



The Benefits of Procuring School Meals through the Food for Life Partnership

An economic analysis

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Executive Summary

nef (the new economics foundation) was commissioned by the Food for Life Partnership (FFLP) to undertake a study of the wider social, economic and environmental impacts of FFLP procurement practices for school meals. The study has been carried out in relation to two case studies: local authority procurement in Nottinghamshire and Plymouth. This draft report sets out the results.

Following a Social Return on Investment (SROI) approach, our analysis is based on engagement with key stakeholders involved in the supply of ingredients for school meals in Nottinghamshire and Plymouth. Stakeholders helped us identify the principal outcomes from a focus on seasonal, local produce. These were then valued to reveal the impact that local contracts for school meal ingredients have for local and wider society.

A summary of our results is as follows:

- In Nottinghamshire, spending for school meals locally within an FFLP framework is calculated to generate over £5 million in value each year. The share of ingredient spend on seasonal, local produce has risen dramatically, by a nominal £1.65 million per year, returning **£3.11 in social, economic and environmental value for every £1 spent**.
- In Plymouth, the change in spending on seasonal, local produce is valued at £384,000 per year as a result of adopting FFLP practices. This spending into the local economy is found to generate £1.2 million of value per year, a return of **£3.04 for every £1 spent**.
- It is important to highlight that this study represents only a partial analysis. It does not take account of any of the health, educational or cultural benefits of a whole school approach to food which are the primary objectives of FFLP. Adding these benefits would result in a substantially larger positive return to investment.

Separate from our main outcomes model, we looked at the multiplier effect from procuring a higher share of ingredients for school meals from the local economy. Comparing current spending and re-spending in Nottinghamshire now and prior to a focus on procuring locally and seasonally shows that the total amount of money circulating in the local economy from this source has increased substantially, from £181,418 in 2004 to £3,826,688 currently.

The multiplier calculation, based on the ratio between the initial injection of income to the local economy and the total circulation of the money within it, shows that currently for every £1 spent initially from the Nottinghamshire school meals budget on seasonal, local ingredients, a further £1.19 of economic activity is being generated. In Plymouth, money circulation as a result of spending from the school meals budget in the local area amounts to £1.2 million per year, with an additional 85 pence worth of activity being generated per £1 of spending.

Introduction

The Food for Life Partnership (FFLP) puts school meals at the heart of a whole school approach to food culture and education. Alongside reported health and educational benefits to children of healthier meals it is anticipated that there are wider impacts on the local economy and society of the procurement approach of FFLP. **nef** (the new economics foundation) was commissioned by FFLP to carry out an analysis of these wider social, economic and environmental impacts. It is one of four current evaluations which together seek to assess the FFLP programme's impact on school meal take-up and effects on pupil health and learning opportunities, as well as the wider benefits of more sustainable sourcing practices.¹

Making the case now for the benefits of healthy and sustainably sourced school meals is especially timely. In the current economic climate, hard-pressed local authorities need to make efficiency savings. Local authority school meals providers are already being asked to reduce their ingredient spend. This has the potential to reduce take-up of school meals in a cycle of decline which could undo the good work of recent years and result in grant dependency or the closure of school meal services beyond statutory free school meal provision. Given the fixed costs associated with free school meal provision, degradation of the service to this level is likely to achieve minimal savings - but the risk is real. Nevertheless, local authorities are under pressure to cut spending and are often encouraged to make short term savings without considering the wider impacts of these decisions. Cost-cutting that has negative knock on social, economic and environmental impacts may in fact be a false economy.

nef's research into the benefits of FFLP procurement standards was carried out according to key principles of Social Return on Investment (SROI) methodology. An important part of this approach is that it is guided by the view of stakeholders when choosing the outcomes that are studied in the evaluation. This ensures that the study of FFLP procurement practices is sensitive to the perspective of those who are affected by it.

This report sets out our findings. The report is organised as follows:

Part 1 provides a short summary of contextual information and evidence from the literature about what sustainable procurement means and what the benefits of procuring food locally and seasonally are anticipated to be for the economy, the environment and society.

Part 2 describes the methodology used in this study. It sets out the key elements of SROI, and how these elements have been applied in this case.

It also explains how the study was scoped and background on the case studies which were chosen.

Part 3 sets out our findings. This includes qualitative findings, as well as the results of measuring and valuing the wider economic, social and environmental outcomes that were identified by stakeholders.

Part 4 concludes with the key messages that can be drawn from this work, and how our results can feed into a complete evaluation of FFLP. Recommendations for further research are also included.

1: Achieving sustainability through procurement

There is a wealth of literature around the subject of sustainable food systems and the part to be played by local and organic production. Even a cursory examination of the debate reveals the complexity of food webs and the issues this throws up, for example, around the links between food consumption in wealthy countries and livelihoods in poorer ones; or around establishing a full account of the carbon embedded in different food production processes.²

For the purposes of this study we have not attempted a lengthy literature review, but this section provides points on some of the relevant context, including policy context, in which efforts for a seasonal, local and organic focus for procurement of school food are taking place.

- There is compelling evidence for the beneficial inter-dependence of producers, wholesalers, retailers and community residents when a thriving local economy in food is achieved.³
- The conclusion of a study conducted in 2003, was that the local food sector makes a positive contribution across all aspects of sustainable development and can help restore the environmental, social and economic assets of a region.⁴
- Government strategy documents have recognised the role of community connectedness within the food chain.⁵ Defra's Working Group on Local Food noted that "It is clear that no community will produce all the food products it will want. However, there may well be opportunities for an area to link food supply and demand more closely with consequent potential changes to the economic, social, health, educational and environmental impacts of the food sector".⁶
- Altogether, the public sector in Britain spends around £2 billion a year on food, including for meal provision in schools, hospitals, and prisons. The school catering industry alone is worth £1.2 billion a year. This means it has potential to be a powerful influence on food production networks and an important part of achieving a shift to a resilient, low carbon economy. Certainly, it seems reasonable to expect that investment of this sum of money across local economies could help sustain local farms and businesses and enhance community food networks.

- The Public Sector Food Procurement Initiative⁷ was launched by Defra in August 2003 as part of the government's Strategy for Sustainable Farming and Food. The primary purpose of the PSFPI was to encourage public bodies to procure food in line with principles for sustainable development. A revision of the objectives of the PSFPI in 2007 included reference to encouraging and supporting the ability of small and local producers to tender and do business with public sector agencies.
- While competition law prevents caterers from setting "local" as a criteria in tendering for supplies for public sector food, stipulations around quality, frequency of delivery and support for smaller, more local businesses to enable them to tender effectively have allowed caterers to build up their local supply networks.

2: Methodology and approach

2.1 Social Return on Investment

nef was commissioned by FFLP to apply the principles of SROI to an assessment of the wider benefits of more sustainable procurement of school meals. SROI is fast gaining credibility amongst economists and policymakers for its contribution to better decision-making since it allows a broader range of outcomes to be captured, measured and valued than is typically the case with more conventional cost-benefit analysis. It enables activities to be evaluated across the 'triple bottom line' of social, environmental and economic impacts consistent with the HM Treasury definition of value for money.⁸ SROI is being promoted as the 'gold standard' for third sector measurement⁹ but it also has wider implications for policymaking.

Although SROI is derived from more conventional approaches such as cost-benefit analysis, it differs from these approaches in its emphasis on the following:

- **Stakeholder engagement:** SROI analysis is firmly based on direct engagement with those who experience the effects of the activity in question. What gets measured depends on what stakeholders tell us about the outcomes that are important to them, even if those outcomes are sometimes hard to capture and measure. Stakeholder engagement brings to light unintended consequences of an activity which can be significant for people, for society and for the environment. It ensures these effects are included in a holistic assessment of costs and benefits.
- **Outcomes not outputs:** An output can tell us how much of an activity is happening, e.g.: the volume of produce procured from a supplier, but it can't tell us what changes for the supplier as a result of that contract, e.g.: whether it increases the security of the business. A focus on outcomes allows us to follow the effect of an activity through to what difference is actually experienced. SROI puts monetary values on as many of the material outcomes identified as possible. This means that the overall valuation of the project captures the range of impacts, assessed in a common unit of account across the triple bottom-line of social, economic and environmental impacts.
- **Theory of change:** SROI is more than a number expressing the value created for a given investment. The methodology puts an emphasis on

describing in qualitative terms not just what changes for stakeholders but also how and why the changes are achieved. The story, or theory of change, conveys a comprehensive understanding of the processes and flows between inputs to an activity, the outputs it delivers, and the outcomes or changes that are experienced.

A summary of the steps involved in carrying out an SROI is set out in Box 1.

Box 1: Social Return on Investment (SROI)

SROI is a method for measuring and reporting on the social, environmental and economic value created by an activity or intervention. Although based on traditional financial and economic tools such as cost-benefit analysis, SROI builds on and challenges these. It includes a formal approach to identifying and measuring the things that matter to stakeholders. These are often outcomes for which no market values exist, for example an improvement in quality of life. Because such outcomes can be difficult to quantify, they have tended to be excluded from more traditional analyses, preventing a full understanding of value being created or lost for society.

Carrying out an SROI analysis involves six stages:

1 Establishing scope and identifying key stakeholders. It is important to have clear boundaries about what the SROI analysis will cover, who will be involved in the process and how.

2 Mapping outcomes. Engaging with stakeholders leads to development of an impact map, or theory of change, which shows the relationship between inputs, outputs and outcomes.

