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Models of Nutrient Demand, Tax Policy & Public Health Impact
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RURAL ECONOMY AND LAND USE

Implications of a Nutrition Driven Food Policy for Land Use and the Rural Environment

Executive Summary

Objectives

This reports aims at assessing the impacts in terms of consumption and public health of a tax applied to food products linked to an increased risk of diet-related conditions. This tax scheme is focused on sources of saturated fats, and the 'fat tax' thus levied is used to subsidise fruit & vegetables consumption, which are acknowledged to be beneficial to health.

Background

Epidemiological studies have shown that excessive intake of fatty acids in general and saturated fatty acids in particular are linked to increased risk of coronary heart disease, higher systolic blood pressure, and higher cholesterol plasma concentration. On the other hand, evidence indicates that fruit & vegetables consumption has a protective effect against various cancers, chronic diseases, and ischaemic stroke.

Various regulatory tools exist, aiming at switching consumers' demand away from nefarious nutrient and towards healthy ones. Among those, a tax on sources of dietary fats can be considered. Several empirical studies have tried to assess the effects both in terms of consumption and public health. Results from the literature indicate that such a tax would have small but significant effects, especially when the tax is focused on specific nutrients (*e.g.*, saturated fatty acids), and is coupled to a subsidy on fruit & vegetables. The need to take substitution effects between taxed and non-taxed goods is also stressed.

The effect of such taxes can be assessed, using results from the medical literature: for specific nutrients such as saturated fats, cohort studies estimate the relative risk factors linked to a range of conditions according to intake levels. (As an example, Esrey *et al.* (1996) estimate that the relative risk of coronary heart disease increases by 4% for a 1% increase in total fats intake.)

Data & Methods

We use household consumption data from the Expenditure and Food Survey to estimate a full system of demand for food products in England & Wales, from which own- and cross-price elasticities of demand are derived. Using nutrient conversion tables, the saturated fats content of each commodity group in the demand system is computed, and is used as a basis for the fat tax rates: for every percentage point of saturated fats, the price of the corresponding group is increased by 1%. The tax revenue thus created is then redistributed as a subsidy on fruit & vegetables (the scheme is revenue-neutral). Based on those variations in prices and price elasticities, new consumption levels are computed for each food group in the analysis.

Based on food consumption figures observed before and after implementation of the tax scheme, nutrient intake levels are computed. Based on these and using relative risk estimates for a range of conditions, the public health impact of the scheme is estimated, for the population as whole and by socio-economic group.

Results

Expenditures on all food groups are predicted to decrease slightly as a result of a fat tax coupled to a thin subsidy. Concerning quantities consumed however, we observe a decrease in taxed products (*e.g.*, cheese is down by 20.2%; beef by 7.0%; eggs by 5.7%), while fruit & vegetables consumption increases by 9.2%, with fruit benefiting more than vegetables from the increase. Two points are of interest here: first, the tax scheme would not increase households' expenditures; and second, most changes in consumption remain under 10%, indicating that dietary patterns would not be dramatically affected. The latter point is ambiguous, as it indicates that households could be willing to accept a scheme that would not disrupt their habits, while at the same time it casts a doubt on the effectiveness of the health impact.

In that respect, observed changes in nutrient intakes are modest, although intake of saturated fatty acids and cholesterol are down by 4.5% and 5.4% respectively. Other nutrients such as sodium and all categories of fats, as well as total energy intake would decrease, while protein, fibre and fruit & vegetables intakes would increase (by 4.5% for the latter). More worrying is the 1.7% increase in free sugars. When considering socio-economic groups, there is no marked difference regarding nutrient intake changes: the overall drop in fat intake for instance is evenly distributed from higher to lower social categories. Finally, these changes are not enough to bring nutrient intake levels within the limits suggested by the Department of Health, with lower socio-economic groups being farther from these guidelines.

In terms of epidemiological consequences in the general population, the tax scenario would see a drop in the relative risk of conditions such as coronary heart disease, cancer and major chronic diseases (-4.3%, -2.7%, and -1.3%, respectively) and a 1.3% increase in the risk of type 2 diabetes (due to the fall in poly-unsaturated fatty acids intake, which have a protective effect against type 2 diabetes). When considering socio-economic groups, we observe an unequal distribution, with higher categories benefiting more than lower ones.

Conclusions

The tax scheme as devised here appears to achieve its main purposes, namely reducing the consumption of fatty foods to the benefit of fruit & vegetables, and as a consequence, reducing the occurrence risk of certain conditions in the population. With fattier foods being those for which larger consumption decreases are observed, the general population's health would benefit as a result.

Beyond positive results however, the scheme has its limitations. The changes observed in nutrient intakes remain low, even though they are going in the "right direction", *i.e.* closer to official guidelines. As a consequence, the impact on public health remains modest in comparison to the large subsidy on fruit & vegetables implemented.

Another limitation is the marginal yet telling fact that the risk of type 2 diabetes would increase as a result of a decrease in protective PUFAs, This indicates that the scheme is not well enough targeted with respect to nutrients: taxing saturated fatty

acids has the pernicious consequence of reducing the consumption of all types of fatty acids, including those deemed beneficial to health.

Another aspect of our results indicates that the scheme is not only ill-targeted in terms of nutrients, but also in terms of socio-economic groups. Considering the distribution of relative risk across the population, it appears that lower groups are more at risk of developing ailments such as cancer, while higher groups are less exposed. Yet, groups more likely to benefit from the scheme are the higher ones, while lower groups are benefiting less.

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1.1 *Generalities*

It is increasingly recognised that diet related chronic disease represents one of the most significant public health challenges of the twenty first century. For example the prevalence of overweight and obesity has grown rapidly since the 1980s and, according to the Health Survey for England, in 2004 63% of the adult population had a BMI>25 while 24% were obese (BMI>30). In addition to obesity, the roles that can be played by fruit and vegetables in the prevention of cancer also commands attention as do the impacts of dietary fat composition on fat and lipoprotein levels in the blood and associated impacts on heart disease. There is also a recognition that the diet related health problems are not evenly distributed in society: Drewnowski (2004) notes that in the United States obesity and type 2 diabetes follow a socioeconomic gradient with the highest rates of disease observed among groups with the highest poverty rates and the least education. Dowler (2003) considers the concept of "food poverty", noting that it is a term which is gaining currency in the UK. She argues that the concept is moving away from a technical conceptualisation in terms of minimal nutritional standards towards a definition which includes aspects of social and cultural participation. She continues to note however, that regardless of which definition is used, in developed countries a pattern exists whereby those living on low wages, or in areas of deprivation have lower nutrient intakes and worse dietary patterns than those not living in such circumstances.

1.2 *The 'Fat Tax' Issue in the Literature*

1.2.1 Regulatory Tools

As health costs deriving from obesity and other diet-related illnesses are partly, borne by the government, there is an argument for the government to intervene and try to influence consumers' dietary choices (Gostin, 2007). The regulatory tools available include regulation of food marketing aimed at children (television ads, vending machines in schools), prohibition of certain foods (*e.g.*, *trans* fats), *etc.* A fiscal tool such a tax levied on calorie-dense and nutrient-poor food items (or 'fat tax') is yet another option available to regulators, in the same way as tobacco and alcohol are taxed. While this can appear as an easy way to target unhealthy food and thus discourage their consumption, it remains however a complex undertaking with no certainty of results as far as obesity rates are concerned (HCHC, 2004).

Following Caraher and Cowburn (2005), we note that no fat tax is currently in application in any country, even though some have devised special schemes aimed at discouraging the consumption of some food categories. Two kinds of fiscal measures can be used: increasing or extending VAT to targeted products; or directly imposing a specifically designed tax to targeted products. In each case, revenues can be earmarked for prevention programmes.

In the European Union, schemes rely on the VAT rate applied to food products. In the UK for instance, no VAT is levied on food except for 'treat foods' (such as ice cream and fizzy drinks) where a 17.5% rate is applied. A similar scheme exists in Ireland with a three-tier rate system. While these fat taxes are easy to implement, their consistency has been questioned, notably in the UK, where treats such as cakes or cookies are not subjected to VAT (Caraher and Cowburn, 2005; HCHC, 2004).

1.2.2 Fat Tax Simulations

Some simulations have been carried out on various products to assess the impact of different taxation schemes. Marshall (2000) for instance extends VAT in the UK to products regarded as the main source of saturated fats (milk, cheese, biscuits, *etc.*), in a bid to decrease rates of ischaemic heart disease in the UK. Using assumed price elasticities, he derives changes in serum cholesterol based on the fat content of the taxed foods. He then estimates ensuing variations in ischaemic heart disease, ranging from 900 to 1,000 premature deaths avoided every year. The author notes however that low income groups, who tend to eat more poorly and are more price sensitive, would bear more of the tax burden than other groups.

As mentioned by Kuchler *et al.* (2005), the approach suggested by Marshall to tackle ischaemic heart disease was advocated by the British and Australian medical associations in 2003, in order to address obesity levels.

Following Marshall's study (2000), Mytton *et al.* (2007) extend the VAT in the UK to different food categories, based on several criteria, in order to assess the impact on cardio-vascular diseases. Their taxes are targeted either on sources of saturated fatty acids; unhealthy foods rated according to their SSCg3d score[1]; or a wider range of foods in order to obtain the best outcome (based on trial-and-error simulations). As far as cardiovascular diseases are concerned, results from the first scenario (based on saturated fats) are unsatisfactory, as a decrease in SFAs consumption would be offset by an increase in sodium intake. Conversely, the second and third scenarios would see a decrease in salt consumption, with better results in the latter, with up to 3,200 deaths avoided annually in the UK. Bearing in mind the results from their first scenario, the authors stress firstly the need to take cross-price elasticities into account to assess substitution effects (which Marshall (2000) had not done). They further note that albeit minimal, the health consequences would be significant and in the right direction.

In another setting, Chouinard *et al.* (2005) estimate an incomplete demand system to estimate the effects of a fat tax on dairy products in the US. In line with Marshall's assumptions (2005), dairy products are found to be relatively price inelastic, even among socio-demographic groups. They conclude that their scheme would fail to significantly affect consumption (short of applying very large tax rates), as a 10% tax applied on dairy products would only entail a 1.4% decrease in consumption. Moreover, welfare effects derived from those results indicate that the loss would be

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[1] The SSCg3d scoring system is a quantitative estimate devised by Mytton *et al.*, of how unhealthy a food product is, based on 8 parameters (energy density, saturated fat, sodium and non-milk extrinsic sugar and subtracted for fruit and vegetable content, iron, calcium and n-3 polyunsaturated fat).

greater for people with lower incomes, and elderly people. They stress however that such a fat tax would be a useful tool to generate a revenue that could be allocated to prevention or information campaigns.

Kuchler *et al.* (2005) implement a range of tax schemes aimed at different categories of specific snack foods in the US: they focus on salty snacks, as these are consumed by almost the entire population and are deemed unhealthy. As with previous studies, they first estimate price elasticities of demand, and find that they are relatively inelastic. Applying different tax rates to all or a few of these snacks, results indicate that consumption would decrease only modestly (only a few ounces per capita and per year). They note that dietary impacts would therefore be close to zero, but that, as with Chouinard *et al.* (2005), the extra money generated could be earmarked for information programmes. They however warn that prevention campaigns are costly (as they need to be constantly repeated) and that their effectiveness is not certain. Their final conclusion is that the benefits of an integrated scheme involving both a fat tax and an information campaign could include zero.

Using Danish data, Jensen and Smed (2007) retain the idea of a dual scheme as mentioned by Kuchler *et al.* (2005), and investigate the effects of nutrient- or food-based taxes, coupled or not to a subsidy in revenue-neutral scenarios. In line with other studies, they find that dietary effects would be minimal, but, as far as nutrient intake is concerned, better results are obtained with scenarios focusing on nutrient content rather than specific food items (*e.g.*, dietary fibre *vs.* fruit & vegetables), and scenarios including a subsidy coupled to a tax.

Following Jensen and Smed (2007), Allais *et al.* (2008) use a demand system to estimate nutrient price elasticities for French households, and then implement a fat tax. Their results show that nutrients, like food items in other studies, are relatively price-inelastic, thus indicating that any tax scheme would have little effects on diet. They also note that such a fat tax would further socio-economic disparities, both directly (as a consequence of the tax which would affect lower income categories more than others), and indirectly if food industries were to develop healthier food products (likely to be more expensive) in order to avoid the tax. In that respect, Allais *et al.* (2008) rejoin Marshall (2000).

1.2.3 Concluding Remarks

Benefits of fat tax schemes are uncertain. Beyond empirical evidence as observed above, several factors have to be taken into account, first of all the general public acceptance: as noted by several authors (Caraher and Cowburn, 2005; Cash *et al.*, 2005; Gostin, 2007), such a tax would be considered as patronising and an attack to the freedom of choice. The problem is also compounded by the fact that food products are not detrimental to health in the same way as tobacco, which is always nefarious and is already heavily taxed (Gostin, 2007; HCHC, 2004); this would probably render any food tax potentially controversial in itself.

In the UK, the issue is further aggravated by the apparent contradictory regulations regarding VAT exemptions for food stuffs, as stressed by the House of Commons Health Committee (2004) or Caraher and Cowburn (2005). There is also a general

concern that the ultimate goal of such a policy would only be to raise extra revenue to fill budget deficits (Gostin, 2007).

Beyond consumers' reluctance, Caraher and Cowburn (2005) also point out that the food industry would certainly oppose any such scheme, or would find ways to avoid it, as already mentioned by Allais *et al.* (2008).

Furthermore, there is evidence that fat taxes can be regressive, in that they will be a heavier burden to those who are already at risk: Leicester and Windmeijer (2004) using the National Health Survey for the UK find very little difference among income deciles as far as nutrient intake is concerned. A tax based on fat content or on calorie density would therefore represent a larger proportion of income loss among less well-to-do, as can be seen in Figure 1 below. Besides, considering the relative price inelasticity observed for unhealthy foods, and as has already been noticed in the case of taxes on tobacco and alcohol, it is also feared that consumers would divert their income away from other expenses, including healthy alternatives (HCHC, 2004; Leicester and Windmeijer, 2004).
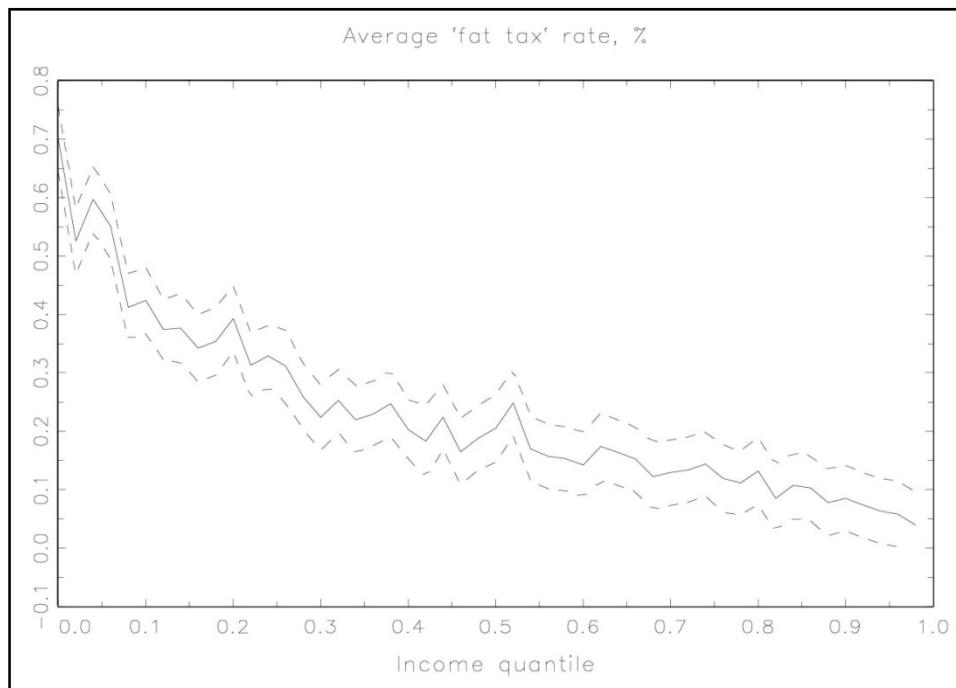
Figure 1: Distributional effects of a fat tax (Leicester and Windmeijer (2004). Authors' calculation from the National Food Survey).

As noted by several studies however, fat taxes can achieve a downward shift in demand for unhealthy foods, albeit small (Jensen and Smed, 2007; Kuchler *et al.*, 2005; Marshall, 2000; Mytton *et al.*, 2007; *etc.*). And tools have been identified to improve the benefits of a fat tax: first by focusing on nutrients rather than food items (Jensen and Smed, 2007), then by coupling the tax to a subsidy scheme aimed at increasing fruit & vegetables consumption (HCHC, 2004; Jensen and Smed, 2007). The latter would not only improve the health outcome, but would also be more acceptable from a consumer's standpoint (Cash *et al.*, 2005). Such a thin subsidy would also have a distributional impact more beneficial to lower income categories, whose diet should be more responsive to a decrease in fruit & vegetables prices, thus

entailing a higher health outcome (Cash *et al.*, 2005). HCHC (2004) therefore concludes that a fat tax scheme should be kept in mind when addressing concerns over obesity and other diet-related conditions.

1.3 *Aims and Purposes of the Study*

Taking into accounts findings from the literature, we propose to implement a fat tax focused on saturated fatty acids, coupled to a subsidy on fruit & vegetables, designed so as to create a revenue-neutral scheme.

We intend to estimate a full set of price elasticities for a range of food products, based on households consumption. This will allow us to take into account any substitution effect between taxed and non-taxed products, as suggested by Kenney and Offutt (2000), and Mytton *et al.* (2007). This will serve as the basis of our fat tax scheme.

The choice of saturated fatty acids as the prime target of the fat tax is justified by evidence from the medical literature: saturated fats are an important risk factor in the occurrence of coronary heart disease (Hu *et al.*, 2001; Mann, 2002), higher systolic blood pressure (Esrey *et al.*, 1996; Schaefer *et al.*, 1996), and higher plasma concentration of cholesterol (Ascherio *et al.*, 1994; Schaefer *et al.*, 1996).

Fruit and vegetables on the other hand are positively linked to a lower risk of various cancers (Ames *et al.*, 1995; Gonzalez, 2006; Riboli and Norat, 2003), and lower risk of major chronic diseases (Hung *et al.*, 2004; Popkin *et al.*, 2001), but also ischaemic stroke (Joshipura *et al.*, 1999).

Based on nutrient intake levels before and after implementation of our scenario, risk factors for the population will be derived and compare across socio-economic groups, in order to assess expected health outcomes.

Chapter 2 Methodology

We follow a sequential approach in order to assess the likely effects of a tax-based policy on the population's health. From a model of consumer demand, we estimate price elasticities for a range of food groups; those elasticities allow us to estimate expenditure changes for different food groups after implementation of a tax policy (which is akin to a change in prices). Changes in the quantities consumed (and therefore nutrient intake) are inferred from expenditure changes, and those changes are compared against dietary guidelines as proposed by the Department of Health. Epidemiological consequences in terms of certain conditions such as cancer or type 2 diabetes are also derived, using prevalence results from the literature.

Our approach is shown schematically in Figure 2, and the following section will detail each of the steps involved.
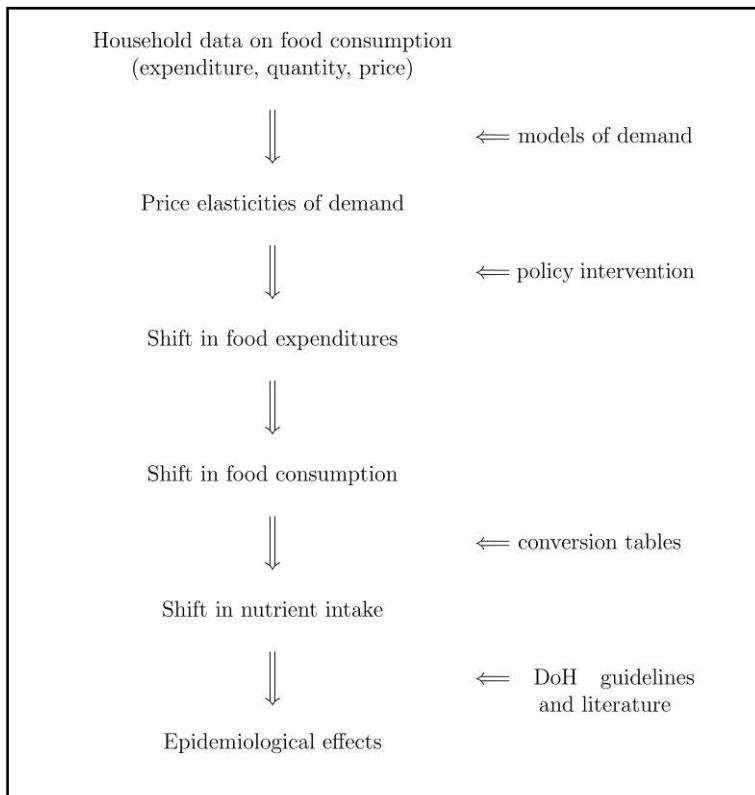
Figure 2: Synthetic diagram of the study

2.1 *Models of Household Demand*

The economic model of consumer choice assumes that consumers make choices in order to maximise utility subject to a budget constraint. Utility is used to characterise the consumer's preferences or rankings of the alternatives that are available to them. Preferences are influenced by socio-demographic characteristics of the consumer such as their employment status, age and regional location. Accordingly purchase patterns

change if preferences change as a consequence of changes in these factors or through changes in the economic factors influencing the budget constraint: prices and income.

2.1.1 Censoring in Demand Analysis

Cross-sectional household budget surveys are characterised by a large number of observations with reported zero expenditure for some food commodities. This is a consequence of households not purchasing quantities from all goods available and leads to discontinuous dependent variables. The data is said to be censored at zero, and the zero valued observations are referred to as being censored. Inappropriate treatment of censored observations can lead to biased and inconsistent parameter estimates.

There are two explanations for why censoring might occur. The first is economic and the second is circumstantial. The economic explanation is that prices and/or income levels combined with consumer preferences are such that the good is unattractive. This is sometimes referred to as a corner solution. The circumstantial explanation is that no purchase is made because the household holds sufficient stocks to meet their requirements. These situations can be modelled with the Tobit and infrequency of purchase models respectively. Both models are examples of a class of model in which some data which is required for estimation is not observed. This is referred to as latent data.

The Tobit Model

This model was originally introduced by Tobin (1958), and acknowledges that a lack of consumption of one good by one household at the time of the survey reflects a constant lack of consumption of this specific good by this household. This situation is defined as a corner solution, as illustrated in Figure 3: the highest utility is attained with basket M, which is on the highest indifference curve available under the budget constraint. In this case, all consumption goes towards good Y, and none of X is consumed. Note that at M, unlike an interior optimum, the budget constraint is not tangential to the indifference curve. The mathematical solution to the optimisation problem is always at a point of tangency, and, in the case of a corner solution, this would be at a negative value of X. This negative value is the latent variable in the Tobit.

The model assumes that there is a linear equation describing the dependence of the missing (latent) variable y_i^* on a set of explanatory variables x_i such as $y_i^* = \beta x_i + u_i$, and an observed value y_i, which satisfies $\left[y_i = \max\left(y_i^*, 0 \right) \right]$. That is, a zero realisation for the dependent variable represents a corner solution or a negative value for the underlying latent dependent variable.
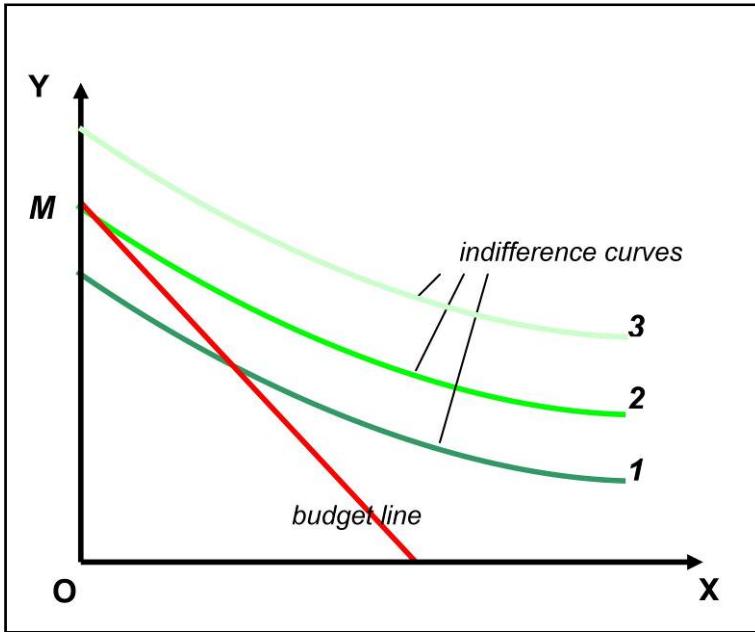
Figure 3: Illustration of a corner solution in the case of a basket containing 2 goods *X* and *Y*.

More simply, the Tobit censoring rule can be written as:

$$y_i = \begin{cases} y_i^* & \text{if } y_i^* > 0 \\ 0 & \text{otherwise} \end{cases} \tag{1}$$

where

$$y_i^* = \beta x_i + u_i, \tag{2}$$

β is a vector of parameters to be estimated, x is a vector of explanatory variables, and the error term u_i is distributed as $u_i \sim N\left(0, \sigma_u^2\right)$.

The Infrequency of Purchase Model

The infrequency of purchase model (IPM) is based on the double-hurdle model (DH) introduced by Cragg (1971), and further developed by Deaton and Irish (1984) and Blundell and Meghir (1987). The DH model builds on the Tobit model by adding a probit (or discrete, *i.e.* 0,1) market participation equation to the Tobit expenditure equation. The rationale is to overcome the limitation in the Tobit model, whereby the same process determines both the continuous consumption and the zero realisation (which is always assumed to be a corner solution rather than due to misreporting or infrequency of purchase[2]).

The censoring rule can be written as:

$$y_i = \begin{cases} y_i^* & \text{if } y_i^* > 0 \text{ and } D_i > 0 \\ 0 & \text{otherwise} \end{cases} \tag{3}$$

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[2] The infrequency of purchase model is used to capture the fact that households might consume a good even if they are not observed purchasing it during the survey period because their stocks are sufficient.

where y_i^* is defined as in equation (2), and D_i is a latent variable describing the decision to purchase, such as:

$$\begin{cases} D_i = \theta z_i + v_i \\ D_i > 0 \Leftrightarrow y_i > 0 \end{cases} \qquad \text{(4)}$$

where θ is a vector of parameters to be estimated, z_i is a vector of variables determining the purchase decision, and the error term v_i is distributed as $v_i \sim N(0,1)$.

The IPM specification was first formulated by Deaton and Irish (1984) and slightly differs from the DH model, the censoring rule becoming:

$$y_i = \begin{cases} \left(y_i^* + \varepsilon_i\right)\big/ P_i & \text{if } y_i^* > 0 \text{ and } D_i > 0 \\ 0 & \text{otherwise} \end{cases} \qquad \text{(5)}$$

where y_i^* and D_i can be defined as in equations (1) and (4), respectively; P_i is the probability of purchase such that:

$$P_i \cdot y_i = y_i^* + \varepsilon_i = \left(\beta x_i + u_i\right) + \varepsilon_i \qquad \text{(6)}$$

and ε_i represents random discrepancies in the process linking the dependent variable y_i observed, and latent variable y_i^* (Blundell and Meghir, 1987). The error terms v_i and u_i, corresponding respectively to the purchase equation (4) and expenditure equation (2), are assumed to be distributed as a multivariate normal distribution: $(v_i, u_i) \sim MVN(0,\Sigma)$, with σ_{11}, the first diagonal element of Σ, assumed to be equal to one.

The sequential approach to consumption used by the IPM implies that different sets of variables can be considered for each equation: for instance, demographic variables can determine consumption itself, while the probability of purchase may rely on variables determining the relative time and money costs of purchase.

Bayesian Model Averaging

While using 2 different approaches to deal with censored data allows encompassing a more exhaustive aspect of households' consumption patterns, having to deal with 2 sets of results would be confusing and unhelpful: which one should be trusted more than the other?

In that respect, the concept of Bayesian Model Averaging (BMA) involves keeping all models, but presenting results averaged over all those models. This is done to reflect uncertainty on the part of the modeller as to which model is appropriate. In our case, it allows us to present a unified set of results which recognises both assumptions made about the presence of censored data.

The concept of posterior model probability $p(M_i \mid y)$ is used to assess the degree of support for each model $M_i, i=1,2$ considered. This model probability can be computed using the marginal likelihood $p(y \mid M_i)$ calculated for each of the m models of interest. The posterior model probabilities sum to one over all the models considered, and can simply be expressed as:

$$p(M_i \mid y) = \frac{p(y \mid M_i)}{\sum_{j=1}^{m} p(y \mid M_j)} \tag{7}$$

The logic of Bayesian inference says that one should obtain results for all of the $i = 1, \ldots, m$ models considered, and average them using the posterior model probabilities $p(M_i \mid y)$ as weights.

2.1.2 The Almost Ideal Demand System

The two models described above are estimated using the Almost Ideal Demand System (AIDS hereafter). It is the most widely used model of demand in the literature, and was introduced and developed by Deaton and Muellbauer (1980a; 1980b). The popularity of this model is largely attributable to its ease of estimation and its flexibility to include parametric restrictions required for consistency with economic theory. It uses an indirect cost function derived from Working (1943) and Leser (1963) as the parametric representation of the consumer's preferences. Deaton and Muellbauer (1980a, 1980b) developed and expanded this model into the linear-approximate AIDS model (LA/AIDS), of the form:

$$w_i = \alpha_i^* + \sum_j \gamma_{ij} \log p_j + \beta_i \log\left(\frac{x}{P^*}\right) \tag{8}$$

where w_i is the budget share of good i $(i = 1, \ldots, m)$, p is price, x is expenditure, and P^* is the Stone price index defined as $\log P^* = \sum_i w_i \log p_i$; γ_{ij} and β_i are parameters to be estimated, and are required in order to compute elasticities.

The AIDS model has proved extremely popular with demand analysts since its inception in 1980. Surveying the literature over the following decade, Buse (1994) found that the Deaton-Muellbauer paper had been cited 237 times in the Social Sciences Citation Index, and out of the 207 papers he read, 68 of the 89 empirical applications were done using the linearised AIDS (23 out of 25 applications in agricultural economics papers). As further observed by Buse (1994, p.781), reasons for this popularity are evident: the model is "grounded in a well-structured analytical framework", "accommodates certain types of aggregation" (*e.g.*, over households), is "apparently easy to estimate" in its linear version, and "permits testing of the standard restrictions of classical demand theory" (adding-up, homogeneity and symmetry).

The AIDS is adapted to the Tobit framework by recognising that the observed shares in equation (8) are related to a latent share in a manner analogous to that depicted in equation (1). Likewise, to obtain an IPM version of the AIDS, a censoring rule analogous to that in equation (3) is employed. Thus, in addition to the $m-1$ share equations, a further $m-1$ probit equations are estimated jointly with the demand equations.

2.1.3 Aggregation

The data used in this study is unwieldy as it contains information on both quantities and expenditure for a large number of food items. Its consolidation into a manageable number of aggregate commodity groups is necessary, as is common in most AIDS applications in the literature

If a group of food commodities can be assumed to be weakly separable from all other commodities, it can be regarded as a homogeneous sub-system in the constrained optimisation process. It therefore has its own cost function, which forms the basis of a price index. Such a price index represents a consistent measure of the price of aggregated purchases within this group. The implication of this is that we can estimate separate systems of equations for subgroups of food such as fruit & vegetables or fish, and also that we can aggregate goods together within a system, to estimate for instance demand for meat and fish.

The price index used in this instance is the Törnqvist-Theil Price Index. For observation k, the index is defined as:

$$\ln p_{ik} = \frac{1}{2} \sum_{i=1}^{m} (w_{ik} + w_{io}) \ln \left(\frac{p_{ik}}{p_{io}} \right) \tag{9}$$

where w_i and p_i are respectively the budget share and price of food item i, and where the zero subscript denotes the base period value.[3]

2.2 *Elasticities in Policy Simulation*

From coefficient estimates obtained by running the AIDS model (either in the SUR-Tobit or IPM form), own-price elasticities ε_i, cross-price elasticities ε_{ij} and expenditure elasticities η_i are derived according to Alton, Foster and Green (1994).

Price elasticities of demand measure the responsiveness of quantity demanded to a change in price; for a given product i the own-price elasticity will measure the demand change resulting from a price change for the same product, while cross-price elasticities will measure changes in demand for product i in response to change in price for another product j. We can therefore work out the changes induced by a change in prices for a group of food products for which we have the full set of cross-price elasticities.

Unfortunately, due to computational limitations, it is not possible to estimate a model comprising of all the food items required in our analysis: it is possible to estimate a system for only up to 6 groups at a time.

It is possible to estimate models comprising of only a few food groups at a time, for instance, beef, lamb and milk in a "meat & dairy" model, and fruit, green vegetables, and potatoes in a "fruit & vegetables" model, but in so doing cross-price elasticities

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[3] This could either be a specific observation for the base (*e.g.*, the first observation), or the mean value as used here.

between say beef and fruit cannot be computed: the impact of any price change applied to meat products on the consumption of fruit & vegetables cannot be estimated.

We therefore resort to a hierarchical approach in order to estimate the changes in consumption for all food items occurring as a result of a price change of a few items.

