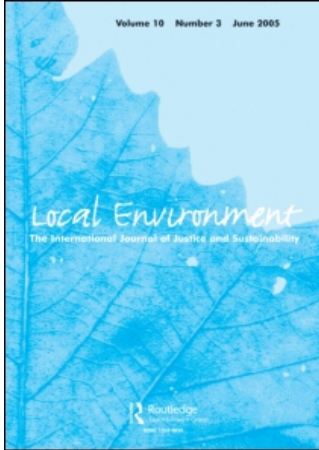


This article was downloaded by:[London School of Economics & Political Science]  
On: 1 July 2008  
Access Details: [subscription number 788670702]  
Publisher: Routledge  
Informa Ltd Registered in England and Wales Registered Number: 1072954  
Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



## Local Environment

### The International Journal of Justice and Sustainability

Publication details, including instructions for authors and subscription information:  
<http://www.informaworld.com/smpp/title~content=t713394137>

#### Measuring the local economic impact of National Health Service procurement in the UK: an evaluation of the Cornwall Food Programme and LM3

Jenny Thatcher<sup>a</sup>; Liz Sharp<sup>a</sup>

<sup>a</sup> Division of Archaeology, Geography and Environmental Science, University of Bradford, Bradford, UK

Online Publication Date: 01 April 2008

To cite this Article: Thatcher, Jenny and Sharp, Liz (2008) 'Measuring the local economic impact of National Health Service procurement in the UK: an evaluation of the Cornwall Food Programme and LM3', *Local Environment*, 13:3, 253 — 270

To link to this article: DOI: 10.1080/13549830701669005  
URL: <http://dx.doi.org/10.1080/13549830701669005>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article maybe used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

# Measuring the local economic impact of National Health Service procurement in the UK: an evaluation of the Cornwall Food Programme and LM3

Jenny Thatcher and Liz Sharp\*

*Division of Archaeology, Geography and Environmental Science, University of Bradford,  
Bradford, UK*

**ABSTRACT** Local procurement by public bodies is one type of short food supply chain (SFSC), which have been argued to contribute to economic regeneration and local sustainable development. In the current UK policy environment, quantifying actual local economic gains could add much-needed weight to arguments in favour of local procurement in the NHS and other public bodies. To aid such quantification, this paper exemplifies and evaluates the use of a “quick and simple” tool called LM3, designed to measure the local economic benefit of initiatives like SFSCs. LM3 is calculated for the Cornwall Food Programme (CFP), a localised procurement initiative. The findings confirm that the CFP has a considerable impact on the local economy. Notwithstanding this conclusion, difficulties in data collection combined with inaccuracies inherent to the LM3 process created a large margin of error in the findings. Moreover, a qualitative evaluation of the CFP added a valuable understanding of the wider economic impact of the CFP. The use of an even simpler and more reliable “LM2” multiplier tool is recommended for future studies, accompanied by some qualitative evaluation to create a fuller picture of local economic impacts.

## Economic regeneration and “buying local”

Economic development of local communities requires two kinds of monetary investment: first, money must be attracted from external sources in terms of private investment or direct support from government bodies; second, that money must be retained in the local economy through reinvestment (Social

---

\*Corresponding author. Email: e.sharp@bradford.ac.uk

Exclusion Unit 2000, quoted in Sacks 2002, p. 5). Hines (2000), Williams (1996) and Dobson (1993) all argue that the latter can only be achieved through a shift in the focus of economic activity, and meeting local needs locally wherever possible. Persky *et al.* (1993, p. 18) point out that, under the name “import substitution”, this kind of localisation “has played an essential role in the development of many, if not most, major metropolitan areas of the world”.

Cornwall, the English county that provides the case study for this paper, is one of the most economically disadvantaged areas in Europe. Roger Thompson of Cornwall Business in the Community states, “In Cornwall, £500 million per year is spent on food. 75 per cent of that is imported from outside Cornwall. If we reduce that by just 1%, we have invested £5 million in our local economy” (quoted in Bullock 2000, p. 5).<sup>1</sup>

However, the current world trade system is geared towards export-led economies and large corporations. Neo-liberal doctrines of globalisation and comparative advantage, and the international rules that back them up, mean that businesses must be internationally competitive (Lucas *et al.* 2002, Hines 2000). Public bodies purchasing goods and services are required to shop around the globe to find the “cheapest deal”. European Union procurement regulations are very clear that discrimination against potential suppliers for public contracts based on location is not allowed (European Commission [EC] 2004), and advice on the website of the UK National Health Service (NHS) Purchasing and Supply Agency (PASA) (the central body that establishes and administers the majority of NHS supply contracts) emphasises the fact that, “[g]enerally speaking, restricting competition to the local supplier base is likely to compromise the delivery of value for money and therefore contravene domestic public procurement policy” (PASA 2007).

There is apparently little space within this economic and political paradigm for public bodies to select products or services that bring benefits above and beyond cost savings, such as local jobs or an injection of cash into an otherwise depressed area (Simms *et al.* 2003 Desai and Riddlestone 2002). “Import substitution” has become a dirty term.

### **Public procurement and sustainable development**

This emphasis on least-cost criteria for public procurement is not presented in every UK government policy document. The Sustainable Development Strategy (Department for Environment, Food and Rural Affairs [Defra] 2005) and its Sustainable Procurement Strategy (Defra 2006a) both highlight the need to integrate social benefits such as local economic regeneration in public spending decisions, and reducing the environmental impact of the entire supply chain. The Food and Health White Paper, 2004 (quoted in National Institute for Clinical Excellence [NICE] 2005, p. 2) emphasises that NHS food purchasing can contribute to the sustainability of the local community; likewise the government’s Food Industry Sustainability Strategy (Defra 2006b) makes a particular case for sustainable food procurement through tenders from small and medium-sized enterprises (SMEs).

