

# **Small Business Innovation Management**

Christopher J Brown

University of Hertfordshire, Hertfordshire, UK

Philip Frame

Middlesex University Business School, Hendon, Middlesex, UK

\* Corresponding author, Marketing and Tourism Department, Business School, University of Hertfordshire, College Lane, Hatfield, Hertfordshire, AL10 9AB. Tel: 01707 285580, Fax: 01582 871092, email: [c.3.brown@herts.ac.uk](mailto:c.3.brown@herts.ac.uk).

## **Small Business Innovation Management**

### **Abstract**

Researchers and managers, over the decades have devoted significant amounts of time in trying to understand and manage the innovation process. This research paper explores one particular part of the innovation journey, the subjectivity of innovation management and the influence that a change in leadership style can have. A framework is presented which explores the sensemaking and subjectivity of those involved in innovation management, and the close link between these and the positive and negative outcomes of the innovation process. The paper sets out the research undertaken by the co-researchers and myself in one small business over a three year period. The research shows that the coordination of group activities surrounding the innovation process are heavily influenced by dominant individuals, namely the founder and key senior managers. The negotiated sensemaking of the different groups is arrived at through consensus and based on the group's customer values associated with the innovation process. These customer values are closely linked to the group's aspirational expectations. But a gap was observed between the customer values (espoused and mental models) of some groups, and was linked very closely to their interpretation of the small business market-oriented strategy. In managing innovation, it is important for all parties to understand the subjectivity of other group's value judgments. The research framework helped the groups understand the complex relationship between group's actions and the observed outcomes. It further assisted the groups in building their own skills and experiences associated with sensemaking during the innovation journey.

# Small Business Innovation Management

## Introduction

This paper presents an overview of the research carried out on a small business. The research focused on innovation management surrounding one particular product innovation project, over three years. Relevant literature is presented to explore the links between the different research topics, and a brief overview of the research methodology is detailed. The research findings highlight some of the principal outcomes of the study. Finally, a summary is given of the principal outcomes and possible relevance to other businesses.

## Organisational and Literature Context

Small businesses have a significant role to play in all economies around the world. Research [Schumpeter, 1942] has suggested that small businesses contribute to the economy in two ways: they are an important element of the overall renewal process; and it is one mechanism by which millions of people enter the economic and social mechanism [Robbins *et al.*, 2000:293]. These small business performances are linked to customer needs. Those businesses that adopt this marketing concept are more likely to succeed when they are combined with growth and differential strategies [Pelham, 2000]. The market-orientated strategic postures of successful small businesses are moderated by the needs of customer-led day-to-day activities. Successful small businesses are those that can wisely balance these two perspectives, market orientation and customer-led, the present with the future. A small business's innovation plans are essentially linked to this present and future balance of customer values [Connor, 1999].

But what is innovation? Innovation is any product, process, policy, or structure change that is perceived to be new [Nohria and Gulati, 1996]. Innovation research has long focused on those factors which are most closely linked to success such as: structure [Appelbaum *et al.*, 1998]; the focus on customer needs, leadership, information sharing, inventiveness, ability to implement [Appelbaum and Goransson, 1997]; building cross-functional teams [Elmuti, 1996]; organizational learning [Denton, 1997]. Research into innovation surrounding New Product Development (NPD) has noted interest in looking at the issues of functional integration and the affect on information sharing and interaction [Craig and Hart, 1992]. Work by Gerhardt (1989) suggested that integration is dependent on interaction between team or group members. It has been suggested therefore that coordination of team or group activity is reached through negotiated sensemaking between these team or group individuals (Ormrod, 2002).

In small businesses the culture resulting from the interaction between the initial founder's assumptions and theories and those learnt by the group's from their own experiences are very important (Schein, 1983). The founder will often bring professional managers into the small business to contribute to the overall organizational and functional skills, and as such are welcomed by most of the business's individuals and groups. An element of mistrust may result, however, when these managers start to question the founding assumptions (Schein, 1983). Owners or founders innovativeness seems to be an essential part of the overall entrepreneurial orientation for innovation within the firm (Verhees and Meulenbergh, 2004). This entrepreneurial orientation reflects how these new innovations are processed. But if there is a difference in assumptions between the founders and these new professional

## **Small Business Innovation Management**

managers, then there is also likely to be a difference in their entrepreneurial orientation. This is likely to be reflected in their approach and concept of innovation management.

