

Internal accounting practices at Whitbread & Company c.1890-1925

Abstract

This paper examines internal accounting practices at Whitbread & Company from c. 1890 to 1925. At this time, there was an increasing interest in cost accounting, but there is little detailed extant research on general internal accounting practices of firms. The brewing sector, we suggest, is a potentially fruitful realm to further our knowledge of this time. Drawing on the Whitbread brewery archival records, we chart the internal accounting practices of the company. Our findings reveal a stable set of accounting practices, focused mainly on bookkeeping, although the firm's auditor produced some reports which may have been useful for management decision-making. We argue these practices were highly institutionalised, and seemingly resistant to external forces present in the company's environment.

Keywords: institutionalised practices, internal accounting, brewing, Whitbread.

Introduction

Funnell (2009: 561-562) comments on the relative lack of historical accounting research on military accounting, given the relative importance of wars and military activities in the history of mankind. He also notes that war, and in particular The First World War (WWI)¹, has been shown to be a driver of the development and professionalization of cost/management accounting (see also Loft, 1986; Matthews, 1998). Another relatively persistent feature of mankind is brewing, dating back to c. 3000 BC (Katz and Voigt, 1986). Closer to the present day, many well-known beer brands date from many years past - the oldest brewery in Munich, Augustiner, dates from 1328 (Assél and Huber, 2012), Guinness from 1759 (Lynch and Vaizey, 1960), Budweiser from 1876 (Knoedelseder, 2012), Carlsberg from 1826², Shepherd Neame from 1698³, and Whitbread - the study subject of this paper - from 1742 (Morgan, 1978).

Similar to Funnell's (2009) comment on accounting in the military, the brewing industry also has much potential value to accounting history researchers. There are some extant studies on the brewing industry, but they are not overly common. In particular, archival records of breweries are a very fruitful source for historical studies on the development of internal/management accounting practices. Many extant studies follow the development of management accounting as a profession (see for example, Loft, 1986; Matthews, 1998; Boyns and Edwards, 2007; McLean et al. 2015), and others focus on particular industries (see for example, Boyns and Edwards, 1997; Fleming et al., 2000; McWatters and Foreman, 2005; Irvine, 2012; McLean, 2013). However, few provide detail on the actual accounting practices within firms during the late 1800s and at the turn of the 20th century. There are some useful existing works on breweries and accounting; for example, drawing on the Guinness company archives, work by Hiebl et al. (2015), Quinn (2014) and Quinn

and Jackson (2014) suggests that accounting within breweries from about 1886 to 1940 was relatively sophisticated, with signs of cost and management accounting. However, Guinness is a single case, and research on more breweries is likely to provide additional insights to complement the works mentioned, and add to our general knowledge of the development of internal accounting practices - toward what we would today term management accounting - in the late 19th and early 20th century.

In the cotemporary literature, management accounting practices have been noted as being quite stable over time, and indeed as institutionalised (Burns and Scapens, 2000). Change to such practices is a process which typically embodies the extant practices (Burns and Scapens, 2000). Thus, the objective of this paper is to explore the accounting records of Whitbread & Co. Ltd - a well-known former British brewery – and to examine the development of internal accounting practices and their institutionalisation over time. This objective, by providing a view of institutionalised accounting practices, offers evidence of the nature of and influences on internal accounting practices (and outputs thereof) from the time of our study. The period of analysis spans the time from Whitbread's incorporation in 1890 to 1925. The records from incorporation are relatively complete, hence the start date of this period. The end date was chosen for two reasons. First, it overlaps the post-WWI period and the beginnings of a management accounting profession in the United Kingdom with the formation of the Institute of Cost and Works Accountants (ICWA) in March 1919 (see Armstrong, 1987). Second, Johnson and Kaplan (1987: 12) note that “by 1925, virtually all management accounting practices used today had been developed” – see also Otley (2008). They base their claim on a small number of US-based cases, which may/may not be applicable to a UK context. Although this study is not focused on management accounting practices *per se*, our examination of internal accounting records may provide

evidence of such practices and provide support (or not) for Johnson and Kaplans' contention.

The remainder of the paper is structured as follows. The next section provides a brief history of the Whitbread company, drawing on archival sources and corporate history publications. This is followed by a brief review of literature on management and cost accounting at the turn of the 20th century, including works on the brewing sector. Section four outlines our sources and methods and delineates Burns and Scapens' (2000) framework, which we utilise to establish accounting practices at Whitbread as routine and potentially institutionalised (Burns and Scapens, 2000). Section five details the accounting practices and reports at Whitbread during our study timeframe, and discusses them in the context of the process of institutionalisation as set out by Burns and Scapens (2000). This, in a similar fashion to Quinn (2014), Quinn and Jackson (2014) and Hiebl et al. (2015), helps us build a clear and supported picture of the regular work of accountants within the brewing industry at the time. The final section provides some concluding comments and suggestions for further research.

Whitbread - a brief history

For the 2013/14 financial year, Whitbread plc had a turnover of £2.2 billion, generated £411 million profit before tax and employed 43,000 staff⁴. Its main business today comprises hotels, restaurants and coffee shops, having ceased brewing and pub operations in 2000/2001⁵. Since this paper is concerned with the brewing operations and its internal accounting practices between 1890 and 1925, a reflection on Whitbread's brewing history follows. Unless noted otherwise, the history draws on Morgan's *Whitbread's Entire* (1978).

Samuel Whitbread I (1720 – 1796) founded Whitbread at a time when breweries in London and elsewhere brewed mainly low-quality ale with a short shelf life. The development of porter ‘brewed specifically to keep [...] opened the way to mass production’ (Lynch and Vaizey, 1960:39; see also Talbot, 2008), and large migration to cities like London provided Samuel Whitbread I with a business opportunity. Not owning an existing ale brewery to convert, and lacking capital to acquire one, he entered a partnership with brothers Thomas and Godfrey Shewell in December 1742. By 1761, both brothers had left the company, leaving Samuel Whitbread I as sole proprietor. At the time of his death in June 1796, production exceeded 200,000 barrels - 60,000 more than the nearest competitor, setting a record for London. As noted by Morgan, ‘in a matter of 45 years Whitbread had risen from a beginner to be top of the league’ (1978: 9), to become the leading London brewery around the turn of the 18th/19th century (Talbot, 2006: 90). His son and successor, Samuel Whitbread II, lacking his father’s familiarity with the brewing business (Talbot, 2006), left the running of the brewery to two chief clerks and the head brewer initially. From 1799, Samuel Whitbread II created partnerships to raise finance and help manage the business. In 1812, Martineau & Bland merged with Whitbread, bringing in new business, trade accounts and brewing infrastructure such as malt houses in Norfolk. Various members of the Whitbread and Martineau families continued in the partnership until its incorporation in 1889.

The Memorandum of Association (LMA/4453/A/02) reveals that the conversion to a company took place on July 27th, 1889. At this time, the profit for the previous five years averaged £141,285, with the profit for the preceding year at £142,519; as certified by Messrs. Chatteris, Nichols and Atkins, an audit firm, of 1 Queen Victoria Street, London.

