

PROFITS, PEOPLE AND PLANET IN THE UK FRESH FOOD SUPPLY CHAIN

ABSTRACT

The theme of the 31st IMP conference is sustainability in B2B relationships and networks. While sustainability can be interpreted in various different ways, two prominent definitions are: ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (WCED., 1987); and, ‘consuming resources at a rate which allows them to be replaced, and only producing pollution at a rate that the environment can assimilate’ (Peattie, 1995:33). Following the work of Elkington (1994) in accounting this is often summarized as the triple bottom-line, or, popularly, as ‘profits, people and planet’. However, not everyone agrees with the implicitly optimistic stance of triple bottom-line advocates, that global capitalism (profits) can be successfully reconciled with social (people) and environmental (planet) progress. For example, Fleming and Jones (2013) argue that corporations continue to act in the interests of a small number of stakeholders (notably, senior managers and equity holders), and so are incapable of delivering outcomes that are beneficial to society as a whole.

The UK fresh food supply chain represents a fascinating context in which to explore the feasibility of reconciling profits, people and planet. This sector is characterized by substantial power imbalances with power asymmetries that favour large supermarkets and their preferred lead suppliers (Hingley, 2005; Hingley & Hollingsworth, 2003; Lindgreen & Hingley, 2001). As a consequence British food producers come under severe pressure from their customers, not only to deliver ever-greater cost savings but also to absorb market-related risks encountered by the supermarkets. Official analysis of the problems arising from these circumstances is couched in terms of ‘markets’, ‘marketing’ and ‘market failure’ (DEFRA, 2002). This paper investigate how ‘markets’, ‘marketing’ and ‘market failure’ are understood and interpreted by actors in the UK fresh produce sector, using qualitative data from 21 recently conducted interviews. As well as the tensions between ‘people, planet and profit’, key concepts from prior IMP studies in the food sector are investigated in this context, including retailer dominance, relationship management, parallel networks, and the way that markets are constructed in practice.

KEYWORDS: Power; Asymmetrical Relationships; Fresh Food; Parallel Networks

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INTRODUCTION

The theme of the 31st IMP conference is sustainability in B2B relationships and networks. While sustainability can be interpreted in various different ways, two prominent definitions are: ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (WCED., 1987); and, ‘consuming resources at a rate which allows them to be replaced, and only producing pollution at a rate that the environment can assimilate’ (Peattie, 1995:33). Following the work of Elkington (1994) in accounting this is often summarized as the triple bottom-line, or, popularly, as ‘profits, people and planet’. However, not everyone agrees with the implicitly optimistic stance of triple bottom-line advocates, that global capitalism (profits) can be successfully reconciled with social (people) and environmental (planet) progress. For example, Fleming and Jones (2013) argue that corporations continue to act in the interests of a small number of stakeholders (notably, senior managers and equity holders), and so are incapable of delivering outcomes that are beneficial to society as a whole.

The UK fresh food industry represents a fascinating context in which to explore the feasibility of reconciling profits, people and planet. For example, recently substantial controversy has surrounded the UK fresh milk supply industry, with British farmers claiming that the dominant supermarkets are demanding such low prices that they make UK milk production uneconomic. Over the longer-term, UK vegetable growers have struggled to reconcile their investment needs, the challenges of sustainability, and consistent price pressure from supermarket buyers. The UK food sector is characterized by substantial power imbalances with power asymmetries that favour large supermarkets and their preferred lead suppliers (Hingley, 2005; Hingley & Hollingsworth, 2003; Hingley & Lindgreen, 2001). As a consequence British food producers come under severe pressure from their customers, not only to deliver ever-greater cost savings but also to absorb market-related risks encountered by the supermarkets. Official analysis of the problems arising from these circumstances is couched in terms of markets, marketing and market processes (DEFRA, 2002). This paper investigates how markets, marketing and market processes are understood and interpreted by actors in the UK vegetable sector, using qualitative data from 21 recently conducted interviews. Inspired by previous IMP research that has investigated relationships and networks in fresh food supply (Abrahamsen & Hakansson, 2012; Hingley, 2005; Hingley & Hollingsworth, 2003; Hingley & Lindgreen, 2001; Machat, Salle, & Fenneteau, 2004; Skytte, 2010) we ask whether an industrial networks (IMP) conceptualisation of the UK vegetable supply chain might provide more fruitful policy recommendations.

The conceptual framework for the research is presented in the next section. First, to illuminate the issues and demonstrate the currency of the subject matter we briefly discuss the case of the UK milk market in 2015; second, we identify important concepts from the industrial networks approach that have been used in prior studies of the food sector. Subsequently, we outline the qualitative methods used to gather data for this study, and then present the findings, organised using the concepts identified during the literature review. The paper concludes by discussing the contribution arising from this study, and the implications for future research and policy in the food sector.

CONCEPTUAL FRAMEWORK

MILK AS A PARABLE FOR OUR TIMES: PROFITS VERSUS PLANET?

In March 2015 the price of milk in leading British supermarkets stood at £0.38/litre, cheaper than most brands of bottled water. While the British public enjoyed their cheap milk, and the British Government basked in the glow of generally low or negative food price inflation, there were some who questioned the sustainability of this state of affairs (Bulman, 2015). Even without being a farmer one can see that a final retail price of £0.38/litre suggests that milk producers must be making nothing, or less than nothing, on what they sell. Everyone knows that cows are large mammals that must eat in order to lactate, and that even the most efficient dairy farmer has to employ some labour and invest in, and maintain, some rather expensive equipment. However, to counteract this sense of unease, a ready story could be found in conventional market economics. As a result of increasing competition among supermarkets, fuelled by some dastardly German market entrants, a food price war had broken out in the UK. Consumer choice, in an economy where average real wages had been in decline for several years, was for cheap, no frills shopping. Supermarkets were responding to this expression of consumer sovereignty. The supermarkets, operating in effect as agents for the sovereign consumer, were pressurising their suppliers to reduce food prices.

