Supply Chain Management in the Agri-Food Industry

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**ASsured, SaFE and Traceable food (ASSET)**

**Why invest in traceability?**

- Generate a competitive advantage.
- Improve operational performance.
- Regulation compliance.
- New RFID technology.
- Risk management.
- Increasing frequency/severity of recalls (e.g. BSE, Chinese milk, Irish Pork)

**Annual trends in EU food health risk notifications**

Source: EU Rapid Alert System for Food and Feed RASFF (Annual Report, 2008).
Case Study 1: the Irish Pork 2008 recall

“A supply chain is only as strong as its weakest link”

- Traced to a small feed supplier within Ireland.
- Dioxin levels 80 - 200 times legal limits.
- Irish pork products recalled from 21 countries.
- Country-wide destruction of pork products.
- Large unknown impact on economy.

Affected Countries

- Republic of Ireland
- Northern Ireland
- England
- Scotland
- France
- Italy
- Germany
- Netherlands
- Poland
- Sweden
- Denmark
- Belgium
- Estonia
- Portugal
- Cyprus
- USA
- Canada
- Japan
- China
- Russia
- Hong Kong
- Korea
- Singapore
- Switzerland
Case Study 2: the Menu Foods 2007 recall

- Menu Foods a large global pet food company.
- Complex global supply chain.
- Supplier disintermediation.
- Internal quality control practices.
- But ... no supply chain traceability system.
- Contamination in China leads to global recall.
- Recall causes **82% fall** in Menu Foods share price.
Supply Chain Risk

- Most frequent source of glitches is ... the supply chain. (e.g. quality defects, contamination, supply shortages)
- Supply Chain Risk: large growth in glitches from suppliers.
- Negative impact on share price and financial performance.
- Affects all industries, and especially smaller companies.
- Supply chain glitches cause 10% decline in share price (av.).
- Impact on financial performance:
  - operating income.
  - sales growth.
  - return on sales.
  + cost growth.
  - return on assets.
  + inventory levels.
- 2 years for financial performance to return to pre-glitch level.

Traceability research within ASSET

- Dedicated ASSET research centre, covers traceability technology and management.
- Collaborate with Judge Business School (University of Cambridge).
- Supply chain traceability case studies with local industry (1x PhD researcher).
- Large survey across UK and Ireland agri-food industry focusing on traceability.
- Key research questions:
  1. Drivers of traceability.
  2. Types of traceability systems.
  4. Managerial implications.
Stakeholder focus on environmental performance within the food industry.

Many food producers have implemented green management practices.

e.g. pollution prevention, waste minimization, food miles, recycling, reuse.

Green management practices can improve operational performance.
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Green Supply Chains

• Consumer, retailer, and regulatory attention turning to the impact of supply chains on the environment.

• Stakeholders are now encouraging food producers to improve the environmental performance of their supply chains (i.e. Green Supply Chains).

• Leading food producers are turning to green purchasing practices.
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Sustainability research within ASSET

• Does ‘going green’ lead to a competitive advantage?

• What impact does green purchasing have on product, operational, and environmental performance?

• Large survey across UK and Ireland agri-food industry (1x PhD researcher).

• Key research questions:
  (1) Drivers of green purchasing.
  (2) Types of green purchasing practices.
  (3) Impact of green purchasing on performance.
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Choice Modelling

Dr Danny Campbell and Professor George Hutchinson

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Choice modelling is a method used to determine the features of goods and services that influence people’s purchasing decisions.

By analysing the choices that people make it is possible to determine the premium that they are willing to pay for value added services.
Choice modelling research within ASSET

- Research questions:
  - What is the premium for ASSET value-added services?
  - How will ASSET value-added services impact market share?
  - Who are the target markets for ASSET value-added services?
  - What impact will ASSET value-added services have on the NI agri-food industry profits?

- Methodology:
  - Large scale public surveys within NI, RoI, GB and EU to establish local, national and international markets for ASSET value-added services.
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thank you for your time! ... any questions?

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