The initial share capital of the company was £1,250,000, and the capital brought in by the partners was valued at £1,735,484. The first directors of the company were Samuel Whitbread III (Chairman), Richard Temple Godman, Frederick Du Cane Godman, Richard Worsley (Managing Director), John Martineau, Edgar Lubbock (Managing Director) and Henry William Whitbread (Managing Director). Messrs. Chatteris, Nichols and Atkins were appointed as company auditors, subject to annual re-appointment. The Memorandum of Association also set out the directors' duties in terms of keeping accounts, namely: to keep true accounts, to have accounts available for inspection by members, to prepare an annual statement of income and expenditure and balance sheet, and to send accounts to members annually⁶. The first accounts of the company, dated July 5, 1890 report a net profit of £135,781, sales of £626,058, and a balance sheet total of £2,362,612. To give a comparison of the scale of Whitbread, comparative figures for 1890 from Arthur Guinness & Son Ltd (incorporated in 1886) were: net profit £701,272, balance sheet total £7,125,909⁷.

From the 1860s onwards, the increasing popularity of bottled beer fuelled business growth. After incorporation in 1889, internal growth was mostly driven by the expansion of Whitbread's own bottling stores. By 1895, as revealed in the internal accounting records (see later), the company had already opened bottling stores in locations such as Birmingham, Leeds, Liverpool and Cardiff. External growth was fuelled by eight acquisitions by Whitbread from 1891 to 1925 (Monckton, 1984) - the time period of our analysis. The acquisitions included H & V Nicholls Co Ltd in 1891, Notting Hill Brewery Co. Ltd in 1920 and Forest Hill Brewery Co. Ltd 1924. These acquisitions were funded by increased debt capital primarily (Gourvish and Wilson, 1985). The impact of these internal and external growth activities was clearly seen in bottling and sales figures. From 1891 to

1910, the volume of beer bottled by Whitbread increased ten-fold (Gourvish and Wilson, 2008). At the same time, expansions and activities exacerbated a drop in the return on capital figure which fell from 7% in 1890 to about 3% in 1910 due to difficult trading conditions in the early 1900s (Gourvish and Wilson, 1985). By 1925, net profit had reached £246,498, sales £2,775,161, the balance sheet total was £4,487,252 and return on capital figure was just under 5%.⁸ The company continued to expand throughout the 20th century - from 1925 to 1970, 27 separate acquisitions were made by Whitbread. Today, Whitbread has no brewing activities.

Internal accounting at the turn of the 20th century

This section provides an overview of extant literature on management/internal accounting around the time period of our study to ascertain the contemporary internal practices to be expected. As noted by Edwards and Boyns (2013), although cost accounting did exist at this time, methods were not common, business owners were not convinced of the value of cost information and it may have been confined to particular industries. We should note that many extant studies focus on cost accounting methods, which is not our focus *per se* - our objective is to detail internal accounting practices, and their institutionalisation. Also, at this time there was little in the way of regulation of accounting in comparison to today, and the professionalization of cost/management accounting was in its infancy, as elaborated below. We first detail what extant accounting history literature reveals on internal accounting, with some insights into costing methods of the time. Following this, we detail some contemporary literature at the time of our study, 1890 – 1925.

Research detailing internal accounting practices in firms around the late 19th /early 20th century is typically less detailed and tends to focus more on either a single aspect within a firm, or on a more macro level. As a starting point, Edwards and Boyns (2013) provide a very useful summary of cost calculation techniques from 1870 to 1914. However, they suggest that opinion is divided on how widespread such practices were. For example, Boyns (1993) noted that cost sheets were in use at Welsh collieries, but not taken on board by smaller firms (Britten, 1912). Boyns and Edwards (1997) noted that the iron and steel sector had cost systems - such as cost sheets and departmental costs - in place well before 1870. The chemical sector (Boyns et al., 2004) and shipbuilding (Fleming et al., 2000) similarly developed cost calculation methods. On the other hand, Vent and Milne (2000) suggest some firms had very limited costing practices. At the macro-level, works by, for example, Loft (1986); Matthews et al. (1997), Matthews (1998), and Fleischman and Tyson (1999, 2000) explore the role of the accountant within firms, and factors influencing that role (such as professionalization and industrialization).

The literature suggests that few professionally qualified accountants were employed by firms. Instead firms relied on the service of public accounting firms for accounts preparation and audit work (Matthews et al., 1997; Matthews 1998; McKinstry 1999; Fleming et al., 2000). These public accountants acted as advisors and non-executive directors in many British industrial firms (Matthews 1998, 2001). Some scholars have argued that WWI was a driver of change in the accounting profession (see Loft, 1986), although this is contested (see Edwards and Boyns, 2013). However, it is by and large accepted that WWI did increase the focus on cost accounting and indeed record keeping within firms (see for example, Fleischman and Tyson, 2000; Fleming et al., 2000; Boyns et al., 2004). During the war, contractors to the war effort lacked market prices for some

outputs and thus relied on costing techniques to set prices and calculate a profit surplus. The government relied on cost investigators to prevent excessive profiteering (see, for example, Arnold, 2014; Billings and Oats, 2014) under powers of the Defence of the Realm Act(s) 1914. There was thus an increased need for cost accounting techniques and even a severe shortage of cost accountants (Loft, 1986). After the war, the importance of cost accounting continued to rise, with the formation of the ICWA in 1919 (see Armstrong, 1987). A post-war economic depression in the early 1920s also forced many firms to focus on costs (Loft, 1986; McKinstry, 1999; Fleming et al., 2000; Boyns et al., 2004; Boyns and Edwards, 2007). This resulted in a rising number of internal (cost) accountants, and larger accounting departments in many firms (Matthews, 1998).

As noted earlier, there has been some historical research on accounting at breweries⁹. Quinn (2014) reveals that the Cooperage at Guinness maintained detailed cost information (from at least 1896) and departmental accounts from 1909. Quinn and Jackson (2014) report a relatively complex system of charging additional war risk costs to cost centres at Guinness, which they propose was a direct consequence of WWI, but emerged from existing practices at the brewery. Hiebl et al. (2015) add to these studies by providing an overview of the Chief Accountant's role at Guinness during the period c. 1920-1940. They suggest the role was quite similar to the present day Chief Financial Officer, and also provide evidence of a growing and more complex accounting function. Other research on accounting in breweries has been more general. For example, Higgins and Verma (2009), while focusing on the Bass brewery and trademarks (1870-1914), do provide some accounting data such as profit and capital. They also note various costs incurred, including the costs of acquiring businesses and defending trademarks, suggesting good record keeping. Talbot (2008) investigates malt costing practices of (brewing) maltsters in Staffordshire from 1700 - 1939.

He concludes that cost and management accounting systems were relatively primitive and did little to inform management about the real cost of malting. Acheson et al. (2016) similarly draw on accounting records from breweries to explore their financing. Again, this indicates reasonable financial records were maintained, but no detail of accounting or accounting records is given. Further, a recent study by Moreno and Cámara (2014) focuses on the El Alcázar brewery in Spain from 1928 to 1993. Although just after our period of analysis, the El Alcázar brewery would also seem to have maintained good accounting records from the 1920s. Finally, Gourvish and Wilson (2008) provide an extensive review of the British brewing industry from 1830 to 1980. While their excellent work does provide some detail on costs, prices and profits (Gourvish and Wilson, 2008), the work is not an accounting work *per se* and does not provide detailed accounting information. Gourvish and Wilson (2008) do provide one useful example of accounting information from the Whitbread archive, which shows a profit calculation from 1891. Later, we detail the internal accounting which made this possible.

