Interfirm supply chains: The contribution of management accounting

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Abstract: The article discusses a study on the relation between management accounting and supply-chain management. Conducted by J. Cullen of Sheffield Hallam University in England, the study examined the implications of supply-chain management initiatives for management accounting and for management accountants. The authors concluded that their study supports the criticism that traditional management accounting systems do not readily support supply-chain management perspectives.

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the contribution of management accounting

Supply-chain management

It has been argued that 'traditional' management accounting systems do not readily support supply-chain management perspectives. Our study of the implications of supply-chain management initiatives for management accounting and for management accountants both supports that criticism and shows how management accounting is changing in response to the challenges.

A familiar definition of the term supply chain management is:

'The strategic management process, unifying the systematic planning and control of all technologies, materials and services, from identification of need by the ultimate customer. It encompasses planning, designing, purchasing, production, logistics and quality. The objectives are to optimise performance in meeting agreed customer service requirements, minimising cost, whilst optimising the use of all resources throughout the entire supply chain' (DTI, 1997).

This definition indicates the wide scope of supply-chain issues. The main focus of our work centred around interfirm supply-chain issues. However, as the work developed, it became apparent that we would also need to study intrafirm supply-chain relationships within large organisations.

The 'normal' assumptions of interfirm behaviour is of autonomous firms engaging in arm's length conflictual business, with quite separate accounts reflecting the stewardship of the assets. A second view is to understand the dependence along the supply routes. The first type of dependence is to see the serial nature of the processes; a second is to recognise the reciprocal nature of the processes and the third is to recognise the mutual nature of the processes. In each of these types of dependence managers seek to act beyond the boundaries of the firm.

First, we present three brief case studies of interfirm supply-chain practice moving along the stages of development from autonomy to mutuality or partnership.

The Cost Management Group case study illustrated the way in which multifunctional teams can work together to improve competitive performance. The key features of the Cost Management Group were the clear focus on the cost of suppliers and of supplies; the dyadic nature of these relationships; the ability to work a proactive cost-management process across organisational boundaries; the ability to work to a shorter time cycle than the annual budget; the freedom to begin and implement ad hoc projects; the proactive role of the management accountant; the maintenance of the familiar full absorption cost measurement practices; the maintenance of the monthly and annual cycles of management accounting. In making this move, Dextron was in a fairly powerful position relative to most, but not all, of its suppliers.

The case shows a firm moving from arm's length relationships to managing the serial dependence on its suppliers. We now go on to look at two cases where the power positions are shared more equally and the firms have moved from serial dependence to reciprocal and perhaps mutual dependence.

New hybrid organisational arrangements (interfirm agreements linking firms with complementary capabilities and capacities) may turn out to be as significant an organisational development as the moving assembly line and the multidivisional firm (Teece, 1996). Case study 2, illustrated the way in which management accounting contributed to the development of a strategic alliance and partnership arrangements.

The Alliance case illustrated the first stages in managing the change from managing supply chains based on serial dependence and power to recognising and managing the reciprocal dependence.

Key features were the dyadic nature of the partnership; the implementation of open books for both supplier and purchaser; target costing; common and shared cost reduction activities; common development activities; development of the shared balanced scorecard integrating accounting with other data; the maintenance in each firm of familiar cost accounting and management accounting procedures; the proactive and managerial roles of the management accountants.

The third case study involved moving beyond reciprocal dependence to managing mutual dependence via partnership arrangements. The case is based on a company, Morrison Construction, whose whole strategic drive is based on the concept of partnership.

Key features of this case were the dyadic nature of the developing partnership; absence of competitive tendering; open books; the sharing of budgets; the multiple balanced scorecard for performance measurement and monitoring; sharing profits and losses; target costing.

The second and third cases provided examples of accounting techniques being used in partnership situations. Open-book accounting was a common feature in both of these two case studies and this opening of books was extended to both companies in the partnership arrangements. Target costing was also a feature of both cases and the role of accounting and accountants in facilitating organisational change was apparent.

