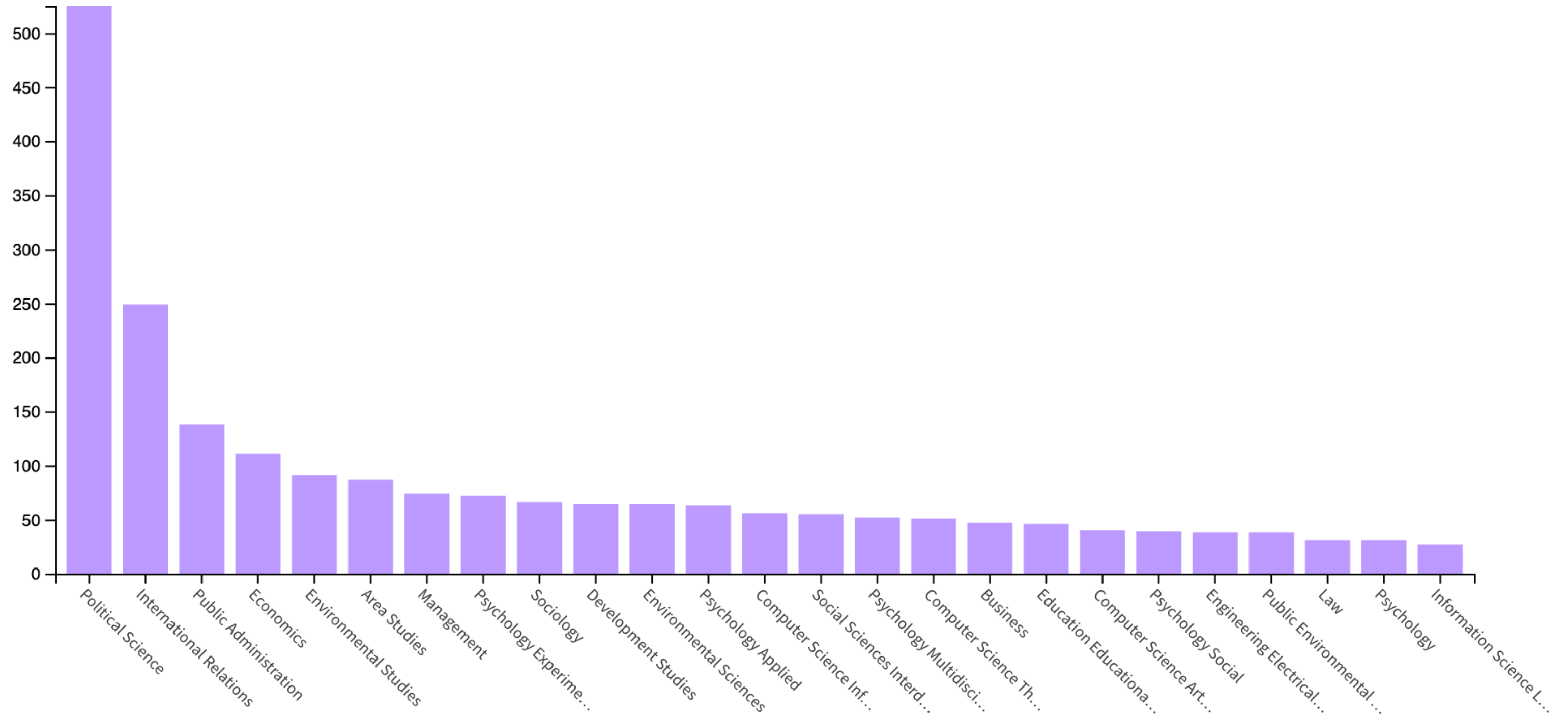
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PT: INCREASINGLY POPULAR METHOD



