

BUSINESS PROCESSES
Internal business processes
The mission
■■■

LEARNING AND GROWTH
Employee training
Corporate cultural training
■■■

CUSTOMER
Customer focus
Customer satisfaction
■■■

PERFORMANCE MEASUREMENT AND RISK MANAGEMENT

In intermediary food
chain businesses

FINANCIAL
Corporate database
Risk assessment
■■■

THE BALANCED
SCORECARD
20th
ANNIVERSARY
1992-2012

KEY FINDINGS

- The main risk identified by the participants in this research was commercial risk, which includes the risk of losing customers or suppliers at relatively short notice for reasons other than their own inability to supply or meet requirements. It appears that retailers want the assurance of quality and delivery that come from long-term relationships, but at the same time prices that come from competitive trading markets.
- Intermediary food companies play a crucial pivotal role in attempting to align strategic and operational planning in the industry. In order to develop the long-term relationships that make planning and negotiation more effective and to ensure their own survival, they show best practice in delivering on time in full and to specification to the retailer, and in creating value adding relationships with suppliers based on constant communication and business support, and by providing some protection for suppliers against commercial risk.
- Elements of the Balanced Scorecard approach were evident even though no examples of full scorecards were presented, suggesting that the influence of the approach has extended beyond major multinationals. Performance measurement through the supply chain is based primarily on non-financial measures relating to quality, customer service and learning. Financial measures are used within the intermediary measures, but only price is discussed between supply chain partners, restricting the scope of negotiations and maintaining the monopsony where a very small number of retail buyers are able to drive prices down.

OBJECTIVES OF THE STUDY

- To review current management accounting practices, techniques and support systems in case companies, aiming to identify best practices and more importantly, to identify how intermediary supply chain businesses negotiate the use of performance measurements in communications with customers and suppliers.
- To understand the extent to which performance measurement systems in food supply chains might be incomplete and inadequately balanced, and to consider the importance of performance measurement in aligning food supply chains and networks.
- To investigate how risk is perceived and incorporated into performance measurement systems in food supply chains.

We use intermediaries to refer to wholesalers, processors, packers, distributors and manufacturers. Our research finds that these businesses perform a key role in aligning supply chains and networks in what is a very fragmented and high pressured industry.

Agri-food is the largest single commercial sector in the UK, representing 14% of the economic output. In the sector, food manufacturing was the largest contributor at 29%, ahead of food retailing at 27% and non-residential catering at 25%. Food wholesaling covers 11% of the sector. Horticulture is said to be worth £3bn a year. The value added to the economy by food manufacturing is £29.3bn (Agriculture in the UK 2011, Defra).

“Acting as the interface between customers and clients, our experienced team are able to manage the whole supply chain process, from uploading orders to forecasting, sourcing, delivering and managing accounts on clients’ behalf.”

Case study 3

BACKGROUND

Intermediary food businesses operate in a highly competitive market place where demand is volatile and net margins are low (typically around 2% of turnover). The grower-packers and small manufacturers in this study face worries about survival and long-term profitability because of high risks centred around:

- Loss of customer through ‘promiscuous’ chasing of lower prices, even when ability to supply exists
- Refusal of product by customer
- Loss of reputation
- Loss of supply through weather, disease or contamination
- Relative ease of substitution in the market of both product and supplier

Unlike the bigger manufacturing firms in the industry selling long-established brands, the businesses that we examined have little protection in terms of intellectual property and, with a few exceptions, are using generic technologies and patenting processes. They rely on quality of produce and products, and of customer service to achieve some competitive advantage and longevity in the market.

The environment of highly concentrated retailers, category and supply chain management is one that has developed in the past 20 years. It is a monopsony – an economic situation in which a very small number of buyers dominate in a market of seemingly limitless supply and are able to force prices downward. Yet the whole supply chain (retailer, intermediary, primary producer) needs to make a return in the long term to secure the supply of food for everyone. The strategic aims of the intermediaries we spoke to were to establish long-term positive cash flows from current activities and to continually look for opportunities to develop new revenue streams. The alternative is to exit the industry, or product lines, but survival of the firm is the main driver: the grower-packer businesses, for example, may only have emerged in their current form in the past 20 years, but they are built on farming businesses three generations or more old.

