



**HOUSEHOLD SATELLITE ACCOUNT
(EXPERIMENTAL)
METHODOLOGY
Chapter 4 Providing Nutrition**

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April 2002

4. PROVIDING NUTRITION

Output

Concepts

The output of this function is “meals, snacks, drinks for the members of households”, and the principal activity is food preparation. In order to value these meals appropriately, we must distinguish between the different types and the likely content. A breakfast should not be valued at the same price as a dinner. Tea and toast should not be valued at the same price as a full English breakfast. An adult meal should not be valued at the same price as a child’s meal.

The cost of a meal bought in a restaurant or café and used in the valuation also includes the cost of the premises and the furniture, as well as the cost of the ingredients, equipment and labour. Double counting must be avoided - see above.

Inputs

Intermediate consumption

This includes the bought ingredients which are transformed in the process of preparing a meal. When estimating the value of the ingredients, we need to be very careful to distinguish between these items and food which is eaten without preparation –fruit, snacks etc. – the latter remains in the National Accounts as final consumption.

The cost of any inputs to homegrown food (seeds, fertiliser etc.) are also part of intermediate consumption. The value of the fruit and vegetables etc. which are produced should not be deducted from the value of the meal. In this way, the return to labour will include the value of the home grown food. To take an example, if a vegetable hotpot is valued at £3.00 and the cost of the vegetables, household capital etc. etc. comes to £1.50, the return to labour is £1.50 – this may represent 30 minutes preparing the dish i.e. an hourly rate of £3.00. If the vegetables are all home grown, and the cost of the other inputs is only £0.50, then the return to labour is £2.50. This may represent 30 minutes preparing the dish and a total of 30 minutes in the allotment – an hourly rate of £2.50. The return to labour is higher in the second case because the ingredients are also produced by the household. The hourly rate is lower because it represents more time relative to value added spent in producing the meal.

The market prices used to value meals will include the cost of the premises and related transport costs. Intermediate consumption in this account should therefore also include a proportion of the goods and services relating to the accommodation (owner-occupied and rented) where the activity takes place. Transport costs should also be included, both relating to market-provided transport (if this can be identified as relating to providing nutrition) and to household-provided transport (e.g. a proportion of the consumables identified in the transport account).

Household capital consumption

This includes ovens, dishwashers and refrigerators, as well as smaller items such as mixers and food processors. If computers are used to purchase food, a proportion of their value should also be included.

Related services

As above, the shopping, gardening etc. which relate to providing nutrition must be separately identified and allocated.

Labour

This is time spent in food preparation and related activities e.g. washing up.

Methodology

Data sources

We purchased market research data from Taylor Nelson Sofres for the year 2000. The Family Food Panel (FFP) samples 11,000 individuals within 4,200 households. The panel reports on all food and drink consumed at home, with each household reporting for a two-week period every six months via self-completion diaries. The sample is staggered so that every day of the year is covered. The sample is designed to be representative of the GB household population. Initially the sample design was based on a random route quota sample controlled by district. Since the initial recruitment the sample has been maintained to ensure that panel attrition is replaced to the appropriate demographics, poor responders are replaced and targets are revised to take account of changes in the GB household population.

The diary keeper is asked to allocate all the ingredients used during the period according to when they were eaten i.e. at breakfast, morning snack, lunch, tea, evening meal or evening snack. They also note who in the household consumed the meal and whether it was eaten in the home or outside (e.g. a lunchbox). This results in approximately 2 million records relating to one calendar year, which need to be condensed into a more manageable dataset.

Information on prices comes from the Eating Out section of the National Food Survey (NFS). This estimates eating out consumption from occurrences and estimated portion sizes, to supplement the information on household food and drink collected in the main survey. The NFS is a continuous sampling enquiry into the food consumption and expenditure of private households in the United Kingdom. Information is obtained continuously throughout the year, apart from a short break over the Christmas period. For 2000, the sample size for home foods was 5,974 households with a response rate of 64 per cent.

2,549 households responded to the Eating Out section, with a response rate of 57 per cent in 2000. Each member of the household over the age of 11, including visitors staying with the household, is given a diary to record all personal consumption of, and expenditure on snacks, meals, confectionery and drinks eaten outside the home (not from household supplies). The following details are recorded in the eating out diary for each food item: the description, the number and size of certain items (where possible), the cost (where the respondent paid), the type of outlet where it was bought, and whether it was consumed on or off the premises. The expenditure is attributed to a complete dish (course) or to a whole meal.

The prices in the Eating Out section are therefore an average from a range of eating out establishments, from a small, basic café to a large expensive restaurant. We have assumed that the range of quality of meals that this represents is similar to the range of quality which is found in home produced meals.

Volume

By looking at the ingredients in each meal and who ate it, as recorded in the FFP survey, we were able to classify meals by portion size and by NFS meal classification, taking a ‘common sense’ approach to the likely ingredients of NFS meals. So, for example, if the FFP ingredients include beef, vegetables, rice or pasta, we have used the NFS price of a beef meal. If the ingredients include beef, bread and salad vegetables this is a meat sandwich, and if the ingredients include only beef and salad vegetables, this is a meat salad. Of course, the former could also be a beef salad eaten with a bread roll, but this would be more expensive when eaten out, and, as we do not have more precise information, we have used the classification which gives us the most conservative estimate. The classification, detailed in Annex 4.1 at the end of the chapter, includes 29 different types of meal, 5 types of salad, 9 types of sandwich, and 41 other ingredients consumed on their own. These meals can be eaten at any time of the day.

