Ewaluacja

IV Konferencja Ewaluacyjna

Ewaluacja - kluczowy instrument poprawy jakości działań administracji publicznej

Warszawa, 17.10.2008

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Rola sieci w rozwoju obszarów wiejskich i ich implikacje dla ewaluacji ex-ante. Przypadek sieci informacji i regionalnej dyfuzji innowacji

NARODOWA STRATEGIA SPÓJNOŚCI

MINISTERSTWO ROZWOJU REGIONALNEGO

PARP

UNIA EUROPEJSKA
EUROPEJSKI FUNDUSZ ROZWOJU REGIONALNEGO

advanced-eval

EVALUATION OF EU-RURAL DEVELOPMENT PROGRAMS

Development and application of advanced quantitative methods to ex-ante and ex-post evaluations of rural development programmes in the EU

The role of networks in rural development and its implication for ex-ante evaluation of rural policy:

The case of information networks and regional diffusion of innovations

by

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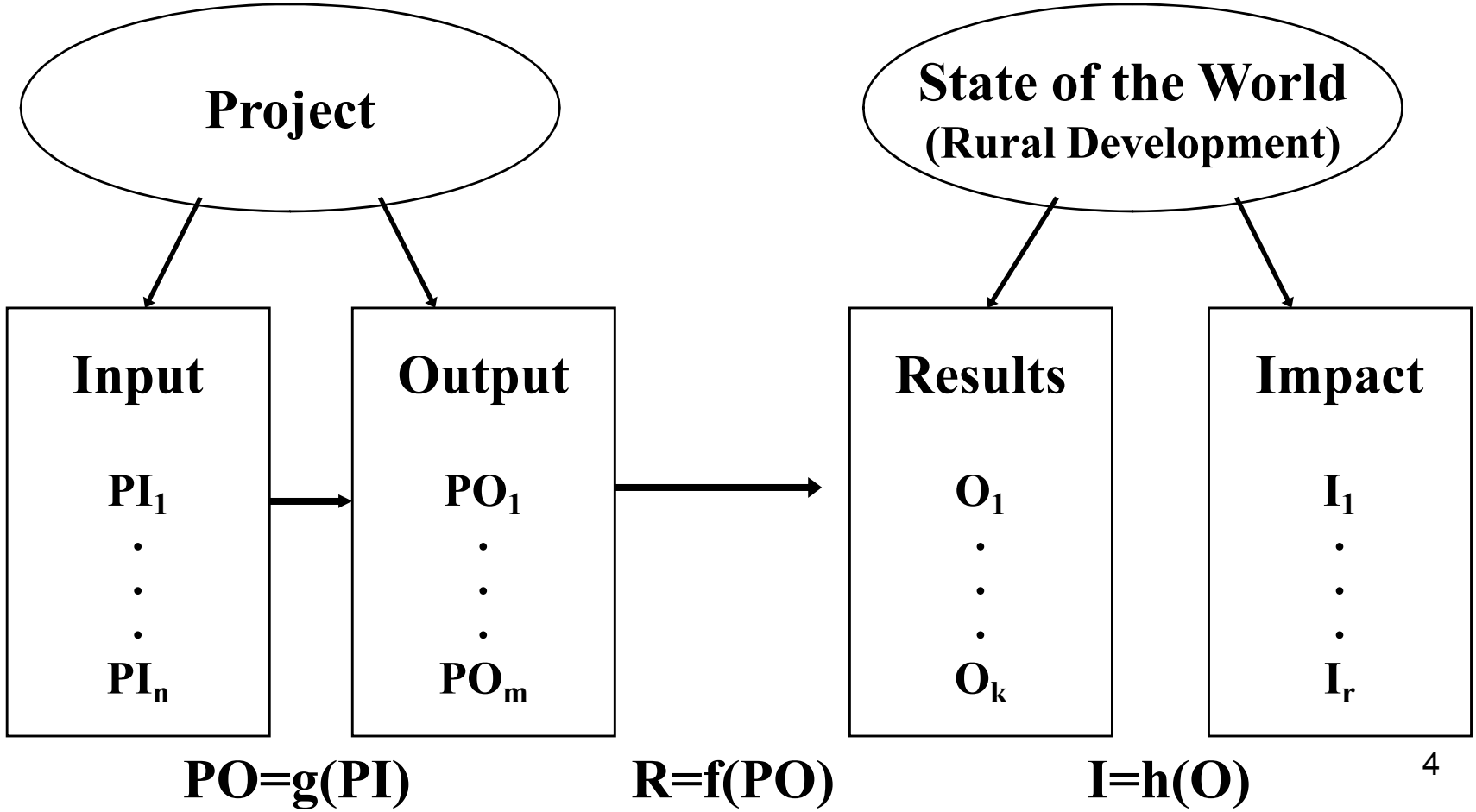
17 October Warsaw