The conventional story is that hard-pressed British consumers want cheap milk, supermarkets respond to shoppers' demands by paying less to their milk suppliers, and if British farmers cannot make a profit at that price, then no doubt milk can be imported from somewhere that can. What remains unsaid, but is tacitly understood, is that the British farmers have no realistic alternative. The British retail market for food is heavily concentrated in a few hands; if you cannot sell through the major supermarket chains then all that is left to you are niche routes to market such as farm shops and farmers' markets. The power lies in the hands of the supermarket buyers. The relationships between these buyers and most food suppliers, certainly including those in the milk supply chain, are severely asymmetrical. Indeed, while the situation in the British milk market in March 2015 was perhaps a little extreme, this was not so much evidence of consumer sovereignty as straightforward confirmation that the British food supply network is dominated by a few powerful actors that ruthlessly pursue their own ends regardless of the damage done to the network. Or, indeed, the damage done to animal welfare or the natural environment.

Such competing stories about how markets work, and for whose interests, are not new (Araujo, Finch, & Kjellberg, 2010). In particular, and in contrast to the standard economic market model, those who approach the food market from an industrial networks (IMP) perspective concentrate on the ways in which actors seek to position themselves within the network and to influence network forces for their own purposes (Håkansson & Snehota, 1995).

STUDIES IN THE FOOD SECTOR USING THE INDUSTRIAL NETWORKS APPROACH

The empirical context for this study is the vegetable distribution system in the UK. The academic dialogue to which this paper seeks to contribute is that concerning the conceptualisation and evolution of distribution systems, with particular reference to food distribution networks. Gadde (2010) provides a summary of the development of distribution systems theory, and points to the practical and theoretical gaps that became apparent in the field during the twentieth century. In practical terms the negotiation and logistical aspects of distribution became separated into 'marketing' and 'logistics', with the consequence that logistics was seen as a relatively prosaic aspect of business and, erroneously, not as a

potential source of competitive advantage. In theoretical terms the systems perspective of Alderson (1965) never gained widespread popularity, and competing approaches based on neo-classical economics, power and conflict, transaction cost economics, and political economy emerged. Gadde (2010:165) contends that the industrial network approach is “an alternative meaningful conceptualisation” that can handle the fragmentation of distribution research, and that “the ARA model used for analysis of industrial networks is a highly relevant framework for the investigation of (complex distribution networks)” (Gadde, 2010:166).

Unsurprisingly, agriculture and the food industry have always been of considerable research interest within the IMP Group. The origins of this research tradition lie in the North-Western countries of Europe where such industries as fresh produce, horticulture, forestry, and fishing are of great economic, historical, social and cultural importance. Furthermore, given both the intrinsic nature of many of these industries – such as their vulnerability to booms and busts as a result of forces in either the physical or the global economic environment - and their frequent politicisation as ‘strategic industries’, there is a strong sense that conventional (neoclassical) models are not a good description of the way these industries work. Consequently, researchers have often sought to re-conceptualise these ‘industries’ and ‘markets’ as industrial networks, and to apply the conceptual tools of relationship and network management to them. This point is well-made by Olsen (2012) in connection with international seafood markets: the fishing industry is subject to “natural stochastic variation and regulatory interferences”, and the goal of IMP studies in this field has been to discover “how the real-market-economy actually works ‘below the surface’ of competitive market images”. Indeed, the parallel with the seafood industry can be taken further, since Olsen (2010), commenting on the research papers in a special issue of the IMP Journal devoted to the seafood industry, interprets fish markets “as battlegrounds between historical distribution networks across the world with their traditional market arrangements and power structures on the one hand, and the emerging integrated retail chain to supply chain ... networks on the other.” A particularly good example of such parallel networks is the Japanese seafood distribution system (Abrahamsen & Hakansson, 2012). Similarly, the UK fresh produce sector contains parallel, traditional market arrangements, alongside the increasingly dominant integrated supply chain networks headed by major supermarkets.

Wycherley (2000) investigated the UK organic food industry using the concepts of relationship management, the relationship lifecycle, positive and negative effects of network forces, and weak and strong ties in network structures. In Wycherley’s (2000) empirical analysis the concept of parallel networks again emerged: the conventional network and the pioneer network. The conventional network comprises actors that do not trade in organic produce at all (‘pure conventional’) and actors that are of non-organic origin but are incorporating organic lines (‘hybrid conventional’). The pioneer network comprises ‘hybrid pioneers’ and ‘pure pioneers’. Important differences were found between the pioneer network and the conventional network. The pioneer network is largely built on close personal relationships, and driven by an idealistic belief in the value of organic products. The conventional network is built on more conventional business relationships, where organic is seen as simply a rapidly growing niche market, and the primary motivation is the search for profitable business opportunities.

Hingley and Lindgreen (2001) researched both the UK fresh produce industry and the New Zealand wine industry. In the UK they studied 17 fresh produce supplier case studies using a qualitative, inductive method. Power/dependency and retailer dominance were found to be important characteristics of this industry, and there was evidence that partnership approaches

to sourcing espoused by major retailers lacked sincerity. Social exchange between suppliers and customers was limited to professional circumstances, and tangible relationship commitment, for example in terms of dedicated investments in the relationships, was one-way (from the supplier) rather than mutual. Although becoming a “preferred supplier” to a major retailer could lead to rapid sales growth, it also lead to reduced profit margins (Hingley & Lindgreen, 2001). One respondent in this study said: “A partnership between a supplier and a multiple retailer is like a ballerina dancing with a bear”. Regarding the nature of supplier-customer relationships in this sector, Hingley & Lindgreen (2001:20) conclude that there is “widespread criticism of ‘partnership’/‘relationship’ terms as lacking substance and a PR gimmick”. Continuing this line of argument, Hingley (2005) contended that key characteristics of the UK fresh produce supply industry are power imbalances, retailers striving to reduce the number of suppliers with whom they deal directly, leading to the appointment of ‘super-middlemen’ who act as network supply coordinators on behalf of the retailers. Many suppliers had opted for preferred relationships with a single retailer, but had given up their right to price negotiation (that is, had become price takers), in return. Hingley (2005:4) asserts that competition in the UK food industry is best conceptualised as competition between managed industrial networks, with a major retailer at the centre of each network, and super-middlemen acting as network coordinators within each network.