We identified one, two and three course meals by looking at starters and desserts. The only starter we were able to identify easily was when soup was eaten with the meal. This means that we have underestimated the number of three course meals. We have made a distinction between packet soup and other soup, and valued these differently. Breakfast cereal is eaten with a wide variety of other ingredients, so we have also classified this as a starter, where the additional items do not include potatoes, rice, pasta or other vegetables. We identified 8 types of dessert, including fresh fruit. Because the respondents report who is eating each individual ingredient, we can account for adult and child portions, and different individuals eating different meals at the same time. We have also identified those occasions where only snacks were eaten – these include biscuits, crisps etc. – as well as the total number of hot drinks (tea, coffee, hot chocolate etc.) made.

In order to arrive at volume estimates for the UK population, we used grossing factors using data derived from the Labour Force Survey, which exclude people living in institutions, stratified by gender, eight age groups and three regions, as show in table 4.1 below.

Table 4.1 Categories used for grossing factors

Age Groups	Gender	Regions
1: 0-9 years	Male	North: Rest of Scotland, Strathclyde, Tyne & Wear,
2: 10-19 years	Female	South & West Yorkshire, Rest of Yorkshire & Humberside
3: 20-29 years		Middle: East Anglia, East Midlands, Greater Manchester &
4: 30-39 years		Merseyside, Rest of North, Rest of North West, Rest of
5: 40-49 years		West Midlands, West Midland Metropolitan County
6: 50-59 years		South: Inner London, Outer London, Rest of South East,
7: 60-69 years		South West, Wales
8: 69+ years		

Source: HHS/LFS

We were not able to subdivide the age groups further, due to sample sizes in the individual cells, so we used a definition of child portions that corresponded to the first age group 0-10 years old. The diaries are kept for two weeks, and we assumed that these two weeks are representative of the whole quarter, and multiplied the results by 6.5 for the quarterly estimate. The four quarters are then added together to produce the annual estimate.

Value

The NFS gives prices for meals and for individual ingredients, and is the average of prices collected in Great Britain. The prices cover items purchased from the following types of outlets: major chain fast food outlets, other fast food/takeaway outlets, Chinese, Indian and other ethnic restaurants, other restaurants and cafes (including railway and bus terminals, airports, hotels and guest houses), public houses and wine bars. The GB prices are not thought to be significantly different from prices collected at the UK level.

We have used these prices in the following way. Any item which we have classified as a dessert or a starter is always priced, whether or not it is eaten as part of a meal. Individual ingredients, when we have not classified them as snacks, are also priced even when they are the only item that is eaten at a 'meal'. Ingredients which we have classified as snacks and which are eaten on their own have not been valued. So for example, a beef salad meal may include crisps among the ingredients. We have assumed that these could be included in the price of a beef salad. Crisps eaten on their own are not valued.

Children's portions are all those meals consumed by children under the age of 10. This is definition of a child is dictated by the level of aggregation required for the grossing factors. Children's portions have been valued at half the price of an adult meal.

Only hot drinks have been valued - tea, coffee and hot chocolate. Individual instant soups have also been classified as hot drinks, when they are the only item consumed at a meal.

Sensitivity analysis

We have looked at the sensitivity of our estimates to the assumption about children's portions, and to average prices including subsidised outlets.

Annex 4.1 Classification of meals

Meal	Salad	Other	Starter
Beef	Cheese	Bacon	Packet Soup
Burger	Chicken	Baked Beans	Soup
Casserole	Egg	Beans on Toast	Breakfast Cereal
Chicken	Fish	Beef	
Chinese	Meat	Bread	Dessert
ChineseB		Bread & Spread	Cake
Duck		Casserole	Dessert
Egg	Sandwich	Cheese	Fruit
Fish	Cheese	Chicken	Fruit Salad
Fry Up & Chips	Egg	Chips	Ice Cream
Ham	Fish	Chop Suey	Milk Pudding
Kebab	Fish in Bun	Cooking Sauce	Yoghurt
Lamb	Hamburger	Duck	
Liver	Meat	Egg products	
Meat Curry	Poultry	Eggs	
Meat CurryB	Steak	Fish	
Meat Pie	Vegetarian	Fishfingers	
Mixed Grill		Ham	
Other		Jacket Potato	
Pasta		Kebab	
Pizza		Lamb	
Pork		Liver	
Quiche		Meat	
Sausage		Meat Dish	
Steak		Meat Pie	
Turkey		Other Meat	
Veal		Pasta/NoodleDish	
Veg Curry		Pastry	
Vegetarian		Pie Filling	
		Pizza	
		Pork	
		Prepared Dish	
		Rice	
		Sardines	
		Sausages	
		Soya	
		Spread	
		Steak	
		Turkey	
		Vegetables	
		White fish	

Notes: A meal includes the main ingredient plus potatoes and/or vegetables and/or rice and/or pasta. A salad includes the main ingredient plus salad vegetables. A sandwich includes the main ingredient plus bread. Other refers to ingredients eaten on their own:

“Chop suey” is any type of Chinese sauce without another main ingredient

“Egg products” are quiches without any other ingredients

“Meat” includes beef, lamb and pork

“Meat Dish” is a bought prepared savoury dish eaten on its own

“Other meat” is burgers eaten on their own

“Pasta/Noodle Dish” covers pasta eaten alone, hot instant snacks and canned pasta meals

“Sardines” covers all tinned fish.