3 Evidencing outcomes and giving them a value. This stage involves finding data to show whether outcomes have happened and then valuing them.

4 Establishing impact. Having collected evidence on outcomes and monetised them, those aspects of change that would have happened anyway or are a result of other factors are eliminated from consideration.

5 Calculating the SROI. This stage involves adding up all the benefits, subtracting any negatives and comparing the result to the investment. This is also where the sensitivity of the results can be tested.

6 Reporting, using and embedding. Easily forgotten, this vital last step involves sharing findings with stakeholders and responding to them, embedding good outcomes processes and verification of the report.

Further guidance on the practice of SROI is available from *A Guide to Social Return on Investment*, co-written by nef and published by the Cabinet Office (<http://www.neweconomics.org/publications/guide-social-return-investment>)

2.2 Adopting a case study approach

nef applied the SROI approach to two FFLP case studies. These were local authority procurement of school meals in Plymouth and Nottinghamshire. These case studies were chosen as examples of good practice in applying FFLP standards.

The local authority in Nottinghamshire is procuring school meals to FFLP silver standard which, alongside a whole school approach, puts a strong emphasis on procuring local, seasonal goods with meat being Freedom Food certified and fish caught sustainably. School meals in Plymouth have achieved bronze and are very close to meeting silver standard.

As yet, although some self-catering schools have achieved the FFLP gold standard, gold has not been sought or achieved at the level of local authority catering. Caterers told us that this is due to a combination of two factors. First, purchasing organic produce can be prohibitively expensive, particular organic meat. Second, organic farms have been found to be unable to meet the bulk orders required by large-scale caterers supplying for a number of schools. Nottinghamshire had considered aiming for gold, particularly to support some of their schools which are close to achieving gold, but had concluded that it was not currently feasible, particularly as school meals budgets face the prospect of cuts.

The fact that our case study areas are procuring to silver and bronze respectively rather than gold standard had implications for the scope of this piece of research in that we were not able to examine the impacts of procuring organically produced ingredients. The literature on organic agriculture does suggest that the principal gains from organic agriculture are: Reduced environmental pressure due to reduction in primary energy use and fertilizers and increased employment opportunities.¹⁰

2.2.1 Background to FFLP in Nottinghamshire

Nottinghamshire County Council catering department procures school meal ingredients for 97 per cent of primary schools in the county and 70 per cent of secondary schools. In total they cater for around 300 local schools. The school meals ingredients budget is currently £4.75 million a year. Schools in Nottinghamshire are not obliged to contract with the Council for their school meals. They could obtain supply through an alternative provider, or self manage their catering provision, since funding is delegated to schools, but almost all primary schools use the Council's provision because it is efficient for them to do so, and secondary schools make the choice to go with the Council because of its offer on service and price. And all schools benefit because the risks of procurement rest with the local authority.

For Nottinghamshire the benefit of joining the Partnership was to demonstrate to parents, through a formal framework, the progress made in the provision of quality school meals and what that means for children's health and well-being. For Head Teachers, the compelling factor in FFLP procurement is in supporting local produce and local businesses. Nottinghamshire's procurement staff explained that the biggest change to their procurement patterns and menus in becoming part of FFLP was in increasing the share of seasonal ingredients.

Nottinghamshire County Council has been procuring school meals to FFLP standards for around two to three. Prior to this, the Council had already made considerable progress over a few years towards applying local and freedom-food standards. The motivation for this came from a belief in providing “real food, not dinosaur-shaped stuff” in order to improve the health of children and families through a change in the culture around food and eating. The Council’s procurement staff told us that initially schools complained that the children wouldn’t eat the dinners because they didn’t recognise the food was that was being served. Gradually enjoyment of school food and uptake has improved especially recently in the summer of 2010 (although Nottinghamshire’s uptake suffered for several years, as did uptake in other areas, as a result of negative publicity around school dinners generally in chef, Jamie Oliver’s television programme *Jamie’s School Dinners*).

2.2.2 Background to FFLP in Plymouth

The local authority in Plymouth procures school meals for 84 local schools, four of which are secondary schools. The turnover is currently around £3 million per year, of which £1.2 million is spent on ingredients.

In Plymouth, the shift to a focus on local, seasonal ingredients and an approach to whole-food culture is more recent than in Nottinghamshire. When contracts with suppliers came up for renewal and were tendered in the spring of 2009, new specifications were set for contracts based around local sourcing (within the restrictions of EU tendering rules), seasonality and fresh, home-cooked menus. Compliance with FFLP bronze award standards became part of the procurement process.

As well as refocusing the approach to procurement, Plymouth will have invested £3.4 million in the period between 2006 and August 2011 in refurbishing school kitchens and building kitchens in schools which had not had them.

In accord with principal findings in Nottinghamshire, Plymouth described the main benefits for them of procuring local, seasonal produce for school meals as follows:

- Improved customer perception of menus and the food offered, being local, seasonal, free range and to high standards of animal welfare.
- Being able to tap into people’s view that local and seasonal is better quality and value, and better for the environment (e.g.: because of shared delivery arrangements).
- Higher spending into the local economy.
- Increased take-up of school meals.
- Improved awareness of children and young people about where their food comes from and how it is grown, produced and prepared.

2.2.3 Conducting SROI-based research in the case study areas

The Nottinghamshire case study provided the initial main findings for this research, with supplementary, and mainly complementary, findings from subsequent interviews and analysis in the Plymouth case study.

An important consideration early on in the project was to establish the baseline against which to assess progress in supplying seasonal and local ingredients. In the case of Nottinghamshire, the Council had already made strides in procuring local and seasonal ingredients before joining the Partnership. The question was, therefore, whether to take the baseline as the period just prior to membership of FFLP, or the period prior to the earlier decision after 2004 to start buying more seasonal and local ingredients. In consultation with FFLP, we chose to take the latter as the base case since a decision to procure more seasonal and local produce is in line with FFLP objectives even if the local authority had not formally joined the Partnership.

In the case of Plymouth, spending on local ingredients prior to joining the Partnership had been limited to purchases of local meat. We agreed with procurement staff that the most appropriate benchmark was their spending with the local meat wholesaler in 2008/09, just prior to the application of FFLP practices.

For both case studies, initial interviews with each local authority catering department identified the key stakeholders in the supply chain – wholesalers and individual farmers. Schools themselves, including school catering staff, and parents were not considered to be key stakeholders in this study because the scope of the work was specifically to consider the impacts of FFLP procurement practices.

We conducted in depth semi-structured interviews with all the local wholesalers and a sample of farmers in our case study areas to help us understand the impact on their businesses and the local economy of the school meals supply contract. The results of our interviews are described in detail in part 3.

Explanations for subsequent steps in the SROI process are included as part of the description of findings in the next section of this report.

3: Results

3.1 The supply chain

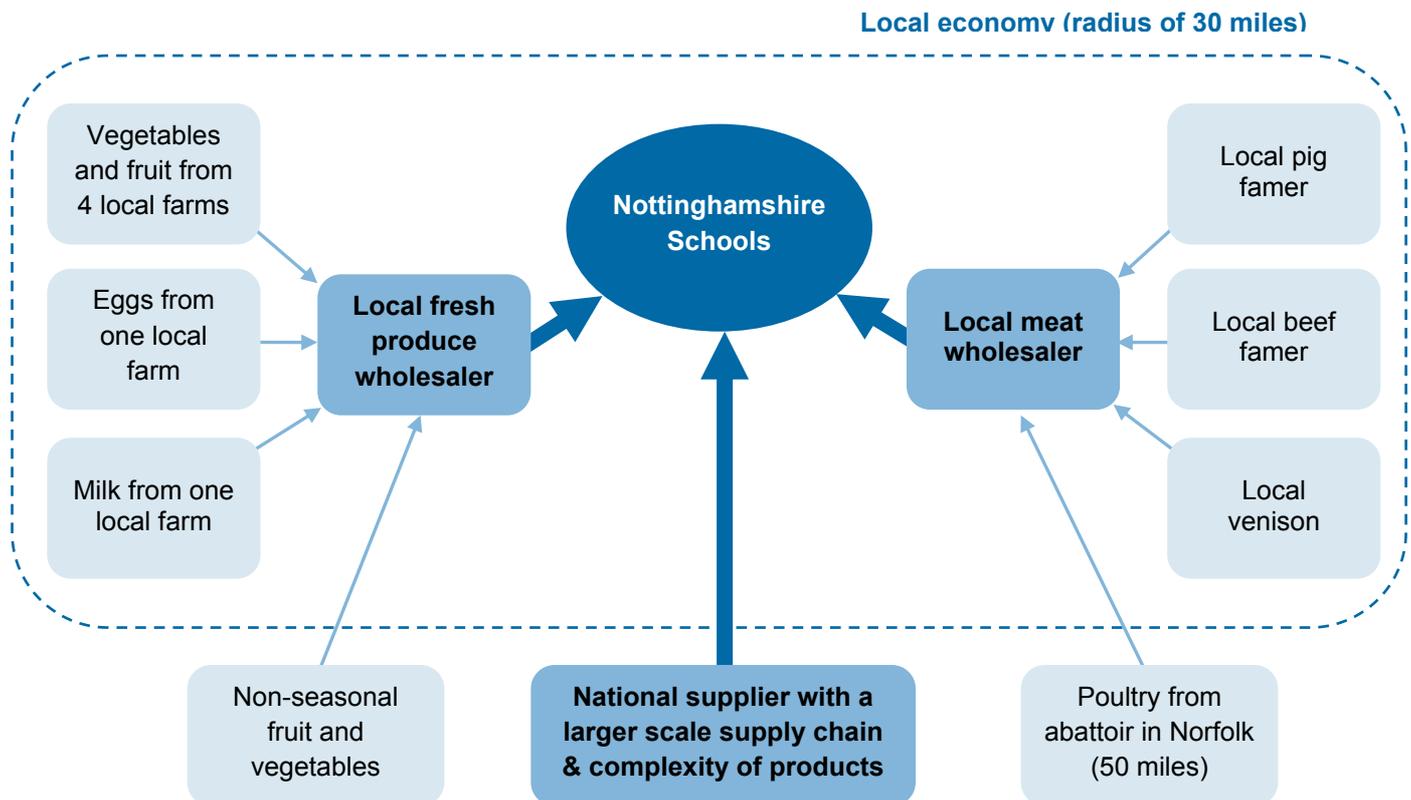
An important early step in this study was to understand how the supply chains in Nottinghamshire and Plymouth have changed as a result of an emphasis on local and seasonal procurement.