In summary, while the available literature does provide some useful insights on costing methods and the general emergence and development of cost accounting, there would seem to be a gap in the literature in terms of internal accounting practices in general. For example, we could pose questions such as did managers receive any other form of useful accounting information, how were records maintained, who maintained the records, was there any product or process level accounting/reporting? While some such questions may have been answered, there has been little focus on the brewing industry. We hope the remainder of this paper will shine some light on this sector, but also provide an insight into the internal accounting processes and management information provision at the turn of the 20th century.

Contemporary accounting literature

Some detail of contemporary literature on accounting practices at the time of our study is useful. The process of dissemination of cost accounting knowledge by a dedicated professional accounting body did not begin until the founding of the ICWA in 1919¹⁰ (Allott et al., 2000). Rather, (cost) accounting knowledge dissemination occurred in the main via contemporary periodicals. Sketching an image of what was recommended practice in accounting, its role in decision-making and internal accounting practices helps place Whitbread's accounting practices in their historical context. It also helps interpret Whitbread's practices compared to that which may be expected of a brewing operation of the time. As we detail in Section five, Whitbread's accounting system appears already well-established by the time of incorporation in 1889. Therefore, in this section, we detail some examples of relevant books and periodicals from the 19th and early 20th century.

James Dodson's "The accountant, or, The method of book-keeping deduced from clear principles", published in 1750, provided early advice on book-keeping and accounting principles. Later, Charles Babbage's (1835) seminal book "On The Economy of Machinery and Manufactures" contained detailed information on the nature of prices, as well as costs of raw materials, labour, and the cost of processes in a manufacturing environment - but does not include accounting principles or advice on internal accounting practices. However, during the industrial revolution in Britain, the main focus of entrepreneurs was technological innovation rather than the commercial side of their operations (Fleischman, 2009). In Whitbread's case, this is supported by Morgan (1978) describing Samuel Whitbread I's focus and efforts to improve and innovate the brewing process early on, rather than dealing with beer sales or profit figures.

Further insights on what was considered as useful (cost) accounting knowledge can be gleaned from practitioner journals such as *The Accountant* (Talbot, 2006) and the *Engineering Magazine* (Boyns, 2003). Where the former was UK-based and its archives are currently held by ICAEW, the latter was US-based and published in the US and the UK (European edition). The *Engineering Magazine* was dominated by US authors, supporting the export of US-American cost accounting knowledge to Europe. At the beginning of the 1890s, some interesting articles detailing and dealing with accounting matters were published in the *Engineering Magazine*,¹¹ which we now summarise. Child (1891) advised on the value of accounting as a contributor of corporate success, and criticized the strict focus on how particular books are kept. Further articles focus more on costing, with Brady (1894), Roland (1897, 1898a, 1898b, 1898c) and Norris (1898) focusing on costing in machine shops. These articles provide detailed instructions and examples on how to calculate and record prime cost and general expenses¹². The articles also included detailed advice on how to distribute costs to final products over various stages of the production process. The contributions of Roland (1897, 1898a, 1898b, 1898c) provided an initial six-part series on various aspects of costing, including practice examples. In 1898, after being approached by several seasoned businesses in the mechanical engineering sector, Roland added two further articles on how to set up such a costing system. Later on, from 1900 - 1920, articles in the *Engineering Magazine* on cost accounting and general accounting increase in both volume and frequency, evidencing a broader dissemination of accounting knowledge.

Articles from *The Accountant*¹³ during our study period reveal some interesting insights into the expectations of accounting practices in the brewing sector at the time. Walkden

(1891) provides detail of the bookkeeping for a brewery. Much emphasis is given to the recording of maltings, stocks, records of debts owing and cash receipts. A year-end of September 30th is suggested, as this is the time when malting is at its lowest levels. The text of a lecture given by JJB Arter is published in an issue of *The Accountant* in May 1897 (Arter, 1897). This more extensive article not only deals with the form of the financial statements (balance sheet and brewery trading, profit and loss account¹⁴), but also the day books to be kept. The level of detail prescribed for the former is quite extensive – for example, the expense classifications suggested includes materials, increase/decrease in stocks, brewing charges, sale and office expenses, delivery expenses and general expenses: examples of each classification are also given. The day books to be maintained include beer sales and returns, sales ledgers, travellers cash books, cash received book, cash paid book, wages book, purchase day book, journal, purchase ledger, nominal ledger, property ledger, beer stock book and a cask ledger. In a 1906 article, bottled beer is also mentioned in the context of brewery accounts (Lanham, 1906). This article notes similar daybooks to Arter (1897), and in addition notes books such as bottled beer sales and bottled beer stocks. It also provides more detailed descriptions of other accounts related documents such as order books, order sheets and invoices; and details of elements of the financial statements similar to Arter (1897). The length and detail of the article by Lanham (1906) suggests an increasing interest in brewery accounts, which is reflective of the increasing number of breweries being incorporated at the turn of the century (Gourvish and Wilson, 2008). Finally, an article in 1925 (Anonymous, 1925) shows an increasing interest in distinguishing overhead charges in breweries. It describes not only a more standardised form of brewery accounts, but also highlights the increasing need to isolate specific expense classifications within the accounts.

This brief recounting of some contemporary literature gives an impression of knowledge within the professional accounting community of cost accounting and internal accounting. The relatively detailed articles on accounting within breweries have in particular shown that practicing accountants were not only aware of brewery accounting, but that a suggested or standard approach to brewery accounting was in existence. As we have noted, there was no professional body representing cost/management accountants for the most part of the timeframe of our study. However, the contemporary literature reveals what appear to be some common and/or accepted ways of accounting in breweries. Such accepted ways could be referred to as institutionalised accounting practices, which brings us to describe our methods in the next section.

Methods

Before detailing the internal accounting at Whitbread, we first outline our methods. The primary archival source is the accounting and business records of Whitbread & Company Ltd, located at the London Metropolitan Archives (LMA)¹⁵. The records analysed included ledgers (general, trade, sales and depreciation), day books, journals, internal directors' and the secretary's copies of annual accounts, published financial statements, minutes of the Annual General Meeting, other minutes, Memorandum and Articles of Association and correspondence with external auditors (see Table 1). Records were photographed digitally for further and later analysis. All records were in good condition, legible and are what Scott (1990) terms recurrent and regular records. It should be noted that some of the records available for Whitbread are more detailed than in some previous studies. In particular, while Quinn (2014), Quinn and Jackson (2014) and Hiebl et al. (2015) provide interesting

detail on accounting at the Guinness brewery, Quinn (2014) noted that no ledgers survived – fortunately, many ledgers are available for Whitbread.