Source: Web of Science

MAINLY IN THE SOCIAL SCIENCES



Source: Web of Science

DOMINANT SCHOLARLY VIEW ON CAUSALITY

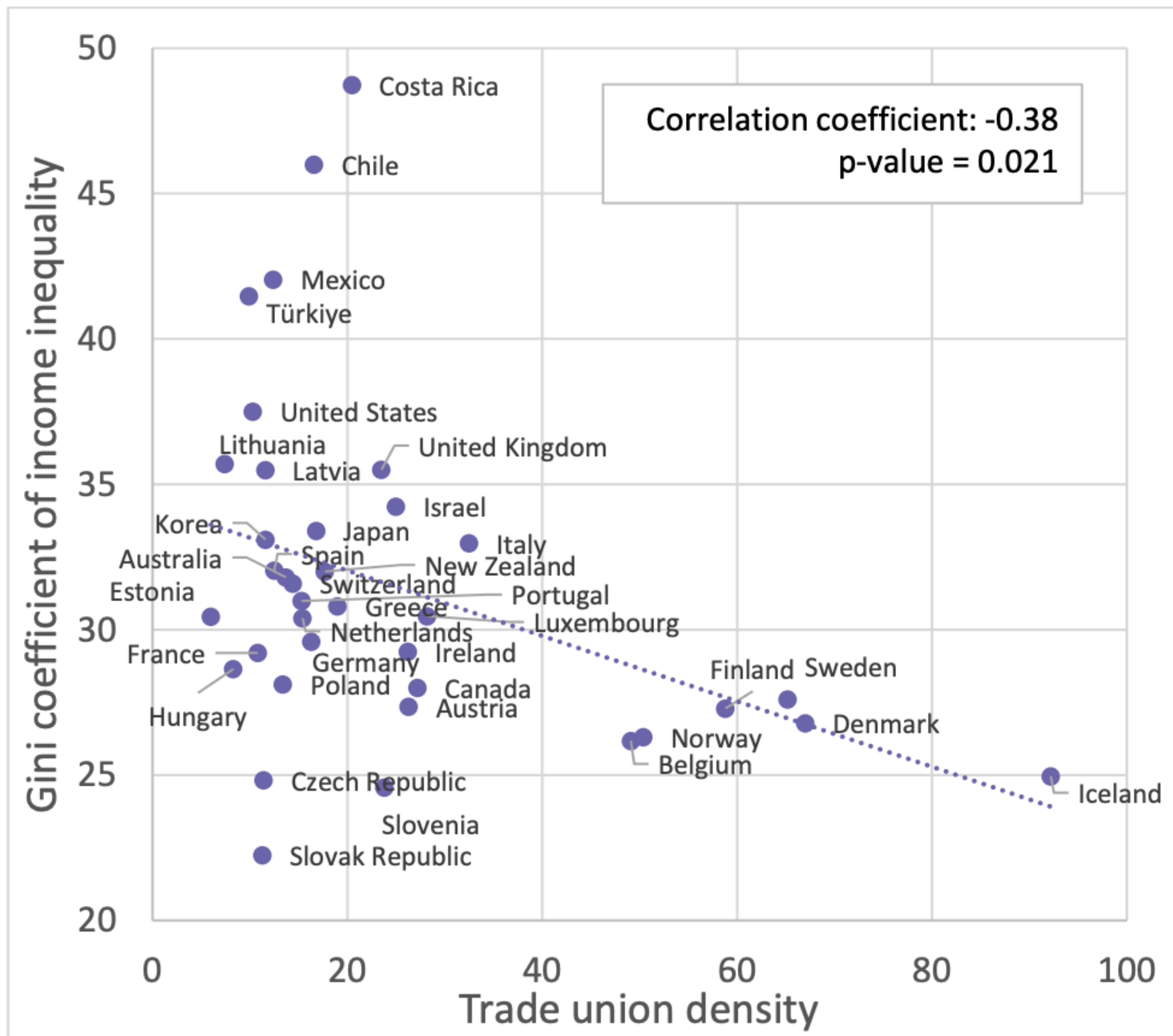
- “**Counterfactual**” or “**covariational**” definition
- Causality as “**difference-making**”:
X is a cause of Y if a different value for X leads to a different value for Y
- Causality is assumed to be not directly observable, but to be detectable by studying **cause-effect relationships**

TESTABLE THROUGH LARGE-N QUANTITATIVE STUDIES

- **Ideal**: randomized controlled trial (**RCT**)
 - Isolate effect of treatment X on outcome Y through randomization and control
- **Second-best** (if RCT not possible for practical or ethical reasons): **observational statistical analyses**
 - Isolate effect of cause X on outcome Y by controlling for confounding variables