3.1.1 Nottinghamshire

Nottinghamshire Council now procures school meal ingredients through three distributors:

- **A local meat wholesaler** provides meat which is 90-95 per cent local (within 50 miles); 50-55 per cent is from within 30 miles. The wholesaler told us that on the back of the contract with Nottinghamshire school meals they are now supplying to others including six Asda stores. The meat they supply is Freedom Food accredited.
- **A local wholesaler** provides fruit and vegetables, milk and eggs for the school meals. Staples, such as potatoes, onions and cabbage are 100 per cent locally provided. 40 per cent of the fruit and vegetables across the board is local. The milk is 100 per cent local, bought from one dairy. The eggs are 100 per cent local through one supplier. The farms supplying milk and eggs were nominated to the wholesaler by the local authority catering department which has helped to establish a relationship between these local farms and the wholesale business. There are inevitably some fluctuations in the volume of fruit and vegetables sourced locally depending on the time of year. For example, tomatoes may be local while in season, but otherwise will be bought from Spain or Holland.
- **One of the biggest national suppliers** provides all the store cupboard goods, as well as fish and frozen items. This account still represents the bulk, two-thirds, of the value of procurement for school meals in Nottinghamshire because of the number of items they supply. There is less opportunity for the procurement department to set preferences in the sourcing of the goods through the national wholesaler, but they have agreed to deliver Marine Conservation Standard (MSC) fish. The supplier told us that despite being a large national supplier they are aware of the growing social agenda around preference for local food, which they try to respond to where possible. There is some local employment of staff by this firm as deliveries take place from local depots.

Figure 1: Nottinghamshire school meals supply



The national supplier has a contract for the bulk of the procurement budget so that only 33 per cent, in financial terms, of the Council's spend on school dinner procurement is confirmed as local. Nevertheless 60 per cent of what is on a school dinner plate (in terms of mass) is local because most of the meat, all the eggs and milk and all or most of the vegetables are from the local area. Sandwich fillings are also provided by a local firm.

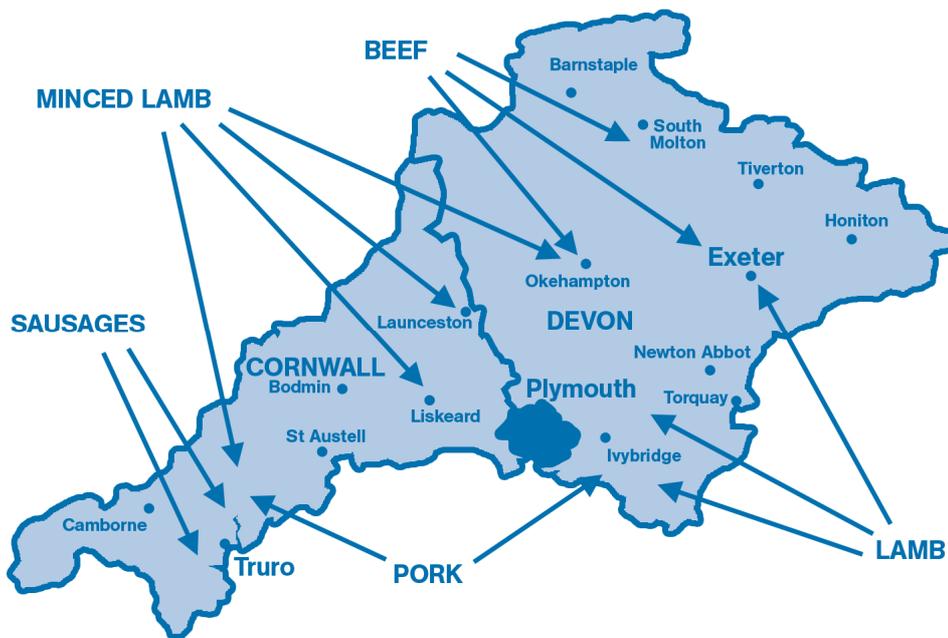
Figure 1 shows how the supply chain for schools meals has changed to tap into local supply connections. The volume of spending in the local economy through the school meals budget has changed dramatically over the past 6-7 years. Previously, only around £100,000 a year was spent on buying just a few locally grown ingredients. This has risen to some £1.75 million a year now, representing a sizeable injection of money into the local economy, and engaging at least 11 separate local supply businesses.

3.1.2 Plymouth

Since the autumn of 2009, when new contracts were issued, Plymouth purchases school meal ingredients from four key distributors:

- **A local meat wholesaler** provides meat and poultry, all supplied from within the South-West. This wholesaler already supplied meat for the school meals prior to the renewal of contracts, and new focus on local purchasing, in 2009. A map showing the geography of meat supply for this wholesaler, and hence for the school meals is shown in figure 2.

Figure 2: Local sourcing of meat for Plymouth school meals



- **A local wholesaler** provides seasonal fresh fruit and vegetables, as well as milk and organic herbs. Across the range of produce this business supplies for Plymouth’s school meals, 50 per cent is local at any time, with all the vegetables and milk supplied locally. A map provided by the wholesaler revealed that they source produce from 24 farms in the South West, within a radius of 63 miles. All but four of the farms are within 30 miles of the wholesaler and Plymouth itself.
- **A local fish merchant** provides locally caught Pollock for the school meals which is collected by the meat wholesale company above, and is delivered to schools along with the meat and poultry supplies.
- **A large national supplier** provides the main grocery and frozen food requirements, as well as eggs and yogurt. Despite being national, the firm’s depot is local and consequently there are benefits to local employees from the contract to supply for school meals in Plymouth.

Prior to 2009, Plymouth sourced the bulk of its ingredients from large national suppliers, with little certainty over provenance. Only the meat was supplied locally, through the same wholesale firm that supplies under current contracts.

3.2 Mapping outcomes: the theory of change

We asked the key local stakeholders in the supply chain in Nottinghamshire and Plymouth about the changes they have experienced as a result of the Council’s emphasis on local and seasonal ingredients for school meals. We were able to build up a picture of the material benefits experienced by suppliers consistent across both areas. Table 1 summarises our findings in an ‘impact map’. In SROI methodology impact maps are used to outline the links between inputs, outputs and outcomes for different stakeholders. It illustrates the flow between these different elements making visible how change comes about for stakeholders.

Table 1: Impact map

Stakeholder	Inputs	Activities	Outputs	Outcomes
Local suppliers (wholesalers and farmers)	Time Skills Infra-structure	Production/ delivery of produce to FFLP standards Employment of local people Making links in the local economy	Volume of supplies for school meals contract Increase in number of local employees Number of new local links Number of new local contracts	Improved security of market and income Opportunity for expanding business Enhanced local reputation
Local employees	Time Skills	Working for local suppliers to deliver to school meals contract	Employment Wages	Opportunities for local employment Increased job security Well-being impacts of working locally
Local community		For example, purchase of local produce (other than school meals)		Well-being gains from buying/ supporting local food
Local society/ local authorities	Money Skills	Application of FFLP procurement standards Nomination of local suppliers Support to local suppliers in tendering for contracts	Quantity of school meal ingredients which are local, seasonal, organic Number of local suppliers Uptake of school meals	Improved public perception of the quality of school meals Savings from cheaper local supplies (Plymouth) Increase in council tax payments due to reduced local unemployment Increase in economic activity in the local area
Wider society/ Central government	<i>No direct input to FFLP in Nottinghamshire</i>		Reduced unemployment through additional jobs created in the Nottinghamshire economy	Reduction in payment of unemployment benefits
Future generations/ the environment			Reduced food miles	Reduced carbon emitted from transportation

The impact map shows how the key benefits of local and seasonal procurement are experienced predominantly through support for local businesses and those who work for them. The principal environmental benefit referred to by stakeholders is a reduction in traffic and the carbon emissions associated with it due to decreased transportation distances. Fuller descriptions of the outcomes by stakeholder are set out below.

3.2.1 Outcomes for Local Suppliers in Nottinghamshire

In our interviews with local wholesalers and farmers in Nottinghamshire the outcome that was highlighted most was the increase in the security of their income and business, conferred by their contract to supply ingredients for local school meals. For the local wholesalers, this contract accounted for a significant share of their turnover and because of the length of contract, three to five years, provided a reliable revenue stream for a sustained period of time.

Growers and producers in Nottinghamshire described how a focus on procurement of seasonal produce allowed them to benefit year round from the school meals contract, since menus changed according to the local produce available.