As noted in the introduction, we draw from some extant works on institutionalisation of accounting practices to frame this paper - similar to works such as Spraaakmann (2006), Quinn (2014), Quinn and Jackson (2014) and Hiebl et al. (2015). First, we draw on a framework provided by Burns and Scapens (2000). In brief, they propose that management accounting rules (how things should be done) and routines (how things are done) interact over time to become the taken-for-granted way of doing things. In other words, through the interactions of rules and routines, accounting practices become institutionalised. Such practices tend to become resistant to change and unquestioned. While Burns and Scapens (2000) effectively treat rules and routines as a bundled phenomenon, later work by Quinn (2011) and Oliveira and Quinn (2015) suggests rules and routines are separable. Quinn (2011) for example suggests rules are formal, written, but need not exist (as routines can fulfil rule-like functions), whereas Oliveira and Quinn (2015) suggest rules need not be written, but are formal cognitive structures. These notions on rules are relevant here, as during the timeframe of this study (1890-1925) there were, for example, no accounting rules/standards; company legislation said little on accounting and there was (for the most part) no dedicated professional body representing cost/management accountants. Thus, at the time, routines were likely more prevalent. We therefore operationalise Burns and Scapens (2000) for this study by focusing on routines rather than rules, in effect taking on board the work of Quinn (2011). Focusing on routines also has the advantage that the archival records we observed and analysed are outputs (or artefacts) of routines; we cannot go back in time to question Whitbread staff of the study period to determine their cognitive structures (as a component of rules). Thus, by confirming accounting tasks as routinized

and representative of the normal and repeated practices of the firm, we can argue they are institutionalised. Similar to Quinn (2014), we additionally draw on Pentland (2011) to provide a more refined definition of routines. Pentland (2011) notes four essential criteria for a practice to be determined as routine. These are: 1) routines are repetitive, 2) a recognizable pattern of action occurs on each performance, 3) actions are interdependent, and 4) multiple actors are involved. As we analysed the records of Whitbread, we kept these criteria in mind to determine key accounting routines and establish them as institutionalised practices, which we discuss later in a separate sub-section. First, we outline Whitbread's operations and detail our findings from the archival records.

Internal accounting at Whitbread

We now present the key internal accounting practices as revealed from the archival records for the time period of the study. We begin with an outline of Whitbread's operations, then describe the accounting and bookkeeping practices and a key accounting report prepared by the external audit firm. Finally, we discuss these in terms of routines and institutionalised practices.

Whitbread's operations

An overview of the operations and business structure of Whitbread is useful, as it helps set the context for the types of accounting and/or decision-making information which may have been in place and/or useful. Between 1890 and 1925, Whitbread's operations were, as far as we can ascertain, run from the main brewing site at Chiswell Street. A crucial component of Whitbread's growth after incorporation in 1889 were the bottling stores,

subsumed in the Bottling Department. Due to the growing popularity of bottled beer and a reduction on glass duty that had prevented widespread commercial use of beer bottles (Morgan, 1978), Whitbread added more and more bottling stores. Where the accounting records for Whitbread's bottling stores showed only two depots at Grays Inn Road and Lewisham in 1890, this number increased considerably over the next decade - for example Leeds opened in 1892, Liverpool in 1893, Cardiff in 1894, and Newcastle in 1896. By 1900, Whitbread had spread out across the United Kingdom, with the Bottling Department comprising 16 bottling stores. In 1904, Whitbread expanded to continental Europe, opening a bottling store in Brussels; further bottling stores opened over the next ten years in Antwerp, Ghent and Liege. With a bottling stronghold in Belgium, Whitbread opened a bottling store in the early years of WWI in Paris. At this point, Whitbread operated a total of 45 bottling stores, with Grays Inn Road serving as the main hub of the Bottling Department. This expansion and geographical spread, presumably, increased the need for accounting information for decision-making. The central role of Grays Inn Road is also reflected in the accounting numbers. Each bottling store held a separate bank account under the control of the Bottling Department Manager. From each bottling store, bottled beer was distributed on a sell-or-return basis by travelling salesmen (or "travellers"). Whitbread kept detailed sales records for each travelling salesman. Once per month (typically in the last week), the sales value was recorded in the *Wages, Commissions and Expenses* notebook to calculate commission owed in addition to their standard wages. Unsold beer was returned to the bottling stores and recorded accordingly in a *Waste and Returns* book. Whitbread kept returns under close scrutiny, as percentage of beer returned was targeted at less than 2% of the total beer sent. Apart from the brewing and bottling of beer, Whitbread also made a considerable return on renting out premises to private tenants (including, but not exclusively, to their own workers) as well as businesses. A Private Trade journal shows

names of tenants, rent due and rent paid as well as repairs required to the premises. This rental income contributed a substantial amount to Whitbread's profits; for instance, in 1897, the profit and loss account shows a gross profit from beer sold of £313,852, and a rental income from houses of £53,031.

5.2 Whitbread's bookkeeping and accounting

From the brief outline of Whitbread's business operations, we gain a picture of a relatively large and complex business. We now describe the internal bookkeeping and accounting practices as evidenced from the archival records. From this, evidence emerges of a quite detailed institutionalised accounting system (see later). On the subject of accounts, Whitbread's Articles of Association include what was a standard clause for the time, adopted and modified based on a model included in the Joint Stock Companies Act 1856 (ss. 69-73) and the Companies Act 1862 (Table A) (see Edwards, 1989; Napier, 2010) detailing the responsibilities of the directors on keeping of accounts (Joint Stock Companies Act, 1856):

The Directors shall cause true accounts to be kept of the sums of money received and expended by the Company, and the matters in respect of which such receipt and expenditures takes place, and of the assets, credits, and liabilities of the Company. The books of account shall be kept at the Registered Office of the Company, or at such other place or places as the Directors think fit. (Article 143, Articles of Association, Whitbread 1904)

Shareholders had a right to inspect books with authorisation of the Directors - auditors were authorised to access the books and accounts at all times, which was, according to Matthews (1998: 77) ‘a unique privilege not given to any other profession which had dealings with companies’. The main ledgers - such as the General Ledger - were kept at Chiswell Street, in the brewery’s counting-house¹⁶ (see Morgan, 1978). From the archival records, the books of accounts held by Whitbread were as shown in Table 1. Talbot (2006) states that the bookkeeping system (as per Table 1) was set up mainly to meet the requirements of the tax system, and Whitbread’s counting-house staff were predominantly occupied delivering them.

[insert Table 1 here]

Table 1 depicts the main internal books (excluding the published accounts) kept by Whitbread. Other books kept included production ledgers and estate/property ledgers for rental activities (LMA/4453/C/07). To recount the internal accounting practices at Whitbread, we focused on the books that recorded and detailed the outcomes of the main brewing business only. In the following paragraphs, we outline in some detail the books as shown in Table 1, discuss their links and in the next section focus on the Accounts Director’s Copy (ADC). We also summarise our findings as a hierarchy of internal accounting practices at Whitbread, which remained fairly stable over the 35-year timeframe of our study. We should note that we distinguish these bookkeeping records as transactional records as opposed to summary records/accounting reports, which we term accounting records – see later in this section. The daybooks, as would be expected, served as the original entry point for the recording of business transactions, such as sales or purchasing

books, and were maintained throughout the year. These books eventually fed into Whitbread's General Ledger and Rest Book (see later).

The "Sales (Trade) Ledger" recorded the sales of beer net of waste, returns and loss during transportation. The level of detail of these sales records is quite intricate. Whitbread used several different physical books to make the Trade Ledger. For instance, sales were recorded from different perspectives - based on sales area (e.g. Greenwich, Sydenham) and customers (free houses), stating quantity of beer sold as bottle or in bulk. These books were summarised quarterly and fed into the trial balance (see later). A weekly journal, detailing sales by travelling salesperson, was also part of this series. It allowed the calculation of monthly sales figures by salesperson, as well as commission due on their sales.

