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The value of Sainsbury's sales data in assessing the impact of self-service methods on food retailing in postwar Britain[1]

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Over the last two decades the study of the development of retail organisations has moved from being relatively under-researched into the mainstream of business history and management studies. That this has been the case is due, in part, to the recognition by some prominent retailers in Britain and elsewhere of the value of archival records both within their organisations and as a wider cultural and historical resource. At a time when 'corporate responsibility' is becoming an increasingly important buzz-phrase, the idea that keeping business archives can not only provide practical evidence to support reputational claims, but is in itself a practical example of corporate responsibility is particularly welcome. One of the most prominent examples is the Sainsbury Archive, which has been preserved for posterity through the setting up of an independent charitable trust funded jointly by the parent business and the Sainsbury family and made accessible at a purpose-equipped study centre located at the Museum in Docklands, which is part of the Museum of London. The focus of this article is on the value of a part of the collection – records of sales – to researchers, and in particular how these have been used to shed light on Sainsbury's postwar transformation from a medium-sized regional operator of small provisions shops to become, by the early 1970s, the yardstick by which the supermarket industry measured itself. The paper falls into two parts: firstly an examination of the types of sales records that are available[2], and secondly a summary of the preliminary results obtained from analysing sales data and associated sources which relate to the period 1947-75.

Sales are, of course, the life-blood of every business, but they are retailers' *raison d'être.* They are the mechanism by which the value of shop space is measured, the chief tool for assessing employees' performance and the determinant of managers' promotion prospects. Until the advent of computers, a small army of head office clerks was employed by Sainsbury's in tabulating and analysing the raw data which each branch recorded. The 'sales office' was at the opposite end of the company's fourth floor offices from the chairman's

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[1] This article is forthcoming in *Business Archives: Sources and History* (November, 2008). It is based on research carried out with assistance from the Business Archives Council's Business History Bursary 2006. I'd also like to express my particular thanks to Clare Wood, the Sainsbury Archivist, and to Professor Andrew Godley.(Reading CIBH).

[2] References to catalogue codes were correct at Oct 2007, but may be revised as a result of an on-going revision

suite, and it's said that the delivery of the collated figures was marked by a weekly parade from one end of the building to the other. But the esteem in which these records were held at the time is belied by the paucity of published information. As a private limited company whose articles of association restricted share ownership to members of the founding family, the company's *Annual Reports* from 1949 contained the minimal information required by the 1948 Companies Act, and did not, until 1968, include turnover figures. Researchers are therefore likely to be surprised by the richness of internal record-keeping preserved in the Sainsbury Archive. At the core of the surviving sales records is a series of ledgers which give weekly sales figures for every Sainsbury's branch from 1911 until 1979[3]. The records are arranged into the firm's supervisory districts; later volumes also group stores by type, branch number (the unique number allotted to each store in the late 1940s to facilitate the use of Powers-Samas punched-card branch accounting) and department. Thus these documents contain, in addition to statistical data, a significant subtext of management information. There is also, for the earlier period, a parallel series of ledgers relating to branch expenses.

The extent of this weekly sales and expenses data is substantial, bearing in mind that at the start of the its coverage Sainsbury's had over 100 branches, rising to 255 by the outbreak of the second world war. More manageable are the data contained in a series of volumes compiled by the company's personnel department and 'discovered' in the office of a retiring senior personnel manager in 1986. The three volumes span the period 1906-1964, with a few entries for 1965[4]. It is believed that their original purpose was to record basic data about store performance to inform decisions about store managers' remuneration. For each branch the manager's name, salary and annual bonus are recorded, together with basic information about store opening, extension and closure dates. But, in the present context, these volumes' greatest value is that they record annual average weekly sales, expenses and gross margin for each store, thus forming a continuous and consistent series for a period of nearly sixty years.

