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Full costing versus variable costing: Does the choice still matter? An empirical exploration of UK manufacturing companies 1988–2002

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Abstract

This paper explores the impact of the choice of full costing, as a basis for stock valuation (SSAP 9), on the reported profitability of UK manufacturing companies from 1988–2002. It does so by assessing the sensitivity of these companies' profits to the adoption of the variable costing alternative and so explores the potential for this accounting method choice to influence this important performance measure. Tests are undertaken to identify the accounting significance of the stock asset and the stock adjustment, the longer term effects of the choice on the time series of companies' profits and the shorter term effects as reflected in variation in the annual profit signal (particularly, profit vs loss and profit growth vs profit decline). The results indicate that stock remains a substantial variable in profit measurement and that there are likely to be a minority of companies whose reported profitability during the period changes significantly depending upon the basis of stock valuation used. Given the absence of any definitive case for full costing over variable costing, these findings suggest that further research and some consideration of the modification of the existing standard to permit financial statement users to ascertain variable costing based profits are merited.

Keywords: Full costing; Variable costing; Accounting standards

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1. Introduction

When financial accounting standard setters choose between two alternative accounting methods they can potentially influence the future amount and pattern of key financial performance measures. Especially where their choice is debatable, knowledge of the subsequent effects of their decision on these measures provides valuable feedback evidence to review their actions and to corroborate or question their original decision.

In SSAP 9, 1975 (revised 1988) established the following requirements for stock valuation in UK corporate financial reporting:

1. Stock valuations should be inclusive of all production costs and reflect: "Expenditures incurred in the normal course of business in bringing the product or service to its present location and condition'. (SSAP 9, par. 17)
2. More specifically in respect of overhead costs the following general guidance was provided: "The classification of overhead necessary to achieve this allocation [of overheads to stock] takes the function of overheads as its distinguishing characteristic… rather than whether overhead tends to vary with time or with volume". (SSAP 9, Appendix 1, par. 4).

These requirements of SSAP 9 provided an operational resolution, in the financial accounting domain, to one of the longest running and fiercest accounting debates. The introduction of the standard meant full costing had prevailed over variable costing (see, for example, Reece, 1940; Bishop, 1959; Horngren and Sorter, 1961; ICWA, 1961; NAA, 1961; Fremgen, 1962, 1964; Sizer, 1963; Dixon, 1966; and Goodwin, 1972 for the first hand views of some of the protagonists and Dugdale and Jones, 2003 for a more recent historical analysis of the debate).

This standard was not the result of the establishment of an irrefutable case for full costing. It contained no argued rationale either for full costing or against variable costing. Post 1975, the case for variable costing has remained intact.

The importance of the choice between these two methods of accounting lies in their potential to produce different measurements of profit. Since, the 1975 standard, UK corporate profit measurement has been based on the full costing approach. This paper investigates the likelihood that reported profits would have been significantly different had variable costing been in use. It does this by exploring the potential of stock valuation to influence profit and the sensitivity of reported profitability, in a sample of UK manufacturing companies, to the application of variable costing.

There are a number of reasons that warrant a contemporary empirical exploration of this topic. First, the use of full costing means that increases in stock enhance reported profits as compared to their variable cost alternatives. This has led to recent criticism that the full costing method may motivate managers to increase stocks deliberately to benefit from this effect (Kaplan, 1984a,b; Johnson and Kaplan, 1987). Second, the control of stock levels has been a high profile issue over the last two decades. The practical popularity of stock systems such as Kanban and just-in-time (Wilkinson and Oliver, 1998; Monden, 1992; Cobb, 1993; Billesbach, 1994; Balakrishran et al., 1996), resource planning systems such as MRP and ERP (Wagle, 1998; Davenport, 1998), co-operative supplier networks