FRC Food Policy Discussion Paper

The secrets of supermarketing: A model balanced on a knife-edge

Lisa Jack

December 2021

Series Editor:
Rosalind Sharpe

Food Research Collaboration

an initiative of

Centre for Food Policy

Shaping an effective food system

UNIVERSITY OF PORTSMOUTH

CITY UNIVERSITY OF LONDON EST 1894

Contents

Glossary

Bottom Line	The 'bottom line' refers to a company's net profit (i.e., income after all expenses, overheads, tax have been deducted) for a year, which is presented at the bottom of the income statement (also known as the 'profit and loss account'). It is the profit the company has made when all expenses including interest and taxation have been deducted from the income of the company.
Bundles of conveniences	In this context, conveniences for the customer are time savings, 'one-stop shopping', parking, online shopping, and all the other things that make grocery shopping more convenient. Supermarkets try to put as many of these together to attract customers, hence 'bundle of conveniences'.
Category Management	A systematic, disciplined approach to managing a product category as a strategic business unit. Instead of managing the products bought and sold in the supermarket through a team or committee, one manager becomes responsible for a category (say, fresh fruit or toothpastes) and each category manager is responsible for maximising profits in the category. This was introduced throughout the 1990s, and enabled supermarkets to achieve control by making suppliers compete with each other in the category rather than suppliers being able to tell supermarkets what they would supply and when.
Commercial income	This is also called 'suppliers' payments'. Supermarkets are able to ask for payments from suppliers for the work that the supermarket does in marketing and managing the sale and promotion of the suppliers' goods to the public. As well as marketing fees, there can be bonuses for selling large quantities; penalties for deliveries not made on time and to specification; and volume discounts. This is a significant source of income for supermarkets but has only been included as a separate item in the financial statements and notes of supermarkets since 2014 in the UK.
Costs	Costs are all the expenditures that must be made in order to run a business. One of the roles of management is to identify and reduce unnecessary amounts spent (costs) in a business.
Direct costs	Direct costs are the expenses that a business incurs directly to make a product or service, or buy a wholesale product for resale. This does not include general costs or overheads, which are termed 'indirect costs' or 'fixed costs'.
Discount	A deduction from the usual price of something.

Economy of scale	The concept of an 'economy of scale' is that the cost per unit of output decreases as scale of production increases. In other words, the greater the scale of a business and the more that it does, the less each individual item costs the business to produce.
Finance	Simply, the money business people require to start, run or expand a business.
Fixed costs	The overheads of the business. Typically, these are amounts that do not vary day-to-day – for example, managers' salaries, rents, insurance premiums. However, the classification of these depends on the type of business.
Grocery Supply Code of Practice	The UK Grocery Supply Code of Practice (the Code) is a voluntary code that governs certain conduct by grocery retailers and wholesalers in their dealings with suppliers.
Indirect costs	The general costs or overheads of running a business or organisation, not directly related to the manufacture of goods or sale of services. Indirect costs are spread over several activities. The term is sometimes used interchangeably with fixed costs but allows for more fluidity in the definition of costs.
Inflation	Inflation measures how much more expensive a set of goods and services has become over a certain period, usually a year.
Just-in-Time (JIT)	An inventory system in which a company receives goods as close as possible to when they are actually needed.
Labour productivity	A measure of the efficiency of a workforce, including output per worker, per job and per hour.
Loss management	Identifying and preventing events causing potential value losses to revenue, assets or services during a company's active business practice.
Losses	Where expenses exceed income in a particular area. For example, when goods cannot be sold at full price because they are damaged.
Low margin	See Margins. A small difference between the price and the cost of an item, meaning that the profit per item is small.
Margins	The difference between sales income and expenses. Also, 'profit margins'. In other words, the difference between making a profit and making a loss. Usually expressed in percentages.
Marginal customers or marginal sales	Where one customer or one more sale is the difference between making a profit or a loss. Therefore, supermarkets strive to bring in new customers and to make sure that existing customers do most or all of their shopping with them. At the very least, you want each customer to buy one premium or one extra item to ensure that tight profit margins are not eroded.

Middle-Aisle effect	Where the middle aisle of the supermarket is used to display a changing array of special offers on general merchandise and some food items. Common in the 'discounters' such as Lidl and Aldi (see theatre below).
Net margin	The percentage of profit from sales after all expenses including tax and interest have been deducted. Also called 'the bottom line'.
Overhead	An ongoing cost of running a business such as rent or management salaries, that still has to be paid even if no sales are made.
Rebate	A partial refund – here, often given by the supplier to the supermarket due to some fault with the delivery of goods. See also Volume based rebates below.
Shrinkage	The amount lost when stock is stolen or destroyed.
SKU	Stock Keeping Unit – for example, a named brand 1Kg bag of flour.
Supermarketing	A term used by writers to signify that supermarkets are not grocers but market places offering skill in marketing.
Theatre in supermarkets	See this 2021 online message from Aldi about their 'middle-aisle', or any Christmas advert for any supermarket: "Welcome to a place like no other. A world of wonder. A destination full of mystery, magic…and unmissable bargains…Yes, you may come in for bread, but who knows what amazing possibilities you'll leave with from the famous Aisle of Aldi – a special place for Special Buys".
Volume based rebates	Essentially, when a supplier sells goods at a lower cost to the retailer because they are buying a large volume of items.
Volume discount	A deduction given by the supplier when the supermarket buys a large volume of their goods.

Introduction

Put simply, the concept of an economy of scale is that the cost per unit of output decreases as scale of production increases. The obvious assumption, looking at the reach of supermarkets, is that they offer cheap food due to the economies of scale that they can achieve. However, if we look at research that has been carried out in the last 60 years, it is not entirely clear what these economies of scale are, and how they should be quantified.

Supermarkets were designed, since their inception around 1930 in the USA, to offer a variety of cheap food and a one-stop shop. Consumers have been delighted with this proposition ever since, and have become habituated to a readily available, wide choice of food and drink. However, providing a one-stop shop and wide choice incurs *expenses*, rather than savings, especially when chains of supermarkets are established. So how to keep the prices down?

This has always been a low-margin, high-volume business. In other words, the business model has always been to keep prices low by making only a small profit on each item, but to sell large enough volumes of goods for this to add up to a large profit. But protecting very small profit margins allows the supermarkets few options if they wish to keep consumer prices low when costs of food and overheads increase. So while *profits* might seem high when measured in millions of pounds, *profitability measured by the profit margin* is low, because the net profit of a supermarket, when all costs including tax and interest are deducted from sales income, is only a small percentage of its sales income. By the 1940s, managers in the USA had worked out how to run a supermarket with very low but consistent percentages of net profit in relation to income from sales. With a few modifications over the decades, the principles remain the same as they were at the start. Furthermore, net profit margins averaged 2-2.5% in 1950s America[1]. In 2020 Britain, net profits of the four largest supermarkets were between 0.75-2%. As stated, this may represent several hundred millions of pounds in value to a supermarket, but it is still a low percentage return when millions can easily be wiped out by slightly increased costs. An example of this is found in the 2021 results of supermarkets. Although their sales of food increased during the Covid-19 restrictions in place in 2020-21, the additional costs incurred to manage staff, supplies and infrastructure in a safe way incurred equally high costs. Net profits remained very similar to or lower[2] than previous years, after a short but controversial spike in 2020[3].