The end of this series almost certainly corresponds with the start of computerised record-keeping by Sainsbury's personnel department. As is so often still the case, electronic data have survived much less well than their paper-based equivalent, with the result that there are major gaps in the Sainsbury Archive's collection. But the fact that Sainsbury's was one of

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of the collection's arrangement and description.

[3] Catalogue references SA/BR/21/6 15 volumes covering the period 1911-1961; SA/BL/3: 18 volumes covering 1961-71.

the first British companies to use computers for business purposes had considerable benefits in terms of the quality and professionalism of the statistical data that was collected as well, of course, for the company's commercial success. The company's first statistician was Bernard Ramm[5], who joined the company in 1949. His appointment as the fourth non-family board director in 1962 was a measure both of the esteem in which he was held and of the importance to his department's work. Amongst his achievements was to earn Sainsbury's the distinction of becoming the first British food retailer – the sixth British business of any kind - to enter the computer age. The team that he appointed in advance of the installation of the Emidec 1100 computer in 1961 was part of an elite group of computer programmers and experts in the commercial world at that time.[6]

The first applications to which the new computer was put were stock control and ordering – based, no doubt, on the company's experience of using Powers-Samas punched-card machinery for these functions. But the scale of the investment involved and the complexity of the task for a company which sold around two thousand product lines - of which the potential for stock losses was accentuated by the proportion which were highly perishable - necessitated a step change in Sainsbury's information management expertise. Under Ramm, the company built up statistical expertise which included market analysis, sales forecasting, site assessment and work study, as well as more day-to-day functions such as financial accounts and payroll[7]. The survival of records from all of these areas is patchy, but the quality of the material which does survive is exemplary.

One of the most important series of documents is the 'Financial Reviews' which were produced at each financial year end as a briefing document for directors[8]. The series is incomplete, but contains information about branch sales - broken down by type of store - costs, including central department and depot overheads and branch depreciation estimates,

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[4] SA/EMP/2/27 (1906-20); SA/BL/3/236 (1921-1948). The final volume is currently uncatalogued.

[5] Sainsbury's, *The Record Years*, Haggerston Press, London, 2006, pp80-81. Ramm was also assistant editor of the *Journal of Applied Statistics* from 1956-57.

[6] Graeme Nicholls, one of Sainsbury computer programmers, later recalled how in the late 1950s the circle of computer experts was so small that they used to decide between themselves who would apply for each new job. *JS Journal* May 1996 p20.

[7] Another factor prompting Sainsbury's increase in statistical expertise was the increasing requirement to produce data for government surveys such as the *Census of Distribution* and *National Food Survey.* See 'The Statistical Function in a Distributive Organisation', N C Turner, *The Incorporated Statistician.* Vol. 4, No. 1 (Mar., 1953), pp. 27-40 Turner was Sainsbury's Company Secretary 1938-67. Although these requirements were common to other retailers, Sainsbury's wartime experiences had brought the company into unusually close contact with government because of the advisory roles played by Alan Sainsbury and others.

data relating to the sales and profitability of each product department and a management commentary. Thus they provide much of the information which latterly came to be included in the official *Reports and Accounts*, but a detail and format which appears to be 'unmassaged'. These documents were regarded as being so highly confidential that each copy was numbered and marked with the name of the recipient.

The 1960s marked the ascendancy of the fourth generation of the Sainsbury family. John Sainsbury, the founders' eldest grandson, joined the firm in 1950. He gradually took over responsibility for the trading side of the business, becoming vice-chairman when his father, Alan Sainsbury, retired in 1967. He succeeded his uncle as chairman two years later.

John Sainsbury's two younger brothers, Simon and Timothy, qualified respectively as an accountant and a chartered surveyor. The former initially became responsible for personnel and finance and served as vice-chairman from 1969-79; the latter board-level responsibility for the company's store development programme. Their cousin, David Sainsbury, took a Cornell MBA before becoming financial controller and subsequently finance director. Thus the fourth generation of the Sainsbury family was not only itself professionally well-qualified, but also understood the importance of employing a highly-qualified and well-informed senior management team.