Case study 1

Company 1 is a major supplier of vegetables to UK supermarkets, with a group turnover of around £220m per annum. Since the 1990s they have been organised as a group of private limited liability companies, with the majority of the shareholders coming from the family that developed the business out of their farming interests which in turn extend back some five generations.

Their guiding principle is to treat their own suppliers fairly, providing the information and support needed to grow crops to specification. They are pioneering a scheme for growers prepared to commit to longer-term relationships. To some extent, they offer a buffer between the growers and the major retailers. At present, there are a number of different arrangements with preferred suppliers, including an innovative target

cost based contract for the provision of premium quality vegetables and a joint venture with a Spanish grower using open book accounting.

Key performance indicators (KPIs) are used extensively. A number are imposed by the customer, with ‘on time in full’ (OTIF) being central – company one was achieving 98.8% on this target. A number of lines have ‘LEAF mark’ or similar accreditations to be met. The customer maintains continuous monitoring of KPIs but they are used “normally in the price negotiations if we haven’t hit our target”. Price negotiation is a continuous activity, and vegetable prices can fluctuate significantly even over a few days. Within the business there are technical and financial KPIs, called over in weekly meetings – the philosophy is one of continual improvement.

Best practices included the use of regular communications to manage risks against internal and external measures, not just within the intermediary businesses themselves but also with customers and suppliers. Sharing information, expertise and integrating planning adds value and appears to contribute to maintaining relationships even when prices come under pressure. There were examples of growers who had been supplying the intermediary, for over a decade, and these long-term relationships enabled suppliers to evolve using the technical and market knowledge provided by the intermediary. The result is more reliable sources of higher quality produce. However, the industry is very visible – competitors can see fields and transportation, and the products on the supermarket shelves. Information sharing only takes place with trusted suppliers and customers.

As one director said:

“There is a lot of sensitive commercial information, isn’t there? We don’t want our competitors getting hold of that.”

With customers, the aim is to provide a high level of service, quality and reliability in order to make substitution by a competitor more problematic. The main role of the intermediary, though, is to channel the strategy of the buyer:

“We can tweak and steer slightly. We probably haven’t influenced strategy, but we have certainly helped them deliver it in terms of agricultural sustainability and thinking along those areas.”

– Director, Grower-Packer

Performance measures are used extensively within the intermediaries, and cover internal processes; quality; customer profitability; delivery to customers; staff development; and finance. In terms of negotiation with retailers, quality and delivery specifications are set by the retailer/caterer. Financial and risk measures are rarely discussed, except price where again negotiations centre on quality and delivery. With suppliers, intermediaries did develop relationships which involved wider discussions about risk and price, especially where they wanted to retain the services of the best growers. Asked what drove the strategic plans of the intermediary one director replied:

“Quality, integrity and provenance in the market place in the UK. We can’t afford to pay any more money than anyone else, but we need to attract the best 25% of the growers.”

We did not find any examples of balanced scorecards in use, but it is clear that the underlying approach has permeated into the thinking of the senior managers of the company, many of whom had undertaken an MBA or similar studies. It could be said that a virtual scorecard is in place, where each element is diagnosed and developed without the tangible visual device being used. In creating sustainable supply chains within the complex food supply network, there may be a place for a streamlined version of the scorecard to be used between supply chain partners centred on price, demand fulfilment, quality and environment. However, unless it also contains elements that facilitate discussions about sharing risk and value throughout the chain, the device could in turn limit discussion leading to the development of more collaborative supply chains.

Case study 2

A small food manufacturing company that has recently been taken over as an investment by the owners of a larger food import business and runs at a loss despite a turnover of around £300,000 per annum. They have a number of substantial contracts with national high street catering outlets, and source supplies from a range of medium-sized and large wholesalers.

