

Insights into “mysterious processes”: incentivising co-innovation in agrifood value chains

by

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Quotation relating to the thesis title:

From Price, H 1996, 'The anthropology of the supply chain: fiefs, clans, witch-doctors and professors', *European Journal of Purchasing & Supply Management*, vol. 2, no. 2-3, pp. 87-105.

In the future...successful businesses will create value by implementing innovations across organizational boundaries...Supply chain management will need to nurture successful innovation within these cross-functional teams. The fundamental challenges are social rather than technical, involving issues of trust, co-operation, power and politics. As a result of this, the roles and relationships required for best practice supply management are changing... The management of these roles will be a strategic issue, since it will be the key to competitive advantage for many organizations... Innovation and creativity are *mysterious processes* that do not respond predictably to purely rational economic circumstances. Rather, the process of 'condition setting' across organizational boundaries encourages innovation... (pp. 87, 103).

Declaration of Originality

This thesis contains no material which has been accepted for a degree or diploma by the University or any other institution, except by way of background information and duly acknowledged in the thesis, and to the best of the my knowledge and belief no material previously published or written by another person except where due acknowledgement is made in the text of the thesis, nor does the thesis contain any material that infringes copyright.

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The research associated with this thesis abides by the international and Australian codes on human and animal experimentation, the guidelines by the Australian Government's Office of the Gene Technology Regulator and the rulings of the Safety, Ethics and Institutional Biosafety Committees of the University.

Declarations Signed:

(Lawrence Bryan Bonney)

Date: 10th November 2011

Dedication

This research is dedicated to Neil Lawrence Bonney (1922 -), a single father who instilled in me a curiosity to understand the world, a love of knowledge and the motivation to learn.

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Abstract

The globalisation of agrifood markets and the liberalisation of world trade is creating a new competitive environment. Price-based competition is giving way to innovation-based competition and businesses are increasingly turning to collaborative innovation or 'co-innovation' to be able to compete. As a result, the locus of competition has shifted from the individual firm to competition between whole chains. Thus, the core concerns for modern businesses are managing collaboration and innovation across whole value chains (vertical co-innovation) to create competitive advantage. The Australian agrifood industry has been slow to adopt co-innovation and investment lags behind other industries. Although the industry faces unique challenges compared to other industries, little research has been done on the dynamics of co-innovation in agrifood chains or the strategic issue of how firms, executives and employees are incentivised to co-innovate.

Therefore, this thesis addresses the problem of how to incentivise firms, executives and individual employees to co-innovate in agrifood value chains. Because this involves a multi-disciplinary investigation of multi-level systems with complex, interacting variables and the lack of cross-disciplinary research in this field, an exploratory research design based on the constructivist-interpretivist paradigm using a phenomenological strategy of inquiry was adopted. A case study research method was employed to gather data from three purposively selected, contrasting agrifood value chains in Australia and North America using 128 semi-structured interviews with managers and a range of company and public documents. Qualitative content analysis was then undertaken using NVivo 8 computer software.

The investigation found that the mental models held by executives of the most powerful firm, usually the retailer or the processor, determine the form of chain governance and consequently the incentives employed to achieve the chain goals. Achieving those goals requires complex behaviours at firm, executive and employee levels in a dynamic environment and so multiple forms of incentives need to be employed and managed purposefully to motivate such behaviour. Incentives need to be aligned with strategy and have a degree of individualisation. They should also be supported by appropriate chain values, culture and other management functions such as chain partner selection, recruitment and professional development. Firm incentivisation strategies need to incorporate economic, normative and social incentives. Although aligned with overall chain strategy, these will be different at each level of the chain, Tier 1, Tier 2 and Input Suppliers, reflecting their different contributions to creating consumer value, their differential capacities and idiosyncratic aims. Individual incentivisation to co-innovate should incorporate extrinsic, social and intrinsic incentives and take place in a supportive culture if behavioural intentions are to achieve co-innovative outcomes.

The analysis also provided support for the conceptualisation of four conditions that influence co-innovation: relational competence, cultural compatibility, a co-innovation architecture and co-innovation competence. The presence of these conditions was associated with the development of co-innovation and their absence with the inhibition of co-innovation.

The contribution of this study is its systemic, multi-level model of chain incentivisation through the integration of concepts from the value chain, incentivisation, collaboration and agrifood literature. This highlights possible future research in agrifood value chain incentivisation and suggests that managers in value chains should adopt multi-level strategies with multiple forms of incentives to achieve co-innovation.

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