John Sainsbury, in particular, placed great emphasis on the value of high-quality statistical data as a management tool and as a mechanism for informing and motivating staff at all levels, particularly senior and middle management. He initiated a biennial programme of management conferences and introduced 'year end' meetings – which soon also came to be supplemented with 'interim meetings' to explain the company's strategy and performance as an adjunct to the published announcements of the company's financial results. These included a series of presentations by directors, led by John Sainsbury himself, together with formal 'Q&A' sessions and a post-meeting social gathering. Most of John Sainsbury's speeches for these presentations – although not those of other directors – survive, together with printed copies of the visual aids used[9]. Additionally some of the statistical department's briefing papers and supporting documentation for these 'year end' presentations have survived. Together with the *Financial Reviews* and, from 1969, the more informative format

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[8] SA/CO/5/4/1-4

[9] Catalogue refs fall into SA/CO & SA/FAM

of the official *Annual Reports*, these groups of papers complement each other to provide a far-reaching body of information about the company's strategy and progress. The sales data contained within these internal documents include comparisons between the performance of counter service and self-service stores, commentary on the progress of particular product departments, for example in relation to product innovation, and comparison with competitors.

A complementary information source gives details of sales of individual products, together with retail price movements from 1963-1979[10]. I believe that these data were collected as part of the statistical department's production of a 'JS Basket' - a selection of products sold in Sainsbury's stores - for comparison with the data produced by market research agencies and the RPI. The figures do not relate to the complete product range and the coverage for the different departments is variable, but, used in conjunction with the *Financial Review* data, the series is large enough to give insights into the evolving product range and the strategies used to build the sales of Sainsbury's supermarkets during the 1960s and 70s.

These datasets are extremely unusual in their quality and extent. Unlike, for example, financial institutions, retailers tend to use few historical records in pursuance of their day-to-day business activities, which is one of the main reasons why the survival of retail archives is patchy. That such records have survived at Sainsbury's is as much the result of a dynastic corporate culture that cherished the past as of the professional passion of successive archivists. The paucity of sources, particularly hard evidence of the sales performance of early supermarket trading, helps to explain why this subject has been neglected. There is much scope for a detailed re-examination of the whole history of multiple food retailing and its role in transforming on the one hand the channels by which food was distributed and on the other the diets and shopping patterns of ordinary people. But the remainder of this paper will argue that one period in particular has suffered from this neglect and that the development of self-service trading in the postwar period deserves recognition as a watershed which bore the hallmarks of a classic economic revolution. It will show how the sales data outlined above have been used partially to redress this balance.

Contemporaries were in no doubt about the importance of the changes which took place in food retailing during the third quarter of the twentieth century.[11] The postwar period

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[10] SA/BL/1/.

[11] Literature ranged from trade journals such as the *Grocer* and *Supermarket and Self-service,* practical witnessed the introduction of new technologies and forms of organisation which changed the structure of food retailing, increased scale and alleviated the historic bottle-necks of traditional forms of service. It made possible spectacular and permanent improvements in productivity.

Self-service food retailing originated in the USA in the early twentieth century and spread rapidly during the interwar years. It became associated with the sale of pre-packed branded goods at low prices from warehouse-style premises. Labour costs were minimised by pushing the preparation and packaging that had previously been carried out by shop assistants onto food manufacturers, and by delegating to shoppers activities such as assembling orders and home delivery[12]. British retailers were aware of US developments in food retailing and there were a number of interwar experiments with self-service techniques. But differences in the economic and social context - particularly the relative prices of land and labour, and lower levels of private car ownership - explain the time-lag between the introduction of self-service techniques in Britain and America.