2.2.1 Hierarchical System

With the hierarchical system, price elasticities within a group of foods at a specific point in the hierarchy assume that expenditure on that group remains constant as the price change takes place. For example we estimate a system of equations the fruit and vegetables grouping and within this we estimate a demand equation for peas and beans. The own price elasticity for peas and beans that is obtained from this system assumes that the expenditure on fruit and vegetables remains constant. In practice this assumption it likely to be unrealistic: a reduction in the price of peas and beans is likely to induce consumers to spend more on all fruit and vegetables. To address this problem, a 2-level hierarchical model is estimated.

Let us consider the 16 individual food items in which we are interested (*e.g.*, beef, cheese, *etc.*).[4] As N is too large to allow estimation of a single model, we implement the following steps:

1. We split the N items into 3 broad categories (meat & dairy, miscellaneous, and fruit & vegetables);
2. We estimate 3 models corresponding to these categories, each including 5 or 6 food items; we thus obtain 3 independent sets of elasticities;
3. A further demand system is estimated at a higher level in order to explain the allocation of expenditure between each of the 3 main categories. In this demand system there are thus 3 equations, each based on an aggregation of the groups within each of the lower level demand systems.

As a result, we obtain 4 sets of elasticities: at a lower level, we have 3 sets of own- and cross-price elasticities for food items within each of the categories, and at an upper level, we have a single set of elasticities between the 3 aggregations created from the 3 lower models.

The construct is represented schematically in Figure 4 below.

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[4] These "items'" may in reality be the aggregation of different products: beef for instance could include mince meat, steaks, *etc.*
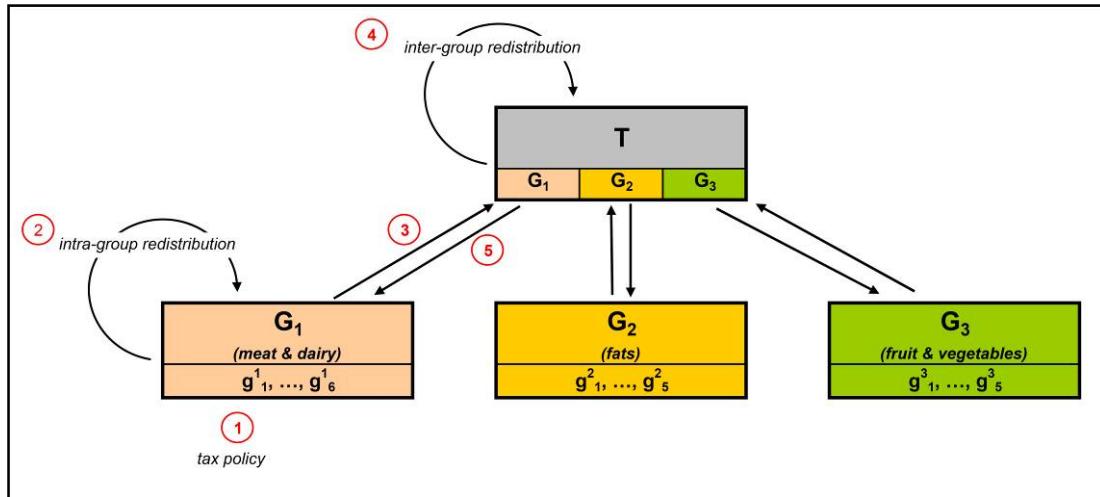
Figure 4: Schematic representation of the hierarchical model: a tax is applied on each food item g_i^k ①, causing a demand redistribution within each lower model G_k ②; these changes are transferred to the upper model T ③, triggering a demand redistribution between groups G_k ④, with redistributive effects towards lower models ⑤.

Consider the impact of a set of taxes is applied to the g_i^1 food items in the first group (①, bottom left in the figure): the impact on consumption of such prices changes can be accounted for with two effects. First there is the direct effect that results in a change in the allocation of a given level of expenditure within the group (②) and second there will be a change in the allocation of expenditure to the category as a whole (④). The change in expenditure for a given category (⑤) can be combined with the within category effect (②) to yield the overall change in demand that is the consequence of the tax.

The combined effects of ② and ⑤ can be computed by using the Slutsky equation, which is written in terms of price and expenditure elasticities:

$$\varepsilon_{ij} = \varepsilon_{ij}^* - \eta_i w_j \tag{10}$$

where ε_{ij}, ε_{ij}^* and η_i are respectively the uncompensated, compensated and expenditure elasticities, while w_j is the budget share.

By viewing the within category uncompensated elasticities as a form of compensated elasticity in which nominal expenditure on the category is held constant we can adapt the Slutsky equation to compute an overall elasticity which takes into account the change in expenditure on the category. For example, if we consider two products butter (*b*) and cheese (*c*), belonging to the same bottom group meat and dairy products (*D*), we can write:

$$\varepsilon_{bc}^{**} = \varepsilon_{bc} - \eta_D w_c \tag{11}$$

where ε_{bc} is the within group cross price elasticity between butter and cheese and η_D is the expenditure elasticity for dairy products as whole, ε_{bc}^{**} captures changes

occurring within the bottom group D (② in Figure 4), as well as those entailed by redistribution between main groups at the top level (④).

2.2.2 Policy Simulation

Once the relationships between the different food groups are established through elasticities, it becomes possible to simulate a taxation scenario aimed at improving the population's diet.

For each food item $i = 1,\dots,n$ in the bottom groups, the predicted percentage change in expenditure Δx_i is simply:

$$\Delta x_i = \mathbf{\varepsilon}_i^{**\prime} \Delta \mathbf{p}^k \tag{12}$$

where $\mathbf{\varepsilon}_i^{**} = \left[\varepsilon_{i1}^{**}, \dots, \varepsilon_{ij}^{**}, \dots, \varepsilon_{in}^{**} \right]'$, and $\Delta \mathbf{p}^k$ is the $n \times 1$ vector of price changes due to the tax or subsidy applied to the n products in group k.

Working from initial household consumption data (that is expenditures $x_{t=0}$, quantities $q_{t=0}$ and prices $p_{t=0}$), computing new prices $p_{t=1}$ and expenditures $x_{t=1}$ after tax implementation is straightforward knowing Δp and Δx, from which Δq and the new quantities $q_{t=1}$ can be inferred.

2.3 *Health Implications*

From the changes in expenditures and quantities consumed that are estimated in the way described above, it becomes possible to estimate the changes in the population's diet triggered by the policy scenario. Using nutrient conversion tables, we can convert food items into nutrient equivalent and therefore calculate the average intake in key nutrients such as saturated fats or dietary fibre, before and after implementation of a tax-based policy. In a first step, these can then be compared against dietary guidelines as given by the Department of Health, as presented in Table 1.

Table 1: Dietary guidelines, Department of Health (1991), BNF (2004), SACN (2006).

Nutrient	Amount
Total fat	33%
Saturated fatty acids (SFAs)	10%
Monounsaturated fatty acids (MUFAs)	12%
Polyunsaturated fatty acids (PUFAs)	6 to 10%
n-6 PUFAs	> 1.0%
n-3 PUFAs	> 0.2%
Trans fatty acids (TFAs)	< 2%
Glycerol	3%
Cholesterol	< 300mg.day^{-1}
Protein	10 to 15%
Total carbohydrate	50%
Free sugars	< 10%
Salt	< 6 g.day^{-1}
Sodium equivalent	< 2.36g.day-1
Fruit and vegetables	≥ 400g.day^{-1}
Total dietary fibre	≥ 18g.day^{-1}

Relative Risk

In a second step, the medical literature can then be used to assess what impact those changes will have in terms of public health.

There is a wealth of articles giving relative risk estimates (*RR*, also "rate ratio", see Northridge, 1995, or "odd ratio" *OR*) linking a diverse range of foods or nutrients, to a range of conditions (various forms of cancers, CHD, diabetes, *etc.*). The relative risk is calculated by dividing the incidence rate in the exposed population by the incidence rate in the unexposed (Kaelin and Bayona, 2004; StatsDirect, 2005). There is not a standard way of reporting RR estimates. In particular the distinction between the exposed and unexposed segments of the population is somewhat arbitrary. On approach is to associate the estimates to a range of increased intake of the nutrient: For example in the case of fruit & vegetables consumption and gastric cancer, $RR_{st}^{F\&V} = 0.80$ is associated with an increase in consumption of 100g per day. This means that for every additional 100g consumed, the risk of gastric cancer occurrence decreases by 20 percentage points.

Table 2 below presents relative risk estimates from the literature. Nutrients for which the relative risk is less than 1 have a protective effect against the occurrence of a condition: a consumption increase in the corresponding nutrient will lower the risk of developing the corresponding condition. Estimates greater than 1 have an adverse effect: an increase in their consumption will increase the risk of the condition in question.

As would be expected, fruit & vegetables estimates are all below one, indicating that higher consumption lowers the risk of conditions such as cancer of CHD. Conversely, most fatty acids estimates are above 1. It should be noted however that some fatty acids have a protective role against certain conditions, as is the case for instance with poly-unsaturated fatty acids which are beneficial against type 2 diabetes and coronary heart disease, especially among women.

Table 2 can be summarised in a few words:
- fruit & vegetables have a protective role against cancer, major chronic diseases, and coronary heart disease
- total fats, saturated fatty acids (SFAs) and mono-unsaturated fatty acids (MUFAs) have an adverse effect in relation to coronary heart disease
- poly-unsaturated fatty acids (PUFAs) have a protective effect against coronary heart disease
- all fat categories with the exception of MUFAs have a protective effect against type 2 diabetes, especially PUFAs.

Table 2: Relative risk estimates from the literature

Nutrient	Exposure	Condition	RR	95%CI		Source
Fruit & Veg.	+100g.day^{-1}	oesophageal cancer	0.81	[0.66-1.01]	[1]	Riboli and Norat (2003)
	+100g.day^{-1}	gastric cancer	0.80	[0.66-0.93]	[1]	Riboli and Norat (2003)
	+100g.day^{-1}	colorectal cancer	0.93	[0.78-1.07]	[1]	Riboli and Norat (2003)
	+100g.day^{-1}	breast cancer	0.89	[0.78-1.01]	[1]	Riboli and Norat (2003)
	+100g.day^{-1}	lung cancer	0.87	[0.78-0.93]	[1]	Riboli and Norat (2003)
	+100g.day^{-1}	bladder cancer	0.86	[0.70-1.03]	[1]	Riboli and Norat (2003)
	+80g.day^{-1}	cancer (general)	1.00	[0.95-1.05]	[2]	Hung *et al.* (2004)
	+80g.day^{-1}	cardio-vascular disease	0.88	[0.81-0.95]	[2]	Hung *et al.* (2004)
	+80g.day^{-1}	coronary heart disease	0.96	[0.94-0.99]	[3]	Joshipura *et al.* (2001)
	+80g.day^{-1}	major chronic disease	0.96	[0.92-1.00]	[2]	Hung *et al.* (2004)
	+80g.day^{-1}	ischemic stroke	0.94	[0.90-0.99]	[4]	Joshipura *et al.* (1999)
Total Fats	1%	coronary heart disease	1.04	[1.01-1.04]	[5]	Esrey *et al.* (1996)
	5%	type 2 diabetes‡	0.98	[0.94-1.02]	[7]	Salmerón *et al.* (2001)
SFAs	1%	coronary heart disease	1.11	[1.04-1.18]	[5]	Esrey *et al.* (1996)
	5%	coronary heart disease†	1.17	[0.97-1.41]	[6]	Hu *et al.* (1997)
	5%	type 2 diabetes‡	0.97	[0.86-1.10]	[7]	Salmerón *et al.* (2001)
MUFAs	1%	coronary heart disease	1.08	[1.01-1.16]	[5]	Esrey *et al.* (1996)
	5%	coronary heart disease†	0.81	[0.65-1.00]	[6]	Hu *et al.* (1997)
	5%	type 2 diabetes‡	1.05	[0.91-1.20]	[7]	Salmerón *et al.* (2001)
PUFAs	1%	coronary heart disease	0.99	[0.90-1.08]	[5]	Esrey *et al.* (1996)
	5%	coronary heart disease†	0.62	[0.46-0.85]	[6]	Hu *et al.* (1997)
	5%	type 2 diabetes	0.63	[0.53-0.76]	[7]	Salmerón *et al.* (2001)

†among women; ‡not significant

Prevalence Risk

The information in Table 3 is used to estimate the implication of a predicted pattern of nutrient intake for the prevalence of certain conditions in the population before and after scenario implementation

In order to this we define a relative measure of the prevalence risk in a population, that is, the relative risk that a certain condition would occur in the population given the a pattern of nutrient intake which is based on RR estimates given by the literature.

Given a series of intake brackets (*e.g.*, 0-100g, 100-200g etc) we define RP^{pop} as the sum of the relative prevalence RP^i corresponding to each intake bracket $i = 1, \ldots, N$ and the weight ω_i of that bracket in the population.

Consider again the relationship between fruit & vegetables intakes and gastric cancer. The first bracket (people consuming 0 to 100g per day) is arbitrarily assigned a relative prevalence of 1; the risk relating to the second bracket (people consuming 100 to 200g per day) is therefore 1×0.80 (that is a 20% lower risk of developing stomach cancer); for the third bracket (200 to 300g) the risk is $(1 \times 0.80) \times 0.80$, and so on. For any given bracket i, the relative prevalence RP^i associated is:

$$RP^i = RR^{(i-1)} \tag{13}$$

At the population level, the prevalence risk RP^{pop} is the sum of the different RP^i weighted by the percentage ω_i of the population belonging to each bracket i:

$$RP^{pop} = \sum_{i=1}^{N} \omega_i \cdot RP^i \tag{14}$$

Or else:

$$RP^{pop} = \sum_{i=1}^{N} \left[\omega_i \cdot RR^{(i-1)} \right] \tag{15}$$

While this measure is not meaningful on its own, it is useful for comparison purposes. By computing the population prevalence risk before and after implementation of a tax scenario, one can compare $RP_{t=1}^{pop}$ to $RP_{t=0}^{pop}$ and see if the tax policy had any impact on the general population. It should also be noted that the measure has distinct limitations. It represents the risk of disease occurrence for those diseases linked to the specific nutrients detailed in Table 2. One has to be careful in attributing changes in these risk levels to changes in the diet because such changes may affect nutrient intakes that are not covered by Table 2 and these may have their own impact on dietary health.

2.4 *Data*

2.4.1 The Expenditure and Food Survey (EFS)

The EFS (starting 2001-2002) is the result of the merger between the Family Expenditure Survey (FES) and the National Food Survey (NFS), two well established surveys and important sources of information for government and the broad research community on UK spending and food consumption patterns. In the current study we will use the 2003-2004 data-set, which at the time of starting to work with the data was the latest complete data-set available from the Economic and Social Data Service (ESDS).[5]

In terms of the information required for the analysis carried out in this study, the EFS records data on a wide range of food eaten at home. Each participating household does so voluntarily and without payment for two weeks. Data are collected through the completion a two-week diary for each individual over seven years of age supplemented with the use of till receipts.

Descriptive tables of quantities, expenditures and censoring levels for the period 2001-02 to 2005-06 are given in Appendix F pp.67-86, and Appendix G pp.87-106.

The main features of the EFS 2003-2004 are described below:

- **Data type:** Household level, annual, repeated cross-section.

- **Sample:** 672 postcode sectors stratified by GOR (Government Office Region), socio-economic group ownership of cars. Approximately 7,014 households take part this specific year.

- **Coverage:** Annual cross-sectional household-level surveys run on a fiscal year basis since 2001/02. It is a combination of the FES and the NFS and replaces both data sets, which have a much longer time series. It is carried out throughout the UK and throughout the year in order to capture seasonal variations.

- **Information collected:** Data is recorded on a wide range of food, eaten both in and out of the home.[6] In terms of the expenditure component, households are asked to maintain a two-week diary of expenditures with results presented as weekly average spending. In particular, the EFS identifies four major categories of interest: food (sub-divided in 55 categories), non-alcoholic drink (sub-divided in 7 groups), alcoholic drink (sub-divided in 4 groups) and catering services (split into 3 categories). In addition to this data, various demographic and other key variables are available for individuals and households, including: ownership of food-related durables (fridges, freezers etc.), housing tenure, key demographics (age, sex, employment status, *etc.*) for

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[5] The ESDS is a national data archiving and dissemination service based on collaboration between four key centres of expertise: UK Data Archive (UKDA), Institute for Social and Economic Research (ISER), Manchester Information and Associated Services (MIMAS), Cathie Marsh Centre for Census and Survey Research (CCSR); http://www.data-archive.ac.uk/

[6] While information is available on eating out expenses, there is no data on quantities purchased, thus rendering this category inadequate for analysis.

each household member, type and composition, social class of head of household, region and categorical degree of activity for head of household (*i.e.* sedentary, active, *etc.*).

2.4.2 Data for Selected Demand Systems

Data are extracted from the EFS and prepared into the form required for estimation. The aggregations used are constrained by requirements from Work Package 5: food groups have to be homogenous enough so as to be easily converted into farm commodities that are relevant to the modelling work that is conducted in that part of the project. We thus have 3 main aggregations: milk, dairy & meat; fruit & vegetables; and miscellaneous. Each of these is detailed in Table 3.

Table 3: Aggregations used in the study

Aggregation	Food groups
Milk, dairy & meat	Milk
	Butter
	Cheese
	Other dairy
	Beef
	Lamb
Miscellaneous	Eggs
	Oils & fats
	Sugar
	Potatoes
	Cereals (wheat & barley)
Fruit & vegetables	Peas & beans
	Turnips & swede
	Other vegetables
	Tree fruit
	Soft fruit

The complete list of all food items allocated into these food groups can be found in Appendix E pp.63-66.

Chapter 3 Results

In this section we report and discuss results from the different steps presented above.

3.1 *Models of Household Demand*

We begin our analysis of the results with discussion of the Bayes ratio and model averages. We proceed with an evaluation of the robustness of the results before discussing the interpretation of the estimated elasticities.

3.1.1 Model Selection & Robustness

Two forms of the model which rest on slightly different economic explanations for the presence of zero purchases by the household are estimated.[7] The first one, the SUR-Tobit model, assumes that zero observations are the result of corner solutions which arise solely because people do not wish to purchase the good in question at the price it is on offer. The second model, the infrequency of purchase model, assumes that zero purchases are the result of stock-holding by consumers. The full set of results for both SUR-Tobit and IPM estimations are given respectively in Appendix H pp.107-134, and Appendix I pp.135-162.

Table 4: Log marginal likelihoods for models estimated using 2003-04 data

	SUR-Tobit	**IPM**
Upper model	-2,674.34	-113,085.80
Meat & Dairy	-38,067.86	-648,567.39
Miscellaneous	-17,999.78	-587,549.80
Fruit & Vegetables	-27,657.94	-1,240,890.50

Table 4 reports the log of the marginal likelihoods for the models estimated using 2003-04 data.[8] It can be seen that in all cases the values differ by an order of magnitude. This implies that, using a Bayes ratio, the data strongly favours the SUR-Tobit model or, if we were to compute model average parameters, to all intents and purposes these would be no different to the SUR-Tobit estimates.

The infrequency of purchase approach would have been our *ex ante* preference, as it is intuitively more appealing to explain censoring levels in our sample, considering the short span of the survey. We can however offer an econometric explanation as to why the SUR-Tobit is so dominant: there is evidence to suggest that the Bayes ratio always favours a model which has fewer parameters. In our case the IPM entails the

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[7] For further details on these models as well as on censoring in demand analysis, please refer to Appendix A to Appendix D.
[8] We focus on results for 2003-04 for two reasons: it was the latest available EFS survey when work started on this study; previous analyses for the RELU project at Reading University were also based on this data set, see Arnoult (2006), and Jones and Tranter (2007).

estimation of an additional block of equations, and hence parameters, and it will always be penalised in model comparisons using the Bayes ratio.

Estimates obtained from both approaches are very similar however, which means that following one or the other set of results would not lead to different conclusions. We therefore follow the Bayes ratio outcome, and focus our interpretation on SUR-Tobit results.

To determine the robustness of the results we report, we estimated the model for a number of years.[9] Table 5 reports the expenditure and own price elasticities for these years whilst the full set of results are presented in Appendix H, pp.107-134. It can be seen that there is a high level of consistency in the results between the years and we therefore conclude that the results are robust. The results in the appendices also show high levels of consistency. In particular, when considering the effects of the socio-demographics the majority of coefficients have the same sign in each of the years for which the models are estimated.

Henceforth, a discussion of the results for our chosen set of data (2003-04) can be considered to apply for the period 2001-02 to 2005-06.

Table 5: Own-price and expenditure elasticities for the four different models estimated

	Own-Price					Expenditure				
	01-02	02-03	03-04	04-05	05-06	01-02	02-03	03-04	04-05	05-06
Upper model										
Meat & Dairy	-0.728	-0.667	-0.702	-0.721	-0.768	1.011	1.012	0.996	0.999	0.981
Miscellaneous	-0.701	-0.610	-0.586	-0.403	-0.453	0.767	0.730	0.772	0.712	0.724
Fruit & Veg.	-0.663	-0.699	-0.640	-0.614	-0.749	1.172	1.194	1.180	1.168	1.186
Meat										
Milk	-0.544	-0.409	-0.443	-0.434	-0.596	0.703	0.704	0.694	0.691	0.667
Butter	0.382	0.166	-0.138	0.096	-0.089	0.925	0.913	0.741	0.878	0.875
Cheese	-0.631	-0.450	-0.494	-0.504	-0.468	1.010	1.001	1.014	1.003	1.010
Misc. Dairy	-0.802	-0.734	-0.700	-0.634	-0.443	0.981	0.989	1.033	0.963	1.014
Beef	-0.234	-0.185	-0.249	-0.217	-0.560	1.382	1.364	1.331	1.403	1.375
Lamb	-1.786	-1.317	-1.591	-1.703	-0.741	1.606	1.677	1.680	1.683	1.746
Miscellaneous										
Eggs	-0.211	-0.236	-0.235	-0.519	-0.402	0.117	0.131	0.254	0.102	0.183
Fats	-0.195	-0.201	-0.201	-0.251	-0.111	1.236	1.254	1.242	1.236	1.232
Sugar	0.190	0.007	-0.009	-0.037	-0.175	0.978	1.016	1.098	1.021	1.137
Potatoes	-0.645	-0.564	-0.592	-0.957	-1.176	1.245	1.181	1.177	1.254	1.272
Cereals	-0.385	-0.404	-0.456	-0.460	-0.528	0.732	0.789	0.789	0.804	0.810
Fruit & Vegetables										
Peas & Beans	-0.579	-0.575	-0.535	-0.602	-0.536	0.577	0.529	0.573	0.533	0.552
Turnips & Swede	1.051	0.590	0.418	0.311	1.209	1.003	1.160	0.942	0.926	0.928
Other Veg.	-0.903	-0.879	-0.859	-0.901	-0.905	1.043	1.040	1.008	1.044	1.026
Tree Fruit	-0.665	-0.690	-0.767	-0.847	-0.781	1.072	1.073	1.116	1.032	1.072
Soft Fruit	-0.563	-0.626	-0.740	-0.719	-0.784	1.384	1.440	1.440	1.370	1.355

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[9] As mentioned earlier, the latest data set available for our analysis was 2003-04; we therefore started to estimate models up to that year, and then estimated models for 2004-05 and 2005-06 when those data sets became available.

3.1.2 Elasticities

We report in Table 6 the modified price elasticities as defined in section 1.2.1 for the bottom models, along with price and expenditure elasticities for the upper model.

Table 6: Modified price and expenditure elasticities for all models

Upper model	Price			Exp		
	Meat	Misc.	F & V			
Meat & Dairy	-0.702	-0.107	-0.187	0.996		
Miscellaneous	-0.128	-0.586	-0.058	0.772		
Fruit & Veg.	-0.407	-0.134	-0.64	1.18		

Meat & Dairy	Price						Exp
	Milk	Butter	Cheese	Misc.	Beef	Lamb	
Milk	-0.105	-0.016	0.06	0.189	-0.019	0.192	0.694
Butter	-0.174	-0.105	-0.008	0.468	0.449	-0.375	0.741
Cheese	-0.008	-0.01	-0.291	0.077	-0.138	0.352	1.014
Misc. Dairy	0.245	0.078	0.084	-0.523	0.213	-0.134	1.033
Beef	-0.252	0.063	-0.219	0.155	-0.067	-0.016	1.331
Lamb	0.685	-0.228	0.986	-0.49	-0.108	-1.528	1.68

Miscellaneous	Price					Exp
	Eggs	Fats	Sugar	Potatoes	Cereals	
Eggs	-0.125	-0.146	-0.016	0.061	-0.009	1.007
Oils & Fats	-0.166	-0.08	-0.077	0.009	-0.156	1.242
Sugar	-0.052	-0.179	0.037	-0.017	-0.114	1.098
Potatoes	0.013	0.016	-0.009	-0.411	-0.014	1.177
Cereals	0.028	0.011	0.002	0.083	-0.141	0.789

Fruit & Vegetables	Price					Exp
	Peas	Turnips	Other	Tree F	Soft F	
Peas & Beans	-0.37	0.036	0.659	0.202	0.082	0.573
Turnips & Swede	0.454	0.43	-0.578	0.181	-0.248	0.942
Other Vegetables	0.098	-0.01	-0.176	0.185	0.075	1.008
Tree Fruit	0.066	0.007	0.479	-0.533	0.045	1.116
Soft Fruit	0.034	-0.038	0.341	0.057	-0.653	1.44

Generalities

Consider first the price elasticities: the diagonal elements are the own-price elasticities, that is the demand change resulting from a price change for the same product, while off-diagonal elements are the cross-price elasticities, that is the change in demand for product i in response to change in price for another product j. As an example, the first element in Table 6, the own-price elasticity for meat & dairy products, indicates that when prices of meat & dairy increase by 1%, their demand decreases by 0.702% as a result. Then, reading across the table from the own-price elasticity for meat & dairy, we see that a 1% increase in the price of meat & dairy entails a 0.107% decrease in the demand for miscellaneous products, and a 0.187% decrease in the demand for fruit & vegetables. Conversely, reading from top to bottom, a 1% increase in the price of miscellaneous foods and fruit & vegetables would trigger a decrease in the demand for meat & dairy of respectively 0.128% and

0.407%. Finally, the sign of cross-price elasticities indicates whether the products considered are substitute (positive sign) or complements (negative sign): looking at the block of price elasticities for meat & dairy (second part of the table), one can see that milk and butter are complements, while milk and cheese are substitutes. Own-price elasticities are expected to be negative, as an increase in the prise of a product is likely to trigger a decrease in demand for that specific product.

The last column of the table reports expenditure elasticities: within each group considered, these measure the impact on the demand for the different food products when expenditure for the whole group increases by 1%. Considering the upper model expenditure elasticities, one can see that a 1% increase in total expenditure would see a 0.996% increase in the demand for meat & dairy products, a 0.772% increase in the demand for miscellaneous goods, and finally a 1.180% increase for fruit & vegetables. Expenditure elasticities can be used to assess the effect on demand of an income change with the impact of an income change expected to be less than that of an expenditure change, as food expenditure as a whole is likely to be income inelastic. The pattern of response is however likely to be retained with the most expenditure elastic foods also being the most income elastic. Goods whose expenditure elasticity is less than 1 are said to be inferior or necessity goods, while goods whose expenditure elasticity is greater than 1 are said to be superior or luxury goods.

Results

All elasticities in the upper aggregation are negative, indicating a high level of complementarity between goods considered: while surprising, this can be explained by considering the two effects of a price change. First, a price increase in meat & dairy may produce a decrease in demand for these, and a report of expenditures on miscellaneous products for instance (consumers substituting miscellaneous for meat & dairy products). Secondly, as a consequence of an increase in prices, consumers have less disposable income and will therefore decrease their demand for all products, including miscellaneous which had been substituted to meat & dairy: this income effect can be large enough to cancel out the substitution effect, thus making meat & dairy and miscellaneous appear as complements.

This explanation is supported by the fact that the compensated (that is without income effect, see Appendix H, pp.107-134), cross-price elasticities are positive, thus indicating substitution between groups.

When considering the other aggregations reported in Table 6, some substitutes are observed. In the case of the meat & dairy aggregation, miscellaneous dairy products in particular exhibits substitution with all other groups, except lamb. Lamb has high substitution levels with cheese, and to a lesser extent, with milk.

In the case of the miscellaneous aggregation, there are fewer substitution effects: a price increase for cereals would trigger substitution with all other groups, but these remain very low (from 0.002% to 0.083% increase for a 1% price increase of Cereals). Fruit & vegetables is the aggregation with most substitutes, increases in the price of fruit (tree or soft) resulting in a shift in consumption towards all other groups (with the exception of turnips & swede which are complements to soft fruit).

3.2 *Scenario Implementation*

In order to discourage the consumption of fatty foods (generally acknowledged to have an adverse effect on health (see *inter alia* Hu *et al.*, 2001; Appel *et al.*, 1997), a tax scenario is devised. We simulate the effects of a tax scheme based on the content in saturated fatty acids of individual food items; saturated fatty acids are almost exclusively of animal origin (with the exception of fish, where they are virtually absent), and are recognised to contribute to such conditions as coronary heart disease for instance (see Mann, 2002). We propose to increase the price of fatty foods by 1% for every percent of saturated fats they contain; for instance, milk which contains 1.72% of saturated fats will see its price increasing by 1.72%.

The choice of such a tax scheme relies on its simplicity both administratively and from a consumer's perspective. We also considered alternative tax rates. First, based on the same scheme but with different "saturated fat content" *vs.* "tax increase" ratios: instead of 1:1 as chosen, 1:0.5 or 1:0.25 have been considered, but results were too modest to be of any interest. The use of tax brackets based on fat content has also been considered, but it is felt that such schemes do not have the advantages of simplicity possessed by our approach.

To offset the tax burden and to encourage the consumption of fruit & vegetables, a subsidy on fruit & vegetables is set up, so as to exactly cancel the costs of the fat tax, at the population level thereby making the whole policy revenue neutral.

Table 7 presents the tax rates applied to the different food groups in our models, based on nutrient conversion tables available from the EFS data set.

Table 7: Tax and subsidy rates applied

Meat & Dairy		Miscellaneous		Fruit & Veg.	
Milk	1.72%	Eggs	3.20%	Peas & Beans	-10.09%
Butter	53.30%	Fats	15.51%	Turnips & Swede	-10.09%
Cheese	19.60%	Sugar	0.00%	Other Veg.	-10.09%
Misc. Dairy	2.02%	Potatoes	0.03%	Tree Fruit	-10.09%
Beef	5.82%	Cereals	0.35%	Soft Fruit	-10.09%
Lamb	6.59%				
All	*8.20%*	*All*	*3.03%*	*All*	*-10.09%*

The tax applied on butter and cheese reflects the high fat content of those products: the average fat content of butter is over 80%, with two thirds being saturated. The subsidy on fruit & vegetables is applied equally across all groups as there is no reason to encourage consumption of a specific component of this group at the expense of another.

Based on the changes in prices entailed by the tax & subsidy scheme, and using the modified price elasticities from Table 6, the expected changes in expenditure for the different food groups are computed and are presented in Table 8.

Table 8: Shifts in expenditures and quantities observed after implementation of the tax-based scenario.

Meat & Dairy	ΔX(%)	ΔQ(%)	Miscellaneous	ΔX(%)	ΔQ(%)	Fruit & Vegetables	ΔX(%)	ΔQ(%)
Milk	1.71	-0.01	Eggs	-2.66	-5.69	Peas & Beans	-6.13	4.40
Butter	-4.96	-38.00	Oils & Fats	-1.83	-15.01	Turnips & Swede	-2.41	8.54
Cheese	-4.61	-20.24	Sugar	-2.99	-2.99	Other Veg.	-1.74	9.29
Misc. Dairy	5.54	3.45	Potatoes	0.27	0.24	Tree Fruit	-0.65	10.49
Beef	-1.55	-6.96	Cereals	0.22	-0.13	Soft Fruit	2.62	14.13
Lamb	-3.36	-9.34						
All	-0.03	-6.64	*All*	-0.69	-3.33	*All*	-1.82	9.20

It can be seen that changes in expenditures remain within a narrow range, from a reduction of 6.13% for peas and beans, up to an increase of 5.54% for miscellaneous dairy. Globally however, expenditures on all food groups are predicted to decrease slightly, from a reduction of 0.03% for meat & dairy, to a reduction of 1.82% for fruit & vegetables.

Concerning quantities consumed, taxed groups decrease by 6.64% and 3.33%, for meat & dairy and miscellaneous, respectively, whilst the subsidised fruit & vegetables consumption increases by 9.20%. Looking at a more disaggregated level, heavily taxed products like butter, cheese and oils & fats exhibit big decreases in consumption (by 38.00%, 20.24% and 15.01%, respectively). Consumption of meat products is also predicted to decrease, by 6.96% and 9.34% respectively for beef and lamb, while eggs would go down by 5.69%. Miscellaneous dairy products would however increase slightly (by 3.45%), and sugar, though not directly affected by the tax scheme, would see its consumption decrease by almost 3%: this is due to cross-price complementarity effects. Milk, potatoes and cereals remain barely affected by the scheme, while fruit & vegetables consumption increases from 4.40% (peas & beans) up to 14.13% (soft fruit); it can also be noticed that fruit benefit more than vegetables, as they are more price-responsive.

As far as consumption figures are concerned, the tax scheme modelled here achieves its primary purpose: the decrease in consumption is higher for the fattier foods, whilst consumption of fruit & vegetables is increases substantially. These changes are achieved without no budgetary impact for consumers, since overall expenditures are slightly down.

The fact that most predicted changes in consumption remain small (well under 10%) is noteworthy on two accounts: first, this would not entail a dramatic change in consumer's food habits, and therefore more likely to be acceptable, the major changes in consumption of fatty products is the exception to this; second, and for the very same reason, whether this scheme would have any benefit in terms of public health remains uncertain.