While many researchers have reported on the economic dependency of small food suppliers on large buyers (whether intermediaries or retailers), Machat et al (2004) drew attention to the potential negative impact of buyer-domination on the organisational learning achieved by small suppliers. So, in addition to economic dependency, Machat et al (2004:20) commented on: “a cognitive dependency revealed by (this) competency trap”. Their empirical study of 131 French SME food suppliers found that market-based organisational learning was impaired where suppliers entered into exclusive supply contracts, resulting in a ‘competency trap’ where the supplier became progressively less capable of responding to changing market conditions.

Table 1: Principal Concepts

Concept	Source
Retailer dominance (retailer managed networks)	(Hingley, 2005; Hingley & Lindgreen, 2001)
How the real-market-economy actually works ‘below the surface’ (in contrast to the competitive markets narrative)	(Araujo et al., 2010; Olsen, 2012)
Parallel networks (two or more distribution networks operating largely in parallel with limited inter-network interaction)	(Abrahamsen & Hakansson, 2012; Olsen, 2012; Wycherley, 2000)
Managing Relationships (relationship management processes)	(Hingley, 2005; Munksgaard, 2008)
Profit versus planet? (economic sustainability and environmental sustainability)	(Elkington, 1998; Peattie, 1995)

Using an in-depth case study conducted within the Danish food industry, Munksgaard (2008) investigated relationship-specific adaptations and inter-organisational product development routines. This study explored the relationship between a focal supplier and two major customers: a large retailer, and a food products manufacturer. For both customers the product

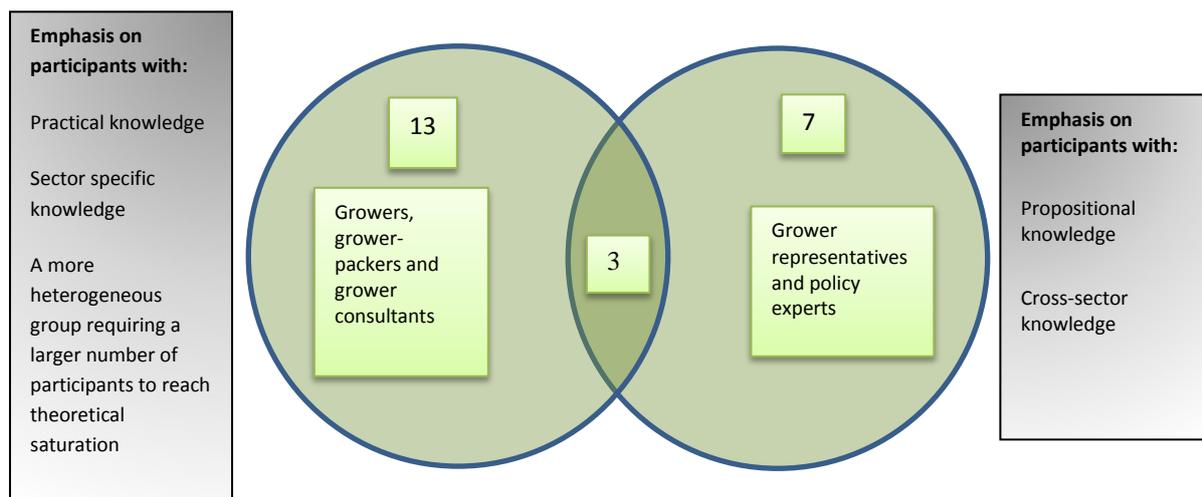
development process involved extensive collaboration and joint development meetings, with the supplier being regarded as a member of the product development team by the customers. The supplier developed new products and new supporting services – that is, engaged in substantial relationship-specific adaptations – for both customers (Munksgaard, 2008). Another study in the Danish food industry found that “there is complementarity between the constructed identity of producers and retailers ... the producers take their starting point at the farmers, when they construct their meanings, and the retailers begin with their constructed understanding of consumer trends” (Skytte, 2010).

Table 1 provides a summary of the key theoretical concepts derived from the review of the literature and used in the analysis of the empirical data for this study.

RESEARCH METHODS

Our empirical study focused on the English vegetable sector and explored how markets, marketing and market processes are understood and interpreted by actors in the sector, using qualitative data from 23 participants in 21 interviews. Figure 1 provides a summary of the interview participants.

Figure 1: Pictorial Summary of Participants



Some participants represented more than one group within the study. For example, one individual was a key policy expert having been a member of the Policy Commission on the Future of Farming and Food, but was also a grower and had been active as a representative at a senior level in a grower representative organisation. Fifteen of the participants were linked to the larger conventional networks, six were involved in the much smaller pioneer networks, and two had links to both pioneer and conventional networks.

