Using accounting information systems by operations managers in a project company

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This paper describes the results of a case study that investigated the use of accounting information by operations managers in a road building company. There was considerable preplanning before the execution of project activities, but task uncertainty during execution created the need to take corrective action. Information on prices and expected costs was crucial for preplanning purposes. During project execution higher-level managers depended upon accounting information about actual project costs to be able to focus on low performing projects. Lower-level managers observed work on-site and they used information about the prices of various resources. Learning over time happened on the basis of experimenting with practical ideas and building a repertoire of solutions that worked (or did not work). The study suggests that under high task uncertainty in projects, accounting information may not take on the role of a ‘learning machine’ to help managers decide on action, because managers may supply action-centred skills to manage cost. Action-centred cost management strategies for negotiation and improvisation are not informed by accounting information that supports analytical cost management strategies. The study also suggests that direct observation of processes is more informative compared to the representation of these processes through accounting information, if the complexity of these processes is limited (few different input and output resources).

Key words: accounting information systems; operations management; building industry; project management; field research.

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1. Introduction

In this paper we discuss the use of management accounting information by the operations management function in a project organization. Understanding how people outside the accounting function use accounting information in their work is important for management accountants. Understanding how operations managers do their work and how accounting fits in, may, however, not be easy. The study is partly motivated by notions of a ‘gap between the traditional finance and operations perspectives’ (Anonymous, 1996) which requires some ‘rethinking about the expected usefulness of accounting information on the operational level’ (Jönsson and Grönlund, 1988).

The use of accounting information has been studied in different ways. A major strand of literature has applied the contingency framework to the study of management accounting systems design and performance. These studies have found relationships between contextual variables (such as environmental uncertainty, span of control, task interdependence, and decentralization), the use of management accounting systems, and performance. See, for example, Gordon and Narayanan (1984), Chenhall and Morris (1986), Gul and Chia (1994), Mia and Chenhall (1994) and Chong (1996). These studies use questionnaire data from multiple firms and define the use of management accounting systems by certain information characteristics: breadth of scope, timeliness, levels of aggregation, and integrative nature. Swenson (1995), Foster and Gupta (1994) and Joseph et al. (1996) are examples of questionnaire studies that do not use the contingency framework and that provide insights into the use of accounting information for decision-making by operations management. There is another body of literature on the use of accounting information that is based on case studies. These studies generally are of an exploratory nature. See, for example, McKinnon and Bruns (1992), Scapens et al. (1996), Ahrens (1997), Jönsson and Grönlund (1988), Fry et al. (1995), Mouritsen and Bekke (1999) and Jazayeri and Hopper (1999).

The motivation for the present study is that there is not much knowledge of how operations managers, particularly at lower levels, use accounting information (Lukka, 1998). We do not understand very well the usefulness of accounting information on the operational level, and it is challenging to try to improve this (Jönsson and Grönlund, 1988). Operations managers have various concerns, such as quality, safety, efficiency, and completing activities on time. For daily, short-term activities, managers generally use non-financial operating data on units of output, units of input, scrap, quality, order quantities, inventory availability, etc. ‘In 12 varied manufacturing companies, we found no instance of a key daily production indicator being a cost or other financial number’ (McKinnon and Bruns, 1992, p. 42). However, accounting numbers become important as the horizon lengthens. The performance of managers is often measured in financial numbers and managers build a mental model of the financial implications of their actions that are guided by physical counts. Also, a longer horizon is sometimes needed, because of concern with costs rather than simply quantities (e.g. to control budgeted expenses, to identify problems and opportunities for improvement). The study of Jönsson and Grönlund (1988) is a good example here. They describe how operations managers in a production plant used cost data on tools over a longer period to detect problems and to monitor the results of experiments with new tools.
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