Budget neutrality at the population level could however mask some inequalities between individuals, based on their dietary habits: vegetarians would benefit from our scenario and be better off, while consumers with a liking for meat and dairy products

would suffer financially. It is also probable that foods which have a higher fat content are consumed by the poorer socio-economic groups and they would therefore be disproportionately affected by our scenario. It is clear that budget neutrality would not be at the household level and the distributional impacts of such a policy are worthy of further investigation.

3.3 *Health Implications*

3.3.1 Consequences on Nutrient Intake

Recommended daily amounts of nutrient intake can be found in Table 1 page 21 (Department of Health, 1991), while Table 9 reports the mean intakes for a range of nutrients before and after scenario simulation, based on the changes in consumption predicted in section 2.2 above. Figure 5 reports the same results in the form of a bar chart, with minima and maxima figured respectively as green and red bars.

Table 9: Mean nutrient intakes before and after policy implementation.

Nutrient	Unit	before	after	Δ%
Protein	% of energy intake	14.11	14.21	0.72%
Total fats	% of energy intake	36.20	34.94	-3.48%
SFA	% of energy intake	14.49	13.83	-4.54%
MUFA	% of energy intake	13.02	12.64	-2.92%
PUFA	% of energy intake	6.18	6.01	-2.69%
Cholesterol	$mg.day^{-1}$	230.80	218.19	-5.46%
Free Sugars	% of energy intake	15.28	15.54	1.72%
Sodium	$g.day^{-1}$	2.54	2.50	-1.63%
Fruit & Veg.	$g.day^{-1}$	354.84	370.94	4.54%
Fibre	$g.day^{-1}$	12.68	12.92	1.90%
Energy	kcal.day-1	1993.19	1944.89	-2.42%
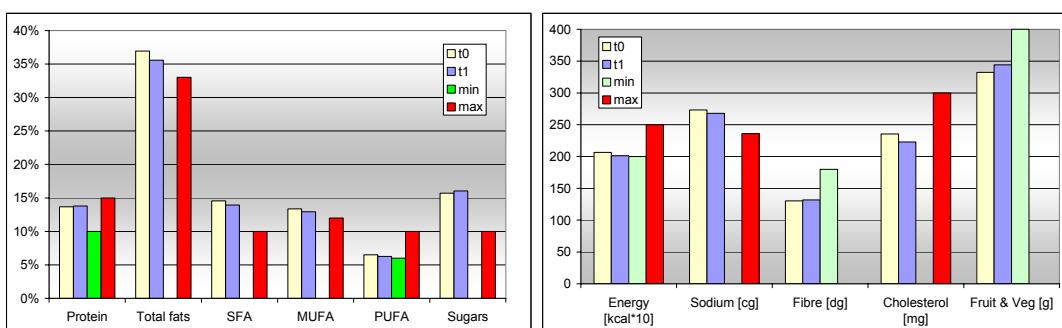
Figure 5: Mean nutrient intake before and after policy implementation.

The range of changes in nutrient intake is fairly narrow, as could be expected from previous results, from a 5.46% decrease in cholesterol, to a 4.54% increase in fruit & vegetables. Concerning fats, which are the primary target of the tax scheme, there is

an overall decrease of 3.48%, with saturated fatty acids decreasing by 4.54%. This fall is however not sufficient to bring average intakes in total fats, SFA and MUFA in line with recommendations; PUFA intake, which was within limits, remains so, although just above the lower limit. Free sugars increase slightly (1.72%) and remain well above the recommended limit.

Concerning other nutrients, there is a substantial decrease in cholesterol intake (-5.46%) and an increase in fruit & vegetables (4.54%) which is however not enough to bring the mean intake above the 400g recommended per day. Finally, there is a slight decrease observed in total energy and sodium intake, along with a slight increase in dietary fibre.

The distribution of these changes across the different socio-economic groups (SEG) can be observed in Figure 6. The 6 socio-economic groups used here are defined in Table 10.

Table 10: Definition of the socio-economic groups used in the study.

Group	Definition
seg1	High managerial
seg2	Low managerial
seg3	workers & technical
seg4	Unemployed & Never worked
seg5	Students
seg6	Other (not stated/recorded)
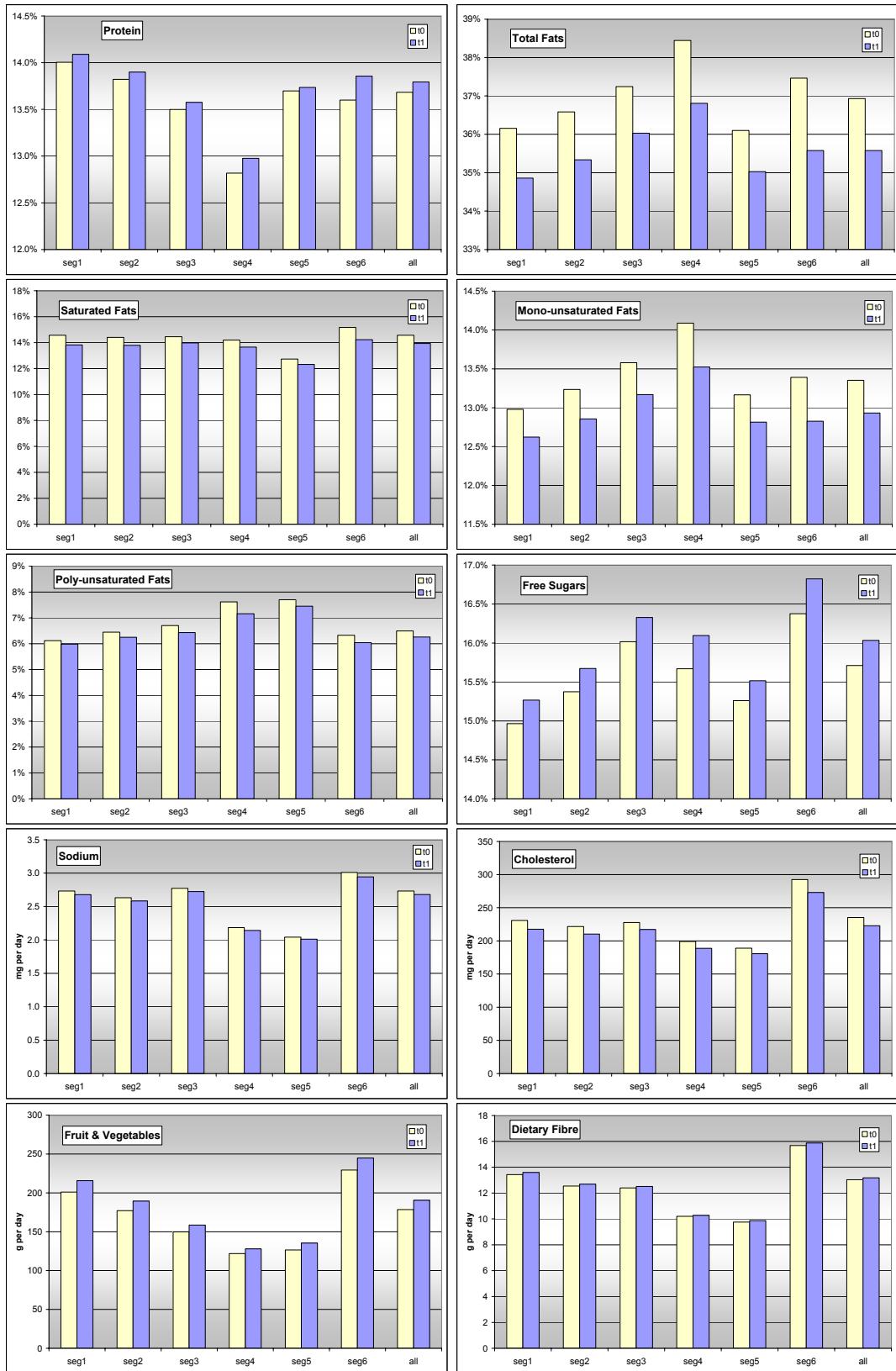
Figure 6: Mean nutrient intake before and after policy implementation according to socio-economic groups.

Concerning protein, variations across groups are minimal compared to the overall average (between 13.5% and 14%, for a population average of 13.7%). One group however stands out in terms of mean intake: unemployed & never worked (seg4) have a lower intake than the population average (under 13%); this can be explained by a lower consumption of meat products (source of protein) due do their higher price.

Considering total fats, mean intake is increasing as we move through the segments, from under 35% for seg1, to almost 38.5% for seg4. The same pattern is observed for mono-unsaturated fats. Saturated and poly-unsaturated fats exhibit a different profile: mean intake of SFAs varies very little across groups (with the exception of students (seg5) who are under the population average); in the case of PUFAs, mean intake varies across groups, increasing from seg1 to seg5.

Concerning free sugars, mean intake increases from seg1 to seg4, and is highest for seg6; variations remain however close to the population average (between 15% for seg1 and 16.4% for seg6, with a population average about 15.7%).

In the case of sodium, mean intake is about identical and close to the population average for seg1 to seg3 (around 2.7g per day), is lower for seg4 and seg5 (about 2.1g per day) and substantially higher for seg6 (3.0g per day).

The same pattern appears for cholesterol, with seg1 to seg3 around the population average, seg4 and seg5 under the average, and seg6 clearly above.

Fruit & vegetables as well as dietary fibre intakes have the same profile, decreasing from seg1 to seg5, seg6 standing out with higher than average intakes.

In all cases, the implementation of the policy scenario triggers an evenly distributed change in consumption across categories: no group has a noticeable higher reduction in fat intake, or higher increase in fruit & vegetables consumption. In that respect, inequalities between groups observed prior to taxation are preserved after scenario implementation.

3.3.2 Epidemiological Consequences

Table 11 reports prevalence risks[10] for a range of conditions in the general population, based on nutrient intakes before and after policy simulation. As presented in section 2.3 page 20, those estimates are derived from relative risk coefficients *RR*, which indicate the risk of developing a condition according to one's diet, relative to the rest of the population.

Table 11: Predicted changes in the prevalence risk of a range of conditions in the general population.

Condition	Nutrient	Source*	before	after	Δ%	95% CI
major chronic diseases	fruit & veg.	[2]	0.85	0.85	-0.82	[-1.49; -0.08]
cancer (general)	fruit & veg.	[2]	1.00‡	1.00	0.00	[-1.00; 0.95]
oesophageal cancer	fruit & veg.	[1]	0.58‡	0.57	-2.32	[-3.59; 0.14]
gastric cancer	fruit & veg.	[1]	0.56	0.55	-2.42	[-3.59; -0.91]
colorectal cancer	fruit & veg.	[1]	0.82‡	0.81	-0.91	[-2.57; 0.98]
breast cancer	fruit & veg.	[1]	0.73‡	0.72	-1.39	[-2.57; 0.14]
lung cancer	fruit & veg.	[1]	0.69	0.68	-1.62	[-2.57; -0.91]
bladder cancer	fruit & veg.	[1]	0.67‡	0.66	-1.73	[-3.28; 0.41]
CVD	fruit & veg.	[2]	0.64	0.63	-2.08	[-2.96; -1.00]
CHD	fruit & veg.	[3]	0.85	0.85	-0.82	[-1.17; -0.28]
ischemic stroke	fruit & veg.	[4]	0.79	0.78	-1.17	[-1.79; -0.28]
CHD	total fats	[5]	4.10	3.90	-4.95	[-10.96; -0.97]
CHD†	SFA	[6]	1.46‡	1.43	-2.39	[-5.94; 0.41]
CHD	SFA	[5]	4.73	4.40	-7.42	[-13.58; -2.39]
CHD†	MUFA	[6]	0.64	0.65	1.49	[0.07; 2.87]
CHD	MUFA	[5]	2.76	2.68	-2.87	[-5.90; -0.29]
CHD†	PUFA	[6]	0.70	0.71	1.02	[0.44; 1.42]
CHD	PUFA	[5]	0.94‡	0.94	0.20	[-1.39; 1.21]
type 2 diabetes	total fats	[7]	0.87‡	0.88	0.49	[-0.45; 1.42]
type 2 diabetes	SFA	[7]	0.93‡	0.93	0.41	[-1.39; 1.90]
type 2 diabetes	MUFA	[7]	1.11‡	1.10	-0.28	[-1.26; 0.72]
type 2 diabetes	PUFA	[7]	0.71	0.71	0.99	[0.67; 1.24]

CHD coronary heart disease; CVD cardio-vascular disease - † among women; ‡ not significant

Confidence intervals as given in the original literature studies (see Table 2, p.22) allow us to compute 95% confidence intervals for our estimates, thus indicating whether these estimates are significant or not (if 0 is included in the interval, then we cannot reject the hypothesis that the estimate is null). Of the 22 estimates reported here, only half are significant.

Results for fruit & vegetables consumption indicate that the tax scenario would entail a slight reduction in major chronic diseases (-0.82%), along with a decrease in gastric and lung cancers (-2.42% and 1.62%, respectively). The impact on heart conditions

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[10] As defined in equation (15) in paragraph 2.3, page 21.

would also be beneficial, with slight decreases predicted in CVD, CHD and ischemic stroke (-2.08%, -0.82% and -1.17%, respectively).

In the case of fatty acids consumption, expected benefits are of a larger amplitude: a decrease in total fats intake would trigger a reduction in CHD close to 5%. Still concerning CHD, changes in SFAs and MUFAs consumption would entail a 7.42% and a 2.87% decrease. The case of PUFAs is peculiar however: as these are acknowledged to have a protective effect against CHD among women as well as against type 2 diabetes, a decrease in their intake would lead to a slight increase in the risk of CHD (+1.02%) and type 2 diabetes (+0.99%).

Focusing on confidence intervals, we observe that changes in fruit & vegetables intake yield quite narrow intervals, thus indicating that expected health improvements are likely to be modest. In comparison, intervals obtained from fatty acids are rather wide (reaching -11% for fats & CHD, and -13% for SFAs & CHD), indicating that benefits from the tax scheme could be potentially larger for fat-related diseases. It should be noted however that most if not all of the estimates presented here have confidence intervals which come close to 0, hinting that potential health benefits from the scheme could be quite low.

Results across socio-economic groups are more telling. Figure 7 summarises the relative risk obtained before policy simulation for a selection of conditions (coronary heart disease, cancers, type 2 diabetes and major chronic diseases) for the different segments. Values have been normalised, meaning that for each condition (CHD, cancer, *etc.*) the result for the general population has been set equal to 1, and values for the different SEG have been scaled accordingly.
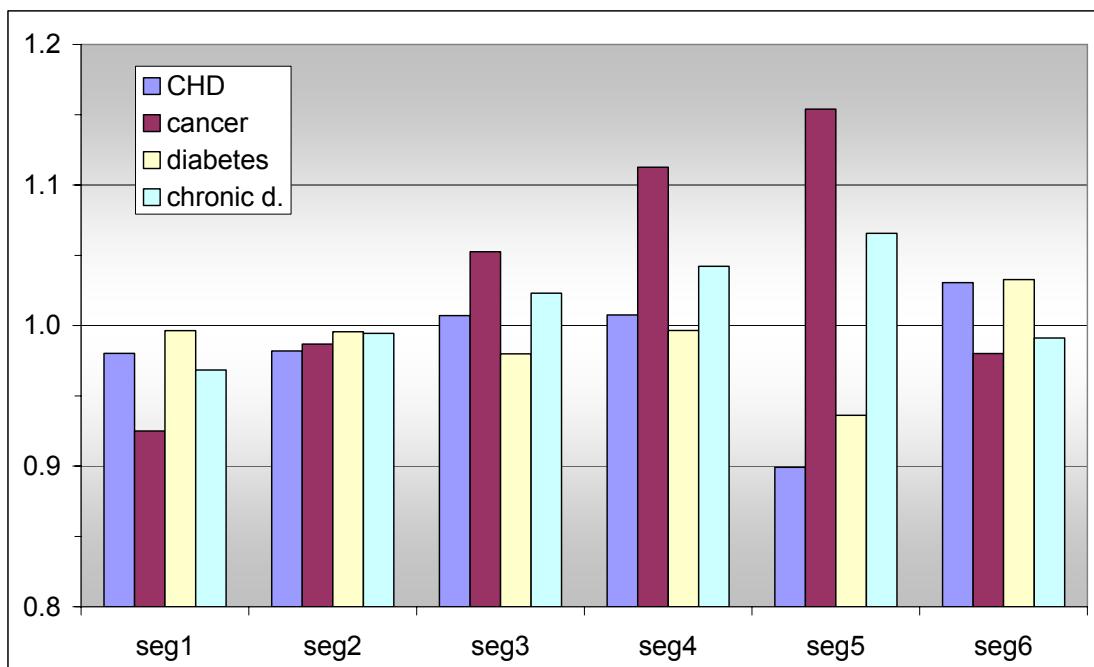
Figure 7: Risk estimates across socio-economic groups for a range of conditions before scenario simulation. (Normalised values: population risk estimates all equal to 1).

Results indicate substantial variations across groups, lower disease risks amongst the professional groups: seg1 and seg2 are under 1 for all conditions, especially cancer and to a lesser extent major chronic diseases in the case of seg1. These results can be attributed to a higher fruit & vegetables intake amongst these groups. Conversely, seg3 and seg4 exhibit higher risks for those two conditions (cancer and chronic diseases), due to a lower fruit & vegetables intake. Results for students (seg5) indicate a much higher risk of cancer and chronic diseases, but also the lowest estimates concerning CHD and type 2 diabetes, mostly due to higher intakes in unsaturated fatty acids.

Figure 8 reports variations in risk observed across SEG after scenario simulation. Starting with results for the population as a whole, there is a 4.33% reduction in the risk of CHD, followed by a 2.69% fall in cancer, and a 1.30% reduction in major chronic diseases. There is, however, a 1.29% increase in the risk of type 2 diabetes: this disturbing result is due to the slight expected increase in PUFAs intake: as they have a strong protective role against type 2 diabetes ($RR = 0.63$), an increase in consumption is bound to have a large negative effect.
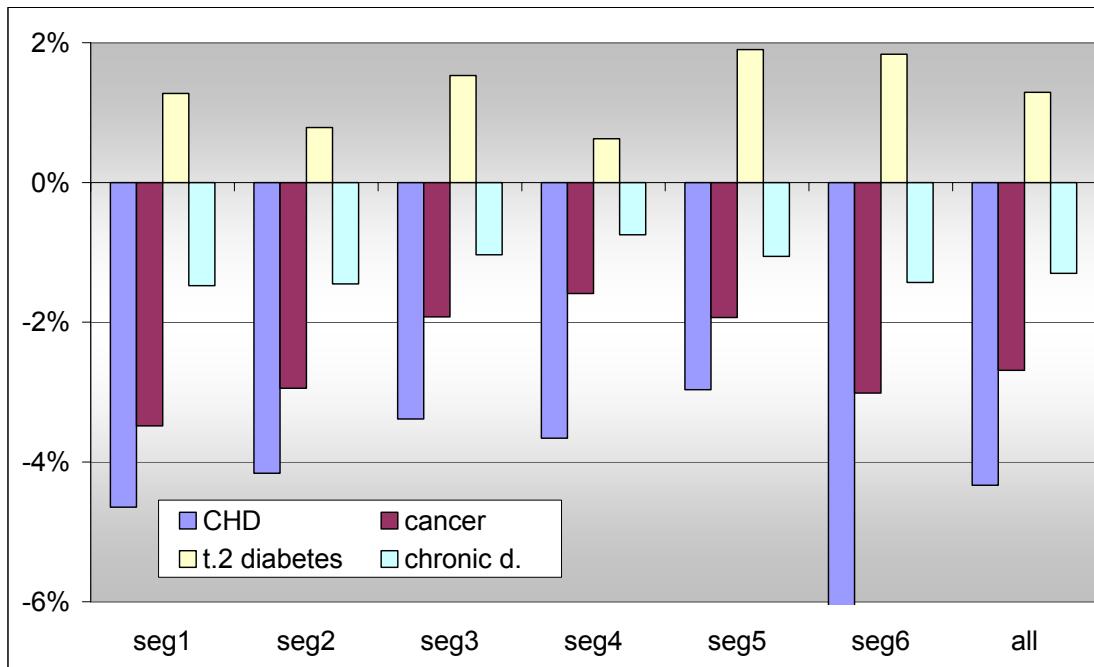
Figure 8: Variation across socio-economic groups in relative risk for a range of conditions.

Figure 7 shows that changes in disease risk as a result of the policy are not evenly distributed across segments. Groups seg1 and seg2 see larger reductions in CHD and cancer, and to a lesser extent, chronic diseases. In seg6 there is a strong reduction in CHD risk (-6.09%), due to a conjunction between an increase in fruit & vegetables intake, and a decrease in fats (total fats and SFAs) intake.

3.3.3 Impact on Weight and BMI

Weight

Considering the slight decrease in total energy intake suggested by our scenario (-2.42%, see Table 9), it is possible to infer the impact it would have on people's weight, and therefore their BMI.

Cutler *et al.* (2003) propose a weight equation based on Schofield et al. (1985), which includes all sources of energy required on a daily basis; these are:

1. basic metabolic rate: the energy required to maintain the body's primary functions;
2. physical activity: energy required for all activities not included in the basic metabolic rate; and finally
3. thermic effect of food: 'burning' food requires energy, about 10% of the ingested calorie content.

Schofield *et al.* (1985, cited by Cutler *et al.*, 2003) have derived a relationship between the basic metabolic rate (BMR, the energy required to maintain the body) and weight:

$$BMR = \alpha + \beta \times weight \tag{16}$$

where α and β are constant coefficients estimated for men and women by Schofield *et al.* (1985).

From this, Cutler et al. (2003) give their weight equation as:

$$K = \alpha + (\beta + E) \times weight + K/10 \tag{17}$$

where K represents calorie intake. The energy cost associated to BMR can be recognised from equation (16), modified by the adjunction of the exercise index E (for physical activity); finally, the thermic effect of food is taken into account by the term $K / 10$.

An expression of weight can be derived from equation (17):

$$weight = \frac{0.9K - \alpha}{\beta + E} \tag{18}$$

Assuming that physical activity remains unchanged (*E*=constant), and using estimates for α and β from the literature,[11] we can therefore compute the long-term impact on weight due to a reduction in calorie intake $\Delta K = -2.42\%$. For men, this amounts to a 4.75% reduction in weight, and to a 4.51% reduction in weight for women.

Body Mass Index

As the body mass index is linear in weight ($BMI = weight/height^2$), a one percent reduction in weight translates as a one percent reduction in BMI. Based on the National Diet and Nutrition Survey for adults aged 19 to 64 years, we can therefore compute the long-term changes in BMI at the population level. These are presented in Table 12 below.

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[11] Schofield et al. (1985) give $\alpha = 879$ for men and $\alpha = 829$ for women, and $\beta = 11.6$ for men and $\beta = 8.7$ for women.

These results are however to be taken very cautiously: extrapolating a BMI distribution from a decrease in calorie intake is an exercise likely to be fraught with caveats. Indeed, applying the same weight loss to all members of the population is bound to yield unlikely and surprising results, as can be seen from the increase in underweight people.

Table 12: Expected impact on BMI from a reduction in calorie intake.

	before†	after†	Δ%
mean BMI	26.83	25.59	-4.62%
underweight (BMI<18.5)	1.96%	3.41%	73.98%
optimal (18.5<BMI<25)	37.98%	46.59%	22.67%
overweight (BMI>25)	60.07%	50.00%	-16.76%
obese (BMI>30)	22.54%	15.44%	-31.50%
morbidly obese (BMI>40)	1.90%	1.23%	-35.26%
15 < BMI < 20	4.75%	8.45%	77.65%
20 < BMI < 25	35.18%	41.55%	18.12%
25 < BMI < 30	37.53%	34.56%	-7.90%
30 < BMI < 35	15.94%	11.13%	-30.18%
35 < BMI < 40	4.70%	3.08%	-34.52%
40 < BMI < 45	1.40%	0.89%	-36.00%
BMI > 45	0.50%	0.34%	-33.33%

†percentage of the population

As shown in the table, a 2.42% reduction in calorie intake would potentially have a massive impact on the BMI distribution in the population. The proportion of people in the optimal range would increase by over 22%, while the proportion of overweight people would decline by just under 17%. Looking at the tails of the distribution, we notice a 31% reduction in obese people (-35 for morbidly obese). At the other end of the distribution however, we find a disturbing 74% increase in the proportion of underweight people. These figures tend to confirm the impossibility of extrapolating mean weight loss to BMI changes in the population. In turn, this forbids us to estimate relative risk outcomes for several BMI-related conditions such as CHD or type 2 diabetes, as we did in section 3.3.2 based on nutrient intakes across the population.
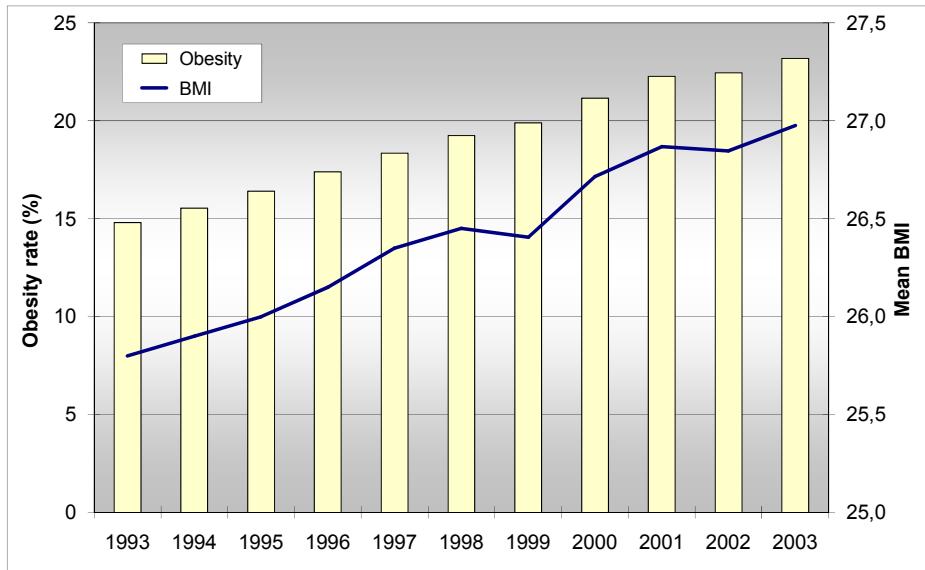
Figure 9: Trends in BMI and obesity rates in England, 1993-2003 (British Heart Foundation, 2004).

All things considered, we can merely conclude that our tax scenario would, in the long run, have the potential effect of bringing the average population BMI from 26.8 down to 25.6, that is down to levels observed before 1993. Figure 9 presents both mean BMI (graph, right-hand axis) and obesity rates (bars, left-hand axis) over the 1993-2003 period; it shows that while BMI was increasing by just under 1.2 points (from 25.8 to 27.0), obesity rates were increasing by almost 10 percentage points (from 14.8% to 23.2%). These numbers indicate that a relatively small increase in BMI (+4.5%) can result in a large obesity increase (+36% over the period considered).

Conversely, the BMI decrease we computed at the population level could have reverse effects of a similar magnitude and see a potentially sharp decline in obesity rates.

Chapter 4 Conclusions

4.1 *Findings*

The tax scheme as devised in this study appears to achieve its main purposes, namely reducing the consumption of fatty foods to the benefit of fruit & vegetables, and as a consequence, reducing the occurrence risk of certain conditions in the population. At the population level, a reduction of 4.33% in the risk of developing CHD, or a reduction of 2.69% in the risk of cancer is indeed not trivial.

More precisely, fattier foods are those for which larger consumption decreases are observed. In turn, as those fattier foods are those linked to higher risks of conditions like CHD, the general population's health would benefit as a result.

Besides, while milk and other dairy products would see a severe decrease in demand as a result of the tax scenario, other products are less affected, with variations in demand under 10%. This indicates that changes in dietary habits would likely remain, for the most part, realistic and acceptable by consumers. This is compounded by the fact that this scheme would not entail an increase in household spending.

Beyond those positive results however, the scheme has its limitations. The changes observed in nutrient intakes remain low, even though they are going in the "right direction", *i.e.* closer to official guidelines. As a consequence, the impact on public health remains modest in comparison to a 10% subsidy on fruit & vegetables for instance.

Another limitation is the marginal yet telling fact that the risk of type 2 diabetes would increase as a result of a decrease in protective PUFAs, This indicates that the scheme is not well enough targeted with respect to nutrients: taxing saturated fatty acids has the pernicious consequence of reducing the consumption of all types of fatty acids, including those deemed beneficial to health.

Another aspect of our results indicates that the scheme is not only ill-targeted in terms of nutrients, but also in terms of socio-economic groups. Considering the distribution of relative risk across the population, it appears that lower SEG are more at risk of developing ailments such as cancer, while higher SEG are less exposed. Yet, groups more likely to benefit from the scheme are higher SEG, while lower SEG are benefiting less.

Caveats

Constrained by WP5 requirements, our models are based on a limited number of food items and ill-fitted food categories, and results are therefore to be taken cautiously.

Indeed, the lack of categories such as pork and poultry could impair some of the substitution effects one could expect when introducing a fat-based tax: poultry for instance, being a lean meat, could benefit from the scheme in terms of demand. Fish would also be an alternative to fattier meats like lamb, with the added benefits of having a high PUFAs content. In that respect, an increased demand in fish as a result of a tax on other products would certainly mitigate the potential increase in type 2 diabetes.

Considering the strong levels of complementarity observed however, it is possible to consider that such a pattern would prevail when using different aggregations. Resulting effects of a fat tax scenario would then likely be at least similar to those obtained so far, or even of a larger magnitude, as cross-price effects would reinforce each other.

In that respect, results obtained from a limited diet could be interpreted as valid with respect to a full diet: a tax on fatty foods doubled with a subsidy on fruit & vegetables would trigger a decrease in the consumption of said fatty foods, which would in turn prove beneficial in terms of public health, with a decrease of a few percentage points in the occurrence risk of CHD and cancer.

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APPENDICES

Appendix A. The Almost Ideal Demand System

The Almost Ideal Demand System (AIDS) presented in section 2.1.2 used an indirect function derived from Working (1943) or Leser (1963) as the parametric representation of the consumer's preferences, where the budget share w_i of food expenditure f over total expenditure x is given as a logarithmic function of x:

$$w_i = a_i + b_i \log(x) \tag{A.1}$$

With $1 = 1, \ldots, n$ goods.

This function implicitly incorporates the assumption that consumers make choices by maximising their utility under a fixed budget constraint. Deaton and Muellbauer (1980a; 1980b) expanded this model by defining the parameters a and b as functions of prices. The corresponding cost function is:

$$\log c(u, p) = a(p) + ub(p) \tag{A.2}$$

where u represents utility and p represents prices.

By introducing expressions of $a(\cdot)$ and $b(\cdot)$ such as:

$$a(p) = \alpha_0 + \sum_i \alpha_i \log p_i + \frac{1}{2} \sum_i \sum_j \gamma_{ij}^* \log p_i \log p_j \tag{A.3}$$

$$b(p) = \beta_0 \prod p_i^{\beta_i} \tag{A.4}$$

the functional form of the AIDS cost function becomes:

$$\log c(u, p) = \alpha_0 + \sum_i \alpha_i \log p_i + \frac{1}{2} \sum_i \sum_j \gamma_{ij}^* \log p_i \log p_j + u\beta_0 \prod p_i^{\beta_i} \tag{A.5}$$

where $i, j = 1, \ldots n, i \neq j$, and α_0, α_i, β_i and γ_{ij}^* are parameters. This cost function is both flexible and aggregates consistently across consumers (Deaton and Muellbauer, 1980b).

By applying Shepard's Lemma ($\partial c / \partial p_i = q_i^*$), optimal choices q_i^* can be obtained directly from the cost function by differentiation. This leads to writing the budget share w_i as the derivative of $\log c$ with respect to $\log p_i$; we obtain:

$$\frac{\partial \log c}{\partial \log p_i} = \frac{\partial c}{\partial p_i} \frac{p_i}{c} \tag{A.6}$$

$$= \frac{q_i^* p_i}{c} \tag{A.7}$$

$$= w_i \tag{A.8}$$

From equation (A.5) we therefore obtain the following expression of the budget share w_i:

$$w_i = \alpha_i + \sum_j \gamma_{ij}^* \log p_j + \beta_i u\beta_0 \prod_k p_k^{\beta_k} \tag{A.9}$$

As u is not observable, equation (A.9) cannot be directly estimated.