Whereas in the US, early supermarket development was spurred by competitive pressures, in Britain experimentation with self-service took place within a command economy. The London Co-operative Society opened its first self-service shop at Romford in 1942; many of the major multiples also tested the new shopping methods during the 1940s. One of the chief attractions, at a time of labour shortages, was the expectation that self-service would facilitate improvements in labour productivity, although other features also appealed to retailers, such as the reorientation of product assortment towards ranges which were relatively plentiful to supplement supplies of rationed fresh foods. In 1949, John Strachey, Minister for Food,

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handbooks, e.g. *Self-service Retailing, its Profitable Application to all Trade,* Ralph G Towsey, London 1964; *Management Implications of Self-service Installations*; *Self-service Shop,* J A Hough and F Lambert, Manchester, 1951; and academic studies such as *Revolution in Retailing*, C Fulop, Institute of Economic Affairs,1961; *Competition for Consumers*, C Fulop, IEA 1964; *Productivity in Distribution*, K D George Cambridge University Press, 1966; *Productivity in the Distributive Trades*, J B Jefferies, European Productivity Agency, 1954. WG McClelland, who bridged the academic and business sectors in his capacity as Managing Director of the regional grocer Law's Stores Ltd and the first Director of Manchester Business School, published extensively on the subject, e.g. 'The Economics of the Supermarket *Economic Journal*, 72, pp154-70, *Costs and Competition in Retailing,* Macmillan, 1966, *Studies in Retailing*, Blackwell, 1963. Governments' concern with the potential of self-service for improving retail productivity was sufficiently strong to merit special studies on self-service as part of successive Censuses of Distribution. See, for example, *Board of Trade Journal* - 4th Sept 1959. Volt 177 no 3259 and *The Economic Performance of Self-service in Europe,* Henksmeier, OEEC European Productivity Agency, Paris, 1960.

[12] E.g. Anglo-American Council on Productivity, Productivity Team Report: *Retailing*, London, Nov 1952, p21.

announced the availability of 100 special building licences to encourage retailers to experiment with self-service methods. So challenging was the postwar trading environment that the licences were undersubscribed. J. Sainsbury Ltd was one of the firms which did take up the Minister's offer. Its first self-service store opened in Croydon on 26th June 1950. This converted store was sufficiently successful to encourage further experimentation and, by the mid 1960s, Sainsbury's was committed to the replacement of all of its counter service branches.

As a first step towards understanding the impact of introducing self-service methods into food retailing, the personnel department's average weekly sales figures for all Sainsbury's stores were analysed for the period 1947-1964.

Figure 1 shows the sales for each store type adjusted for food inflation. At the beginning of the period all Sainsbury's 240 stores fell into the 'pre-war counter service' category, which is to say that they conformed to the 'traditional' pattern of trading in which customers were served by shop assistants who also weighed and wrapped the goods as required and took payment. This type of store therefore forms a 'baseline' against which the performance of other stores may be measured. The two most salient features of this store type's performance are firstly sales which were below those of any of the self-service types and secondly, by the early 1960s, sales which were declining in real terms. Seventeen 'postwar counter service' stores were opened during the period under review. These operated on similar lines to their predecessors.

The other store types offered self-service. Most of these were purpose-built, but seven former counter service stores were gutted and converted. The six stores which were opened in New Towns are shown separately from the other 38 other 'new self-service' stores. Sales in the former 'matured' over time as the communities which these shops served grew and, by the mid 1960s, matched those of other self-service stores. The contrast with the stagnant performance of the counter service branches is marked, and supports the notion that the introduction of self-service enabled a sustained 'take-off' in sales.

These results reinforce the conventional view that self-service increased sales per store, but they do not indicate the relative productivity of self-service technologies. The key measures used by contemporary commentators and within the industry for comparison relate to labour productivity - sales per employee - and the efficiency of retail space - sales per sq ft. Surviving data of staff numbers are very limited, but staff allowances in Sainsbury's self-service stores survive for 1958. These make it possible to compare Sainsbury's performance with other equally rare data from a 1957 OEEC survey and from the 1957 Census of Distribution - which was the first to elicit separate information on self-service trading. The results are presented in Table 1.

