

Solutions **Chapter 4: Cost Accounting in Supply Chains**

Review question 4.1:

Unlike financial accounting, cost accounting is not subject to extensive regulation and firms are more or less free to structure their cost accounting system as they see fit. Financial accounting data is also subject to extensive disclosure requirements and standardized information (mostly coming from a company's annual accounts) is available to stakeholders outside of the organization. The information that is processed and stored in a company's cost accounting system is typically not shared with third parties. Instead, cost accounting information is available to internal stakeholder (company decision makers) only. First, there are no disclosure requirements for cost accounting data (except for cases in regulated industries), and second, cost accounting data is typically considered to be relevant for a company's competitive position, which is why firms usually do not share it with their business partners.

Review question 4.2:

In order to generate information that is relevant to company management, a cost accounting system must (1) collect cost data from various internal sources, (2) put the cost data into a suitable structure (categorization and grouping of cost data), (3) allocate cost to the different objects that are relevant to management, and finally (4) present and report the cost data in a format that is understood and accepted by managers. A cost accounting system typically provides answers to the following three questions:

1. Which amounts of different resource types have been consumed in the period? (cost type accounting)
2. Which organizational entities have been involved in that resource consumption process and which amounts have been consumed by which entity? (cost center accounting)
3. Which marketable goods and services have been produced with these consumed resources? (cost unit accounting)

Review question 4.3:

Supply chain cost can be defined as all costs that are incurred when initiating, negotiating, monitoring and adapting mutual performance relationships with supply chain partners. Supply chain costs occur because collaborative task fulfillment must be aligned and coordinated across supply chain partners.

Review question 4.4:

Supply chain cost items are typically handled as (undifferentiated) overhead costs in traditional cost accounting, because cost accounting systems place much less emphasis on a detailed and specific measurement and allocation of transactional and relational cost items and focus on product cost instead. This insufficient transparency of traditional cost accounting is all the more critical since even many of the firm's internal cost items are driven by external trading partners' behavior and business practice. Improved cost visibility – both within and across firms – would enable executives to better understand how their relationships with key customers or suppliers drive costs throughout the supply chain. Supply chain cost accounting, therefore, must deliberately identify and separate these cost items in order to make them manageable.

Review question 4.5:

1. Standardization and harmonization: Cost accounting information coming from a partner's system can only be properly integrated into a firm's own decision making if it is clear how to interpret and "read" the data. Supply chain partners must standardize and harmonize their systems as much as possible in order to avoid misinterpretations.
2. Aggregation and consolidation: In the SCM perspective, management focus shifts from the single firm to

the cooperative network. Performance measures as well as cost and revenue figures need to be determined at the network level rather than the firm level. This requires aggregation and consolidation of individual firms' data into a consistent set of supply chain-related data. Structural and procedural alignments between partners' cost accounting systems are necessary in order to make comparisons and consolidation possible.

3. Communication: Since cost data originates in each partner firm's proprietary cost accounting system, rules and processes need to be established that determine how and which information is exchanged between partners.

Review question 4.6:

The degree of harmonization can range from selective coordination of individual elements across partners' cost accounting systems (cost item definitions and valuation principles, for example) to partial or full integration of their systems (merging cost accounting sub-systems across partner firms and establishing a single, cross-company system with the supply chain being the key entity in focus).

In most cases, partners will retain their own, separate cost accounting systems (parallel cost accounting systems), even if these are partly harmonized and aligned. In only very rare cases will partners drop their own systems in favour of a shared system (substituting cost accounting system). The standard approach in practice is to use the SC-aligned system for specific occasions and decisions only, while each partner continues to use its proprietary system for recurring costing and pricing decisions (complementing cost accounting system). Closer integration and harmonization of cost accounting systems involves more effort and higher costs, requires a considerably higher level of trust between SC partners and much more intensive exchange of cost-related information.

Review question 4.7:

Consolidation is necessary if supply chain partners retain their own cost accounting systems and only exchange partial cost and revenue information. Without consolidation, cost accounting information will be distorted. The basic idea of consolidation is the elimination of double-counting of cost and revenues across multiple supply chain layers. Unconsolidated cost information will overestimate cost and revenue figures across supply chain layers, since revenues of one firm are counted again as costs at the next SC layer and no reasonable supply chain decision can be based on such additive figures.