*“Evidence shows that when public sector organisations buy seasonal produce, the local economy and rural community see the benefits very quickly”.*¹¹

As we heard from one farmer, the opportunity to sell produce through a regular contract with a local wholesaler conferred substantial security gains because it allowed him to side-step the main alternative means of selling his produce at a wholesale market. Selling through the wholesale market carried an element of risk that the produce would not sell or that the farmer would not receive a sufficient price for it, whereas their contract with the local wholesaler gave him certainty of income.

Suppliers described the inter-connectedness of their businesses. In some cases, relationships between wholesalers and farmers were of long-standing mutual benefit. But new connections were also being made within the local economy. One of the activities of the local authority procurement team was to nominate to wholesalers particular farms that they wanted to buy from. This made new links between the wholesale businesses and a wider range of local farms, increasing the reach of local authority spending within the economy.

The wholesale suppliers made a strong connection between the increase in the security of their income and the opportunities for expanding their businesses. As a result of the school meals contract they had were able to invest in their infrastructure and employed more staff. We heard from some of the farmers we spoke to that they had invested in new infrastructure, e.g.: barns, and had also rented more land as they increased the scale of their production. An expansion in their capacity, together with a stronger local presence as a result of supplying for local school meals, allowed them to take on other new contracts locally, for example supplying nursing homes, pubs and farm shops.

The wholesalers told us that they did not just experience their enhanced local reputation through the economic opportunities that resulted from taking on additional profitable activities. One wholesaler in particular described well-being gains among staff within the business as a result of knowing that they were a respected business and were contributing to a thriving local community.

3.2.2 Outcomes for Suppliers in Plymouth

Our findings from interviews with suppliers for Plymouth school meals differed from Nottinghamshire, less in terms of what kind of benefits were experienced but more in terms of the extent of the benefit experienced. This could be because the school meals contracts in Plymouth appeared to account for a smaller share of overall turnover than was the case in Nottinghamshire. For the wholesalers we spoke to, around 10 per cent of their turnover was accounted for by the school meals contract in the case of Plymouth compared with around 20 per cent in the case of Nottinghamshire.

The wholesale businesses we spoke to in Plymouth did describe the security of income conferred by the school meals contract as a key benefit for them. One of the wholesalers we spoke to had undertaken some investment, and did attribute one additional contract to the enhanced network they had gained as a result of supplying for school meals.

Farmers we spoke to in the South West were less aware of the value to them of supplying for the school meals. Again this seemed to be because it accounted for only a small part of their revenue, and because they were unaware of how the produce they supplied to the wholesaler was then distributed on to different clients. The supply maps for meat and for vegetables suggest that the wholesalers for Plymouth school meals obtain their produce from a greater number of farms than is the case in Nottinghamshire. Again, this suggests that for any one farm in the South West the benefits of the school meals contract is more diluted than in Nottinghamshire. Nevertheless, the farmers we spoke to in the South West noted that every end-client was important. They also described strong support for the philosophy behind FFLP, and for its role in promoting healthy eating among children. One farmer described a visit that local school children had made to the farm and how successful it had been.

3.2.3 Outcomes for Local Employees

The key wholesalers in Nottinghamshire and two of the wholesalers in Plymouth had increased the number of their employees as a result of their contract to supply school meal ingredients. By contrast, none of the farmers we spoke to had increased their employment, even though we did hear that in several cases they had expanded their production.

Only two local wholesaler for Plymouth had increased employment as a result of their contract to supply for school meals, and then only by one employee each. However, we heard from another wholesaler that although the number of employees had not changed if they were to now lose the contract for school meals they would probably have to lose five of their employees. A third wholesaler attributed 10 employees at any one time to the school meals contract which suggests that were the contract to be lost to them, then some or all of this number could lose their jobs.

Owing to time and resource constraints we did not interview employees directly, other than the wholesale managers we spoke to. They were able to estimate how many of their additional staff as a result of the school meals contract had been previously unemployed. One wholesaler told us

that their additional 20 employees had all come through advertisements in the local Job Centre and we can assume, therefore that these employees had been unemployed. As a result of information supplied directly by the wholesale managers we were able to estimate how many additional jobs had been created in the local economy.

There was also evidence that staff enjoyed longer than average length of employment in the businesses we spoke to. From this we inferred that there was a material outcome for employees of having greater than average job security.

We asked suppliers how many of their staff lived locally. This was the great majority, over 90 per cent. We assumed wellbeing gains from living and working locally, not least because of building local social networks. This was also included as a material outcome for employees.

3.2.4 Outcomes for the Local Community

Although we did not survey members of the local community, suppliers and caterers told us that they heard from parents, teachers and others about a sense of pride and well-being from buying local produce, and of knowing the provenance of their food. These gains appear to arise from a sense that local food is often of higher quality, not least because it will have travelled only short distances, and from a desire to support local businesses and contribute to a thriving local area.

One of the national catering companies we spoke to said that a demand for local food was a growing social agenda which they needed to respond to. It meant that in some cases, they were buying local produce to meet their contracts even though this entailed an extra cost to them. A local wholesaler told us that local chefs put a premium on buying locally from them because it was an important selling point to their customers. This fact further supports the conclusions that members of community assign value to a more localised agricultural economy.

3.2.5 Outcomes for local society/ Local Authority

In Nottinghamshire, the stated objective for adopting FFLP standards for school meal provision is to:

“provide demonstrable evidence of the food quality/local produce to our stakeholders, and reduce food miles”.

The catering managers reported to us a substantial improvement in the public perception of the quality of school meals in Nottinghamshire, reflected in consistent increases in school meal numbers over the past two years especially. Since spring 2010, the local authority has been promoting the awareness of their procurement practices – with the emphasis on local and seasonal. The monthly take-up numbers since May 2010 have shown dramatic increases, most likely in part due to increased awareness about the sourcing of the food.

From 2006/07 to 2008/09 school meal take-up in Plymouth declined year on year, but picked up in 2009/10 and have continued to rise during 2010.

We heard from local authority staff that until 2007, prices had been held at £1.45 per meal. This was reviewed and the price per meal has gradually risen to £1.90. Despite the price rise, take-up has increased. The message around supplying seasonal, local, whole-food for school meals has been pushed where possible. Feedback from the majority of schools suggests that there is support for local ingredients. Parent groups have expressed interest and there is anecdotal evidence that people are in favour of supporting local farms and businesses.

It should be noted that prior to 2008/9 take-up of school meals in Nottinghamshire and Plymouth lagged behind the national average rate. These areas and others were hard-hit by the reduction in take-up following *Jamie's School Dinners* in 2005.¹² Taking the example of Nottinghamshire, this means that progress made in increasing take-up is under-estimated if we just compare the area's figures to the latest national average annual take-up rates as reported by the School Food Trust.¹³ The 'distance travelled' in terms of increasing school meal numbers when compared over time within Nottinghamshire tells a much more positive story.

In Nottinghamshire, procurement staff noted that sourcing seasonal, local produce has not increased the cost of delivering school meals. Particularly in the case of milk and eggs they were sourcing better quality for the same or less cost. The local authority budget has though benefited from a supplement of around £600,000 per year from the school lunch grant which has helped ensure higher quality ingredients. Now that the school lunch grant is no longer ring-fenced there is a risk that it will be used for other purposes, which means a risk to the budget for food on the plate where lower cost could become a more important driver. This does not necessarily mean a move away from local procurement but would mean a reduction in food value.

Procurement staff in Plymouth also reported that the move to local and seasonal purchasing had not incurred additional costs for school meals provision. But they had discovered that their most recent menu (introduced on 1 November 2010) had resulted in a reduction in average food cost across the three-week menu cycle of eight pence per meal. This was achieved without any compromise on ingredients, quality or portion size. This suggests the potential in some cases for reducing the cost of school meals to providers, although we would recommend further research around this potential. Given the report from Plymouth staff, we have included potential cost savings in our model for Plymouth.

Increasing the take-up of school meals is a key objective for local authorities such as Nottinghamshire and Plymouth, and is also central to the FFLP. As well as this direct outcome for the local authority, however, there is a wider benefit to local government from a thriving and resilient local economy. Nottinghamshire procurement staff told us that a strategic local government objective is to support local businesses and economic activity, as shown by the following extract from Nottinghamshire County Council's website:

“We want the local economy to become more competitive and sustainable, to link Nottinghamshire people to local jobs and to develop an enterprising culture.”

Nottinghamshire Council’s spending into the local economy on school meal ingredients represents an injection to the local economy of around £1.75 million a year, impacting directly on eleven local businesses. In the case of Plymouth, local spending for school meal ingredients is around £644,000 a year, benefiting four local wholesalers directly and a number of primary producers. Interviews with the wholesale businesses that supply for school meals indicated that some of the additional members of staff taken on as a result of the school meals contract were previously unemployed. This provides an extra benefit, though small, to the local authority through increased council tax receipts.

3.2.6 Outcome for wider society/ central government

Since a number of jobs have been created in the local economy and the evidence is that a few were taken up by people who were unemployed, there will be a small overall reduction in payment of unemployment benefits for those new employees. This is a benefit which accrues to the national government, and ultimately the taxpayer.

In addition, since we heard that staff in the local firms we spoke to enjoyed longer than average terms of employment, and hence job security, supported by the school meals contract, we included a benefit to the state from reduced periods of interim unemployment among staff.