Research into innovation management and the related disciplines i.e. is fragmented, inconclusive, inconsistent and with relatively low-levels of explanations (Tidd, 1997; Dougherty, 1996; Wolfe, 1994). The challenge for innovation managers is that no empirically based roadmap exists of how and why innovation emerges, develops, proceeds and terminates over time (Angle and Van de Ven, 2000). There is an important link between the innovation roadmap, the temporal sequence of events and innovation management and that is conflict management. Conflict often occurs over the different group's value judgements concerning the associated criteria necessary for innovation success (Dornblaser *et al.*, 2000). Angle (2000) suggested that group cohesiveness leads to innovation effectiveness, but innovation effectiveness criteria are unique to that group's decision-making individuals and are highly subjective to the organization, industry and environment (Dornblaser *et al.*, 2000). External environmental and internal organizational events have a 'spill-over' effect on innovation processes. This 'spill-over' effect directly influences group's value judgements. Innovation managers need to manage these influences, by creating an environment where negotiated sensemaking by all groups results in a clearer understanding and commitment to future changes in the innovation process (Dornblaser *et al.*, 2000).

This research paper evaluates, through one case study, some of the issues of managing these negotiated sensemaking activities, in association with a given innovation process. It presents a small part of the research findings, and more analysis is on-going and likely to result in further research papers and publications.

### **Research Objectives & Questions**

This research case study is based around one small business over a three year period, during which the business lost its original founder, restructured itself around the new senior managements strategies, and finally sold itself to a large corporation. For the purposes of this research paper, I will call the small business 'Sigmin'. Within the small business there were four main groups: the operational staff who managed client site resources, services and project activity (Operations); the specialized technical accounting group who worked on client data and produced daily, weekly and monthly auditable reports (Accounts); the consultancy group who worked all over the world and undertook technical appraisal work (Consultants); and finally, the senior management group who had been hand-picked by the outgoing founder (Senior Management).

Managing innovation in a small business is very difficult when the environment within which the employees work is seen by most as being both ambiguous and uncertain. Changes in leadership style and values can play a part in contributing towards this. The changes observed in this small business are not unique, and many similar small businesses go through changes in leadership styles as a consequence of the inevitable business life cycle. This research study had the following objectives:

1. To explore the consequence of leadership style change on one particular innovation process.

## **Small Business Innovation Management**

2. To consider how sensemaking and subjectivity influence the overall task of innovation management

### **Sensemaking and Subjectivity in Innovation Management**

People strive to make sense of their world, by examining their past experiences and then evaluating these against their current needs and values. The resultant environment enacted by individuals/groups can be markedly different from those around them (Angle, 2000). This strong link between making sense and value judgements helps explain an individual's or group's interactional behaviors (Barker, 1993). The consensus on value judgements within a group also helps explain the group's activity and decision-making. The resultant belief systems are used by individuals and groups to interpret events around them and make sense of the world (Swan and Newell, 1994). This involves the formulation of mental models to represent these concepts, and the relationships between them. This then underpins their expectations about the likelihood of future events (Weick, 2001). This sensemaking of the action-outcome relationship and the resultant group learning outcomes provides a link between the derivation of a group's mental models and their future actions (Van de Ven *et al.*, 1999).

Researchers studying cognitive psychology (Anderson, 1987) suggest that a person's behavior is based on his or her perceptions and beliefs regarding what will best lead to the desired outcomes. The relationship between action and outcome is based on these cognitive biases, on other individuals or groups involved in associated actions, and on causal ambiguities. This causal ambiguity associated with the link between actions and outcomes may be highly complex and very difficult to identify. But to identify it, we must help to facilitate sensemaking and to be able to perform the innovation task management. In this research we focus on the innovation process, and the understanding and sensemaking associated with it.