The "Order, rent and cash books" series were used to record the orders placed by the various public houses supplied by Whitbread. The records show that such a book was kept for each customer, detailing the type and quantity of beer ordered, how much they owed, and how they settled the debt. A postage and Inland Revenue stamp was affixed to the payment entries to indicate that beer duty had been paid. A "Waste/Returns book" was maintained for each public house, and this recorded the beer wasted and returned to the brewery. Within these books, an account was kept for each public house, and monthly sales, waste and returns listed and summarised at the end of the year. Ultimately, this resulted in a total sales figure net of wastes and returns. Additionally, Bad Debt Ledgers recorded outstanding payments the brewery was unable to recover.

The "Cash Book" category includes the books that recorded cash-in and cash-out transactions, and these were balanced weekly. This included cash-in from sales, rents, loans

and deposits, as well as cash-out for purchases, loan repayments, wages, salaries and dividends to shareholders and directors. The year-end balances of the cash book were also reflected in various accounts in the ledgers. The Salaries Ledger included entries such as wages, commissions and expenses incurred by travelling salespersons, wages of brewery and bottling store staff, and the remuneration of directors and managers of the brewery. Finally, the Purchase Ledger contained recorded purchases and expenses regarding the raw materials and labour employed in the brewing process, with open balances being recorded in the General Ledger and balance sheet as accounts payable.

The main accounting records draw on the books, journals and ledgers at the bookkeeping level as outlined above. These were the General Ledger, Depreciation Ledger, and a Rest Book, and were created towards the end of the year. The general ledger contained accounts typical of any business, with some of them specific to the brewing sector - for example, a malting account (see section three). The Rest Book is of particular interest. According to Morgan (1978), the “rest” was an annual stock-taking exercise at the end of the brewing season, typically the end of June when brewing was not taking place due to higher temperatures (Talbot, 2006). Whitbread was among the first to implement such a linking of brewing cycles to the accounting year. The Rest Book was instrumental for counting-house staff to compute and check annual balances used in the General Ledger, including individual stock creditor balances, and accounts of beers and casks by type. Talbot (2006) notes that the analysis of beer by type therein served to satisfy tax purposes mainly. The Rest Book further included stocks of raw and auxiliary materials such as hops or grain, as well as third-party services like blacksmiths, carpenters, or masons (Talbot, 2006). Another link to the bookkeeping records was the inclusion of bad debt figures in the Rest Book, which has been observed by Talbot (2006) as early as 1791.

To facilitate balancing the books at year end, counting-house staff calculated balances more than once a year. Quarterly trial balances were noted within the General Ledger as an ongoing balance check. The trial balance took a form similar to a contemporary structure, with balances based on the accounts in the order as presented in the General Ledger. However, we did not find any records of a quarterly Rest Book or similar, suggesting the quarterly trial balance was an accounting check and that quarterly accounts were not prepared. The General Ledger itself was again similar to a contemporary ledger in that it was fed with data from the bookkeeping records as described above. The level of detail was meticulous, and data could easily be cross referenced to the daybooks and other books. Accordingly, it assisted the production of published annual accounts as required by law. The ledger also assisted with the production of a more detailed set of accounts, the ADC, which arguably was a centrepiece of Whitbread's accounting practices and potentially useful for management purposes. Finally, the Depreciation Ledger, as expected, recorded assets at cost net of the accumulated depreciation; these net costs were computed annually and transferred to the General Ledger. All three types of accounting records, namely the Rest Book, the General Ledger, as well as the Depreciation Ledger, do not show much change between 1890 and 1925 in terms of general format or content.

Having outlined the basic books of accounts, we can now outline a hierarchy of internal accounting practices at Whitbread as per Figure 1. This is in essence what we might today term Whitbread's accounting information system.

[insert Figure 1 here]

Figure 1 draws on Table 1, determining the interconnections between the various books as described above. It shows what seems to be a well-established set of accounting practices at Whitbread. During the 35-year timeframe of this study, we found no evidence of major changes to the accounting practices. The links drawn within the bookkeeping record level (bottom of Figure 1) and between the bookkeeping and accounting records level (centre of Figure 1) reflect our description of Whitbread's accounting thus far. What Figure 1 depicts is that which one might expect, and quite similar to what a modern organization may have - albeit embraced most likely within software nowadays. It is also reflective of the contemporary methods of the day as outlined in section three.

Whereas the links between these books were evident, details on persons involved in recording the transactions were not as forthcoming. Minutes from regular meetings of the directors (LMA/4453/A/01, available for the entire 35 years) provided much evidence of the various management and administration roles at Whitbread, as well as the names of people attached to them. However, we found no evidence of persons linked to any particular accounting book, task or function. Thus, we cannot ascertain who was responsible for each type of accounting record found, and as a consequence, Figure 1 does not reflect a link to any internal administration or management levels. Although, we did find evidence in the minutes that Whitbread did run a counting-house (as noted), and some "accountants" were named, it is not certain what any such "accountant" was responsible for, who these person(s) were or if they were professionally qualified in any way. On this matter, Talbot (2006) noted that the financial accounts were maintained by counting-house clerks even at the time of Samuel Whitbread I, and there is no indication that this practice had changed up to or during our timeframe of analysis. The General Ledger, Trial Balance, Depreciation Ledger and the Rest Book ultimately led to annual accounting reports as

shown in Figure 1 - again as one might expect in a modern organization. In addition to externally published accounts, an internal ADC was also prepared alongside a smaller, but otherwise very similar Secretary's Copy (SC). We now turn to the ADC, as it provides some interesting insights on internal accounting information at Whitbread.

Accounts Director's Copy - content, likely uses, development

Whitbread's ADC was a central output of their internal accounting practices, and embodies the outcomes of the interplay between the bookkeeping and accounting records as discussed earlier. It is quite detailed, and the archival evidence provides annual examples across the entire period of this research and beyond. The ADC is likely to have been used by, and useful to management, as the detail within it is extensive and was similar over the entire 35-year timeframe of our study. However, while logical as a supposition, we did not find any written mention in Whitbread's records (such as the Board of Directors meeting minutes) indicating *how* the ADC was used by directors, managers or any other parties. The only mention of the ADC was in the covering letter from the auditors which was attached to it each year, stating that they "submit herewith the following Statements and Accounts, containing fuller information than is given in the printed Balance Sheet; we think this will be useful for your considerations" (LMA/4453/B/01). However, no detail is given about the nature of these "considerations"; in fact, the accounting detail in the ADC may have only been of interest to the directors if anything unusual happened. This is in line with Talbot (2006) who cites Whitbread director Sir Sidney Nevile, that business directors at the time were mostly concerned with the industry as a whole and with shareholders, and less so with daily accounting details. However, in Whitbread's case, we have not found any evidence pointing this out in a clear manner, not even during the WWI years. As the bottling

department was run almost as a separate entity at Whitbread (Talbot, 2006), the only decisions we found in the directors' meeting minutes on the bottling stores were of an operational nature. These decisions dealt with opening and closing bank accounts, as well as allocating authority to draw on them on behalf of the company. We have not found written evidence that the directors looked at profitability figures, budgets, or comparisons between the stores. The by and large unchanged list of directors, and the appointment of former staff to managing director roles (e.g. H.P. Grundy started out as registrar in 1890, later becoming company secretary and ultimately managing director by the end of the 1890s) may be an indicator that the general and preferred focus of Whitbread's directors was similar throughout our study timeframe. However, despite the lack of evidence of actual use of the ADC by managers/directors, it seems very unlikely that such a report was produced by an audit firm (for a fee) and not at all used internally.