What is evaluation?

Why to evaluate?

How to evaluate?

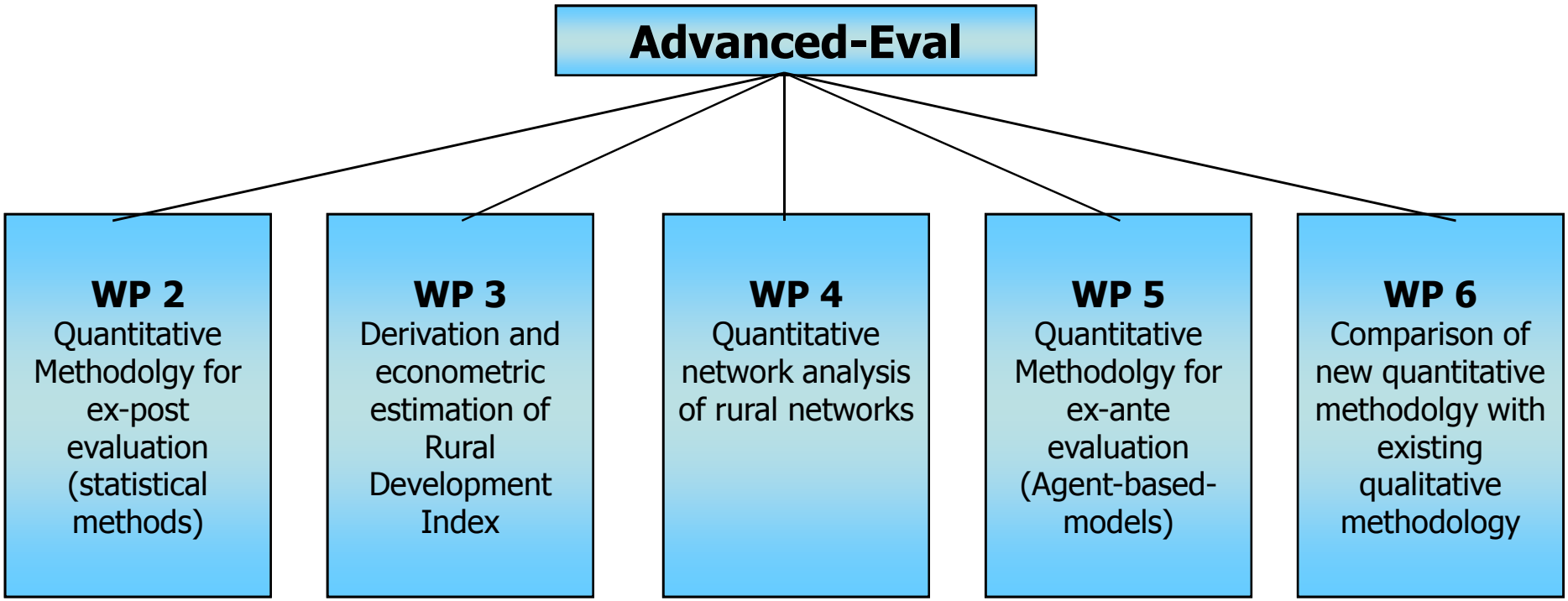
Project Evaluation: A General Framework



Project Objectives

1. Quantitative methods of ex-post evaluation of RD-programmes.
2. Quantitative methods of ex-ante evaluation of RD-programmes.
3. Advanced theory of rural development.