Defining the scope of the study was problematic given the heterogeneous nature of the vegetable sector. Agriculture policy and data usually group fruit and vegetable crops together, although a few crops were sometimes treated separately (for example, potatoes, and mushrooms) (DEFRA, 2014). The Horticultural Development Company (HDC) classifies horticulture products into eight major categories; vegetables are divided into protected edibles and field vegetables, and fruit is divided into soft fruit and tree fruit (Horticultural

Development Company, 2015). Most of the fruit consumed in England is imported, whereas most of the vegetables consumed are home grown ("Basic Horticulture Statistics 2014 ", 2014). Vegetable production is diverse – see appendix 1 for summary data on vegetable supply. Growers are involved production across protected and field environments in conventional or pioneer networks and some growers are also involved in a range of supply chain activities. For example, there are a few large grower/packer/marketing organisations (GPMOs) that are involved in vegetable production, packaging, storage, transportation and marketing of both English and overseas produce. Domestic vegetable production is likely to play an important part in the development of a sustainable agriculture policy, potentially capable of achieving economic, environmental, social/health and animal welfare goals.

The growers' perspectives take centre stage in the study but we also sought the views of grower representatives, many of whom were growers themselves or grower consultants, and policy experts such as the horticulture specialists at Defra, who were able to provide cross-sector insights. A list of crop associations was obtained from the HDC website [<http://www.hdc.org.uk>] and interviews were obtained with several crop representatives who then recommended suitable growers to approach. In addition, other potential participants were identified by contacts at City University's Centre for Food Policy. The Centre suggested particular growers from the conventional and pioneer networks to approach to participate in the study. Most vegetable production, especially in the conventional network, is based in Eastern and South East England and the sample reflects this geographical bias; however, some pioneer producers based in the South West were included in the study. In total almost ninety organisations and individuals were invited to take part in the study.

The appendix provides further information about the participants involved in the study. Interviews took place at the participants' farms or sometimes by phone or at (or nearby) a convenient university location. Most of the interviews were between 45 and 90 minutes, although some of the interviews on farm sites occurred over a longer period of time because growers would take time to show farm production and processing facilities.

NVivo was used to code the transcripts of the interviews. The results from the study were triangulated with documentary analysis of key policy publications.

FINDINGS

RETAILER DOMINANCE

There was a great deal of agreement across the different growers that there is a problem concerning margins for growers, particularly in the supermarket dominated supply networks:

'One of the major problems that growers face, without any doubt at all, is lack of margin, right. Now, lack of margin is caused by fierce price competition between the supermarkets.'

Quote from grower consultant (Con01). He continued:

'...in the last five years we've seen three very major companies go out of the industry, right. Why have they gone out of the industry? Because they can't make profit. And as I say, this has largely been [caused by] the supermarkets demanding such things as over-riders...'

Quote from grower consultant (Con01).

The same consultant suggested that grower businesses were efficient but that they were subject to price pressure from the supermarkets. The price pressure limited the extent to which growers can reinvest.

'Overriders, let's take the example of a salad producer, right. Salad producer is, and might be producing a thousand acres of lettuce, right, and his price agreed with the supermarket is 30p. And at the end of the season, the supermarket says, "Yes, you have sold X amount of lettuce, we want an overrider of 2p on every lettuce you've sold retrospectively from the 1st of March." Right, so what does the grower do? Does he say, "No, you can't have it," if he does that, he will no longer supply that supermarket, he will no longer have a business. So it is commercial blackmail, there's no question about it, commercial, not all supermarkets do that but the likes of [supermarket A] do, or are particularly aggressive and [supermarket B] also are quite aggressive, right. So one of the problems is that growers, although they have been able to very often stay in business, they haven't been able to make enough profit for capital reinvestment which is absolutely vital, you know'

Quote from grower consultant (Con01).

'...they've been squeezed and squeezed and squeezed on margin, they have reacted by getting more and more efficient and then they're squeezed a bit more on margins and they get a bit more efficient and then there comes a point where you just can't squeeze any more out of it.'

Quote from grower representative (Rep04). He elaborated further:

'In essence what we've got now is a smallish group of sellers [...] who are fighting over market share. Retailers who are sitting there, very happy knowing the government would like them to manage inflation, and that they've got sellers desperate for orders, volume. And so all that's happening is prices are being negotiated down and down and down and that blows out the back end to the fellows who are growing the product who are getting a lower and lower return.'

Quote from grower representative (Rep04)

He felt that there needed to be a different way of sharing the risks and rewards along the supply chain. He pointed to the problem that the retailers were able to appropriate a large proportion of the value created regardless of variations in supply or other problems:

'But I think... we talk about reconnection but I think that whole circle needs to be reconnected, rewired in a way which there is a better balance. So the retailers don't continuously take 50% margin.'

Quote from grower representative (Rep04)

'...you're relying on very thin margins to exist on.'

Quote from grower representative (Rep03)

There was a belief in the effectiveness of markets across both conventional and organic growers, small and large, often accompanied by a concern that somehow the present arrangements were not always fair. So it would seem that the consensus was not to abandon markets but to ensure that they operated in a way that enabled more growers, not just the largest or the smallest, to continue to grow vegetables. A key issue was the ability of the large retail multiples to appropriate a large share of the value created in the supply network.

*'If you look at the best grower in this country, and you look at Mr Tesco's results, the difference is that Tesco make huge profits, the grower is not, simple as that, right.'*¹

Quote from grower consultant (Con01)

HOW THE REAL-MARKET-ECONOMY ACTUALLY WORKS 'BELOW THE SURFACE'

One grower consultant (Con01) highlighted the perishable quality of the produce as a critical issue so the produce cannot be stored until prices improve. He also mentioned the problem for a supplier that has agreed to provide all year round supply to supermarkets. If there are problems with supply the grower has to find alternative suppliers even when these are expensive. Price is often the only way a supplier keeps a contract to supply a supermarket.

'And if somebody says to you, "We don't want your lettuce this week," what are you going to do with, you know, half a million lettuce? [...] So it's a perishable product, they've got to do it [accept a price below the cost of production].'