Appendix A. The Almost Ideal Demand System

By substituting equation (A.5) into equation (A.9) and rearranging, the budget share form of the AIDS is obtained:

$$w_i = \alpha_i + \sum_j \gamma_{ij} \log p_j + \beta_i \log\left(\frac{x}{P}\right) \tag{A.10}$$

where P is the price index defined by:

$$\log P = \alpha_0 \sum \alpha_i \log p_i + \frac{1}{2}\sum_i \sum_j \gamma_{ij} \log p_i \log p_j \tag{A.11}$$

and the γ parameters are defined by:

$$\gamma_{ij} = \frac{1}{2}\left(\gamma_{ij}^* + \gamma_{ji}^*\right) = \gamma_{ji} \tag{A.12}$$

Equation (A.10) is almost linear in its parameters, and as noted by Buse (1994), it also contains all parameters but α_0. Thus, if the P were known, we would have a system of linear equations: Deaton and Muellbauer observe that if the prices $\log p_j$ were collinear, then $\log P$ could be assumed to be proportional to the observable Stone Price Index P^*, that is:

$$\log P^* = \sum_i w_i \log p_i \tag{A.13}$$

which is approximately proportional to P. From equation (A.10) we thus obtain the linear-approximate AIDS model (LA/AIDS):

$$w_i = \alpha_i^* + \sum_j \gamma_{ij} \log p_j + \beta_i \log\left(\frac{x}{P^*}\right) \tag{A.14}$$

Coefficients can be interpreted as follows:

- The ith budget share w_i is expressed in terms of prices and real income or expenditures x/P^*;
- The intercept α_i represents the budget share when all logarithms and real expenditure equal zero;
- The γ_{ij} represent the change in the ith budget share with respect to a percentage change in the jth price with real expenditures or income held constant: $\gamma_{ij} = \partial w_i / \partial \log p_j$;
- The β_i represent the change in the ith budget share with respect to a percentage change in real income or expenditures with prices held constant: $\beta_i = \partial w_i / \left[\partial \log\left(x/P^*\right)\right]$. They also indicate whether a good i can be considered a luxury (if $\beta_i > 0$, w_i increases with x) or a necessity $\left(\beta_i < 0\right)$.[12]

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[12] A luxury good is a good on which the share of a consumer's expenditure increases with overall expenditure, and a necessity is a good for which it decreases

Appendix A. The Almost Ideal Demand System

Besides, adding-up conditions (budget shares adding up to 1) imply that:

$$\begin{cases} \sum_i^n \alpha_i = 1 \\ \sum_i^n \gamma_{ij} = 0 \\ \sum_i^n \beta_i = 0 \end{cases}$$

(A.15)

while homogeneity and symmetry are respectively defined by:

$$\sum_j^n \gamma_{ij} = 0$$

(A.16)

$$\gamma_{ij} = \gamma_{ji}$$

(A.17)

See for instance Deaton and Muellbauer (1980b, page 76).

Elasticities

Alston, Foster and Green (1994) derive expressions for price and expenditure elasticities as function of the LA/AIDS estimates, showing through Monte Carlo experiments that their estimates are the most accurate and consistent.

The *uncompensated* price elasticities ε_{ij} are:

$$\varepsilon_{ij} = -\delta_{ij} + \frac{\gamma_{ij}}{w_i} - \beta \frac{w_j}{w_i}$$

(A.18)

where δ is defined as:

$$\begin{cases} \delta_{ii} = 1 \\ \delta_{ij} = 0 \end{cases}, \quad \text{for } i \neq j$$

(A.19)

The *compensated* price elasticities ε_{ij}^* are:

$$\varepsilon_{ij}^* = -\delta_{ij} + \frac{\gamma_{ij}}{w_i} + w_j$$

(A.20)

And the expenditure elasticities η_i of demand are:

$$\eta_i = 1 + \frac{\beta_i}{w_i}$$

(A.21)

Appendix B.   Bayesian Methods of Estimation

We will estimate the models presented in the previous section using a Bayesian approach. The basis of this approach is that we explicitly model our uncertainty about the parameters of interest in the model through a posterior density function which states the probabilities of alternative values of the parameters. The posterior is obtained by combining prior information (which may be highly non specific) in the form of a prior density function, with information from the sample in the form of a likelihood function. This is done using Bayes' theorem:

$$p(\beta \,|\, y) \propto p(y \,|\, \beta) \, p(\beta) \qquad \text{(B.1)}$$

where:

- $p(\beta)$ is the prior density of the parameters;

- $p(y \,|\, \beta)$ is the likelihood function, the joint *pdf* for all the data conditional on the unknown parameters;

- $p(\beta \,|\, y)$ is the posterior density, *pdf* for the parameters of the model given the data.

The posterior distribution provides the basis for inference. In cases where the density is tractable, this can be achieved through analytical methods. This is often not possible however, and it is then necessary to employ numerical methods.

B.1   Monte Carlo Methods

One approach to numerical analysis of the posterior distribution is Monte Carlo (MC) integration. This entails the generation of a large sample of random numbers from the posterior distribution and the use of summary statistics from this sample as descriptors of the posterior density. In many cases it is not possible to draw random numbers from the posterior density itself: in such cases Markov Chain Monte Carlo methods are however often applicable. Two such approaches are available and provide the basis for estimating the models which we employ here. These are the Gibbs Sampler and the Metropolis-Hastings algorithm.

B.1.1 The Gibbs Sampler

The Gibbs Sampler (GS) is an algorithm that generates random variables from a (marginal) posterior distribution of a block of parameters indirectly, by drawing on the conditional distributions derived from the full posterior, for all such blocks. For example, a posterior distribution $p(\beta \,|\, \Sigma)$, where β and Σ are two blocks of parameters, can be sampled by making a draw first for β from the conditional distribution $p(\beta \,|\, \Sigma)$, and then drawing Σ from the conditional distribution $p(\Sigma \,|\, \beta)$. At each stage the most recent draw is used as the conditioning parameters in the next step. After a number of repetitions the successive draws on β and Σ can be treated as if they were obtained from the marginal distributions $p(\beta)$ and $p(\Sigma)$.

The general form of the algorithm can be summarised following Koop (2003, p.63): considering θ, a vector of parameters of interest, partitioned into P blocks,[13] such as $\theta = \left(\theta'_{(1)}, \theta'_{(2)}, \ldots, \theta'_{(P)} \right)$, we can write the Gibbs Sampler as:

Step 0: Choose a starting value $\theta^{(0)}$ for the set of parameters θ.

For $g = 1, \ldots, G$, repeat the following s steps, $s = 1, \ldots, S$:

Step 1: Take a random draw, $\theta_{(1)}^{(g)}$, from $p\left(\theta_{(1)} \mid y, \theta_{(2)}^{(g-1)}, \theta_{(3)}^{(g-1)}, \ldots, \theta_{(S)}^{(s-1)} \right)$;

Step 2: Take a random draw, $\theta_{(2)}^{(g)}$, from $p\left(\theta_{(2)} \mid y, \theta_{(1)}^{(g)}, \theta_{(3)}^{(g-1)}, \ldots, \theta_{(S)}^{(s-1)} \right)$;

Step 3: Take a random draw, $\theta_{(3)}^{(g)}$, from $p\left(\theta_{(3)} \mid y, \theta_{(1)}^{(g)}, \theta_{(2)}^{(g)}, \ldots, \theta_{(S)}^{(s-1)} \right)$;

$\vdots$

Step S: Take a random draw, $\theta_{(S)}^{(g)}$, from $p\left(\theta_{(S)} \mid y, \theta_{(1)}^{(g)}, \theta_{(2)}^{(g)}, \ldots, \theta_{(S-1)}^{(g)} \right)$.

Each of the steps builds on the draw made in the previous one. By repeating steps 1 to S a large number of times G, and after discarding the first G_0 draws[14] to eliminate the effects of $\theta^{(0)}$, as G goes towards infinity the remaining G_1 draws can be averaged to obtain estimates of the posterior distribution of θ.

B.1.2 Metropolis-Hastings

The Metropolis Hastings (MH) algorithm is an alternative to GS that can be applied in cases where it is not possible to make draws from the conditional densities required in the Gibbs sampler. Instead, draws are made from an approximation referred to as the *candidate generating density*. The draws from this candidate density are retained in the sample according to a rule based on the relative probability that the candidate draw comes from the true density and the candidate respectively. Therefore, draws which would otherwise be under-represented in a sample from the candidate, as opposed to the true density, have a higher probability of retention than those which would be over-represented.

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[13] In the case of the linear regression model, $P = 2$, with $\theta_{(1)} = \beta$, and $\theta_{(2)} = \Sigma$.

[14] This is known as *burn-in*.

Appendix B. Bayesian Methods of Estimation

The algorithm can be summarised as follows (Koop, 2003, p.93):

Step 0: Choose a starting value $\theta^{(0)}$ for the set of parameters θ.

For $g = 1,\dots,G$, repeat the following steps:

Step 1: Take a candidate draw, θ^*, from the candidate generating density, $q\left(\theta^{(g-1)};\theta\right)$;

Step 2: Calculate an acceptance probability,[15] $\alpha\left(\theta^{(g-1)},\theta^*\right)$;

Step 3: Set $\theta^{(g)} = \theta^*$ with probability $\alpha\left(\theta^{(g-1)},\theta^*\right)$, and set $\theta^{(g)} = \theta^{(g-1)}$ with probability $1-\alpha\left(\theta^{(g-1)},\theta^*\right)$;

The average of the G draws is then used as estimates.

Posterior and Conditional Distributions

The preceding paragraphs have explained the centrality of the conditional distributions to the MCMC algorithms. We will now shortly show how posterior conditional densities can be derived. Full detailed derivations are given in Appendix C, pp.58-60.

The system of equations which are the basis of the AIDS can be modelled as a system *seemingly unrelated regressions* (SUR):

$$y_i = X_i\beta_i + e_i \qquad \text{(B.2)}$$

where $i = 1,\dots,M$ indicates the food groups, y_i is a T-dimensional vector of observations on a dependent variable, X_i is a $T \times K$ matrix of observations on K_i explanatory variables, including a constant term, β_i is a K_i-dimensional vector of unknown coefficients that we wish to estimate, and e_i is a T-dimensional unobserved random vector. In compact notation, the full system can be written:

$$\mathbf{Y} = \mathbf{X}\boldsymbol{\beta} + \mathbf{e} \qquad \text{(B.3)}$$

where $\mathbf{Y} = \left[y_1^{'} y_2^{'} \dots y_M^{'} \right]^{'}$, $\boldsymbol{\beta} = \left[\beta_1^{'} \beta_2^{'} \dots \beta_M^{'} \right]^{'}$, $\mathbf{e} = \left[e_1^{'} e_2^{'} \dots e_M^{'} \right]^{'}$, and $\mathbf{X}$ is a block diagonal matrix. We assume that the distribution for the error term $\mathbf{e}$ is such as $\mathbf{e} \sim N(0,\Phi)$, where $\Phi = E[ee'] = \Sigma \otimes I_T$.

The likelihood functions for different specifications of this general model can be derived, either for a single equation or for a full system. The likelihood thus obtained

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[15] The rule of acceptance is: $\alpha\left(\theta^{(s-1)},\theta^*\right) = \min\left[\dfrac{p\left(\theta=\theta^* \mid y\right)q\left(\theta^*;\theta=\theta^{(s-1)}\right)}{p\left(\theta=\theta^{(s-1)} \mid y\right)q\left(\theta^{(s-1)};\theta=\theta^*\right)} \right]$, where $p\left(\theta=\theta^* \mid y\right)$ is the posterior density evaluated at the point $\theta=\theta^*$ and $q\left(\theta^*;\theta=\theta^{(s-1)}\right)$ is the density of the random variable θ at the point $\theta=\theta^{(s-1)}$.

will then allow to determine what prior marginal distributions the parameters follow, for instance a normal distribution for the β parameters, or an inverted Gamma for the variance σ^2 in the case of a single-equation specification. Those different prior distributions provide then the conjugate prior density of the parameters.

Following Bayes' theorem in equation (A.1), the joint posterior distribution can then be derived from the likelihood function and the conjugate prior distribution; from the joint posterior, the conditional posterior distributions for the different parameters can then be obtained.

In the general SUR model, the β parameters are drawn from a multivariate normal distribution conditional on the observed data and the covariance matrix Σ:

$$\beta \mid \Sigma, y \sim MNV\left(B, \left(X'HX\right)^{-1}\right) \tag{B.4}$$

with posterior mean and posterior covariance equal to:

$$\begin{cases} E\left(\beta \mid \Sigma, y\right) = B\left(X'HX\right)^{-1} X'Hy \\ V\left(\beta \mid \Sigma, y\right) = \left(X'HX\right)^{-1} \end{cases} \tag{B.5}$$

where H is the $M \times M$ precision matrix defined as $H = \Sigma^{-1} \otimes I_M$.

The covariance Σ is drawn from an inverted Wishart distribution conditional on the observed data and on the β parameters:

$$\Sigma \mid \beta, y \sim IW\left(T - \left(M+1\right), A\right) \tag{B.6}$$

with $T - \left(M+1\right)$ degrees of freedom, and parameter matrix $A = \mathbf{e}'\mathbf{e}$.

B.2   Missing Latent Data

In the absence of latent data the two conditional densities identified above complete the Gibbs sampler for the estimation of the SUR model. Repeated draws on the normal and inverted Wishart converge to draws on the posterior marginal distributions for β and Σ. In the presence of latency however additional steps are required in order to replace the unobserved data with its latent counterpart. The procedure for making these draws differs between the Tobit and IPM models.

B.2.1 Tobit Model

In the case of the Tobit Model, the latent data occur only when a zero observation occurs. In these cases the definition of the latent variable in equation (1) implies that the latent variable is negative. Hence the latent variables are distributed as a truncated normal (*TN*) above zero:

$$\begin{cases} y_{ij}^* \mid \beta, \Sigma, w_{ij} \sim N\left(\mu_{i\mid j}, \sigma_{i\mid j}\right) l\left(y_{ij}^* < 0\right) & y_{ij} = 0 \\ \qquad y_{ij}^* = y_{ij} & y_{ij} > 0 \end{cases} \tag{B.7}$$

where $l(\cdot)$ is the indicator function which equals 1 when the expression in brackets is satisfied and zero otherwise.

Appendix B. Bayesian Methods of Estimation

Combining the three conditional distributions, the GS algorithm proceeds as follows:

Step 1: Select starting values for β and Σ.

Step 2: Whenever appropriate (*i.e.* $y_{ij} = 0$) draw latent budget shares $\left(y_{ij}^* \right)$ from the *TN* distribution of equation (B.7); otherwise (*i.e.* $y_{ij} > 0$), use the observed value (*i.e.* $y_{ij}^* = y_{ij}$).

Step 3: Draw β from the multivariate normal (*MVN*) in equation (B.4).

Step 4: Draw Σ from the inverted Wishart (*IW*) in equation (B.6).

Step 5: Repeat steps 2—4, a large number of times, until convergence is attained.

B.2.2 Infrequency of Purchase Model

In the IPM model there are both probit and conventional demand equations, which both have to be adjusted for latency. In the probit equation every observation has a latent variable. The definition in equation (2) implies that where a purchase is observed, the latent variable is positive and where it is not the latent variable may be positive or negative. Hence the latent variable in the demand equation is truncated (to the positive domain) only when it is observed.

In addition to this, observed purchases are adjusted to acknowledge the infrequency of purchase, by using the cumulative normal density based on the probit equation according to equation (3). Furthermore, in the probit equations, it is also necessary to restrict the covariance matrix for the equation to be identified.

The Gibbs sampler for the IPM therefore differs slightly from the Tobit:

Step 2: requires draws to be made for all observations in the probit equations, and adjustments to be made to account for infrequency of purchase.

Step 4: is replaced by draws on the normal and inverted Wishart distributions, so as to compute the blocks of Σ, with the identifying restrictions imposed.

B.3 Bayesian Model Averaging

The concept of Bayesian Model Averaging (BMA)[16] involves keeping all models, but presenting results averaged over all those models. This is done to reflect uncertainty on the part of the modeller as to which model is appropriate. In our case it allows us to present a unified set of results which recognises both assumptions made about the presence of censored data.

Suppose we have M_i different models, $i = 1, \ldots, m$, depending upon parameters θ_i, each one defined by a likelihood function and a prior, which all seek to explain the

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[16] This section draws heavily on Koop (2003, chapter 11).

observed patterns on the dependent variable y. The posterior for the parameters calculated using M_i is written as:

$$p\left(\theta^i \mid y, M_i\right) = \frac{p\left(y \mid \theta^i, M_i\right) p\left(\theta^i \mid y, M_i\right)}{p\left(y \mid M_i\right)} \tag{B.8}$$

the notation implying that we now have a posterior, likelihood and prior for each model. The concept of *posterior model probability* $p\left(M_i \mid y\right)$ can be used to assess the degree of support for each specific model M_i. Following Bayes' theorem we obtain:

$$p\left(M_i \mid y\right) = c\, p\left(y \mid M_i\right) p\left(M_i\right) \tag{B.9}$$

where $p\left(M_i\right)$ is referred to as the *prior model probability*, $p\left(y \mid M_i\right)$ is called the *marginal likelihood*, and c is a constant which is the same in all models.[17] Allocating equal prior probability to each model by setting $p\left(M_i = 1/m\right)$, we can ignore $p\left(M_i\right)$ and just use the marginal (normalised) likelihood:

$$p\left(M_i \mid y\right) = \frac{p\left(y \mid M_i\right)}{\sum_{j=1}^{m} p\left(y \mid M_j\right)} \tag{B.10}$$

The logic of Bayesian inference says that one should obtain results for every model under consideration and average them using the posterior model probabilities as weights. Thus, once the posterior and the marginal likelihood for each model have been worked out, BMA is straightforward. We can obtain an average value of the parameter across all models under consideration as a weighted average using the posterior model probabilities as weights. Hence, from two sets of results (*i.e.* SUR-Tobit and IPM), we obtain one.

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[17] This constant will therefore cancel out in all relevant formulae and can be ignored.

Appendix C.   AIDS Posteriors and Conditionals

In this section we first explain the derivation of the full posterior density function before explaining how the conditionals are derived from it. The system of equations which are the basis of the AIDS can be modelled as a system of *seemingly unrelated regressions* (SUR):

$$y_i = X_i \beta_i + e_i \tag{C.1}$$

where $i = 1, \ldots, M$ indicates the food groups, y_i is a T-dimensional vector of observations on a dependent variable, X_i is a $T \times K$ matrix of observations on K_i explanatory variables, including a constant term, β_i is a K_i-dimensional vector of unknown coefficients that we wish to estimate, and e_i is a T-dimensional unobserved random vector. In compact notation, the full system can be written:

$$\mathbf{Y} = \mathbf{X}\boldsymbol{\beta} + \mathbf{e} \tag{C.2}$$

where $\mathbf{Y} = [y_1' \, y_2' \ldots y_M']'$, $\boldsymbol{\beta} = [\beta_1' \, \beta_2' \ldots \beta_M']'$, $\mathbf{e} = [e_1' \, e_2' \ldots e_M']'$, and $\mathbf{X}$ is a block diagonal matrix. We assume that the distribution for the error term e is such as $e \sim N(0, \Phi)$, where $\Phi = E[ee'] = \Sigma \otimes I_T$.

Derivations for a single equation system will be presented, then extended to the general case.

C.1   Single Equation

C.1.1 Prior Distribution
Following Koop (2003, p.18), the likelihood function for a single equation linear model can be written as:

$$p(y \mid \beta, \sigma^2) = (2\pi)^{-T/2} \left\{ \frac{1}{\sigma} \exp\left[-\frac{1}{2\sigma^2}(\beta - \hat{\beta})^2 \sum_{i=1}^{T} x_i^2 \right] \right\} \left\{ \frac{1}{\sigma^v} \exp\left[-\frac{vs^2}{2\sigma^2} \right] \right\} \tag{C.3}$$

where:

$$s^2 = \frac{\sum_i (y_i - \beta x_i)^2}{v} \tag{C.4}$$

and

$$\hat{\beta} = \frac{\sum_i x_i y_i}{\sum_i x_i^2} \tag{C.5}$$

with v degrees of freedom.

The form of the likelihood in equation (B.3) suggests a Normal distribution (N) for β, such as:

$$p(\beta \mid \sigma^2) \propto \frac{1}{\sigma} \exp\left[-\frac{1}{2\sigma^2}(\beta - \hat{\beta})^2 (X')^{-1} \right] \tag{C.6}$$

with mean $\underline{\beta} = (X')^{-1} X'Y$ and variance $\sigma^2 \underline{V}$, $\underline{V} = (X')^{-1}$, or else:[18]

$$\beta \mid \sigma^2 \sim \mathrm{N}\left(\underline{\beta}, \sigma^2 \underline{V}\right) \tag{C.7}$$

The same likelihood suggests an Inverted Gamma (*IG*) distribution for Σ:

$$p\left(\sigma^2 \mid \beta\right) \propto \frac{1}{\sigma^{\underline{\nu}}} \exp\left[-\frac{\underline{\nu}\,\underline{s}^2}{2\sigma^2}\right] \tag{C.8}$$

or else:

$$\sigma^2 \mid \beta \sim \mathrm{IG}\left(\underline{\nu}, \underline{s}^2\right) \tag{C.9}$$

The conjugate prior, which includes both distributions can be expressed as (Koop, 2003):

$$\beta, \sigma^2 \sim NIG\left(\underline{\beta}, \underline{V}, \underline{\nu}, \underline{s}^2\right) \tag{C.10}$$

C.1.1 Posterior Distribution

Still following Koop (2003), the posterior is of the form:

$$\beta, \sigma^2 \mid \mathrm{y} \sim \mathrm{NIG}\left(\overline{\beta}, \overline{V}, \overline{\nu}, \overline{s}^2\right) \tag{C.11}$$

where:

$$\overline{\beta} = \overline{V}\left(\underline{V}^{-1}\underline{\beta} + \hat{\beta}X'X\right) \tag{C.12}$$

$$\overline{V} = \underline{V} + X'X^{-1} \tag{C.13}$$

$$\overline{\nu} = \underline{\nu} + T \tag{C.14}$$

$$\overline{s}^2 = \frac{\underline{\nu}\,\underline{s}^2 + \nu s^2 + \left(\hat{\beta} - \underline{\beta}\right)\left[\underline{V} + (X'X)^{-1}\right]^{-1}\left(\hat{\beta} - \underline{\beta}\right)}{\overline{\nu}} \tag{C.15}$$

This approach can be extended to a system of equations, see for instance Zellner (1971).

C.2 Systems with General Error Covariance Matrix

For a system of M equations with covariance matrix Σ, the likelihood is of the form:

$$L(\beta, \Sigma \mid \mathrm{y}) \propto |\Sigma|^{-T/2} \exp\left\{-\frac{1}{2}\nu\hat{\Sigma}^2 + (\beta - B)' X'HX\,(\beta - B)\right\} \tag{C.16}$$

$$\propto |\Sigma|^{-T/2} \exp\left\{-\frac{1}{2}\,tr\,A\Sigma^{-1}\right\} \tag{C.17}$$

where:

$$\Sigma^2 = \frac{(y - XB)'(y - XB)}{\nu} \tag{C.18}$$

$$B = \left(X'X^{-1}\right)X'Hy \tag{C.19}$$

$$H = \Sigma^{-1} \otimes I_T \tag{C.20}$$

---

[18] Notation: bars under parameters refer to parameters of a prior density, while bars over parameters refer to parameters of a posterior density.

$$y = \begin{bmatrix} y_1 \\ y_2 \\ \vdots \\ y_M \end{bmatrix} \tag{C.21}$$

$$A = \begin{bmatrix} e_1 \\ e_2 \\ \vdots \\ e_M \end{bmatrix}' \begin{bmatrix} e_1 & e_2 & \cdots & e_M \end{bmatrix} \tag{C.22}$$

The prior is then, following for instance Zellner (1971, p.242):

$$G(\beta \mid \Sigma) \propto |\Sigma|^{-(M+1)/2} \tag{C.23}$$

Using the likelihood in equation (C.17) and the prior in equation (C.23), the joint posterior density for β and Σ is:

$$P(\beta, \Sigma \mid y) \propto |\Sigma|^{-(T+M+1)/2} \exp\left\{ -\frac{1}{2} v \hat{\Sigma}^2 + (\beta - B)' X'HX (\beta - B) \right\} \tag{C.24}$$

$$\propto |\Sigma|^{-(T+M+1)/2} \exp\left\{ -\frac{1}{2} tr \ A\Sigma^{-1} \right\} \tag{C.25}$$

The conditional posterior density $(\beta, \Sigma \mid y)$ is multivariate normal (*MVN*):

$$\beta, \Sigma \mid y \sim \text{MVN}(B, X'X^{-1}) \tag{C.26}$$

with posterior mean and covariance equal to:

$$\begin{cases} E(\beta \mid \Sigma, y) = B = X'X^{-1}Hy \\ V(\beta \mid \Sigma, y) = X'X^{-1} \end{cases} \tag{C.27}$$

where H is the $M \times M$ precision matrix defined as $H = \Sigma^{-1} \otimes I_M$.

From the joint posterior in equation (C.25), the conditional posterior density for $(\Sigma \mid \beta, y)$ is given by Zellner (1971, p.395) as an Inverted Wishart (*IW*):

$$\Sigma \mid \beta, y \sim \text{IW}(T - (M+1), A) \tag{C.28}$$

It has $T - (M+1)$ degrees of freedom, and parameter matrix $A = \mathbf{ee}'$.

Appendix D.   Missing Latent Data in the IPM

As presented in paragraph B.2.2, the system of equations to be estimated is:

$$\begin{cases} \mathbf{Y}_1^* = \mathbf{X}_1\boldsymbol{\beta}_1 + \mathbf{u} \\ \mathbf{Y}_2^* = \mathbf{X}_2\boldsymbol{\beta}_2 + \mathbf{v} \end{cases} \tag{D.1}$$

where $\mathbf{Y}_1^*$ is a $MT \times 1$ vector of latent variables, $\mathbf{X}_1^*$ and $\mathbf{X}_2^*$ are $MT \times k_1$ and $MT \times k_2$ matrices of explanatory variables respectively, $\boldsymbol{\beta}_1$ and $\boldsymbol{\beta}_2$ are $Mk_1 \times 1$ and $Mk_2 \times 1$ vectors or parameters, and $\mathbf{u}$ and $\mathbf{v}$ are $MT \times 1$ vectors of residuals. M is the number of equations in the system, T is the number of observations, and k_1 and k_2 are the numbers of explanatory variables in each of the two equations. It is assumed that:

$$\binom{u}{v} \sim \mathrm{N}(0, \Sigma) \tag{D.2}$$

and the covariance matrix Σ is partitioned as:

$$\Sigma = \begin{pmatrix} \Sigma_{uu} & \Sigma_{uv} \\ \Sigma_{vu} & \Sigma_{vv} \end{pmatrix} \tag{D.3}$$

and we further want to impose the restriction that $\Sigma = I$.

Standard results give:

$$u \sim (0, \Sigma_{uu}) \tag{D.4}$$

$$v \sim N\left(\Sigma_{uv}\Sigma_{uu}^{-1}u,\ \Sigma_{vv} - \Sigma_{uv}\Sigma_{uu}^{-1}\Sigma_{uv}\right) \tag{D.5}$$

In the regression:

$$\tilde{v} = \tilde{u}\,\delta + \varepsilon \tag{D.6}$$

where $\tilde{v}$, $\tilde{u}$ and ε are $T \times M$ matrices, and δ is $M \times M$, we can write:

$$\delta = (\tilde{u}'\tilde{u})^{-1}\tilde{u}'\tilde{v} \tag{D.7}$$

Hence:

$$\delta = \Sigma_{uu}^{-1}\Sigma_{uv} \tag{D.8}$$

and:

$$\Sigma_{uv} = \Sigma_{uu}\delta \tag{D.9}$$

Moreover:

$$\Sigma_{\varepsilon} = \mathrm{cov}(v \mid \mathbf{u}) \\ = \Sigma_{vv} - \Sigma_{uv}\Sigma_{uu}^{-1}\Sigma_{uv} \tag{D.10}$$

Hence:

$$\Sigma_{vv} = \Sigma_{\varepsilon} + \Sigma_{uv}\Sigma_{uu}^{-1}\Sigma_{uv} \tag{D.11}$$

Therefore, under the assumption that $\Sigma_{uu} = I$, we can recover the other parts of Σ as follows:

$$\begin{cases} \Sigma_{uv} = \delta \\ \Sigma_{vv} = \Sigma_{\varepsilon} + \Sigma_{uv}\Sigma_{uv} \end{cases} \tag{D.12}$$

From the regression in equation (D.6), it can be seen that the conditional distributions for δ and Σ_{ε} are normal and inverted Wishart respectively:

Appendix D. Missing Latent Data in the IPM

$$\delta \mid \Sigma_\varepsilon \sim N\left[\left(\tilde{u}'\Sigma_\varepsilon^{-1}\tilde{u}\right)^{-1}\tilde{u}'\tilde{v}, \left(\tilde{u}'\Sigma_\varepsilon^{-1}\tilde{u}\right)^{-1}\right] \qquad \textbf{(D.13)}$$

$$\Sigma_\varepsilon \mid \delta \sim IW(u, v) \qquad \textbf{(D.14)}$$

Step 4 of the Gibbs sampler for the IPM entails therefore a draw on the normal and on the inverted Wishart, following equations (D.13) and (D.14), respectively. These draws can then be used to compute the blocks of Σ using equations (D.12).

Appendix E.   EFS Data & Food Nomenclature

E.1   Aggregation

Each food group has been set bearing in mind the data requirements of WP5, that is, the ability to easily convert each aggregation into a single farm commodity for use with the LUAM model.

Four factors, some contradictory, had to be taken into account:
1. the need to keep the number of groups as low as possible so as to keep the models workable and so as to avoid problems linked to high censoring
2. he need to keep each group as consistent and homogenous as possible so as be able to convert it into a single farm commodity, thus implying as many different groups as possible
3. the need to conform to the nomenclature imposed by the LUAM model.
4. Data for England & Wales only was retained, as the LUAM model is restricted to these two countries.

As a result of these constraints, out of the 258 food items recorded in the EFS, only 85 could actually be used in our study. Ready meals, processed, and multi-ingredient food products could not be used as their composition is not known or too vague. Fish, pork and poultry also had to be discarded, as they are not part of the LUAM model, along with drinks and confectionery.

E.1.1 Higher Model Aggregation

In our hierarchical modelling structure, the top model includes 3 groups only corresponding to the 3 lower models described below, each of these groups containing all the items listed in the different subgroups.

E.1.2 Milk, Dairy & Meat

The 6 food groups in this aggregation are: milk, butter (for which there is only this single item), cheese, other dairy, beef, and lamb.

Food items allocated to "milk"	
UHT milk	Infant or baby milks - ready to drink
Sterilised	Infant or baby milks - dried
Pasteurised/homogenised	Fully skimmed milk
Condensed or evaporated milk	Semi-skimmed milk

Food items allocated to "cheese"	
Hard cheese - Cheddar type	Soft natural cheese
Hard cheese - Other UK or foreign equivalent	Processed cheese
Hard cheese - Edam or other foreign	Cream
Cottage cheese	

Food items allocated to "other dairy"	
Yoghurt	Dried milk products
Fromage frais	Milk drinks & other milks
Dairy desserts - not frozen	

Food items allocated to "beef"	
Beef joints - on the bone	All other beef and veal
Beef joints - boned	Ox liver
Beef steak - less expensive	Corned beef, canned or sliced
beef steak - more expensive	Burgers, frozen or not
Minced beef	

Food items allocated to "lamb"	
Mutton	All other lamb
Lamb joints	Lambs liver
Lamb chops	

E.1.3 Miscellaneous

The 5 food groups in this aggregation are: eggs (for which there is only this single item), oils & fats, sugar (for which there is only this single item), potatoes, and wheat & barley.

Food items allocated to "oils & fats"

Soft margarine	Reduced fat spreads
Other margarine	Low fat spreads
Lard, cooking fat	Suet and dripping
Other vegetables and salad oils	Imitation cream

Food items allocated to "potatoes"

Potatoes - bought Jan-Aug, previous years crop
Potatoes - bought Jan-Aug, this years crop
Potatoes - bought Sep-Dec, this years crop or new imported

Food items allocated to "wheat & barley"

White bread, standard, unsliced	Brown bread
White bread, standard, sliced	Wholemeal and granary bread
White bread, premium	Flour
White bread, soft grain	

E.1.4 Fruit & Vegetables

The 5 food groups in this aggregation are: peas & beans, turnips & swede (for which there is only one single item), other vegetables, tree fruit, and soft fruit.

Food items allocated to "peas & beans"

Fresh peas	Other canned beans and pulses
Fresh beans	Peas, frozen
Peas, canned	Beans, frozen
Baked beans in sauce	

Food items allocated to "other vegetables"

Fresh cabbages	Fresh onions, leeks and shallots
Fresh brussels sprouts	Fresh cucumbers
Fresh cauliflower	Fresh mushrooms
Lettuce and leafy salads	Fresh tomatoes
Prepared lettuce salads	Fresh vegetables stewpack, stirfry, etc.
Other fresh green vegetables	Fresh stem vegetables
Fresh carrots	Fresh marrow, courgettes, aubergine, etc.
Other fresh root vegetables	Fresh herbs

Food items allocated to "tree fruit"

Fresh apples	Fresh stone fruit
Fresh pears	

Food items allocated to "soft fruit"

Other fresh soft fruit	Other fresh fruit
Fresh melons	

E.2   Incorporation of Demographic Data

The motivation behind the incorporation of specific socio-demographic features into model estimation (*i.e.* household composition, socioeconomic group, age, geographic region of residence, gender and ethnic origin) is the investigation of the ways these variables augment economic factors such as prices and total expenditure in influencing the demand for food. The table below describes all the socio-demographic variables incorporated into the estimation of both modelling approaches (SUR-Tobit and IPM) and their respective categories.

EFS socio-demographic variables used in the SUR-Tobit and IPM.

Household Composition	1 or 2 adults only
	Single parents
	Family with children
	Family with children & more than 2 adults
	Family without children & more than 2 adults
Socio-economic Group‡	High managerial
	Low managerial
	Workers-technical
	Never work-unemployed
	Students
	Other
Age‡	< 30
	30 < age <45
	45 < age <60
	> 60
GOR (Government Office Region)	North East - North West & Merseyside - Yorks & Humber - East Midlands - West Midlands - Eastern - London - South East - South West - Wales
Ethnic Origin‡	White - Mixed race - Asian - Black - Other
Gender‡	Male - Female

‡ relating to the household reference person (HRP)

We should also note that in order to avoid the situation of exact collinearity among the explanatory variables of the estimated models we define one less dummy variable than the number of categories that exist for each one of the socio-demographic variables described in the table above. These are the last ones listed in each category (*i.e.* families without children and 3 or more adults, other socio-economic group of householder, age of householder greater than sixty years, households residing in Northern Ireland, female householder and other ethnic origin). The coefficients on the remaining dummy variables represent the influence of the relevant variable on demand relative to the reference category for which the dummy variable is excluded.

