Developing a Resilient Agri-food Supply Chain: the case of the ASDA PorkLink Chain in Scotland

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Introduction

In recent years there has been growing concern that the world’s systems for producing and distributing food should, inter alia, be more resilient to a variety of shocks, be they economic, of natural making, accidental, malicious or borne out of ignorance.

In the UK one group of researchers has indicated that four characteristics are of increasing significance in a future food supply system, namely: resilience, sustainability, competitiveness and consumer expectations (Ambler-Edwards et al, 2009).

The chosen path of making European agriculture more market oriented, and therefore more exposed to shocks, makes it important to explore what this means for the upstream part of the agri-food supply chain, particularly at the farm level where information is frequently more limited.

The purpose of this research is twofold: 1. To categorise the key risks and challenges involved in developing and maintaining a sustainable agri-food supply system and 2. To show how risk management and collaboration amongst stakeholders can increase supply chain resilience.

Methods

The case-based research is centred around one of Scotland’s major pork supply chains, that of Scottish Pig Producers Ltd. (i.e., Scotland’s major pig production co-operative), Vion Food Scotland Ltd (Halls) (i.e. a major pigmeat processor) and the UK multiple retailer ASDA.

The case is interesting because:
1. It is a supply chain that is not protected by direct payments from the Common Agricultural Policy.
2. The profitability of the pigmeat supply chain has been under constant pressure due to short terms variation in prices, and longer term price depression, as well as escalating feed prices.
3. The profitability of the sector has also been affected by issues related to production shocks in the form of animal diseases and to changes in policy related to animal welfare.

Theoretical issues

<table>
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<th>Risk</th>
<th>Supply chain vulnerability to risk</th>
<th>Risk management</th>
<th>Supply chain resilience</th>
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<td>Facing individual enterprises and the whole supply chain</td>
<td>The susceptibility of the chain to the likelihood and consequences of disruption</td>
<td>Developing the capability to cope with risk</td>
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Figure 1 - Risk to resilience

Figure 2 - Individual and supply chain risks

Developments in key variables affecting the pig sector

Balancing risk vulnerability and capability to cope with risk

Conclusions

Elements found as contributing to the resilience of the supply chain were:
1. Supply chain design (engineering) - Large pig group, efficient producers, well managed, emphasis on quality, contract with price transparency; high quality processor (scale).
2. Anticipation and risk management (agility) - Pro-active management (e.g. contract, waste management, energy efficiency); risk management focus (e.g. non payment insurance, feed price support).
3. Collaboration - Horizontal (scale and reliability of supply, information exchange with industry bodies; QMS, SSPCA) - Vertical (information exchange, market development, product development, longer term sustainability (contract and input price support).
4. Influencing the business environment (Meat promotion, research priorities, representation).

References


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