Table 1

Productivity measures, Self-service and Counter Service Shops, 1958

	Annual average sales	Average sales area	Annual average sales		
		M^2	/ m^2	/employee	/checkout
UK self-service	£12,000	116	£630	£5,700	£32,000
All Sainsbury's self-service	£420,000	306	£1,370	£6,060	£67,400
Large* Sainsbury's stores	£503,000	360	£1,400	£5,180	£72,000
Large* cooperative stores	£144,000	353	£410	£7,870	£36,900
Large* self-service multiples	£355,000	407	£870	£6.490	£59,900

Sources: Sainsbury's average weekly sales data; Henksmeier, ed, *The Economic Performance of Self-service in Europe* - OEEC: EPA, 1960, pp83-98; *Board of Trade Journal* Vol 177 no3259, 4th Sept 1959, p215. *1959; *Self-service stores with sales areas of at least 3,000 sq ft.

Sainsbury's self-service stores achieved sales which were about 35 times the British average. It was more efficient than its competitors in the intensity with which it used its store space, but its labour was less productive than that employed by co-operatives or by other multiples. The discrepancy appears to have increased with store size, a factor which suggests that, since the adjustment of staff numbers was a variable over which management had control, this lower labour productivity was intentional. Sainsbury's sales per checkout were higher than those of competitors, which suggests that the additional labour was not deployed at the 'front end'.

These differences are partly explicable in terms of product range[13]. Chains which concentrated heavily on merchandise which did not require practical preparation skills were better able to manage the hours of shop floor employees to suit peaks and troughs in trade. Skilled jobs such as butchery were less susceptible to part-time employment than shelf-filling and checkout operation. Part of the co-operatives' superior labour productivity is attributable to tobacco sales[14].

This 'snapshot' comparison suggests that there was considerable scope for management decision-making in the deployment of resources. A study which attempted to disaggregate the effects of labour, capital and entrepreneurship inputs was published by K D George in 1968.[15] The capital expenditure of the 84 large retailing firms which participated in George's study corresponded to around 30% of the Board of Trade's total figure of £247 million for all retail firms in that year.

The first three columns of Table 2 below replicate George's computations for rates of change in labour productivity, capital intensity and management input by type of business for the period 1961-66. The other columns show the same calculation for Sainsbury's stores for the same period, for 1966-70, and for the decade as a whole. The latter are derived from the series of detailed financial reviews prepared for Sainsbury's directors over this period. Figures for Sainsbury's capital investment have been estimated from information about the depreciation of capital assets, using bank base rates as a proxy for depreciation rates.

Sainsbury's growth in output - measured by its increase in turnover - was similar to that of other large grocery multiples for the first half of the decade and grew more rapidly thereafter. In the period covered by George's survey, its wage bill increased by around 4% per annum in real terms to £8.7m by 1966.[16] Labour productivity increased in parallel, a pattern similar to that of other grocers, but markedly different from that of the co-operatives, who responded to

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[13] There also be differences in measurement, and in particular how part-time work was represented.

[14] Tobacco sales were reported to account for around 12% of sales in a 1962 study of two Nottingham Co-operative stores 'The Operation of a Self-service Store' L A Cherriman & R Wilson, Co-operative Union 1962 p16; Other Co-operatives attracted even higher tobacco sales, cf *Supermarkets,* Co-operative Trade Guide, 1964, p93, assumed 20% of sales of a 'typical' store were tobacco. Sainsbury's did not sell tobacco products until the late 1960s.

[15] *Productivity and Capital Expenditure in Retailing,* Cambridge University Department of Applied Economics Occasional Papers: 16. CUP, 1968.

[16] Following George's methodology, Sainsbury's wage and salary bills for 1961, 1966 and 1970 were deflated

stagnant sales by reducing their labour input at a rate of 1.6% per annum. In the second half of the decade Sainsbury's increased its labour input, so that although sales rose by over 9% per year, the growth in labour productivity declined to around half the level of the early 1960s.