Project Structure



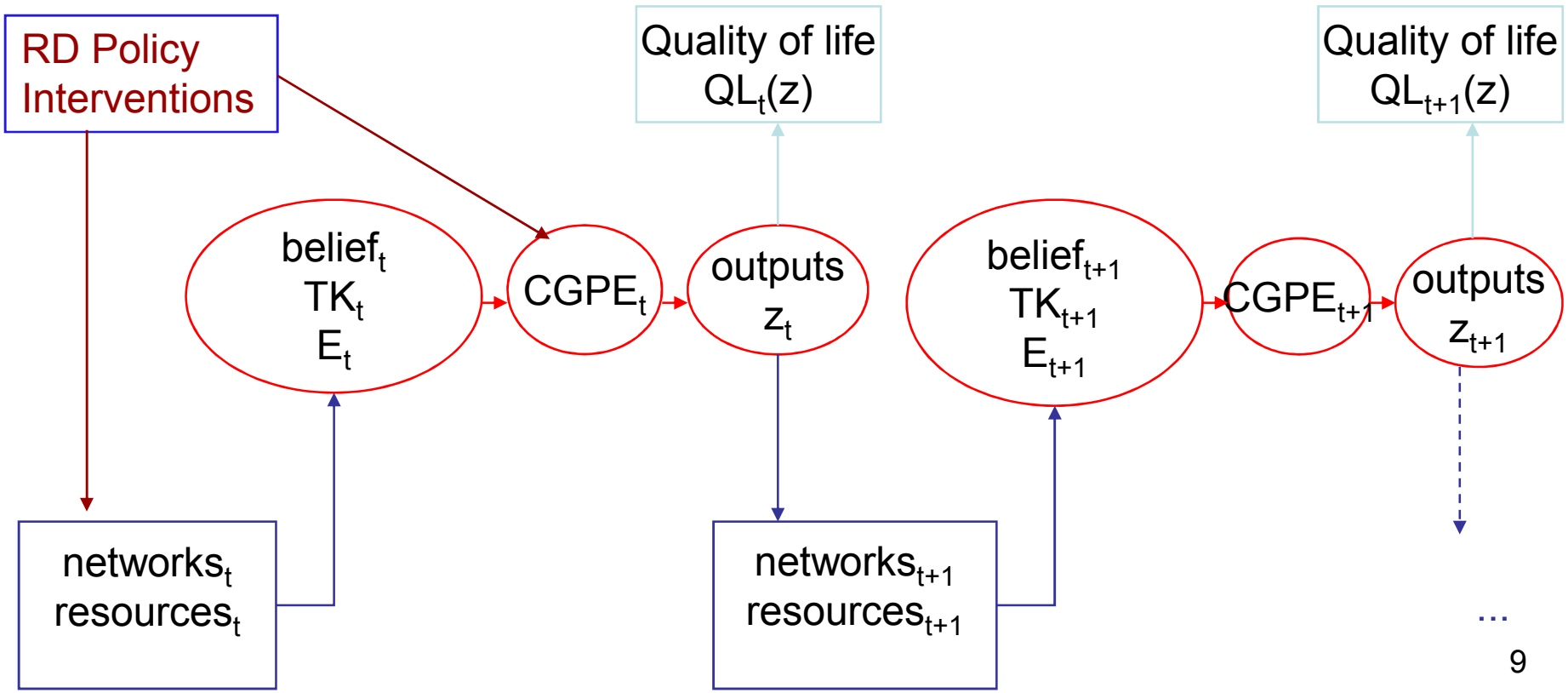
- Ex ante Evaluation **Why?** and **How?**
- Parametric and Nonparamteric (Matching) approaches
- Simulation based on a CGPE-ABM

Ex ante evaluation

Applying a **C**omputable **G**eneral **P**olitical Economy **E**quilibrium Model linked with a **A**gent-**B**ased-**M**odel (**CGPE-ABM**)

- General equilibrium effects (interregional linkages, multiplier)
- Endogenous local government behavior
- Non-market interaction among agents (Networks)
- Bounded rationality of agents (belief formation)

Schematic Structure of the CGPE-ABM



Research questions

1. How can networks be measured empirically?

2. How is economic performance determined by network structures?

3. How is governmental performance determined by network structures?

Information Networks, Knowledge Spillovers and Regional Economic Growth

- New Endogenpous Growth Theory focus on Knowledge Spillovers between leading and follower regions (Romer 1992, Grossmann & Helpman 1991)
- Central determinants of regional growth are technological knowledge gap and firms‘ adoption capacity (Nelson&Phelps 1966, Rogers 2003)
- **Knowledge diffusion** between firms within follower region is **neglected**!