The purpose of this report is to look at what makes a supermarket viable, and to raise the question of whether, in the UK, this is due to economies of scale or other means. It also raises the question of whether efforts to achieve economies of scale have unintended or even unacceptable consequences for food systems as a whole. The aim here is to be deliberately neutral on the desirability or otherwise of the structure of our current food system. Instead, the focus is to understand **the pivotal point on which the system is finely balanced – the protection of very narrow profit margins**. An alternative food system could find that it faced similar issues when scaling up to provide a long-term, consistent supply of food for an urban population. The goal to provide nutritious, affordable food for everyone requires infrastructure, which in turn adds overhead costs that make it difficult to keep prices low while still meeting goals of good quality, full traceability from farm to fork, and fair wages.

How supermarkets make profits

'From its inception, the supermarket profit was predicated on volume operation: Low price policies, display techniques, advertising, and promotion'[4]. These words, written in 1961 by Frank Charvat, an early analyst of the supermarkets' model, make the point that to turn a profit, you need a large number of customers and a wide assortment of goods. 'Simply, the policy is to attract the consumer and attractively display a variety of fast-turning merchandise that can be purchased as a result of planned purchases as well as impulse buying'[5]. Implicit in these observations is that a supermarket has high overheads to achieve a large number of sales, but that to keep prices low, the margin of profit (or profitability) will be necessarily low as well.

A very narrow profit margin can be enhanced by attracting one additional customer. This is known as a 'marginal' customer because assuming all overheads are covered, the profit from the additional customer goes straight to the profits recorded in the bottom line. Alternatively, the supermarket needs to keep enticing established customers to spend an additional ('marginal') pound (same result). However, such tight margins also mean that you cannot afford to lose a customer, or carry a range that has very slow sales. The problem is that the person who makes those slow but regular purchases may take their whole basket elsewhere or online[6]. It took Walmart several attempts to find out how they could best rationalise their vast number of items for sale by taking out the ones where the costs of storage were more than the income they made while still retaining their customers[7]. The assumption in the past that one customer will favour one supermarket and only drive so far for cheap food has gradually eroded as fuel has got cheaper and online sales have become normalised – many people have shopped at most of the supermarkets at different times in the last few years (pre-Covid19). They may be a regular customer at one, but an occasional customer at others and change allegiance over time.

One of the problems with assessing economies of scale in a supermarket is tied in closely with this scenario of offering low prices, variety and novelty to retain and attract customers. Providing displays, layouts, locations, advertising and promotion, and more recently multiple store formats (express stores, motorway outlets and hypermarkets alongside regular stores), increases expenses[8]. The supermarket idea moved rapidly in the USA (and in the UK from the 1960s) from individual self-service stores to chains, and to make the chain concept work, the stores had to increase costs.

The question then becomes: *'what is a supermarket selling?'* As noted above, the concept of an economy of scale is that the cost per unit of output decreases as scale of production increases. A retailer, though, is not manufacturing items or 'units of output'. The question also needs to be expanded, and this is an aspect many people forget. The question should be: *'what is a supermarket selling and to whom?'*

To their *customers* – the consumers of food and general merchandise – they are selling what has been called 'a bundle of conveniences'[9]. This means that consumers acquire not only food but time-savings, easy parking, ready availability of their preferred items and other offerings that make shopping more convenient. Furthermore, and this is especially true of higher-end supermarkets and those discounters with a 'middle aisle', they are creating an entertaining trip out, a diversion where people can enjoy bargains, a pleasant ambience and excitement in finding new food, drink and possibly useful household items. For some researchers, the art of 'supermarketing' is closely linked with providing theatrical experiences in which the consumers themselves are performers10.

To their *suppliers*, though, they are selling *space in a market* and *access to their superior marketing skills and budgets*. Over time this led to supermarkets charging suppliers for the supermarketing that they offer, and this 'commercial income', as it is termed, contributes significantly to the net profit of many (though not all) retailers.

This set of ideas – **marginal customers, bundles of conveniences and commercial income** – is key to the supermarkets' success, and thus highly relevant to efforts to make food systems more 'sustainable' – meaning fairer, healthier and less environmentally damaging. To understand why these ideas are important, it is helpful to look at recent research in this area. The argument here is that supermarkets are not designed to succeed on the basis of economies of scale but on the basis of generating as many sales as possible. To achieve any profit at all they need volume sales and, more importantly, cost control. As we will see, this is mainly exercised through the bargaining power that supermarkets have gained over time through their size and dominance over other types of food retail such as smaller shops and market places. **It is the mechanisms for cost control and the steps they need to take to protect their narrow margins that cause many of the concerns about the supermarkets' operations.**

Looking for economies of scale

Around 1960, supermarkets were becoming prevalent in the UK and clearly following in the footsteps of their USA model. McClelland, writing in 1962, set out to analyse the potential effects of size on the profitability of supermarkets. If supermarkets became larger – greater than 100,000 square feet in 1962 – would they achieve economies of scale? He concludes that this would not be through 'labour productivity' – employing fewer staff per square foot pays off initially but after a certain size, the overheads of running a large building and the pilferage that occurs due to lack of supervision detract from what could be a labour productivity gain. Instead, he argues that the benchmark for successful supermarkets is *'sales density' – the number of sales per square foot*. By offering a large assortment of goods, a pathway through the store which ensures that the customer passes most of those goods, and a place to park a car to take away the bulk purchases, a large floor space would lead to larger sales per visitor. Recent figures show that the still popular sales density benchmark has the discounter Aldi as the leading UK multiple retailer: its floor space is smaller and opening hours shorter, but it has more sales per square foot, possibly due to its bargains for offer in household goods and one-off food items that encourage impulse shopping, the so-called 'middle aisle' effect. To increase sales density, a store can also open for longer, which brings us to the 363-day-per-year, 24-hour-a-day supermarket (or 365 days for smaller convenience formats).

Aldi was also the top performing supermarket in consultancy Insider Trend's retail league table for the UK in 2018, where it placed sixth (with the top five all high tech or luxury retailers)[11]. They attribute Aldi's sales density of £1,170 per square foot to a mix of quality and low-value items, and smaller store size. Tesco appears at number eight (£985 per square foot) and Sainsbury at number nine (£940 per square foot). This suggests that although Barros[12] finds that the bigger supermarket chains tend to be profitable because of their large share of the market, numerous outlets and favourable locations, their vast floor space might not function as an economy of scale. In other words, they are not as profitable as one might expect given their size.

But sales density is not what one would call an economy of scale either, more a way of exploiting time and space to fulfil the imperative of low-margin, high-volume sales. Operating a store with high sales density involves *more* investment and costs *more* to run. Saving on labour in this context is not a true economy of scale either – it is simply a reduction in costs and also a forgoing of income due to the inevitable 'shrinkage' that accompanies a low staff presence, usually couched in terms of the 'cost of doing business'. There is a fine line here between an economy of scale and simply not employing enough people. This is the real skill and balance of running a profitable supermarket – putting up with the inevitable costs of doing business whilst cutting expenses wherever possible.