Table 2

Productivity and technical change 1961-70

	Co-op	Grocers[17]	All Firms[18]	Sainsbury's	Sainsbury's	Sainsbury's
	1961-66	1961-66	1961-66	1961-66	1966-70	1961-70
Changes in						
Output	0.14	7.64	5.37	7.79	9.22	8.43
Labour input	-1.66	4.29	2.25	3.94	7.76	5.62
Labour Productivity	1.80	3.35	3.12	3.85	1.46	2.81
Of which, due to changes in:						
Capital/head	1.89	1.12	1.86	4.45	-4.10	0.61
ATOK[19]	-0.09	2.23	1.26	- 0.60	5.56	2.20

Sources: K D George*: Productivity and Capital Expenditure in Retailing,* CUP, 1968, p29; Sainsbury's Financial Reviews 1961-1970*; Time, Rates of Wages and Hours of Work* (HMSO, 1962, p210 & 1967, p208); C Feinstein *National Income, Expenditure and Output, 1855-1965,* CUP 1972, T141. Productivity growth = changes in output – changes in input.

While labour productivity is often easier to measure, its importance to economic historians is typically as a proxy for underlying changes in capital investment or the layout of work that enable the workforce to become more efficient. Increases in labour productivity during this period are not typically assumed to be caused by workers putting more effort in for the same wages. In his survey of productivity, George explicitly differentiated between the increases to labour productivity caused by additional capital investment and the residual, presumed to be caused by innovations in management and firm organisation (or what he called Applied Technical and Organisational Knowledge – ATOK in Table 2). Using firm-level sources, the equivalent data for Sainsbury's have been calculated and so the comparison of the determinants of labour productivity in the grocery trades has been extended.

to 1961 rates by an index computed from the information using the sources cited.

[17] Food multiples who responded to George's survey. These were: Allied Suppliers, Amos Hinton, Booth and Co, Clover Dairies, Cullen, Duckworth, Jas, J W Hillard, International Stores, Laws Stores, Melias, Pricerite, J.Sainsbury, Tesco Stores, Victor Value, F J Wallis, Wrenson.

[18] i.e. the 84 large retailing firms who responded to George's survey.

[19] Applied Technical and Organisational Knowledge (ATOK) ie entrepreneurship $=(O-L)-\alpha(C-L)$, where O is the real annual cumulative percentage change in output, measured by sales, L is the real annual cumulative change in labour input, measured by wages, and C is the real annual cumulative change in capital investment. The factor α is the share of profits in net output which, since Sainsbury's were increasing capital and labour

Sainsbury's annual percentage increase in capital per worker during the period covered by George's survey was about four times that of the 'Grocers' category and twice that of Co-operatives. As a result, the residual productivity change attributable to Sainsbury's management expertise, 'ATOK', was virtually zero, as was also the case with the co-operatives. However, while Sainsbury's ATOK was, in this period, negligible because the company was increasing its labour and capital inputs in parallel, the Co-operatives appear to have been substituting capital for labour. Since the labour input is measured by wages, this could have been either a matter of reducing actual staff numbers, or it may have been the result of lower average wages as a result of 'de-skilling'. In either case, the contrast between these two approaches is an important indicator of the difference in the trading practices of each type of business. It is noteworthy that while Sainsbury's was amongst the most successful chains in this period, the Co-operatives were steadily losing market share.

