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Management accounting, engineering and the management of company growth: Clarke Chapman, 1864–1914

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ABSTRACT

This research examines the relationship between management accounting and engineering in the processes of strategic decision-making and managerial control underlying the management of growth in Clarke Chapman, 1864 – 1914. The research finds that strategic decisions to invest in new technologies were grounded in the engineering ethos of the firm, market awareness and information derived from the firm's extensive business networks. Decisions regarding the (dis)continuance of existing strategic directions were based on management accounting information and product and market awareness. The management and control of costs were important factors underlying significant re-organisations of the firm. Managerial control was exercised on a direct, personal basis and was undertaken in conjunction with the use of routine and ad hoc management accounting reports.

The current research makes two major contributions to our knowledge of the development of management accounting. First, it finds that Clarke Chapman's management accounting system evolved incrementally to match the growth requirements of the firm. The research finds no evidence of periodic fluctuations in demand having a significant impact on the development of the management accounting system. Second, the current research indicates that there is no evidence of conflict between professional groupings of engineers and accountants over the ownership of the management accounting system which was rooted in the accounting function. In this respect, it is considered significant that engineering and accounting were both represented at very senior levels in the firm.

1. Introduction

For much of the twentieth century, histories of British costing (Edwards, 1937; Pollard, 1965) held that little meaningful development took place until the 'costing renaissance' of the late nineteenth century. However, detailed archival research (e.g. Boyns, 1993; Boyns & Edwards, 1995, 1996, 1997a, 1997b, 2007; Edwards, Boyns, & Anderson, 1995; Fleischman & Parker, 1991, 1992) has led to the formation of a "new conventional wisdom" (Boyns & Edwards, 1997a, p. 2) which demonstrates the long use of sophisticated costing systems in the provision of information for managerial decision-making.

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It is acknowledged that more archive-based research is required in order to increase our understanding of the development of costing (e.g. Boyns & Edwards, 1995; Fleischman & Tyson, 2000; Fleming, McKinstry, & Wallace, 2000; McKinstry, 1999). However, the current authors consider that it is appropriate to use the term 'management accounting', rather than costing, in this paper. The authors follow Boyns and Edwards (1997a) in adopting the Institute of Chartered Accountants in England and Wales' (ICAEW) view of management accounting as being the provision of 'accounting information which is of direct assistance to the management in the formulation of policy and in the day-to-day control of a business' (ICAEW, 1954, para. 3). Thus, in terms of Chandler's analysis (Chandler, 1990), management accounting is engaged in both the strategy and structure of organisations: 'on the one hand it is synonymous with the provision of information for strategic decision-making and on the other with information for everyday managerial control purposes' (Boyns & Edwards, 1997a, p. 22). The research literature (Boyns & Edwards, 1996; Edwards et al., 1995; McLean, 2006) indicates that the main motivation for management accounting innovation in Britain 'was not to enable the control of labour…but to aid the provision of performance indicators considered relevant for a range of routine and strategic business decisions' (Boyns & Edwards, 1996, p. 17).

The current paper builds upon and extends previous studies (Fleming et al., 2000; Hopper, Cooper, Lowe, & Capps, 1986; McKinstry, 1999; McLean, 2013; McLean & Tyson, 2006) which have analysed the impact of engineering environments on the development of management accounting and, in particular, have scrutinised the notion that engineers and accountants were 'fighting for turf' (Boyns & Edwards, 2007, p. 980) in a battle for the control of the management accounting function. In their study of cost accounting in the shipbuilding, engineering and metals industries of the West of Scotland, c.1900–1960, Fleming et al. (2000) found that an inhibiting engineering culture was a factor underlying the non-development of standard costing and budgetary control in these industries. Mcinstry (1999, p. 219) noted that the engineering-oriented culture of a Scottish vehicle manufacturer in the twentieth century led to the company's preference for 'control systems of a non-financial kind'. Similarly, McLean and Tyson (2006, p. 413) concluded that standard costing and budgetary control were not widely employed in the post-Second World War North East England shipbuilding industry because 'the engineering culture of the shipbuilding industry promoted the use of 'alternative', non-accounting measurement systems'. Hopper et al. (1986) noted that although standard costing and budgetary control systems were installed in the National Coal Board during this period, their proper operation and use were undermined by the organisation's engineers and dominant engineering culture. However, McLean (2013) researched the activities of a shipbuilding company during the period 1886–1915 and found that its engineers and accountants were not 'fighting for turf' (Boyns & Edwards, 2007, p. 980) in a war of the professions. Rather, in this company, separate disciplines of cost engineering and costing were developed to serve very different functions. Cost engineering provided information for cost management and for cost estimation, pricing and tendering while costing provided information for performance measurement and for the operation of managerial accountability and managerial reward systems.

The particular objective of the current paper is to examine the relationship between management accounting and engineering in the processes of strategic decision-making and routine managerial control, including the control of labour, underlying the management of growth and fluctuations in demand in Clarke Chapman, 1864–1914. In pursuing this objective, the current research examines 'the complexity of the nature and process of (management) accounting change' (Boyns & Edwards, 2013, p. 23). This article makes two major contributions to our knowledge of the development of management accounting. First, it indicates that Clarke Chapman's management accounting system developed in a gradual, evolutionary manner related to the general growth trend of the firm; it did not change significantly and suddenly in the context of fluctuations in demand and organisational shock. Second, this research finds that there is no evidence of conflict between engineers and managers over the ownership of Clarke Chapman's management accounting system. The fact that engineering and accounting professions were both represented at very senior levels of the firm is considered to be significant in this respect. This article is presented in five further sections: Clarke Chapman, the context; accountants and engineers: actors and change agents; management accounting, engineering and strategic decisions; management accounting, engineering and managerial control; and conclusions.

2. Clarke Chapman, the context

2.1. The research site

The current research is based on an examination of the extensive but incomplete Clarke Chapman collection (DS/CC) held by the Tyne Wear Archive Service in Newcastle Upon Tyne. Although the firm was founded in 1864, the vast bulk of the archive dates from after 1883, when a partnership re-configuration took place. A further increase in documentation occurred after 1893, when Clarke Chapman was formed as a limited company. A study of the archive collection (DS/CC) of this British engineering company and a reading of the related literature (e.g. Manders, 1980) indicate several factors which justify the selection of Clarke Chapman in the period 1864–1914 as a valuable site for the research of management accounting and the management of company growth. First, from its foundation in 1864 the firm grew to become the United Kingdom's leading supplier of auxiliary machinery for the shipbuilding industry and the largest manufacturing employer in its home base of Gateshead. Second, Clarke Chapman instigated and experienced profound organisational changes, including the transitions from partnership to limited company and from entrepreneurial to managerial control. Third, during this period known as the Second Industrial Revolution (Landes, 2003, p. 235), Clarke Chapman was at the forefront of technological change and was permeated by engineering values and capabilities. Fourth, the firm managed the problems of risk and uncertainty, which were