'The benchmark for successful supermarkets is 'sales density' ... but achieving it adds costs'

Later writers have identified more tangible candidates as supermarket economies of scale. For Arndt and Olsen13, there are three areas that allow supermarkets to avoid cost by exploiting the scale of the organisation. These are, first, the use of specialised equipment which can be replicated across stores and thus bought in quantity at a better negotiated rate. Second, there is the use of specialised labour. From the mid-1990s onwards, supermarkets moved from using more centralised forms of management covering all products stocked in a supermarket to 'category management', where buying and management decisions were devolved into individual areas such as meat, bakery, salads and so on. Supermarket buyers became specialists in creating competition between suppliers in a particular category, creating criteria on which commercial income could be solicited and seeking out new products and suppliers. Targets were set to improve profit in each category, and for the business as a whole. The third area is the use of specialised forms organisation and administration. A recent example of this is the growing use of centralised algorithms to manage inventory and mark-downs of food close to its 'best-before' date. By investing in information technology (IT) and handheld devices or phone apps for staff, small savings can be made and forecasting improved through standardised processes that identify food that will need to be taken off the shelf within a few days. This gives the opportunity to reduce (mark-down) the price of the items to encourage a sale before food has to be discarded, a difficult task when a large format store may carry several thousands of individual items. Previously, this would be a decision for store management, but this has been shown to lead to losses and inaccurate forecasting. Just-in-time ordering, loss-prevention management and waste management are other examples of where algorithms can be used. However, lack of coherence in IT and lack of cross-functional teams detract from the potential for economies of scale, and increase cost. Supermarkets such as Aldi and Lidl (known as the 'Discounters' because they aim to sell food more cheaply than conventional supermarkets) have also shown that multi-tasking for staff is more efficient and possibly gives more job satisfaction.

A more recent study, by Lu and Reardon[14], has fine-tuned this analysis and found that three more precise economies of scale are available through, first, the cost-efficient procurement and handling of perishable goods; second, the reduction in costs of storage; and third, bargaining power. Supermarkets originally were a place for 'dry goods', quickly supplemented by non-food grocery such as cleaning products and similar consumables, and a range that included more expensive branded, processed foods as well as dry staples (flour and rice, for example). Self-service meat, fish and greengrocery were added substantially in the 1980s and 1990s. Lu and Reardon[15] present a model showing how changes in technology, consumer income and customer preferences have shaped retailing from traditional shops through to supermarkets and e-commerce. Fresh produce, though, is where many of the fragilities of the system become exposed. Jack et al.[16] and Bowman et al.[17] show just how difficult it is for supermarkets to control fresh produce chains and keep prices low without resorting to coercion. The UK food system also relies on a just-in-time system for the storage of goods. Suppliers are required to hold fresh produce for as long as possible in their own storage or to manage harvest to meet the orders as and when they come in. Manufacturers have to invest in storage or produce smaller batches to meet the demands of just-in-time. This transfers the cost to the supplier. The supermarket then has the costs only of collecting the goods in a now reduced-size distribution centre and allocating them to stores. A recent paper shows that it is the rigidity of this system, which is tightly controlled to ensure a round the clock supply, that has been disrupted by Covid 19 in 2019-21 and by the exit from the European Union at the end of 2020[18].

Dry goods and general merchandise products and chains can be developed through partnerships with suppliers that, ideally, control prices by mutual agreement[19,20], but fresh produce quality and prices are more volatile and less controllable due to weather, disease and other constraints. The purchase of fresh produce relies far more on bargaining arrangements in which buyers set low prices which suppliers feel bound to accept when fresh food perishes quickly[21,22,23].

A question of bargaining power

In the end, it seems that the only advantage that supermarkets gain in relation to their size is bargaining power: the ability to get a lower price and charge commercial income in return for offering larger sales volumes to suppliers. In 1962, McClelland, a political economist, saw this as being of enormous benefit to consumers. Up to then, retail price maintenance legislation in the UK had allowed manufacturers to set and maintain prices. Similarly, price protections were in place for agriculture. However, by the early 1960s, the government had removed these mechanisms, partly due to pressure exerted by owners of emergent supermarket chains, such as Jack Cohen at Tesco, and partly due to changes in policy to make farming more business-like[24]. For McClelland, the manufacturers and processors up to then were viewed as having 'overweening' power that kept prices for consumers high. From this point, supermarkets gradually grew in size and became more and more able to exert themselves (i.e., they gained bargaining power) as they became the main places frequented by shoppers. Manufacturers and producers now found themselves having to sell their goods at lower prices than before to supermarkets in order to reach consumers, who would in turn benefit by paying less for food and drink.

The public are very used now to the discourse that supermarkets are the ones with 'overweening' power that needs to be kept under control, for example by a Grocery Supply Code of Practice. It needs to be understood that the way in which supermarkets acquired and deployed bargaining power evolved over several decades, and has had unintended consequences. From the arguments reviewed here, it appears that the only economy of scale that has an impact on profits for supermarkets is bargaining power and that the exercise of this power has meant that other potential economies of scale could be less attended to, allowing costs associated with managing stock, property, transport and advertising to build up. These, in turn, need to be offset by income or savings gained from suppliers (because it would be unacceptable to consumers to raise prices). The problem is that this is not a bottomless pot and **the system, although finely balanced and expertly run at the supermarket end, risks unbalancing the rest of the food system.**

Unpacking this argument requires an examination of the nature of the power wielded by supermarkets, and the emergence of commercial income as an important source of profit. Following that, an analysis is needed of how costs build up and create waste, and how savings can be made.

In 1996, Ogbonna and Wilkinson published an important analysis of the nature of power in supermarkets at that point, which is long after manufacturers lost the privileges of retail price maintenance mechanisms but just before the establishment of category management as a norm in supermarket buying. Ogbonna and Wilkinson[25] identify the type of power in play as 'countervailing', meaning that both parties have power but that one is able to neutralise the power of the other. They also established that there were several different types of power relationship in play, depending on whether the party other than the supermarket is a major brand owner (Nestlé or Unilever, for example); a secondary brand owner (a manufacturer producing 'own brand' goods that have the supermarket name on them); or a smaller player such as a niche or local producer. With the large brand owners, the power that supermarkets have is that they can buy 20% of what the manufacturer can produce so that the manufacturer is reliant on their business. However, those same goods might be only 2% of the stock that the supermarket holds – they are, in theory, not reliant on the goods and could choose not to sell them. The supermarket is more important to the manufacturer than vice-versa. On the other hand, shoppers expect the brands to be available in most supermarkets. The power of the brand owners is that absence of their brand may mean that shoppers take their basket elsewhere and so damage the narrow profits of the supermarket[26].

Overall, though, the access and expectations of shoppers – to buy branded goods in quantity and cheaply from supermarkets – allows supermarkets to negotiate more favourable terms that go beyond bulk discounts, as we see below. With other suppliers, the exercise of power is more overt and often involves the supermarkets directing the operations of the supplier in terms of how goods are to be packaged and delivered, or the ingredients to be used, for example. Jack et al.[27] note that having 'preferred suppliers' – that is, businesses that the supermarket is most likely to buy from – is another form of cost control, because these suppliers are most likely to deliver the goods on time, to specification and in full, at a lower cost. In the 1990s, there was a growth of 'super middlemen'[28] who could ensure this high level of service and consolidate a number of growers and meat producers into a network that could provide a near all-year-round supply that kept supermarket shelves fully stocked round the clock[29].

The situation now is that highly consolidated supermarkets work primarily with highly consolidated manufacturers, processors, distributors and grower-packers. Logistics, equipment and expertise are streamlined – allegedly. Uneconomic locations are being closed. Price wars between supermarkets mean that fewer items bring in higher marginal profits from impulse or excess buying. To bring in more customers, though, they need to keep discounting, offering promotions or 'Every Day Low Prices'. **This really only leaves three ways for supermarkets to protect their very narrow margins: by extracting benefits and income from suppliers; using technology to reduce overhead costs including waste and losses; and by reducing the cost of staff.**

The importance of 'commercial income'

Charvat articulates early on that what supermarkets offer suppliers is 'supermarketing', an ability to sell their goods at volume, and that suppliers should be asked to pay for this additional benefit[30]. Therefore, astute buyers (the supermarket employees whose role is to buy from suppliers) would negotiate not only discounts and favourable terms (practices which led very swiftly to anti-competition legislation in the USA in the form of the 1936 Robinson-Patman Act to prevent aggressive undercutting and coercion) but also fees for promotion and 'placing'. (The latter refers to where a product would be positioned on the supermarket shelves, with certain positions known to prompt higher sales because of prominence or visibility. There is some debate over whether or not placing fees are still used, however.) The 'commercial income' thus gained made a modest but useful contribution to net profit because income gained in such a way was a bonus, and entailed little overhead beyond the time, travel and effort put into buyer negotiations. In McClelland's 1962 review, supplier payments are mentioned in passing, and various other academic papers comment briefly on the practice as being part of everyday business in supermarkets, one which suppliers might complain about but which delivered even lower prices for consumers[31].