These contradictions are highlighted by the Sustainable Procurement Task Force (Defra 2006a), which suggests that current guidance gives purchasing officers no clear direction or incentive to include sustainability criteria such as local regeneration in their purchasing decisions. It quotes one local authority procurement officer:

The savings required by implementation of the Gershon review [of UK public spending – see Gershon 2004] are generally perceived as diametrically opposed to achieving sustainable procurement. The decision has to be made: do you consider SD [sustainable development] benefits and pay extra for it or do you go for a lower price in light of efficiency savings. The lower price tends to win as the council is being rigorously assessed on Gershon. (Defra 2006a, p. 52)

This lack of clarity, coupled with the regulations precluding the specification of location in supply contracts, often leads procurement officers to believe that local sourcing is impossible. One of the key recommendations of the Sustainable Procurement Strategy is the need to build capacity among procurement professionals so that they can negotiate the balance between the need to save money and demands for sustainable procurement.

While the rhetoric of the strategies mentioned above may seem encouraging, they lack muscle (Sustain 2006), focusing solely on micro-level adaptation and voluntary action rather than macro-level changes such as new legislation or changes to the neo-liberal approaches to economic development described above.

Nevertheless in recent years a growing body of micro-initiatives have together offered some resistance to the standard economic system (Hedges and Zykes 2003). In particular, sustainable food initiatives are emerging in Europe and the US that seek to benefit farmers, consumers and the environment (for example Bradford Food Information Trust [B-FIT] 2003, Sustain 2002a, Hines 2000, Pretty 2001), with emphasis on direct connections between producer and consumer, quality produce and a fair price – so-called Short Food Supply Chains (SFSCs) (Renting *et al.* 2003).

### Sustainable short food supply chains

A distinction can be made between *local* SFSCs, which sell food grown or processed in the region of sale, for example, farmers' markets, vegetable box schemes, community-supported agriculture and farm shops, and "spatially extended" SFSCs, where food is marketed on the basis of its origin in a particular region (Parmaggiano cheese, for instance) or its cultivation through particular methods (fair trade and organic products, for example) (Ilbery and Maye 2005, p. 234, Marsden *et al.* 2000). While Ilbery and Maye (2005) are right to point out that not all SFSCs are necessarily more sustainable than conventional supply chains, there is some evidence indicating that *local* SFSCs can contribute to sustainable development on environmental, social and economic grounds.

1. *Environment.* Local food clearly accrues less food miles than that imported from elsewhere, and, if seasonal, will usually use less energy (Defra 2006b). The Foundation for Local Food Initiative's (F3's) study (2003) finds that producers engaged in a local SFSC are likely to reduce their impact on the local

environment in other ways such as engaging in land management schemes or converting to organic.

2. *Social*. Local producers can provide affordable fresh food to local people as well as re-connecting them with their food supply. Halweil (2002, p. 47) mentions the transformation achieved by a food-buying coop on the former “food desert” of the Hartcliffe estate in Bristol, UK, where residents now enjoy access to fresh, local, seasonal food, and a newly created sense of community cohesion. Feagan *et al.* (2004) also discuss the role of farmers’ markets in helping people to make direct connections with local food producers.
3. *Economic*. F3 (2003) concludes that locally oriented businesses are 24 times as likely to create new jobs in the area and twice as likely to offer those new employees training, six times more likely to buy from local suppliers and more than twice as likely to have direct contact with their customers, as well as being more likely to use existing local shops and markets for their own sales. A study of a local organic vegetable box scheme in Cornwall, UK, revealed that for every £1 spent on the scheme, £2.59 was generated for the local economy (Ilbery and Maye 2005, Sacks 2002).

Finally, it is important to note that while local SFSCs can be a step towards more sustainable local economic development, the impact of micro-level initiatives is severely restricted by the fact that three-quarters of the food purchased in the UK is purchased in a supermarket (Council for the Protection of Rural England [CPRE] 2002). Feagan *et al.* (2004, p. 250), in their investigation of consumer motivation at Niagara region farmers’ markets, point out the possible limitation of local food systems as “perhaps only ‘irritating’ corporate dominance of the food sector”.

### **The role of public procurement in delivering sustainable SFSCs**

Public-sector catering as a whole makes up approximately 7% of total expenditure on food consumed in the UK (Sustain 2002b). The NHS is the largest single purchaser of food in the UK, and its annual budget of around £500 million (Leach 2003) indicates considerable potential to open up new markets for local food.

The discussion above has focused on the benefits of truly sustainable SFSCs for economic, social and environmental well-being, but has also highlighted the problems with implementing them on the ground, particularly where the public purse is concerned. However, albeit on a small scale, sustainable SFSCs are emerging in the public sector. An increasing number of public bodies including local authorities, housing associations, schools and NHS Trusts are experimenting with and succeeding in implementing SFSCs (Sacks 2005, Morgan and Morley 2002). There is evidence to imply that these schemes are indeed bringing wider sustainability benefits, but in the current UK public-sector climate with its emphasis on spending efficiency (Gershon 2004) and lack of clarity around legalities (see above), there is a need for empirical research to quantify and publicise the benefits of individual SFSC schemes. Evidence demonstrating that local public procurement regenerates communities remains anecdotal (Sustain 2002a, Sacks 2002, p. 3).

### The Multiplier Effect and LM3

First developed by John Maynard Keynes, the Multiplier Effect of an investment is said to be the number of times that that investment is spent within an economy before it leaves the area, and is a calculation of the total value of an investment to the local economy (Sacks 2002). It has been defined in simple terms in the following equation, where Direct Effects are the value of the initial investment into the area, and Indirect Effects are the spending generated by that initial investment (Walsh 1986):

$$\text{Multiplier} = (\text{Direct Effects} + \text{Indirect Effects}) / \text{Direct Effects}$$

An example of how the Multiplier Effect works is given in Box 1.

#### Box 1. Illustration of the Multiplier Effect

If £1 is given to an individual in a particular community and that individual then spends the whole of that £1 buying a loaf of bread from a local baker, then the total value of that £1 in the local economy is actually £2. The first individual has a locally purchased loaf of bread worth £1, and the baker still has £1 to spend on other goods and services in the local area (a multiplier effect of 2).

