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HOW TO MAKE PUBLIC SECTOR FOOD PROCUREMENT SUSTAINABLE?

Introduction

A pilot study, conducted within the framework of the H2020 **Strength2Food** project, helps to give an answer to this question, investigating the environmental, economic, social and nutritional impacts of two different primary school meals services in County Durham, North East England.

Conducted by Angela Tregear, Mary Brennan, and Maysara Sayed, from the University of Edinburgh, between autumn 2016 and the first months of 2017, **the pilot study** assessed the food procurement models to two schools: VillageSchool and TownSchool. One (to VillageSchool) representing a local /short and organic chain, in which all milk and meat is locally sourced and has organic certification, and the other (to TownSchool) representing a more mainstream chain, in which sourcing of milk and meat is regional rather than local, and not organic.

The study

The Durham County Council is the Local Authority with core responsibility for providing school meals. The council receives funding from English government to cover the full cost of meals to children from lower income households, as well as to all children in the first three years of schooling. The price per meal in County Durham is £2.

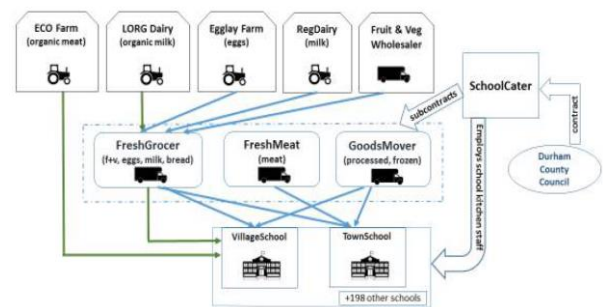
For almost all schools in the County, provision is serviced via a third party catering firm, SchoolCater, contracted by the Local Authority. The **tender document requires** the fulfilment of several requirements: **health and sustainability criteria**, including requirements for meals to meet specific **nutritional guidelines**, engage in **staff training and up-skilling**, and procurement from **local suppliers**.

SchoolCater, in accordance with the quality and sustainability criteria, sets the menus and recipes for

the meals, subcontracts suppliers, determines the list of specific goods that schools can order, records meal up-take and kitchen waste data, and reconciles payments. In addition, it employs all kitchen staff.

SchoolCater subcontracts the supply of fresh produce, groceries, meat and processed/frozen goods to relevant first tier suppliers who deliver them directly to the schools. In turn, these first tier suppliers source items from next tier wholesalers, processors and/or farmers, at least some of whom are located in the region.

The food supply chain is partially different in VillageSchool: milk comes from a 100% organic dairy farm, located nearby, delivered via FreshGrocer, who also delivers all fresh fruit and vegetables and eggs to the school. All fresh meat comes exclusively from a local organic farm that delivers directly to VillageSchool without further intermediaries.



The impacts

The core measure used to assess the **environmental impact** of the school meal services was carbon footprint, expressed as kgsCO₂e emitted from the production, processing, transportation and waste of selected food items purchased by TownSchool and VillageSchool. The aim of the pilot study was to verify if different procurement models adopted by the chain could generate different volumes of emission.

The study revealed that **i) for both schools production-related emissions far outweigh emissions from downstream, or local transportation; ii) of all production-related emissions, those pertaining to meat represent the greatest carbon burden.**

The analysis per meal shows that, on average, carbon emissions at VillageSchool are greater than at





TownSchool, despite the first one operating a Local/Short and Organic procurement model.

What contributes to this result?

First, what emerges is that VillageSchool is supplied with proportionately greater volumes of fresh vegetables and milk than TownSchool, which partly accounts for the disparity in production-related emissions. The study does not take into account volumes of processed and frozen groceries purchased that, possibly, are comparatively smaller in VillageSchool than TownSchool, which could offset the greater production emissions from fresh groceries.

Second, there are greater transport-related emissions attributed to VillageSchool. There are two explanations for this. For the fresh groceries, it could be attributed to VillageSchool’s remoteness and distance from FreshGrocer’s depot. For meat, the explanation is in the delivery arrangement between VillageSchool and the firm that supplies meat. The supplier is just 15 km away from the school but is the exclusive supplier to the school. This means that all meat transport-related emissions are attributed to VillageSchool. In contrast, only a small proportion of meat transport emissions are attributed to TownSchool, because its meat supplier, although covering a much greater distance, delivers also to other customers.

Better results, in terms of transport-related emissions, could be generated with a more efficient procurement management. For example, if FreshGrocer, who already makes weekly deliveries to VillageSchool of fresh produce, were to take in the collection of meat from the local farm within its delivery round, meat transportation to VillageSchool would drop from 99 kgsCO₂e per school year to 8 kgsCO₂e.