In 2014, commercial or 'supplier' income suddenly became news in the UK. Tesco had to admit to a £250 million shortfall in its accounts. Effectively, it had included income from supplier payments in its financial statements before that income had been earned, but a downturn in sales meant the income could not actually be charged and was never received. The company executives involved have since been cleared of fraud, but Tesco was censured by the Grocery Code Adjudicator for engaging in coercive practices to obtain income in advance of entitlement to it[32]. It was at this point in the UK that it could be seen that commercial income had gone beyond reasonable bulk discount and marketing fees in the industry. Because this is very much under the radar of most people, further explanation is needed.

At the time of the scandal, although commercial income was disclosed in accounting statements in the USA, there was no such convention or requirement in the UK. The 2013 annual report for Tesco plc does not mention it and the 2014 annual audit committee report states briefly that:

> *The Committee notes that commercial income was an area of focus for the external auditors based on their assessment of gross risks. It is the Committee's view that whilst commercial income is a significant income for the Group and involves an element of judgement, management operates an appropriate control environment which minimises risks in this area. As a result, the Committee does not consider that this is a significant issue for disclosure in its report[33].*

In accounting terms, the amounts involved were judged to be 'immaterial', or negligible in terms of making a judgement or decision about the performance of the company. Relative to turnover, commercial income is small: the £250 million shortfall in income is less than 0.1% of Tesco annual turnover of c. £66 billion. However, as stated above, this is income that goes 'straight to the bottom line'. In terms of net profit, commercial income is highly 'material'. As a BBC article explained in 2014 in response to the scandal at Tesco:

> *British retailers don't publish how much money they receive from commercial income but the declared income from a number of big American supermarkets gives a clue. According to Fitch, the credit*

> *rating agency, the payments are the equivalent to 8% of the cost of goods sold for the retailers, equal to virtually all their profit [author's emphasis][34].*

Since 2014, UK supermarkets have disclosed their commercial income and made changes in practices to comply more closely with the UK Grocery Code of Practice. Morrison's joined a project with the Financial Reporting Council (FRC), the UK regulator, to develop best practice in this area[35]. Morrison's has been quite open since 2014 about its income from suppliers, and although it is not presented next to profit outcomes, these are easy to find and compare. Before 2014, the amounts were included in cost of sales and inventory, and no breakdown was given. For the 12 months ending 31 January 2021, it disclosed commercial income of £88 million for marketing and advertising fees charged to suppliers, and commercial income of £152 million from volume-based rebates, giving £240 million as the total commercial income for the year ending 31 January 2021. Its net profit after tax was £143 million[36].

All the other major supermarkets have followed suit in making disclosures. Sainsbury plc has 'supplier arrangements' bringing in a total of £451 million in the year ending 7 March 2020, which is greater than its stated profit after tax of £437 million[37].

The Tesco 2015 annual report contained several statements in apology:

> *In addition, or perhaps as a result of this lack of growth, we had significant internal challenges. The commercial income issue identified in September was a significant blow and has resulted in a [Serious Fraud Office] regulatory inquiry. We have been cooperating fully with the inquiry and as we work on a programme of change across Tesco, we must ensure this never happens again. New management are transforming our commercial model to create long-term, mutually beneficial partnerships, with a greater focus on cost prices than on the commercial income we receive back from suppliers for promoting their products[38].*

Tesco plc now discloses the nature of the commercial income received, the processes for its collection and the amounts outstanding at the year-end (which were the subject of the 'accelerated recognition of commercial income and delayed accrual of costs' which disguised the original shortfall). It does not disclose the full amount received over the year. However, the amounts due to them on the balance sheet date of 23 February 2020 amount to £587 million, which means that the suppliers' payments still to be collected account for one third of its profits after tax of £1,587 million. This suggests that these profits also include the undisclosed amount that suppliers paid in respect of commercial income during the year ending 23 February 2021, implying that Tesco may still be reliant on commercial income to attain profitability. This is unsurprising, as there are few producers or manufacturers that can afford to cut cost prices any further under current practices, and still provide the service and new product development (NPD) required[39]. However, this carries the caveat that changes in practices, around NPD for example, might lead to further savings throughout the supply chain and not increase the consumer price of food.

In 2014, Duncan Swift of Moore Smalley, an accounting practice with a specialism in the food industry, was quoted as saying:

> *'Over the years, it's become a very lucrative source of additional profits for the supermarkets. You'd think the amount of price reductions that a supermarket can get through rebates is going to be nothing like what we as consumers spend at the tills and relatively you're right. But in profit terms, at the margin, it's far more attractive for a supermarket to get ever larger supplier rebates than it is to encourage the likes of you and I to spend more money at the till.[40]'*

The practices brought into the light by the Tesco commercial income debacle showed that buyers had essentially got out of hand. An article in *The Grocer*[41] provided a table of around 30 payments that buyers were imposing on suppliers[42]. For example, rather than a rebate based on hitting a sales target and paid after the target was achieved, there were instances of rebates being solicited in advance of a promotion taking place and before the targets were achieved. The article quotes:

> *Crucially, a rebate system relies on the retailer receiving accurate internal information from people – e.g. buyers – who may be incentivised through bonus systems to be overly optimistic in what they are promising to deliver. As one supplier puts it: 'The danger is you get a culture where buyers do whatever is necessary to hit their bonus'[43].*

With declining markets after the financial crash, it seems that the 'ruses'[44] in place had grown. In 2015, Tesco plc included a full-page explanation of commercial income in its Annual Report[45] and stated that it was simplifying its approach. Up to 2014, there had been 20 different mechanisms that the firm had used to extract commercial income. It now discloses that:

> *Consistent with standard industry practice, the Group has agreements with suppliers whereby volume-related allowances [i.e. volume-based rebates], promotional and marketing allowances and various other fees and discounts are received in connection with the purchase of goods for resale from those suppliers[46].*

As explained in *The Grocer*, supermarkets used to require suppliers to pay for a range of items from a list of things such as set discounts and listing fees. These charges were subject to conditions and there was a risk of abuse in demanding which items the supplier had to pay for, opening the supermarkets to a risk of breaching the Grocery Supply Code of Practice. Now, supermarkets charge suppliers an amount based on a set calculation which looks at the quantities of goods involved (in order to levy a volume based discount) and the retailers' desired profit margin. The supermarkets make the same level of profit but are less at risk of breaching the code[47].