If, however, the same individual spends only 50 pence on bread from the baker and uses the other 50 pence to buy an item from a mail-order catalogue, then half of the money has left the local economy and the net local income is only £1.50 (a multiplier effect of 1.5).

Calculations of this type are not usually limited to one “round”. In reality the original £1 investment in the example above would be “followed” through the hands of all the people who received it until it had completely left the local economy. For example the baker, on receiving fifty pence for a loaf of bread, might decide to spend 30 pence on a cup of tea at a café next door, and the remaining 20 pence might go towards the rent of his or her premises. So after the second round of spending, 30 pence is definitely still in the local area, but the remaining 20 pence may have left, or “leaked” (Walsh 1986), depending on where the baker’s landlord lives. The greater the net income for the local economy of the initial investment, the higher the Multiplier Effect is said to be. Research has shown that the majority of the money entering a local economy has leaked by the third round of spending, and that practically all of it has gone by the twelfth (Sacks 2002, Walsh 1986).

Calculation of Multiplier Effects is a complex and lengthy business, and requires the expertise of economists to complete comprehensively. However the New Economics Foundation (Nef)<sup>2</sup> has recognised the potential benefit of this type of

calculation in evaluating the impact of spending within communities. Nef's Local Multiplier, or LM3, claims to provide a simple method for the non-economist to measure and understand the Multiplier Effect of money within an area (Sacks 2002).

LM3 is so called because it only traces the first three "rounds" of spending of an investment, which in most cases will incorporate the vast majority of spending (Sacks 2002). Nef has developed a survey that can be used to collect the information required, and provides instructions on how to calculate the LM3 from the information given. The end figure is simple to understand and provides a graphic representation of impact – the result is a number between 1 and 3, where 3 means that 100% of the initial investment has stayed within the local economy and 1 means that 100% has left. In *The money trail* (Sacks 2002), Nef also outlines a variant of the LM3 tool, called LM2, which only covers the first two rounds of spending, and which ends with a figure between 1 and 2.

In this paper we apply Nef's LM3 method to a local purchasing policy in Cornwall. The aim is both to explore the economic impact of local purchasing policies, and to evaluate Nef's claims that LM3 is a "quick and simple" multiplier. We conclude with a comparison between LM3 and LM2.

### **Context and background to the Cornwall Food Programme**

Cornwall is a geographically isolated and rural county in southwest England, with sea on three sides and only one major road linking it with the rest of the UK (see Figure 1). This relative isolation disadvantages Cornish businesses trying to compete with other areas in the UK, but also offers a unique opportunity for the creation of a locally distinctive, sustainable local economy (Reed *et al.* 2003). At the time of the study, however, the county had the lowest per capita income in the UK – 24% below national average in 1999. The Cornish economy is largely seasonal, with the majority of local jobs in the tourism sector (Cornwall County Council 1999). In 2000 Cornwall was awarded Objective One<sup>3</sup> status within the European Union in recognition of its economically disadvantaged state.

The isolated nature of Cornwall offers particular challenges and opportunities to the local NHS Trusts. The vast majority of NHS procurement operates through centrally managed contracts operated by the NHS Purchasing and Supply Agency (PASA). There is no obligation for a NHS Trust to operate within the PASA system, but most do to save money and make the most of the purchasing power of a national body (Harrow 2002). For example, Cornwall is famous for its dairy produce, but the local NHS Trusts buy their milk through a national contractor because the difference in cost between this national contract and a possible local supplier was too great for the local supplier to be considered.<sup>4</sup> This creates logistical problems for the Trusts because the national supplier is not prepared to deliver to the far west of the county. An additional challenge for NHS Trusts all over the UK is that many hospitals do not have the capacity to prepare food on site, and so are dependent on cook-freeze meals brought in from central production units (CPUs). At the time of the study there was one hospital in Cornwall, the Royal Cornwall in Truro, with its own kitchen facilities.

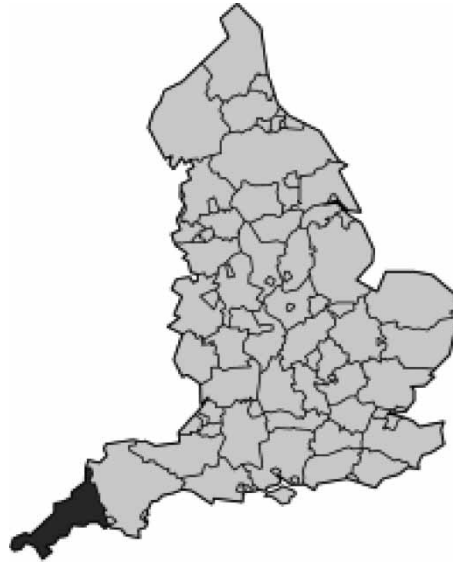


Figure 1. Map showing location of Cornwall in England.

In the early 2000s the Royal Cornwall Hospitals Trust (RCHT) began proactively searching for local alternatives to the national food suppliers under the banner of “the Cornwall Food Programme” (CFP). As described above, it is illegal for large public contractors to specify that supplies must be locally sourced, and to operate within EU regulations suppliers need to be competitive on price (EC 2004). However by simply re-thinking the terms of contracts as they became available, communicating opportunities to potential local suppliers and building mutually trusting relationships with local businesses, project managers estimated that they had succeeded in sourcing between 50% and 80% of hospital food locally (staff interview).