LIMITATIONS OF THIS VIEW ON CAUSALITY

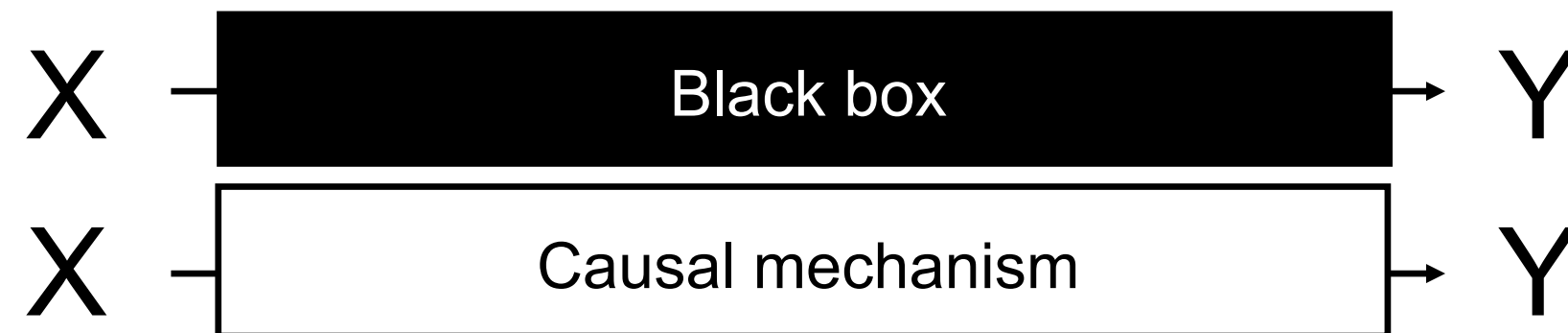
- **Covariation is not causality**
 - Reversed causality?
 - Selection bias?
 - Ommitted confounding variables?
- **No direct test of causal relationship:** why/how does X cause Y?
- E.g. UN peacekeeping missions -> peace (duration)
- E.g. Trade union density -> income inequality



