

## Managerial Accounting in the Telecommunications Sector

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Unprecedented changes have occurred in the European telecommunications industry in the last 15 years. Broadly those changes have followed transformations in the international telecommunications market. Technological innovation, growing customer demand, and pressures from the European Union and the World Trade Organization for deregulation, have been the main forces for change.

Rules to open up the telecommunications market in European countries, culminating in free competition from the beginning of 1998, were laid down by the European Union. Countries that needed more time to prepare their telecommunications market for liberalisation had this time limit extended.

Until the mid-1990's most of the European telecommunications sector was not open to competition, so many companies operated as a monopoly and as state concessionaires for the public telecommunications services. The majority were production oriented, and they were frequently criticised for spending public resources inefficiently and neglecting the market.

As a consequence of EU pressure for telecommunications liberalisation, in the mid-1990's the structure of the telecommunications sector in EU countries was drastically changed. The most important changes were: (1) the integration of public telecommunications operators into national telecommunications groups; (2) the establishment of new telecommunications firms in the market; and (3) the active involvement of national telecommunications regulators in monitoring the market.

Following the entry of new operators into the market, telecommunications prices generally decreased. As well as bringing lower prices, the liberalisation of the telecommunications market has brought opportunities for operators other than public concessionaires to use telecommunications infrastructures and fixed telephone networks that are now in the 'public domain'. Until liberalisation they were used exclusively by public operators. To use these infrastructures and networks, the new operators must pay an 'interconnection rate' to public a concessionaire, which is based on costs determined from the managerial accounting systems of these operators.

The liberalisation of the European telecommunications market forced therefore many telecommunication companies to introduce advanced managerial accounting systems that could simultaneously aid managers to face competition and provide regulators with detailed and accurate cost accounting data.

When companies were faced with the prospect of competition being introduced into the EU telecommunications market, most of them were not concerned with calculating product and service costs. Pressures were not other than those normally associated with a state concessionaire providing a public service.

Consequently, until mid-1990s many public European operators had not developed a cost accounting system capable of providing managers with comprehensive costing data. Their main concern was the preparation of annual reports to provide national regulators. Often budgets were produced annually, but only in a ceremonial way. They were used not as a management tool, but to justify the firm's costs to the national government and shareholders. Competition was weak, so top managers attached little importance to developing its

managerial and cost accounting systems. Activity-based costing and management (ABC/M) became regarded as the solution for enhancing telecommunications competitiveness and legitimating interconnection rates set to the new operators that came into market.

ABC/M operates on a two-stage basis, with the concept of 'activity' being central in these stages. Activity means those actions that are needed to achieve the goals and objectives of the function [1]. In the first stage indirect costs are pooled and traced to activities while in the second stage, activity costs are allocated to outputs (telecommunications products and services) through the use of a determined costing rate for each activity cost pool (called 'activity cost driver'). There are four different categories of activities in an ABC/M system: (1) unit-level activities, which are directly linked with the production (or operation) of each product (service) unit; (2) batch-level activities, whose performance depends on the production (operation) of a batch of products (services); (3) product-level activities, which are related to the production (operation) of each different type of product (service); and (4) facility-level activities, which support a general facility-level process. Similarly there are different types of cost drivers: unit-level, batch-level, and product-level bases. For each activity cost pool, a costing rate will be determined by dividing a period's activity cost by the period's cost driver volume. This costing rate has a double function: to link the overhead costs to the cost objects (products and services) and to reveal opportunities for improvement. The product costing process described above can be summarised in the two following propositions: first, that 'activities consume resources' (and therefore costs), and second that 'products consume activities'. Four steps can be identified in the development process of activity-based product costing systems [2]: (1) identifying activities; (2) costing activities; (3) selecting activity drivers; and (4) allocating the costs of activities to products and services. The main difference between ABC and traditional costing systems lies in how, in an ABC system, costs resulting from batch-level, product-sustaining and facility-sustaining activities are allocated to the cost object through cost drivers other than unit-level ones. In a 'well-designed' ABC system, the different types of activities are matched with the corresponding drivers. As Cooper and Kaplan [3] warned, "failure to perform such matching guarantees that product and customer costs will be distorted".

Despite the emergence of criticism towards the resistance and burden ABC/M implementation could cause in organizations, anecdotal evidence indicates that many telecommunication companies are using successfully this managerial accounting system. More studies describing how ABC/M are used in telecommunication companies are

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still needed to understand how this tool can be adopted as an effective device for enhancing firms' performance and competitiveness.

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