The ice-cream supplier is one example of a contract that was successfully locally sourced. Cornwall is famous for its ice-cream production, but local companies were small and could not match larger national suppliers on price. The CFP identified a local company that was interested in supplying the hospital and worked with it to develop a strategy to make it competitive with national suppliers. This included reducing portion sizes (which were larger than needed), and doing away with expensive packaging that patients would not see. Staff then realised that the local ice cream was far richer in key nutrients such as protein and calcium than the national ice cream, so when the contract was re-issued, minimum nutrient contents were specified. Thus the contract was drafted to favour the local supplier without contravening UK or EU procurement regulations. The national ice-cream supplier did not even submit a tender (Sacks 2005<sup>5</sup>). By 2004 this creative approach to contracting and building relationships with potential local suppliers had also yielded a local sandwich supplier, a cheese supplier and a likely local fish supplier (the latter two both based on the CFP buying cheap but high-quality “off-cuts” that national supermarkets had rejected) as well as a local source of money-saving whey butter

to be used instead of regular butter in pastry production (Sacks 2005<sup>6</sup>). Objective One funding had also been obtained to extend capacity for local food preparation through the construction of a CPU in the county.<sup>7</sup>

## Method

In summer 2004, an LM3 study was conducted in an attempt to quantify the real economic impact of the local sourcing element of the CFP.

LM3 is calculated using the following equation:

$$(\text{Round one} + \text{Round Two} + \text{Round Three})/\text{Round One} = \text{LM3}$$

The three “rounds” of spending analysed were as follows:

- Round One: Total income of RCHT’s Catering Department for the financial year 2003–2004.
- Round Two: Total expenditure of RCHT’s Catering Department that remains within Cornwall (financial year 2003–2004) (= total spent on Cornwall-based suppliers and staff).
- Round Three: Estimated amount of Round Two spending that is re-spent within Cornwall (= total spent within Cornwall by Cornwall-based suppliers and staff).

Round Two calculations were made possible though a breakdown of actual RCHT expenditure for each local contract. For Round Three, generic survey forms supplied by Nef<sup>8</sup> were distributed to RCHT catering staff and suppliers. Surveys required respondents to make detailed estimates of the proportion of their expenditure made on different goods and services. Estimating the proportion of this expenditure based in Cornwall required assumptions to be made about which goods and services were supplied locally and which were not, in line with recommendations made in the Nef LM3 guidance document (Sacks 2002). For example it was assumed that all spending on utilities and taxes was not “local”.

In addition to this LM3-related data, interviews were conducted with four managerial staff involved in the development of the CFP to gather more detailed information on its local impact. Suppliers were also asked to provide some qualitative information on the impact for their business of winning a contract through the CFP. Table 1 indicates the response rates to the supplier and staff surveys.

As Table 1 shows, the suppliers’ responses represented 67% of the total CFP spending on Cornish suppliers. In line with Sacks’s recommendations this was accepted as a valid response from which to estimate the local spend by non-respondents.<sup>9</sup> In contrast, the staff responses represented a small proportion of expenditure<sup>10</sup>, and cannot be used to estimate other responses. These data issues mean that a valid estimate of LM3 can only be made by excluding RCHT’s staff expenditure.

Table 1. Supplier and staff response rates.

	Catering expenditure (£)	No. surveys sent out	Response number (%)	Expenditure covered by returned surveys (%)	Valid for averaging to cover non respondents?
Suppliers	591,336	11	4 (36)	67	Yes
Staff	1,040,030	123	2 (1.6)	Not known – individual staff salaries not requested	No

### Calculating LM3 for the Cornwall Food Programme

The RCHT catering department's total budget for the financial year 2003–2004 was £2,487,000, of which £1,631,366, or 57.2%, was spent within Cornwall. The process of LM3 calculations is shown in Table 2.

RCHT supplied figures for the amount it spent with each of its Cornwall-based suppliers. The supplier survey allowed actual (or estimated, if no response received) local re-spend to be calculated for each supplier. Based on the average local re-spend of 46.53%, the total estimated local spending by local suppliers was £319,258.59. On this basis, the LM3 was calculated at 1.81. In monetary terms, this means that the initial spending of £1,131,000 (on suppliers only) generated an additional “Cornish” expenditure of £910,625. These figures demonstrate that the CPF is having a considerable local economic impact.

An additional calculation was carried out with the invalid figures from the staff survey to illustrate what could have been achieved had better data been available. LM3 was calculated as 1.95, meaning that initial spending by RCHT of £2,487,000 could generate an additional £2,364,753 for the Cornish economy. These figures indicate that the LM3-based estimate of the CPF's absolute impact on the Cornish economy could more than double if accurate staff re-spend figures were available.

Table 2. LM3 score for the Cornwall Food Programme.

	Including staff spending (not a valid LM3)	LM3 round	Supplier spending only (valid LM3)	
Total catering turnover	£2,487,000	1	Total CFP spending on suppliers	£1,131,000
CFP total local spend	£1,631,366	2	CFP local spending on suppliers	£591,366
Estimated suppliers' and staff total local spending	£733,387	3	Estimated suppliers' total local spending	£319,258.59
Total local spending LM3	£2,364,753 1.95		Total local spending LM3	£910,624.59 1.81

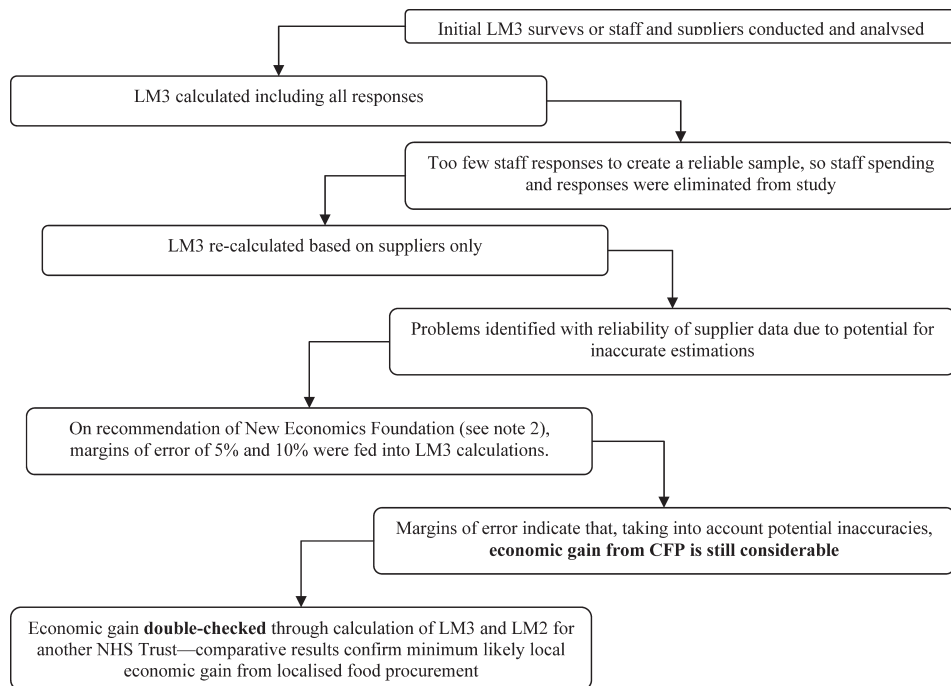


Figure 2. Flow diagram illustrating calculation and verification of local economic gain using LM3 and LM2.