3.2.7 Outcome for the environment/ future generations

A reduction in negative environmental consequences from more sustainable procurement practices are of intrinsic benefit, but can also be thought of as accruing to future generations who would experience the result of today’s damage to the environment. Farming activities and the processing of food have numerous environmental impacts, from energy use, changing land use, water pollution and greenhouse gas emissions. To derive comprehensive estimates these would be a very complex research exercise and beyond the scope of this study. We chose to focus the research only on transportation, as it is the most tangible and easily measured part of agriculture with ecological consequences. The need for transportation is obviously connected also to the scale of the supply chain, so it can be expected to change in response to a focus to procuring food from local sources. Often a measure of food miles is adopted to study transportation in agricultural supply chains. We used slightly more developed indicators and took into account also differences in the vehicles used and the fact that some transportations links can supply multiple destinations.

Based on our interviews we estimated the total amount of transportation involved annually in supplying school meals. We were not able to conclusively measure the change in transportation that had resulted from the adoption of FFLP standards, but made an estimate based on the results from a previous case study of FFLP¹⁴, in which a 70 per cent reduction in transportation needs had been observed.

Our estimates of the environmental costs associated with transportation included its impact on climate change as well as the associated noise, congestion, harm to health and damage to infrastructure.

3.3 Evidencing outcomes: measurement and valuation

Demonstrating and valuing outcomes, particularly where they are less tangible or have no easily identifiable market value, relies on the identification of indicators which express how the outcome is experienced in a way that is measurable. So, for example, greater security for businesses cannot be measured directly, but that security might reasonably be experienced through the certainty of being able to pay core business costs for the duration of the contract. The indicator is therefore core business costs as reported by the relevant stakeholders.

Having identified suitable indicators, it is then a matter of finding the right financial proxies. The proxies demonstrate the value of the outcomes in monetary terms. For things that are traded in markets, the market price is used when suitable. When a price is not available, other ways of approximating how much stakeholders value the outcome can be used. Table 2 sets out the indicators and financial proxies used for the outcomes that were identified in our case studies, and that are described in the impact map above. Further detail is provided in the technical appendix to this report.

3.3.1 Valuing the overall increase in local economic activity

The concept of an economic multiplier effect is that money coming into an economy has a multiplied impact on that economy based on the way the money is spent and re-spent within it. In an economy where everyone spends 100 per cent of their incomes locally, the multiplier effect is high. In an economy where everyone spends their money outside the local economy the multiplier effect is low. The multiplier effect therefore shows how strong the linkages are between the people and businesses in a local economy.¹⁵

nef has developed a simple multiplier measuring tool to enable people to measure economic impact in a clear, manageable way. This tool is known as LM3 – Local Multiplier 3. It is an economic tool to measure how income into an area circulates and multiplies within the economy. It measures three ‘rounds’ of spending to capture the bulk of spending and re-spending and to keep the tool manageable. In this study, the three rounds of spending we tracked are as follows:

- Round 1: Local authority school meals budget paid to local wholesalers and other direct suppliers.
- Round 2: Wholesalers’ payments to local growers and farmers in order to meet the school meals contract, plus payments to their locally based employees and services.
- Round 3: Growers, employees and local services spending within the local economy.

Table 2: Outcomes indicators and attaching financial values

Outcome	Indicator	Estimating Value
Improved security of market and income	Ability to meet core business costs	Aggregate annual core business costs reported by wholesalers and farms in proportion to the share of business revenues accounted for by the school meals contract
Opportunity for expanding business	Investment in business infrastructure	Rate of return on general market investments, calculated on the aggregate value of investments in new plant and capacity due to the school meals contract reported by stakeholders
Enhanced local reputation	New contracts attributable to school meals contract	The value of additional contracts gained by suppliers which they attribute to having the school meals contract
Opportunities for increased local employment/ additional jobs	Number of new employees taken on by wholesale firms and farms to service school meals contract who were previously unemployed	Difference between average agricultural wage and income from unemployment benefit for each new employee who was previously unemployed
Increased job security	Number of employees who experience an increase in job security through increased length of employment contracts/ reduced frequency of involuntary redundancy	Income lost during an average period between jobs as measured by the difference between the average annual wage in agriculture and average annual unemployment benefits
Well-being impacts of working locally	Increase in number of employees who live locally	Value of job satisfaction, expressed as an equivalent increase in income (estimate taken from a previous nef study – Benefits that Work ¹⁶)
Pride in thriving local community	Not measured. Resource constraints did not allow for a survey of people in the local area	Not valued in this study
Improved public perception of the quality of school meals	Increase in take-up of school meals attributable to FFLP procurement approach	Difference between price of a school meal and average spend on a packed lunch
Cost savings from local procurement	Reduction in spending against baseline	Saving in pence per meal
Reduced cost of unemployment to the local authority	Increase in council tax revenue for the local authority as a result of fewer unemployed people who receive a reduction	Annual council tax payments across additional employees
Increase in economic activity in the local area	This outcome has been valued using a local multiplier method which gives an overall measure of improved local economic activity. The value is calculated separately from the main outcomes valuation model to avoid double counting some of the outcomes, e.g.: improved business security, which can be valued individually with a proxy but which also forms part of the overall increase in local economic activity. See 3.3.1.	
Reduced cost of unemployment to wider society	Reduction in payment of benefits as a result of additional job opportunities and enhanced job security	Estimate of annual benefit payments for the number of employees who have gained employment, and to reflect a reduction in periods of interim unemployment
Reduced damage from carbon emissions	Reduction in greenhouse gas emissions, air pollution and congestion from local supply	Value of reduced vehicle emissions, air pollution and congestion, measured by social cost of carbon

We were able to ask stakeholders directly how much of their income or what share of it was spent in the local economy. The results of this exercise are presented in the next section on establishing impact.

3.4 Establishing impact

Having derived values for each indicator and hence each outcome, the SROI model is then adjusted in order to establish the impact of FFLP procurement. This means qualifying the observed changes where it is reasonable to expect that they don't reflect social value created. This process needs to take account of four considerations:

- Costs and benefits that would have been realized anyway for stakeholders without spending a greater proportion of the same school meals budget seasonally and locally (**deadweight**).
- Costs and benefits that would have accrued to groups or individuals outside the scope of the study (e.g. farmers and suppliers outside of the local area or not targeted by FFLP procurement practices), but that are now displaced to groups or individuals within the scope of the study (e.g. local farmers) (**displacement**).
- The extent to which achieving the changes observed has to be attributed to other resources and investment that made them possible (e.g. faster economic growth in the area) rather than merely procuring school meals according to FFLP standards (**attribution**).
- The period over which the changes and benefits accrue, and the extent to which benefits drop off year by year across the appraisal period, for example, there may be outcomes which are experienced in full initially but without lasting impacts (**drop-off**).

Careful consideration was given in this study to the issue of displacement because of the possibility that a switch to procuring ingredients from a local supplier, which might result in an increase in local employment for example, would remove benefits from an alternative or existing non-local supplier. This could mean a loss of jobs in another part of the economy, yielding no net benefit across society. Any outcome that was considered to be 100 per cent displaced would mean that the gain to the local economy would equal the loss to another part of the national economy. Careful examination of particular circumstances in any given case is necessary to understand displacement effects, but a general finding in the case of food supply is that procuring from farms and suppliers with smaller, localized supply chains entails an increase in labour intensity resulting in a net gain in employment terms, i.e.: some of the gain to the local economy can be expected to be additional to the national economy too.

Nottinghamshire Council told us that prior to their focus on seasonal, local produce, the majority of their ingredients were sourced from the EU or further afield, particularly in the case of meat. This means that it is likely that benefits to Nottinghamshire businesses which now supply the bulk of ingredients on the plate have not been substantially displaced from elsewhere in the UK economy. For the purposes of this analysis we

assumed moderate displacement in the case of both Nottinghamshire and Plymouth so that it was not discounted as an issue altogether. Further study of displacement effects in food procurement was beyond the scope of this study but would be valuable to enhancing our understanding of the full impacts of a shift to seasonal and local produce, particularly as our literature review revealed little detailed analysis to date of this important consideration.

3.5 Calculating the Social Return on Investment

3.5.1 SROI ratio

Our results indicate that by spending around a third of the Nottinghamshire school meals ingredients budget on seasonal and local produce, value of over £5 million a year is generated for stakeholders. In Plymouth, around half of the school meals ingredients budget is spent locally, generating value for the local economy and other stakeholders of around £1.2 million every year.

The value of input costs in deriving the SROI ratio is taken as the amount of additional spending on local and seasonal produce as a result of applying FFLP standards of procurement. In Nottinghamshire, prior to the change in focus, around £100,000 a year was spent on a few local items. This has grown to £1.75 million a year, an increase of £1.65 million a year. In Plymouth the benchmark value of spending on local produce is £260,000. This was the amount spent on local meat in 2008/09. Currently, local spending from the Plymouth budget is worth around £644,000, an increase of £384,000.

- In Nottinghamshire, additional spending for school meals locally is calculated to generate over £5 million in value each year. With additional investment of £1.65 million this represents a return of **£3.11 for every £1 spent**.
- In Plymouth, the additional spending on seasonal and local school meal ingredients as a result of adopting FFLP practices is found to generate £1.2 million per year, a return of **£3.04 for every £1 spent**.