Appendix F. EFS Quantities, Expenditures & Prices

Key to the tables and units, as used in the EFS datasets:
- − **obs** indicates the number of households present in the data set for each socio-demographic category;
- − **q** indicates mean quantities consumed per household in grams or millilitre equivalent;
- − **x** indicates mean expenditures per household in pence;
- − **p** indicates mean prices faced by households, in pounds per kilogram or litre equivalent (except eggs, in pence per unit).

F.1 Upper Model

Upper Model 2001-02	obs	Meat & Dairy			Miscellaneous			Fruit & Vegetables		
		q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3738	8515	1169	1.37	5797	520	0.90	5344	822	1.54
Single parents	451	10850	1136	1.05	7279	524	0.72	4577	608	1.33
Children, 2 adults	1448	16625	2029	1.22	9617	753	0.78	7873	1173	1.49
Children, >2 adults	253	20004	2442	1.22	14647	1056	0.72	10138	1332	1.31
>2 adults, no children	430	15704	2107	1.34	11253	921	0.82	8775	1250	1.42
High managerial	683	12963	1947	1.50	6543	634	0.97	8161	1466	1.80
Low managerial	1842	11863	1647	1.39	7255	634	0.87	6981	1107	1.59
Workers-technical	1337	12380	1446	1.17	8840	661	0.75	6100	785	1.29
Never worked-unemployed	82	12088	1186	0.98	11122	653	0.59	5414	627	1.16
Students	31	9595	1038	1.08	4834	461	0.95	5406	972	1.80
Other	2345	10330	1253	1.21	7188	593	0.83	5428	751	1.38
Under 30	630	9632	1086	1.13	5568	447	0.80	4424	667	1.51
30 to 45	1995	13042	1583	1.21	7845	622	0.79	6375	974	1.53
45 to 60	1745	12469	1723	1.38	8697	716	0.82	7575	1125	1.49
Over 60	1950	9693	1285	1.33	6792	599	0.88	5703	820	1.44
North East	314	11512	1368	1.19	7774	606	0.78	5756	738	1.28
North West & Merseyside	852	11820	1427	1.21	7675	636	0.83	5832	814	1.40
Yorkshire & Humber	599	10787	1268	1.18	7066	557	0.79	5745	752	1.31
East Midlands	536	12003	1504	1.25	7821	629	0.80	6329	916	1.45
West Midlands	645	11706	1436	1.23	8553	661	0.77	6221	853	1.37
Eastern	640	11920	1627	1.37	7502	639	0.85	6849	1050	1.53
London	678	10752	1465	1.36	6724	626	0.93	6766	1184	1.75
South East	1035	11416	1642	1.44	7012	609	0.87	6617	1077	1.63
South West	666	12001	1511	1.26	7278	595	0.82	6520	943	1.45
Wales	355	10997	1367	1.24	8991	715	0.80	6076	841	1.38
Men	3992	12611	1644	1.30	8218	680	0.83	6991	1035	1.48
Women	2328	9623	1201	1.25	6333	526	0.83	5170	777	1.50
White	5981	11443	1488	1.30	7473	621	0.83	6226	930	1.49
Mixed	40	9191	1241	1.35	6753	552	0.82	7069	1150	1.63
Asian	128	17835	1658	0.93	11830	871	0.74	10198	1338	1.31
Black	121	8988	1056	1.18	6859	562	0.82	6009	824	1.37
Other	50	11936	1405	1.18	5688	539	0.95	8589	1346	1.57
Sample mean (Total)	(6320)	11514	1481	1.29	7530	624	0.83	6325	941	1.49

Appendix F. EFS Quantities, Expenditures & Prices

Upper Model 2002-03	obs	Meat & Dairy			Miscellaneous			Fruit & Vegetables		
		q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3517	8705	1211	1.39	5908	527	0.89	5522	877	1.59
Single parents	411	10281	1135	1.10	6672	490	0.74	4557	589	1.29
Children, 2 adults	1253	16456	2048	1.25	9359	741	0.79	7861	1188	1.51
Children, >2 adults	187	18424	2404	1.31	14044	1059	0.75	9424	1285	1.36
>2 adults, no children	389	15082	2147	1.42	11210	941	0.84	9599	1411	1.47
High managerial	630	11905	1836	1.54	6700	655	0.98	7976	1498	1.88
Low managerial	1678	11759	1634	1.39	7095	621	0.88	6922	1139	1.65
Workers-technical	1182	12339	1500	1.22	8864	659	0.74	6212	808	1.30
Never worked-unemployed	39	9065	1023	1.13	6379	518	0.81	4591	509	1.11
Students	24	8182	1113	1.36	6552	578	0.88	7055	1166	1.65
Other	2204	10206	1291	1.27	6970	586	0.84	5642	796	1.41
Under 30	530	8752	1018	1.16	5538	445	0.80	4403	652	1.48
30 to 45	1761	12660	1582	1.25	7724	615	0.80	6505	1001	1.54
45 to 60	1560	12173	1726	1.42	8295	703	0.85	7443	1167	1.57
Over 60	1906	9930	1346	1.36	6765	598	0.88	5940	886	1.49
North East	318	11310	1322	1.17	7650	588	0.77	5322	682	1.28
North West & Merseyside	747	11721	1443	1.23	7246	614	0.85	5496	794	1.44
Yorkshire & Humber	560	11209	1381	1.23	7541	585	0.78	6266	840	1.34
East Midlands	438	11953	1565	1.31	7757	624	0.80	6195	893	1.44
West Midlands	558	11813	1538	1.30	8373	667	0.80	6437	907	1.41
Eastern	638	10978	1518	1.38	6894	607	0.88	6861	1095	1.60
London	605	10178	1510	1.48	6822	620	0.91	7024	1214	1.73
South East	920	11099	1587	1.43	7073	624	0.88	6905	1180	1.71
South West	616	11452	1533	1.34	7060	622	0.88	6638	1017	1.53
Wales	357	11182	1362	1.22	7993	619	0.77	5893	841	1.43
Men	3650	12345	1656	1.34	8016	670	0.84	6997	1067	1.52
Women	2107	9406	1207	1.28	6212	526	0.85	5336	823	1.54
White	5470	11230	1498	1.33	7284	615	0.85	6287	971	1.54
Mixed	35	9514	1200	1.26	5894	503	0.85	5851	933	1.60
Asian	128	15438	1639	1.06	10792	794	0.74	11166	1419	1.27
Black	92	9010	1081	1.20	7728	604	0.78	5698	770	1.35
Other	32	9689	1336	1.38	7368	527	0.72	8046	1091	1.36
Sample mean (Total)	(5757)	11270	1492	1.32	7363	618	0.84	6394	978	1.53

Appendix F. EFS Quantities, Expenditures & Prices

Upper Model 2003-04	obs	Meat & Dairy			Miscellaneous			Fruit & Vegetables		
		q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3546	8582	1239	1.44	5692	537	0.94	5454	923	1.69
Single parents	409	10727	1231	1.15	6466	523	0.81	4772	693	1.45
Children, 2 adults	1316	16546	2147	1.30	8757	763	0.87	7674	1231	1.60
Children, >2 adults	236	20358	2559	1.26	12060	971	0.81	9861	1445	1.47
>2 adults, no children	377	15706	2204	1.40	10201	892	0.87	8685	1357	1.56
High managerial	682	12595	2027	1.61	6451	649	1.01	8012	1548	1.93
Low managerial	1995	11810	1670	1.41	6647	625	0.94	6797	1181	1.74
Workers-technical	1605	12396	1511	1.22	8392	668	0.80	5980	831	1.39
Never worked-unemployed	117	13258	1470	1.11	8696	675	0.78	5776	726	1.26
Students	69	8372	1010	1.21	5156	494	0.96	4686	773	1.65
Other	1416	9343	1260	1.35	6112	579	0.95	5298	813	1.54
Under 30	571	8811	1070	1.22	4918	441	0.90	3905	653	1.67
30 to 45	1824	13074	1699	1.30	7306	638	0.87	6416	1047	1.63
45 to 60	1592	12474	1807	1.45	8041	710	0.88	7708	1269	1.65
Over 60	1897	9851	1361	1.38	6430	604	0.94	5718	912	1.60
North East	313	11099	1309	1.18	7017	594	0.85	5294	723	1.37
North West & Merseyside	743	11317	1512	1.34	7040	644	0.92	5467	857	1.57
Yorkshire & Humber	596	11126	1399	1.26	6689	568	0.85	6148	913	1.49
East Midlands	497	11926	1514	1.27	7115	610	0.86	6489	956	1.47
West Midlands	571	11685	1601	1.37	8151	693	0.85	6513	998	1.53
Eastern	605	11769	1653	1.40	7010	641	0.92	6730	1134	1.69
London	639	10286	1524	1.48	5960	599	1.01	6538	1240	1.90
South East	898	11717	1678	1.43	6704	630	0.94	6722	1195	1.78
South West	652	11855	1652	1.39	6849	622	0.91	6442	1083	1.68
Wales	370	11741	1554	1.32	8155	678	0.83	6324	914	1.45
Men	3713	12436	1709	1.37	7647	681	0.89	6944	1117	1.61
Women	2171	9779	1299	1.33	5881	537	0.91	5235	877	1.68
White	5521	11429	1569	1.37	6977	628	0.90	6235	1024	1.64
Mixed	35	9214	1176	1.28	6741	580	0.86	7067	1066	1.51
Asian	157	15569	1649	1.06	9000	717	0.80	8791	1218	1.39
Black	147	8941	1131	1.27	5634	524	0.93	6070	907	1.50
Other	24	9431	1446	1.53	7037	698	0.99	9063	1476	1.63
Sample mean (Total)	(5884)	11457	1558	1.36	6997	628	0.90	6318	1029	1.63

Appendix F. EFS Quantities, Expenditures & Prices

Upper Model 2004-05	obs	Meat & Dairy			Miscellaneous			Fruit & Vegetables		
		q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3417	8522	1277	1.50	5381	555	1.03	5652	973	1.72
Single parents	381	10300	1252	1.22	6001	560	0.93	4764	729	1.53
Children, 2 adults	1241	16033	2162	1.35	8702	799	0.92	7938	1268	1.60
Children, >2 adults	216	20596	2627	1.28	11823	1065	0.90	10122	1530	1.51
>2 adults, no children	419	14676	2137	1.46	10492	939	0.89	8943	1422	1.59
High managerial	653	12496	1971	1.58	6023	650	1.08	8183	1598	1.95
Low managerial	1738	11729	1737	1.48	6882	674	0.98	7186	1251	1.74
Workers-technical	1146	12126	1584	1.31	8077	714	0.88	6446	910	1.41
Never worked-unemployed	114	11185	1301	1.16	7864	670	0.85	4732	607	1.28
Students	51	6684	897	1.34	4563	520	1.14	5108	982	1.92
Other	1972	9930	1359	1.37	6244	619	0.99	5558	871	1.57
Under 30	479	8297	1091	1.32	4849	473	0.98	4260	728	1.71
30 to 45	1717	12670	1682	1.33	6951	656	0.94	6616	1098	1.66
45 to 60	1609	12363	1832	1.48	7831	743	0.95	7673	1268	1.65
Over 60	1869	9642	1411	1.46	6257	636	1.02	5997	980	1.63
North East	255	11547	1540	1.33	6454	613	0.95	6070	895	1.48
North West & Merseyside	721	12171	1684	1.38	7145	695	0.97	6245	978	1.57
Yorkshire & Humber	567	10683	1438	1.35	6534	629	0.96	5780	881	1.53
East Midlands	473	12535	1659	1.32	7275	672	0.92	6343	923	1.46
West Midlands	541	11123	1491	1.34	7708	692	0.90	6382	975	1.53
Eastern	633	11153	1626	1.46	6903	659	0.96	7100	1198	1.69
London	631	9892	1521	1.54	5764	624	1.08	6818	1271	1.87
South East	887	10874	1637	1.51	6465	656	1.01	6758	1225	1.81
South West	618	11151	1640	1.47	6515	625	0.96	6857	1178	1.72
Wales	348	11738	1525	1.30	7774	727	0.94	6425	993	1.55
Men	3572	12288	1753	1.43	7453	714	0.96	7098	1155	1.63
Women	2102	9403	1303	1.39	5683	564	0.99	5554	948	1.71
White	5334	11137	1596	1.43	6736	655	0.97	6434	1071	1.67
Mixed	29	11250	1418	1.26	6738	720	1.07	6345	955	1.51
Asian	152	17216	1775	1.03	10764	891	0.83	9768	1400	1.43
Black	124	8301	989	1.19	5046	547	1.08	6368	914	1.44
Other	35	7629	1407	1.85	5288	526	1.00	7468	1469	1.97
Sample mean (Total)	(5674)	11220	1586	1.41	6801	659	0.97	6531	1079	1.65

Appendix F. EFS Quantities, Expenditures & Prices

Upper Model 2005-06	obs	Meat & Dairy			Miscellaneous			Fruit & Vegetables		
		q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3521	8458	1283	1.52	5441	563	1.03	5656	990	1.75
Single parents	399	9587	1233	1.29	6264	562	0.90	5132	813	1.59
Children, 2 adults	1182	16589	2314	1.40	8775	829	0.95	8971	1473	1.64
Children, >2 adults	187	20703	2812	1.36	12997	1170	0.90	10829	1640	1.51
>2 adults, no children	402	15219	2281	1.50	10207	966	0.95	9328	1532	1.64
High managerial	609	12709	2104	1.66	6120	666	1.09	8314	1719	2.07
Low managerial	1685	11644	1812	1.56	6694	680	1.02	7538	1340	1.78
Workers-technical	1125	11836	1562	1.32	7714	719	0.93	6554	959	1.46
Never worked-unemployed	119	13278	1555	1.17	9712	769	0.79	7077	870	1.23
Students	78	8376	1169	1.40	5775	541	0.94	7534	1125	1.49
Other	2075	9835	1365	1.39	6479	633	0.98	5718	912	1.60
Under 30	495	8907	1195	1.34	5541	521	0.94	5383	869	1.61
30 to 45	1676	12548	1745	1.39	7068	671	0.95	7052	1192	1.69
45 to 60	1550	12075	1849	1.53	7591	745	0.98	7799	1349	1.73
Over 60	1970	9716	1429	1.47	6287	643	1.02	6034	1000	1.66
North East	280	11419	1406	1.23	6445	604	0.94	5578	791	1.42
North West & Merseyside	722	11487	1564	1.36	7186	684	0.95	5864	942	1.61
Yorkshire & Humber	582	11223	1503	1.34	6268	620	0.99	6131	949	1.55
East Midlands	508	11647	1655	1.42	7444	722	0.97	7514	1158	1.54
West Midlands	538	10588	1507	1.42	7161	686	0.96	6297	995	1.58
Eastern	577	11730	1767	1.51	7013	688	0.98	7362	1249	1.70
London	601	10400	1701	1.64	6355	653	1.03	8138	1558	1.91
South East	937	10847	1721	1.59	6400	673	1.05	6907	1308	1.89
South West	614	11084	1631	1.47	6744	659	0.98	7114	1214	1.71
Wales	332	11074	1490	1.35	7368	667	0.91	5825	865	1.49
Men	3476	12187	1791	1.47	7449	733	0.98	7441	1244	1.67
Women	2215	9456	1343	1.42	5791	567	0.98	5703	981	1.72
White	5278	10979	1616	1.47	6684	662	0.99	6583	1134	1.72
Mixed	41	9165	1509	1.65	6405	708	1.11	7298	1041	1.43
Asian	209	16343	1877	1.15	10652	924	0.87	10447	1366	1.31
Black	112	9382	1268	1.35	6143	561	0.91	7508	1074	1.43
Other	51	9970	1435	1.44	5953	559	0.94	8566	1283	1.50
Sample mean (Total)	(5691)	11124	1617	1.45	6808	669	0.98	6765	1142	1.69

F.2 Meat & Dairy

Meat & Dairy 2001-02		Milk			Butter			Cheese			Other Dairy			Beef			Lamb		
	obs	q	x	p	q	x	p	q	x	p	q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3717	6645	345	0.52	582	169	2.91	711	340	4.78	1439	299	2.08	1093	503	4.60	1086	499	4.59
Single parents	450	8949	438	0.49	569	151	2.65	678	301	4.44	1453	293	2.02	1082	373	3.44	1581	539	3.41
Children, 2 adults	1463	13037	675	0.52	636	177	2.78	1038	496	4.78	2048	450	2.20	1443	583	4.04	1242	570	4.59
Children, >2 adults	256	15720	780	0.50	778	211	2.72	1250	541	4.33	2134	452	2.12	1847	770	4.17	1813	726	4.01
>2 adults, no children	434	11764	587	0.50	763	200	2.62	1059	493	4.65	1973	409	2.08	1606	710	4.42	1226	579	4.72
High managerial	687	9762	527	0.54	610	185	3.03	1077	578	5.37	1974	440	2.23	1376	693	5.04	1148	625	5.45
Low managerial	1837	9055	467	0.52	621	178	2.87	971	471	4.85	1827	393	2.15	1344	603	4.49	1153	549	4.76
Workers-technical	1338	9787	481	0.49	623	168	2.69	816	348	4.27	1632	329	2.01	1341	525	3.92	1373	521	3.79
Never worked-unemployed	83	9771	462	0.47	699	152	2.18	706	287	4.06	1504	292	1.94	1368	406	2.97	2122	737	3.47
Students	32	7676	396	0.52	438	141	3.22	689	359	5.22	1149	259	2.25	775	308	3.98	840	383	4.55
Other	2343	8440	438	0.52	621	173	2.79	674	306	4.54	1486	311	2.09	1126	480	4.27	1114	502	4.51
Under 30	623	8131	421	0.52	517	138	2.67	723	337	4.67	1477	301	2.04	1031	395	3.83	1259	522	4.15
30 to 45	1999	10326	518	0.50	586	165	2.81	929	432	4.65	1799	385	2.14	1317	533	4.05	1195	547	4.57
45 to 60	1745	9458	480	0.51	647	185	2.85	950	461	4.85	1834	385	2.10	1505	650	4.32	1254	546	4.35
Over 60	1953	7702	411	0.53	636	179	2.82	681	318	4.66	1466	312	2.13	1039	499	4.80	1119	521	4.66
North East	314	9102	469	0.52	511	160	3.14	793	358	4.51	1643	334	2.03	1314	501	3.81	994	460	4.63
North West & Merseyside	852	9518	492	0.52	610	170	2.78	788	345	4.38	1524	313	2.05	1243	540	4.34	1208	516	4.27
Yorkshire & Humber	599	8756	446	0.51	542	154	2.85	708	301	4.25	1550	302	1.95	1238	494	3.99	932	398	4.27
East Midlands	537	9734	507	0.52	643	186	2.90	915	395	4.31	1644	350	2.13	1166	519	4.45	1028	449	4.37
West Midlands	644	9323	465	0.50	641	163	2.54	786	358	4.56	1684	354	2.10	1313	564	4.29	1279	547	4.28
Eastern	640	9128	467	0.51	624	174	2.79	877	440	5.02	1861	396	2.13	1263	554	4.39	1156	575	4.98
London	678	8329	436	0.52	677	195	2.88	838	430	5.13	1705	366	2.15	1310	563	4.30	1363	640	4.70
South East	1035	8578	452	0.53	618	177	2.87	930	476	5.11	1800	401	2.23	1284	594	4.63	1303	590	4.53
South West	666	9516	477	0.50	628	172	2.74	903	423	4.69	1727	361	2.09	1316	568	4.31	1084	499	4.61
Wales	355	8803	433	0.49	677	202	2.99	806	365	4.54	1625	349	2.15	1239	518	4.18	1286	547	4.25
Men	4003	9836	503	0.51	660	186	2.82	915	432	4.72	1824	385	2.11	1352	597	4.41	1234	563	4.56
Women	2317	7707	399	0.52	544	154	2.84	714	336	4.71	1447	307	2.12	1098	446	4.06	1101	480	4.36
White	5989	8982	463	0.52	608	173	2.84	850	402	4.72	1694	359	2.12	1271	550	4.33	1096	509	4.64
Mixed	40	7350	369	0.50	600	176	2.94	648	370	5.72	1529	339	2.22	994	444	4.47	865	495	5.72
Asian	126	14707	705	0.48	1031	264	2.56	871	368	4.23	1892	354	1.87	1289	443	3.44	3265	1163	3.56
Black	116	7411	374	0.51	688	168	2.45	576	266	4.62	1288	265	2.06	1305	481	3.69	2067	770	3.72
Other	49	9118	427	0.47	870	225	2.59	690	332	4.81	1472	297	2.02	995	413	4.15	4442	1385	3.12
Sample mean (Total)	(6320)	9064	465	0.51	620	175	2.82	845	399	4.72	1689	357	2.12	1268	547	4.31	1190	536	4.50

Appendix F. EFS Quantities, Expenditures & Prices

Meat & Dairy 2002-03	obs	Milk			Butter			Cheese			Other Dairy			Beef			Lamb		
		q	x	p	q	x	p	q	x	p	q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3506	6761	361	0.53	540	162	3.00	720	350	4.86	1479	314	2.12	1021	492	4.82	981	507	5.17
Single parents	414	8465	422	0.50	529	151	2.85	669	299	4.47	1553	319	2.05	1098	381	3.47	1180	490	4.15
Children, 2 adults	1260	12550	661	0.53	643	187	2.91	1014	484	4.77	2339	479	2.05	1446	588	4.07	1293	617	4.77
Children, >2 adults	187	13647	672	0.49	750	207	2.76	1241	587	4.73	2556	481	1.88	1966	757	3.85	1805	729	4.04
>2 adults, no children	390	11109	573	0.52	731	209	2.86	1046	492	4.71	2042	420	2.06	1696	759	4.47	1361	637	4.68
High managerial	633	8821	489	0.56	577	180	3.12	1006	547	5.44	2158	473	2.19	1299	636	4.89	1106	646	5.85
Low managerial	1686	8817	464	0.53	588	178	3.02	933	462	4.95	1950	412	2.11	1336	589	4.41	1127	580	5.15
Workers-technical	1184	9518	480	0.51	606	170	2.81	815	356	4.37	1847	369	2.00	1380	559	4.05	1279	554	4.33
Never worked-unemployed	37	8525	411	0.48	464	128	2.75	762	314	4.12	1160	193	1.66	1129	389	3.45	1425	639	4.49
Students	24	6092	302	0.50	363	110	3.03	1054	508	4.82	1722	393	2.28	1191	497	4.18	0	0	--
Other	2193	8159	432	0.53	576	168	2.91	698	321	4.59	1532	310	2.02	1039	472	4.54	1073	512	4.78
Under 30	527	6943	352	0.51	422	124	2.94	704	315	4.48	1462	287	1.96	1177	397	3.37	765	375	4.91
30 to 45	1767	9780	507	0.52	569	166	2.93	894	435	4.86	2047	419	2.05	1298	517	3.99	1322	599	4.53
45 to 60	1564	9186	473	0.52	624	187	2.99	947	456	4.82	1932	406	2.10	1381	642	4.65	1231	633	5.15
Over 60	1899	7773	426	0.55	581	170	2.93	703	334	4.75	1523	322	2.11	1039	510	4.91	982	486	4.95
North East	318	8894	443	0.50	565	178	3.15	709	311	4.39	1624	344	2.12	1266	462	3.65	958	460	4.81
North West & Merseyside	747	9184	487	0.53	615	174	2.84	768	349	4.55	1890	370	1.96	1167	519	4.45	1053	489	4.65
Yorkshire & Humber	560	8584	452	0.53	610	186	3.05	771	324	4.21	1700	320	1.88	1306	526	4.03	1120	501	4.48
East Midlands	438	9029	464	0.51	599	172	2.88	872	402	4.61	1988	405	2.04	1324	566	4.28	1133	556	4.91
West Midlands	558	9554	505	0.53	597	171	2.86	826	399	4.82	1721	366	2.13	1216	552	4.54	1207	568	4.71
Eastern	638	8501	453	0.53	571	174	3.04	843	430	5.11	1846	382	2.07	1253	568	4.53	910	500	5.49
London	605	7799	425	0.55	544	172	3.17	905	472	5.22	1786	384	2.15	1210	600	4.96	1520	731	4.81
South East	920	8228	433	0.53	576	173	3.01	900	448	4.98	1966	425	2.16	1222	561	4.59	1119	565	5.05
South West	616	8809	458	0.52	562	160	2.84	886	434	4.90	1676	358	2.14	1200	541	4.51	1065	535	5.02
Wales	357	8880	457	0.51	597	159	2.67	727	325	4.46	1578	324	2.05	1146	472	4.12	1090	565	5.19
Men	3652	9450	497	0.53	612	180	2.94	894	430	4.81	1921	399	2.08	1309	585	4.47	1171	584	4.99
Women	2105	7378	386	0.52	531	158	2.97	719	341	4.75	1597	330	2.07	1056	450	4.26	1040	487	4.68
White	5472	8664	457	0.53	577	171	2.96	840	403	4.80	1795	375	2.09	1225	544	4.44	1039	527	5.07
Mixed	37	8066	412	0.51	455	153	3.37	716	341	4.76	1875	367	1.96	866	310	3.58	1565	668	4.27
Asian	127	11977	571	0.48	906	232	2.57	666	281	4.22	2006	375	1.87	1278	617	4.83	2916	1091	3.74
Black	90	7075	346	0.49	516	151	2.93	587	272	4.63	2088	357	1.71	1315	420	3.20	2117	781	3.69
Other	31	6556	350	0.54	438	149	3.40	727	326	4.48	1918	364	1.90	2284	782	3.42	1201	615	5.12
Sample mean (Total)	(5757)	8702	457	0.53	583	172	2.95	833	399	4.79	1805	374	2.07	1229	542	4.41	1129	553	4.90

Appendix F. EFS Quantities, Expenditures & Prices

Meat & Dairy 2003-04	obs	Milk			Butter			Cheese			Other Dairy			Beef			Lamb		
		q	x	p	q	x	p	q	x	p	q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3537	6623	359	0.54	536	159	2.96	732	355	4.85	1584	336	2.12	1054	516	4.90	984	555	5.64
Single parents	408	8818	470	0.53	508	146	2.88	670	301	4.49	1626	319	1.96	1175	423	3.60	1439	539	3.75
Children, 2 adults	1325	12642	679	0.54	642	189	2.94	1052	513	4.88	2518	517	2.05	1429	606	4.24	1510	727	4.81
Children, >2 adults	237	15300	784	0.51	729	198	2.72	1254	563	4.49	2958	535	1.81	1808	804	4.45	1469	648	4.41
>2 adults, no children	376	11556	601	0.52	653	192	2.94	1118	529	4.74	2323	466	2.01	1566	739	4.72	1141	622	5.46
High managerial	683	9194	499	0.54	620	189	3.05	1054	572	5.42	2370	501	2.12	1340	720	5.38	1101	667	6.05
Low managerial	1991	9000	486	0.54	562	166	2.95	955	466	4.88	2125	441	2.07	1268	601	4.74	1211	638	5.27
Workers-technical	1609	9701	499	0.52	608	170	2.80	843	372	4.41	1920	382	1.99	1328	523	3.94	1222	568	4.65
Never worked-unemployed	116	10965	551	0.50	647	183	2.83	825	332	4.02	2011	375	1.87	1134	401	3.53	3971	1430	3.60
Students	68	6442	324	0.50	409	123	3.01	710	346	4.88	1461	267	1.83	951	327	3.44	1220	517	4.24
Other	1416	7393	416	0.56	550	163	2.96	631	300	4.76	1535	321	2.09	1026	504	4.92	933	518	5.55
Under 30	571	7218	401	0.56	461	127	2.76	733	332	4.52	1655	328	1.98	996	378	3.80	1007	503	5.00
30 to 45	1818	10070	530	0.53	573	169	2.94	929	452	4.86	2175	449	2.07	1336	555	4.15	1487	666	4.48
45 to 60	1591	9358	489	0.52	605	177	2.93	999	478	4.79	2173	439	2.02	1361	662	4.86	1101	629	5.71
Over 60	1903	7694	428	0.56	569	168	2.95	700	338	4.84	1623	342	2.11	1073	528	4.92	1004	550	5.48
North East	312	8608	451	0.52	525	173	3.30	687	313	4.55	1889	351	1.86	1187	458	3.85	827	423	5.11
North West & Merseyside	743	8844	489	0.55	559	161	2.88	821	374	4.56	1852	373	2.01	1292	557	4.31	958	549	5.73
Yorkshire & Humber	596	8658	457	0.53	565	161	2.85	794	355	4.47	1869	377	2.02	1130	485	4.29	1212	493	4.07
East Midlands	497	9178	487	0.53	645	184	2.85	877	391	4.46	1978	397	2.01	1197	515	4.30	932	503	5.39
West Midlands	571	9083	471	0.52	599	165	2.75	874	421	4.82	1840	376	2.05	1333	610	4.58	1355	639	4.71
Eastern	605	8951	471	0.53	549	162	2.95	939	465	4.95	2207	457	2.07	1203	566	4.70	1095	594	5.43
London	639	7802	416	0.53	626	194	3.10	812	423	5.21	1911	414	2.17	1166	562	4.82	1739	836	4.81
South East	898	8968	491	0.55	591	174	2.94	881	454	5.15	2141	445	2.08	1220	614	5.03	991	601	6.07
South West	652	9154	496	0.54	531	152	2.86	957	463	4.84	1989	418	2.10	1248	618	4.95	1131	608	5.37
Wales	370	9113	494	0.54	561	174	3.09	876	398	4.54	1844	376	2.04	1396	589	4.22	1103	621	5.63
Men	3712	9452	504	0.53	613	179	2.92	922	443	4.81	2113	431	2.04	1310	604	4.61	1247	639	5.13
Women	2171	7758	420	0.54	503	150	2.98	750	360	4.80	1713	358	2.09	1088	485	4.46	991	531	5.35
White	5521	8794	473	0.54	568	168	2.95	869	419	4.82	1980	408	2.06	1237	569	4.60	1010	564	5.58
Mixed	36	7074	340	0.48	663	207	3.13	756	370	4.89	2090	477	2.28	758	335	4.41	959	457	4.76
Asian	157	12336	608	0.49	855	221	2.59	763	308	4.04	1910	341	1.79	1161	518	4.46	3769	1300	3.45
Black	145	7206	382	0.53	485	148	3.06	594	276	4.65	1609	305	1.90	1261	409	3.24	2499	932	3.73
Other	24	6584	344	0.52	494	180	3.63	940	489	5.20	1755	416	2.37	1613	583	3.62	1141	416	3.65
Sample mean (Total)	(5883)	8834	473	0.54	576	169	2.94	862	414	4.81	1970	405	2.05	1235	564	4.57	1158	602	5.19

Appendix F. EFS Quantities, Expenditures & Prices

Meat & Dairy 2004-05	obs	Milk			Butter			Cheese			Other Dairy			Beef			Lamb		
		q	x	p	q	x	p	q	x	p	q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3406	6642	365	0.55	531	164	3.09	714	366	5.13	1457	348	2.39	1103	566	5.13	929	522	5.62
Single parents	381	8572	452	0.53	483	151	3.12	709	339	4.78	1315	304	2.31	1157	452	3.91	1074	502	4.67
Children, 2 adults	1247	12282	684	0.56	651	195	2.99	1024	526	5.13	2081	478	2.30	1463	657	4.49	1380	691	5.01
Children, >2 adults	219	15756	815	0.52	652	181	2.77	1154	556	4.82	2043	464	2.27	2108	858	4.07	3081	1089	3.53
>2 adults, no children	421	10996	585	0.53	689	205	2.98	1040	501	4.82	2017	435	2.16	1591	789	4.96	1209	664	5.49
High managerial	654	9344	538	0.58	559	183	3.28	1000	561	5.61	1930	468	2.42	1335	730	5.47	1196	593	4.96
Low managerial	1745	8970	485	0.54	592	181	3.05	924	477	5.16	1767	414	2.34	1336	660	4.94	1290	650	5.04
Workers-technical	1144	9439	500	0.53	579	165	2.84	819	391	4.77	1765	392	2.22	1412	598	4.24	1176	582	4.95
Never worked-unemployed	113	9032	471	0.52	528	173	3.27	674	325	4.82	1346	283	2.10	1340	506	3.78	2515	880	3.50
Students	48	5868	342	0.58	442	135	3.06	762	413	5.42	1088	246	2.26	631	313	4.96	966	506	5.24
Other	1970	7987	441	0.55	567	171	3.02	703	339	4.83	1471	346	2.35	1154	554	4.81	998	557	5.58
Under 30	473	6841	381	0.56	500	145	2.91	696	352	5.07	1361	305	2.24	1067	460	4.31	948	499	5.27
30 to 45	1714	9988	543	0.54	562	172	3.06	886	456	5.14	1743	403	2.31	1351	593	4.39	1556	677	4.35
45 to 60	1610	9394	502	0.53	602	183	3.04	952	481	5.05	1867	431	2.31	1439	695	4.83	1174	618	5.27
Over 60	1877	7512	421	0.56	566	172	3.05	704	349	4.95	1530	366	2.39	1132	594	5.25	955	548	5.74
North East	255	8978	507	0.57	639	193	3.02	875	410	4.69	1646	362	2.20	1360	602	4.43	765	472	6.17
North West & Merseyside	721	9586	521	0.54	555	171	3.09	786	380	4.84	1763	399	2.26	1400	660	4.72	1153	575	4.99
Yorkshire & Humber	567	8591	466	0.54	565	176	3.11	796	383	4.81	1587	354	2.23	1242	600	4.83	979	505	5.16
East Midlands	473	9797	522	0.53	511	157	3.08	909	439	4.83	1815	403	2.22	1212	574	4.73	954	497	5.21
West Midlands	541	8744	474	0.54	595	166	2.80	797	392	4.91	1665	376	2.26	1365	582	4.26	1097	563	5.13
Eastern	633	8582	478	0.56	565	172	3.05	862	449	5.21	1861	431	2.32	1234	605	4.90	1016	584	5.74
London	631	7909	442	0.56	511	172	3.36	744	415	5.58	1510	375	2.48	1302	656	5.04	1605	853	5.31
South East	887	8231	450	0.55	594	184	3.09	888	476	5.37	1649	408	2.47	1244	607	4.88	1311	605	4.61
South West	618	8396	453	0.54	569	164	2.89	948	474	5.00	1694	393	2.32	1289	646	5.01	964	586	6.08
Wales	348	9390	509	0.54	702	201	2.86	704	336	4.77	1613	381	2.36	1261	582	4.61	1326	576	4.34
Men	3575	9498	518	0.55	588	178	3.02	889	450	5.06	1833	424	2.32	1376	667	4.85	1220	627	5.14
Women	2099	7448	408	0.55	548	169	3.08	739	375	5.07	1430	336	2.35	1118	511	4.57	1043	540	5.18
White	5338	8644	475	0.55	569	174	3.06	847	429	5.07	1689	394	2.33	1281	616	4.81	1016	553	5.44
Mixed	28	8882	439	0.50	393	137	3.48	536	246	4.59	1757	367	2.09	1320	533	4.04	7104	2119	2.98
Asian	154	14373	715	0.50	835	219	2.63	636	303	4.77	1885	394	2.09	1752	754	4.31	3621	1417	3.92
Black	117	6672	338	0.51	497	133	2.67	476	232	4.87	1339	336	2.51	1562	457	2.92	2248	844	3.75
Other	37	5931	305	0.52	284	89	3.13	822	410	4.99	1324	320	2.41	1101	623	5.66	2834	1322	4.67
Sample mean (Total)	(5674)	8747	478	0.55	574	175	3.04	837	423	5.06	1687	392	2.33	1289	615	4.77	1161	598	5.15