One of the most consistent findings from our case study organisations was the involvement of management accountants in multifunctional teams. These teams were designed to work with processes along the chain which crossed functional and, sometimes, organisational boundaries. Management accountants were developing their broader managerial and personal skills, and commercial capability, as well as their financial knowledge. Much of this work was being done through ad hoc projects alongside the normal accounting systems which remained unchanged, observations also noted by Burns et al (1999).

Further empirical evidence

In addition to the three brief case studies we have case material covering a number of other companies from a wide range of different industries--engineering, manufacturing, electronics, telecommunications, retail, pharmaceuticals, logistics and. publishing. Management accounting systems within these organisations were both in a stable state and a state of change. However, it is important to note that most of the interfirm relationships we studied were only taking place in terms of dyadic or two party relationships. We found little evidence of management across the supply system of businesses as a whole.

The main driving force for many developments in supply chain management was the notion of world class performance. All of the companies in this study were striving towards continuous improvement and were adopting accounting ideas which supported that. We found evidence, in different organisations, of horizontal information systems, kaizen costing, benchmarking, open book accounting, value engineering and target costing. These techniques were being used sparingly in interfirm and richly in intrafirm contexts.

In one multinational company there was evidence of the emergence of a quite new mode of inter- and intrafirm management based on the integrative concept of the supply chain. Here some tens of supply chains had been identified and multifunctional teams were established to manage them, limiting the authority and responsibility of the extant regional and national management structures. Further each chain had an integrated logistics model to which other information, accounting and markets, were being added. Here there was the development of a process driven integrated information system which has the potential to displace all other systems and be a strategic tool.

Whilst we found evidence of these new techniques, it is important to note that, in virtually all of our ease study companies, routine accounting systems remained in place alongside and underpinning the accounting innovations. We found little impact on the routine structures of financial planning, budgeting and reporting. This reflected the fact that there were few organisational changes. Most of the work that was being undertaken was in the form of ad hoc projects which did change the way processes occurred. So, on a routine basis, costs were still being reported in a traditional mode of full absorption. Therefore, despite identifying the need to understand processes, and introducing ad hoc systems to provide such information, all of the companies provided monthly reports under traditional functional responsibility headings, reflecting the unchanged structures.

Performance measurement in the intrafirm cases was not as simple or straightforward. In one company, because of the way reward systems within the divisionalised company operated, managers were very reluctant to open their books internally whilst they would be willing to open their books to external organisations. The penetration into the firm of divisional performance measures such as residual income had strengthened divisional autonomy and inhibited collaborative working. Here quasi economic approaches had broken the practice of mutual and reciprocal interdependence and returned the firm to serial dependence and quasi autonomy, the reverse of the practices in the inter firm case studies. This served to discourage managers from looking at processes across divisions.

The question is whether, in time, the new supply-chain management and the new accounting systems will become the new 'routine accounting systems within organisations' and displace current systems. As Burns et al (1999) noted, stability and change are not mutually exclusive and some form of stability may be necessary to enable change. Our evidence of continuity in accounting practice and radical change, if ad hoc, supports this notion.

Conclusions

Supply-chain developments require the contribution of the ideas from management accounting and management accountants, both internal to the firms and in inter firm relationships. Indeed, the appointment of management accountants to jobs carrying the title of supply chain accountant or continuous improvement manager, suggests that this contribution is now being recognised.

Accounting has a constitutional role to play in the establishment and management of trusting and collaborative business relationships based upon openness of books, profits and losses, and shared and common programmes of cost management. The role of accounting shifts from separation to shared practices as the relationship changes from autonomy, to mutuality or partnership via the stages of serial and reciprocal dependence.

Supply-chain developments in the context of other changes (e.g. rising competitive intensity and world-class manufacturing) demand the introduction of new management accounting techniques alongside traditional reporting systems which seem to be surviving perhaps as the bridge to a new future.