The problem, going back to Charvat[48], is that even having a system for commercial income builds in expense, although that income probably does outweigh the expenses incurred in monitoring and evaluation, staff time in reconciling accounts, invoicing and collecting the income, and IT maintenance. The discounters' claim not to get involved in commercial income (although there is evidence that they do impose penalties, for example on late deliveries[49]), preferring to negotiate a low price that covers service as well as goods, as shown in this example:

> *To reduce the cost of goods sold, [the discounter] negotiates net-net buying prices with suppliers. Under that arrangement, the chain agrees not to charge suppliers for such things as bonuses, rebates, and funding [marketing fees]. In return, suppliers cover other costs on their side, including packaging and logistics[50].*

This tends to be more profitable for the suppliers, because they do not have variable commercial income demands they have not budgeted for. The discounters benefit from lower operating costs and make a profit. However, it is the build-up of promotion, advertising and store decoration costs that poses a risk to its profitability as a supermarket chain grows. An analysis of the Canadian discount chain No Frills showed that:

> *As discounters bolster their presentations to lure more customers, they have to focus even more on cost controls. 'The cost advantage is driven by the simplicity of the offering,' says Tim McGuire, a director at consultancy McKinsey & Co. in Toronto. 'The No. 1 risk is that they damage the cost equation, which is key to their success … And there is a risk that if they make the stores too nice, they start to feel expensive'[51].*

In fact, No Frills follows the textbook 'how to build a food retailer with low margins' model that has been in place since the 1930s. The principles have not changed. To achieve high volumes of sales, a supermarket incurs high 'overheads' in offering food in good condition with a variety of attractions.

What counts as an 'overhead'?

One of the surprises encountered when analysing financial statements of different food companies was the question of what is and what is not treated as an overhead. Basic accounting recognises two types of cost. Typically, the direct costs are the costs of providing the product or service. In manufacturing this is largely raw materials, labour to make an item and costs that are only incurred because the item is being made or the service provided. If the item is not made, then those costs are not incurred. Indirect costs – overheads – are costs such as management and administration staff salaries, property costs, depreciation of machinery and so on, which have to be paid regardless of whether products are being made or services provided on any particular day. There are some costs which need to be separated out: for example, electricity usage is direct but the standing charges are indirect. By identifying costs as direct/indirect, we can evaluate how effective the business is at managing its day-to-day operations (direct costs) and in managing the long-term infrastructure (indirect).

To understand how supermarkets account for their costs, the question is: are they selling products or a service? The direct costs of an independent grocer are the costs of buying, transporting and storing the products for sale and perhaps sales assistants. The indirect costs are rents, utility bills, management salary and so on, the cost of owning or renting a shop and maintaining the business. The supermarket, though, as shown, is not a grocer. It is in effect offering a marketplace which it manages: it provides a service. Therefore, the direct costs of a supermarket shown in the accounts are all the costs of providing the marketplace. As stated in the Sainsbury Annual Report 2020, its direct costs are:

> *all costs that are directly attributable [up] to the point of sale including warehouse, transportation costs and all the costs of operating retail outlets*[52].

In other words, *all the costs an independent grocer would class as overheads – indirect cost – are classed as direct costs by the supermarket.* The only indirect costs classed as such are under the heading 'administration costs', and relate to running the Head Office or property portfolio, for example. The logic is that without the marketplace in the form of stores, there would be no sales. This echoes what Arndt and Olsen say about the 'product' of a supermarket being a 'bundle of conveniences'. Every cost incurred to provide that bundle is then not an overhead[53] despite the understanding of most laypeople of what an overhead might be (the cost of running a warehouse for example).

Although the accounting logic might be correct, it has two serious consequences. First, it is impossible to work out from the publicly available financial statements what the supermarket pays for the goods that it sells. This supports the assumption made by consumers that supermarket profits come from the sale of food and drink at high prices to the public. As explained above, this is not the case, and supermarkets can only make a profit by selling non-food items and extracting commercial income from their suppliers. Second, the classification of what is and what is not a direct cost affects negotiations with suppliers because in nearly all cases what supermarkets will pay a supplier is negotiated on the basis of direct costs only. What follows is an attempt to explain why this is a major weakness in our food supply systems.

Supermarkets are constrained by the prices that consumers will pay or that their competitors are offering. Out of their income, they need to cover all the direct costs of running the stores. They use their bargaining power to negotiate low prices from suppliers, allowing them to mark up goods to cover these costs. Typically, they offer a price to the supplier that will cover the supplier's own direct costs. However – and this is a big qualification – **suppliers account for indirect costs differently.** All their infrastructure and management costs are shown as overheads on their accounts, not direct costs.

As shown in Jack et al.[54] and elsewhere, prices paid by supermarkets are negotiated on this 'marginal basis' (also referred to as 'marginal costing') – which means that a price is agreed that covers each party's direct costs. In short, this is the basis of the 'win-lose' negotiations that Hingley[55] and others describe as characterising the supermarket sector. Put crudely, by counting its overheads as costs, the supermarket 'wins', and achieves a price that covers its overheads, and the supplier 'loses', and has to cover its overhead costs in some other way, usually by juggling cash flow or having other sources of income. One grower-packer described marginal costing as *'the cancer of our industry'*[56].

Figure 1 illustrates the proportions of income and costs occurring in four supply chain entities. The proportions are taken from representative financial statements and industry analyses of cost structures and financial ratios, anonymised. The left hand side of each block represents costs and the right hand side represents income. Supermarkets have three sources of income on the right – the largest is from food but this income does not cover all the direct costs shown on the left. Income from other sales (general merchandise, fuel, banking, etc.) and from commercial income is needed to cover all the costs, including interest and tax shown as a very thin black line. Carefully looking at the foot of the diagram, we see that the net profit (in orange) is very narrow, and *smaller* than the proportion of commercial income from suppliers.

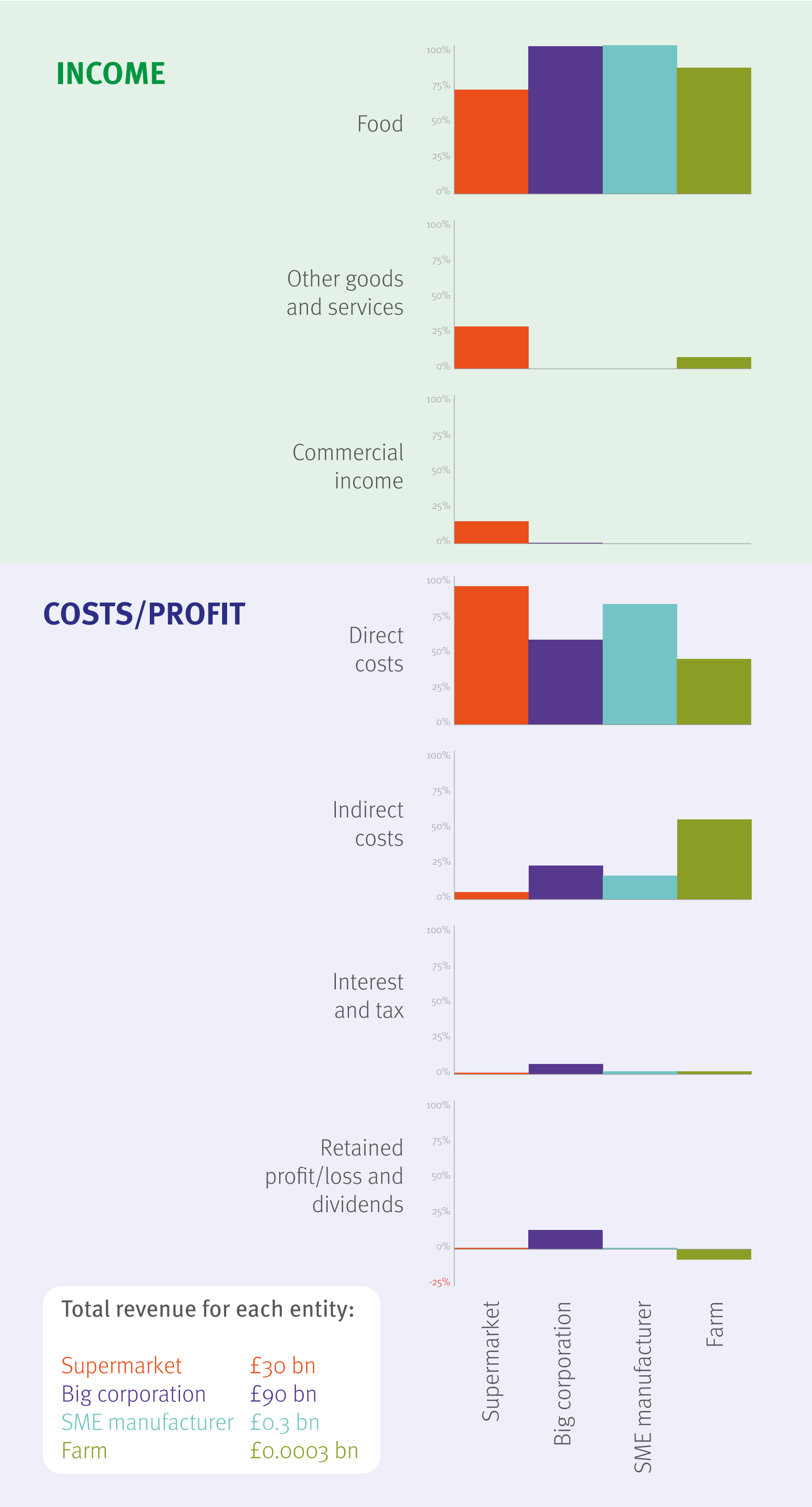
Big corporations selling brands and snack foods make the highest profits and consequently pay more for interest and taxation. They have only the income from food and a very small proportion of commercial income. The key point here, though, is that the costs are accounted for differently. There is a more even split between direct and indirect costs. Small and medium sized food companies (excluding farms and horticultural growers) typically have only one source of income, from their products, and again, lower profits. Farmers make a loss, have higher payments on loans and account for overheads following a text-book pattern set down shortly after the 1947 Agricultural Act[57]. Farm income comes from sale of commodities and livestock (including agricultural support payments or 'subsidies'); what are called 'diversified enterprises' such as holiday lets, shoots, leisure activities; and off farm income, usually a spouse working in a non-farming job.

