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# Marketing concentration and geographical dispersion

## A survey of organic farms in England and Wales

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### Abstract

**Purpose** – The purpose of this paper is to examine the proportion and distribution of organic produce sold through different marketing channels by a sample of organic farmers in three "core" areas of organic farming in England and Wales. More specifically, it conducts a quantitative analysis of marketing concentration and geographical dispersion within different travel time zones.

**Design/methodology/approach** – A quantitative database was constructed on the marketing channels and travel time zones used by 61 organic farmers to sell their produce and purchase necessary inputs. Indices of marketing concentration and geographical dispersion (outputs and inputs) were then calculated for each farm and region.

**Findings** – Results indicate a high level of marketing concentration, dominated by marketing cooperatives, direct marketing and abattoir/processors. Similar levels of concentration are recorded for the indices of geographical dispersion (especially outputs). Results vary significantly between the three regions, but it is clear that organic farmers in each region make use of different combinations of marketing channels, both local and national, in increasingly hybridised and individualised supply chains.

**Research limitations/implications** – Many organic farmers are developing hybridised supply chains, including both local and more conventional marketing channels, and further research is needed into the identified regional differences and the reasons for developing what are often very individualised marketing chains.

**Originality/value** – This is the first attempt to calculate indices of marketing concentration and geographical dispersion for organic farms in different regions of England and Wales. The paper also contributes to debates on the potential impact of organic farming on rural development and the local economy.

**Keywords** England, Wales, Farms, Organic foods, Distribution channels and markets

**Paper type** Research paper

### Introduction

Although traditionally lagging behind other European countries, the UK organic market has expanded rapidly over the past decade, with retail sales worth over £2 billion in 2008 (Soil Association, 2009). Approximately, 75 per cent of these sales are through the multiple retailers, although their share has actually fallen since 2002 due to the growth in sales through "alternative" marketing channels such as box schemes, farmers' markets, independent retail shops and farm gate sales. While the overall rate

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of growth has slowed down during the 2008/2009 economic recession, sales still managed to increase (by 1.7 per cent) in 2008. Significantly, sales in some supermarkets (e.g. Tesco) actually fell, whereas those through channels such as farmers' markets increased by as much as 18 per cent. Such has been the rapid rate of expansion in organic sales since around 2000 that knowledge about the form and nature of organic food marketing chains is unclear, at least in a UK context. There is not, for example, any clear consensus about where and, more importantly, how producers sell their organic produce.

While empirical work on organic marketing chains is limited, secondary data suggest a certain degree of differentiation in the UK organic market, with sales in multiple retail outlets slowing and those via direct/producer owned/alternative markets increasing (Soil Association, 2008, 2009). The aim of this paper, therefore, is to examine the amount of produce marketed through different marketing channels by a sample of organic farmers within three "core" areas of organic farming in England and Wales: south-east England, south-west Wales and south-west England[1]. More specifically, the paper conducts a quantitative analysis of the degree of marketing concentration within ten different types of marketing channel among the sampled farms. It also examines the geographical dispersion of both sales (outputs) and purchases (inputs) within different travel time zones from the farm. The analysis provides a "whole chain" perspective to organic farming and builds upon an earlier methodology developed by Ilbery and Maye (2005, 2006).

The rest of the paper is structured into four main sections. After providing an academic context for the research in the next section, the principal methods of data collection and analysis are then outlined. This is followed by a presentation and brief analysis of the survey results, before ending with some points of conclusion.