### Testing the reliability of LM3

A flow chart illustrating the process through which a reliable calculation was reached is provided in Figure 2. As noted above, although over 67% of RCHT's local spending was caught in the actual figures provided by those suppliers who responded, calculations were based on averages for over half the suppliers.

There is also a potential problem in that the accuracy of the figures supplied cannot be known. At least one supplier provided the figures over the phone in a couple of minutes, changing the percentages for each item when they did not quite add up. Moreover, responding suppliers may be particularly committed to local food sourcing, and may unintentionally inflate local spending figures. The possibility of such over-estimation was demonstrated during interviews at RCHT; one manager suggested that 80% of RCHT food is locally sourced, while analysis shows the actual proportion to be just 57.2%.

For this reason it was recommended that the results of the supplier-based LM3 were "tested" for margins of error.<sup>11</sup> Spending figures were first reduced by 5%, mimicking a scenario where the figures supplied had been over-estimated by this amount. This yielded a new LM3 score of 1.79. Next the local spending was reduced by 10%, giving a new LM3 of 1.23. Over-estimation of local spending by 5% was thus shown to have little effect on the LM3 score, but an over-estimation of 10% raised it considerably. With data from only four suppliers, it

is impossible to identify patterns that might indicate where one supplier has over-estimated their local spending.

### Exploring LM2

Disputes over reliability of the collected data are only relevant to the third round. As noted above, LM2 only covers the first two rounds of spending. An LM2 score could be calculated for the CFP with 100% confidence, although obviously the maximum possible score would be 2.00 rather than 3.00. Using the figures provided by RCHT, the LM2 of the Cornwall Food Programme's suppliers is 1.52 ( $[(\text{Round One} + \text{Round Two})/\text{Round One}]$ ), indicating that for each pound spent in the RCHT catering department, 52 pence is re-spent in Cornwall. This figure itself provides a useful indication of the programme's considerable impact.

A comparison with a neighbouring NHS Trust that was not yet involved in local sourcing illustrates the benefits of the CFP very clearly, and also enables LM2 to be contrasted with LM3. The Cornwall Partnership Trust sources the vast majority of its food from Tillery Valley, a CPU in South Wales. The respective LM2s were calculated based on actual local supplier spending: local spending of £13,161 generated an LM2 of 1.05 for the Cornwall Partnership Trust compared with £591,366 and LM2 of 1.52 for the CFP.

A theoretical LM3 calculation for the Cornwall Partnership Trust yielded a figure of 1.07,<sup>12</sup> compared with the CFP's LM3 of at least 1.23 (the "worst case scenario" of 10% inaccuracy described above).

These comparative figures both show that the local economic impact of the CFP is considerable in terms of increased circulation of money within Cornwall when compared with a non-localised food procurement system. Given the amount of work required and questions over reliability of the final calculations, it is arguable that an LM2 calculation, rather than an LM3, could be a more valuable investment of time.

### Beyond LM2 and LM3: other factors influencing the economic impact of localised public procurement

While LM3 and LM2 are useful in indicating the local financial impact of procurement policies, there are other factors that influence the potential for localised procurement to benefit local economies. Several of these factors emerged through the qualitative research that formed part of the case study investigation.

Benefits cited by survey respondents included gaining more business from elsewhere as a result of the kudos of supplying the CFP, and increased stability through steady (non-seasonal) employment and high value orders. RCHT managers' support for local businesses in meeting their contracting criteria (as discussed above) aided their wider business development and helped them to expand. These factors would imply that the wider economic benefits of a large, high-profile purchaser like the NHS deciding to source locally are greater than those indicated by the LM3 calculations.

Supplier responses also revealed that many of them provide business for each other, and many also use the same third-party suppliers. This implies again that

the knock-on effect of providing business to one of these suppliers might be greater than the figure revealed by the LM3 – a theory supported by research conducted into local business “webs” in Suffolk (Cranbrook 2002).

A further economic benefit might be changing attitudes towards local sourcing. A high-profile initiative like the CFP raises awareness among local people and businesses of the local food agenda. Survey respondents all showed awareness of the social and economic sustainability benefits of local sales, and several interviewees commented that local support for the CFP was high. If this support and awareness were translated into purchasing patterns among staff, patients and local residents, then the potential for expansion in the market for localised food is evident.

Evidence was also, however, found to indicate that the economic impact of the CFP might be less than the LM3 figures indicate. For example the characteristics of supplier businesses are not revealed in any detail during the LM3 process, and these could potentially affect the economic impact of the CFP. We learn from Reed *et al.* (2003) that most food businesses in Cornwall are small, and many are family run. The businesses supplying the CFP were found to be reasonably large, and so probably unrepresentative of the majority of Cornish businesses.

Investigation of the value of the CFP contract to each business is also telling – only one business claimed that the CFP contract was worth more than 3% of its annual turnover, and only one claimed that it had any influence on staff levels. This is a positive sign for the businesses concerned, as it means that they are not overly reliant on one source of income.<sup>13</sup> However, this information also raises questions about the difference that would be made to these businesses if they did not have the CFP contract. The LM3 research has shown the proportion of their turnover that is re-spent locally, but the low value of the CFP contract implies that the majority of this re-spend would be happening in any case. There is possibly more that the CFP could do to engage small-scale local producers and suppliers.