Barnett & Storey (2001) noted in their research the differences and divisions between managers over the meaning, priority and expected consequences of innovation. This research together with that of Griffin and Hauser's (1996) suggests that rather than actual personality differences existing between individuals or groups, the barriers to communication could be a perceptual barrier based on stereotypes or cognitive biases. These are the hardest communication barriers to remove or eliminate, hence the importance and value of understanding and building trust between groups. Another significant difference is the cultural thought worlds that these different groups are trained in. The cultural differences, say between an R&D and Marketing group has been well documented by researchers (Lorsch and Lawrence, 1967; Gupta *et al.*, 1986). These researchers have suggested that they differ over time orientation (long/short), projects preferred (advanced/incremental), ambiguity tolerance (low/high), professional orientation (science/market) and professional orientation (more/less). These last two factors could explain the difficulties with regard to sensemaking between these functional groups, and between the founder and professional managers.

The challenge today is how do small businesses manage the innovation processes, which must rely on cross-functional cooperation and full interaction?

## **Small Business Innovation Management**

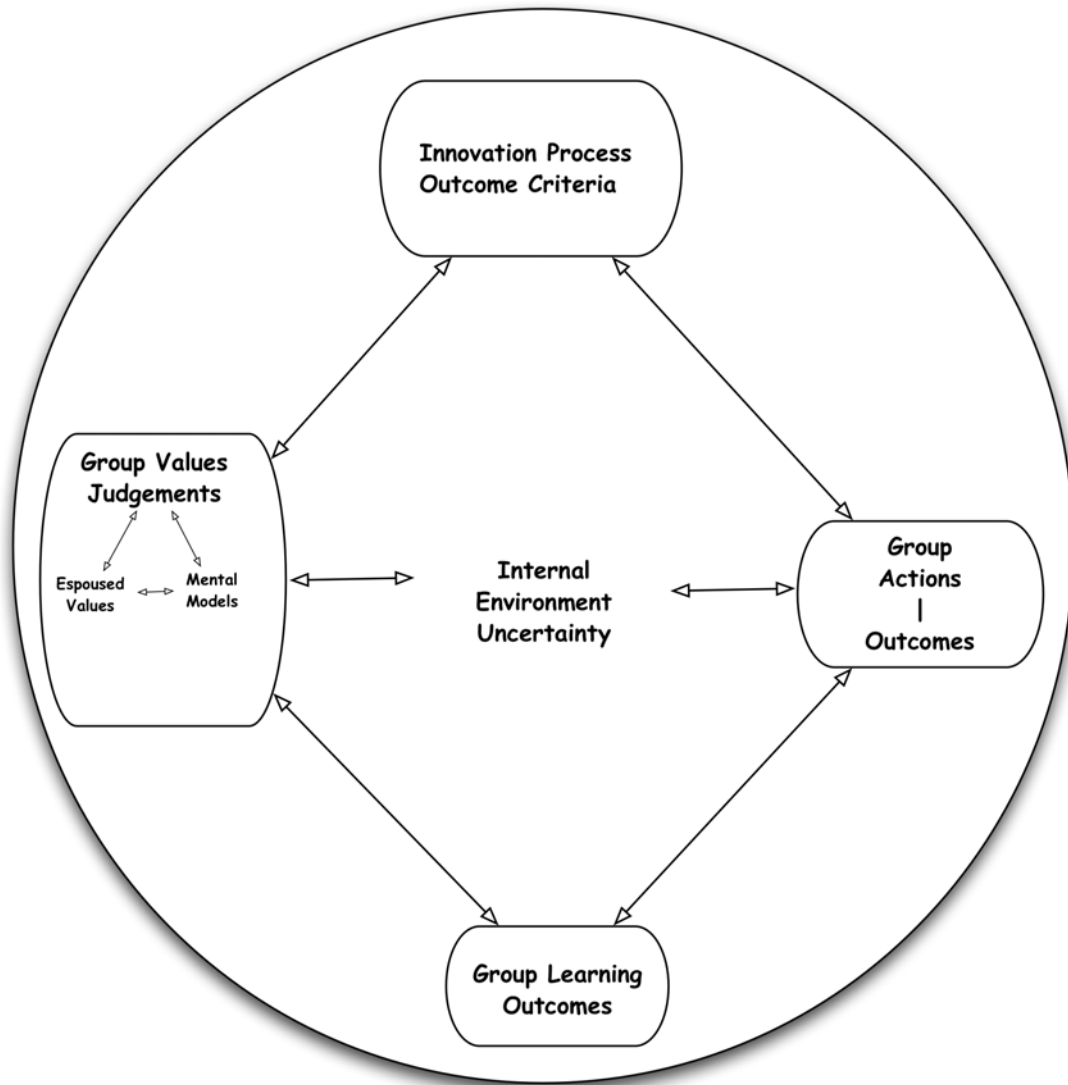
### **Research Methodology**

This research study, taking place as it did over a three year time period, was designed around a single longitudinal case study. The methodology utilizes in-depth interviews, focus groups, action workshops and organizationally generated secondary data (e-mails, project and group documentation). To explore a phenomenon which is based on perceptions and mental models it was necessary to engage the participants in the research process. This is why we felt justified in selecting a Participatory Action Research (PAR) approach. PAR is focused around action and change, by involving the participants in the problem formulation, the resulting inquiry and action (Levy and Brady, 1996). As a consequence it scores highly in research relevance, community involvement and empowerment for the participants.

This research was developed from a previous research study (Brown and Frame, 2004) into subjectivity in innovation management. This study utilized some of the techniques and methodologies from this previous research. During the first year focus group sessions and interviews were held to explore some of the general issues associated with innovation management within the small business. Transcripts from these sessions were analyzed and coded, the resulting themes and sub-themes were then used in action workshops involving members from the different groups. Additionally, researchers attendance was possible at most project and strategy meetings associated with the innovation process. During the entire three years of the study, regular action workshops were run to feedback findings and to facilitate group actions and initiatives.

The research data collected, transcripts of focus group sessions, interviews and project and strategy meetings were analyzed alongside secondary data. Open coding was initially used to highlight themes and sub-themes from the different sessions, and then axial coding was used to group these themes and sub-themes into larger groupings. These findings were further explored in the action workshop sessions, creating further themes and sub-themes, and so the cyclical process continued. Slowly a research framework emerged that was continually tested and refined, linking the different themes together.