The evidence of this study suggests that, at the leading edge, there is an emergence of a radical process driven integrated information system which will challenge all other information providers.

Finally, management accountants are becoming involved in cost management for efficiency, for effectiveness and in strategic issues through their involvement in multifunctional teams which look at processes across organisational boundaries. This will demand new skills for management accountants in terms of personal relationships and business acumen as well as the maintenance of traditional financial and analytical skills.

CIMA provided research funding for a multi-disciplinary team from Sheffield Hallam University and ISCAN (Innovative Supply Chains and Networks) to study the consequences of interfirm supply chains for management accounting practice.

Case Study 1: Cost Management Group 1997-98

Dextron designs, assembles and builds electronic machines for business use in an intensely competitive market. The cost management group was set up within Dextron as part of a strategic response to competitive pressures and the need to improve all aspects of the supply chain.

The group was given considerable freedom to take and propose initiatives. Initially the group just consisted of two people--a project accountant and a project engineer.

However, over time this group has expanded and other functional areas have joined the team for ad hoc projects. The group was also free to operate across boundaries both inside the organisation and especially outside it.

Among the projects that have been undertaken to gain significant cost reductions were:

• reduction in the number of suppliers;

• make or buy decisions;

• reduction in lead time given to suppliers for part or component orders;

• benchmarking suppliers;

• development of HUBs;

• inventory reduction;

• development of suppliers suggestion schemes;

• exercises on the cost of quality;

• supplier management programmes;

• internal communication;

• benchmarking and tear-down analysis in order to understand competitor's products and processes.

These projects focused attention on processes and each project led to others.

The group had a role as a catalyst for change and worked both inside and outside the company system in order to stimulate new thinking.

The reduction of supply costs had been central to the cost management group. A monthly report was prepared by the group which highlighted key cost, activity and supplier issues.

It was estimated that the cost management group had generated savings of between eight and ten million dollars over the last couple of years. An important feature was that the Cost Management Group had been freed from the normal monthly and annual time cycles of the accounting and reporting structures in the company.

Cost management was developed on a rolling three/four month basis.

This ability to reconsider time appeared to have been crucial for it enabled the cost management group to have both a short-term project focus and a longer-term development focus.

The role of accountants in the Cost Management Group was central to its effectiveness as they became immersed in production, commercial, organisational, managerial, catalytic and change management issues whilst not losing the substantive accounting contribution they were making.

Through the experience of doing this work, the accountants have developed a more managerial and strategic view of how cost management must embrace the operation of the whole system to meet market needs at Dextron.

Case Study 2: Alliance

This case was based around a business relationship involving two companies in the manufacture and supply of a customised component in the automotive industry. The assembler, a subsidiary of a large American multinational, was developing a strategic partnership with a supplier which itself was a subsidiary of a large UK multinational. The companies had been doing business for about 25 years but until recently their relationship had been a traditional arm's length relationship.

The concept of a strategic partnership started with the formation of a draft alliance agreement based on a document drawn up by the assembler, which stressed the principle of an open and trusting relationship which 'delivers tangible and measurable benefits to both sides over a long period, and allows for the sharing of ideas and information'. The agreement specified cost-reduction targets, areas for continuous improvement, a management review process and a grievance procedure. The alliance agreement proposed that cross-company teams should seek out and design mutually beneficial technological projects.

The first step was to set up the new multifunctional team with representatives from both organisations. Accounting representatives from both organisations were included and, interestingly, the accountant from the supplier organisation had the title of continuous improvement manager. The draft alliance agreement made specific mention of a 6% cost reduction which was interpreted as an 'all in cost'. This meant that the parties were looking at total costs and, as a result, it did not represent an attempt by the purchaser to squeeze the margin of the supplier.