## Academic context

The literature on marketing channels is extensive and includes classic works on political economy and the structural form of interrelationships in generally large organizations (Stern and Reve, 1980), inter-organizational relationships (John and Reve, 1982), the environmental determinants of channel structures and processes (Achrol *et al.*, 1983), decision uncertainty (Achrol and Stern, 1988) and marketing networks (Achrol, 1997). However, none of this seminal work focuses specifically on the marketing channels used by organic farmers to distribute their produce to customers and the final consumer. Nevertheless, organic farming has been the subject of considerable research over recent years. Some of this research has focused on the motives for either producing or consuming organic food. While non-economic factors have played a role in the adoption of organic farming (Rigby *et al.*, 2001; Codron *et al.*, 2006), environmental and especially health concerns have been advocated by consumers for buying organic food (Wier *et al.*, 2008; Gracia and Magistris, 2008; Magistris and Gracia, 2008; Aldanondo-Ochoa and Almansa-Sáez, 2009). However, for some consumers, there is a preference for "local" over "organic" food as they wish to support local farmers and the local economy, in what Winter (2003) describes as a form of defensive localism.

Local marketing can be beneficial because it helps to retain the incomes of producers and consumers, as well as other businesses such as food processors and retailers, in the local economy (Sacks, 2002). However, with the exceptions of Darnhofer (2005), Lobley *et al.* (2005) and Seyfang (2006), there has been relatively little detailed analysis on the extent to which organic farming activities are economically integrated into local economies.

Lobley *et al.* (2005) reviewed the extent to which organic farming can contribute to rural development, including employment, retaining and generating value, diversification, skills, knowledge and networks, community and social capital. Likewise, Seyfang (2006) suggested that organic food supply chains can make a significant contribution to rural development by giving farmers greater control of their marketing and retaining a greater proportion of food spent in the local economy.

More recently, Lobley *et al.* (2009) examined the socioeconomic linkages of organic and non-organic farms in England. Significantly, in terms of marketing orientation, they found that:

> [. . .] organic farms [. . .] are slightly less locally orientated than their non-organic counterparts with the value of sales accounting for only 20 per cent of the total sales made by organic farms compared to 27 per cent for non-organic farms (p. 732).

Thus, organic farms are "no more connected to their local economy than non-organic farms and the value of their sales is less" (p. 372). The one major exception to this general finding was in the organic horticultural sector, which is highly connected locally (67 per cent of sales); in contrast, the non-organic horticultural sector has a more regional and national focus. Given the findings of Lobley *et al.* (2009), it is necessary to heed the call from Clarke *et al.* (2008, p. 220) for more critical and reflexive accounts of organic food networks and to challenge the "supposedly localized nature of organic food". Indeed, some researchers have suggested that organic farming has become "conventionalised" in the sense that it is dominated by conventional patterns of marketing and distribution (Guthman, 2004; Lockie and Halpin, 2005; Guptil, 2009; Rosin and Campbell, 2009).

Closely linked to the rural development and marketing impacts of organic farmers, geographers have been interested in the distribution of organic farming and especially the development of "organic clusters" (Risgaard *et al.*, 2007; Sutherland and Brown, 2007). In a UK context, for example, organic farming is still not penetrating the intensive agricultural "core" (Ilbery *et al.*, 1999), with greater uptake in more "marginal" farming areas outside the so-called "bread basket" (especially East Anglia) where the organic premium is presumably less of an attraction (Ilbery and Maye, 2008; Gabriel *et al.*, 2009). The literature suggests two further reasons for such clustering. First, much organic knowledge is place specific and passed on by word-of-mouth (i.e. as forms of "tacit knowledge") rather than through official advisory systems, making it easier for farmers to adopt organic practices in areas where they can access advice and moral support (Morgan and Murdoch, 2000). Second, recent research in the USA suggests that "edge effects" may be significant and that finding a location that is protected from potentially incompatible uses may be an important factor for certified organic growers so that they can avoid the need for buffer zones to protect their farms from the effects of neighbouring conventional farms – who may be using genetically-modified varieties (Parker and Munroe, 2007). Whatever the reasoning, the clustering of organic growers and spatial concentration of organic food production may mean that local marketing channels soon become saturated, encouraging the use of more distant sales. This would help to confirm Lobley *et al.*'s (2009) finding that organic farms are no more connected to the local economy than non-organic farms.