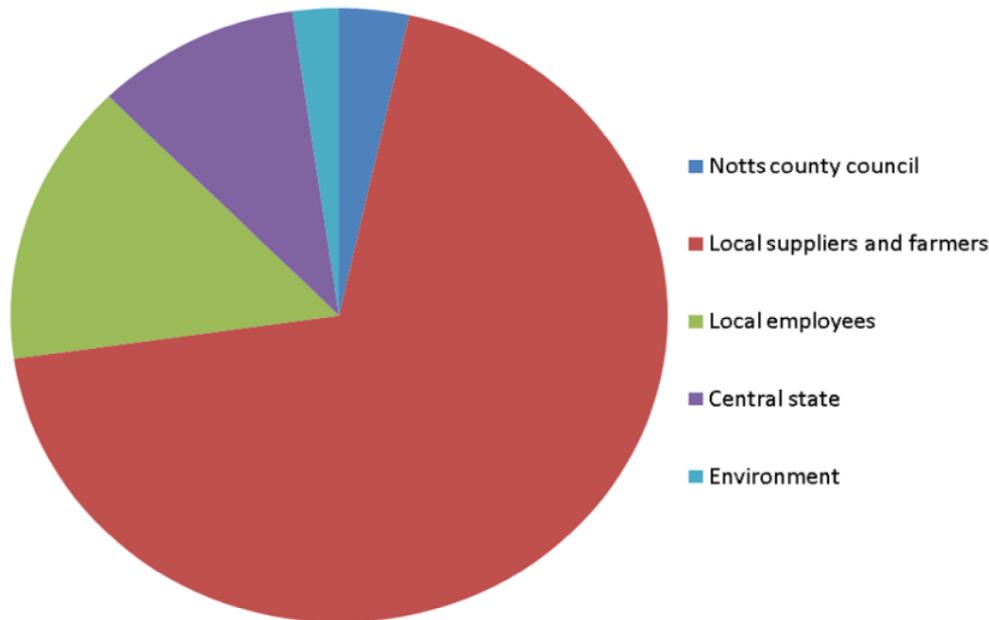
3.5.2 Value by Stakeholder

Figures 3 and 4 show how the total value generated accrues to different stakeholders in each case study area.

For Nottinghamshire (figure 3), the results suggest that:

- The greatest share of the benefits is experienced by **local businesses** – wholesale and primary producers in the form of greater business security and especially enhanced local presence which leads to additional contracts and income. Of the total £5 million of benefit generated, around £3.6 million (69 per cent) accrues to local suppliers.
- Around £765,000 (15 per cent) of the total benefits accrue to **local employees** from additional jobs, enhanced job security, and well-being benefits which are expected to accrue from a greater number of them living and working in the same area.

Figure 3: Share of value by stakeholder for Nottinghamshire

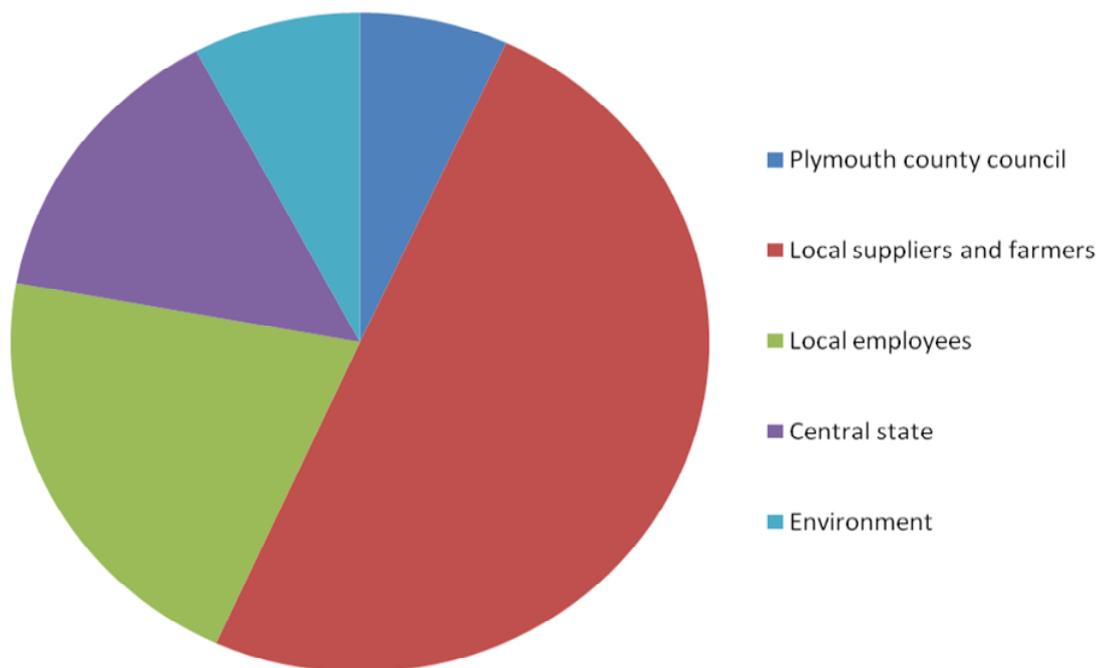


- £518,000 (10 per cent) of the benefits accrue to **the state/ central government** as additional jobs reduces the payments of unemployment support.
- For **local society/ Nottinghamshire County Council** the benefit of higher take-up of school meals as a result of improved public perception amounts to £176,000 (3 per cent) of the total.
- For **the environment**, the benefit of reduced transportation impacts is relatively modest. The environmental benefit measured amounts to £117,000 (two per cent). A fuller account of the potential for achieving environmental benefits as a result of local and seasonal procurement would need to examine processes other than transportation which embed carbon in the production of goods. It would also need to consider the extent to which smaller scale, more localised farming techniques would reduce the use of other environmentally damaging chemicals, or the production of waste.

In Plymouth a breakdown of the results (figure 4) shows that:

- As for Nottinghamshire, the greatest share of the benefits is experienced by **local businesses**. In the case of Plymouth this only includes the wholesale businesses because an indicative survey of farmers suggests that supplying ingredients for school meals accounts for a smaller share of their turnover than in Nottinghamshire. Of the total £1.2 million in benefits generated in the Plymouth case study, around £582,000 (50 per cent) accrues to local suppliers.
- Around £246,000 (21 per cent) of the total benefits accrue to local employees from additional jobs, enhanced job security, and well-being benefits which are expected to accrue from a greater number of them living and working in the same area.

Figure 4: Share of value by stakeholder for Plymouth



- £168,000 (14 per cent) of the benefits accrue to **the state/ central government** as additional jobs reduces the payments of unemployment support.
- For **local society/ Plymouth Council** the benefit amounts to £80,000 (seven per cent) of the total. This is higher than the share in Nottinghamshire (three per cent) because of the additional outcome reported around budgetary savings.
- For **the environment**, the modelled benefit is £91,000 (eight per cent).

3.6 Local Economic Multiplier Effect

Table 3 shows the basic working of the LM3 model. Comparing current spending and re-spending in Nottinghamshire now and prior to a focus on procuring locally and seasonally shows that the total amount of money circulating in the local economy from this source has increased substantially, from £218,668 every year to £3,826,688.

Table 3: Money circulation generated by local sourcing for school meals in Nottinghamshire

Current local spending		Previous local spending	
Spending in:	Value of spending	Spending in:	Value of spending
Round 1	£1,750,000	Round 1	£100,000
Round 2	£1,115,000	Round 2	£63,714
Round 3	£961,688	Round 3	£54,954
Total	£3,826,688	Total	£218,668
LM3 score	2.19	Ratio	2.19

Table 4: Money circulation generated by local sourcing for school meals in Plymouth

Current local spending	
Round 1	£644,000
Round 2	£354,200
Round 3	£194,810
Total	£1,193,010
LM3 score	1.85

The multiplier calculation, based on the ratio between the initial injection of income to the local economy and the total circulation of the money within it, shows that currently for every £1 spent initially from the school meals budget on seasonal, local ingredients, a further £1.19 of economic activity is being generated.

Current figures for Plymouth are set out in table 4. The share of income in each round re-spent locally was reported by stakeholders as being slightly lower compared with Nottinghamshire, yielding a lower multiplier which indicates that for every £1 of spending from the school meals budget, a further £0.85 of economic activity is being generated.

As noted previously, we do not include the multiplier effect within the main outcomes model in order to avoid double counting certain outcomes. However, to the extent that the local authority has an objective in supporting local economic resilience, and representing the interests of local society as a whole, we might note the catalytic role played by Nottinghamshire County Council in spending £1.75 million of the school meals budget locally. The multiplier calculation reveals that this level of spending generates additional economic activity worth a further £2 million in overall benefits to local business and society. Similarly spending of £644,000 by Plymouth Council generates additional activity in the local area worth £549,000.

4: Conclusion

The results of both case studies suggest that there are substantial economic and social benefits to be gained from public procurement practices which focus on a sustainable agenda around seasonal and local produce. We find complementary results from the two case study areas, which indicate wider annual benefits of over £3 for every £1 spent in the local economy. The full benefits of an FFLP approach to school meals can be expected to be significantly higher than this, however. The analysis presented in this report is only partial. It does not take account of any of the health, educational or cultural benefits of a whole school approach to food which are the primary objectives of FFLP. Adding these benefits would result in a substantially higher positive return to investment.

An important finding is that recently take-up of school meals has been responding well in both areas to a whole food approach. In Nottinghamshire, as a result of earlier efforts to transform school meal ingredients, built upon by being part of the formal framework of FFLP, there has been a strong resurgence in take-up. A recent conversation with local authority procurement staff suggests that Nottinghamshire school meals are now almost breaking-even. Were this to be the case, it is possible to envisage a self-sustaining service delivering health, educational and wider social and economic benefits for the local community, and also contributing to a better national outlook.