The risks and challenges that they face are not dissimilar to those in the other case companies. Commercial risk in the form of loss of a customer or reputational risk from a food safety incident were identified as the main risks. Buyers for restaurant chains were seen as more stable and in possession of significantly more technical knowledge than those in retail. As menus tend to stay fixed for several months, planning is

easier as forecasting and relationships tend to be longer term. There was some barrier to entry for competitors if certain ingredients used are difficult to source, as it may take another manufacturer several weeks both to replicate the recipe and to source supplies, but again, relative ease of substitution means that there is always a risk of losing a contract.

The aim of company two was to operate using a small number of KPIs, and they had learned through experience to negotiate on price with suppliers, through increasing understanding of costs. A constant problem is that margins negotiable with customers fall short of covering cost of capital or fixed overheads. Cash flow management rather than profit management is essential to the survival of the company.

Research methods

Four case studies have been carried out with intermediary food companies in the UK and Spain, based on interviews with key managers, secondary company and financial data, and review of prior research in related areas (such as value chain management; the role of retail buyers). Sixteen interviews were carried out in total, lasting an average of one hour each. The interview data was in most cases recorded and then transcribed, although in three meetings notes were taken and written up as memoranda. The majority of interviews were carried out on site and included one major site tour. The remainder were telephone interviews.

Transcripts and memoranda were coded using NVivo software, first identifying free codes and then grouping these under four headings (tree/parent codes) based on the four areas of intermediary dependencies, perceived risk, negotiation of inter-organisational performance measures and proactive performance management. Reports generated by NVivo were then subjected to close reading to identify key factors for further analysis.

MAIN FINDINGS AND THEIR IMPLICATIONS FOR PRACTICAL APPLICATION

Our research focused on four interlinked areas, shown in Figure 1.

FIGURE 1: Areas of investigation and their relationships



The main findings are:

1. *Intermediary dependencies*: food supply chains are not characterised by sharing of physical assets or financial information, but we did find one example of open book accounting, between the case study 1 company and its Spanish joint venture partner. While there is evidence elsewhere of shared IT, it is less evident in the cases here. Computer systems between customers and suppliers at each level were not integrated.
2. *Perceived risk*: although the performance risks of food production are weather and disease related, in all cases owners and managers saw their main risk as being commercial risk, including reputational risk. Commercial risk is a relational risk (Das and Teng, 2001) identified by our interviewees as:
 - i. Promiscuity
 - ii. Loss of customer
 - iii. Loss of reputation
 - iv. Relative ease of substitution in the market

Quality assurance programmes were given as the main risk management tool: the ability to deliver safe food, grown to specification and delivered on time, provides protection against loss of custom and more opportunities for the development of long-term relationships. The longer-term relationships with growers that case companies

are developing show that some intermediaries are protecting growers and sharing risk in return for the benefits of that longer-term relationship in the form of information, advice, quality know-how and even, in some cases, guaranteed prices at times of catastrophe. The risks attached to growing crops, such as weather, disease and water shortage, are known and managed. Similarly, risks associated with transportation and delivery logistics are managed, with a very small number of penalties being received for late or non-delivery. Overall, companies one and three stated that they achieved in excess of 99% of agreements with the retail customer. Commercial risk, on the other hand, is largely out of their control.

One director defined commercial risk as:

“Our customers and retailers being promiscuous with suppliers by chasing the cheapest grower all the time, by having no longevity for their source. It is very short-term behaviour all the time and there’s also the cancer of our industry – marginal costing.”

The situation is exacerbated by the role of retail buyers who are alleged to be non-specialist and rotated between categories on a frequent basis. Linked into this was the problem of forecasts: the director simply said that their own forecasts for what consumers required were often better than those of the retailers.

Case study 3

A group with a turnover of around £25 million per annum, their core is a co-operative of six companies based on the Spanish mainland and the Canary Islands that distribute and market mainly salads across Europe through limited liability companies incorporated in the UK and in the Netherlands. The six main partners are in turn supplied by co-operatives of growers, and the customers are both supermarkets and food preparation companies (eg sandwich makers).

As in case study 1, the company works to maintain solid relationships with its growers. The group's aim is to maintain and improve the income of growers, and in order to achieve this they impose what could be translated as 'steely discipline' in operations. The MD likened the relationship between the co-operative and the

growers as a 'doctor-patient' relationship, with training and advice offered to growers in order to raise them to achieve the high specifications imposed by the company's customers.