With regard to more technical information on the marketing of organic food, research has so far concentrated on two key areas: first, in improving market information, for example, for organic vegetables and arable crops; and second, in initiatives to improve

collaboration and efficiency in the organic food chain. However, they have not led to a greater understanding of the complexity and dynamics of organic marketing chains more generally. As Smith and Marsden (2004) note, limited attention has been given to the potentially differentiated marketing channels that may have evolved within the sector. Nevertheless, Morgan and Murdoch (2000) noted a division within the organic producer community between pragmatic and purist growers. While the former recognize that supermarkets dominate retail food markets and so must be used to build the organic food market, the latter assert that the ethics of organic growing are contrary to all that supermarkets represent. More recently, Aertsens *et al.* (2009), focusing specifically on supermarket sales of organic food in Belgium, found that different groups of supermarkets have different strategies for the marketing of organic produce. However, their analysis did not extend as far as comparing supermarket sales with other types of organic marketing channels.

Overall, this review of relevant literature highlights a dearth of information on the different marketing channels used by organic farmers and whether or not they sell their produce through local and/or more distant outlets. The following section outlines the "whole chain" methods employed to help address these empirical gaps.

## Methods

Through the application of location quotient statistics, three "core" areas of organic farming in England and Wales were identified from a database provided by Defra (Ilbery and Maye, 2008):

| Region | County |
|---|---|
| South-east England: | East and West Sussex |
| South-west Wales: | Ceredigion and Pembrokeshire |
| South-west England: | Devon and Somerset |

Within these specific counties, 61 in-depth interviews were conducted with a range of organic businesses in terms of farm size, farm type and marketing channels[2]. This represents 5 per cent of organic businesses in the selected counties, meaning that results are illustrative and not necessarily representative of all organic farms in those regions. The farms were selected according to three main criteria: first, those who had earlier completed a postal questionnaire survey and agreed to participate in the in-depth interviews; second, those who appeared on a Defra organic database; and third, those recruited through a process of snowballing. This ensured a diverse sample of organic farms in terms of farm size, farm type and farming backgrounds. As part of a much larger and detailed "whole chain" analysis of organic businesses, and building on previous methodologies developed by Ilbery and Maye (2005) and Courtney *et al.* (2006), information was collected on the proportion of produce, in terms of value, sold through up to ten different distribution channels. The main organic distribution channels are as follows:

(1) direct marketing;
(2) independent retailers;
(3) supermarkets;
(4) wholesalers;

(5) abattoir/processor;
(6) marketing cooperative;
(7) catering;
(8) public sector procurement;
(9) other farmers; and
(10) livestock markets.

Thus, as part of keeping the number of distribution channels to 10, the direct marketing channel includes one single figure for box schemes, farm shops, farmers' markets, farm gate sales and distribution rounds rather than separate figures for each element. While recognising that this is a slight weakness of the method, the number of marketing channels needed to be kept to a reasonable number. The proportion of products sold through both the different marketing channels and the four travel time zones from the farm (local: $<30$ minutes; regional: 30-60 minutes; national: over one hour and international: non-UK) for each of the 61 organic farms were entered into a specially created database. Similar information on the sourcing of farm inputs was also included in the database.

The database permitted the calculation of three separate indices in relation to marketing concentration and geographic dispersion: an index of marketing concentration and indices of geographical dispersion for both the sale of outputs and purchase of inputs. Each of the following measures was based on the Herfindahl-Hirschman index, a commonly used and accepted measure of market concentration.

*Index of marketing concentration*

This indicates the proportion of outputs sold through each marketing channel and is calculated by squaring the proportion of organic produce sold through each marketing channel (in terms of value) and summing the resulting numbers. Results can range from close to 0 (when an equal proportion of produce is sold through each marketing channel) to 1 (when all produce is sold through just one marketing channel); the closer to 1, the higher the degree of marketing concentration. Thus, for an organic beef farm selling 50 per cent to independent retailers, 24 per cent to an abattoir/processor, 24 per cent to a marketing cooperative and 2 per cent to other farmers, the index of marketing concentration is calculated:

$$(0.50)^2 + (0.24)^2 + (0.24)^2 + (0.02)^2 = 0.25 + 0.06 + 0.06 + 0.00 = 0.37 \quad (1)$$

By squaring the proportion of produce sold through each marketing channel, the index gives greater weight to channels with high amounts of produce, e.g. $0.9^2 = 0.81$, whereas $0.5^2 = 0.25$, thereby accentuating tendencies towards a relatively small number of outlets.