There is ongoing debate about the role of local procurement in sustainable procurement strategies, especially as it relates to environmental benefits and social justice. It was beyond the scope of this study to examine the extent to which local food production delivers an overall reduction in environmental impact as compared with alternative supply options. Part of this depends on greater understanding of the wider environmental impacts of local food production techniques compared with large-scale industrial ones. There is a need for further work on this important subject so that broader impacts than just transportation effects can be regularly incorporated into evaluations.

The other important issue raised in this study is about the extent to which displacement effects occur and should be taken into account. From a whole society point of view, the value of local gains will be that they are additional across the economy. Certainly, taking account of social and environmental benefits, including wellbeing impacts of working locally, and having stronger local interconnections takes the debate beyond a narrow focus on economic efficiency. This is critically important in ensuring that full

value is recognised and taken into account in decision-making. It underpins the principles, purpose and contribution that SROI analysis can make. Further analysis would be helpful in advancing our understanding of the extent to which impacts are displaced and under what circumstances impacts are additional in generating net value for society locally and nationally.

Technical Appendix

A1: Outcomes, indicators and proxies

Outcomes	Indicator	Financial proxy	Net value across 5 yr appraisal period ^{17, 18}
Improved security of market and income for local suppliers	<p>Core business costs</p> <p>Source: interviews with local supply businesses</p>	Aggregate annual core business costs reported by wholesalers and farms in proportion to the share of business revenues accounted for by school meals contract	<p>N: £1,507,923</p> <p>P: £525,782</p>
Opportunity for local suppliers to expand business	<p>Investment in business infrastructure</p> <p>Source: interviews with local supply businesses</p>	<p>Rate of return on general market investments calculated on the aggregate value of investments in new plant and capacity due to the school meals contract as reported by stakeholders</p> <p>Rate of return on market investments = 5%. Source: Ofcom, http://faculty.london.edu/icooper/assets/documents/ofcomriskpremFINALforpdf.pdf</p>	<p>N: £243,331</p> <p>P: £8,770</p>
Enhanced local reputation experienced by local suppliers	<p>New contracts attributable to school meals contract</p> <p>Source: interviews with local supply businesses</p>	The value of additional contracts gained by suppliers which they attribute to having the school meals contract	<p>N: £1,808,330</p> <p>P: £47,017</p>
Opportunities for increased local employment/ additional jobs for local people	<p>Number of previously unemployed new employees taken on by suppliers to service school meals contract</p> <p>Nottinghamshire n=24. Source: interviews with local supply businesses</p> <p>Plymouth n=7. Source: interviews with local supply businesses</p>	<p>Difference between average agricultural wage and income from unemployment benefit for each new employee who was previously unemployed</p> <p>Average agricultural wage = £17,619. Source: University of Reading, The Farm Labour Force. http://www.ecifm.rdg.ac.uk/maclab3.htm</p> <p>Income from unemployment benefit = £3,344. Source: Knuutila, A (2010) Punishing Costs. London: nef</p> <p>Difference = £14,275 per year</p>	<p>N: £383,637</p> <p>P: £111,894</p>

<p>Increased job security for employees of local suppliers</p>	<p>Number of employees experiencing greater job security</p> <p>Nottinghamshire n=11 Plymouth n=4</p> <p>nef estimate of reduction in periods of unemployment through more stable employment relationships reported by local supply businesses, compared to the average frequency and length of spells of unemployment.</p> <p>The average length of a period of unemployment is 20.5 months. Source: Nomisweb).</p> <p>The average length of employment tenure is 7.5 years. Source: ONS study, available at http://www.statistics.gov.uk/articles/labour_market_trends/jobmobility_nov03.pdf.</p>	<p>Income lost during an average period between jobs, measured by the difference between the average annual agricultural wage and average annual unemployment benefits</p> <p>Average agricultural wage = £17,619. Source: University of Reading, The Farm Labour Force. http://www.ecifm.rdg.ac.uk/maclab3.htm</p> <p>Income from unemployment benefit = £3,344. Source: Knuutila, A (2010) Punishing Costs. London: nef</p> <p>Difference = £14,275 per year</p>	<p>N: £174,978</p> <p>P: £68,899</p>
<p>Well-being impacts of working locally experienced by employees</p>	<p>Increase in the number of employees who gain wellbeing benefits from working locally</p> <p>Nottinghamshire n=34. source: interviews with local supply businesses and nef calculation to account for more secure job tenure.</p> <p>Plymouth n=11. Source: interviews with local supply businesses and nef calculation to account for more secure job tenure.</p>	<p>Value of job satisfaction, expressed as an equivalent increase in income</p> <p>Research concludes that a move in level of job satisfaction from the 50th percentile to the 75th is equivalent in its effect to a 53% increase in income. Source: Heliwell, J F and H Huang (2005) How's the Job? Well-being and Social Capital in the Workplace NBER Working Paper No. 11759, http://www.nber.org/papers/w11759.</p> <p>In this case we took 53% of the average agricultural wage, £17,619. Source: University of Reading, The Farm Labour Force. http://www.ecifm.rdg.ac.uk/maclab3.htm</p>	<p>N: £207,034</p> <p>P: £65,052</p>
<p>Reduction for society in payment of unemployment benefits</p>	<p>Number of employees who gain employment / job security</p> <p>Nottinghamshire n=35. Source: interviews with local supply businesses and nef calculation to account for more secure job tenure.</p> <p>Plymouth n=11. Source: interviews with local supply businesses and nef calculation to account for more secure jobs</p>	<p>Estimate of benefits in comparison to someone with £13,500 income, without council tax payments</p> <p>Value = £9,250. Source: nef calculation taking account of the costs of Jobseeker's Allowance, housing benefits as well as the lost taxes from income tax, National Insurance contributions and consumption taxes. In total the revenue of the central increases by about £180 pounds per week for each additional person employed.</p>	<p>N: £517,572</p> <p>P: £167,510</p>
<p>Improved public perception of the quality of school meals</p>	<p>Increase in annual take-up of school meals attributable to FFLP approach</p> <p>Nottinghamshire n=100,000. Source: Nottinghamshire County Council</p> <p>Plymouth n=32,000. Source: Plymouth, Services for Children and Young People</p>	<p>Difference between price of a school meal and average spend on a packed lunch</p> <p>Value = £1. Source: nef estimate based on price of a school meal and additional amount estimated to be spent on packed lunch.</p>	<p>N: £150,694</p> <p>P: £30,139</p>

Cost savings from local procurement (Plymouth)	<p>Number of school meals per year</p> <p>n=1.4 million. Source: Plymouth local authority</p>	<p>Saving in pence per meal</p> <p>Value of saving = 8 pence per meal. Source: Plymouth, Services for Children and Young People</p>	<p>N: -</p> <p>P: £42,000</p>
Reduced cost of unemployment to the local authority	<p>Increase in number of people paying council tax revenue through reduced local unemployment and risk of unemployment.</p> <p>n=35. Source: interviews with local suppliers and nef calculation</p> <p>Plymouth n=11. Source: interviews with local supply businesses and nef calculation to account for more secure jobs</p>	<p>Annual council tax payments</p> <p>Value = £14 per week. Source: Department for Work and Pensions</p>	<p>N: £25,137</p> <p>P:£ 8,135</p>
Reduced damage from carbon emissions	<p>Reduction in greenhouse gas emissions, air pollution and congestion from local supply</p> <p>Source: survey data from local suppliers on numbers of journeys, distances and vehicle types.</p> <p>Baseline reduction of 70% assumed in journey distances as a result of local supply. Source: Lancaster, O., and Durie, S. (2008) The Social Return on Investment of Food for Life School Meals in East Ayrshire. Footprint Consulting Limited, http://www.footprintconsulting.org/resources/44-resources/138-eac-sroi-report</p>	<p>Value of reduced vehicle emissions, air pollution and congestion, measured by social cost of carbon</p> <p>Defra conversion factors were used to calculate the amount of CO2 equivalent greenhouse gases associated with different types of vehicles. Source: http://www.defra.gov.uk/environment/business/reporting/pdf/100805-guidelines-ghg-conversion-factors.pdf</p> <p>The cost associated with these emissions was estimated based on the results from PAGE2009, one of the most recent climate economic models. The PAGE2009 places the social cost of carbon at £165 per ton of carbon at 2009 prices. Source: Hope C (2010) The Social Cost of CO2 from the PAGE09 model</p> <p>For other externalities we used estimates of the cost of noise, congestion, harm to health and damage to infrastructure. The cost estimate is £0.22 per mile travelled. Source: Pretty J et al (2005) Farm costs and food miles: An assessment of the full cost of the UK weekly food basket. Food Policy 30 (2005) 1–19.</p>	<p>N: £117,125</p> <p>P:£ 90,657</p>

A2: Additional explanatory notes

Reduction of environmental damage from transportation

Farms create numerous types of environmental pressures, from the use of fertilizers and pesticides to the greenhouse gas emissions associated with keeping livestock. A precise estimation of all these effects is beyond the scope of this piece of research, as it would have required detailed information on the functioning of the farms. We chose to focus the research only on transportation, as it is the most tangible and easily measured part of agriculture with ecological consequences. The need for transportation is obviously connected also to the scale of the supply chain, so it can be

expected to change in response to a focus on procuring food from local sources.