Communications are advanced, with weekly bulletins on price, weather and other factors sent to suppliers and customers. As with company 1, customer site visits and communications with buyers happen on a daily basis. Forecasts, plans and prices are changed and reacted to constantly. More importantly, the co-operative packer-grower is responsible for planning the planting cycles and maturation of crops across a range of growers, so each one delivers product within certain timescales, usually manageable to within three - four days, to ensure that the company can deliver a consistent supply.

Discussing the characteristics of better customers among the retailers, it was said that:

"Longer-term approach is probably the main thing. They understand crop timings better than other retailers, they have more stability than other retailers. Therefore, they have better understanding and there is more of a trusting relationship, which works both ways. They are still hard on pricing, but at least you can plan."

3. *Negotiation of performance measurement:* performance measures are diverse and fragmentary in food supply chains, and are mainly kept within individual companies. However, where measures are negotiated between supply chain partners, this was perceived as easier to achieve with suppliers rather than with customers, who tended to impose rather than negotiate measures. Measures tend to be non-financial and related to quality and delivery, and where negotiations do take place on price, the non-financial measures tend to be the focus of discussion rather than overheads, for example. The prevalence of marginal costing as the basis of price negotiations in the industry is seen as severely inhibiting by our interviewees.

4. *Proactive performance management:* the central problems identified in food supply chain management are forecasting and buyer behaviour. On the one hand, a number of interviewees attested that the industry was often 'fire-fighting' – dealing with changing forecasts and orders on a daily basis. On the other hand, reviewing and changing plans and budgets denotes a high level of interactive management as a matter of course in the industry. This is tempered by the need to consider growing cycles and agronomy concerns in fulfilling new demands from customers.

While retail forecasting has been identified as a major issue in food supply chains (see for example Fearne and Taylor, 2008), one of the investor-directors of company two indicated more tolerance by reminding us that it is the ultimate customer – the consumer – who tends to be fickle and unpredictable.

Case study 4

A family company in Spain with more than 30 years of experience in growing, currently they deal with more than nine thousand growers and two thousand clients, forming a complex group in which the case company leads the commercial process with clients and input suppliers. They developed a revolutionary benchmark process ten years ago, when the company opened the second of six packing centres. Currently, the company has a turnover of around £32 million, and the main co-operative of one hundred growers £5 million per annum. In the past two decades, their business orientation has moved towards foreign markets and high quality standards, putting them ahead of other agri-companies in the south of Spain.

Best practice is demonstrated in their business improvement system, designed to support growers through advice, training and assistance to achieve budgeted amounts of products to the

quality specifications defined by the retailers. Discussing the characteristics of these closer relationships, and referring to the Spanish cucumber (e-coli) crisis in summer 2012, it was said that:

“we have continued to work; my company received and paid for all the cucumbers from our associated growers, otherwise the growers would have to take the losses.”

The company principle is that where associated growers achieve the high standards required by retailers and meet programmed production and internal audit directions, risks from climate conditions should be supported by the company. The company tries to cover commercial risks such as price volatility or credit risk by credit insurances. The critical success factor in their operations is high levels of quality without rejections from clients, which can be very costly.

Putting the findings in the context of contemporary strategic planning and control, five key areas of insight emerged:

1. Interactivity

The work of Simons (eg 2005) emphasises the need for businesses to have interactive networks and controls in order to foster the creative tension that leads to innovative practices. The Balanced Scorecard and other performance measurement techniques only achieve their potential when used interactively, incorporating forecasts and new information swiftly.

All the case companies have evolved networks of communication that enable them to work to monitor and rework plans daily. Creative tension is the normal state of affairs for these companies. They have a wide net through which they collect data, probe for new information, and attempt to influence the work of both growers and retailers, through education and negotiation.