Quote from grower consultant (Con01)

A young innovative grower avoided the retail sector (Gr05), citing low prices as the reason for moving out of the mainstream retail supply network.

'...it wasn't really a conscious decision [to cease supplying supermarkets], in some respects. It was that we were losing money on the commodity lines, like all small growers were and there was a fair, a few round here that disappeared, because the prices weren't sustainable.'

Quote from conventional grower (Gr05)

One crop representative (Rep01) felt that some buyer organisations were advocating fair trade for overseas suppliers but seemed to be unconcerned about the problems facing domestic growers of vegetables. He gave the example of the Co-Op:

'And that kind of fair trade approach from retailers too where, and bizarrely I understand something(?) about the Co-Op, probably the most difficult, because they really, and of the producers I've been talking to over the last six months certainly, they just don't pay, they pay less than the cost of production and I know it was recently an issue with milk and the Co-Op but it's true of fresh produce supplied to the Co-Op, you know, there has to be a recognition in, companies who expound their credentials of being the biggest fair trade organisation in Britain [inaudible] fair trade are not to apply the same fair trade principles to British suppliers seems perverse now.'

Quote from grower representative (Rep01)

One grower consultant highlighted the structural problems associated with growing vegetables. Scale was required to ensure low unit costs but scale locked a grower into the retailer supply network since only about 15% of vegetables go through alternative supply networks. The same consultant also asserted that innovation (such as extending the growing season) in domestic production was being stifled, possibly because the large grower-packer MOs had different investment priorities and could turn to overseas suppliers as an alternative.

¹ Intriguingly, on the day that this paper was submitted to the IMP Conference, Tesco announced a £6.4 billion loss for 2014/15, compared to a £2.3 billion profit for 2013/14.

'...this whole dynamic of being able to develop new crops, new months of production in this country which nobody is picking up...'

Quote from grower consultant (Con04)

He also felt that producers were not able to achieve prices that covered the cost of production:

'They don't want any grant money for the tunnels, for the marketing, for the feasibility study, they don't want that, but what they say is, "We're not investing in this crop and getting three pound a chip when we need five pound a chip, we are not going to sell this below what it cost us."'

Quote from grower consultant (Con04)

PARALLEL NETWORKS

There was some concern that the supermarkets were limiting the options that growers had to get their produce to end consumer markets. One consultant suggested that part of the reason for the problem was that growers had not been market oriented, and now supermarkets were able to limit growers' access to markets:

'Marketing, traditionally farming has, farmers have been very lazy about marketing. We haven't picked up on the necessity, we haven't needed to market because we have had markets. Now, I believe one of the studies that everyone's forgetting about within this, these local issues, primary production issues, is studying markets. Now markets are quite clever because they are very good at self-regulating themselves, they have supply and demand, you have USPs and so on, but to a large extent the supermarkets have virtually wiped out our alternative method of marketing [...] So what have we got left? We've got box schemes, we've got farmers' markets, we've got a few little local markets might happen every Saturday and so on...'

Quote from grower consultant (Con04)

The organic farmers that did have alternative routes to market discussed the quality of the relationship they have with their end customers.

'...given the densities of people in London and the distribution of markets that..., potentially lots and lots people and you do get a wide variety of people to try and you get all sorts of characters young lads who you wouldn't think are very keen to try new kinds of vegetable because it does mean something to them. They really notice the difference and it's exposing people to it.'

Quote from organic grower (Gr02)

He went on to say:

'I think people are scared that farmers' markets are dear when they're not really now but it's just getting people to trust it because they get ridiculed that's the thing it's like organic vegetables and farmers' markets. The media has put it forward that they're expensive and a rip off...'

Quote from organic grower (Gr02)

A small organic grower said of his strategy of running a market stall:

'And having that direct link with the customer. It gives us a chance – and that's the only advantage of doing the market. We can talk to people and find out what they want, what they like and what they don't like.'

Quote from organic grower (Gr03)

He went on to say:

'...because we are quite small scale and we grow just a few crops and we have quite a range of customers that we can generally find an outlet for what we grow.'

Farmers' markets are important to the alternative/organic growers:

Farmers' markets are great and I think they're a fantastic starting point for a business.

Quote from organic grower (Gr04)

For more mainstream growers, one grower representative mentioned how market access was controlled by supermarkets so that growers felt the success of their business depended on whether they obtained the consent of a supermarket buyer.

'Effectively, you're relying on the good grace of a supermarket buyer...'

Quote from grower representative (Rep03)

There are few alternative routes to market for many growers apart from the retail multiples.

'It's very difficult for you to go and say, "Right, I'm going to use someone else."'

Quote from grower representative (Rep02)

This is acknowledged by one policy expert:

'... then you get into very complex arrangements of ownership of land, renting of fields, etc. as part of that rotation because the kind of person who would produce carrots would have specialised equipment for it, so not everyone will grow carrots because you're going to need to be able to harvest them... And you're also going to need your connections, all the way down the supply chain, to get them in the grocery store... so, that whole side of it is, I suspect it might be a barrier to entry as well, that if you decided that you wanted to grow some carrots, you would have trouble selling them.'

Quote from policy expert (Pol02)

MANAGING RELATIONSHIPS

Most growers, conventional and organic, had little positive to say about contracts. One older grower (Gr08) asserted that contracts between growers and supermarkets were rare. Another claimed that arrangements were 'an intention to supply':

'Supermarkets don't have contracts in fruit and veg, if you're lucky they give you a programme.'

Quote from grower (Gr08)

'There's no contract, it's just an intention to supply I think. There's nothing written there are very, very few written contracts in this business....'

Quote from conventional grower (Gr06)

In any case, many in B2B marketing see contracts as relevant only when relationships fail. This point is echoed by a medium-sized but successful grower:

'At the end of the day, it's very rare that anyone sticks to the contracts, you know, there will be a certain element of tonnage and price but in a difficult season, you know, they can be worthless at the end of the day...'