In the numerous examples of the ADC, its content included balance sheets, profit and loss statements, manufacturing accounts and trading accounts from the 1890 fiscal year-end onwards. From 1893, the bottling department was shown separately, most likely due to increased importance. Within the ADC, balance sheets and profit and loss statements showed information on assets, liabilities, revenues, costs and expenses of Whitbread's business - but in more line item detail than the published accounts. The manufacturing accounts provided additional details on material costs and usage and the value of beer sales. In 1891, a trading account was added to the ADC, showing the net cost of beer brewed, as well as other trade expenses like transport costs and stock remaining at the end of the period. Both trading and manufacturing accounts could have been potentially used as a decision-making tool post-production (Talbot, 2006). In 1893, trading, profit and loss statements for each bottling store were added to the ADC as separate items. Their addition

increased the volume of the ADC considerably in 1894 (see for example, Figure 2 for the Lewisham depot).

[insert Figure 2 here]

This overview of all bottling stores was moved before the individual bottling stores' statements in 1895 - see Figure 3 as an example extract showing some of the 13 bottling stores, plus a total. The position of this overview was not constant in the ADC, as it was moved back to after the individual statements in 1896. However, overviews and details by bottling store remained a component of the ADC during the entire period of our study. The additional detail on the bottling stores contained within the ADC is an indication of Whitbread's ability to create a foundation for facilitating management decisions and/or planning on - at least - an annual basis. If there were no such detail within the bookkeeping and/or accounting records as per Figure 1, this would not have been possible, suggesting that those involved in the accounts preparation did have the provision of management information in mind –see later.

[insert Figure 3 here]

As Whitbread's expansion strategy added new bottling stores and increased their business reach, so did the amount of accounting information in the ADC, which grew in content and volume. Until 1921, the ADC was produced as a handwritten report, and only after a change in auditors (see below) was it provided in a typewritten format. At that point, an auditor's letter was affixed to the ADC, offering further "remarks explanatory of the accounts submitted" (ADC, 1923). These remarks typically dealt with details on cost,

inventory value, regulatory issues, etc., similar to information found in the notes of contemporary published financial statements. Although we found letters provided by Whitbread's company secretary - for instance in 1915 on the accounting principles for Belgian accounts - such notes were not provided on a regular basis before 1923. Additionally, as shown in Figure 4, the bottling stores overview (see Figure 3) was now presented as a more detailed set of departmental accounts.

[insert Figure 4 here]

Figure 4: Bottling store overview extract of the General Trading & Profit & Loss Accounts, ADC 1923 (LMA/4453/B/01, London Metropolitan Archives).

The departmental accounts from 1923 as shown in Figure 4 provide more detail than in previous years, and in particular lists figures per barrel. As outlined below, this change in detail level may be reflective of a change in the external auditor. The additional information may have also been useful for management decision-making. Although beyond the period of this study, the archival records reveal the bottling department accounts were maintained in a similar format well into the 1950s.

The company auditors produced the ADC as part of the annual audit process. From 1889 to 1920, the firm Chatteris, Nichols & Atkins¹⁷ (London) was appointed annually “for a fixed fee”, as stated in the Articles of Association and the directors meeting minutes. This annual fee was typically in the range of £400-500. Messrs. Chatteris, Nichols & Atkins (later renamed to Chatteris, Nichols & Co. when William B. L. Atkins dissolved the partnership) were among the top accounting firms in London in the latter part of the 19th century (see Matthews et al., 1998). Based on published media from the time, they worked with mainly

industrial clients and are likely to have provided financial advice to them (Matthews 1998, 2001). For example, according to *The London Gazette* they acted as liquidators for companies such as Cardiff Castle Gold Mines Ltd in 1899, Franco-British Exhibition Inc. in 1913, Furriers Alliance Ltd in 1911, Santa Fe Land Company Ltd in 1918, and Diamond Soda Water Machine Company Ltd in 1911. From 1921 to 1925 (and beyond), there was a change in the auditor to the firm of Mann, Judd, Gordon & Co., 8 Frederick's Place, London. According to an entry in the Directors Minutes Books on January 18, 1921, the change was initiated due to the planned merger of Chatteris, Nichols & Co. with another auditing firm, Kemp, Sendell & Co. and Charles L. Nichols' (one of the partners) decision to retire after the death of his son. Due to the loss of their long-standing personal relationship with Charles L. Nichols, the directors opted for a change, and appointed Mann, Judd, Gordon & Co. in June 1921. Interestingly, both of Whitbread's auditing firms during our timeframe merged into the same company eventually, Touche Ross & Co., which became Deloitte & Touche today.

As noted above, Mann, Judd, Gordon & Co¹⁸. added more explanatory remarks and figures per barrel to the ADC, and also brought about a change in its layout, size and format. This, and the switch from handwritten to typed format, reduced the physical volume it had reached under the prior auditors - something management likely appreciated. We have also found some suggestions that auditors may have served (at least partially) as accountants to Whitbread. Charles L. Nichols was explicitly named as "Company accountant" in board meeting minutes. Nichols was also often listed as present at these meetings, and the meeting minutes note requests for his advice on shareholding matters, as well as providing books to the counting-house and the bottling stores when required. As such, he was involved to some extent in the accounting information system of Whitbread – not only by

advice, but by content (ADC) and form (provision of physical books and ledgers). We did not find evidence of any additional work (e.g. of a cost/management accounting nature) undertaken by C.L. Nichols beyond that. His role and the audit firm role supports the notion that audit firms of the time offered advice on internal accounting systems (see Boyns and Edwards, 2013), or as it would appear at Whitbread, actually prepare additional accounting reports for management – as noted above, the trading accounting showed bottling stores separately from 1893. This role seems to have been a norm, as internal accounting knowledge *per se* was not widespread in the brewing industry at the time (Talbot, 2006). Auditing firms of the time provided (some) internal accounting knowledge, with counting-house clerks more likely to be trained in financial accounting for tax purposes, asset valuation and error detection (Talbot, 2006; Allot et al., 2000). As noted by Talbot, before the professionalization of management accounting, financial advice stemmed from the auditor, offered as “a value-added product which occurred from the normal audit engagement rather than from within the business” (Talbot, 2006:317).

The ADC, while we cannot be certain how it was used by management at Whitbread given the archival evidence, can be reasonably speculated to have had some management value. It was also repeatedly produced, even after a new audit firm was employed, which supports the notion of its value to management. The ADC of course could not have been prepared without the underlying bookkeeping and accounting system we have described at Whitbread. We cannot be certain if the underlying system was designed with the main purpose to produce an ADC, if the audit firms produced such a report as a matter of course for brewing firms, or if management requested it. What we can say with certainty is that the accounting practices and outputs we have described thus far were repeated in a similar way

during the entire period of our study. This brings us to a discussion on the institutionalisation of Whitbread's accounting practices.