## Small Business Innovation Management



Source: Brown and Frame, 2004.

**Figure 1: The 'Brown and Frame' Research Framework**

### Research Findings

Examining the unfolding innovation journey undertaken by the different groups (Operations, Accounts, Consultants and Senior Management) in this small business helped them and us understand the underlying interactions and sensemaking concerning one specific innovation process: the development of a new financial accounting service (FinAccount). The first focus of the research was to study and understand the group's activities towards this identified innovation process.

## **Small Business Innovation Management**

### **Coordination of Group Activity**

The coordination of group's activities surrounding this innovation process was reached through negotiated sensemaking. This shared knowledge could then be used by the group members to make sense of past experiences and provide a framework for interpreting situations and deciding present and future actions (Rawson *et al.*, 1980). The underlying patterns of interaction developed over time, both intra- and inter-group, and were heavily influenced by dominant individuals especially the founder and certain managers (Schein, 1983).

At a strategy review workshop, a year after the founder had effectively retired, there were two noticeable camps within Sigmin concerning shared values. One clearly reflected those of the original founder, and the other came from the professional managers brought in by the founder:

[Operations manager] *“the company has a strong will to keep its identity, its survived a number of changes in the past, and will so in the future”* [March, 2001]  
This was clearly a direct challenge to the new senior management team

Schein (1983) noted a complex interaction between the founder's assumptions or mental models and those of the other group's within an organisation. It was observed and noted in interviews and at project meetings that some groups (Operations and Accounts) had a mistrust of the new management because of the differences in their mental models to those espoused by the founder. These differences were most clearly visible in the customer values held by the two parties.

The founder had held the belief that the long-term strategy and survival of the business rested on driving the marketplace. This involved building and developing new innovative business and providing valuable services that the customer would want. The new Senior Management (SM) were more conservative, choosing to be more customer-led, providing what the customer needed. This market-driven versus customer-led strategy resulted in conflict and confusion in all groups.

### **Link between Value Judgements and Group Actions**

As noted above, group activities were arrived at through consensus, based on negotiated sensemaking. In exploring the value judgements of the groups, the groups better understood and could explain their actions and decision-making. To help in this process, I used a research framework (see figure 1.) from a previous research study (Brown and Frame, 2004) to further explore the contributing factors associated with the different group's sensemaking surround the innovation process (FinAccount).

The research data indicated that the value judgements used to make decisions were very closely linked to the group's aspirational expectations concerning the innovation process. In the research framework we redefined these aspirational expectations as Innovation Process Outcome Criteria (IPOC).