The concept of open-book accounting was part of the relationship. Discussions developed in a collaborative way. Here, open book accounting was not perceived as a mechanism whereby the supplier opened its books to the customer. It was recognised in this relationship that the need to share information must be two way and that there was also a need for the customer to open its books to the supplier, sharing data (including cost and value added calculations) with the supplier. There was therefore a willingness to look across company boundaries and allow open-book analysis within pre-agreed limits.

Discussions concentrated on operational processes rather than functions. For example, a particular process was identified where costs could be reduced if a procedure was carried out by the supplier rather than the assembler. Such a cost reduction was only made possible by looking across organisational boundaries. The concept of target costing was also used to enable managers to think 'outside the box'. Target costing was linked to the total cost concept to initiate cost reduction activities.

Discussions also took place with regard to the use of a balanced scorecard performance measurement and reporting system--customer perspective, internal business perspective, innovation and learning perspective, financial perspective--across organisational boundaries. This was perceived as a means of measuring the benefits of partnership to both organisations.

As a result of these multifunctional discussions, a joint action plan was prepared which addressed issues such as the fine tuning of current processes, development of new products and, in the longer term, arrangements with regard to the ownership of new patents.

Case Study 3: Morrison Construction

Much of the impetus for changes adopted by Morrison came from the Latham Report in 1994. Latham suggested that partnering includes the concept of teamwork between supplier and client and the concept of total cost improvement. This report also talked about the necessity for openness between parties, ready acceptance of new ideas, trust and perceived mutual benefit. The benefits of such partnering would be seen through improvements in quality, quicker completion times and a reduction in costs.

Morrison Construction enthusiastically took on board these ideas. Morrison's whole strategic drive is based on the concept of partnership and now this method of business accounts for more than 80% of total business. Morrison Construction had operating margins of 5.4% compared with an industry average of 1.5% (Financial Times, June 1998) and was described as the 'Rolls Royce firm which purrs on to ever higher profits' (Investors Chronicle, June 1998). Morrison has developed long-term strategic relationships with certain clients which means that traditional tendering for contracts does not take place.

An example of these partnership arrangements may be seen in the construction of a large supermarket. Morrison would be in a partnership arrangement with a large retail company and the retail client would give a budget (linked to the concept of target cost) to Morrison Construction which would aim 'to work within that budget. If they complete the project at a cost less than the original budget, then the profit is shared between the two parties on an agreed basis. In order for this to work, there is a necessity for open book accounting. Similar arrangements also exist with utilities organisations and Morrisons relationship with Thames Water was reviewed in the Financial Times (Buxton, 1997). In the case of Thames Water and Morrison's utility division, if the cost for a project is below the agreed estimate, both parties share the resulting profit according to a formula. If the costs are above the agreed estimate, they share the loss.

For performance measurement, Morrison use the concept of the balanced scorecard. They adopt a system which uses the imagery of a golf course and eighteen holes with par scores identified for each hole. The actual performance against par is subject to both internal and external perceptions of what has happened. The relationship between Morrison and Thames Water provided some interesting insights into the extended use of the balanced scorecard--using measures of innovation, customer service, quality and cost issues.

BERRY, A.J., AHMED, M., CULLEN, J., DUNLOP, A. and SEAL, W. (1997): 'The consequences of inter-firm supply chains for management accounting', Management Accounting, November, pp. 74-75.

BURNS, J., EZZAMEL, M. and SCAPENS, R. (1999): 'Management accounting change in the UK', Management Accounting, March, pp. 28-30.

BUXTON, J. (1997): 'Goodwill on tap: James Buxton looks at partnership arrangements in the construction industry', Financial Times, 9 January.

DTI/Supply Chain Networks Group (1997): Supply Chain Management Attitude Survey. Report of the supply chain Working Group, April.

TEECE, D. (1996): 'Firm organisation, industrial structure and technological innovation', Journal of Economic Behaviour and Organisation, Vol 31, pp. 193-224.

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