British entrepreneurs and industrial revolution cost management: a study of innovation

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the profession's most treasured ritual: that of examining candidates' knowledge and competence to be admitted to the guild of Accountancy.

In this paper there are four research issues. First, the developments that led to the institution of the first CPA Exam are identified. Second, the evolution of the earliest state CPA Examinations into the "uniform" CPA Examination is investigated. Third, the early CPA Exams are compared to the current exams as a way of illustrating the impact that these first exams have had, and continue to have, on modern exams. Last, in a very subjective way, the rigor of the early examinations is compared to "modern" examinations in an attempt to draw conclusions about the relative difficulty of the old examinations compared to the modern ones. This level of rigor will be assessed by (1) comparing and contrasting questions and (2) comparing pass rates. The issues which are discussed include:

- Has the level of difficulty of examinations changed appreciably from early exams to more modern ones?
- Have the pass rates changed appreciably over the years?
- Is the coverage of the exam more (or less) comprehensive now than in the past?

The primary research method employed in this paper is to investigate the old examinations by reviewing *The Journal of Accountancy* issues from the turn of the century. CPA exam information printed in *The Journal of Accountancy* includes reprints of the actual CPA Examinations, articles discussing various aspects of the examination procedure and facts about the pass/failure rates on various exams.

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**BRITISH ENTREPRENEURS AND INDUSTRIAL REVOLUTION COST MANAGEMENT: A STUDY OF INNOVATION**

by

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Traditional accounting histories date the advent of sophisticated cost accounting from the mid-1880's and credit American innovators of Frederick Taylor's scientific management movement with conceiving the new practices. However, it is counterintuitive to think the entrepreneurs of the British Industrial Revolution would not have developed costing techniques, given their significant methodological advances in other economic areas, such as technology, capital accumulation, and marketing structure development. This paper reports the findings from a survey of surviving business records from twenty-five large industrial firms during the 1760-1850 period, concentrated in the dominant textile and iron industries. Substantial evidence of mature cost management has
been found in eight major areas of activity:

Expense Control: Concern over expenditure must be considered a most fundamental aspect for even a nascent cost management system. However, Industrial Revolution firms tracked costs to a degree unanticipated in terms of frequency, specificity, and detail. For many companies raw materials and productive processes were costed to a fraction of a pence on a weekly or even daily basis. This evidence sheds new light on the frequently heard contention that entrepreneurs were unconcerned about costs since profit margins were so enormous.

Responsibility Cost Management: A number of the firms surveyed made regular comparisons of individual factories and shops of the same function. Managers were evaluated on the basis of these comparisons.

Product Costing: Great care was taken to price products based on lengthy and intricate cost calculations which included, not only the more obvious prime costs, but selling expenses and factory overhead allocations as well. Product costing efforts of Boulton & Watt and Wedgwood were particularly impressive.

Accounting for Overhead: The realization that productive departments and products should bear overhead allocations was prevalent. On several occasions allotment was based on predetermined application formulae.

Cost Comparisons: Sophisticated cost comparisons were made on a wide variety of subjects, including mineral field yields, waste associated with various raw material mixtures, and individual blast furnaces. The efficiency of steam engines was particularly scrutinized, including horsepower generated, coal consumed, and machine downtime.

Costs for Special Decisions: Cost analyses were both frequent and sophisticated to support decision-making in areas such as lease or buy, introduction of technology, subcontracting, expansion of operations, product line abandonment or deemphasis, and marketing/transportation.

Budgets, Forecasts, and Standards: Nearly all major Industrial Revolution firms employed standard cost techniques for valuing inventory, transferring costs for raw materials between departments, product costing, and departmental evaluations. Budgeting and profit forecasting was done more rarely, though several sophisticated examples do exist.

Inventory Control: References are frequent to the concern of managers about inventory problems such as carrying charges, stockout dislocations, and risks of obsolescence.

Tables have been presented demonstrating on an individual firm basis either a substantial volume of activity or an excellence/sophistication of technique in each of the eight cost management categories. The evidence supports the contention that British Industrial Revolution entrepreneurs had good costing instincts appropriate for their environment. Comparisons to the literature of the later "costing renaissance" era suggest that much greater credit should be accorded their activities as a formative stage in the evolution of cost accounting.