Information Networks, Knowledge Spillovers and Regional Economic Growth

- Technological progress is a collective process, since adoption capacity of individual firm is rather low.
- Adaption capacity crucially depends on accumulated knowledge.
- It is much easier to imitate from other firms in the region than to adopt knowledge from an external source (leading region or learning by doing).

Set-up of ABM-model: Knowledge accumulation in an Information Network

1. **Generation and transmission of new knowledge**

$$K_{iT} = \sum_{t=1}^{T_i} k_t = T_i, \quad with \quad T_i \leq T$$
$$\Delta K^0_{iT} = \begin{matrix} 1 & if\ m^e_i \geq 1 \\ 0 & if\ m^e_i < 1 \end{matrix} \qquad (10)$$

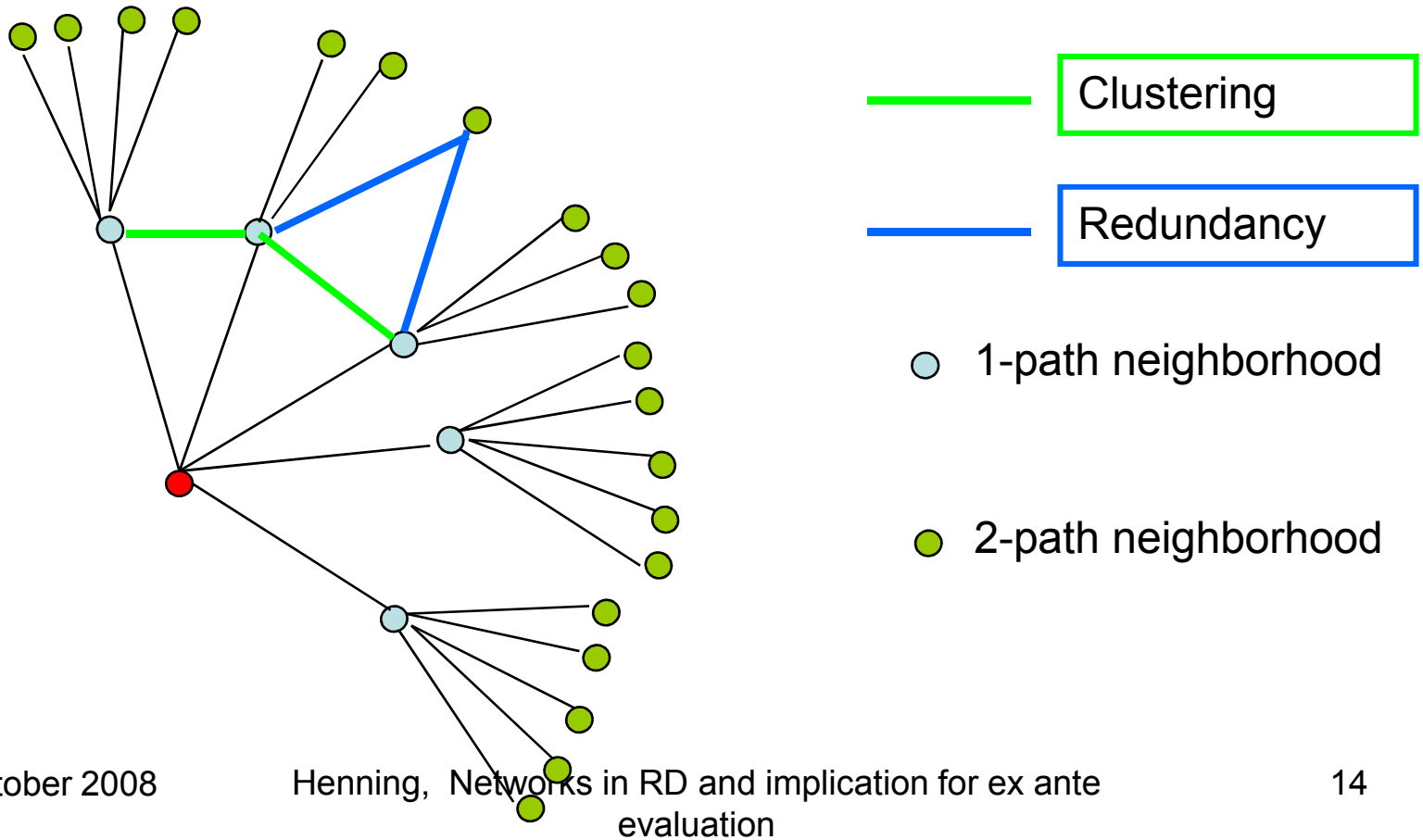
2. **Diffusion of knowledge between regional firms:**