*Indices of geographical dispersion*

These are used to indicate the proportion of outputs sold and inputs bought at local, regional, national and international scales. They are calculated as for the index of marketing concentration, but this time using four travel time zones for the sale of outputs and purchase of inputs, respectively. Thus, for an organic beef farm selling 75 per cent of output locally and 25 per cent regionally, the index of geographical dispersion for outputs is calculated:

$$(0.75)^2 + (0.25)^2 + (0.00)^2 + (0.00)^2 = 0.56 + 0.07 + 0.00 + 0.00 = 0.63 \quad (2)$$

If the same organic beef farm sources 15 per cent of its inputs locally, 25 per cent nationally and 60 per cent internationally, the index of geographical dispersion for inputs is calculated:

$$(0.15)^2 + (0.00)^2 + (0.25)^2 + (0.60)^2 = 0.03 + 0.00 + 0.06 + 0.36 = 0.45 \quad (3)$$

Calculation of these indices allows the relative significance of the different marketing channels and travel time zones to be assessed for the whole sample, as well as any inter-regional differences to be highlighted.

## Results

The size of sampled businesses varied from just 1.1 ha to a massive 4,500 ha, with the largest farms occurring in south-east England and the smallest in south-west England. A vast majority (74 per cent) were fully organic and only three businesses (two in south-east England and one in Wales) had more conventional than organic land. There was some evidence of differentiation in terms of marketing channels, as advocated by Guthman (2004) and Lockie and Halpin (2005). Thus, on the one hand, there were organic commodity producers who sold their raw products directly to supermarkets, processors and organic cooperatives such as Organic Milk Suppliers Cooperative (OMSCo) and Organic Livestock Marketing Cooperative and were not trying to either add value or sell their produce locally. On the other hand, the usually smaller organic growers (with notable exceptions) were attempting to produce for the local economy and to sell their produce either directly to the final consumer (via farm gate sales, farm shops, box schemes and farmers' markets) or to independent retailers, a range of catering establishments and other local farmers.

However, a closer analysis suggests that this simple binary distinction between national/commodity markets and local/alternative chains is not always helpful; in reality, there is considerable "blurring" or hybridisation and a number of organic producers often combine different types of national and local marketing channels. Thus, mainly commodity producers occasionally sell small amounts of produce locally, just as mainly local producers sometimes have to use conventional channels to dispose of surplus produce. Yet, others deliberately use a combination of national commodity markets and local "alternatives" such as box schemes, farmers' markets and independent retailers. This allows them not to be over-dependent on just one main outlet and to complement commodity prices with adding value by processing and/or marketing their produce directly to the final consumer. However, at the time of the survey, some producers gave the impression that local markets were becoming saturated and so they deliberately sought to complement these with more distant marketing channels.

Despite an increasing trend towards hybridisation, an overall index of marketing concentration of 0.76 for the 61 farms indicates a quite high level of concentration in the use of the different distribution channels. This suggests that most organic farms tend to sell a majority of their produce through just one type of marketing channel. The figure rises to a high of 0.83 in south-west England and falls to lower than average figures of 0.74 for south-east England and 0.71 for south-west Wales (Table I). Significantly, 19 farms had a marketing concentration index of 1.0, indicating that all of their produce was sold through just one of the ten types of distribution channel. Just over a half