Review question 4.8:

1. Partners can rely solely on market prices of goods and services exchanged.
2. The explicit reactions and retaliation from other supply chain partners also provide feedback on costs and prices charged between SC partners. Firms that can no longer realize their expected minimum surplus will eventually initiate countermeasures, either by withdrawing from the supply chain themselves or by searching new, alternative partners – thus providing feedback to other SC partners.
3. Firms can compare prices of their own partners with alternative offers in the markets. This cost and price benchmarking is standard practice in most supply chains.
4. Supply chain partners that belong to the same group of companies are often governed by a more or less complex scheme of transfer prices. A governing entity (typically group headquarters or any other group unit with hierarchical authority) influences or even dictates the price to be charged between the two trading partners (typically subsidiaries of the same group).
5. Firms can provide operational data to their supply chain partners, which can be used to make inferences about cost structures.
6. Supply chain partners might engage in a direct exchange of detailed cost data, providing transparent information of their own cost structure to other supply chain layers further up- or downstream. This

approach is generally known as “open book accounting”.

Review question 4.9:

OBA denotes the systematic, mutual exchange of financial and accounting data between legally independent supply chain partners. OBA's benefits to a specific supply chain depend on the power distribution between partners, the duration of the SC cooperation, and the number of partners involved. OBA will be more effective and efficient, if SC partners possess the necessary level of trust and mutual commitment, have well-developed cost accounting systems and have agreed on incentive systems that motivate partners to disclose the information (e.g. profit sharing agreements).

Review question 4.10:

Cost transparency alone does not save costs. In practice, potentials for cost savings throughout the supply chain do not come automatically. If the disclosed cost information is not used for analyzing such potentials, there will be no benefits from OBA.

By disclosing sensitive cost data to other suppliers, manufacturers may reveal strategically relevant information that the supplier's competitors may use. Competitors could, for instance, derive information about innovative production processes from the cost data.

By making cost information transparent, a supplier automatically reveals its profit margins. This can make a supplier vulnerable. A manufacturer, for instance, may use the data of one supplier in negotiations with other competing suppliers.

Business practice often uses OBA arrangements as a price management tool rather than for cost management. The stronger supply chain partner uses its negotiation power to force weaker partners to make their cost structure transparent – less so to initiate joint cost management actions, but rather to dictate price reductions on products and services rendered.

Exercise 4.1:

Take It Easy will typically offer a broad range of different models. It is likely that R&D as well as core manufacturing processes are not specific to individual retail partners. These cost items, therefore, will not be in the focus of Take It Easy's initiative. Instead, the focus will have to lie on the cost of dealing with the retail store chains. This mainly comprises the following:

1. Cost of managing the relationship with its retail partners (negotiating and monitoring frame contracts, exchanging information on end customer feedback and customer satisfaction, joint forecasting, etc.)
2. Cost of physical flows between partners (shipping, packaging, warehousing, etc.)
3. Cost of joint planning and implementation of marketing campaigns and point of sales initiatives for Take It Easy products

All three cost elements will be relevant for the distribution partners as well – although from a different perspective. Take It Easy, therefore, will most likely be able to raise interest for this initiative among its distribution partners since they as well can benefit from a more efficient and more effective management of these cost items – provided that the business volume for them is high enough to justify additional efforts.

Exercise 4.2:

Hay Minion's information needs as such do not differ between its two main suppliers. It wants to identify the cost drivers behind the purchased components and wants to understand the cost structure of the key processes the tie Hay Minion to its suppliers. This will possibly comprise not only actual manufacturing cost of the components, but also forecasting and scheduling, packaging, shipping, return processes, etc.

A uniform OBA system is probably unrealistic in Hay Minion's case. The two suppliers are too different in their size and structure as well as in their negotiating position towards Hay Minion. It is very unlikely that Hay Minion could enforce OBA rules on both partners that also fit both partners' different needs. Instead, Hay Minion should rather try to negotiate specific agreements with each partner separately. Since Hay Minion's position towards Shafts United is strong, the OBA agreement can be deeper and probably more targeted towards Hay Minion's needs. Cost information from this supplier could be collected without giving up too much proprietary own information, if needed. Global Screws, in turn, is unlikely to implement a one-sided OBA agreement. Hay Minion will have to offer a mutual exchange of cost-related information and will most probably receive less detailed cost information. It might be advisable to suggest OBA as a one-time project only to Global Screws, thus lowering the initial hurdle and promising quick results for both partners. The OBA agreement with Shafts United, in turn, might become part of an overall frame contract.