Similarly, we do not find out in any detail from the LM3 process where supplies are coming from. Interviewees were asked whether they could monitor what proportion of their suppliers’ products were actually locally produced. Only the meat supplier was able to do this to any extent. The economic impact of the CFP, and the distribution of that impact, is obviously increased if suppliers, especially wholesalers, are buying local. CFP staff are working to address this issue in the future, through close partnerships with producers. However, when asked, suppliers had different reasons for not sourcing locally. One supplier highlighted the fact that the lack of manufacturing industry in Cornwall meant that he had no choice but to buy outside the county, despite a commitment to the local economy (communication with supplier). As Halweil (2002) pointed out, local processing is an area of great untapped potential in the establishment of sustainable SFSCs. It is also a significant barrier to their genuine sustainability. As Ilbery and Maye’s study of English–Scottish Borders food producers reveals, “local” food is often undermined by globalised sourcing further up the chain (Ilbery and Maye 2005). If the CFP were to use the LM3 score on its own as a basis for future planning, it would not only be unable to identify significant leaks of this type, but it would also not have engaged in dialogue with its suppliers about potential solutions.

The qualitative research implies that the economic impact of the CFP is affected by a more complex interaction of factors than the LM3 identifies, and

that much can be revealed in terms of possible improvements if more detailed responses from suppliers are gathered. Table 3 summarises the benefits and shortcomings of LM3 as identified in this paper, and other areas worthy of investigation.

Table 3. Benefits and shortcomings of using LM3 to measure the economic impact of the Cornwall Food Programme.

Benefits of LM3	Shortcomings of LM3	Other indicators worthy of case study investigation
<ul style="list-style-type: none"> <li>• Providing evidence for genuine economic gain from a local purchasing policy.</li> <li>• Highlighting some of the “leaks” and areas for possible improvement.</li> </ul>	<ul style="list-style-type: none"> <li>• Results can be relied on as an indicator of the benefits of local vs non-local procurement but not considered reliable enough to be a monitor of progress or comparison between local initiatives.</li> <li>• Surveys require detailed expenditure figures from staff and suppliers which may be time consuming to obtain, and asking for them could be deemed intrusive.</li> <li>• Use of samples and only one year’s financial records – not creating a 100% accurate financial picture.</li> <li>• Considerable time commitment required in order for calculation to be reliable.</li> <li>• Those in best position to carry out accurate LM3 (practitioners involved with projects) have little time to spare.</li> <li>• Assumptions about what is “local”, e.g. utility payments and supermarkets, are flawed.</li> <li>• Three “rounds” doesn’t catch all useful information.</li> <li>• Redistribution effect not quantified.</li> </ul>	<ul style="list-style-type: none"> <li>• Level of provision of local processing and production.</li> <li>• Source of inputs up the chain. Are local suppliers sourcing locally themselves? Are they being supported to do so?</li> <li>• Level of support from public body for organic conversion, or establishment of local processing facilities.</li> <li>• Value of public contract to suppliers, and size of suppliers – is the initiative reaching SMEs?</li> <li>• Effect on suppliers of contract – enabled to expand or increase staff levels as a result?</li> <li>• Knock-on benefits from kudos or connections won as a result of supplying such a large contract.</li> <li>• Business benefits from raised public awareness as a result of high profile localised public procurement in the area.</li> <li>• Extent to which initiative operates in dialogue with suppliers and is responsive to local circumstances and needs.</li> </ul>

### LM3 – the “quick and simple” Multiplier Effect?

In *The money trail*, Sacks (2002, p. 19) asserts that LM3 is a “quick and simple” way for communities, businesses and local authority officers to calculate local Multiplier Effects. In this investigation of the CFP, the LM3 process actually took considerable time and effort to complete, not least because the accuracy of the calculations needed to be tested and verified. Time constraints had a detrimental effect on the reliability of data collected in this study, as did lack of direct access to survey populations and the distance of the case study from the research base. Feedback highlighted in *The money trail* indicates that other researchers have experienced similar problems, with one recommending that a team of workers take on the task rather than an individual (Sacks 2002, p. 38).

However the “quick” factor is not the only problem with this methodology. The findings of this study indicate that LM3 may be too reliant on assumptions, estimates and averages: it covers only three rounds of spending and one year’s spending patterns, and often uses samples rather than entire populations. Spending patterns differ from year to year and samples are not definitely representative. As we’ve seen, the LM2 is even more “quick and simple” than LM3, and arguably provides an equally reliable indicator of economic benefit.

The lack of information relating to the levels of local sourcing by CFP suppliers has already been highlighted, and assumptions about what is “local” that are made in connection with LM3 calculations could also bring their accuracy into question, especially in this case where the boundary of what is “local” was an entire county<sup>1</sup>. For example, it is assumed that all utility spending is “non-local”, whereas in fact at least some spending with a local water company in particular is likely to remain within the county.

As already highlighted, the use of Multiplier Effects is in itself not uncontroversial. *The money trail* itself points out that boosting local spending could simply be “robbing Peter to pay Paul” (Sacks 2002, p. 8). For example this investigation did not quantify the redistribution effect that might take place from Tillery Valley if all Cornish NHS Trusts start to source locally. Although such redistribution might be immaterial to the CFP, it is of vital importance to the wider regeneration agenda. Sacks argues that the LM3 tool is “designed primarily for poorer communities” (2002, p. 9), but when the potential redistribution is *between* two economically and socially disadvantaged areas (such as South Wales and Cornwall), rather than from “rich” to “poor”, this has to raise questions that national policymakers should seek to answer before they endorse projects like the CFP as part of a national regeneration strategy.