| Region | Direct marketing | Independent retailers | Supermarkets | Wholesalers | Abattoir/ processor | Marketing cooperative | Catering | Public sector procurement | Other farmers | Livestock markets | Overall index |
|---|---|---|---|---|---|---|---|---|---|---|---|
| South-east England | 0.27 | 0.10 | 0.08 | 0.08 | 0.11 | 0.14 | 0.07 | 0.00 | 0.13 | 0.01 | 0.74 |
| South-west England | 0.19 | 0.08 | 0.02 | 0.02 | 0.38 | 0.23 | 0.01 | 0.00 | 0.07 | 0.00 | 0.83 |
| South-west Wales | 0.16 | 0.01 | 0.00 | 0.10 | 0.14 | 0.45 | 0.06 | 0.00 | 0.03 | 0.04 | 0.71 |
| Total sample | 0.21 | 0.07 | 0.03 | 0.07 | 0.20 | 0.28 | 0.05 | 0.00 | 0.08 | 0.02 | 0.76 |

**Table I.**
Indices of marketing concentration, by distribution channel and study region

of these (ten) were in south-west England, nine of which sold all of their produce to either a processor or a marketing cooperative, suggesting that they are essentially commodity producers with little interest in adding value or selling to local consumers.

The overall index of marketing concentration is dominated by three marketing channels: marketing cooperatives (0.28), direct marketing (0.21) and abattoir/processor (0.20); the remaining channels contribute very little to the index (Table I). However, there are some differences between regions, with marketing cooperatives (0.45) accounting for a high proportion of the overall index in south-west Wales, but much less in south-west England and, especially, in south-east England. In south-west Wales, many organic milk and meat producers were cooperative members who tended to sell their products to OMSCo, Calon Wen (organic marketing cooperative in Pembrokeshire) and Craig Farm (organic meat producer group in Powys). The greater use of marketing cooperatives in south-west Wales relates to its early establishment as one of the original concentrations of organic farming in England and Wales (Ilbery *et al.*, 1999). Thus, while organic producers in south-west Wales often supply national markets (see below), they do so because of a strong organic heritage in their region. In a similar way, abattoirs/processors dominate the marketing concentration index in south-west England (0.38), followed by marketing cooperatives (0.23). Direct marketing is the primary marketing channel in south-east England (0.27), but this is not as high as for marketing cooperatives in south-west Wales and abattoirs/processors in south-west England. It could be that the greater value of organic produce sold through direct marketing and, to a lesser extent, other farmers, independent retailers and catering establishments reflects the more prosperous nature of the regional economy in south-east England, with its proximity to London, and the demand for local/organic food from such outlets by relatively wealthy consumers. Although three marketing channels dominate overall sales among the 61 surveyed producers, considerable variation in the use of specific and different combinations of channels was found in each region. This emphasizes the often complex and individualised ways in which organic products are marketed.

Turning to the index of geographical dispersion (outputs) and thus focusing on where, rather than how, the organic produce is sold, an overall value of 0.84 again indicates a relatively high concentration of distribution. Thus, producers tend to sell most of their produce via one marketing channel within just one of the four travel time zones. The figures are similar for all three regions, rising to 0.89 in south-west England and falling to 0.81 in south-east England (Table II). Interestingly, 33 of the 61 businesses (55 per cent) had a maximum geographic dispersion index of 1.00 – meaning that all of their produce was sold within just one travel time zone. Again, the results differ by region, rising to a very high 71 per cent in south-west England and falling to 52 per cent in south-west Wales and just 45 per cent in south-east England. Of the 33 selling all of their produce within just one travel time zone, 16 sold locally (within 30 minutes of the farm), five regionally (30-60 minutes) and 12 nationally

| Region | 0-30 minutes | 30-60 minutes | Rest of UK | Overall index |
|---|---|---|---|---|
| South-east England | 0.53 | 0.09 | 0.38 | 0.81 |
| South-west England | 0.38 | 0.30 | 0.32 | 0.89 |
| South-west Wales | 0.33 | 0.13 | 0.53 | 0.83 |
| Total sample | 0.42 | 0.16 | 0.42 | 0.84 |

**Table II.** Indices of geographic dispersion (outputs), by study region

(over 60 minutes). Whereas the focus in south-east England is on selling locally (seven of the ten selling everything within one travel time zone compared to three selling nationally), the situation is reversed in both south-west England (five local, four regional and three national) and south-west Wales (four local, one regional and six national).

