

Lean thinking in the UK red meat industry: A systems and contingency approach

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Abstract

Food Value Chain Analysis (FVCA) based on the lean paradigm is being applied to eight value chains in the UK red meat industry. This paper is based on the forth chain involving a value added pork for a major retailer. Systems theory is used to evaluate FVCA based on four sub-systems—goals and values, logistics, human resources and management structure. The results show a positive potential logistics benefits along the chain, but identified two key implementation issues; inter-company alignment of other sub-systems and chain organisational stability through time.

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1. Introduction

The UK red meat industry is undergoing a period of intense change due to concentration of demand into a small number of supermarket channels in the UK and reforms of the European Union Common Agriculture Policy (CAP). To cope with this flux, the UK government's Policy Commission on the Future of Farming and Food in January 2002 recommended the introduction of a Food Chain

Centre² (FCC) to “...bring together people from each part of the food chain”. FCC was created in 2002 and based on previous industry findings (Hobbs, 1996; Fearne, 1998, 2000; Katz and Boland, 2000; Hornibrook and Fearne, 2001, 2002) recognised the potential of improved vertical cooperation in the food chain. To achieve improved vertical collaboration, FCC commissioned the research team to develop an agri-food specific methodology, Food Value Chain Analysis (FVCA) based on the lean paradigm (Womack and Jones, 1996). The research team and FCC are applying FVCA in red meat, dairy, horticulture and cereals agri-food sectors. This paper focuses on the development of FVCA in the red meat sector.

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¹The Food Process Innovation Unit received a Department of Trade and Industry of £427,000 to conduct eight value chain analyses in the UK Red Meat Industry. There has also been Welsh Assembly Grant for similar work in Wales These Grants were administered and managed through the Red Meat Industry Forum and Food Chain Centre.

²For further information about the FCC see <http://www.foodchaincentre.com/>.

FCC linked with the Red Meat Industry Forum³ (RMIF), which was set up in June 2001, with the primary objective of improving the performance and profitability of the UK red meat industry. RMIF have a ten-point action plan, which includes initiatives on benchmarking, process improvement, business relationships and dissemination. FVCA is a key component of this ten-point plan and commenced as a 3-year programme in April 2002, covering eight pilot chains.⁴ The eight chains were selected to cover the three species (beef, lamb and pork), market channels (supermarkets, foodservice, public services) and products (fresh, organic, value added).

The fourth chain selected in the Red Meat Industry Value Chain Analysis project focused on sausages as an example of a value-added pork product. The companies involved were John Easey, a commercial farmer who controls a variety of pig units; Porcofram Marketing—a pig marketing company and a division of BOCM Pauls, Flagship Fresh Meats—operating the abattoir and meat processing plant and part of the Flagship Foods group, Walkers Midshire Food—a sausage producer and a division of Samworth Brothers, and Tesco the retailer.

The FVCA methodology is evolving as each chain progresses and the findings are summarised for Chain 1–3 Summary by Simons et al. (2004). Specific methodological issues have also been reported for each chain. Chain 1 (Simons et al., 2003) identified dedicated project representatives from each company to form an effective trusting inter-company team. Chain 2 (Taylor, 2003, 2005); Chain 3 contributed improved data collection process through video techniques (Francis, 2004) and the opportunity for a more effective future state mapping system.

The objectives of this paper are as follows:

- to outline FVCA methodological developments stemming from Chain 4 particularly in terms of benefits sharing, and identification of supply chain issues for value added pork products;
- to discuss the methodological developments in the context of systems and contingency theory;
- to report the case method and results;

³For further information about the RMIF see <http://www.mlc.org.uk/forum/phasetwo/>.

⁴The UK agri-food industry defines three species as red meat; beef, lamb and pork.

- the final section gives conclusions and suggestions for further research.

2. The systems context for Food Value Chain Analysis

Scientific research was based on ‘reductionism’ until the 1930s (Andersen, 2001), where the behaviour of the whole could be explained by the individual parts. The origins of the term describing holism are credited to a South African Statesman Jan Christian Smuts; “a unity of parts could be so close and intense as to be more than the sum of the parts” (Andersen, 2001). Ludwig von Bertalanffy is credited with challenging reductionism with holism in the form of systems theory in the 1940s, followed by hard systems (Ashby, 1956; Beer, 1981) and soft systems (Checkland, 1981). “The systems movement ... attempts in all areas of study to explore the consequences of holistic rather than reductionist thinking” (Checkland, 1981, p. 92). Systems apply to the physical, biological, and social world” (Kast and Rosenzweig, 1981). Physical systems have rigid boundaries and are ‘closed systems’, whereas social systems have flexible permeable boundaries are ‘open systems’. Closed systems will gradually collapse over time (entropy), whereas Open systems will grow. Social and business systems are argued to be open systems analogous to biological systems such as the human body in that to be understood they had to be viewed in their entirety. Fig. 1 shows an open business system that survives by converting inputs (raw materials) into outputs (consumer requirements).

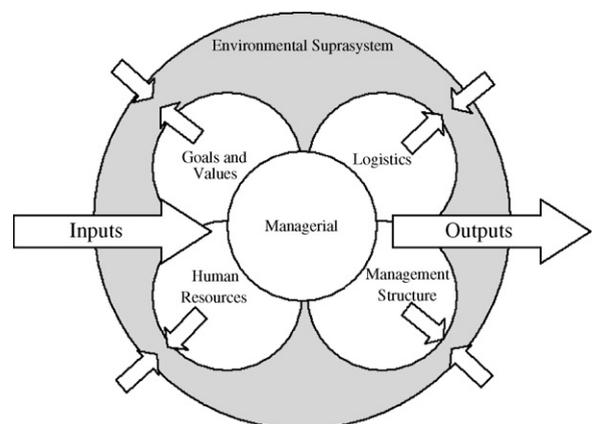


Fig. 1. An Open Business System with terms adapted for the food industry.

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