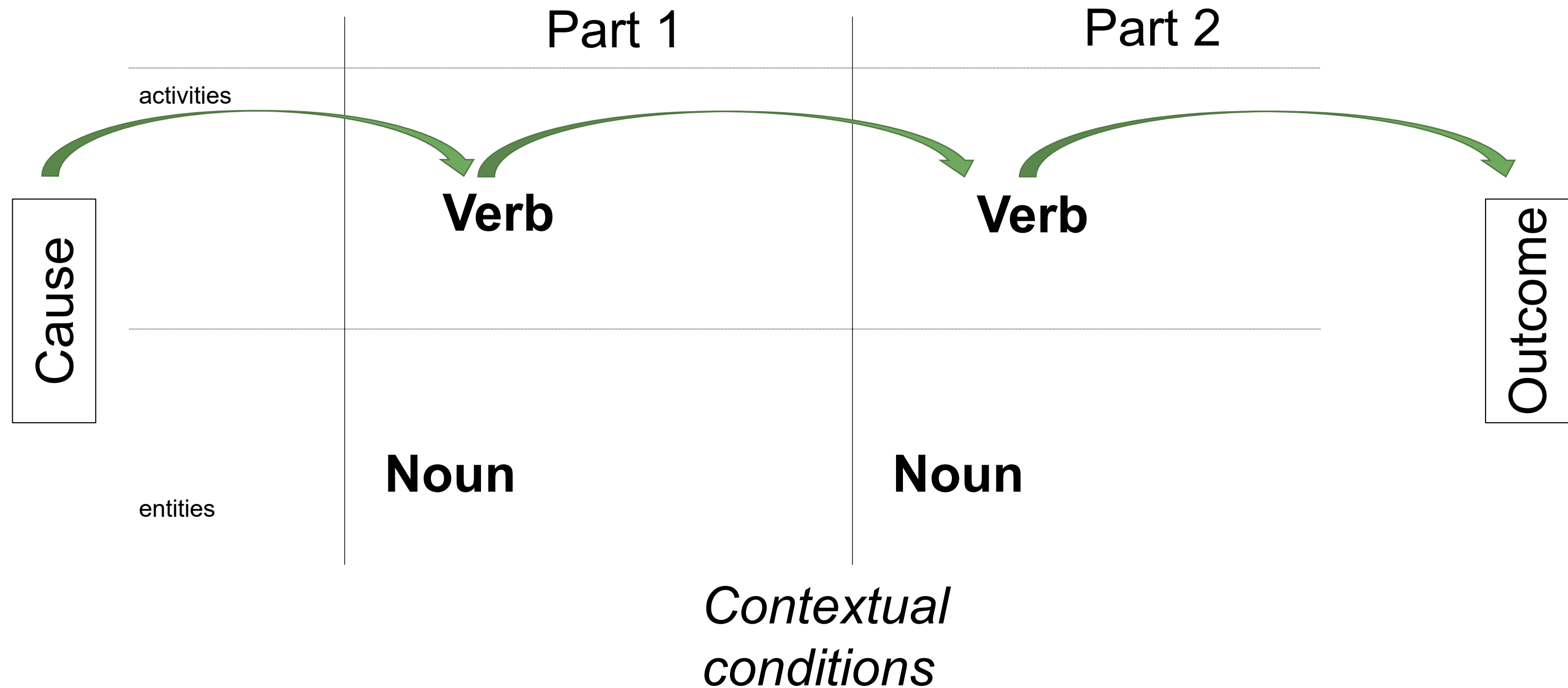
Source:
Darvas, Giotti
& Sekut 2023

DIFFERENT VIEW ON CAUSALITY: CAUSAL MECHANISM

- CM = system of interlocking parts that transmit causal powers between a (set of) cause(s) and an outcome
- Assumes that causality/causal processes are **directly observable**
- “Opening the black box”



CAUSAL MECHANISM AS SYSTEM



Can be more complex, e.g. more parts, different causes, feedback loops, etc.

ADDED VALUE OF PROCESS-TRACING

- Allows to **confirm causal relationship** (posited through cross-case inference) with within-case evidence
- Allows to show **how** a cause leads to an outcome
- Provides detailed **case-specific knowledge** (strong internal validity)

Limitations:

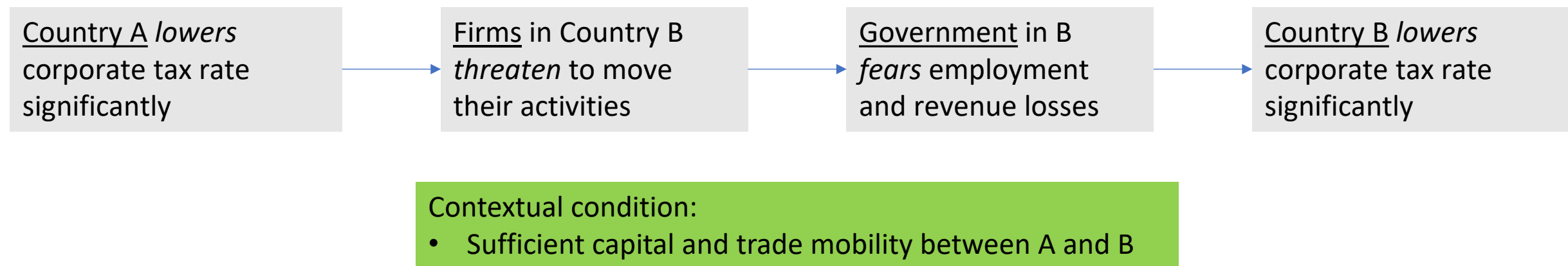
- Time- and energy-intensive
- Limited external validity

KEY STEPS IN (TT)PT ANALYSIS

1. Conceptualisation
 2. Case selection
 3. Operationalization
 4. Collection and evaluation of data
 5. Generalization
- (different order in theory-building PT)