One interpretation of this data is that supermarkets have less incentive to create more effective management and supply chain systems that reduce the overheads in their own operations and throughout their supply networks, when they can cover those indirect costs through commercial income. In fact, **there is evidence that the supermarkets can transfer additional cost and overhead onto suppliers and producers by requiring them to invest in storage facilities, food safety testing, and research and development activities**[58]. In New Product Development – the lifeblood of a super according to Charvat[59] – studies show that the costs of R&D, promotion, test runs, etc., fall on the supplier. There is also evidence that where a supplier achieves savings, they become obliged to pass those onto the supermarket, rather than retaining the income to reinvest in their own businesses[60].

Managing losses

In retail, loss management (sometimes referred to as profit protection/enhancement) is the job of controlling the inevitable losses a retailer faces in the course of doing business. The role has grown to include the management of waste and round-the-clock availability of goods. Loss managers in the past were mainly concerned with preventing 'shrinkage', which is primarily the loss of stock through pilfering by customers and staff, and with managing stock damage or obsolescence. But

Figure 1. A proportional representation of net margins in food supply chains, showing the importance of overhead classification and commercial income to the supermarkets' overall profitability



the term has become flexible. Beck points out that for some companies:

> *shrinkage is only the value of their unknown losses based upon the difference between expected and actual stock number/values, with anything else being regarded as known and therefore not included in the calculation. Other companies were much more inclusive, incorporating a number of other types of loss, ranging from damages, wastage, spoilage and price markdowns, to the costs of burglaries and robberies*[61].

Based on extensive empirical data collection through surveys and interviews, the following definitions were created:

> *Costs: Expenditure on activities and investments that are considered to make some form of recognizable contribution to generating current or future retail income.*

> *Losses: Events and outcomes that negatively impact retail profitability and make no positive, identifiable and intrinsic contribution to generating income.*

The problem is that some activities and investments designed to bring in more custom and provide greater customer satisfaction create losses. One example is the investment in self-scanning checkouts and similar, which have increased incidences of consumer fraud[62]. Conversely, schemes to better handle food waste through donations, recycling and other zero-waste-to-landfill initiatives can incur costs through investment in waste separation facilities, IT development and maintenance to identify out-of-date items and staff training. There is also evidence that investment in online shopping by multiple retailers takes a very long time to pay back the investment and generate a contribution to profit. Although the data on online food retailing is still emerging, an article in the *Financial Times* from July 2020 clearly shows that the issues are much the same as those described by the first supermarkets in America 90 years ago[63]. The fees charged are too low to cover the costs of picking and delivering from stores, and supermarkets' CEOs admit that online grocery is the least profitable part of their businesses. This was evident during the Covid-19 crisis because although people bought more online, they tended to purchase the lower-margin items. The most profitable format for a supermarket is the convenience store format, because people buy more high-margin items in the form of ready-meals, snacks and drinks. However, online may be less 'dilutive' – a term used by Tesco's CEO – in the future and the purely online retailers such as Ocado are beginning to become profitable on their retail activities (which include commercial income). Nonetheless, the investment in robotics and other IT solutions is very high and these aspects of their business still generate some losses outside of their retail operations[64]. These new technologies reduce the time spent checking inventory; in selecting optimal prices for marked down goods to reduce losses; and reducing the costs of hiring staff, thus helping the supermarket to maintain profitability.

Beyond supermarketing?

Supermarkets run successfully because they are expert in their business of driving food costs down, providing choice for the consumer and working to protect very narrow margins. Originally, independent self-service supermarkets used low-cost operations and low-cost deals with suppliers to keep food prices low. Most of all though, they discovered and honed 'bargaining power'. Whilst there may be many criticisms of the way supermarkets operate, and counter claims for social benefits and consumer satisfaction, the argument in this report focuses on just one consequence of the supermarket model: selling at volume and retaining market share requires continual investment and expense, and too often, instead (or in spite) of efforts to improve internal systems and supply chains, there is a reliance on 'supplier income' to ensure profits.

The recognised social problems addressed by supermarkets include egalitarian access to a range of affordable foods and control over choice to individual shoppers[65], but these have led to a frenetic food system that unintentionally arrived at over-purchasing, over-eating, over-production and waste to keep the system (not people) going[66]. At its worst, long-life items are transferred to store cupboards in consumers' homes and then left unused; empty calories are stored in bodies[67]; and fresh foods go into bins. However much the supermarkets can contribute to the efficient provisioning of societies in the developed world (and their achievements are undeniable), the rationale of providing cheap food through supplier payments and displacement of costs onto suppliers is potentially the wrong way of working, however efficient the system may appear.

In itself, the charging of a fee for marketing services and the negotiation of bulk discounts are not unfair or unreasonable. It could be said that they are preferable to extracting profits from customers. But the supermarkets' reliance on these fees and discounts has unintended consequences. An escalation in them is disastrous, as the 2014 Tesco episode demonstrates. Suppliers may not be able to pay fair wages, they may become overwhelmed by the costs of supplying in accordance with supermarket needs, and they may lack monies for reinvestment and innovation. Additionally, rather than supermarkets seeking to improve internal business practices and supply chain coordination, savings are found through pressurising sometimes already fragile supply businesses and primary producers to produce food and drink that ultimately will be wasted by the consumer, the store or further upstream.