To estimate the amount of transportation we asked farmers and wholesalers supplying school meals about the distances travelled in the steps needed for processing and delivery of their goods. We asked about the types of vehicles used and how often these journey steps were made. If deliveries to multiple destinations were made on the same trip, we asked for the total annual distance driven when delivering the goods in question. Using this information we estimated the total amount of transportation, in miles, associated with the processing and delivery of school meals. In the absence of data about prior transportation requirements, it was impossible to conclusively establish how much road traffic had been reduced as a result of procuring locally and seasonally. To estimate the change we therefore referred to a previous FFLP study that had established a 70 per cent reduction in the average distances travelled for school meal ingredients.¹⁹ We assumed that a change of the same magnitude had taken place in the case study areas.

To estimate the costs associated with the environmental consequences of transportation we used cost estimates of the externalities from secondary research. Using the Defra conversion factors we calculated the amount of CO2 equivalent greenhouse gases associated with transportation with different types of vehicles.²⁰ The cost associated with these emissions was estimated based on the results from PAGE2009, one of the most recent climate economic models. The PAGE2009 places the social cost of carbon at £165 per ton of carbon at 2009 prices.²¹ For other externalities associated with traffic we used an estimate from a paper University of Essex that estimated the cost of noise, congestion, harm to health and damage to infrastructure.²² The cost of these was estimated to be £0.22 per mile travelled.

Increase in employment and work security

To assess the employment impacts of local procurement, we asked farmers and wholesalers whether they had employed more people as a consequence of supplying the council. We also asked how many of those who were employed had been unemployed previously. We assumed that those individuals that had been working previously would have found employment elsewhere.

We paid careful attention to the issue of displacement of jobs, i.e.: to whether or not the new jobs in local firms entailed a loss of jobs in other firms which has been supplying ingredients for the school meals. In this study, we heard from Nottinghamshire County Council that prior to the focus on local procurement, the majority of ingredients was sourced outside the UK. This limited the extent of displacement in a UK context more than we might have expected.

There is also evidence that localized supply chains are more labour-intensive.²³ If this is the case, the shift to production of the same volume of commodities in a localized agricultural economy can lead to a net increase in employment.

We also asked the wholesalers and farmers about their human resource policies: How long were typical employment relations and how often did they have to make workers redundant? Where the employers reported very stable employment relations we interpreted this to mean an improvement in the work security for those employed. We estimated the reduction in periods of unemployment created by more stable employment relationships by comparing them to the average frequency and length of spells of unemployment.²⁴

The increase in work was valued separately for the individuals involved as well as for central and local government. We used the difference in income between being on unemployment benefits and the estimated UK average wage for agricultural workers (£17,619) as the financial proxy for individuals. For those gaining employment at the farms the work also represents benefits in addition to an increase in employment. Research shows, for instance, that working locally is associated with higher levels of well-being and life satisfaction. To account for this fact we also included a measure of the value of increased satisfaction with work. The valuation of this was based on a piece of research that estimated the equivalence between increased income and increase in job satisfaction in terms of their connection to overall life satisfaction.²⁵ The research concludes that an move in levels of job satisfaction from the 50th percentile to the 75th is equivalent in its effect to a 53 per cent increase in income.

To estimate the cost of unemployment to the state, we took account of the costs of Jobseeker's Allowance, housing benefits as well as the lost taxes from income tax, National Insurance contributions and consumption taxes. In total the revenue of the central increases by about £180 pounds per week for each additional person employed. For the local government the benefit is about £14 per week due to an increased uptake in council tax.

A3: Assessing impact

A critical part of an analysis based on SROI methodology is to be clear about the extent to which changes in outcomes are due to the activity in question. This entails adjusting the financial values obtained for each outcome so that the impact of the activity in question is isolated and so that its impact is not over-stated.

In this study, we assumed a low **deadweight** (i.e.: the change that would have happened anyway without FFLP procurement practices), typically less than 25 per cent across outcomes. We did assume that businesses may have had other business opportunities in the absence of the school meals contract, but since most of the businesses were of long-standing we did not assume a significant deadweight for this, assessing that a significant portion of the change for them was generated by the move to local and seasonal provision of school meals. Similarly we allowed for a limited amount of deadweight in the case of employment effects to allow for employees finding new work or gaining additional security of tenure through other local business opportunities. For the change in take-up of school meals there might still have been a drive to improve perception of quality among parents and pupils but traction on this was gained particularly by emphasising the change to local and seasonal ingredients.

We paid particular attention in this study to **displacement** effects because we envisaged that if supply for school meal ingredients shifted to local suppliers, other national suppliers would lose business and possibly numbers of employees, i.e.: the gain to Nottinghamshire or Plymouth businesses would represent some loss to businesses elsewhere. Interviews with the local authorities however suggested that displacement effects were less than might be expected because of the quantity of ingredients previously procured from international sources. This will of course imply displacement from other countries' economies, but for scoping purposes we limited this analysis to impacts on the UK.

The concept of **attribution** aims to allow for the part played by complementary activities in achieving outcomes. This avoids over-claiming the impacts of one specific intervention or activity. In most cases for this study we assumed a high attribution, above 75 per cent, to sourcing ingredients locally and seasonally. This is because our interviews and calculations were aimed at isolating the impacts of FFLP procurement. Businesses were able to attribute effects on, for example, business security and employment with a high degree of certainty.

The final step in assessing impact, is to take account of **drop-off** rates. This refers to the length of time over which the effects of the intervention, and investment in it, are experienced. For this study we looked at the cost of implementing FFLP procurement on an annual basis. We assumed a five year appraisal period so that the potentially longer-term effects of one year of purchasing local and seasonal produce could be assessed. We assumed a high drop-off rate, i.e.: 75 per cent or more for most of our outcomes, since if local authority catering departments ceased to buy local and seasonal ingredients the benefits to local businesses and employees could be expected to fall away quite rapidly. We assumed a lower drop-off rate for some outcomes, however, such as enhanced local reputation of businesses since the impact of higher visibility in one year could be expected to persist for some time.

Endnotes

¹ The four evaluation partners are: **nef** (the new economics foundation), the University of the West of England, the National Foundation for Educational Research; and the BIG Lottery Health and Wellbeing evaluation.

² For an examination of these issues, see Sumberg, J. (2009). *Re-framing the great food debate: The case for sustainable food*. London: **nef**

³ Cranbrook, C. (1998). *Food Webs*. CPRE.

⁴ Delow, E., & Cousens, C. (2003). *FLAIR Report 2003: The development of the local food sector 2000-2003 and its contribution to sustainable development*. f3- Foundation for Local Food Initiatives.

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⁹ Nicholls, J., Lawlor, E., Neitzert, E., & Goodspeed, T. (2009). *A Guide to Social Return on Investment*. London: Cabinet Office. <http://www.neweconomics.org/publications/guide-social-return-investment>

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¹¹ Sustain. (2010). *You fund it, government buys it and we all pay*. Retrieved from www.sustainweb.org

¹² Storey, P. & Chamberlin, R. (2001). *Improving the Take-Up of Free School Meals*. London: DfEE. Retrieved from <http://www.education.gov.uk/research/data/uploadfiles/RR270.PDF>

¹³ School Food Trust. (2010). *Fifth Annual Survey of Take Up of School Meals in England*. Retrieved from <http://www.schoolfoodtrust.org.uk/school-cooks-caterers/reports/fifth-annual-survey-of-take-up-of-school-meals-in-england>

¹⁴ Lancater, O., & Durie, S. (2008). The Social Return on Investment of Food for Life School Meals in East Ayrshire. Footprint Consulting Limited. Retrieved from <http://www.footprintconsulting.org/resources/44-resources/138-eac-sroi-report>

¹⁵ This explanation is drawn from: Longrigg, A. (2005). *London Hospital Food Project Economic Evaluation*. London: nef.

¹⁶ Steed, S., & Knuutila, A., (2009). *Benefits that Work*. London: nef.

¹⁷ Net values are calculated for a one-year investment, taking account of the effects of deadweight, displacement, attribution, and drop-off of impacts. These effects are explained in section A3 of this Appendix below.

¹⁸ Value in Nottinghamshire case study denoted by N. Value in Plymouth case study denoted by P.

¹⁹ Lancaster, O., & Durie, S. (2008). *The Social Return on Investment of Food for Life School Meals in East Ayrshire*. Footprint Consulting Limited. Retrieved from <http://www.footprintconsulting.org/resources/44-resources/138-eac-sroi-report>

²⁰ For Defra Conversion Factors, see <http://www.defra.gov.uk/environment/business/reporting/pdf/100805-guidelines-ghg-conversion-factors.pdf>

²¹ Hope, C. (2010). The Social Cost of CO₂, from the PAGE09 model.

²² Pretty, J. et al. (2005). Farm costs and food miles: An assessment of the full cost of the UK weekly food basket. *Food Policy*, 30, 1–19.

²³ Defra. (2009). *Investigating the practicalities and benefits of local food production and identifying any unintended effects and trade-offs*. Retrieved from <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=15219>

²⁴ The average length of a period of unemployment for 20.5 months (Source: Nomisweb). The average length of an employment relation is 7.5 years (Source: ONS study, available at http://www.statistics.gov.uk/articles/labour_market_trends/jobmobility_nov03.pdf).

²⁵ Heliwell, J. F., & Huang, H. (2005). *How's the Job? Well-being and Social Capital in the Workplace*. NBER Working Paper No. 11759. Retrieved from <http://www.nber.org/papers/w11759>

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