### Conclusion

This paper has highlighted the potential link between localised SFSCs and economic regeneration, as well as broader sustainability gains. Public procurement, in particular by the NHS, has a significant role to play in this process because of its size and other potential gains for health and well-being from localised procurement. There is an immediate need for more straightforward guidance for procurement professionals on how to go about localising their supply

chains. However, case studies have shown that it is possible to take a creative approach to contracting and communication which leads to public contracts being won by local suppliers. Of course this is no substitute for strong political leadership, without which, as Halweil (2002, p. 50) states, “the scattered efforts to invigorate local food systems could have as little effect as a mosquito bite on a tractor”. In the current political climate, sharing the learning of these practitioners is the most promising option for progress in this area. If local procurement initiatives could “prove” in quantifiable terms the sustainability benefits to their communities then this information can be used to give weight to government lobbying whilst also helping to demonstrate what is possible under current circumstances.

Analysis of the CFP has shown that there are quantifiable economic gains to be had by localising public procurement, and since this investigation was conducted other studies have shown similar benefits (Sacks 2005). Discussion of qualitative findings and exploration of the problems with the LM3 findings within this study have highlighted some of the possible limitations of using LM3 to evaluate the local economic impacts of the CFP. However, the use of LM3 to compare the CFP with another NHS Trust has demonstrated that there is considerable added value for local areas of localising purchasing. The LM3’s unreliability might limit its usefulness in comparing the relative impacts of two different local sourcing policies, but this study has shown that it can be a useful indicator that local sourcing in itself has benefits. This paper has argued that a simpler version of the LM3, known as LM2, would provide a completely reliable illustration of local economic gains with considerably less effort, and only some loss of detail. An additional qualitative analysis, to support and expand the LM2 findings, could be used to identify problem areas or further opportunities, making more efficient use of the time and resources available to the surveying organisations. (A full account of this research and more detailed analysis of findings can be viewed by going to <http://www.brad.ac.uk/acad/envsci/resources/> and selecting “Cornwall Food Programme”.)

## Acknowledgements

The authors acknowledge the invaluable help and expertise of Justin Sacks, Manager of the Local Money Flows Measurement Programme at the New Economics Foundation, in reviewing and verifying the multiplier calculations in this investigation. They also thank the staff at the Royal Cornwall Hospital Trust, and in particular Nathan Harrow, for their cooperation and support in conducting the investigation.

## Notes

1. This definition of “local”, as within the boundaries of the county of Cornwall, is also the one taken by the investigation discussed in this paper. In the case of Cornwall this was a logical decision based on geographical and cultural realities; however, it is acknowledged that in other circumstances the term “local” is in itself value-laden and not so easily defined (see for example Cavallero and Dansero [1998], Desai and Riddlestone [2002] and Hines [2000], who discuss the concept of subsidiarity as one solution to this question).

2. The New Economics Foundation is recognised as one of the UK's leading think-tanks and describes itself as a "think and do tank . . . acting through policy, research, training and practical initiatives to promote a 'new' economy that is people-centred, delivers quality of life and respects environmental limits". It was voted "Think Tank of the Year" in 2002–2003. See [www.neweconomics.org](http://www.neweconomics.org).
3. The European Union Structural Funding under Objective One is earmarked for the most economically and socially disadvantaged areas in Europe (either member states or parts of member states), with the aim of bringing these areas into line with EU averages in areas such as gross domestic product (GDP) and employment. Cornwall was awarded European funding under Objective One between 2000 and 2006, with investment focused on economic development and diversification, mainly through supporting the development and support of competitive small and medium-sized businesses. However, this funding is under threat following the entry into the EU of Eastern European states in 2004 and 2007.
4. N. Harrow, Project Manager, Royal Cornwall Hospitals Trust, personal communication, 23 August 2004.
5. And Harrow, personal communication.
6. Ibid.
7. Harrow, personal communication.
8. For a more thorough analysis and rationale for how LM3 is calculated, the reader is directed to Nef's publication *The money trail* (Sacks 2002, also available from [www.neweconomics.org](http://www.neweconomics.org)). A full explanation of the LM3 investigation described in this paper, and samples of the questionnaires and surveys used, can be found in Thatcher (2004).
9. J. Sacks, New Economics Foundation, personal communication, 23 August 2004.
10. The low staff response rate can largely be explained by the fact that the survey was postal, and relied on distribution by managerial staff at the hospital where the catering staff worked. A higher rate could have been achieved through better engagement of staff in the process – a presentation introducing and explaining the research, for example, and the collection of survey responses in person by a researcher. In addition several returned surveys were subsequently mislaid by the managerial staff. Finally, although the questions asked were straightforward, some respondents may have considered them to be intrusive.
11. J. Sacks, personal communication, 3 September 2004.
12. This calculation was "theoretical" because the average supplier local spend from CFP was transferred directly to the Cornwall Partnership Trust, as it was assumed to be within the right order of magnitude. The alternative to this assumption would have been a lengthy research process equivalent to that already carried out for CFP. The Cornwall Partnership Trust spends approximately £246,000 per year on food (Round One), 91.65% of which is spent with Tillery Valley and 3% of which is spent with a national sandwich supplier. Only 5.35% stays within the county – a total of £13,161 (Round Two) (Harrow 2004). This gives an LM2 of 1.05. Using the average local supplier re-spend for CFP – 46.53% – the total local re-spend (Round Three) can be estimated at £6,123.81, giving an LM3 of 1.07.
13. Sacks, personal communication, 3 September 2004.

## References

- B-FIT, 2003. *Bradfood: developing markets for local produce in the Bradford district* [CD-ROM]. Bradford.
- Bullock, S., 2000. The economic benefits of farmers' markets [online]. Available from: [www.foe.co.uk](http://www.foe.co.uk) [Accessed 1 April 2004].
- Cavallero, V. and Dansero, E., 1998. Sustainable development: global or local? *Geojournal*, 45 (1–2), 33–40.
- Cornwall County Council, 1999. Socio-economic profile of Cornwall [online]. Available from: [www.cornwall.gov.uk](http://www.cornwall.gov.uk) [Accessed 13 July 2004].
- CPRE, 2002. Down your way: a CPRE briefing on supermarkets and local food [online]. Available from: [www.cpre.org.uk](http://www.cpre.org.uk) [Accessed 8 July 2004].
- Cranbrook, C., 2002. Food-webs: a report on local food networks in East Suffolk which demonstrates the importance of local shops and services to rural communities [online]. Available from: [www.cpre.org.uk](http://www.cpre.org.uk) [Accessed 1 April 2004].
- DEFRA, 2005. *Securing the future: delivering UK Sustainable Development Strategy*. London: DEFRA.
- , 2006a. *Procuring the future – sustainable procurement action plan: recommendations from the Sustainable Procurement Task Force*. London: DEFRA.