Further analysis of the index of geographical dispersion for outputs reveals that there is indeed clear evidence of differentiation in the sense that 42 per cent of all sales are local and 40 per cent are national (just 16 per cent regionally and 2 per cent beyond the UK). This contrasts with the findings of Lobley *et al.* (2009), who found a much lower percentage of local sales (20 per cent). However, one has to be careful with such direct comparisons because Lobley *et al.* conducted a national survey whereas the findings in this paper relate to three "core" areas of organic production; the definition of "local" also varies between the two studies. Indeed, the situation varies between the regions. Thus, while 53 per cent of sales in south-east England is local, the same amount (53 per cent) in south-west Wales is national; in contrast, there is a more even distribution of sales in south-west England across the three distance zones within the UK (38 per cent local, 30 per cent regional and 32 per cent national). Overall, therefore, a picture emerges whereby greater use is made of direct marketing channels in south-east England to sell a significant proportion of organic produce locally, whereas in south-west England and south-west Wales, marketing cooperatives and processors dominate as more produce is sold regionally and especially nationally. As some producers in Ceredigion (south-west Wales) suggested, marketing locally was very difficult, with restricted opportunity to add value. This relates to the generally small scale of production, lack of suitable local labour, distance from major population centres, lack of local processing capacity for meat and the amount of time and effort to sell produce via farmers' markets.

Despite these general findings and inter-regional differences, it needs to be emphasized that examples of the use of a wide and complex range of marketing channels and different travel time zones can be found in each region. Thus, attempts to contrast national commodity markets and local/direct markets, as well as regions, must be treated with caution. Producer supply chains are also in a state of flux, particularly for those pursuing more direct and/or local markets. One of the reasons offered for this is the competition resulting from the growth of large, national "alternative" forms of direct marketing such as Riverford and Abel and Cole. The analysis actually revealed a retrenchment away from some forms of direct marketing for some businesses and a tendency to orientate towards certain types of marketing channel, such as producer cooperatives, as indicated by the index of marketing concentration. This trend also relates to the difficulty of trying to add value to produce before selling it. Although examples of adding value can be found in each region, it was often seen as involving much more work and a number of respondents simply did not have the time and/or capacity to consider adding value to their produce. As one yogurt producer remarked "making it is easy, selling it is not" (SE205). It is not surprising, therefore, that it is often cheaper and more efficient not to add value and to sell produce directly to marketing cooperatives and/or processors, mainly outside the local area.

There was a desire by a number of the 61 farmers to either produce their own inputs or purchase them from local suppliers. Nevertheless, many were forced to buy crucial, primary inputs such as seed and feed from outside their own region. In many cases, input suppliers are located relatively long distances away from the farm, with some supplies actually coming in from abroad. This "problem" not only seems to be particularly acute

in terms of organic livestock feed (especially proteins) and cereal/grass seeds and plants but is also noticeable in some regions for other inputs such as packaging, labels, bottles, boxes and polythene. One good example of this included the purchase of vegetable plants and seeds by horticultural growers in both south-east England and south-west Wales from specialist providers in East Anglia. These providers produced what was perceived to be a far superior seed and price, quality, reliability, availability and trust were important considerations for the choice of input suppliers for many organic businesses. An overall index of geographical dispersion of 0.69 for inputs indicates a reasonably high level of concentration among the main travel time zones, but much less than the figure of 0.84 obtained for outputs. This suggests that organic producers have less control over sourcing input supplies than they do when selling their outputs, having to source the former from wherever possible. There is again some variation between the regions, rising to 0.70 in south-east England and 0.76 in south-west England and falling to 0.61 in south-west Wales (Table III). Just ten out of 59 businesses providing the necessary information had a maximum geographical dispersion index for inputs of 1.00, compared to 33 businesses with an index of 1.00 for outputs. These are fairly evenly distributed between the regions (four in south-east England, four in south-west England and two in Wales), with four sourcing just locally (within 30 minutes of the farm), four regionally (30-60 minutes) and two nationally (over 60 minutes).