2. Alignment

Achieving alignment of strategic plans and operations throughout supply chains is accepted as the means by which value can be maximised and competitive advantage maintained. While this is often perceived as being a strategic management, top down/bottom up process, we find that in these more complex supply networks intermediary companies play a crucial role in aligning the many-to-many relationships involved between growers and wholesalers, and retailers and caterers. While the downstream customers provide the quality specifications, quantities and timings, actual planning of operations and assurance of supply are created by intermediaries. They balance the demands of buyers and patterns of consumer behaviour with the practical demands of land and crop management. This may involve having the same crop grown by several producers in rota, or having several harvests through one grower. In particular, they align the network using the quality assurance and product specifications – and the performance measures derived from them – against the one measure of ‘on time in full’.

Certain activities such as transportation and plant-raising (from seed to seedling for planting) are outsourced, and the intermediary plays a significant role in ensuring the efficiency of the network in incorporating these outsourced activities.

Whether full strategic alignment takes place is another issue. Immediately, there are different strategic aims at play, with retailers perhaps aiming for shareholder value maximisation, and growers and intermediaries having a survival or satisficing approach. It is likely, though, that all aims are achieved through the same means, and so a degree of strategic alignment happens if the quality targets are met. A more significant issue in alignment emerges when we consider the question of pricing along the chain. It seems evident that the food supply chain is still in transition from a trading to a collaborative environment. Retailers want the assurance on quality and delivery that comes from long-term collaborative relationships, but want the prices that can be gained from trading. Until this conflict is resolved, full alignment of supply chains in the food industry seems unlikely.

3. Communications

We found several examples of best practice in communications. In the case of the grower-packers (Cases 1, 3 and 4), information is shared with their customers and suppliers, but much is on an informal, verbal level. Site visits are frequent (it is a rare day on which there are no visitors) and communication with customers happens on a daily or at least weekly level. Case company three issues weekly bulletins to all partners, for example. Personal contact with growers tends to be preferred over formal contracts. On a technical level, information is shared, and both retailers and suppliers have been engaged in projects relating to waste reduction and seed variety trials. However, we were reminded on several occasions that "...it is a dog-eat-dog world in this business. We are all working for next to nothing and everyone is out for the next opportunity. You can't afford to release sensitive stuff."

4. Supplier relations

All the case companies reflected on the need for long-term relationships. One manager summarised the situation in this way:

"The amount of commitment that has been obtained from customers. There are suppliers with whom we have been working for years; in those cases the price becomes a secondary matter. If these clients are happy with the service and the price is within their expectations, they continue with the relationship." (Case study 3)

All the grower-packers emphasised the need for nurturing supplier relationships (as do the retailers in their public information), but Case Company 2 sounded one warning: for some manufacturers, using the same supplier can mean that you accept higher prices for raw materials and the relationship has to be reviewed and discontinued in order to preserve margins.

5. The language of relevance regained

We did not find any examples of the balance scorecard in use in any of our case companies, nor any indication that the balanced scorecards of major retailers were being used in supply chain discussions. However, it was evident that the principles and practice underpinning balanced scorecards and other similar innovations, in particular lean management, had permeated through the intermediary businesses. Unsurprisingly, the majority of senior managers in the case companies were graduates of MBA and other business programmes.

Non-financial performance measures are used extensively, and cover all areas equating to customers, internal processes and learning and growth (employee development schemes were in evidence). Case company two relied more on financial measures, and all used gross and net margins, return on investment (ROI) and other traditional measures. Management information systems are either based on standard cost per product or customer profitability. Straightforward and detailed budgeting is used, but overhead allocation is less sophisticated than in some other industries, reflecting the findings in the CIMA report *Management accounting practices in the UK food and drinks industry* (Abdel Kader and Luther, 2004). We did find some examples of intermediaries refusing to sell to customers at prices offered, arguing from cost analyses. Overall, the intermediaries and growers managed costs very tightly in order to achieve some return on the prices available.

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Abstract

Through case studies we aim to develop an understanding of performance measurement in supply chains by examining how intermediary supply chain businesses in agri-food negotiate the use of performance measurements in communications with customers and suppliers. We investigated how risk is perceived and incorporated into performance measurement systems in food supply chains. Intermediary businesses are found to provide a crucial role in aligning supply networks to provide fresh produce to specification with high levels of on time in full delivery

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