Routines and institutionalised accounting practices

The internal accounting practices of Whitbread and their historical context in the brewing industry paint a picture of long-standing, taken-for-granted procedures. As suggested by Talbot (2006), the bookkeeping records of Whitbread (and other breweries) were set up mainly to comply with tax regulations. We now discuss these records and their outputs (such as the ADC) in the context of the process of institutionalisation of accounting practices as per Burns and Scapens (2000). In doing so, we present a set of accounting practices that existed during a time of little regulation, little professionalization (at least of cost/management accounting) and during which virtually all management accounting techniques had been developed as claimed by Johnson and Kaplan (1987).

First, in line with Quinn (2014), Quinn and Jackson (2014) and Hiebl et al. (2015), we draw on Pentland (2011) to establish if the accounting practices portrayed above are organizational routines, comprising the four components as stated earlier. If we establish the accounting practices of Whitbread as routines, it will allow us to utilise Burns and Scapens' (2000) framework as outlined by Quinn (2011) i.e. using only routines (as written and formal rules seem non-existent within Whitbread). We can satisfy the four components and establish the accounting practices set out in Figure 1 as accounting routines. First, all the internal accounting practices detailed above were repeated on a daily, monthly, quarterly or annual basis - depending on the routine. For example, the ADC was repeatedly produced over the years from 1890 to 1925. Second, the general nature of the accounting

practices as revealed by the books and records were similar over the period of the study. Third, as Figure 1 illustrates, there is a sequence of dependent actions, which results in the ADC and published financial statements. And finally, although we cannot identify the actors, we know that at least internal accounting staff and an audit firm were involved in the accounting practices, thus there are at least two actors in these practices, and likely more. Drawing on Burns and Scapens (2000), we will now explore the process of institutionalisation of these practices.

Burns and Scapens define a practice as institutionalised as ‘the “taken-for-granted” ways of thinking and doing in a particular organization’ (2000:5). In simple terms, this means that accounting practices are likely to be repeated, unquestioned and similar over time – unless subject to external forces or shocks. This institutionalisation comes about through the interactions of rules and routines over time, where the latter are acted out repeatedly by organizational members. As noted earlier, from the archival records, Whitbread’s accounting books can be categorised into bookkeeping records (daybooks), accounting records (such as the ledgers), and the ADC. We have established each of these as accounting routines during our analysis period. It is also likely that by the time of incorporation in 1889 these were already long-standing and well-established (Talbot, 2006). Thus, Whitbread’s internal accounting practices can be regarded as repeated, ongoing, taken-for-granted procedures (Burns and Scapens, 2000) – or in other words, institutionalised practices. Not only were the practices institutionalised, but during the entire period of our analysis we found little evidence of change. For example, the general form and layout of trade ledgers, order books, cash books and ledgers did not change. The ADC also remained similarly stable, only changing in layout to take account of the expanding business and having per-unit figures added.

Although Burns and Scapens' (2000) framework is rooted in more micro-institutional economics, they note that institutionalised practices may be changed by external forces or shocks. Institutional sociologists such as DiMaggio and Powell (1983) and Scott (2014) provide more detail on external factors and institutional arrangements. For example, DiMaggio and Powell (1983) note isomorphic pressures from normative sources (such as professions) and Scott (2014) notes three pillars in institutions – regulative, normative and cultural-cognitive. These three pillars are effected by coercive, normative and mimetic mechanisms. As we indicated above, Whitbread's accounting practices portray signs of being institutionalised, showing more stability than change over time. Without entering in a detailed discussion of the merits of various institutional-theoretical perspectives, it would be remiss of us here to ignore external factors in our analysis of Whitbread – even if the accounting practices are stable and institutionalised. In fact, if external forces are at play but stability remains, this reinforces the argument that the accounting practices were institutionalised. For these reasons, we will now briefly discuss possible external forces drawing on Scott's (2014) three pillars.

First, regulative forces were present, but not to the extent of present day company laws and accounting standards. The Companies (Consolidation) Act 1908 was a key piece of company law during our study period, and it contained no new provisions which affected accounting. The Defence of the Realm Act 1916 forced firms to track costs of production, but only those firms which manufactured or provided items required for the war effort – so this would have had no effect on Whitbread. As noted by Quinn and Jackson (2014), the Output of Beer (Restriction) Act, 1916 limited beer production in the United Kingdom. As noted in section two, Whitbread continued to expand during our study period, which

supports our conclusion that this restriction did not affect the company –and we found no evidence of major change to the accounting practices during the war period. Second, we can also identify normative forces, particularly those for the accounting profession. Earlier, we noted evidence from contemporary literature revealing that accountants were aware of costing techniques and methods in general and also of accounting practices in the brewing sector. Articles from *The Accountant* in particular provide a picture of expectations as to the accounting records that should be held by a brewery. While we cannot determine if anyone involved in Whitbread took such literature on board (or whether the literature took inspiration from Whitbread's practices), we can state that the books and records maintained are similar to, but less complex than, those suggested within the contemporary literature (see section three). This suggests that Whitbread's accounting practices were influenced to an extent by general practices of the accounting profession as applied to the brewing sector (i.e. normative influences). Third, as this study is a single case, we cannot draw any conclusions on whether Whitbread's practices mimicked those of other breweries of the time. It is possible that the normative practices suggested by the accounting profession were gleaned from breweries, something which future research may uncover.

Taking into account the above institutional forces and major external shocks such as WWI, stability of the accounting practices at Whitbread is notable, supporting our earlier argument they were *institutionalised*. A stable relationship with the auditor from 1890 to 1921 may have been a contributory factor. Additionally, the absence of evidence to support a direct link between particular individuals and the records explored gives further support to the argument that the internal accounting practices were institutionalised and taken for granted by the various (unknown) individuals over the 35-year timeframe of this study. This is in line with the notion that staff positions in the brewing industry were

depersonalised, bureaucratised - and thus institutionalised - before 1890, indeed by as early as the end of the 18th century (Pollard, 1965; Talbot, 2006). Even after 1919, with the advent of a nascent cost accounting profession and scientific management (Loft, 1990), these institutionalised practices stood in the way of professional accountants joining boards of directors, which was the case at Whitbread also¹⁹. This paints a picture of rather strongly institutionalised internal accounting practices. Our earlier evidence from *The Accountant* does suggest more detailed accounting was emerging in breweries, for example around bottled beer. Despite these factors, we saw little if any change in the accounting practices, save some format changes in the ADC as introduced by Mann, Judd & Gordon, which again supports our argument that the practices at Whitbread were institutionalised.

While the accounting records at Whitbread show signs of similarity to practices in the contemporary literature, the ADC or similar report is not mentioned in such literature. We know from the archival records of Whitbread that the ADC existed from at least 1890 and continued in a similar form throughout the entire research period. Thus, its origins pre-date the format of financial statements for breweries as suggested by Arter (1897). We cannot be sure of its origin at Whitbread, but it seems very likely that the influence of the audit firm was a factor. Whatever its origin, its repeated production, similarity and presumed use over time allows us to determine it as an institutionalised practice – possibly one which could have influenced practice in other breweries or within the profession, given it pre-dated contemporary writings. Earlier we noted that we could not determine precisely *how* the ADC was used from the archival records. We presume it was used to inform decision-making in some way, but having said that, if it were produced over time and not used, this reinforces its taken-for-granted and institutionalised nature. It was also replicated and

enhanced by Whitbread's new auditor in 1921, which is suggestive of either its usefulness and/or its institutionalised nature.