Is it possible to design a system that is sufficiently profitable, refuses waste but provides affordable food? Other commentators are already asking counterintuitive questions about what the effects on food systems – including supermarkets – might be if:

- The system is predicated on avoiding waste throughout[68];
- More use is made of other ways of providing low-cost food for consumers, such as through buying groups linked to independent stores that creatively manage other economies of scale[69];
- The negotiations of supply preclude asking for discounts[70];
- Prices paid to farmers include costs of management and overheads to reflect their expertise and necessary investment;[71];
- Consumers can learn to buy things differently, not just buy different things[72].

But another question is: could *supermarkets* change in some of these ways and still be supermarkets? They are currently, overwhelmingly, the main distributive element of food systems in developed countries. They succeed because they provide a variety of foods in ways consumers perceive to be cheap and convenient. But the system is fragile: as we have seen, its profitability is balanced on a knife-edge. To maintain the system requires other mechanisms and technologies to be put in place to tidy up the more negative consequences, which are mainly felt by the supermarkets' suppliers. This is a conundrum, for all users of the food system (and its regulators). If we want a food system that allows consumers to retain at least some of the convenience and affordability they have grown used to; allows supermarkets to provide their services and make a profit; and allows suppliers to protect themselves from the retailers' overweening bargaining power – if we want this, we may be asking for something with inherent contradictions. It may be a system that does not contain supermarkets. Or supermarketing may have to reinvent itself.

References

1 Charvat, F.J. (1961). Supermarketing. The Macmillan Company

2 Skeldon, P. (2021) Tesco see online profits rocket but profits down through costs and competition. Internet Retailer. https://internetretailing.net/industry/industry/tesco-sees-online-sales-skyrocket-but-profits-down-through-costs-and-competition-23018.

3 Gneiter, U., Lusiani, N. and Tamir, I. (2020) Power, Profits and the Pandemic. Oxfam International.

4 Charvat, F.J. (1961). Supermarketing. The Macmillan Company, p.120.

5 Charvat, F.J. (1961). Supermarketing. The Macmillan Company p.74.

6 Berg, N. and Roberts, B. (2012). Walmart: key insights and practical lessons from the world's largest retailer. Kogan Page.

7 Berg, N. and Roberts, B. (2012). Walmart: key insights and practical lessons from the world's largest retailer. Kogan Page.

8 Charvat, F.J. (1961). Supermarketing. The Macmillan Company.

9 Arndt, J. and Olsen, L. (1975). A Research Note on Economies of Scale in Retailing. The Swedish Journal of Economics, 77(2), 207-221.

10 Garrouch, K., Mzoughi, M. & Chaieb, S. (2020). An integrative model of the impact of the store environment in supermarkets and hypermarkets. Recherches .en Sciences de Gestion, 138, 183-212. https://doi.org/10.3917/resg.138.0183

11 Trott, C. (2018) How these 15 retailers achieved some of the UK's highest sales per square foot. Insider Trends, https://www.insider-trends.com/how-these-15-retailers-achieved-some-of-the-uks-highest-sales-per-square-foot/

12 Barros, C. P. (2006). Efficiency measurement among hypermarkets and supermarkets and the identification of the efficiency drivers: a case study. International Journal of Retail & Distribution Management. 34(2), 135-154.

13 Arndt, J. and Olsen, L. (1975). A Research Note on Economies of Scale in Retailing. The Swedish Journal of Economics, 77(2), 207-221.

14 Lu, L. and Reardon, T. (2018). An economic model of the evolution of food retail and supply chains from traditional shops to supermarkets to e-commerce. American Journal of Agricultural Economics, 100(5): 1320–1335; doi: 10.1093/ajae/aay056.

15 Lu, L. and Reardon, T. (2018). An economic model of the evolution of food retail and supply chains from traditional shops to supermarkets to e-commerce. American Journal of Agricultural Economics, 100(5): 1320–1335; doi: 10.1093/ajae/aay056.

16 Jack, L, Florez-Lopez, R. and Ramon-Jeronimo, J.M. (2018). Accounting, performance measurement and fairness in UK fresh produce supply networks. Accounting, Organizations and Society, 64(1), 17-30. https://doi.org/10.1016/j.aos.2017.12.005

17 Bowman, A., Froud, J., Johal, S., Leaver, A., & Williams, K. (2013). Opportunist dealing in the UK pig meat supply chain: Trader mentalities and alternatives. Accounting Forum, 37(4), 300-314.

18 See for example, Mitchell, R., Maull, R., Pearson, S., Brewer, S., & Collison, M. (2020). The impact of COVID-19 on the UK fresh food supply chain. arXiv preprint arXiv:2006.00279; Garnett, P., Doherty, B., & Heron, T. (2020). Vulnerability of the United Kingdom's food supply chains exposed by COVID-19. Nature Food, 1(6), 315-318.

19 Lu, L. and Reardon, T. (2018). An economic model of the evolution of food retail and supply chains from traditional shops to supermarkets to e-commerce. American Journal of Agricultural Economics, 100(5): 1320–1335; doi: 10.1093/ajae/aay056.

20 Free, C. (2007). Supply- chain accounting

practices in the UK retail sector: Enabling or coercing collaboration?. Contemporary Accounting Research, 24(3), 897-933.

21 Jack, L, Florez-Lopez, R. and Ramon-Jeronimo, J.M. (2018). Accounting, performance measurement and fairness in UK fresh produce supply networks. Accounting, Organizations and Society, 64(1), 17-30. https://doi.org/10.1016/j.aos.2017.12.005

22 Bowman, A., Froud, J., Johal, S., Leaver, A., & Williams, K. (2013). Opportunist dealing in the UK pig meat supply chain: Trader mentalities and alternatives. Accounting Forum, 37(4), 300-314.

23 Hingley, M. K. (2005). Power imbalance in UK agri-food supply channels: Learning to live with the supermarkets?. Journal of Marketing Management, 21(1-2), 63-88.

24 Jack, L. (2005). Stocks of knowledge, simplification and unintended consequences: the persistence of post-war accounting practices in UK agriculture. Management Accounting Research, 16(1), 59-79.

25 Ogbonna, E. & Wilkinson, B. (1996). Power relations in the UK grocery supply chain: Developments in the 1990s. Journal of Retailing and Consumer Services, 5(1), 77-86.

26 Ogbonna, E. & Wilkinson, B. (1996). Power relations in the UK grocery supply chain: Developments in the 1990s. Journal of Retailing and Consumer Services, 5(1), 77-86.

27 Jack, L, Florez-Lopez, R. and Ramon-Jeronimo, J.M. (2018). Accounting, performance measurement and fairness in UK fresh produce supply networks. Accounting, Organizations and Society, 64(1), 17-30. https://doi.org/10.1016/j.aos.2017.12.005

28 Hingley, M. K. (2005). Power imbalance in UK agri-food supply channels: Learning to live with the supermarkets?. Journal of Marketing Management, 21(1-2), 63-88.

29 See also Jack, L, Florez-Lopez, R. and Ramon-Jeronimo, J.M. (2018). Accounting, performance measurement and fairness in UK fresh produce supply networks. Accounting, Organizations and Society, 64(1), 17-30. https://doi.org/10.1016/j.aos.2017.12.005

30 Charvat, F.J. (1961). Supermarketing. The Macmillan Company.

31 McClelland, W.G. (1962). Economics of the Supermarket. The Economic Journal, 72 (285), 154-170.

32 GCA (2016). Groceries Code Adjudicator Investigation into Tesco plc. The Crown.

33 Tesco (2020). Annual Report. https://www.tescoplc.com/investors/reports-results-and-presentations/annual-report-2020/

34 Simpson, E. (2014). The hidden world of supplying a supermarket. BBC News, https://www.bbc.co.uk/news/business-29629742.