$$\Delta K^N_{iT} = \begin{matrix} 1 & if \quad K_{iT} + \Delta K^0_{iT} < MaxM_{iT} \\ 0 & otherwise \end{matrix}$$

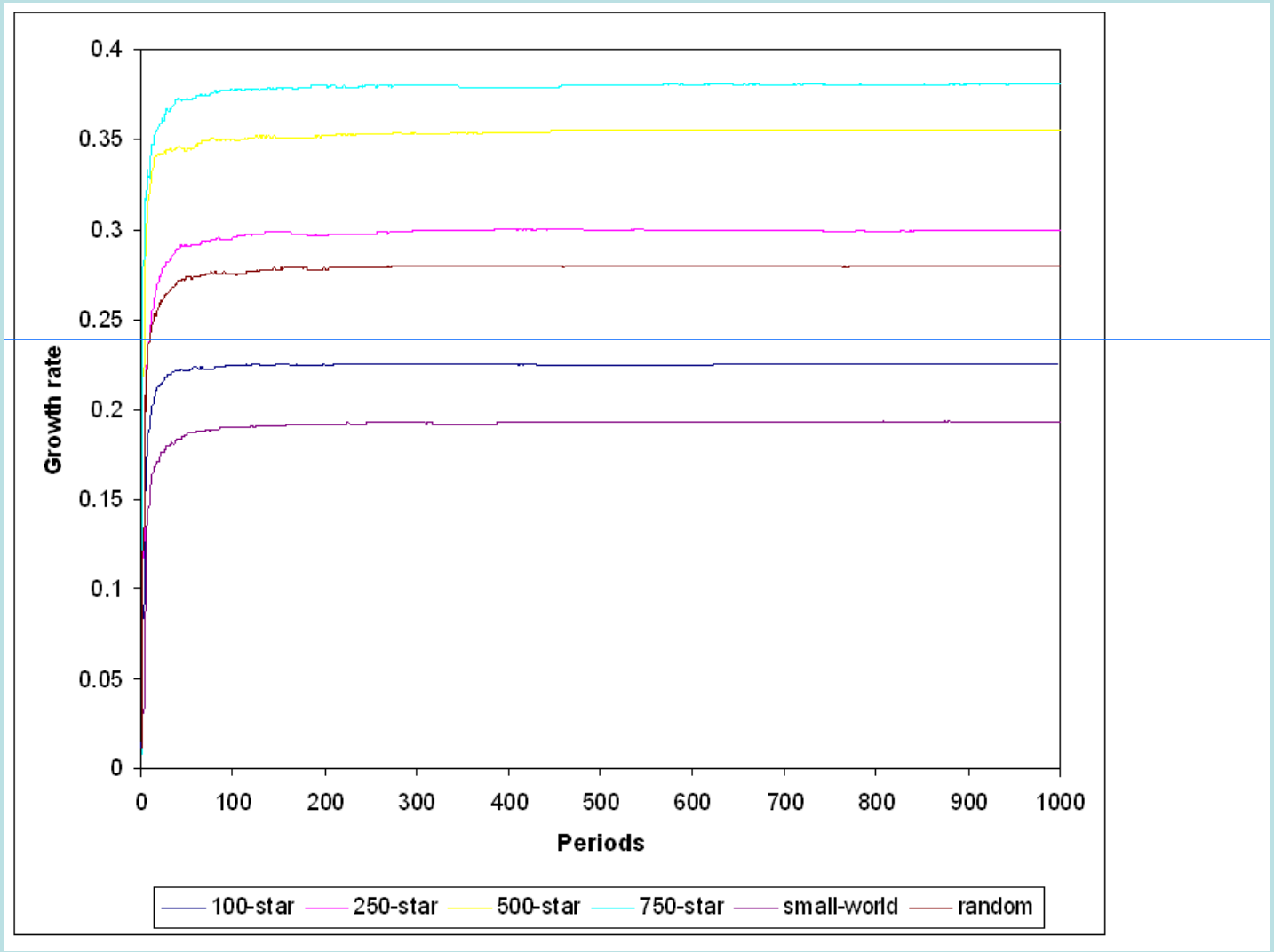
,where $MaxM_{iT}$ is the maximum of the set of received information, M_{iT}. : $M_{iT} = \left\{ K_{jT} + \Delta K^0_{jT} \middle| d_{ijT} z_{ij} = 1 \right\}$,

