

Market-based approaches to food safety and animal health interventions: Lessons from smallholder pig value chains in Viet Nam

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Background

- **Food safety and animal health issues:** Increasingly important constraints to smallholder pig production in Viet Nam
- **Recent studies:** the significant prevalence of animal disease and food-borne pathogens inherent within the Vietnamese pig sector
- Important **negative livelihoods effects** on smallholder pig producers and other value chain actors, as well as important **public health impacts**

Objectives

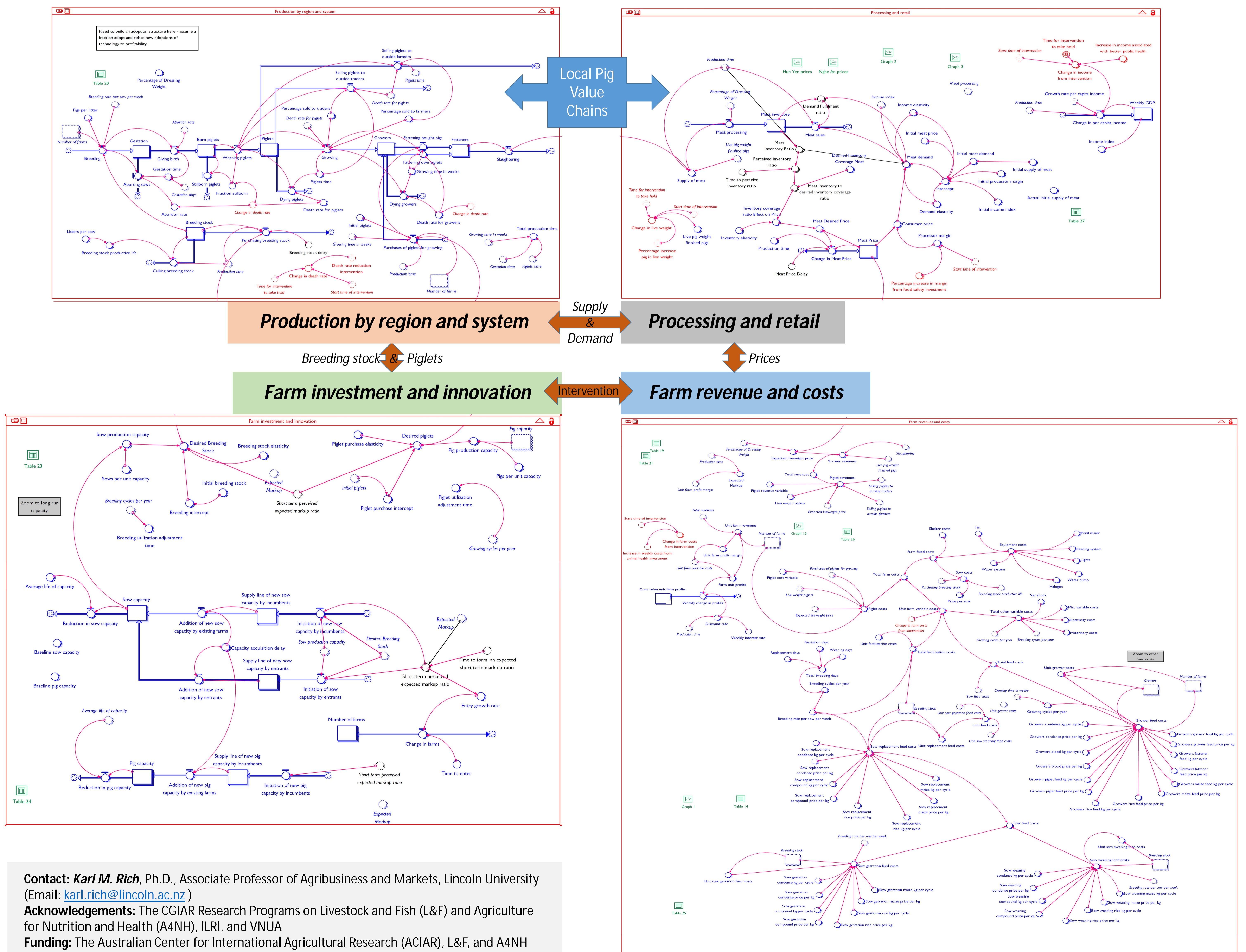
- To identify appropriate *ex-ante* market-based policy responses that take into account the tradeoffs between improved animal health and food safety outcomes and their associated costs for different value chain actors as a means of developing chain-level solutions for their control

Materials and methods

- Data collected in 2014 from a sample of 1000 farmers and other value chain (VC) actors in the pig value chains of two provinces in Vietnam (Hung Yen and Nghe An)
- Employed a system dynamics (SD) analysis framework (using *iThink*®) to explore *ex-ante* disease risks, impacts, and policy options

Results

- Constructed a SD model of the pig VC that combines a **detailed model of herd production and marketing** with modules on **short- and long-term investment** in pig capacity, and decisions by VC actors to **adopt different innovations**
- Model results highlight the **feedbacks between different actors** in the chain to identify both the potential entry points for upgrading food safety and animal health as well as potential areas of tension within the chain that may undermine uptake
- **Interventions at nodal levels** (e.g. only at farm or slaughterhouse level) are **less cost-effective and sustainable** than those that jointly enhance incentives for control across the value chain, as weak links downstream undermine the ability of producers to sustain good health practices.



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