Further analysis of the index of geographical dispersion for inputs reveals limited evidence of differentiation because three travel time zones have some significance in relation to inputs. Local sourcing accounts for 46 per cent of all inputs and, when this is added to the 20 per cent of inputs that are sourced regionally, two-thirds of all inputs are obtained from within 60 minutes of the farm. The remaining one-third is sourced nationally and internationally. Yet again, however, there are notable differences between the regions. Thus, while south-west England sources 88 per cent of its inputs within either 30 minutes (52 per cent) or 60 minutes (35 per cent) of the farm, south-west Wales can manage just 59 per cent and south-east England 56 per cent; in the latter, over 40 per cent is sourced nationally and internationally. The overall pattern for inputs, therefore, is quite complex but less concentrated than for outputs. This situation is quite dynamic in that change in input suppliers was quite common as producers chased down the best offers in order to counter spiralling input costs. As a result, there was often a decline in the use of local supplies as they became too expensive. Another response was to reduce dependence on "bought in" inputs and produce more requirements on the farm itself; good examples included home-grown cereals, lupins and increasing the red clover content of grass (to increase the protein content of hay and silage).

## Discussion and conclusions

The type of marketing channel used by organic farmers in the case study regions in England and Wales is clearly influenced by place, both in terms of where and how

| Region | 0-30 minutes | 30-60 minutes | Rest of UK | Elsewhere | Overall index |
|---|---|---|---|---|---|
| South-east England | 0.36 | 0.20 | 0.40 | 0.05 | 0.70 |
| South-west England | 0.52 | 0.35 | 0.12 | 0.00 | 0.76 |
| South-west Wales | 0.51 | 0.08 | 0.42 | 0.00 | 0.61 |
| Total sample | 0.46 | 0.20 | 0.32 | 0.02 | 0.69 |

**Table III.** Indices of geographic dispersion (inputs), by study region

producers sell their outputs and purchase their inputs. Thus, while marketing cooperatives, direct marketing and abattoirs/processors are the dominant channels used, and their importance varied quite significantly between the three study regions (Table I). So, marketing cooperatives are easily the most dominant channel used in south-west Wales, where producers have traditionally used both supply and marketing cooperatives to purchase their inputs and, because of relative remoteness and the limited local demand for organic products, to sell their outputs mainly beyond the region and into England. At the other extreme, direct marketing, independent retailers and other farmers dominate sales by organic businesses in south-east England. Here, producers prefer to work more independently and try to "tap into" the relatively prosperous nature of the local and regional economy and the increasing demand from wealthy consumers to buy local and/or organic food (local and organic preferably). Falling in between these two extremes is south-west England, where especially abattoirs/processors and also marketing cooperatives account for a majority of all produce sold, with relatively little interest in forms of direct marketing.

There is a fairly clear relationship between the main type(s) of marketing channels used and the geographical dispersion of outputs. Thus, the dominance of marketing cooperatives in south-west Wales ensures that just over a half of all produce is sold outside the region and mainly in England, just as the preoccupation with direct marketing and local marketing channels in south-east England means that a similar proportion is sold within just 30 minutes of the farm. Neither of these regions sell much of their produce regionally (less than 10 per cent), which contrasts with south-west England where there is a more even distribution of selling across the three time distance zones, including 30 per cent regionally. These results call into question the view of Seyfang (2006) who suggested that organic food supply chains help to retain the food spent in the local economy. Instead, they agree with the findings of Lobley *et al.* (2009) that, with the possible exception of south-east England and some horticultural producers, organic businesses are not necessarily connected to the local economy. Indeed, the marketing orientation of many organic businesses is quite complex and individualised, necessitating more reflexive analyses of organic food networks (Clarke *et al.*, 2008). Indeed, the analysis presented here would suggest an increasing hybridisation of organic marketing channels in a national market that is becoming more competitive and pressured by external economic forces. Indeed, despite some fairly clear regional differences, organic farmers in each region make use of different combinations of marketing channels, exploiting both local/regional and national channels in increasingly hybridised supply chains. This, in turn, suggests that Morgan and Murdoch's (2000) division of organic growers into either pragmatists or purists, in terms of their marketing orientation, is no longer accurate.