3. **Knowledge accumulation:** $K_{iT+1} = K_{iT} + \Delta K^0_{iT} + \Delta K^N_{iT}$

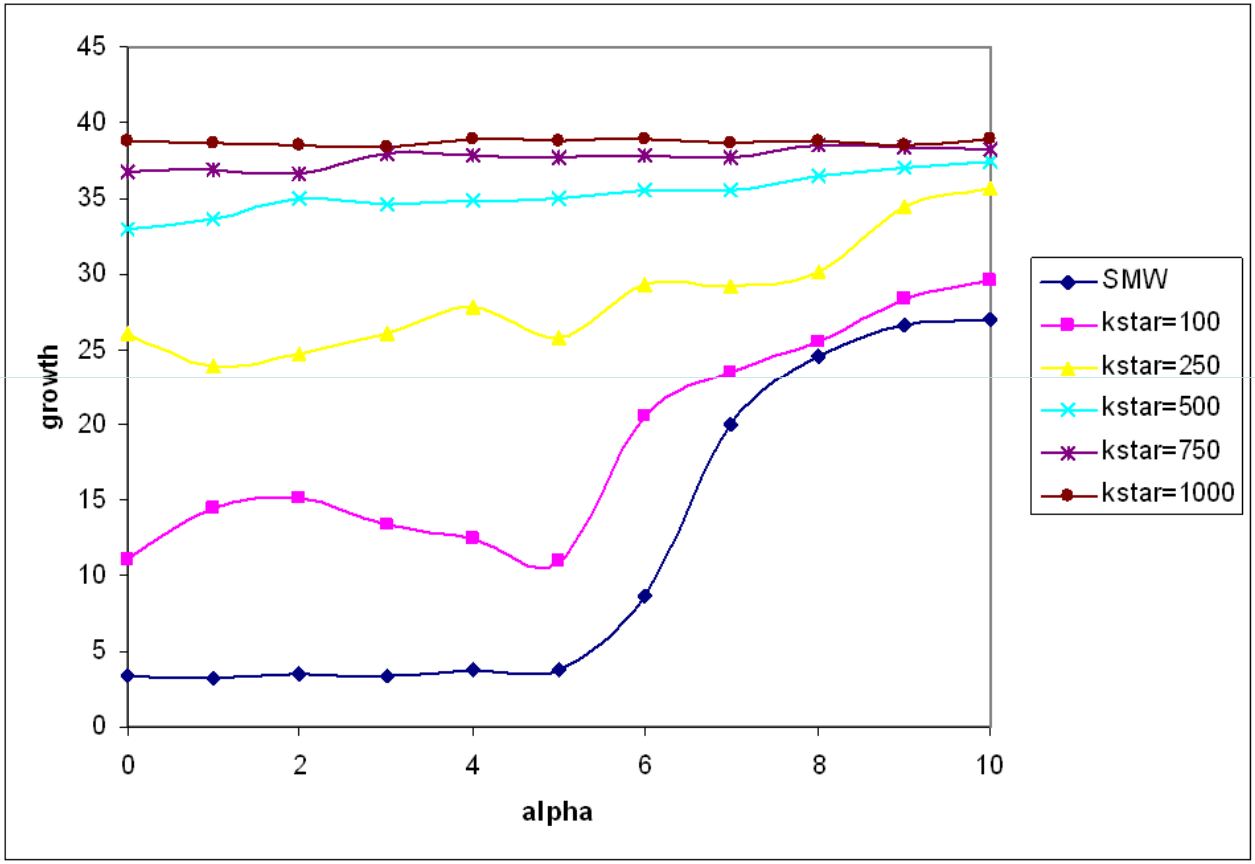
Firm Network Z



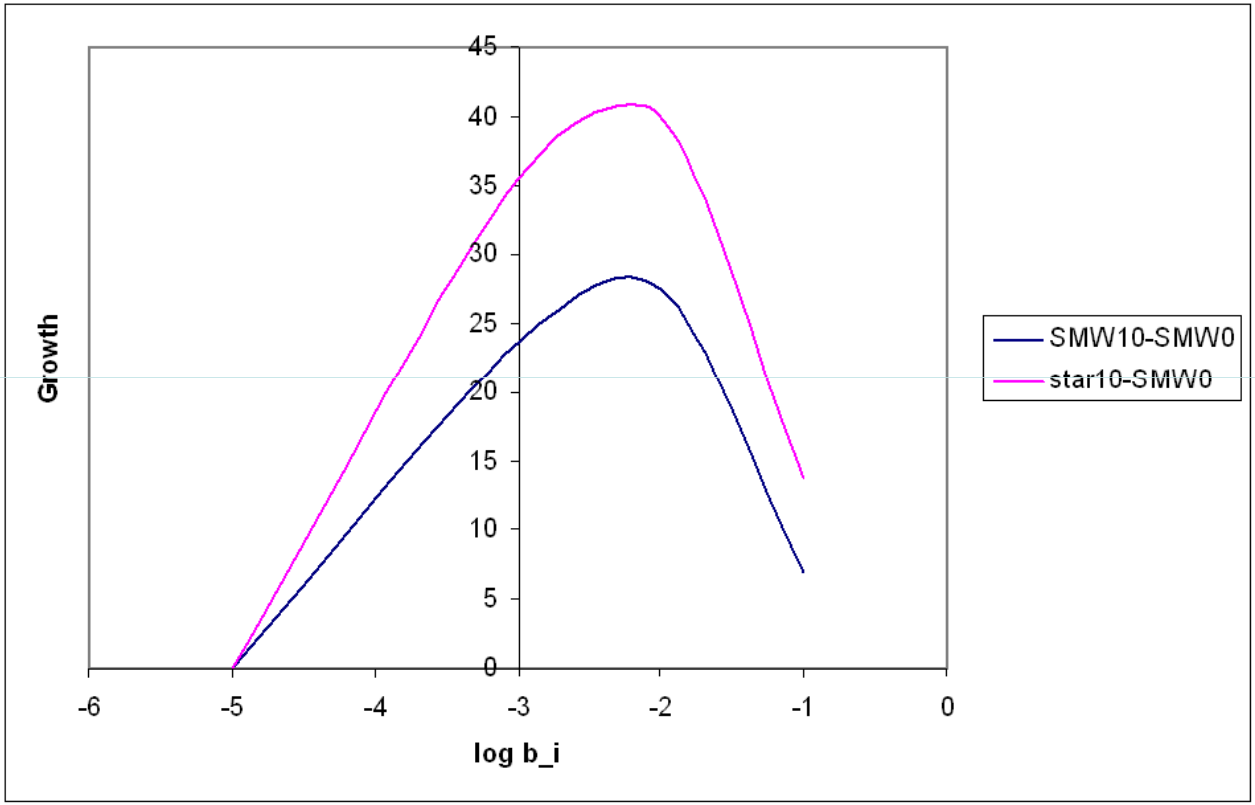