In terms of *economic impact*, the study investigated the economic value generated by the Durham schools meals contract in the local area and amongst members of the local supply chain.

One of the indicators used is “Local Multiplier 3” (LM3) analysis.

What about Durham County schools?

In our case, LM1 is the proportion of budget received by the first actor in the school supply chain, (SchoolCater), which is retained in the local area. Given that SchoolCater’s HQ is outside the local area, in the first passage of money, LM1 is equal to 1.

LM3 analysis is a methodology to calculate what proportion of money spent from an initial budget (e.g. a school meals budget) is retained in the local area (determined by the geographic location of the budget recipients and their suppliers). LM3 is expressed as a figure between 1, indicating that no value has been generated within the local area, and 3, indicating that 100% of values have been retained.

LM2 refers to the proportion of the expenditure of SchoolCater on staff, upstream suppliers and direct costs, retained in the local area. Given that all staff are located within the local area, and that two out of three suppliers’ HQs are also local, the study calculates that LM2 is 1.83, i.e. 69% of values are retained in the local area.

Finally LM3, which refers to the proportion of suppliers’ expenditures retained in the local area. Using a default estimate of 67% spent by local suppliers in the local area, the final LM3 is calculated as 2.50. This means that for every £1 spent by Durham County Council and parents/carers, an additional £1.50 is generated within the local area. Compared with average LM3 ratios for the food sector, this can be regarded as a high return. The figure would drop down if all suppliers were outside the local area.

The assessment of the economic impact also investigated the economic importance of the school meal service to actors in the chain. For all suppliers, the contract represents only a relatively small part of their business, and the amount of new business won as a result of holding the contract was estimated to be very modest. Only SchoolCater was different, as the contract comprises almost 100% of turnover of SchoolCater’s operations in the region.





Moreover, since taking over the contract, it has grown the number of schools and uptake numbers.

ECO Farm, the firm that supplies meat to VillageSchool, presents an interesting economic effect of the contract. It experienced a small amount of new business in the early days of supplies when parents would come to browse the butchery and shop after children talked to them about ECO Farm following tasting the meat at school. However, the main reason why ECO Farm supplies VillageSchool is the communitarian ethos of Eco Farm, its orientation towards supplying locally and interest in being embedded in the community.

The *social impact* analysis assessed social values generated by the Durham school meals service, in terms of employment and working environment of firms in the chain and connectedness of people within it. The analysis highlighted that the chain employs mainly full time staff in low-medium skilled work. The gender split is representative of the food supply/catering sector, with all depot and delivery job filled by male employees, and almost all staff working in school kitchens and offices being female. All suppliers conveyed a strong commitment to training and skills development beyond mandatory standards. From suppliers' testimonies, *a strong sense of rootedness in the position in the region emerges, linked to commercial benefits* (flexibility of service, tailored customer response, development of trust), *together with civic and community oriented outcomes*. Interviewees told of voluntary and outreach activities, in the forms of charitable donations, time and resources spent to support council or public agency-run initiatives, site visits for community groups hosted in their facilities, giving presentations and talks to schoolchildren about their businesses, and participation in educational activities to improve understanding of different foods and their origins.

In terms of *nutritional impacts*, the pilot study aimed to trial a methodology used by the University of Zagreb, within the framework of the *Strength2Food* project, for the analysis of the nutritional impacts of the school meals service.

This methodology is based on the examination of schoolchildren's plate waste.

The pilot study demonstrated how quantities of food, and associated calories, were lost due to plate waste. These can be calculated for each food item. More specific results on nutritional impacts of school meal services will be available once the University of Zagreb has concluded its analysis.

Lessons learnt

The pilot study helps to identify some findings that could facilitate the implementation of more sustainable school meals services.

First, the study shows that *the authority who defines the tender for the school meal service plays a key role specifying minimum sustainability criteria and requirements in the catering contract*, such as sourcing from local suppliers, encouraging healthy and nutritionally-balanced food, and applying for different sustainability certificates and accreditations.

Second, the study shows that *school headteachers can also influence the meal service by asking for a more sustainable catering service* (for example growing food on site) *and teaching sustainability to their children*.

Another finding is that *local/short procurement models do not reduce carbon emission if logistics are inefficient*. Exclusive procurement arrangements, even in situations where the distance between suppliers and schools is small, can generate proportionally higher emissions than those of a longer delivery round that takes in a number of schools. In this sense, having good coordination amongst the participants of the downstream supply chain is vital for managing and lowering transport-related emissions.

The pilot study also demonstrates that *if the actors of the food supply chain are located in the local area, the proportion of the monies from the meal contract retained in the area are higher* than when they are located outside.