From 1966 onwards, the amount of capital invested per worker by Sainsbury's fell sharply. This picture of diminishing capital per worker accords what we know of Sainsbury's investment patterns over this period. The most important of these was the switch from counter service to self-service. At the end of the 1961 financial year, 229 of Sainsbury's 260 stores operated on counter service lines. Over the course of the early 1960s, this situation gradually began to change, but by 1966 two-thirds of the firm's shops still offered counter service. Considerable sums were spent on refitting these stores during the immediate postwar period, for example through the addition of cold stores, refrigerated cabinets, mechanical handling equipment and new fascias. Early self-service stores were similarly capital intensive in their requirements for these facilities. After 1966 Sainsbury's became committed to opening large self-service shops throughout its trading area, and the rate of closure of counter service shops accelerated: 63 of these shops closed in the second half of the decade, against 30 in the previous five years. The average sales area of new self-service stores – which in 1960 had been 4,700 sq ft – increased from 6,483 sq ft in 1966 to 10,215 sq ft in 1970. Their capital intensity decreased partly through the use of standardised shopfittings and construction methods and partly because proportionately less space was devoted to product ranges with required capital-intensive refrigeration. Over the decade, the depreciation data suggest that the amount of capital invested per square foot of sales area fell

inputs roughly in parallel, is here assumed to be equal to 1.

from around £30 to less than £15 per sq ft. In larger stores self-service was not, therefore, a more capital intensive form of distribution than counter service, because the latter had themselves become highly capital intensive and because by the late 1960s new supermarkets were becoming more efficient in their use of capital.

The picture with regard to labour costs is complex. Over the course of the 1960s wages as a percentage of sales remained at between 7 and 8 per cent. This consistency, however, masks important changes in working practices in self-service stores, for example an increase in the use of - typically female - part-time workers whose hours could be scheduled to match customer flows and a 'flatter' management structure. These cost-reducing trends were, however, offset by wage inflation, reduced working hours for full-time staff, and strong concerns about the dilution of the 'quality' of the work force - factors which applied to all stores. Thus while self-service stores' wage costs remained stable, those of counter service stores had increased, by 1970, to over ten per cent of sales.

Together, these factors suggest that self-service was as much a marketing innovation as a 'technological' one. While figure 1 confirms that self-service stores generated significantly higher sales than counter service shops and table 1 demonstrates that Sainsbury's was amongst the industry's most successful exponents of the new shopping methods, table 2 implies that this success was not the result of exceptional investment in either new machinery or novel working patterns. Rather, it is suggested, Sainsbury's success was based on factors such as store design, layout, better-trained staff and product assortment, which together led to a higher footfall and more purchases per visit. This conclusion is supported by the superiority of Sainsbury's sales per square foot, per checkout and per customer.

The value of the records of sales by departments given in the *Financial Reviews*, the statistical department's year-end working papers and the ring binders of individual product sales make it possible to 'unpack' aspects of these marketing changes. Over the period covered by this study, the product range increased from less than 1,000 products in 1950 to around 4,000 product lines in 1970. Proportionately there was a shift away from meat and dairy produce – Sainsbury's traditional strengths – towards groceries and other non-perishables such as non-foods, beers, wines and spirits. These increased from 20% of sales in 1960 to nearly 40% by 1970. The growth in importance of these products also helps to explain the declining rate of Sainsbury's capital investment because they did not require refrigeration. But perishable products continued to form an important part of Sainsbury's trade, helping to explain the company's high sales per sq ft, because these products were relatively expensive per item. Comparison with the co-operatives' pattern of trade, which was heavily biased towards packaged groceries at the expense of fresh food highlights the difference between each organisation's style of trade.[20] Another source confirms this contrast: comparing the store layout diagrams for individual branch openings issued by different supermarket operators to help their customers find their way around new stores demonstrates that Sainsbury's devoted a much greater proportion of its sales space to fresh products – especially fresh and cooked meats and dairy produce – than either the co-operatives or other multiple supermarket companies, and less to packaged groceries and cooked meats. Over time we also see at Sainsbury's a greater increase in space devoted to 'new' departments such as greengrocery, bakery, off-licence and frozen foods, which were departments which carried higher profit margins than the branded groceries which formed the bulk of competitors' trade. On average, these products contributed more to profits than to sales, thus 'earning' their increased sales space.