Network type and knowledge accumulation



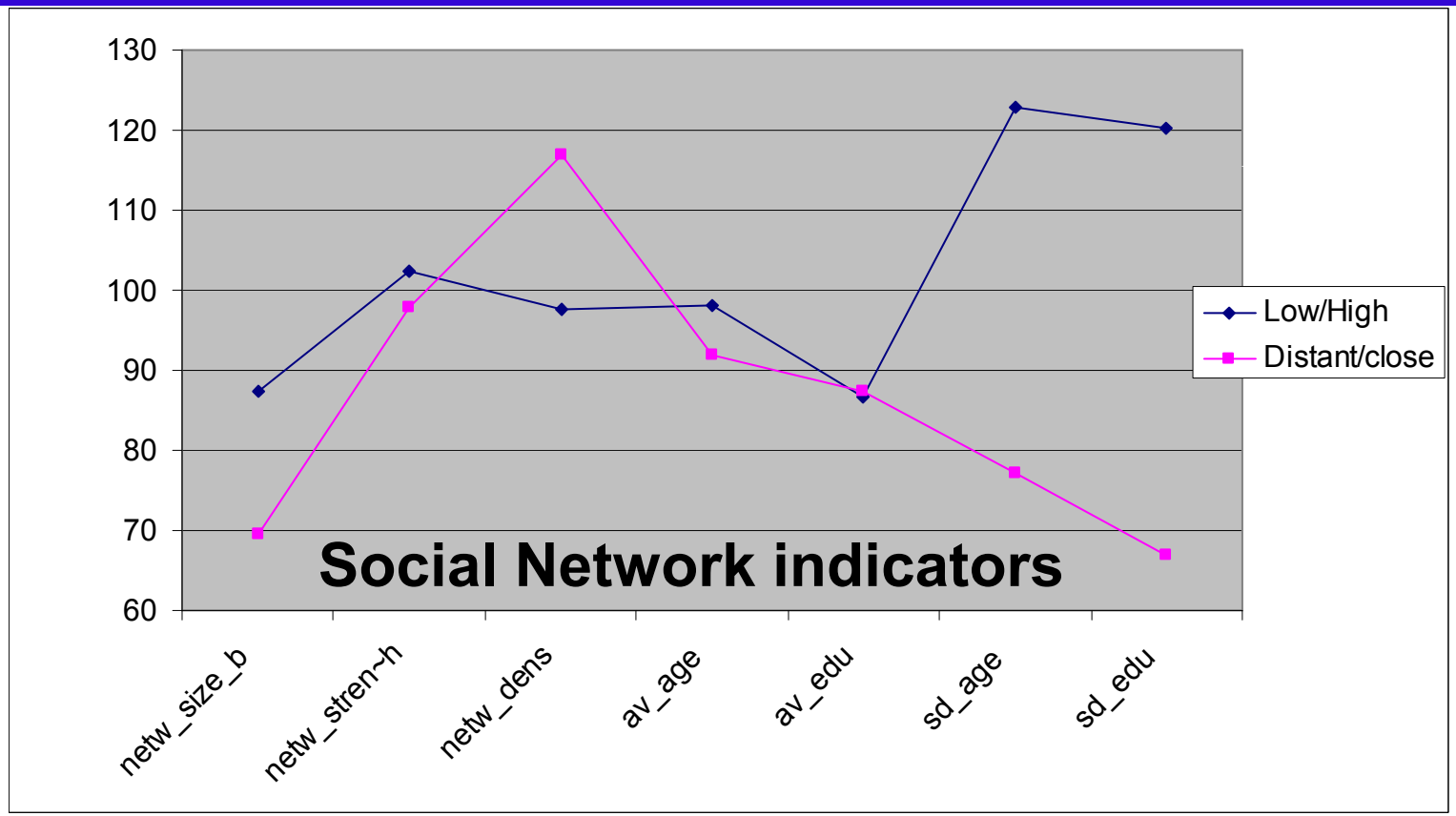
Clustering and knowledge accumulation



Innovation Intensity (b_i) and impact of network structures



Comparative Network studies in high and low performing rural regions in Poland and Slovakia



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