Quote from conventional grower (Gr01)AF

In terms of enforcing a contract, growers were reluctant to seek legal redress:

'You'd just alienate all your customers so, once again, they've got you a little bit.'

Quote from conventional grower (Gr01)AF

And there was a view that the protection that a contract provides was largely illusory. A grower representative stated:

'If you are going to have contracts they've got to be, frankly, legally valid.... And the contracts that we've seen from some supermarkets to some growers have been daily contracts that, if they [the growers] get one thing wrong they'll [the supermarkets] terminate the contract, and the buyers of, frankly, the supermarket buyers have too much power. There is a clear fear factor within the vegetable sector...'

Quote from grower representative (Rep03)

Whether contracts are used or not, there was a sense that growers felt vulnerable. The retailers controlled the enforcement of contracts (or not) in the supply chain.

'We think a lot about being able to guarantee supply yes. We do because we will lose the business if we fail on the supply to our retailers ..., it won't cost us in year one but next time our customer will say right I'm going to split this business I'll find somewhere in another part of the country. We won't do it [guarantee supply] but they will try to spread the risk by giving it to somebody on a different land or soil type and then you'll see 20% of your business go away that way. And by the second year you'll see 60% of it go away and you'll lose it all perhaps.'

Quote from conventional grower (Gr06)

So it would appear that reifying relationships in the form of a contract does not always address power asymmetry between growers and the buyers of their produce. One participant was concerned that the government's willingness to address problems related to power asymmetry is muted.

'Well no, if you look at it, it's taken the government, oh God knows, 15 years to have a, an adjudicator. She isn't even an ombudsman. She's merely an adjudicator, we have no legal framework to protect growers.'

Quote from grower representative (Rep03)

And contracts were seen as a double-edged sword according to several respondents:

'I suppose the nature of the fresh produce business is it is so, it can be really feast and famine as we've seen sort of last year and this year, that signing up to long term contractual agreements is very difficult because it really exposes your business.'

Quote from grower (Gr01)

'Contracts, any contract worth its salt says 'you've got to provide A at price all of the time and if you can't do that all of the time then you've got to go and get it, and nine times out of ten when you've got to go and get it, it's going to be a lot more than the price that was agreed.'

Quote from grower representative (Rep04)

Not having a contract meant that a grower was not obliged to fulfil an order.

'Well, you'd be quite nervous about signing contracts because of the variability of the yields.'

Quote from grower (Gr06)

The GPMOs had a different view of contracts from other grower organisations. Their views were more closely aligned to the retailers' perspective. They saw contracts as fair, and if a farmer failed to produce to the quality standard then the buyer (the MO) was under no obligation to fulfil the contract. A key issue was quality specification, which allowed the buyer, whether the retailer or the grower-packer MO, a legitimate reason for rejecting produce.

'So if the farmer produces it and he gets a disease problem or a pest problem he will, you know, he will fall out of contract and, you know, the retailers or we [my emphasis] would have no rights or reason to take it.'

Quote from large grower-packer MO manager (GP02)

The buyers, in some cases the GPMOs, are gatekeepers to large retail markets. The GPMOs have effectively integrated downstream in the supply chain, taking on more of the intermediary functions that were once performed by the retailer. A system of market based, arms' length relationships between growers and intermediaries has been replaced with longer term arrangements and co-ordinated interactions within a loose quasi-organisational hierarchy controlled by retail multiples and the GPMOs. The GPMOs also continue to exercise control upstream through being able to control the contractual/programme arrangements with individual growers, and through joint ventures into production at home and overseas.

PROFIT VERSUS PLANET?

There were few direct quotes concerning investment in sustainable production. Perhaps few growers wanted to comment on engaging in less sustainable production methods. Input costs were a major concern for many of the growers and some mentioned how low margins made it difficult to invest (whether that is investment in more sustainable or less sustainable production methods).

Investment in renewable energy was discussed, although one manager in a GPMO claimed this was diverting growers from the real issue of growing crops.

So you know, it's taking, it's robbing Peter to pay Paul a little bit. Growers have only got so much money to invest so if they're putting it into solar, you know, into solar and PV instead of actually the next growing system or reducing the fertiliser inputs or buying, you know, buying a new system that's going to save them money on the growing methods or increased yields, it's, it has its benefits but, it's also, I think it's negative. We [should be] putting all our capital into growing this business and producing more rather than actually into those sort of additional income generation projects.

Quote from GPMO manager (GP01)

One grower consultant suggested policy needs to encourage investment in sustainable production.

'Now all of that fits really well because we're eating too much meat, we ought to be eating lots of beans because beans are ever so good for us, beans need to go back in the rotation and so on ... Now, somehow in order to change the whole agricultural dynamic and for that read in this case fruit and veg, we have to convince people [i.e. growers] that there is a market for crops, we have to convince people, the growers, to invest in those production systems and make it happen.'

Quote from grower consultant (Con04)

He went on to provide an example of innovation in tomatoes but warns that farmers:

'They don't want any grant money for the tunnels, for the marketing, for the feasibility study, they don't want that, but what they say is, "We're not investing in this crop and getting three pound a chip when we need five pound a chip, we are not going to sell this below what it cost us."'