In other words, Sainsbury's style of trading, which relied on higher levels of investment in labour and capital-intensive shopfittings, particularly refrigeration, although contrary to received orthodoxy about the chief benefit of supermarket trading being its capacity to substitute 'low-tech' capital (eg simple shelving units, shopping trolleys and checkouts) for labour, was perfectly rational in economise on the light of the company's reputation for high-quality fresh foods. Indeed, one of its most notable product innovations, the collaboration with poultry farmers and processors to mass-produce and market frozen 'broiler' chickens was a spectacular example of the company's capacity to build sales by 'de-seasonalising' a product for which sales had hitherto been almost exclusively restricted to Christmas and Easter, even though this also meant increasing the use of expensive refrigeration plant throughout the distribution chain[21]. As with the company's later role in pioneering the self-service sale of beers, wines and spirits – another product group for which it created a year-round market from a highly seasonal one - Sainsbury's strategy was to expand the concept of

[20] The 'typical' co-operative store used to illustrate the Co-operative Union Trade Guide *Supermarkets* (Co-operative Union, 1964) p93, for example, assumed 38% grocery sales, 15% provisions and only 10% meat. See 'The Operation of a Self-service Store' L A Cherriman & R Wilson, Co-operative Union 1962 p16.

[21] 'The Chicken, the Factory Farm and the Supermarket: the Industrialization of Poultry Farming in Britain and the United States, 1950-1980' Andrew Godley and Bridget Williams, in Roger Horowitz and Warren Belasco eds, *Food Chains,* University of Pennsylvania Press, 2008,

supermarket trading – high turnover at competitive prices – into product areas not generally associated with these methods.

These comparisons have concentrated on the supply side of the equation. But in retailing the 'primacy of the customer' is paramount. The significance of Sainsbury's bias towards high value-added lines like perishable goods and wines was that it enabled the company to appeal to a wider customer base than was typically the case. According to the statistical department's notes for the 1971 year end presentation, 44% of its shoppers at that date were AB or C1s, as against 35% of the population as a whole. There was a slight bias towards the 35-54 age group and away from shoppers under 25. Studies published by the European Productivity Agency and the British Market Research Bureau[22] found that self-service generally appealed chiefly to younger working-class housewives. As we would expect from this customer profile, Sainsbury's customers typically spent more than those who shopped elsewhere. Sainsbury's statistical department calculated the average expenditure per customer visit in the company's supermarkets in 1969 to be £1.10s (£1.50) compared with a national average of 17/- (85p).

This overview suggests that the early development of self-service food retailing bore the hallmarks of a classic economic 'revolution' in terms of its capacity to generate sustained economic growth in a stagnant sector through the use of factory-style forms of organisation, particularly in relation to labour. It also demonstrates that Sainsbury's had a distinctive style of trading which was highly successful both in its use of retail space and in its appeal to high-spending customers. Moreover, by focusing on a wide range of sales figures as the central measure of performance, it allows us to form a deepening picture of the complexity of Sainsbury's style of trade and of its ascendancy as the most successful supermarket company of the 1980s and early 1990s.

The impact of the organisational changes and investment of the 1960s was only just beginning to be felt by the end of the period covered by this study. What we see in 1970 is a business poised on the point of take-off. But these findings have wider implications. The experimentation carried out by British food retailers during the postwar period produced a variety of formats, some of which owed more than others to US or French influences. But it

[22] *The Consumer's Food-buying Habits*, European Productivity Agency, OEEC, Paris, 1958; *Shopping in Suburbia*, British Market Research Bureau, London, 1961

was the Sainsbury's format – centred around the quality of its fresh food offering, and on customer service levels which required significantly higher levels of staffing than other models – which was the most successful and hence became the norm for British supermarkets during the 1980s. It was the model which competitors emulated and upon which in recent years Tesco, in particular, has expanded. The rich vein of sales data contained in the Sainsbury Archive therefore holds the clue not just to that company's success, but to the progress of one of Britain's most dynamic sectors over the course of the late twentieth and early twenty-first centuries.

Figure 1: Average Weekly Sales 1947-1964 £=1947