Some comments on "Research and innovation in agriculture: beyond productivity?"

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Initial reflections

- Davide's presentation critically assesses the way linkages between research investment/performance and productivity growth are assessed
- Need to better embrace complexity of agricultural innovation, and multiple sources and goals of agricultural innovation
- I tend to agree with this view, and will provide mainly some reflections on directions for future research



Recommendation set 1

Better representations of goods and technologies:

- Input and output as bundles of attributes (compounds)
- potential from combination

1) Scope for analysis of combined effect of research and non-research related indicators to measure innovation (e.g. emergence new network configurations, new value propositions, social innovations)

2) Scope for balanced analysis of negative spillovers of scaling new technologies



Scaling has different types of benefits and costs



WAGENINGEN UR For quality of life

Recommendation set 2

Better understanding the role of (changing) actors and institutions:

- *entrepreneurship in research, knowledge exploitation and social construction of successful technologies*
- new business models

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- new connections with consumers
- new role and design of policies

Interactive innovation models imply different roles for research beyond technology creation and hence different contributions – do measurements capture these different inputs and outputs?



New roles for research(ers)

Traditional roles

- Literature analysis
- Knowledge & technology production
- Test hypotheses
- Experimentation
- Process tracing
- Knowledge translation and packaging
- Redefine research agenda's

New roles

- Facilitate interactions
 between stakeholders
- Stimulate capacity development and learning
- Create enabling environment (lobby/ politics)
- Address structural constraints/ power dynamics

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Towards dynamic research configurations: A framework for reflection on the contribution of research to policy and innovation processes

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Recommendation set 3

investigation of new potential tools:

- effects and mechanisms
- contamination among existing tools could be a pathway, e.g. see LCA
- but may be, it is time for some more radical innovation

Scope for 'innovation lifecycle analysis', drawing on insights from e.g. causal process tracing.

Session 3.3, presentation Bartolini et al.



Hence: Measuring impact in complex systems



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Thank you for your attention!