Quote from grower consultant (Con04)

Table 2: Summary of the results

Characteristic	Summary	Indicative quotes
Retailer dominance	Margins low for medium sized growers especially in the supermarket supply network, caused by high input costs and supermarket pressure on farm gate prices, growers exiting the retail market, but longer term the remaining larger growers see positive demand and supply changes	'...they [the supermarkets] were going to put me out of business...' (Gr04)
How the real-market-economy works	<p>Growers claim that they are not achieving prices that enable them to cover costs of production and invest in the replacement of their capital assets. The prices they achieve mean that they are certainly unable to invest in business expansion or new product development.</p> <p>In terms of conventional neoclassical economics, and according to the interviewees, the market mechanism is failing since producers are not receiving the long-run marginal cost of production (that is, short-run production costs plus sufficient contribution margin to fund long-term investment and a normal rate of profit).</p>	<p>'And if somebody says to you, "We don't want your lettuce this week," what are you going to do with, you know, half a million lettuce? [...] So it's a perishable product, they've got to do it [accept a price below the cost of production].'</p> <p>(Con01)</p> <p>'They don't want any grant money for the tunnels, for the marketing, for the feasibility study, they don't want that, but what they say is, "We're not investing in this crop and getting three pound a chip when we need five pound a chip, we are not going to sell this below what it cost us."' (Con04)</p>
Managing Relationships	<p>Growers wary of written contracts because enforcement of contracts shaped by the retail multiples or MO buyers</p> <p>Contracts a double edged sword used by supermarkets to secure year round supply.</p> <p>More contract production/block cropping – growers rent out land to large scale contract producers. More land required for rotation by MOs and growers keep their valuable land assets.</p>	<p>'...there are very, very few written contracts in this business....' (Gr06)</p> <p>'...we have no legal framework to protect growers.'(Rep03)</p> <p>'Rotation means that you need six times the amount of land to grow a crop long term. So large packer growers will tend to rent land rather than own it' (Rep06)</p>
Parallel Networks	<p>Access to consumer markets largely controlled by the retail multiples and the MOs that act as their focal suppliers.</p> <p>Growers with access to alternative markets are able to understand customer requirements and meet their customers' needs.</p> <p>Policy plans to develop alternative routes to market have not been implemented</p>	<p>'I suspect it might be a barrier to entry as well, that if you decided that you wanted to grow some carrots, you would have trouble selling them.'(Pol02)</p> <p>'... having that direct link with the customer. It gives us a chance.... We can talk to people and find out what they want...' (Gr03)</p>
Profit versus Planet?	<p>Integrated farm management is commonplace, as is more crop rotation</p> <p>Investment in renewable energy may be diverting resources from investment in sustainable production</p>	<p>'So there's this whole dynamic of being able to develop new crops, new months of production in this country which nobody is picking up, or very few people are picking up' (Con04)</p>

CONCLUSION AND IMPLICATIONS

Table 2 provides a summary of the results from the empirical study organised using the conceptual framework provided in Table 1. This study indicates that the dominance of the major supermarkets over the UK fresh food production sector found in prior studies by Hingley and colleagues remains a key feature of the sector; power asymmetries are at least as significant as they were when these earlier studies were reported (Hingley, 2005; Hingley & Hollingsworth, 2003; Hingley & Lindgreen, 2001). There is evidence that the way that the 'real market economy' works in practice in this sector (Olsen, 2012) is as competing managed networks with a major supermarket at the hub of each network and, collectively, supermarkets in almost complete control of the most important routes to market. While parallel networks do exist in this sector (Abrahamsen & Hakansson, 2012; Olsen, 2012) the alternative routes to market, such as farmers' markets, account for a small proportion of trade and are not a viable alternative for large-scale producers. As a consequence of the network structure and supermarket dominance, relationship management in the sector seems to be fairly rudimentary. The actors in the networks understand that the exercise of supermarket power, whether implicit or explicit, is the central factor in relationship management. Formal contracts seem to play a relatively unimportant role in the sector. While vegetable producers appear willing and even enthusiastic about investing in sustainable production, the evidence from this study is that the price pressures exerted by the supermarkets reduce margins to such an extent that investment in sustainable practices becomes difficult or impossible.

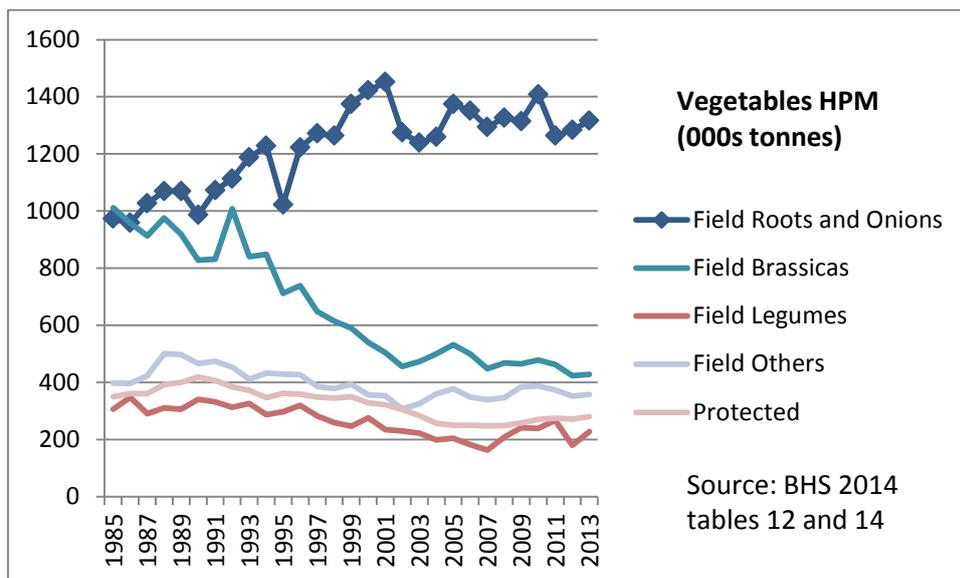
Vegetables are likely to play an important role in food production and consumption that is sustainable economically, environmentally and socially (that is, in health and animal welfare terms). In the context of globalised trade and increased global demand, sustainability in food supply chains is challenging because there are tensions between food supply efficiency (low prices) and resilience (secure supply). This paper has focused on the sustainability in economic terms of the English vegetable sector. Policy solutions aimed at supporting English vegetable producers have focused on: better (consumer) marketing (e.g. branding, adding value through the Assured Produce/Red Tractor scheme); access to alternative routes to markets (e.g. farmers' markets); codes of practice for contractual arrangements (the GSCOP and GCA); and incentives for farmers to consolidate by forming producer organisations (POs). For domestic vegetable producers these solutions are suboptimal because they are based on an inadequate conceptualisation of the reality facing growers. So, for example, there has been a lower than expected uptake of PO status, despite its links to EU funding for growers, because it was difficult for growers to disentangle from existing networks with retailers. Codes of practice do not protect growers from retailers embroiled in price wars whose power over suppliers is beyond the terms in a contract. Farmers' markets are useful but don't enable access to the majority of consumers for whom accessibility is as important as provenance. Policy makers have conceptualised retailers as simply agents of consumers and have depended on retailer-controlled private governance of the food supply chain to enforce quality and hygiene standards and low prices.