## **Small Business Innovation Management**

But we noticed that over a period of time the different group's IPOC changed. These changes reflected the growing gap observed between a group's espoused values and their mental models. Harris (1989) referred to this as attributional and internalized schemas, and reflected the group's understanding of other's values and beliefs. The internalized schemas (mental models) are a source of intrinsic motivation for behaviors consistent with them. The gap observed by the groups inhibited sensemaking. We observed that sensemaking only happened when they could observe the actions of the other groups, and these resulted in predictable outcomes. Ashmos and Nathan (2002) suggested that sensemaking helps people or groups better understand the uncertainties they face.

Groups IPOCs changed over time, and were the result of:

- changes in a group's mental models;
- increasing internal and external environmental uncertainty and ambiguity.

The most notable changes occurred in Senior Management's (SM) IPOC, which reflected significant changes in their customer values. These changes were linked to their short-term 'customer-led' strategies. This put the SM, and Accounts & Operations groups in direct conflict. The founder had personally recruited the Accounts group leader, and had very detailed discussions with him regarding the future strategy and importance of the new FinAccount service. The increasing gap between the SM's espoused and mental model customer values concerning this new service increased the overall ambiguity felt by the other groups. The unwillingness of SM to confront the long-term strategy of this service added to the confusion and decreased the opportunities for conflict resolution.

### **Further Environmental Uncertainty**

Late in 2000, the founder unexpectedly died, and within twelve month the SM sold the small business to a large corporation, but remained to manage the business. The direct result of this change in ownership was the tasking of the Senior Management (SM) group to provide additional management reporting and strategy justification. The SM transformational leadership style hardened; focus was on short-term revenue and profits. Within three months there was a discernible disengagement by the three groups (Operations, Accounts and Consultants) and a further increase in ambiguity and uncertainty. The groups' observation of the action-outcome relationships resulted in new group learning outcomes. One of the most significant changes came about as a consequence of the hardening of the SM's mental models surrounding their customer-led strategy. This resulted in changes in other groups mental models and associated customer values:

- Consultants, who had previously taken an active interest and role in pushing for market-driven changes, and were strong sponsors of the FinAccount process, now focused on day-to-day revenue generating activities;
- operations: three of the top project managers left within three months of the changes in ownership, and those previously vocal about change, and the need for new services, subsequently left or became silent;

## **Small Business Innovation Management**

- accounts: open hostility existed between the group leader and members of the Senior Management (SM), at one point resulting in a 3-day suspension for verbal abuse.

Over this period there was a very strong build-up of cohesiveness amongst the groups, that is excepting SM. The inability of SM to resolve the conflict over long-term organizational strategy had the effect of decreasing consensus within their group.

The increasing interactional problems between groups revealed by an analysis of the transcripts and observation over the transition period, increasing related to two factors: the stereotypes the groups had of each other; and their cultural differences. Two important themes contributed most to the group's cultural differences, that of customer values and the measure of innovation success. The two groups most noticeably different, Operations and Senior Management (SM), had very different perceptions of the success already achieved surrounding the FinAccount process. This "difference in perception" of innovation success was noted in Griffin and Hauser's studies (1996). This inability to understand other group's perceptions of outcomes resulted in poor integration of the different group's contingency approaches to both the 'customer-led' and 'market-driven' activities. This further resulted in increased ambiguity and relationship conflicts.

### **Relationship Conflicts and the Process of Innovation Management**

When the study first began, a strong integrative perspective existed between all four groups. The newly appointed professional managers were keen to listen and respond to group ideas and initiatives. Operations, Accounts and the Consultant groups showed consensus, consistency and integration over the founder's original strategy for the FinAccount process. But with the changes in Senior Management's customer values and their subsequent changes in IPOC, the other groups were forced to alter their own espoused values but not necessarily their mental models surrounding the FinAccount process. The result was the emergence of a differentiated perspective, one where there was an increasingly divergent consensus over the IPOC of the FinAccount process. Towards the conclusion of this study, a fragmentative perspective pervaded the small business and groups constructed multiple interpretations to explain the observed action-outcome relationships.