Meat & Dairy 2005-06	obs	Milk			Butter			Cheese			Other Dairy			Beef			Lamb		
		q	x	p	q	x	p	q	x	p	q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3502	6559	376	0.57	550	171	3.10	725	370	5.11	1500	344	2.29	1034	533	5.15	980	570	5.81
Single parents	400	7769	431	0.56	530	144	2.73	746	369	4.94	1466	325	2.22	1026	407	3.97	927	458	4.94
Children, 2 adults	1195	12714	732	0.58	664	203	3.06	1079	549	5.09	2139	495	2.31	1503	687	4.57	1905	897	4.71
Children, >2 adults	188	15904	894	0.56	817	247	3.03	1094	521	4.77	2341	521	2.23	2104	933	4.43	1646	856	5.20
>2 adults, no children	406	11218	628	0.56	703	210	2.99	1171	576	4.92	2062	457	2.22	1510	760	5.03	1274	697	5.47
High managerial	610	9581	575	0.60	625	194	3.11	1014	572	5.64	1940	461	2.38	1330	725	5.45	1377	890	6.46
Low managerial	1689	8803	502	0.57	610	192	3.15	969	499	5.15	1886	441	2.34	1322	677	5.12	1212	672	5.54
Workers-technical	1121	9163	502	0.55	636	182	2.87	820	394	4.81	1753	384	2.19	1279	554	4.34	1228	597	4.86
Never worked-unemployed	119	11279	629	0.56	479	139	2.90	1171	515	4.40	1578	316	2.00	1446	529	3.66	2686	1483	5.52
Students	76	7197	375	0.52	454	145	3.20	700	343	4.90	1185	239	2.01	1131	476	4.21	1812	888	4.90
Other	2076	7829	454	0.58	573	175	3.05	714	348	4.88	1539	349	2.27	1093	523	4.78	1125	566	5.03
Under 30	494	7179	412	0.57	461	138	2.99	831	395	4.76	1512	321	2.13	1048	414	3.95	1461	804	5.51
30 to 45	1678	9852	559	0.57	615	189	3.07	933	475	5.09	1863	432	2.32	1362	602	4.42	1282	686	5.35
45 to 60	1548	9157	511	0.56	620	190	3.06	934	480	5.14	1857	422	2.27	1349	695	5.15	1318	744	5.64
Over 60	1971	7546	443	0.59	587	179	3.06	731	366	5.00	1574	361	2.29	1064	554	5.21	1115	568	5.10
North East	280	9516	560	0.59	497	160	3.22	732	331	4.53	1573	351	2.23	1220	499	4.09	906	497	5.49
North West & Merseyside	722	9201	525	0.57	571	170	2.97	761	380	4.99	1817	397	2.19	1220	574	4.70	1171	627	5.35
Yorkshire & Humber	582	9208	518	0.56	586	185	3.16	801	383	4.78	1665	376	2.26	1232	584	4.74	973	565	5.81
East Midlands	508	9183	527	0.57	606	180	2.96	891	433	4.86	1686	376	2.23	1233	612	4.96	948	575	6.07
West Midlands	538	8339	473	0.57	606	180	2.97	788	396	5.03	1665	379	2.28	1096	535	4.88	1319	654	4.96
Eastern	577	8720	494	0.57	581	186	3.20	1000	498	4.98	1883	426	2.26	1350	667	4.94	1090	667	6.12
London	601	7691	439	0.57	610	195	3.20	810	464	5.73	1754	424	2.42	1299	644	4.96	2103	965	4.59
South East	937	8074	476	0.59	629	196	3.11	894	473	5.30	1724	409	2.37	1239	624	5.04	1238	680	5.49
South West	614	8425	476	0.57	617	179	2.90	958	487	5.08	1828	410	2.24	1245	621	4.99	908	520	5.73
Wales	332	8870	482	0.54	616	175	2.83	861	397	4.60	1593	363	2.28	1190	564	4.74	946	533	5.63
Men	3479	9339	529	0.57	629	191	3.03	923	467	5.06	1885	429	2.27	1315	655	4.98	1352	697	5.15
Women	2212	7505	435	0.58	541	169	3.12	753	380	5.05	1499	346	2.31	1089	495	4.55	1008	589	5.85
White	5282	8483	486	0.57	589	181	3.08	871	442	5.07	1737	399	2.30	1219	598	4.91	1023	594	5.81
Mixed	41	6938	444	0.64	850	309	3.64	779	392	5.03	1690	395	2.34	1962	626	3.19	1100	556	5.05
Asian	213	13388	730	0.55	829	230	2.77	637	288	4.52	1754	362	2.07	1591	682	4.29	3339	1309	3.92
Black	104	7462	420	0.56	486	139	2.86	545	256	4.70	1578	353	2.24	1546	552	3.57	3755	1488	3.96
Other	51	7491	387	0.52	442	142	3.22	798	386	4.83	2104	403	1.91	1280	573	4.48	1869	911	4.88
Sample mean (Total)	(5691)	8636	493	0.57	598	183	3.06	859	434	5.06	1738	397	2.28	1235	598	4.85	1230	659	5.36

F.3 Miscellaneous

Miscellaneous 2001-02	obs	Eggs			Fats			Sugar			Potatoes			Cereals		
		q	x	p	q	x	p	q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3699	12	127	10.95	988	159	1.61	1429	97	0.68	3489	212	0.61	2593	199	0.77
Single parents	452	13	118	9.04	1190	140	1.17	1513	96	0.63	4268	211	0.49	3316	217	0.65
Children, 2 adults	1474	14	147	10.31	1297	179	1.38	1517	97	0.64	5038	269	0.53	4298	294	0.68
Children, >2 adults	260	18	173	9.37	2294	273	1.19	2004	126	0.63	6636	348	0.53	6138	373	0.61
>2 adults, no children	435	17	167	9.72	1472	212	1.44	1757	110	0.63	5352	307	0.57	4847	344	0.71
High managerial	687	13	166	13.01	979	168	1.72	1310	111	0.84	3670	255	0.69	3182	242	0.76
Low managerial	1834	13	148	11.18	1155	176	1.53	1456	98	0.68	4153	255	0.62	3358	249	0.74
Workers-technical	1333	14	124	8.96	1343	181	1.35	1496	91	0.61	5011	249	0.50	3885	259	0.67
Never worked-unemployed	83	15	122	8.26	2059	190	0.92	1667	102	0.61	6058	250	0.41	4210	222	0.53
Students	29	13	118	9.29	997	156	1.57	1143	77	0.68	2353	178	0.76	3004	223	0.74
Other	2354	13	129	10.05	1140	167	1.47	1607	103	0.64	3965	221	0.56	3117	226	0.73
Under 30	617	12	114	9.57	1187	136	1.15	1433	86	0.60	3415	199	0.58	2749	194	0.70
30 to 45	1991	14	135	9.77	1217	165	1.36	1428	93	0.65	4375	242	0.55	3694	252	0.68
45 to 60	1751	14	153	10.81	1318	194	1.47	1566	102	0.65	4814	272	0.57	3726	266	0.71
Over 60	1961	12	131	10.95	1042	171	1.65	1580	106	0.67	3747	221	0.59	2923	224	0.77
North East	314	15	137	9.06	1017	151	1.48	1584	97	0.61	4344	214	0.49	3492	252	0.72
North West & Merseyside	852	13	123	9.68	1326	174	1.31	1424	87	0.61	4164	231	0.55	3407	268	0.79
Yorkshire & Humber	600	13	122	9.39	1037	150	1.44	1632	99	0.61	4040	212	0.53	3202	230	0.72
East Midlands	535	13	131	10.20	1188	176	1.48	1570	97	0.62	4181	235	0.56	3561	246	0.69
West Midlands	645	13	134	10.31	1254	176	1.41	1802	102	0.57	4466	239	0.54	3904	264	0.68
Eastern	640	13	130	10.29	1161	180	1.55	1475	103	0.70	4181	251	0.60	3480	242	0.70
London	678	14	161	11.27	1375	189	1.38	1373	104	0.76	3729	255	0.69	3104	225	0.73
South East	1035	13	147	11.34	1074	170	1.59	1505	103	0.69	4086	258	0.63	3067	215	0.70
South West	666	13	148	11.11	1113	174	1.57	1434	102	0.71	4476	230	0.52	3205	224	0.70
Wales	355	13	128	10.05	1296	185	1.43	1465	102	0.70	5161	269	0.52	3703	274	0.74
Men	4017	14	143	10.49	1250	184	1.47	1564	102	0.65	4546	257	0.57	3635	260	0.72
Women	2303	12	126	10.25	1068	153	1.43	1431	94	0.66	3648	211	0.58	2899	207	0.72
White	5982	13	135	10.51	1110	169	1.52	1499	98	0.66	4263	242	0.57	3318	240	0.73
Mixed	39	13	146	10.98	1300	168	1.30	1143	82	0.72	3582	220	0.62	3081	204	0.66
Asian	127	22	202	9.23	3850	332	0.86	2182	134	0.61	3768	207	0.55	6260	355	0.57
Black	122	18	152	8.30	2159	226	1.05	1752	121	0.69	3655	210	0.58	3159	192	0.61
Other	50	14	155	10.99	1150	196	1.71	1748	113	0.65	2592	174	0.67	3025	198	0.65
Sample mean (Total)	(6320)	13	137	10.41	1189	173	1.46	1520	99	0.66	4231	241	0.57	3372	241	0.72

Miscellaneous 2002-03	obs	Eggs			Fats			Sugar			Potatoes			Cereals		
		q	x	p	q	x	p	q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3487	11	126	11.20	1007	168	1.67	1476	103	0.70	3476	188	0.54	2642	209	0.79
Single parents	411	12	109	8.97	1094	138	1.26	1501	99	0.66	3865	173	0.45	3105	216	0.70
Children, 2 adults	1274	14	145	10.18	1272	181	1.42	1457	103	0.71	4770	233	0.49	4187	300	0.72
Children, >2 adults	190	19	200	10.47	1968	228	1.16	2102	137	0.65	6173	294	0.48	6548	450	0.69
>2 adults, no children	395	16	164	10.15	1458	224	1.54	1709	117	0.68	5360	281	0.52	5021	377	0.75
High managerial	625	13	157	12.47	1049	186	1.77	1320	111	0.84	3513	224	0.64	3161	261	0.82
Low managerial	1675	12	139	11.46	1097	173	1.58	1400	104	0.74	3918	222	0.57	3333	257	0.77
Workers-technical	1188	14	129	9.21	1274	182	1.43	1498	95	0.63	4961	217	0.44	3958	273	0.69
Never worked-unemployed	39	17	169	9.67	1906	177	0.93	2115	135	0.64	3061	149	0.49	3028	198	0.65
Students	23	13	134	10.02	933	132	1.42	500	87	1.74	3491	180	0.51	4282	338	0.79
Other	2207	12	129	10.35	1139	174	1.53	1654	111	0.67	3868	192	0.50	3033	231	0.76
Under 30	524	11	112	9.78	968	133	1.38	1289	86	0.67	3299	166	0.51	2737	198	0.72
30 to 45	1749	13	130	10.04	1238	170	1.37	1527	103	0.67	4167	210	0.50	3681	265	0.72
45 to 60	1575	14	156	11.12	1203	188	1.56	1559	112	0.72	4555	236	0.52	3683	278	0.75
Over 60	1909	12	128	10.92	1082	182	1.68	1550	106	0.69	3729	197	0.53	2883	229	0.80
North East	318	14	122	9.05	1229	169	1.38	1624	112	0.69	4190	194	0.46	3314	241	0.73
North West & Merseyside	747	12	123	9.96	1102	171	1.55	1403	92	0.66	4191	203	0.48	3283	275	0.84
Yorkshire & Humber	560	13	127	9.70	1105	154	1.39	1478	97	0.66	4317	191	0.44	3439	253	0.74
East Midlands	438	14	139	10.17	1169	190	1.63	1610	115	0.71	4191	199	0.47	3421	244	0.71
West Midlands	558	13	129	10.00	1233	181	1.47	1587	101	0.64	4283	204	0.48	3967	285	0.72
Eastern	638	12	137	11.44	1009	177	1.75	1513	104	0.69	3874	222	0.57	3100	231	0.75
London	605	14	163	11.82	1398	189	1.35	1654	119	0.72	3689	231	0.63	3228	240	0.74
South East	920	12	141	11.70	1110	180	1.62	1450	109	0.75	3932	220	0.56	3154	237	0.75
South West	616	13	138	10.94	1146	184	1.60	1556	114	0.73	3777	203	0.54	3139	239	0.76
Wales	357	13	122	9.70	1137	165	1.45	1552	99	0.64	4543	214	0.47	3571	263	0.74
Men	3665	13	140	10.68	1194	183	1.53	1558	107	0.69	4335	224	0.52	3579	267	0.75
Women	2092	12	126	10.52	1071	162	1.52	1468	103	0.70	3547	181	0.51	2891	222	0.77
White	5475	12	133	10.73	1093	173	1.59	1495	103	0.69	4085	211	0.52	3243	248	0.77
Mixed	32	14	122	8.83	1503	157	1.04	1260	97	0.77	3231	172	0.53	3014	210	0.70
Asian	130	22	206	9.44	3008	285	0.95	2226	140	0.63	3388	169	0.50	6748	381	0.56
Black	90	17	160	9.22	1898	210	1.11	2474	185	0.75	3567	174	0.49	4115	249	0.61
Other	30	20	192	9.54	2300	195	0.85	1292	90	0.70	3900	131	0.34	3786	230	0.61
Sample mean (Total)	(5757)	13	135	10.63	1154	176	1.53	1528	106	0.69	4061	209	0.52	3333	251	0.75

Miscellaneous 2003-04	obs	Eggs			Fats			Sugar			Potatoes			Cereals		
		q	x	p	q	x	p	q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3513	11	134	11.91	1030	172	1.67	1397	108	0.77	3516	202	0.58	2543	215	0.85
Single parents	413	12	119	10.29	1162	145	1.25	1415	107	0.76	3465	167	0.48	3142	232	0.74
Children, 2 adults	1332	14	157	11.02	1258	184	1.47	1449	109	0.75	4444	246	0.55	4046	316	0.78
Children, >2 adults	241	18	174	9.70	1793	226	1.26	1655	118	0.71	5930	293	0.50	5582	416	0.74
>2 adults, no children	384	16	184	11.26	1367	206	1.51	1664	119	0.72	5082	268	0.53	4357	342	0.79
High managerial	686	12	159	12.99	1003	180	1.79	1372	118	0.86	3640	236	0.65	3193	266	0.83
Low managerial	1980	13	153	11.79	1141	181	1.59	1397	112	0.80	3740	223	0.60	3112	256	0.82
Workers-technical	1612	13	136	10.11	1270	172	1.35	1517	106	0.70	4740	225	0.48	3695	280	0.76
Never worked-unemployed	117	16	139	8.85	1801	214	1.19	1666	118	0.71	4029	193	0.48	4216	284	0.67
Students	68	17	179	10.40	1040	121	1.16	1403	95	0.68	3039	197	0.65	2740	208	0.76
Other	1420	11	133	11.76	1077	182	1.69	1424	109	0.77	3590	204	0.57	2650	228	0.86
Under 30	553	11	126	11.58	957	137	1.43	1338	96	0.72	2975	173	0.58	2647	203	0.77
30 to 45	1819	13	145	10.93	1208	170	1.41	1391	104	0.75	3928	216	0.55	3504	274	0.78
45 to 60	1600	14	156	11.31	1239	189	1.52	1531	116	0.76	4459	244	0.55	3558	285	0.80
Over 60	1911	12	139	11.82	1099	187	1.70	1455	113	0.78	3785	213	0.56	2745	234	0.85
North East	313	13	127	9.66	1091	166	1.52	1568	101	0.65	3751	193	0.52	3118	245	0.79
North West & Merseyside	743	12	135	11.23	1155	180	1.56	1462	105	0.72	3887	207	0.53	3282	291	0.89
Yorkshire & Humber	596	13	136	10.53	1085	160	1.48	1441	100	0.69	3862	194	0.50	3065	241	0.79
East Midlands	497	13	140	10.99	1203	169	1.41	1464	107	0.73	4146	219	0.53	3138	247	0.79
West Midlands	571	12	139	11.25	1158	174	1.51	1594	117	0.74	4807	253	0.53	3545	286	0.81
Eastern	605	12	144	11.60	1188	182	1.53	1591	126	0.80	3901	224	0.57	3177	254	0.80
London	639	14	169	11.96	1307	188	1.44	1254	106	0.85	3432	228	0.66	2885	235	0.82
South East	898	12	149	12.08	1121	186	1.66	1395	110	0.79	3616	227	0.63	3119	249	0.80
South West	652	13	152	11.95	1100	181	1.64	1313	108	0.82	3874	209	0.54	3224	247	0.77
Wales	369	13	138	10.61	1278	190	1.49	1508	116	0.77	4962	237	0.48	3471	274	0.79
Men	3713	13	150	11.38	1194	186	1.56	1485	113	0.76	4273	235	0.55	3429	275	0.80
Women	2170	12	134	11.32	1105	164	1.48	1374	104	0.76	3401	192	0.57	2778	227	0.82
White	5530	12	142	11.48	1106	176	1.59	1430	108	0.76	3973	221	0.56	3160	258	0.82
Mixed	34	12	130	11.11	1224	147	1.20	1762	118	0.67	3917	198	0.51	2762	226	0.82
Asian	154	20	198	9.87	2477	239	0.96	1888	131	0.70	4171	197	0.47	5002	320	0.64
Black	142	17	168	9.85	2012	223	1.11	1568	142	0.91	3142	161	0.51	2745	191	0.70
Other	23	16	204	12.44	2169	250	1.16	1477	106	0.71	4467	281	0.63	3031	212	0.70
Sample mean (Total)	(5883)	13	145	11.36	1163	179	1.54	1448	110	0.76	3964	220	0.55	3195	257	0.81

Appendix F. EFS Quantities, Expenditures & Prices

Miscellaneous 2004-05	obs	Eggs			Fats			Sugar			Potatoes			Cereals		
		q	*x*	*p*	*q*	*x*	*p*	*q*	*x*	*p*	*q*	*x*	*p*	*q*	*x*	*p*
1 or 2 Adults only	3378	11	142	12.58	958	174	1.81	1402	115	0.82	3197	209	0.66	2460	224	0.91
Single parents	387	12	134	11.14	1168	166	1.42	1312	113	0.86	3472	201	0.58	2801	248	0.89
Children, 2 adults	1263	14	168	11.89	1293	199	1.54	1534	126	0.82	4463	255	0.57	3923	325	0.83
Children, >2 adults	219	19	211	10.87	1861	254	1.36	2016	155	0.77	5594	309	0.55	4963	406	0.82
>2 adults, no children	427	16	184	11.64	1489	231	1.55	1561	122	0.78	5887	330	0.56	4214	356	0.85
High managerial	651	12	174	14.12	1005	177	1.77	1360	120	0.88	3380	237	0.70	2912	267	0.92
Low managerial	1740	13	161	12.57	1133	192	1.70	1451	120	0.83	3942	245	0.62	3112	270	0.87
Workers-technical	1139	13	143	10.86	1311	196	1.50	1469	111	0.76	4631	253	0.55	3539	296	0.84
Never worked-unemployed	111	19	175	9.48	1426	153	1.08	2023	158	0.78	3974	209	0.53	3770	288	0.77
Students	51	16	199	12.81	1685	196	1.16	1182	99	0.84	2458	187	0.76	2252	196	0.87
Other	1982	12	146	11.88	1055	185	1.75	1499	123	0.82	3492	214	0.61	2780	248	0.89
Under 30	475	11	130	11.67	1039	161	1.55	1287	107	0.83	2951	183	0.62	2414	217	0.90
30 to 45	1697	13	159	11.87	1218	184	1.51	1440	115	0.80	3977	230	0.58	3260	278	0.85
45 to 60	1625	13	162	12.13	1184	195	1.65	1554	126	0.81	4326	263	0.61	3421	293	0.86
Over 60	1877	12	149	12.36	1060	190	1.80	1475	121	0.82	3490	222	0.64	2747	248	0.90
North East	255	13	144	10.96	1080	177	1.64	1548	125	0.81	3683	224	0.61	2831	241	0.85
North West & Merseyside	721	13	146	11.37	1152	189	1.64	1555	125	0.81	3732	229	0.61	3411	299	0.88
Yorkshire & Humber	567	13	152	11.37	1093	179	1.64	1533	121	0.79	3694	217	0.59	2928	265	0.91
East Midlands	473	12	141	11.54	1092	184	1.69	1387	107	0.77	4125	236	0.57	3170	270	0.85
West Midlands	541	13	148	11.39	1243	189	1.52	1575	121	0.77	4235	232	0.55	3399	289	0.85
Eastern	633	13	163	12.53	1194	192	1.61	1298	107	0.82	4129	247	0.60	3027	259	0.86
London	631	14	179	12.77	1294	205	1.59	1522	132	0.87	3509	234	0.67	2619	237	0.91
South East	887	12	158	13.26	1130	192	1.70	1439	123	0.85	3568	238	0.67	3015	263	0.87
South West	618	12	147	12.31	989	179	1.81	1400	116	0.83	3934	232	0.59	2789	242	0.87
Wales	348	13	153	12.10	1124	185	1.65	1611	127	0.79	4077	250	0.61	3558	306	0.86
Men	3585	13	160	12.19	1205	198	1.64	1488	120	0.80	4152	249	0.60	3335	287	0.86
Women	2089	12	145	11.89	1021	170	1.66	1456	122	0.84	3306	207	0.63	2591	233	0.90
White	5334	12	152	12.20	1062	183	1.72	1442	117	0.81	3890	236	0.61	2988	265	0.89
Mixed	30	27	252	9.21	1698	218	1.28	2656	200	0.75	2926	159	0.55	3681	306	0.83
Asian	155	19	219	11.66	3664	359	0.98	2196	187	0.85	3464	207	0.60	6057	391	0.65
Black	120	16	166	10.62	1470	199	1.35	1452	123	0.85	2388	167	0.70	2586	206	0.80
Other	35	17	208	11.96	1100	164	1.49	1250	84	0.67	3051	180	0.59	2483	175	0.71
Sample mean (Total)	(5674)	13	155	12.09	1142	188	1.65	1478	120	0.81	3849	234	0.61	3067	267	0.87

Miscellaneous 2005-06	obs	Eggs			Fats			Sugar			Potatoes			Cereals		
	obs	*q*	*x*	*p*	*q*	*x*	*p*	*q*	*x*	*p*	*q*	*x*	*p*	*q*	*x*	*p*
1 or 2 Adults only	3473	11	144	12.83	972	177	1.82	1360	118	0.87	3289	204	0.62	2450	232	0.95
Single parents	403	12	135	11.08	982	138	1.41	1438	116	0.81	3825	201	0.53	2838	247	0.87
Children, 2 adults	1209	15	182	12.00	1335	191	1.43	1519	125	0.83	4588	259	0.57	3955	355	0.90
Children, >2 adults	191	20	218	11.16	2045	252	1.23	1979	160	0.81	5534	319	0.58	5901	482	0.82
>2 adults, no children	415	17	190	11.42	1485	242	1.63	1459	122	0.83	5366	296	0.55	4453	401	0.90
High managerial	602	12	168	13.83	1045	179	1.71	1262	114	0.90	3485	232	0.67	2855	285	1.00
Low managerial	1678	13	171	13.09	1083	184	1.69	1370	120	0.87	3823	235	0.61	3105	291	0.94
Workers-technical	1137	14	154	11.04	1270	190	1.49	1601	131	0.82	4266	233	0.55	3436	308	0.90
Never worked-unemployed	118	18	175	9.65	1830	194	1.06	1764	140	0.79	5921	303	0.51	4962	345	0.70
Students	80	19	199	10.46	1160	142	1.23	1688	150	0.89	3077	164	0.53	3169	244	0.77
Other	2076	12	148	12.09	1101	189	1.72	1419	119	0.84	3765	218	0.58	2825	258	0.91
Under 30	492	12	136	11.50	1048	143	1.36	1378	118	0.86	3384	195	0.58	2678	238	0.89
30 to 45	1662	14	165	11.91	1227	178	1.45	1483	123	0.83	4127	229	0.55	3267	297	0.91
45 to 60	1558	14	169	12.40	1233	198	1.61	1463	122	0.84	3996	244	0.61	3519	316	0.90
Over 60	1979	12	152	12.57	1032	193	1.88	1405	122	0.87	3679	221	0.60	2685	253	0.94
North East	280	13	137	10.39	1114	168	1.51	1288	110	0.86	3825	208	0.55	2850	263	0.93
North West & Merseyside	722	12	147	11.86	1227	191	1.56	1491	122	0.82	3646	213	0.58	3388	307	0.91
Yorkshire & Humber	582	12	143	11.50	1083	172	1.59	1393	113	0.81	3540	211	0.60	2849	261	0.92
East Midlands	508	14	161	11.50	1259	206	1.64	1584	130	0.82	4281	240	0.56	3174	295	0.93
West Midlands	538	13	152	11.91	1044	172	1.65	1524	124	0.81	4089	231	0.56	3341	310	0.93
Eastern	577	13	162	12.11	1026	178	1.73	1378	124	0.90	4044	235	0.58	3143	289	0.92
London	601	15	187	12.85	1371	207	1.51	1476	125	0.85	3875	237	0.61	3036	271	0.89
South East	937	12	169	13.66	1113	194	1.75	1392	123	0.88	3582	236	0.66	2924	271	0.93
South West	614	13	163	12.41	1089	179	1.64	1422	126	0.88	3986	229	0.58	2971	266	0.89
Wales	332	12	143	12.20	1119	183	1.64	1364	111	0.81	4386	234	0.53	3129	285	0.91
Men	3499	14	168	12.27	1206	198	1.64	1483	125	0.84	4160	246	0.59	3351	307	0.92
Women	2192	12	145	12.18	1035	166	1.61	1366	116	0.85	3394	199	0.59	2652	242	0.91
White	5290	12	155	12.50	1048	181	1.73	1397	118	0.85	3902	230	0.59	2967	278	0.94
Mixed	39	20	209	10.63	1643	250	1.52	1558	132	0.85	3387	195	0.58	2840	280	0.99
Asian	201	23	231	9.99	3243	315	0.97	2155	179	0.83	3367	195	0.58	6266	423	0.68
Black	109	16	190	11.69	1662	196	1.18	1915	150	0.78	3669	173	0.47	3120	252	0.81
Other	52	18	177	9.81	2059	187	0.91	1250	129	1.03	3176	178	0.56	2714	214	0.79
Sample mean (Total)	(5691)	13	159	12.24	1144	186	1.63	1442	122	0.85	3875	228	0.59	3085	282	0.91

F.4   Fruit & Vegetables

Fruit & Vegetables 2001-02	obs	Peas & Beans			Turnips & Swede			Other Vegetables			Tree Fruit			Soft Fruit		
		q	x	p	q	x	p	q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3708	1249	144	1.16	792	57	0.72	3163	520	1.64	1754	252	1.44	1235	246	1.99
Single parents	445	1512	109	0.72	820	51	0.63	2651	412	1.56	1684	224	1.33	1214	220	1.81
Children, 2 adults	1459	1868	171	0.92	886	58	0.66	4325	733	1.69	2215	305	1.38	1314	257	1.96
Children, >2 adults	265	2398	212	0.89	1201	68	0.57	5394	797	1.48	2866	379	1.32	1440	316	2.19
>2 adults, no children	443	1857	192	1.03	976	67	0.69	4973	763	1.53	2341	319	1.36	1361	250	1.83
High managerial	688	1478	195	1.32	793	54	0.68	4683	907	1.94	2329	365	1.57	1359	313	2.31
Low managerial	1842	1510	164	1.09	812	59	0.72	4061	714	1.76	2054	300	1.46	1389	264	1.90
Workers-technical	1331	1740	147	0.85	1029	60	0.58	3400	498	1.46	1846	234	1.27	1137	196	1.73
Never worked-unemployed	80	2041	151	0.74	736	65	0.89	2990	397	1.33	1759	218	1.24	1006	178	1.77
Students	26	1543	141	0.91	561	35	0.62	2901	657	2.27	2018	315	1.56	1045	210	2.01
Other	2353	1421	144	1.02	802	59	0.74	3121	457	1.46	1829	246	1.35	1186	234	1.98
Under 30	578	1415	112	0.79	708	48	0.68	2719	482	1.77	1573	217	1.38	1135	219	1.93
30 to 45	1984	1683	155	0.92	885	61	0.68	3574	629	1.76	1957	276	1.41	1277	254	1.99
45 to 60	1763	1702	179	1.05	887	61	0.68	4337	706	1.63	2186	306	1.40	1340	263	1.96
Over 60	1995	1235	148	1.20	820	57	0.69	3311	486	1.47	1859	259	1.39	1237	243	1.97
North East	314	1524	129	0.85	1098	66	0.60	3222	463	1.44	1739	218	1.25	1059	184	1.74
North West & Merseyside	852	1490	131	0.88	721	52	0.72	3361	515	1.53	1815	244	1.34	1216	227	1.87
Yorkshire & Humber	600	1516	128	0.85	957	51	0.53	3271	488	1.49	1695	221	1.30	1177	192	1.64
East Midlands	535	1591	154	0.97	883	53	0.60	3737	601	1.61	1896	253	1.33	1189	238	2.00
West Midlands	645	1620	149	0.92	729	57	0.78	3597	539	1.50	1912	257	1.34	1318	255	1.93
Eastern	640	1538	167	1.09	805	57	0.70	3858	652	1.69	2099	294	1.40	1470	278	1.89
London	678	1429	188	1.32	810	76	0.94	3970	749	1.89	2202	341	1.55	1475	307	2.08
South East	1035	1547	180	1.16	821	63	0.77	3816	674	1.77	2069	314	1.52	1318	290	2.20
South West	666	1501	162	1.08	887	61	0.68	3710	579	1.56	2073	282	1.36	1166	231	1.98
Wales	355	1653	157	0.95	842	61	0.72	3406	525	1.54	1851	247	1.34	1093	204	1.87
Men	4007	1597	164	1.03	853	59	0.69	3994	647	1.62	2103	292	1.39	1316	258	1.96
Women	2313	1412	140	0.99	857	58	0.67	2991	496	1.66	1699	243	1.43	1195	238	1.99
White	5987	1525	156	1.02	856	59	0.69	3559	584	1.64	1932	270	1.40	1263	251	1.99
Mixed	39	1433	213	1.48	753	45	0.60	3570	693	1.94	2648	403	1.52	1800	244	1.35
Asian	126	2088	182	0.87	1361	189	1.39	6216	856	1.38	2768	391	1.41	1581	255	1.61
Black	116	1643	147	0.90	575	58	1.01	3845	564	1.47	1966	269	1.37	997	215	2.15
Other	52	1452	183	1.26	840	58	0.69	5023	873	1.74	2651	382	1.44	1918	301	1.57
Sample mean (Total)	(6320)	1536	156	1.02	854	59	0.69	3633	593	1.63	1963	275	1.40	1276	251	1.97