Concluding comments

The objective of this study has been to provide some insights into the process of institutionalisation of internal accounting practices of firms around the turn of the 20th century. Thanks to the detailed records of the Whitbread archive, we have gained some useful insights and presented a general overview of the internal workings of accounting in a brewery at this time. Some of the evidence, for example, in Table 1 and Figure 1 is not surprising, and is likely representative of the internal accounting practices of many brewing firms of the time period (Talbot 2006).

Quinn (2014) noted that no detailed ledgers survived at the Guinness archive. Here, not only do we have such ledgers, but also evidence of outputs from those ledgers, namely the ADC. Quinn (2014) and Hiebl et al. (2015) do provide evidence of departmental accounting at Guinness but such accounting was supported by a large accounting department, headed by a Chief Accountant. At the smaller Whitbread brewery (see section two), while we have found evidence of a counting-house, we found no evidence of an internal accounting department similar to that at Guinness. While some studies have noted the involvement of the auditor in internal accounting in firms (see for example, Matthews et al., 1997; Matthews, 1998; McKinstry, 1999), few have detailed their actual contributions. At Whitbread, the external audit firm Messrs. Chatteris, Nichols & Co. seemed to have at least been strongly involved in the provision of the ADC, and possibly in other roles. Extant literature, for example Matthews (1998: 77), states that 'the auditor [...] might commonly

have dealings with a company's directors'. Matthews (1998) also suggests auditors were doing more than just approving published accounts, and were at least privy to the decision-making process, providing cost and management accounting type advice. The evidence from Whitbread, in the form of the ADC, supports Matthews (1998) assertions to an extent (see also Matthews et al., 1997; McKinstry, 1999). The auditors from 1890 to 1921, Messrs. Chatteris, Nichols & Co., not only produced the ADC, but - as board minutes reveal - presented it with comments at board meetings. As noted earlier, Charles L. Nichols appears to have been relatively active within the company, being explicitly addressed as "the Company's accountant". The involvement of the audit firm in record-keeping and in the production of the ADC remained very similar when Mann, Judd and Gordon took over as auditor, suggesting practices as highly institutionalised. As noted, both Mann and Judd had written on and had vast experience of cost accounting. However, they appear to have had little influence on the accounting within Whitbread, save minor changes to the ADC from 1922. This may have been due to the institutionalised nature of the accounting practices in situ. We cannot be certain of this, of course, but we have found no evidence of Mann, Judd & Co being specifically sought out by Whitbread to improve their accounting techniques, nor do the accounting records or the ADC reveal major change or additions. Indeed, although outside the timeframe of our study, the ADC remained similar until at least 1951 (the latest date available in the archive). Thus, in sum, the available evidence suggests a set of highly institutionalised accounting practices. These practices were not around cost accounting. This questions Johnson and Kaplan's (1987) statement that all internal (cost) accounting knowledge was developed by 1925 – it may have been developed, but based on our data from Whitbread, usage was another matter.

This paper has some limitations, the primary being it is based on a single case. Another limitation is one often faced in archival research, that is, an incomplete series of files. However, over the 35 years or so covered by this study, the records were substantially complete and more than sufficient to produce the hierarchy depicted in Figure 1. A further limitation relates to our use of routines and the institutional concepts of Burns and Scapens (2000). The very nature of this research – archival research – does not permit us to observe action, which is a feature of such research. Thus, while we have provided argumentation on the internal accounting practices of Whitbread and their institutional context, we cannot be absolutely certain on, for example, the key individuals or pressures driving the practices. However, the outputs of actions – namely the accounting records and reports – are sufficiently detailed and similar over time to allow us infer action and determine change or stability in the accounting practices. A final limitation is a lack of detail on persons involved in the bookkeeping and accounting within the company - such detail could enlighten the role and background of accounting staff within firms at that time. Further research of more breweries or other organizations may provide such detail. Of particular interest for future research is the role of external auditors and audit firms in the emergence, development or stability of internal accounting practices around the time period of this study.

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LMA/4453/B/02 - Balance sheets.

LMA/4453/B/03 - Statement of expenditure books

LMA/4453/B/04 - Cash books

LMA/4453/B/08 - General ledgers

LMA/4453/B/12 - Rest books

LMA/4453/B/15 - Order, rent and cash books

LMA/4453/C/01 - Beer returns

LMA/4453/C/07 - Estate trade books

LMA/4453/E/01 - Salaries and lists of employees

Archive of Arthur Guinness & Son Ltd, St James's Gate Brewery, Dublin.

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¹ See a special issue of *Accounting History Review* 24:2-3 for some examples of accounting during the WWI.

² See <http://www.carlsberggroup.com/Company/heritage/Pages/FoundingCarlsberg.aspx>

³ See <http://www.shepherdneame.co.uk/brewery>

⁴ Annual Report, 2013/14 available at <https://www.whitbread.co.uk/investors/reports-and-presentations/annual-reports-accounts.html>

⁵ See for example, <http://www.whitbread.co.uk/about-us/history-of-whitbread.html>, <http://www.theguardian.com/money/2000/may/26/personalfinancenews.business2> and <http://www.telegraph.co.uk/finance/4469330/Whitbread-sells-all-3000-pubs.html>

⁶ These requirements closely follow ss. 78-82 of the Companies Act 1862.

⁷ These figures are not directly comparable, as the London beer market was more competitive (see Gourvish and Wilson, 1985) than the mainly Dublin/Ireland market served by Guinness.

⁸ Self-calculated by authors, based on Whitbread's financial statements in 1925.

⁹ Further searches of historic business and economics journals do reveal further literature on breweries, but such literature does not focus on accounting and is thus not detailed here.

¹⁰ This body evolved into the present day Chartered Institute of Management Accountants, who were granted a Royal Charter in 1986.

¹¹ This was an illustrated monthly magazine, published by the Engineering Magazine Co. in the United States and the UK.

¹² The distribution of establishment charges was a major focal point for many businesses. See for instance Boyns' (2003) discussion on Alexander Hamilton Church's system of scientific machine rates at Hans Renold Ltd.

¹³ This was the then weekly journal of the Institute of Chartered Accountants in England and Wales.

¹⁴ Company law of this time did not require a detailed trading account to be published.

¹⁵ From an accounting history perspective, these archives are relatively unused. See Bower (2016) for work from a general business perspective

¹⁶ The term “counting-house” (or compting-house) denotes the location of the accounting clerks in a company, where accounts were kept and clerical activities conducted (Previts and Sheldahl, 1977).

¹⁷ To the best of our knowledge, there are no archival records available or accessible to researchers on Messrs. Chatteris, Nichols, Atkins, or any of their successive firms, until they merged into Touche Ross and Co.

¹⁸ John Mann and Harold Judd (firm partners) are known for their work on cost accounting. For example, Matthews et al (1998) note their involvement in the Ministry of Munitions during the First World War. Their work entailed establishing the cost of munitions manufacture.

¹⁹ The two directors who signed the published financial statements from 1919-1925 were Samuel Howard Whitbread (son of Samuel Whitbread III) and Temple Godman. Neither were accountants as far as we can determine. The other directors and board members as revealed by minutes during this same period comprised either the same directors as on incorporation or their descendants – none of which appear to be professional accountants. Hiebl et al. (2015) note a similar non-presence of professional accountants at Guinness.