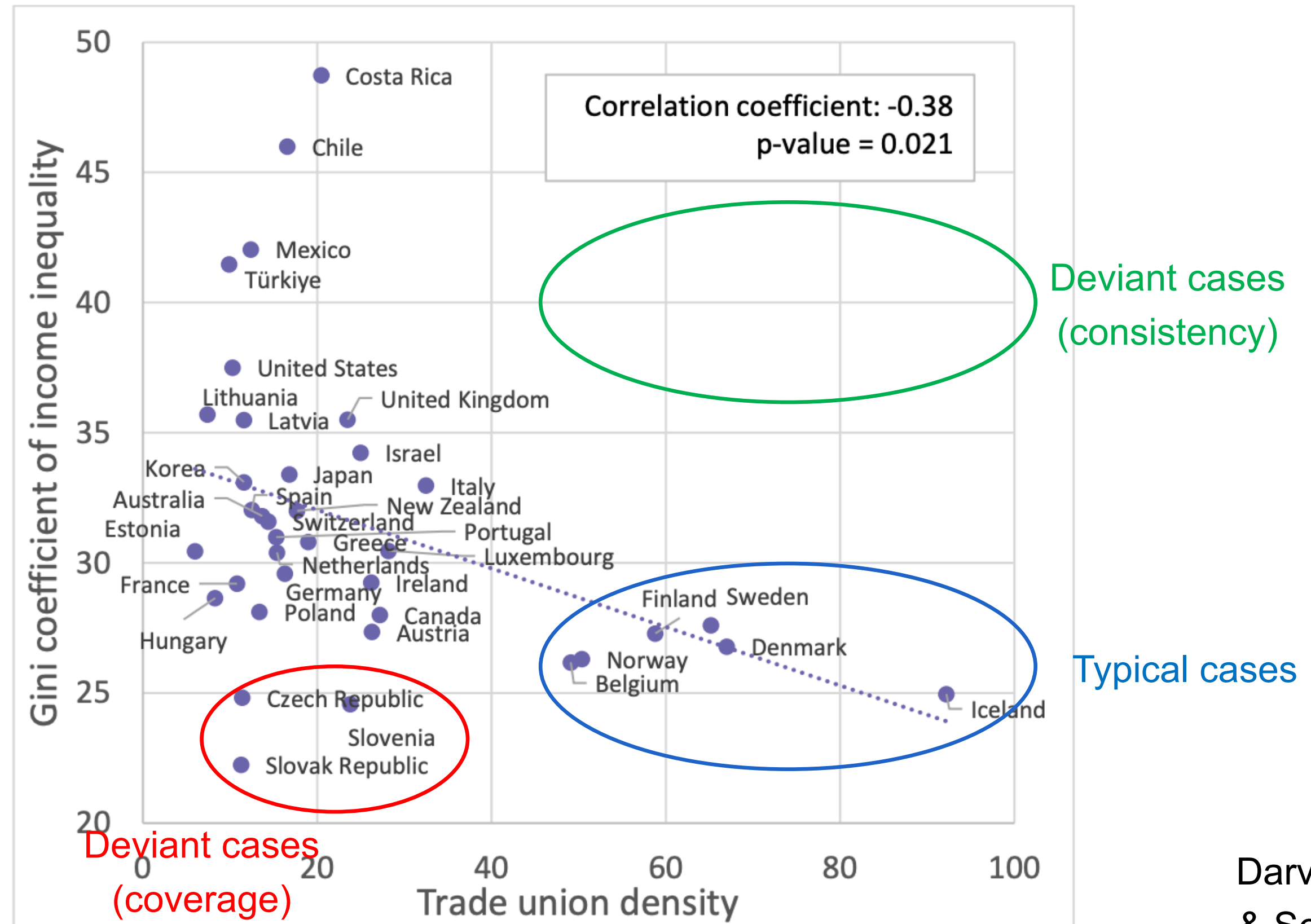
CONCEPTUALIZATION

- Translation of theory to causal mechanism
- E.g. tax competition



- Provides **sufficient** explanation for how X causes Y, with each step **necessary** part of CM

CASE SELECTION



OPERATIONALIZATION

- Making concepts measurable?
- Data collection?
- Making inferences?

➤ Inspired by **Bayesian logic**:

Confidence we can have in an explanation (CM) depends on:

1. Our prior confidence in this explanation
2. The relationship between evidence we found (or not), our own explanation and alternative explanations

$$P(A|E) = \frac{P(E|A)P(A)}{P(E|A)P(A) + P(E|not A)P(not A)}$$

COLLECTION AND EVALUATION OF DATA

- Data need to be interpreted to become evidence
- Check for:
 - **False positives** = is presence of evidence evidence of presence?
 - **False negatives** = is absence of evidence evidence of absence?

GENERALIZATION

- Difficult based on a single case study
 - One solution is to combine PT with comparative methods
 - Problem: “**mechanistic heterogeneity**”
 - Other solution: “**snowballing outward**”: quick PT of cases that are gradually more different from original case