Appendix F. EFS Quantities, Expenditures & Prices

Fruit & Vegetables 2002-03	obs	Peas & Beans			Turnips & Swede			Other Vegetables			Tree Fruit			Soft Fruit		
		q	x	p	q	x	p	q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3481	1290	153	1.19	839	56	0.67	3176	529	1.67	1876	280	1.50	1295	287	2.22
Single parents	390	1479	114	0.77	1125	68	0.60	2521	371	1.47	1526	198	1.30	990	186	1.88
Children, 2 adults	1285	1695	161	0.95	907	61	0.67	4297	723	1.68	2308	333	1.44	1394	285	2.04
Children, >2 adults	193	2078	198	0.95	1090	70	0.65	5301	808	1.53	2523	337	1.34	1513	282	1.86
>2 adults, no children	408	1821	197	1.08	875	67	0.77	5424	841	1.55	2518	353	1.40	1379	302	2.19
High managerial	633	1338	193	1.44	912	74	0.81	4679	949	2.03	2287	378	1.65	1523	353	2.32
Low managerial	1688	1463	166	1.14	846	55	0.66	3870	698	1.81	2173	322	1.48	1318	301	2.28
Workers-technical	1179	1777	151	0.85	991	68	0.68	3429	495	1.44	1929	251	1.30	1225	221	1.81
Never worked-unemployed	37	1663	109	0.66	716	26	0.36	3186	396	1.24	2558	298	1.16	1502	212	1.41
Students	21	1618	153	0.94	0	0	0.00	4012	750	1.87	1967	323	1.64	1827	282	1.54
Other	2199	1357	146	1.07	841	55	0.66	3234	463	1.43	1896	272	1.43	1274	268	2.10
Under 30	499	1547	121	0.78	824	55	0.67	2612	457	1.75	1432	198	1.38	887	195	2.20
30 to 45	1743	1609	152	0.95	980	68	0.69	3656	632	1.73	2071	298	1.44	1351	273	2.02
45 to 60	1595	1551	174	1.12	894	59	0.66	4194	706	1.68	2265	335	1.48	1507	319	2.11
Over 60	1920	1270	158	1.24	815	55	0.68	3380	503	1.49	1949	285	1.46	1203	274	2.28
North East	318	1426	109	0.76	1106	65	0.59	3178	454	1.43	1737	242	1.39	1056	211	2.00
North West & Merseyside	747	1392	122	0.88	730	48	0.66	3044	497	1.63	1848	256	1.38	1287	236	1.83
Yorkshire & Humber	560	1553	133	0.86	766	46	0.61	3614	528	1.46	1887	250	1.32	1355	238	1.75
East Midlands	439	1587	154	0.97	779	55	0.71	3298	526	1.60	2026	278	1.38	1216	243	2.00
West Midlands	557	1571	161	1.03	864	54	0.63	3834	577	1.50	2061	279	1.36	1193	239	2.00
Eastern	638	1500	169	1.13	1022	66	0.64	3921	668	1.70	2101	312	1.48	1354	323	2.39
London	605	1343	176	1.31	924	86	0.93	4063	739	1.82	2344	374	1.60	1722	358	2.08
South East	920	1426	184	1.29	808	62	0.77	3870	697	1.80	2121	336	1.58	1449	338	2.34
South West	616	1510	175	1.16	905	62	0.69	3692	598	1.62	2165	316	1.46	1145	272	2.38
Wales	357	1594	173	1.09	987	59	0.60	3332	491	1.47	1768	242	1.37	930	233	2.50
Men	3664	1539	165	1.07	876	59	0.68	3939	643	1.63	2164	314	1.45	1409	299	2.12
Women	2093	1363	144	1.05	891	61	0.68	3081	511	1.66	1799	263	1.46	1146	251	2.19
White	5466	1472	158	1.07	883	59	0.67	3548	591	1.67	2006	293	1.46	1298	283	2.18
Mixed	36	1536	121	0.78	595	60	1.00	3522	588	1.67	2101	319	1.52	1225	345	2.81
Asian	129	1825	181	0.99	887	94	1.06	6601	822	1.25	3091	415	1.34	1848	289	1.56
Black	93	1342	105	0.78	810	78	0.96	3828	555	1.45	2023	287	1.42	1413	198	1.40
Other	33	1836	253	1.38	600	60	1.00	4470	597	1.34	2356	334	1.42	1826	200	1.09
Sample mean (Total)	(5757)	1480	158	1.07	880	60	0.68	3630	596	1.64	2040	297	1.46	1317	282	2.14

Fruit & Vegetables 2003-04	obs	Peas & Beans			Turnips & Swede			Other Vegetables			Tree Fruit			Soft Fruit		
		q	*x*	*p*	*q*	*x*	*p*	*q*	*x*	*p*	*q*	*x*	*p*	*q*	*x*	*p*
1 or 2 Adults only	3476	1227	154	1.25	904	64	0.71	3204	562	1.75	1837	297	1.62	1223	308	2.52
Single parents	402	1629	135	0.83	752	61	0.80	2834	465	1.64	1732	254	1.47	787	181	2.30
Children, 2 adults	1363	1669	175	1.05	827	64	0.77	4216	735	1.74	2313	345	1.49	1224	306	2.50
Children, >2 adults	245	1995	193	0.97	1082	72	0.67	5458	832	1.52	2739	397	1.45	1515	315	2.08
>2 adults, no children	397	1825	206	1.13	795	59	0.75	4700	776	1.65	2685	400	1.49	1487	326	2.20
High managerial	689	1444	198	1.37	800	68	0.85	4341	892	2.05	2475	427	1.72	1557	419	2.69
Low managerial	2024	1451	175	1.21	823	65	0.79	3925	726	1.85	2151	345	1.61	1257	314	2.50
Workers-technical	1592	1656	146	0.89	796	57	0.72	3417	519	1.52	1922	266	1.38	1189	250	2.10
Never worked-unemployed	113	1673	126	0.75	767	45	0.59	3818	492	1.29	2124	275	1.30	1469	310	2.11
Students	67	1204	127	1.05	899	59	0.65	3143	559	1.78	1511	244	1.62	811	167	2.06
Other	1398	1171	155	1.32	1075	69	0.64	3038	462	1.52	1856	285	1.53	1043	261	2.50
Under 30	534	1344	119	0.89	786	69	0.88	2410	458	1.90	1513	238	1.57	838	212	2.54
30 to 45	1829	1564	161	1.03	829	62	0.75	3663	656	1.79	2047	310	1.51	1172	286	2.44
45 to 60	1628	1608	184	1.14	803	61	0.76	4342	751	1.73	2359	368	1.56	1448	342	2.37
Over 60	1892	1206	159	1.32	984	67	0.68	3283	525	1.60	1918	302	1.58	1172	298	2.55
North East	313	1331	102	0.77	880	53	0.60	3029	440	1.45	1597	226	1.42	1024	245	2.39
North West & Merseyside	743	1396	135	0.97	769	54	0.71	3074	529	1.72	1785	273	1.53	1103	247	2.24
Yorkshire & Humber	596	1379	133	0.96	799	54	0.67	3600	567	1.58	1940	273	1.41	1147	260	2.27
East Midlands	497	1611	156	0.97	775	59	0.76	3765	574	1.53	1980	295	1.49	1207	290	2.41
West Midlands	571	1520	161	1.06	1304	81	0.62	3627	596	1.64	2174	309	1.42	1360	322	2.37
Eastern	605	1393	182	1.31	808	69	0.86	3900	689	1.77	2247	357	1.59	1474	325	2.20
London	639	1467	198	1.35	671	60	0.90	3789	759	2.00	2292	399	1.74	1407	370	2.63
South East	898	1453	196	1.35	813	67	0.82	3882	720	1.86	2123	356	1.68	1337	341	2.55
South West	652	1441	169	1.17	950	74	0.78	3691	644	1.75	2074	328	1.58	1116	322	2.89
Wales	369	1546	163	1.06	1039	66	0.63	3519	538	1.53	2193	303	1.38	1029	244	2.37
Men	3718	1509	171	1.13	935	66	0.71	3961	672	1.70	2198	337	1.53	1312	319	2.43
Women	2165	1342	150	1.12	768	58	0.76	3040	540	1.77	1792	287	1.60	1099	273	2.48
White	5512	1443	164	1.14	878	64	0.73	3561	620	1.74	2018	314	1.56	1204	304	2.52
Mixed	42	1464	125	0.86	600	42	0.70	4191	639	1.53	2266	373	1.65	2511	331	1.32
Asian	163	1713	167	0.98	1060	76	0.72	4977	700	1.41	2894	416	1.44	2020	330	1.63
Black	140	1700	158	0.93	505	37	0.73	3831	607	1.59	2393	362	1.51	1213	223	1.84
Other	26	1218	215	1.76	0	0	0.00	6279	990	1.58	3053	497	1.63	1721	414	2.40
Sample mean (Total)	(5883)	1452	164	1.13	878	64	0.73	3622	623	1.72	2060	320	1.55	1240	304	2.45

Fruit & Vegetables 2004-05	obs	Peas & Beans			Turnips & Swede			Other Vegetables			Tree Fruit			Soft Fruit		
		q	x	p	q	x	p	q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3380	1203	154	1.28	790	58	0.73	3304	591	1.79	1861	292	1.57	1236	324	2.63
Single parents	375	1453	124	0.86	911	63	0.69	2818	471	1.67	1604	241	1.50	982	264	2.69
Children, 2 adults	1263	1696	179	1.06	884	65	0.74	4472	757	1.69	2322	343	1.48	1251	312	2.49
Children, >2 adults	225	2082	203	0.97	864	71	0.82	5443	874	1.61	2827	407	1.44	1742	393	2.26
>2 adults, no children	431	1768	195	1.10	877	73	0.84	5089	842	1.65	2314	352	1.52	1431	365	2.55
High managerial	664	1440	196	1.37	722	59	0.82	4633	940	2.03	2408	416	1.73	1427	416	2.92
Low managerial	1758	1484	182	1.23	845	69	0.81	4107	753	1.83	2159	336	1.55	1280	337	2.63
Workers-technical	1131	1652	151	0.92	872	63	0.72	3722	567	1.52	1877	258	1.38	1193	261	2.19
Never worked-unemployed	111	1646	117	0.71	797	56	0.71	2784	419	1.51	1844	240	1.30	1045	204	1.95
Students	47	1338	186	1.39	413	48	1.16	3671	784	2.14	1972	311	1.58	656	169	2.58
Other	1963	1229	146	1.19	829	59	0.71	3215	514	1.60	1870	280	1.50	1232	309	2.51
Under 30	456	1315	130	0.99	837	70	0.83	2681	514	1.92	1645	245	1.49	911	254	2.79
30 to 45	1710	1561	163	1.05	858	64	0.75	3842	679	1.77	2002	308	1.54	1209	319	2.64
45 to 60	1631	1605	181	1.13	822	64	0.78	4336	760	1.75	2230	343	1.54	1357	336	2.47
Over 60	1877	1168	155	1.33	816	59	0.72	3438	563	1.64	1977	301	1.52	1285	330	2.57
North East	256	1327	114	0.86	954	66	0.69	3344	542	1.62	2089	291	1.39	1562	373	2.39
North West & Merseyside	721	1394	138	0.99	786	54	0.69	3528	594	1.68	1973	286	1.45	1317	304	2.31
Yorkshire & Humber	567	1358	142	1.05	802	53	0.67	3459	575	1.66	1804	256	1.42	1153	252	2.19
East Midlands	473	1529	138	0.90	699	50	0.72	3688	574	1.56	1824	251	1.38	1043	264	2.54
West Midlands	541	1477	162	1.09	686	64	0.94	3682	577	1.57	2019	291	1.44	1145	276	2.41
Eastern	633	1401	178	1.27	894	69	0.77	4140	696	1.68	2156	347	1.61	1577	380	2.41
London	631	1374	182	1.33	702	69	0.99	4112	799	1.94	2261	371	1.64	1242	379	3.05
South East	887	1460	189	1.30	911	71	0.78	3885	740	1.91	1983	326	1.64	1247	346	2.77
South West	617	1444	183	1.27	854	65	0.76	3881	691	1.78	2114	333	1.58	1277	353	2.77
Wales	348	1585	183	1.15	864	60	0.70	3485	564	1.62	2201	326	1.48	1072	289	2.70
Men	3594	1514	173	1.14	842	63	0.75	4068	695	1.71	2161	325	1.51	1304	327	2.51
Women	2080	1282	147	1.14	800	59	0.74	3237	576	1.78	1811	287	1.59	1192	321	2.69
White	5331	1421	163	1.14	829	62	0.75	3686	645	1.75	2003	308	1.54	1238	324	2.62
Mixed	29	2035	216	1.06	0	0	0.00	4168	685	1.64	2368	334	1.41	1668	407	2.44
Asian	157	1956	218	1.11	800	84	1.05	5637	810	1.44	3095	458	1.48	2014	354	1.76
Black	120	1510	145	0.96	827	63	0.76	4376	669	1.53	2103	276	1.31	1559	267	1.71
Other	37	1054	203	1.93	600	110	1.83	4945	973	1.97	1843	315	1.71	1048	340	3.25
Sample mean (Total)	(5674)	1434	164	1.14	828	62	0.75	3767	652	1.73	2039	312	1.53	1266	325	2.57

Appendix F. EFS Quantities, Expenditures & Prices

Fruit & Vegetables 2005-06	obs	Peas & Beans			Turnips & Swede			Other Vegetables			Tree Fruit			Soft Fruit		
		q	x	p	q	x	p	q	x	p	q	x	p	q	x	p
1 or 2 Adults only	3480	1203	160	1.33	782	57	0.74	3352	600	1.79	1845	287	1.56	1219	353	2.89
Single parents	401	1517	147	0.97	800	57	0.71	3023	520	1.72	1661	238	1.43	1024	274	2.68
Children, 2 adults	1206	1711	204	1.19	877	60	0.69	5042	870	1.73	2447	369	1.51	1313	344	2.62
Children, >2 adults	194	2086	226	1.08	1202	96	0.80	6696	1019	1.52	2845	422	1.48	1494	327	2.19
>2 adults, no children	410	1965	228	1.16	764	59	0.77	5276	898	1.70	2601	394	1.51	1355	397	2.93
High managerial	625	1344	213	1.58	971	71	0.73	4790	1016	2.12	2290	421	1.84	1387	437	3.15
Low managerial	1711	1515	197	1.30	788	58	0.74	4396	811	1.85	2216	343	1.55	1292	373	2.89
Workers-technical	1112	1596	160	1.00	833	60	0.72	3868	598	1.55	2038	277	1.36	1078	270	2.51
Never worked-unemployed	105	1890	164	0.87	882	50	0.57	4367	568	1.30	2281	312	1.37	1539	208	1.35
Students	75	1608	175	1.09	628	69	1.10	4914	722	1.47	2739	425	1.55	1075	254	2.36
Other	2063	1299	161	1.24	800	59	0.73	3312	536	1.62	1864	276	1.48	1243	334	2.69
Under 30	478	1469	149	1.02	872	60	0.69	3401	602	1.77	1870	279	1.49	979	258	2.63
30 to 45	1672	1551	181	1.17	827	61	0.74	4130	740	1.79	2131	324	1.52	1214	324	2.67
45 to 60	1566	1609	202	1.25	855	62	0.73	4543	805	1.77	2252	356	1.58	1381	394	2.85
Over 60	1975	1209	162	1.34	779	57	0.73	3472	577	1.66	1928	289	1.50	1232	349	2.83
North East	280	1440	130	0.91	1086	62	0.57	3237	489	1.51	1580	217	1.38	1062	287	2.70
North West & Merseyside	722	1420	150	1.06	767	54	0.71	3424	579	1.69	1864	274	1.47	1126	299	2.66
Yorkshire & Humber	582	1357	147	1.08	830	56	0.67	3573	583	1.63	1840	262	1.42	1078	300	2.78
East Midlands	508	1586	172	1.09	771	57	0.74	4378	720	1.64	2214	306	1.38	1551	328	2.12
West Midlands	538	1427	169	1.19	728	51	0.70	3815	630	1.65	2091	290	1.39	1046	271	2.60
Eastern	577	1457	187	1.29	747	58	0.77	4386	757	1.73	2244	345	1.54	1307	340	2.60
London	601	1473	217	1.48	796	67	0.85	4855	915	1.89	2451	437	1.78	1479	484	3.27
South East	937	1356	206	1.52	796	64	0.81	4044	785	1.94	2110	347	1.65	1239	388	3.13
South West	614	1501	186	1.24	791	62	0.78	4022	707	1.76	2091	327	1.56	1313	363	2.77
Wales	332	1555	181	1.16	870	64	0.74	3193	496	1.55	1891	253	1.34	1167	315	2.70
Men	3484	1523	188	1.24	839	61	0.73	4333	749	1.73	2226	336	1.51	1345	361	2.69
Women	2207	1307	160	1.22	781	56	0.72	3370	599	1.78	1810	284	1.57	1100	327	2.97
White	5281	1424	177	1.25	825	60	0.73	3797	681	1.80	2025	313	1.54	1247	354	2.84
Mixed	42	1677	169	1.01	581	55	0.95	4879	717	1.47	2086	278	1.33	1102	242	2.19
Asian	212	1905	191	1.00	653	48	0.73	6951	880	1.27	2971	409	1.38	1396	265	1.90
Black	104	1672	177	1.06	275	50	1.80	4882	693	1.42	2398	332	1.39	1318	333	2.53
Other	52	1506	207	1.38	861	54	0.63	5616	808	1.44	2364	353	1.49	1194	263	2.20
Sample mean (Total)	(5691)	1446	178	1.23	820	60	0.73	3960	691	1.74	2074	317	1.53	1253	348	2.78

Appendix G. EFS Censoring & Budget Shares

Key to the tables:
- *obs* indicates the number of households present in the data set for each socio-demographic category;
- *cons* indicates the number of households who consumed of the corresponding food group;
- *c* indicates the mean percentage of censoring for each socio-demographic group with respect to one food group;
- *w* indicates the mean budget share for a good group in a specific type of household.

G.1 Upper Model

Upper Model 2001-02		Meat & Dairy			Miscellaneous			Fruit & Vegetables		
	obs	*cons*	*c*	*w*	*cons*	*c*	*w*	*cons*	*c*	*w*
1 or 2 Adults only	3738	3675	1.69	0.47	3624	3.05	0.21	3501	6.34	0.32
Single parents	451	443	1.77	0.51	443	1.77	0.23	421	6.65	0.26
Children, 2 adults	1448	1444	0.28	0.52	1438	0.69	0.19	1399	3.38	0.29
Children, >2 adults	253	252	0.40	0.51	253	0.00	0.22	252	0.40	0.28
>2 adults, no children	430	429	0.23	0.49	427	0.70	0.21	426	0.93	0.29
High managerial	683	673	1.46	0.48	663	2.93	0.16	663	2.93	0.36
Low managerial	1842	1816	1.41	0.49	1787	2.99	0.19	1755	4.72	0.32
Workers-technical	1337	1324	0.97	0.51	1316	1.57	0.23	1256	6.06	0.26
Never worked-unemployed	82	82	0.00	0.49	81	1.22	0.27	76	7.32	0.24
Students	31	30	3.23	0.45	29	6.45	0.19	26	16.13	0.36
Other	2345	2318	1.15	0.49	2309	1.54	0.23	2223	5.20	0.28
Under 30	630	611	3.02	0.51	603	4.29	0.21	545	13.49	0.28
30 to 45	1995	1972	1.15	0.51	1948	2.36	0.20	1893	5.11	0.30
45 to 60	1745	1730	0.86	0.49	1708	2.12	0.20	1686	3.38	0.31
Over 60	1950	1930	1.03	0.48	1926	1.23	0.22	1875	3.85	0.30
North East	314	308	1.91	0.51	311	0.96	0.23	292	7.01	0.26
North West & Merseyside	852	843	1.06	0.51	839	1.53	0.22	791	7.16	0.27
Yorkshire & Humber	599	596	0.50	0.50	585	2.34	0.22	561	6.34	0.28
East Midlands	536	534	0.37	0.50	527	1.68	0.21	515	3.92	0.29
West Midlands	645	641	0.62	0.50	632	2.02	0.22	607	5.89	0.28
Eastern	640	633	1.09	0.50	623	2.66	0.19	615	3.91	0.31
London	678	662	2.36	0.45	657	3.10	0.19	648	4.42	0.36
South East	1035	1018	1.64	0.50	1010	2.42	0.18	1002	3.19	0.32
South West	666	658	1.20	0.50	652	2.10	0.20	635	4.65	0.30
Wales	355	350	1.41	0.47	349	1.69	0.25	333	6.20	0.28
Men	3992	3952	1.00	0.50	3929	1.58	0.20	3804	4.71	0.30
Women	2328	2291	1.59	0.49	2256	3.09	0.21	2195	5.71	0.30
White	5981	5918	1.05	0.50	5861	2.01	0.21	5685	4.95	0.30
Mixed	40	39	2.50	0.43	38	5.00	0.19	37	7.50	0.38
Asian	128	123	3.91	0.43	124	3.13	0.23	119	7.03	0.34
Black	121	114	5.79	0.44	114	5.79	0.23	110	9.09	0.33
Other	50	49	2.00	0.43	48	4.00	0.16	48	4.00	0.41
Sample mean (Total)	(6320)	6243	1.22	0.49	6185	2.14	0.21	5999	5.08	0.30

Appendix G. EFS Censoring & Budget Shares

Upper Model 2002-03	Meat & Dairy				Miscellaneous			Fruit & Vegetables		
	obs	cons	c	w	cons	c	w	cons	c	w
1 or 2 Adults only	3517	3472	1.28	0.47	3402	3.27	0.20	3312	5.83	0.33
Single parents	411	409	0.49	0.53	400	2.68	0.22	372	9.49	0.25
Children, 2 adults	1253	1251	0.16	0.52	1248	0.40	0.19	1221	2.55	0.29
Children, >2 adults	187	187	0.00	0.51	186	0.53	0.22	182	2.67	0.27
>2 adults, no children	389	389	0.00	0.48	388	0.26	0.21	383	1.54	0.31
High managerial	630	628	0.32	0.47	606	3.81	0.16	613	2.70	0.37
Low managerial	1678	1668	0.60	0.49	1633	2.68	0.18	1611	3.99	0.33
Workers-technical	1182	1174	0.68	0.51	1164	1.52	0.22	1107	6.35	0.26
Never worked-unemployed	39	37	5.13	0.50	39	0.00	0.27	35	10.26	0.23
Students	24	23	4.17	0.41	23	4.17	0.21	20	16.67	0.37
Other	2204	2178	1.18	0.49	2159	2.04	0.22	2084	5.44	0.29
Under 30	530	519	2.08	0.50	506	4.53	0.21	475	10.38	0.29
30 to 45	1761	1751	0.57	0.51	1717	2.50	0.19	1657	5.91	0.30
45 to 60	1560	1551	0.58	0.49	1529	1.99	0.19	1515	2.88	0.32
Over 60	1906	1887	1.00	0.48	1872	1.78	0.21	1823	4.35	0.31
North East	318	315	0.94	0.52	311	2.20	0.23	303	4.72	0.26
North West & Merseyside	747	741	0.80	0.52	727	2.68	0.22	697	6.69	0.27
Yorkshire & Humber	560	554	1.07	0.50	547	2.32	0.21	530	5.36	0.29
East Midlands	438	436	0.46	0.52	430	1.83	0.20	413	5.71	0.28
West Midlands	558	553	0.90	0.50	553	0.90	0.22	534	4.30	0.28
Eastern	638	632	0.94	0.48	623	2.35	0.19	611	4.23	0.33
London	605	597	1.32	0.46	582	3.80	0.18	575	4.96	0.36
South East	920	915	0.54	0.47	897	2.50	0.18	886	3.70	0.34
South West	616	612	0.65	0.49	603	2.11	0.20	589	4.38	0.31
Wales	357	353	1.12	0.49	351	1.68	0.22	332	7.00	0.29
Men	3650	3620	0.82	0.49	3588	1.70	0.20	3484	4.55	0.31
Women	2107	2088	0.90	0.48	2036	3.37	0.21	1986	5.74	0.31
White	5470	5427	0.79	0.49	5346	2.27	0.20	5195	5.03	0.31
Mixed	35	35	0.00	0.47	32	8.57	0.18	33	5.71	0.35
Asian	128	126	1.56	0.43	127	0.78	0.21	122	4.69	0.36
Black	92	89	3.26	0.44	89	3.26	0.25	88	4.35	0.31
Other	32	31	3.13	0.45	30	6.25	0.17	32	0.00	0.38
Sample mean (Total)	(5757)	5708	0.85	0.49	5624	2.31	0.20	5470	4.99	0.31

Upper Model 2003-04		Meat & Dairy			Miscellaneous			Fruit & Vegetables		
	obs	*cons*	*c*	*w*	*cons*	*c*	*w*	*cons*	*c*	*w*
1 or 2 Adults only	3546	3504	1.18	0.47	3426	3.38	0.20	3312	6.60	0.33
Single parents	409	404	1.22	0.51	402	1.71	0.22	379	7.34	0.27
Children, 2 adults	1316	1313	0.23	0.52	1302	1.06	0.18	1279	2.81	0.29
Children, >2 adults	236	235	0.42	0.51	236	0.00	0.20	234	0.85	0.29
>2 adults, no children	377	375	0.53	0.50	375	0.53	0.20	374	0.80	0.30
High managerial	682	679	0.44	0.49	667	2.20	0.15	663	2.79	0.36
Low managerial	1995	1973	1.10	0.49	1938	2.86	0.18	1909	4.31	0.33
Workers-technical	1605	1593	0.75	0.51	1574	1.93	0.22	1498	6.67	0.26
Never worked-unemployed	117	115	1.71	0.53	114	2.56	0.24	102	12.82	0.23
Students	69	67	2.90	0.45	66	4.35	0.22	65	5.80	0.33
Other	1416	1404	0.85	0.48	1382	2.40	0.22	1341	5.30	0.30
Under 30	571	566	0.88	0.52	542	5.08	0.20	503	11.91	0.28
30 to 45	1824	1803	1.15	0.51	1779	2.47	0.19	1730	5.15	0.30
45 to 60	1592	1579	0.82	0.48	1562	1.88	0.19	1535	3.58	0.33
Over 60	1897	1883	0.74	0.48	1858	2.06	0.21	1810	4.59	0.31
North East	313	310	0.96	0.51	306	2.24	0.23	292	6.71	0.26
North West & Merseyside	743	738	0.67	0.51	727	2.15	0.21	694	6.59	0.27
Yorkshire & Humber	596	592	0.67	0.50	585	1.85	0.20	561	5.87	0.31
East Midlands	497	494	0.60	0.50	491	1.21	0.20	475	4.43	0.30
West Midlands	571	565	1.05	0.49	558	2.28	0.21	546	4.38	0.30
Eastern	605	600	0.83	0.49	593	1.98	0.19	578	4.46	0.32
London	639	626	2.03	0.46	616	3.60	0.18	596	6.73	0.36
South East	898	891	0.78	0.49	865	3.67	0.18	868	3.34	0.34
South West	652	649	0.46	0.50	636	2.45	0.18	629	3.53	0.32
Wales	370	366	1.08	0.51	364	1.62	0.22	339	8.38	0.28
Men	3713	3682	0.83	0.50	3628	2.29	0.19	3536	4.77	0.31
Women	2171	2149	1.01	0.49	2113	2.67	0.20	2042	5.94	0.31
White	5521	5474	0.85	0.50	5394	2.30	0.20	5232	5.23	0.31
Mixed	35	35	0.00	0.42	33	5.71	0.20	35	0.00	0.38
Asian	157	155	1.27	0.47	152	3.18	0.20	152	3.18	0.34
Black	147	144	2.04	0.45	139	5.44	0.20	135	8.16	0.34
Other	24	23	4.17	0.39	23	4.17	0.19	24	0.00	0.42
Sample mean (Total)	(5884)	5831	0.90	0.49	5741	2.43	0.20	5578	5.20	0.31

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Appendix G. EFS Censoring & Budget Shares

Upper Model 2004-05	Meat & Dairy				Miscellaneous				Fruit & Vegetables			
	obs	*cons*	*c*	*w*	*cons*	*c*	*w*	*cons*	*c*	*w*
1 or 2 Adults only	3417	3363	1.58	0.47	3276	4.13	0.20	3199	6.38	0.34
Single parents	381	376	1.31	0.50	375	1.57	0.22	358	6.04	0.28
Children, 2 adults	1241	1236	0.40	0.52	1227	1.13	0.19	1194	3.79	0.29
Children, >2 adults	216	216	0.00	0.51	215	0.46	0.20	213	1.39	0.29
>2 adults, no children	419	418	0.24	0.48	417	0.48	0.21	413	1.43	0.31
High managerial	653	647	0.92	0.47	634	2.91	0.15	637	2.45	0.38
Low managerial	1738	1720	1.04	0.48	1687	2.93	0.18	1669	3.97	0.34
Workers-technical	1146	1135	0.96	0.51	1109	3.23	0.22	1065	7.07	0.27
Never worked-unemployed	114	112	1.75	0.52	109	4.39	0.26	103	9.65	0.22
Students	51	47	7.84	0.38	46	9.80	0.22	46	9.80	0.41
Other	1972	1948	1.22	0.49	1925	2.38	0.22	1857	5.83	0.30
Under 30	479	466	2.71	0.49	454	5.22	0.21	424	11.48	0.30
30 to 45	1717	1697	1.16	0.50	1652	3.79	0.19	1617	5.82	0.31
45 to 60	1609	1594	0.93	0.48	1582	1.68	0.19	1554	3.42	0.32
Over 60	1869	1852	0.91	0.47	1822	2.51	0.21	1782	4.65	0.32
North East	255	253	0.78	0.52	249	2.35	0.20	235	7.84	0.28
North West & Merseyside	721	714	0.97	0.51	706	2.08	0.21	685	4.99	0.28
Yorkshire & Humber	567	557	1.76	0.50	549	3.17	0.21	525	7.41	0.29
East Midlands	473	472	0.21	0.52	463	2.11	0.21	460	2.75	0.28
West Midlands	541	530	2.03	0.48	520	3.88	0.22	509	5.92	0.30
Eastern	633	626	1.11	0.48	610	3.63	0.19	592	6.48	0.33
London	631	620	1.74	0.45	608	3.65	0.18	599	5.07	0.37
South East	887	879	0.90	0.47	869	2.03	0.19	861	2.93	0.34
South West	618	612	0.97	0.49	598	3.24	0.18	583	5.66	0.33
Wales	348	346	0.57	0.48	338	2.87	0.22	328	5.75	0.30
Men	3572	3532	1.12	0.49	3480	2.58	0.20	3400	4.82	0.31
Women	2102	2077	1.19	0.47	2030	3.43	0.20	1977	5.95	0.33
White	5334	5281	0.99	0.49	5187	2.76	0.20	5057	5.19	0.31
Mixed	29	28	3.45	0.49	26	10.34	0.23	24	17.24	0.28
Asian	152	150	1.32	0.44	149	1.97	0.22	148	2.63	0.34
Black	124	115	7.26	0.41	115	7.26	0.22	114	8.06	0.37
Other	35	35	0.00	0.42	33	5.71	0.15	34	2.86	0.43
Sample mean (Total)	(5674)	5609	1.15	0.49	5510	2.89	0.20	5377	5.23	0.32

Upper Model 2005-06	obs	Meat & Dairy			Miscellaneous			Fruit & Vegetables		
		cons	c	w	cons	c	w	cons	c	w
1 or 2 Adults only	3521	3478	1.22	0.46	3356	4.69	0.20	3300	6.28	0.34
Single parents	399	397	0.50	0.48	389	2.51	0.21	382	4.26	0.31
Children, 2 adults	1182	1180	0.17	0.51	1165	1.44	0.18	1143	3.30	0.31
Children, >2 adults	187	187	0.00	0.50	185	1.07	0.21	185	1.07	0.29
>2 adults, no children	402	401	0.25	0.48	401	0.25	0.20	395	1.74	0.32
High managerial	609	604	0.82	0.47	581	4.60	0.14	599	1.64	0.38
Low managerial	1685	1671	0.83	0.48	1619	3.92	0.17	1627	3.44	0.35
Workers-technical	1125	1113	1.07	0.49	1099	2.31	0.22	1046	7.02	0.28
Never worked-unemployed	119	116	2.52	0.51	113	5.04	0.24	102	14.29	0.25
Students	78	76	2.56	0.42	76	2.56	0.19	73	6.41	0.39
Other	2075	2063	0.58	0.48	2008	3.23	0.22	1958	5.64	0.30
Under 30	495	484	2.22	0.48	471	4.85	0.20	447	9.70	0.32
30 to 45	1676	1662	0.84	0.49	1604	4.30	0.18	1585	5.43	0.32
45 to 60	1550	1539	0.71	0.48	1505	2.90	0.19	1491	3.81	0.34
Over 60	1970	1958	0.61	0.47	1916	2.74	0.21	1882	4.47	0.32
North East	280	276	1.43	0.51	271	3.21	0.22	257	8.21	0.27
North West & Merseyside	722	717	0.69	0.50	705	2.35	0.21	686	4.99	0.29
Yorkshire & Humber	582	577	0.86	0.50	551	5.33	0.20	537	7.73	0.30
East Midlands	508	506	0.39	0.48	496	2.36	0.20	483	4.92	0.32
West Midlands	538	530	1.49	0.48	521	3.16	0.21	510	5.20	0.31
Eastern	577	575	0.35	0.49	556	3.64	0.18	557	3.47	0.33
London	601	591	1.66	0.44	574	4.49	0.17	568	5.49	0.39
South East	937	931	0.64	0.47	904	3.52	0.18	892	4.80	0.35
South West	614	611	0.49	0.47	592	3.58	0.19	593	3.42	0.34
Wales	332	329	0.90	0.50	326	1.81	0.22	322	3.01	0.28
Men	3476	3446	0.86	0.48	3370	3.05	0.19	3305	4.92	0.32
Women	2215	2197	0.81	0.47	2126	4.02	0.19	2100	5.19	0.33
White	5278	5241	0.70	0.48	5109	3.20	0.19	5019	4.91	0.32
Mixed	41	41	0.00	0.48	38	7.32	0.21	38	7.32	0.31
Asian	209	207	0.96	0.46	197	5.74	0.22	198	5.26	0.32
Black	112	104	7.14	0.44	104	7.14	0.20	99	11.61	0.36
Other	51	50	1.96	0.44	48	5.88	0.16	51	0.00	0.40
Sample mean (Total)	(5691)	5643	0.84	0.48	5496	3.43	0.19	5405	5.03	0.33