The often hybridised nature of individual organic business supply chains is also influenced by the geographical dispersion of their necessary inputs. So, despite a focus on selling locally, businesses in south-east England suffer from a relative dearth of local organic input supplies and often have to source important primary inputs (e.g. feed and seed) from national sources. South-west Wales is in a similar position, but its sourcing of national supplies is also complemented by a much higher proportion being sourced locally. Yet again, south-west England is different, sourcing small amounts from national sources and obtaining the vast majority of its inputs from local/regional sources.

However, one has to be careful when making generalisations about organic inputs. It is necessary to distinguish between intermediate (e.g. wholesalers and merchants) and primary (e.g. growers and manufacturers) suppliers because using a local merchant, for example, could mean that inputs are actually being sourced from much further afield. The difficulty in sometimes sourcing vital, primary inputs, and their escalating prices, has seen a much greater emphasis, in all regions, being placed on increasing the use of on-farm inputs. Overall, putting buying and selling strategies together, south-west England seems to be the most self-contained region compared to the more national activities of south-west Wales and the local initiatives of south-east England.

It might be expected that the tendency for organic farms to cluster in particular locations and regions, as identified by Risgaard *et al.* (2007) in Denmark and both Ilbery and Maye (2008) and Gabriel *et al.* (2009) in the UK, would encourage cooperation between growers and greater use of local marketing channels. However, clustering might have just the opposite effect and saturate local markets, especially in areas with a high concentration of organic farming but a relatively low demand for organic food (as in south-west Wales). While cooperation among growers is normal in south-west Wales, this does not seem to be the case in either south-west or south-east England.

In practical and policy terms, the paper has highlighted the particular difficulty that organic producers often experience in sourcing key organic inputs such as organic soya. A limited number of certified suppliers can result in higher transaction costs for the farmer, limit diversification potential and viability and cause leakages of income out of local economies. While farmers could be encouraged to add value to their organic produce on the farm to help offset this leakage, a number of producers in the survey have found both this and selling direct to local consumers quite difficult. This, in turn, raises important questions for policy, where the often held view that local and direct marketing chains are a panacea for rural development needs some distillation and differentiation. Just as local and direct chains can work for some, there is also a need to recognise the importance of national marketing channels (including sales to supermarkets) for other organic farmers. One also needs to better understand the relative merits of "organic" produce in relation to "local" produce, recognising that for some consumers, "local" is preferred over "organic". It is often the case that locally produced organic food is not available to consumers.

This paper has combined the use of "whole chain" analyses with that of specific travel time zones to identify clear regional differences in marketing concentration and geographical dispersion in organic farming in England and Wales. Replication of the methodology to other agricultural sectors and especially to conventional farmers would help to provide deeper insights into the use of marketing channels and to confirm the results presented in this paper. Further detailed and qualitative research is now needed to help understand the importance of place in organic production and marketing, the complexity and hybridisation of supply chain arrangements and the impact of economic and political forces that are beyond the control of individual organic businesses.

## Notes

1. This is part of a much wider research project on "the socioeconomic aspects of local and national organic farming markets", funded by Defra (Department for Environment, Food and Rural Affairs) and conducted between 2007 and 2009.

2. For this study, "farm type" refers to a farm's main organic enterprise(s), e.g. dairy, beef, horticulture and mixed. A "marketing channel" is the route taken to get the organic produce from the producer to the customer or final consumer; it can range from local (e.g. farmers' market) to national (e.g. supermarket).

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