Gaming to gain insight in Dutch pork farmer strategic decision-making

Focusing on social influence

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Pictures taken from www.lagd.nl; foodlog.nl
The Dutch pork sector

Wanted

Intermediate markets
Niche markets
Added-value markets

Pork sector now

Innovations

Important actor(s)

• Adaptive
• Heterogeneity
• Normative influence

Step 1: Farmer decision-making

* Shaun the Sheep Farmer
** Adapted from www.shutterstock.com
First findings: framework

What factors influence pork farmer strategic decision-making?

Ambrosius et al, 2015.
First findings: framework

What factors influence pork farmer strategic decision-making?

Ambrosius et al, 2015.
Next step: empirically assess social influence

Gain insight in whether and how social influence mechanisms play a role amongst farmers in innovation adoption & how this effects innovation diffusion
This presentation: Decisions in Game Design

Game design challenges:
1. Trigger imagination & exploration
2. Playable & understandable
3. Be able to test relevance of social influence mechanisms

This presentation:
1. System representation – farm resources and external environment
2. Social influence mechanisms framework
Game design: Pork system representation

1. **Possibility to invest**

2. **Strategies: should not differ in economic attractiveness**

**Real world**

Possibility to invest:
- Lifetime current housing system
- Loan
- Capital
- Farm performance
- Entrepreneurial skills

Strategies (added-value markets):
- Ideology
- Management style
- Investment costs
- Information on demand and market share

**Game**

Possibility to invest:
- Capital
- Farm size
- optional: loan

Strategies (added-value markets):
- Ideology
- Investment costs
- 3 Markets
- Information on demand and market share
# Game design: social influence

<table>
<thead>
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<th>Theoretical assumptions</th>
<th>Real world</th>
<th>Game: measure social influence</th>
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<tbody>
<tr>
<td><strong>Identity theory</strong></td>
<td><strong>Identity:</strong> farmer neighbours farmers with similar identity board members</td>
<td><strong>Identity:</strong> Study group Questionnaire Observation: film Sheet Debriefing</td>
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<tr>
<td>identity</td>
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<td>Important others: Advisors</td>
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<tr>
<td>similarity</td>
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<td>leadership</td>
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<td>Important individuals</td>
<td><strong>Important others:</strong> advisors wife or husband friends</td>
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- Idealist
- Craftsman
- Entrepreneur
- Constructivist
- Shifter
Game Design: Participants, Roles and Rules

Participants:
study group farmers

Roles:
pork farmers
advisors

Medium:
Board game

Game steps:

1. Choose strategy
2. Get income
3. Pay back loan (optional)

Rules:
Communication allowed
Can ask advisor for information
(information about the % of farmers that adopted a certain strategy)
Some first results

- People who collaborate and talk play the same strategy.
- Non-farmer participants want to have the option to quit. Identity seems important.
- Interview pointed towards the representation of risk as important.
Conclusions & Future work

Conclusions:

- Game design is determined by its goal:
  - Level of abstraction
  - Choice for board game
  - Choice for participants and roles
- Identity does seem important
- Collaboration with colleague seems to influence strategy

Future work:

- Crashtests and game workshops
- Test the measurement of social influence

Thank you!