Conceptualising the supply chain as an industrial network reveals actor bonds, resource ties and activity links that go beyond arms' length transactions, formal contracts and consumer marketing. Perhaps by re-conceptualising the vegetable supply chain as an industrial network rather than a conventional market will enable the emergence of economically sustainable solutions for growers and retailers that are also optimal in societal and environmental terms.

Appendix 1: Supplies of vegetables in the UK - Home Produce Marketed (HPM 000s tonnes)

The vegetable sector in the UK is diverse. The sector is classified into field vegetables and protected edibles. Field vegetables are further classified into roots and onions (including carrots); legumes (peas and beans); and brassicas; and others. The chart below provides a summary of the home produce marketed by weight. With the exception of a few categories: carrots, onions and asparagus for example, most sectors have declined in volume terms since the mid-1980s.

Source of data: ("Basic Horticulture Statistics 2014 ", 2014) 2013 data are provisional.



Appendix2 Table 3: List of Participants

ID Code	Description
Gr01	Conventional network Medium/large mixed traditional farm, field and protected crops, East Anglia Model farm, professional manager but conservation also an important concern Main supply network avoids retailers
Gr02	Pioneer network Organic grower mainly protected crops, East Anglia Entrepreneurial young owner family farm but branched out into downstream supply Alternative supply network through traditional/farmers' markets
Gr03	Pioneer network Organic producer/lifestyle farmer field and protected crops, West Country Small farm, experience of food cooperatives, runs market stall as outlet for produce
Gr04	Pioneer network Medium/large organic grower/supplier field and protected crops, Successful box scheme, main location is West Country but also overseas
Gr05	Conventional network Young owner farmer third generation family farm, South East, sustainability champion Field scale vegetables, serving mainly ethnic wholesale foodservice markets
Gr06	Conventional network Semi-retired, traditional family medium sized farm Field scale vegetables, Eastern England
Gr07	Pioneer network Organic grower (not certified), West Country Very small niche producer (chillies) supplements income from farm, part time, lifestyle choice Serves farmers' markets and some food producers
Gr08	Conventional network Grower owner (retired) with some consultancy experience, small/medium sized farm, South East Formerly a mixed farm, most recently focused on specialist vegetable production for catering trade
GP01	Conventional network Grower/supplier of field and protected crops, based in South East Crop technical manager for large GPMO, focal supplier for retail multiples
GP02	Conventional network Supplier of field and protected crops based in South East Business Development Director for large GPMO, focal supplier for retail multiples
Con01	Conventional network Consultant/agronomist, experience of UK and overseas production Knowledge of large scale production and mainstream supply networks
Con02	Knowledge of conventional and pioneer networks Senior representative from LEAF, grower environmental standards body Broad knowledge of vegetable sector across England, conventional and organic production
Con03	Re-classified as Pol04
Con04	Pioneer network Aligned to organic or non-conventional approach to production, South East Grower consultant and writer, sustainability champion
Rep01	Experience of both conventional and pioneer networks Representative from Tomato Growers Association - mainly protected crops Knowledge of both conventional and organic production
Rep02	Mainly conventional affiliation Representative from CLA (Country Land Association) Rural business focus, traditional farming
Rep03	Mainly conventional affiliation Representative from CLA Rural business focus, traditional farming
Rep04	Conventional network affiliation Representative of British Growers Association (Senior manager) broad knowledge across field scale and protected crops
Rep05	Conventional affiliation Representative from FPC (Fresh Produce Consortium) Broad knowledge of the supply network,
Rep06	Conventional network affiliation Representative of British Growers Association (Chair) Conventional affiliation, broad knowledge of field scale and protected crops Also successful niche grower (asparagus, sprouts), based in North, farming background
Pol01	Conventional network Also a grower traditional family farm, Eastern England

	Medium/large traditional mixed farm field scale vegetables and other crops Member of the Policy Commission on the Future of Farming and Food Had been involved at a senior level in a farmer representative organisation
Pol02	Mainly experience of conventional networks Representative from Defra, senior role Extensive knowledge of horticulture across both field and protected crops
Pol03	Mainly experience of conventional networks Representative from Defra, middle manager role Extensive knowledge of horticulture across both field and protected crops
Pol04 (originally Con03)	Pioneer network affiliation Writer on food and agriculture (semi-retired) Former member of Agriculture and Food Research Council A critical voice in the policy discourse

Key: Gr = grower/farmer; GP = grower/packer marketing organisation, involved in home and overseas production; Con = grower consultant, involved in advisory role to growers (e.g. agronomist); Rep = grower representative, crop association or farmer association; Pol = policy expert (e.g. Defra horticulture specialists)

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