When either the Senior Management or one of the other groups tried to manage the FinAccount innovation process they were presented with significant barriers:

- the degree of environmental uncertainty was significant and without external help, unquantifiable;
- the recent business upheavals, with new management and changes in ownership created high levels of ambiguity;
- the differences in group values and beliefs, and particularly the relationship conflict between Senior Management and the Accounts group;
- the interactions between groups did not help build understanding or shared experiences, and therefore did not help sensemaking and the ability of the groups to interpret and act for the present or the future.

## Small Business Innovation Management

The research study concluded in 2003, and our contact and active involvement in the small business stopped.

### Principle Outcomes

More recent research accepts the particularistic nature of managing innovation (Tidd *et al.*, 1997). In exploring the innovation journey of this small business as it reacts to increased levels of uncertainty and ambiguity originating from inside and outside the business, we have charted a number of issues and problems. None of the problems are unique or insurmountable, the combination did create however a very substantial problem to the managers responsible for managing the innovation process. The research framework used and re-validated by this research study helped the research participants and myself to better understand the problems and issues they faced. Subjectivity amongst the groups surrounding the innovation process was a common problem, and was linked to the following:

- the increasingly divergent group customer values concerning the innovation process;
- an awareness and understanding of the gap between a group's espoused values and their mental models;
- a lack of understanding of the reasons behind the changes on other group's mental models;
- the inability of most groups to sensemake the action-outcome relationships surrounding the innovation process

In managing innovation, it is important for all groups to understand the subjectivity of each group's value judgements. It was the relationship conflicts observed during this research study, surrounding the different group perspectives on customer values, that created significant barriers concerning interaction and integration amongst the groups. Senior management's focus on 'customer-led' activities and requirements, and those held by most other groups, especially the Accounts group, based on market-driven requirements (longer-term customer needs), put them on a collision course. Slater and Narver's research (1998) suggested that both strategies can be successful. This research suggests that problems arise from the inadequate definition of market orientation strategy by the different groups. Because of this, relationship conflicts are created and largely remain unresolved, and the overall management of the innovation process breaks down. This strengthens the underlying premise of this research, that subjectivity is inherent in innovation management. Groups can resolve these differences if they have the sensemaking tools and experience to understand and chart their own innovation journey.

## Small Business Innovation Management

### Bibliography

- Anderson, J.R. (1987) *The Architecture of Cognition*, Harvard University Press, Cambridge.
- Angle, H.L. (2000) "Psychology and Organizational Innovation", In: Van de Ven, A.H., Angle, H.L. and Poole, M.S. (2000) *Research on the Management of Innovation*, Oxford University Press, New York, pp. 135-171.
- Angle, H.L. and Van de Ven, A.H. (2000) "Suggestions for Managing the Innovation Journey", In: Van de Ven, A.H., Angle, H.L. and Poole, M.S. (2000) *Research on the Management of Innovation*, Oxford University Press, New York.
- Appelbaum, S.H. and Goransson, L. (1997) Transformational and Adaptive Learning within the Learning Organizations: a Framework for Research and Application, *The Learning Organization*, **4**(3): 115–128.
- Appelbaum, S.H., St-Pierre, N. and Glavas, W. (1998) Strategic Organizational Change: the Role of Leadership, Learning, Motivation and Productivity, *Management Decision*, **36**(5): 289-301
- Ashmos, D.P. and Nathan, M.L. (2002) Team Sensemaking: a Mental Model for Navigating Uncharted Territories, *Journal of Managerial Issues*, **14**(2): 198-217.
- Barker, J.R. (1993) Tightening the Iron Cage, *Administrative Science Quarterly*, **38**(September): 408 – 437.
- Barnett, E. and Storey, J. (2001) Narratives of Learning, Development and Innovation: Evidence from a Manufacturing SME, *Enterprise and Innovation Management Studies*, **2**(2): 83-101.
- Brown, C.J. and Frame, P.F. (2004) Subjectivity in Innovation Management, *International Journal of Innovation and Learning*, **1**(4): 351-363.
- Connor, T. (1999) Customer-led and Market-oriented: a Matter of Balance, *Strategic Management Journal*, **20**: 1157-1163.
- Craig, A. and Hart, S. (1992) Where to Now in New Product Development Research?, *European Journal of Marketing*, **26**(11): 1-49.
- Denton, J. (1997) *Organizational Learning and Organizational Effectiveness in Five Major Manufacturing Companies*, Ph.D. thesis from University of London, London.
- Dornblaser, B.M., Lin, T. and Van de Ven, A.H. (2000) "Innovation Outcomes, Learning and Action Loops", In: Van de Ven, A.H., Angle, H.L. and Poole, M.S. (2000) *Research on the Management of Innovation*, Oxford University Press, New York, pp. 193-217.
- Dougherty, D. (1996) "Organizing for Innovation", In: Clegg, S., Hardy, C. & Nord, W.R. (1996). *Handbook of Organizational Studies*, Sage, London.