- DEFRA, 2006b. Food Industry Sustainability Strategy [online]. Available from <http://www.defra.gov.uk/farm/policy/sustain/fiss/pdf/fiss2006.pdf> [accessed 01 May 2007].
- Desai, P. and Riddlestone, S., 2002. *Schumacher briefing 8: bioregional solutions for living on one planet*. Totnes, UK: Green Books.
- Dobson, R.V.G., 1993. *Bringing the economy home from the market*. Montreal: Black Rose Books.
- EC, 2004. Directive 2004/./EC on the co-ordination of procedures for the award of public works contracts, public supply contracts and public service contracts [online]. Available from: [www.europa.eu.int](http://www.europa.eu.int) [Accessed 10 February 2004].
- F3, 2003. FLAIR report 2003: the development of the local food sector 2000–2003 and its contribution to sustainable development [online]. Available from: [www.localfood.org.uk/papers/FLAIR-2003-Report-final.pdf](http://www.localfood.org.uk/papers/FLAIR-2003-Report-final.pdf) [Accessed 1 April 2004].
- Feagan, R., Morris, D. and Krug, K., 2004. Niagara region farmers' markets: local food systems and sustainability considerations. *Local environment*, 9 (3), 235–254.
- Gershon, P., 2004. *Releasing resources to the front line: independent review of public sector efficiency*. London: Crown Copyright.
- Halweil, B., 2002. Home grown: the case for local food in a global market. Worldwatch Paper 163. Washington: Worldwatch Institute.
- Harrow, N., 2002. *Cornwall community food manufacturing and distribution study*. Truro, UK: Cornwall Healthcare Estates and Support Services.
- Hedges, A. and Zykes, W., 2003. *Local food: a report on qualitative research*. London: Food Standards Agency.
- Hines, C., 2000. *Localization: a global manifesto*. London: Earthscan.
- Ilbery, B. and Maye, D., 2005. Alternative (shorter) food supply chains and specialist livestock products in the Scottish–English Borders. *Environment and planning A*, 37, 823–844.
- Leach, K., 2003. *Promoting "look to the local" solutions for public food procurement*. Birmingham: Localise West Midlands.
- Lucas, C., Hart, M. and Hines, C., 2002. *Look to the local: a better agriculture is possible!* Brussels: Greens/European Free Alliance.
- Marsden, T., Banks, J. and Bristow, G., 2000. Food supply chain approaches: exploring their role in rural development. *Sociologia ruralis*, 40 (4), 424–438.
- Morgan, K. and Morley, A., 2002. *Re-localising the food chain: the role of creative public procurement*. Cardiff: Cardiff University Regeneration Institute.
- NICE, 2005. Making the case for sustainable procurement: the NHS as a good corporate citizen [online]. Available from: <http://www.nice.org.uk/download.aspx?o=514063> [Accessed 24 March 2007].
- PASA, 2007. Local sourcing [online]. Available from: <http://www.pasa.nhs.uk/PASAWeb/NHSprocurement/Sustainabledevelopment/Socialsustainability/Localsourcing.htm> [Accessed 24 March 2007].
- Persky, J., Ranney, D. and Wiewel, W., 1993. Import substitution and local economic development. *Economic development quarterly*, 7 (1), 18–29.
- Pretty, J., 2001. Some benefits and drawbacks of local food systems [online]. Briefing note TVU/Agrifood network, 2 November. Available from: [www.sustainweb.org](http://www.sustainweb.org) [Accessed 1 April 2004].
- Reed, M., et al., 2003. *A study of food production, distribution and processing in Cornwall and the Isles of Scilly—a report for Cornwall Taste of the West*. Exeter: University of Exeter Centre for Rural Research.
- Renting, H., Marsden, T. and Banks, J., 2003. Understanding alternative food networks: exploring the role of short food supply chains in rural development. *Environment and planning A*, 35, 393–441.
- Sacks, J., 2002. *The money trail: measuring your impact on the local economy using LM3*. London: Nef.
- Sacks, J., 2005. *Public spending for public benefit: how the public sector can use its purchasing power to deliver local economic development*. London: Nef.
- Simms, A., et al., 2003. Ghost town Britain: the threat from economic globalisation to livelihoods, liberty and local freedom. London: Nef.
- Sustain, 2002a. Sustainable food chains briefing paper 1: local food; benefits, obstacles and opportunities [online]. Available from: [www.sustainweb.org](http://www.sustainweb.org) [Accessed 1 April 2004].

270 *J. Thatcher and L. Sharp*

- , 2002b. Sustainable food chains briefing paper 2: public sector catering; opportunities and issues relating to sustainable food procurement [online]. Available from: [www.sustainweb.org](http://www.sustainweb.org) [Accessed 3 April 2004].
- , 2006. Sustain's response to Defra's food industry sustainability strategy [online]. Available from: [www.sustainweb.org](http://www.sustainweb.org) [Accessed 24 March 2007].
- Thatcher, J., 2004. The Cornwall Food Programme: evaluating the economic impact of local procurement in the NHS [online]. Available from: <http://www.brad.ac.uk/acad/envsci/resources/> [Accessed 24 March 2007].
- Walsh, R.J., 1986. *Regional economic decisions: comparing benefits and costs*. PA: Venture.
- Williams, C.C., 1996. Local purchasing schemes and rural development: an evaluation of local exchange and trading systems (LETS). *Journal of rural studies*, 12 (3), 231–244.