35 Financial Reporting Council (2017). Lab case study report: WM Morrison Supermarkets PLC Supplier relationships and emergent issues reporting. Financial Reporting Council.

36 Morrisons (2021) Annual Report. https://www.morrisons-corporate.com/investor-centre/financial-reports/

37 Sainsbury (2020). Annual Report. https://www.about.sainsburys.co.uk/investors/annual-report-2020

38 Tesco (2015). Annual Report, p7 . https://www.tescoplc.com/investors/reports-results-and-presentations/reports-archive/,

39 See, for example, Jack, L, Florez-Lopez, R. and Ramon-Jeronimo, J.M. (2018). Accounting, performance measurement and fairness in UK fresh produce supply networks. Accounting, Organizations and Society, 64(1), 17-30. https://doi.org/10.1016/j.aos.2017.12.005

40 Simpson, E. (2014). The hidden world of supplying a supermarket. BBC News, https://www.bbc.co.uk/news/business-29629742.

41 Leyland, A. and Quinn, I. (2014). How Tesco ran out of rabbits as it struggled to stem losses. The Grocer Online. https://www.thegrocer.co.uk/tesco/how-tesco-ran-out-of-rabbits-as-it-struggled-to-stem-losses/372247.article.

42 see also Nicholson, C., & Young, B. (2012). The relationship between supermarkets and suppliers: What are the implications for consumers. Consumers International, 1, 7-8.

43 Leyland, A. and Quinn, I. (2014). How Tesco ran out of rabbits as it struggled to stem losses. The Grocer Online.

https://www.thegrocer.co.uk/tesco/how-tesco-ran-out-of-rabbits-as-it-struggled-to-stem-losses/372247.article)

44 Leyland, A. and Quinn, I. (2014). How Tesco ran out of rabbits as it struggled to stem losses. The Grocer Online. https://www.thegrocer.co.uk/tesco/how-tesco-ran-out-of-rabbits-as-it-struggled-to-stem-losses/372247.article

45 Tesco (2015). Annual Report, p17. https://www.tescoplc.com/investors/reports-results-and-presentations/reports-archive/

46 Tesco (2020). Annual Report, p85. https://www.tescoplc.com/investors/reports-results-and-presentations/annual-report-2020/

47 Leyland, A. and Quinn, I. (2014). How Tesco ran out of rabbits as it struggled to stem losses. The Grocer Online. https://www.thegrocer.co.uk/tesco/how-tesco-ran-out-of-rabbits-as-it-struggled-to-stem-losses/372247.article.

48 Charvat, F.J. (1961). Supermarketing. The Macmillan Company.

49 Wiggerthale, M. (2021). Knebelverträge im Lebensmittelhandel Wie Supermarktketten Lieferanten unfaire Handelspraktiken und Dumpingpreise aufzwingen. Oxfam Deutschland. https://www.oxfam.de/system/files/documents/oxfam_2021_knebelvertrage.pdf

50 Jacobsen, R., Parker, G., Jensen, T., Magnus, J., Hepp, M. and Urda, B. (2017). How discounters are remaking the grocery industry. BCG, https://www.bcg.com/en-gb/publications/2017/retail-consumer-products-how-discounters-are-remaking-the-grocery-industry

51 Strauss, M. (2010). Sprucing up the place, not the prices. The Globe and Mail. https://www.theglobeandmail.com/report-on-business/sprucing-up-the-place-not-the-prices/article1208781/

52 Sainsbury (2020). Annual Report, p. 130. https://www.about.sainsburys.co.uk/investors/annual-report-2020

53 Arndt, J. and Olsen, L. (1975). A Research Note on Economies of Scale in Retailing. The Swedish Journal of Economics, 77(2), 207-221.

54 Jack, L, Florez-Lopez, R. and Ramon-Jeronimo, J.M. (2018). Accounting, performance measurement and fairness in UK fresh produce supply networks. Accounting, Organizations and Society, 64(1), 17-30. https://doi.org/10.1016/j.aos.2017.12.005

55 Hingley, M. K. (2005). Power imbalance in UK agri-food supply channels: Learning to live with the supermarkets?. Journal of Marketing Management, 21(1-2), 63-88.

56 Jack, L, Florez-Lopez, R. and Ramon-Jeronimo, J.M. (2018). Accounting, performance measurement and fairness in UK fresh produce supply networks. Accounting, Organizations and Society, 64(1), 17-30, p24 https://doi.org/10.1016/j.aos.2017.12.005

57 Jack, L. (2005). Stocks of knowledge, simplification and unintended consequences: the persistence of post-war accounting practices in UK agriculture. Management Accounting Research, 16(1), 59-79.

58 Jack, L, Florez-Lopez, R. and Ramon-Jeronimo, J.M. (2018). Accounting, performance measurement and fairness in UK fresh produce supply networks. Accounting, Organizations and Society, 64(1), 17-30. https://doi.org/10.1016/j.aos.2017.12.005

59 Charvat, F.J. (1961). Supermarketing. The Macmillan Company, p.77.

60 Jack, L, Florez-Lopez, R. and Ramon-Jeronimo, J.M. (2018). Accounting, performance measurement and fairness in UK fresh produce supply networks. Accounting, Organizations and Society, 64(1), 17-30. https://doi.org/10.1016/j.aos.2017.12.005

61 Beck, A. (2017). Reconceptualising loss in retailing: calling time on 'shrinkage'. The International Review of Retail, Distribution and Consumer Research, 27(4), 407-423, p.411.

62 Beck, A., & Hopkins, M. (2017). Scan and rob! Convenience shopping, crime opportunity and corporate social responsibility in a mobile world. Security journal, 30(4), 1080-1096.

63 Eley, J. (2020). Why UK supermarkets are not making super profits. The Financial Times, https://www.ft.com/content/1011469b-65f2-4ca7-83ac-8c4921fcf6c5

64 Ocado (2021). Annual Report. https://www.ocadogroup.com/investors/annual-report

65 See for example, Ritzer, G. (2013). The

McDonaldization of society. Sage.

66 Cardello, H., & Garr, D. (2009). Stuffed: an insider's look at who's (really) making America fat. Harper Collins; p.154.

67 Guthman, J. (2011). Weighing in: obesity, food justice and the limits of capitalism. University of California Press.

68 Cardello, H., & Garr, D. (2009). Stuffed: an insider's look at who's (really) making America fat. Harper Collins; p.154.

69 Dobson, P., & Waterson, M. (1999). Retailer power: recent developments and policy implications. Economic Policy, 14(28), 134-164.

70 Jack, L. (forthcoming) Discounts as a barrier to change in our food systems, under review.

71 Jack, L, Florez-Lopez, R. and Ramon-Jeronimo, J.M. (2018). Accounting, performance measurement and fairness in UK fresh produce supply networks. Accounting, Organizations and Society, 64(1), 17-30. https://doi.org/10.1016/j.aos.2017.12.005

72 Dowler, E., Kneafsey, M., Cox, R., & Holloway, L. (2009). 'Doing food differently': reconnecting biological and social relationships through care for food. The Sociological Review, 57(2_suppl), 200-221.

The Food Research Collaboration is an initiative of the Centre for Food Policy, facilitating joint working between academics and civil society organisations to improve the UK food system, and making academic knowledge available wherever it may be useful.

We are grateful to the Esmée Fairbairn Foundation for funding our work.

Food Research Collaboration

an initiative of

Centre for Food Policy

Shaping an effective food system

ISBN: 978-1-903957-62-2

Please cite as: Jack, L. 2021. *The secrets of supermarketing: A model balanced on a knife-edge*. Food Research Collaboration Discussion Paper.

Esmée Fairbairn FOUNDATION