## Small Business Innovation Management

- Elmuti, D. (1996) The Perceived Impact of Team-based Management Systems on Organizational Effectiveness, *International Journal of Manpower*, **17**(8): 4-17.
- Gerhardt, U. (1989) *Ideas about Illness: an Intellectual and Political History of Medical Sociology*, MacMillan, London.
- Griffin, A. and Hauser, J.R. (1996) Integrating R&D and Marketing: a Review and Analysis of the Literature, *Journal of Product Innovation Management*, **13**(3): 191-215.
- Gupta, A.K., Raj, S.P. and Wilemon, D. (1986) A Model for Studying R&D – Marketing Interface in the Product Innovation Process, *Journal of Marketing*, **50**(2): 7-17.
- Harris, S.G. (1989) A Schema-based Perspective on Organizational Culture, *Academy of Management Proceedings*, 178-182.
- Lawrence, P.R. and Lorsch, J.W. (1967) *Organization and Environment*, Harvard Business Press, Boston.
- Levy, P. and Brady, T. (1996) Learning through Action and Research, *The Learning Organization*, **3**(5): 32-37.
- Lowes, L. and Prowse, M. (2001) Standing outside the Interview Process? The Illusion of Objectivity in Phenomenological Data Generation, *International Journal of Nursing Studies*, **38**: 471-480.
- Nohria, N. and Gulati, R. (1996) Is Slack Good or Bad for Innovation, *The Academy of Management Journal*, **39**: 1245-1264.
- Ormrod, S. (2002) *Sense-making and Authorizing in the Organization of Mental Health Care*, Ph.D. thesis from the School of Health and Social Work, Open University, Milton Keynes.
- Pelham, A.M. (2000) Market Orientation and other Potential Influences on Performance in Small and Medium-sized Manufacturing Firms, *Journal of Small Business Management*, **January**: 48-67.
- Rawson, S., Hinings, B. and Greenwood, R. (1980) The Structuring of Organizational Structures, *Administrative Science Quarterly*, **25**: 1-17.
- Robbins, D.K., Pantuosco, L.J., Parker, D.F. and Fuller, B.K. (2000) An Empirical Assessment of the Contribution of Small Business Employment to U.S. State Economic Performance, *Small Business Economics*, **15**: 293-302.
- Schein, E.H. (1983) The Role of the Founder in Creating Organizational Culture, *Organizational Dynamics*, **Summer**: 13-28.
- Schumpeter, J.A. (1942) *Capitalism, Socialism and Democracy*, Harper and Row, New York.

## Small Business Innovation Management

Swan, J.A. and Newell, S. (1994) Manager's Beliefs about Factors affecting the Adoption of Technological Innovation: a Study using Cognitive Maps, *Journal of Managerial Psychology*, **9**(2): 3-11.

Tidd, J. (1997) Complexity, Networks and Learning: Integrative Themes for Research on Innovation Management, *International Journal of Innovation Management*, **1**(1): 1-21.

Tidd, J., Bessant, J. and Pavitt, K. (1997) *Managing Innovation: Integrating technological, Market and Organizational Change*, John Wiley & Sons, London.

Van de Ven, A.H., Polley, D.E., Garud, R. and Venkataraman, S. (1999) *The Innovation Journey*, Oxford University Press, New York.

Verhees, F.J.H.M. and Meulenbergh, M.T.G. (2004) Market Orientation, Innovativeness, Product Innovation and Performance in Small Firms, *Journal of Small Business Management*, **42**(2): 134-154.

Weick, K.E. (2001) *Making Sense of the Organization*, Blackwell Business, Oxford.

Wolfe, R.A. (1994) Organizational Innovation: Review, Critique and Suggested Research Directions, *Journal of Management Studies*, **31**(3): 405-432.