G.2 Meat & Dairy

Meat & Dairy 2001-02	obs	Milk			Butter			Cheese			Other Dairy			Beef			Lamb		
		cons	c	w	cons	c	w	cons	c	w	cons	c	w	cons	c	w	cons	c	w
1 or 2 Adults only	3717	3442	7.40	0.27	1120	69.87	0.04	2698	27.41	0.21	2210	40.54	0.15	1931	48.05	0.22	865	76.73	0.10
Single parents	450	423	6.00	0.36	90	80.00	0.03	327	27.33	0.19	320	28.89	0.18	245	45.56	0.18	55	87.78	0.06
Children, 2 adults	1463	1415	3.28	0.32	466	68.15	0.03	1242	15.11	0.21	1214	17.02	0.18	969	33.77	0.19	357	75.60	0.07
Children, >2 adults	256	245	4.30	0.31	99	61.33	0.03	226	11.72	0.20	213	16.80	0.15	186	27.34	0.23	72	71.88	0.08
>2 adults, no children	434	416	4.15	0.27	175	59.68	0.04	394	9.22	0.21	337	22.35	0.15	316	27.19	0.25	129	70.28	0.08
High managerial	687	642	6.55	0.25	257	62.59	0.04	592	13.83	0.26	546	20.52	0.18	377	45.12	0.20	174	74.67	0.08
Low managerial	1837	1716	6.59	0.27	574	68.75	0.03	1500	18.35	0.23	1386	24.55	0.18	1073	41.59	0.21	404	78.01	0.07
Workers-technical	1338	1276	4.63	0.32	318	76.23	0.03	1044	21.97	0.19	948	29.15	0.16	860	35.73	0.23	289	78.40	0.08
Never worked-unemployed	83	81	2.41	0.38	23	72.29	0.04	48	42.17	0.14	43	48.19	0.13	47	43.37	0.19	16	80.72	0.12
Students	32	32	0.00	0.38	4	87.50	0.02	23	28.13	0.25	20	37.50	0.16	18	43.75	0.17	2	93.75	0.02
Other	2343	2194	6.36	0.33	774	66.97	0.05	1680	28.30	0.18	1351	42.34	0.14	1272	45.71	0.21	593	74.69	0.10
Under 30	623	580	6.90	0.36	81	87.00	0.02	436	30.02	0.22	423	32.10	0.19	292	53.13	0.17	73	88.28	0.06
30 to 45	1999	1895	5.20	0.31	547	72.64	0.03	1599	20.01	0.22	1484	25.76	0.18	1174	41.27	0.20	362	81.89	0.06
45 to 60	1745	1634	6.36	0.26	588	66.30	0.04	1431	17.99	0.22	1241	28.88	0.16	1100	36.96	0.24	491	71.86	0.09
Over 60	1953	1832	6.20	0.30	734	62.42	0.05	1421	27.24	0.18	1146	41.32	0.14	1081	44.65	0.21	552	71.74	0.11
North East	314	301	4.14	0.33	100	68.15	0.04	234	25.48	0.19	204	35.03	0.16	200	36.31	0.23	52	83.44	0.06
North West & Merseyside	852	807	5.28	0.33	249	70.77	0.03	642	24.65	0.18	548	35.68	0.14	506	40.61	0.22	215	74.77	0.09
Yorkshire & Humber	599	554	7.51	0.33	169	71.79	0.03	442	26.21	0.18	393	34.39	0.16	377	37.06	0.25	119	80.13	0.06
East Midlands	537	498	7.26	0.31	167	68.90	0.04	417	22.35	0.20	369	31.28	0.16	337	37.24	0.22	125	76.72	0.07
West Midlands	644	608	5.59	0.31	194	69.88	0.03	484	24.84	0.19	410	36.34	0.16	374	41.93	0.23	147	77.17	0.09
Eastern	640	609	4.84	0.27	199	68.91	0.03	538	15.94	0.23	455	28.91	0.17	388	39.38	0.21	166	74.06	0.09
London	678	632	6.78	0.28	195	71.24	0.04	496	26.84	0.22	461	32.01	0.17	328	51.62	0.19	170	74.93	0.11
South East	1035	973	5.99	0.26	344	66.76	0.04	862	16.72	0.24	763	26.28	0.18	570	44.93	0.20	256	75.27	0.09
South West	666	631	5.26	0.30	220	66.97	0.04	522	21.62	0.22	454	31.83	0.16	365	45.20	0.21	154	76.88	0.08
Wales	355	328	7.61	0.29	113	68.17	0.05	250	29.58	0.19	237	33.24	0.17	202	43.10	0.22	74	79.15	0.08
Men	4003	3786	5.42	0.29	1279	68.05	0.04	3187	20.38	0.21	2752	31.25	0.16	2446	38.90	0.22	987	75.34	0.08
Women	2317	2155	6.99	0.31	671	71.04	0.04	1700	26.63	0.21	1542	33.45	0.17	1201	48.17	0.19	491	78.81	0.08
White	5989	5629	6.01	0.29	1869	68.79	0.04	4696	21.59	0.21	4072	32.01	0.16	3525	41.14	0.22	1397	76.67	0.08
Mixed	40	36	10.00	0.27	10	75.00	0.04	27	32.50	0.21	27	32.50	0.19	22	45.00	0.20	9	77.50	0.09
Asian	126	123	2.38	0.42	49	61.11	0.06	69	45.24	0.12	93	26.19	0.16	20	84.13	0.04	35	72.22	0.20
Black	116	106	8.62	0.32	12	89.66	0.02	64	44.83	0.14	68	41.38	0.15	57	50.86	0.22	25	78.45	0.16
Other	49	47	4.08	0.29	10	79.59	0.03	31	36.73	0.15	34	30.61	0.15	23	53.06	0.14	12	75.51	0.24
Sample mean (Total)	(6320)	5941	6.00	0.29	1950	69.15	0.04	4887	22.67	0.21	4294	32.06	0.16	3647	42.29	0.21	1478	76.61	0.08

Meat & Dairy 2002-03		Milk			Butter			Cheese			Other Dairy			Beef			Lamb		
	obs	cons	c	w	cons	c	w	cons	c	w	cons	c	w	cons	c	w	cons	c	w
1 or 2 Adults only	3506	3287	6.25	0.28	1113	68.25	0.04	2527	27.92	0.21	2133	39.16	0.16	1835	47.66	0.21	814	76.78	0.10
Single parents	414	382	7.73	0.34	87	78.99	0.03	306	26.09	0.19	304	26.57	0.21	230	44.44	0.19	40	90.34	0.04
Children, 2 adults	1260	1220	3.17	0.31	325	74.21	0.02	1085	13.89	0.20	1097	12.94	0.20	838	33.49	0.19	277	78.02	0.07
Children, >2 adults	187	178	4.81	0.27	54	71.12	0.02	164	12.30	0.21	153	18.18	0.16	135	27.81	0.23	64	65.78	0.10
>2 adults, no children	390	372	4.62	0.25	158	59.49	0.04	344	11.79	0.20	307	21.28	0.15	281	27.95	0.25	124	68.21	0.09
High managerial	633	593	6.32	0.25	213	66.35	0.03	515	18.64	0.24	494	21.96	0.20	359	43.29	0.20	138	78.20	0.08
Low managerial	1686	1597	5.28	0.27	481	71.47	0.03	1375	18.45	0.23	1264	25.03	0.19	943	44.07	0.20	362	78.53	0.08
Workers-technical	1184	1136	4.05	0.31	280	76.35	0.03	926	21.79	0.19	817	31.00	0.17	746	36.99	0.24	232	80.41	0.07
Never worked-unemployed	37	30	18.92	0.33	11	70.27	0.04	27	27.03	0.22	18	51.35	0.09	23	37.84	0.24	5	86.49	0.08
Students	24	22	8.33	0.26	4	83.33	0.02	15	37.50	0.29	17	29.17	0.26	9	62.50	0.17	0	100.00	0.00
Other	2193	2061	6.02	0.31	748	65.89	0.04	1568	28.50	0.18	1384	36.89	0.15	1239	43.50	0.21	582	73.46	0.11
Under 30	527	488	7.40	0.32	91	82.73	0.02	381	27.70	0.23	368	30.17	0.20	265	49.72	0.20	50	90.51	0.04
30 to 45	1767	1678	5.04	0.30	403	77.19	0.02	1386	21.56	0.22	1353	23.43	0.20	1008	42.95	0.19	307	82.63	0.07
45 to 60	1564	1479	5.43	0.26	528	66.24	0.04	1269	18.86	0.21	1078	31.07	0.16	976	37.60	0.23	401	74.36	0.09
Over 60	1899	1794	5.53	0.30	715	62.35	0.05	1390	26.80	0.18	1195	37.07	0.15	1070	43.65	0.21	561	70.46	0.11
North East	318	303	4.72	0.32	98	69.18	0.04	231	27.36	0.17	223	29.87	0.18	209	34.28	0.23	54	83.02	0.06
North West & Merseyside	747	712	4.69	0.32	228	69.48	0.04	563	24.63	0.18	511	31.59	0.18	421	43.64	0.20	176	76.44	0.08
Yorkshire & Humber	560	539	3.75	0.31	173	69.11	0.04	431	23.04	0.18	381	31.96	0.16	334	40.36	0.23	124	77.86	0.08
East Midlands	438	415	5.25	0.28	116	73.52	0.03	338	22.83	0.20	328	25.11	0.19	269	38.58	0.22	91	79.22	0.07
West Midlands	558	516	7.53	0.30	140	74.91	0.03	445	20.25	0.21	355	36.38	0.15	339	39.25	0.22	134	75.99	0.09
Eastern	638	595	6.74	0.28	175	72.57	0.03	499	21.79	0.22	451	29.31	0.18	358	43.89	0.21	150	76.49	0.08
London	605	559	7.60	0.26	172	71.57	0.03	413	31.74	0.21	397	34.38	0.17	304	49.75	0.20	153	74.71	0.12
South East	920	873	5.11	0.26	292	68.26	0.03	741	19.46	0.23	669	27.28	0.20	528	42.61	0.20	207	77.50	0.08
South West	616	587	4.71	0.29	222	63.96	0.04	498	19.16	0.23	440	28.57	0.17	347	43.67	0.20	144	76.62	0.08
Wales	357	340	4.76	0.32	121	66.11	0.04	267	25.21	0.18	239	33.05	0.16	210	41.18	0.20	86	75.91	0.10
Men	3652	3475	4.85	0.29	1117	69.41	0.03	2889	20.89	0.21	2565	29.76	0.17	2268	37.90	0.22	892	75.58	0.09
Women	2105	1964	6.70	0.30	620	70.55	0.04	1537	26.98	0.21	1429	32.11	0.19	1051	50.07	0.19	427	79.72	0.08
White	5472	5175	5.43	0.29	1666	69.55	0.03	4263	22.09	0.21	3791	30.72	0.17	3209	41.36	0.21	1238	77.38	0.08
Mixed	37	29	21.62	0.27	11	70.27	0.04	27	27.03	0.21	29	21.62	0.24	18	51.35	0.13	7	81.08	0.11
Asian	127	125	1.57	0.34	40	68.50	0.04	72	43.31	0.10	94	25.98	0.17	29	77.17	0.09	49	61.42	0.26
Black	90	80	11.11	0.28	16	82.22	0.02	42	53.33	0.12	55	38.89	0.20	49	45.56	0.21	20	77.78	0.16
Other	31	30	3.23	0.25	4	87.10	0.01	22	29.03	0.17	25	19.35	0.22	14	54.84	0.26	5	83.87	0.07
Sample mean (Total)	(5757)	5439	5.52	0.29	1737	69.83	0.03	4426	23.12	0.21	3994	30.62	0.17	3319	42.35	0.21	1319	77.09	0.09

Appendix G. EFS Censoring & Budget Shares

Meat & Dairy 2003-04		Milk			Butter			Cheese			Other Dairy			Beef			Lamb		
	obs	cons	c	w	cons	c	w	cons	c	w	cons	c	w	cons	c	w	cons	c	w
1 or 2 Adults only	3537	3285	7.12	0.27	1010	71.44	0.04	2501	29.29	0.20	2120	40.06	0.16	1920	45.72	0.23	803	77.30	0.10
Single parents	408	373	8.58	0.34	70	82.84	0.02	289	29.17	0.17	308	24.51	0.19	242	40.69	0.20	66	83.82	0.07
Children, 2 adults	1325	1261	4.83	0.30	340	74.34	0.02	1134	14.42	0.20	1135	14.34	0.21	900	32.08	0.19	288	78.26	0.07
Children, >2 adults	237	228	3.80	0.30	84	64.56	0.03	210	11.39	0.20	198	16.46	0.18	172	27.43	0.23	72	69.62	0.08
>2 adults, no children	376	365	2.93	0.26	129	65.69	0.03	326	13.30	0.21	298	20.74	0.17	273	27.39	0.24	117	68.88	0.09
High managerial	683	631	7.61	0.23	235	65.59	0.03	569	16.69	0.24	533	21.96	0.19	411	39.82	0.21	202	70.42	0.10
Low managerial	1991	1846	7.28	0.27	543	72.73	0.03	1575	20.89	0.22	1454	26.97	0.19	1178	40.83	0.21	399	79.96	0.08
Workers-technical	1609	1522	5.41	0.31	321	80.05	0.02	1229	23.62	0.19	1118	30.52	0.18	1043	35.18	0.22	326	79.74	0.08
Never worked-unemployed	116	108	6.90	0.35	28	75.86	0.03	76	34.48	0.15	71	38.79	0.16	66	43.10	0.15	20	82.76	0.17
Students	68	63	7.35	0.30	11	83.82	0.02	47	30.88	0.24	51	25.00	0.20	32	52.94	0.15	12	82.35	0.09
Other	1416	1342	5.23	0.31	495	65.04	0.05	964	31.92	0.16	832	41.24	0.15	777	45.13	0.22	387	72.67	0.11
Under 30	571	517	9.46	0.34	68	88.09	0.01	398	30.30	0.22	377	33.98	0.20	281	50.79	0.17	67	88.27	0.06
30 to 45	1818	1708	6.05	0.29	411	77.39	0.02	1417	22.06	0.21	1387	23.71	0.20	1112	38.83	0.20	347	80.91	0.07
45 to 60	1591	1485	6.66	0.25	486	69.45	0.03	1289	18.98	0.21	1145	28.03	0.17	1034	35.01	0.24	414	73.98	0.09
Over 60	1903	1802	5.31	0.30	668	64.90	0.04	1356	28.74	0.18	1150	39.57	0.15	1080	43.25	0.22	518	72.78	0.11
North East	312	300	3.85	0.33	78	75.00	0.03	223	28.53	0.17	208	33.33	0.18	192	38.46	0.21	70	77.56	0.07
North West & Merseyside	743	694	6.59	0.30	193	74.02	0.03	555	25.30	0.19	487	34.45	0.16	478	35.67	0.24	171	76.99	0.08
Yorkshire & Humber	596	560	6.04	0.31	159	73.32	0.03	450	24.50	0.19	400	32.89	0.18	362	39.26	0.21	130	78.19	0.08
East Midlands	497	471	5.23	0.30	127	74.45	0.03	382	23.14	0.20	364	26.76	0.19	306	38.43	0.21	98	80.28	0.07
West Midlands	571	528	7.53	0.27	155	72.85	0.03	438	23.29	0.20	401	29.77	0.16	348	39.05	0.23	152	73.38	0.11
Eastern	605	565	6.61	0.26	177	70.74	0.03	490	19.01	0.23	413	31.74	0.19	373	38.35	0.21	140	76.86	0.08
London	639	588	7.98	0.25	171	73.24	0.03	441	30.99	0.19	430	32.71	0.18	335	47.57	0.19	163	74.49	0.14
South East	898	840	6.46	0.27	262	70.82	0.03	708	21.16	0.21	655	27.06	0.19	505	43.76	0.21	208	76.84	0.08
South West	652	614	5.83	0.28	201	69.17	0.03	503	22.85	0.22	457	29.91	0.18	390	40.18	0.22	127	80.52	0.07
Wales	370	352	4.86	0.30	110	70.27	0.03	270	27.03	0.19	244	34.05	0.16	218	41.08	0.22	87	76.49	0.09
Men	3712	3501	5.68	0.28	1091	70.61	0.03	2900	21.88	0.20	2604	29.85	0.18	2329	37.26	0.22	881	76.27	0.09
Women	2171	2011	7.37	0.30	542	75.03	0.03	1560	28.14	0.20	1455	32.98	0.18	1178	45.74	0.20	465	78.58	0.09
White	5521	5178	6.21	0.28	1558	71.78	0.03	4249	23.04	0.21	3812	30.95	0.18	3360	39.14	0.22	1244	77.47	0.08
Mixed	36	35	2.78	0.28	4	88.89	0.02	25	30.56	0.21	22	38.89	0.24	22	38.89	0.17	7	80.56	0.07
Asian	157	150	4.46	0.35	50	68.15	0.04	94	40.13	0.11	118	24.84	0.16	39	75.16	0.08	51	67.52	0.26
Black	145	127	12.41	0.29	17	88.28	0.02	75	48.28	0.13	90	37.93	0.17	72	50.34	0.18	39	73.10	0.22
Other	24	22	8.33	0.22	4	83.33	0.02	17	29.17	0.25	17	29.17	0.21	14	41.67	0.24	5	79.17	0.06
Sample mean (Total)	(5883)	5512	6.31	0.28	1633	72.24	0.03	4460	24.19	0.20	4059	31.00	0.18	3507	40.39	0.22	1346	77.12	0.09

Appendix G. EFS Censoring & Budget Shares

Meat & Dairy 2004-05	obs	Milk cons	c	w	Butter cons	c	w	Cheese cons	c	w	Other Dairy cons	c	w	Beef cons	c	w	Lamb cons	c	w
1 or 2 Adults only	3406	3162	7.16	0.27	1006	70.46	0.04	2423	28.86	0.20	2059	39.55	0.17	1800	47.15	0.23	759	77.72	0.09
Single parents	381	351	7.87	0.33	72	81.10	0.02	281	26.25	0.20	273	28.35	0.17	222	41.73	0.21	56	85.30	0.06
Children, 2 adults	1247	1216	2.49	0.31	351	71.85	0.03	1064	14.68	0.21	1034	17.08	0.18	856	31.36	0.21	265	78.75	0.07
Children, >2 adults	219	215	1.83	0.30	68	68.95	0.02	186	15.07	0.18	184	15.98	0.15	154	29.68	0.23	61	72.15	0.12
>2 adults, no children	421	404	4.04	0.26	151	64.13	0.03	361	14.25	0.20	308	26.84	0.15	298	29.22	0.26	121	71.26	0.09
High managerial	654	622	4.89	0.26	229	64.98	0.03	556	14.98	0.24	527	19.42	0.19	374	42.81	0.21	129	80.28	0.06
Low managerial	1745	1635	6.30	0.26	492	71.81	0.03	1408	19.31	0.22	1261	27.74	0.17	1050	39.83	0.23	383	78.05	0.08
Workers-technical	1144	1092	4.55	0.30	235	79.46	0.02	871	23.86	0.19	809	29.28	0.18	736	35.66	0.24	224	80.42	0.07
Never worked-unemployed	113	108	4.42	0.35	18	84.07	0.02	81	28.32	0.18	70	38.05	0.14	59	47.79	0.20	19	83.19	0.11
Students	48	41	14.58	0.33	9	81.25	0.03	24	50.00	0.23	30	37.50	0.17	17	64.58	0.13	9	81.25	0.11
Other	1970	1850	6.09	0.30	665	66.24	0.04	1375	30.20	0.17	1161	41.07	0.15	1094	44.47	0.23	498	74.72	0.10
Under 30	473	429	9.30	0.32	62	86.89	0.02	316	33.19	0.22	297	37.21	0.18	246	47.99	0.22	54	88.58	0.05
30 to 45	1714	1626	5.13	0.31	408	76.20	0.02	1360	20.65	0.22	1283	25.15	0.18	1010	41.07	0.21	285	83.37	0.07
45 to 60	1610	1522	5.47	0.26	513	68.14	0.03	1316	18.26	0.21	1132	29.69	0.17	1035	35.71	0.24	408	74.66	0.09
Over 60	1877	1771	5.65	0.28	665	64.57	0.04	1323	29.52	0.17	1146	38.95	0.16	1039	44.65	0.23	515	72.56	0.11
North East	255	245	3.92	0.32	79	69.02	0.04	176	30.98	0.18	166	34.90	0.15	167	34.51	0.26	43	83.14	0.05
North West & Merseyside	721	673	6.66	0.29	221	69.35	0.03	570	20.94	0.18	498	30.93	0.16	454	37.03	0.25	193	73.23	0.09
Yorkshire & Humber	567	529	6.70	0.30	160	71.78	0.03	399	29.63	0.19	357	37.04	0.16	337	40.56	0.25	111	80.42	0.07
East Midlands	473	453	4.23	0.30	126	73.36	0.03	381	19.45	0.21	336	28.96	0.17	311	34.25	0.23	93	80.34	0.06
West Midlands	541	510	5.73	0.30	138	74.49	0.03	386	28.65	0.19	349	35.49	0.16	300	44.55	0.22	149	72.46	0.10
Eastern	633	597	5.69	0.28	172	72.83	0.03	488	22.91	0.21	450	28.91	0.19	374	40.92	0.22	126	80.09	0.07
London	631	582	7.77	0.27	168	73.38	0.03	462	26.78	0.20	408	35.34	0.16	308	51.19	0.21	151	76.07	0.13
South East	887	839	5.41	0.26	284	67.98	0.04	710	19.95	0.23	634	28.52	0.18	501	43.52	0.21	191	78.47	0.08
South West	618	591	4.37	0.26	198	67.96	0.03	484	21.68	0.23	438	29.13	0.17	370	40.13	0.24	120	80.58	0.07
Wales	348	329	5.46	0.32	102	70.69	0.04	259	25.57	0.16	222	36.21	0.16	208	40.23	0.23	85	75.57	0.09
Men	3575	3389	5.20	0.28	1069	70.10	0.03	2797	21.76	0.20	2457	31.27	0.17	2214	38.07	0.24	841	76.48	0.08
Women	2099	1959	6.67	0.29	579	72.42	0.04	1518	27.68	0.21	1401	33.25	0.17	1116	46.83	0.21	421	79.94	0.08
White	5338	5034	5.70	0.28	1574	70.51	0.03	4125	22.72	0.21	3654	31.55	0.17	3213	39.81	0.23	1180	77.89	0.08
Mixed	28	25	10.71	0.28	7	75.00	0.02	20	28.57	0.12	16	42.86	0.15	12	57.14	0.16	5	82.14	0.27
Asian	154	148	3.90	0.39	47	69.48	0.04	100	35.06	0.11	105	31.82	0.15	37	75.97	0.10	38	75.32	0.20
Black	117	107	8.55	0.31	9	92.31	0.01	48	58.97	0.10	65	44.44	0.19	45	61.54	0.18	29	75.21	0.21
Other	37	34	8.11	0.19	11	70.27	0.02	22	40.54	0.17	18	51.35	0.11	23	37.84	0.27	10	72.97	0.25
Sample mean (Total)	(5674)	5348	5.75	0.28	1648	70.96	0.03	4315	23.95	0.20	3858	32.01	0.17	3330	41.31	0.23	1262	77.76	0.08

Appendix G. EFS Censoring & Budget Shares

Meat & Dairy 2005-06	obs	Milk			Butter			Cheese			Other Dairy			Beef			Lamb		
		cons	c	w	cons	c	w	cons	c	w	cons	c	w	cons	c	w	cons	c	w
1 or 2 Adults only	3502	3246	7.31	0.27	1006	71.27	0.04	2543	27.38	0.21	2172	37.98	0.17	1829	47.77	0.22	764	78.18	0.10
Single parents	400	368	8.00	0.32	84	79.00	0.02	303	24.25	0.23	271	32.25	0.18	235	41.25	0.19	54	86.50	0.05
Children, 2 adults	1195	1155	3.35	0.31	386	67.70	0.03	1024	14.31	0.20	992	16.99	0.18	809	32.30	0.20	261	78.16	0.08
Children, >2 adults	188	183	2.66	0.31	63	66.49	0.03	172	8.51	0.17	153	18.62	0.15	135	28.19	0.24	64	65.96	0.10
>2 adults, no children	406	395	2.71	0.27	145	64.29	0.03	353	13.05	0.22	309	23.89	0.15	300	26.11	0.25	105	74.14	0.08
High managerial	610	568	6.89	0.26	221	63.77	0.03	524	14.10	0.23	491	19.51	0.18	346	43.28	0.20	150	75.41	0.10
Low managerial	1689	1579	6.51	0.26	517	69.39	0.03	1382	18.18	0.23	1225	27.47	0.18	1032	38.90	0.23	358	78.80	0.08
Workers-technical	1121	1078	3.84	0.31	259	76.90	0.03	894	20.25	0.20	781	30.33	0.17	718	35.95	0.23	194	82.69	0.07
Never worked-unemployed	119	111	6.72	0.38	24	79.83	0.02	74	37.82	0.21	63	47.06	0.11	45	62.18	0.13	20	83.19	0.16
Students	76	64	15.79	0.27	14	81.58	0.02	50	34.21	0.19	50	34.21	0.13	41	46.05	0.22	16	78.95	0.16
Other	2076	1947	6.21	0.31	649	68.74	0.04	1471	29.14	0.18	1287	38.01	0.16	1126	45.76	0.21	510	75.43	0.10
Under 30	494	454	8.10	0.31	77	84.41	0.02	364	26.32	0.24	330	33.20	0.18	269	45.55	0.19	48	90.28	0.06
30 to 45	1678	1579	5.90	0.30	448	73.30	0.03	1324	21.10	0.21	1228	26.82	0.18	986	41.24	0.20	301	82.06	0.07
45 to 60	1548	1460	5.68	0.26	499	67.76	0.03	1281	17.25	0.21	1069	30.94	0.16	969	37.40	0.24	378	75.58	0.10
Over 60	1971	1854	5.94	0.29	660	66.51	0.04	1426	27.65	0.19	1270	35.57	0.16	1084	45.00	0.21	521	73.57	0.11
North East	280	264	5.71	0.37	83	70.36	0.03	199	28.93	0.17	169	39.64	0.15	189	32.50	0.24	34	87.86	0.04
North West & Merseyside	722	674	6.65	0.31	221	69.39	0.03	543	24.79	0.18	457	36.70	0.16	429	40.58	0.22	164	77.29	0.09
Yorkshire & Humber	582	537	7.73	0.32	146	74.91	0.03	432	25.77	0.19	397	31.79	0.17	339	41.75	0.23	107	81.62	0.07
East Midlands	508	474	6.69	0.30	140	72.44	0.03	399	21.46	0.21	368	27.56	0.17	308	39.37	0.22	111	78.15	0.08
West Midlands	538	502	6.69	0.29	131	75.65	0.03	415	22.86	0.20	363	32.53	0.17	318	40.89	0.21	117	78.25	0.09
Eastern	577	554	3.99	0.27	180	68.80	0.03	463	19.76	0.23	409	29.12	0.17	337	41.59	0.22	122	78.86	0.08
London	601	561	6.66	0.24	180	70.05	0.03	432	28.12	0.20	416	30.78	0.17	315	47.59	0.20	164	72.71	0.16
South East	937	890	5.02	0.26	322	65.64	0.04	764	18.46	0.22	667	28.82	0.17	528	43.65	0.20	238	74.60	0.10
South West	614	577	6.03	0.27	199	67.59	0.04	502	18.24	0.24	440	28.34	0.18	327	46.74	0.20	123	79.97	0.06
Wales	332	314	5.42	0.30	82	75.30	0.03	246	25.90	0.20	211	36.45	0.15	218	34.34	0.25	68	79.52	0.07
Men	3479	3297	5.23	0.28	1102	68.32	0.03	2746	21.07	0.21	2409	30.76	0.17	2137	38.57	0.22	805	76.86	0.09
Women	2212	2050	7.32	0.30	582	73.69	0.03	1649	25.45	0.21	1488	32.73	0.17	1171	47.06	0.20	443	79.97	0.09
White	5282	4968	5.94	0.28	1571	70.26	0.03	4160	21.24	0.22	3622	31.43	0.17	3158	40.21	0.22	1122	78.76	0.08
Mixed	41	34	17.07	0.24	5	87.80	0.03	28	31.71	0.18	30	26.83	0.19	26	36.59	0.26	11	73.17	0.10
Asian	213	206	3.29	0.38	77	63.85	0.04	117	45.07	0.08	148	30.52	0.13	50	76.53	0.09	85	60.09	0.28
Black	104	93	10.58	0.30	18	82.69	0.02	60	42.31	0.12	65	37.50	0.17	43	58.65	0.18	19	81.73	0.21
Other	51	46	9.80	0.25	13	74.51	0.03	30	41.18	0.16	32	37.25	0.18	31	39.22	0.25	11	78.43	0.14
Sample mean (Total)	(5691)	5347	6.04	0.29	1684	70.41	0.03	4395	22.77	0.21	3897	31.52	0.17	3308	41.87	0.22	1248	78.07	0.09

G.3 Miscellaneous

Miscellaneous 2001-02	obs	Eggs			Fats			Sugar			Potatoes			Cereals		
		cons	c	w	cons	c	w	cons	c	w	cons	c	w	cons	c	w
1 or 2 Adults only	3699	2046	44.69	0.14	2072	43.98	0.17	1241	66.45	0.06	2539	31.36	0.28	3398	8.14	0.35
Single parents	452	234	48.23	0.12	264	41.59	0.16	171	62.17	0.07	297	34.29	0.26	432	4.42	0.39
Children, 2 adults	1474	958	35.01	0.13	1012	31.34	0.16	568	61.47	0.05	1150	21.98	0.28	1432	2.85	0.38
Children, >2 adults	260	180	30.77	0.11	195	25.00	0.19	137	47.31	0.06	223	14.23	0.28	256	1.54	0.35
>2 adults, no children	435	303	30.34	0.13	314	27.82	0.17	210	51.72	0.06	364	16.32	0.28	433	0.46	0.37
High managerial	687	423	38.43	0.16	367	46.58	0.14	187	72.78	0.05	509	25.91	0.30	645	6.11	0.36
Low managerial	1834	1051	42.69	0.13	1067	41.82	0.16	577	68.54	0.05	1312	28.46	0.29	1720	6.22	0.37
Workers-technical	1333	828	37.88	0.12	882	33.83	0.18	534	59.94	0.06	963	27.76	0.27	1279	4.05	0.38
Never worked-unemployed	83	43	48.19	0.10	59	28.92	0.21	44	46.99	0.08	64	22.89	0.29	78	6.02	0.32
Students	29	15	48.28	0.13	15	48.28	0.17	7	75.86	0.04	14	51.72	0.19	28	3.45	0.47
Other	2354	1361	42.18	0.13	1467	37.68	0.18	978	58.45	0.07	1711	27.32	0.27	2201	6.50	0.36
Under 30	617	321	47.97	0.13	300	51.38	0.15	167	72.93	0.05	365	40.84	0.26	582	5.67	0.41
30 to 45	1991	1152	42.14	0.13	1228	38.32	0.16	695	65.09	0.05	1386	30.39	0.27	1889	5.12	0.39
45 to 60	1751	1079	38.38	0.13	1114	36.38	0.17	686	60.82	0.06	1370	21.76	0.30	1645	6.05	0.35
Over 60	1961	1169	40.39	0.13	1215	38.04	0.18	779	60.28	0.07	1452	25.96	0.27	1835	6.43	0.35
North East	314	185	41.08	0.13	189	39.81	0.15	112	64.33	0.06	235	25.16	0.26	299	4.78	0.40
North West & Merseyside	852	500	41.31	0.11	534	37.32	0.17	332	61.03	0.05	628	26.29	0.27	806	5.40	0.40
Yorkshire & Humber	600	326	45.67	0.12	365	39.17	0.16	209	65.17	0.06	418	30.33	0.27	558	7.00	0.39
East Midlands	535	306	42.80	0.12	327	38.88	0.17	188	64.86	0.05	406	24.11	0.28	511	4.49	0.37
West Midlands	645	389	39.69	0.12	415	35.66	0.17	250	61.24	0.06	478	25.89	0.27	611	5.27	0.38
Eastern	640	395	38.28	0.13	415	35.16	0.18	247	61.41	0.06	445	30.47	0.27	608	5.00	0.36
London	678	411	39.38	0.16	388	42.77	0.17	228	66.37	0.06	471	30.53	0.28	628	7.37	0.33
South East	1035	595	42.51	0.14	606	41.45	0.16	375	63.77	0.06	747	27.83	0.31	969	6.38	0.33
South West	666	396	40.54	0.15	384	42.34	0.17	238	64.26	0.06	472	29.13	0.27	620	6.91	0.35
Wales	355	218	38.59	0.11	234	34.08	0.17	148	58.31	0.06	273	23.10	0.29	341	3.94	0.37
Men	4017	2474	38.41	0.13	2556	36.37	0.17	1549	61.44	0.06	2966	26.16	0.28	3826	4.75	0.36
Women	2303	1247	45.85	0.13	1301	43.51	0.16	778	66.22	0.06	1607	30.22	0.28	2125	7.73	0.36
White	5982	3514	41.26	0.13	3654	38.92	0.17	2191	63.37	0.06	4369	26.96	0.28	5639	5.73	0.36
Mixed	39	20	48.72	0.14	18	53.85	0.14	14	64.10	0.05	28	28.21	0.29	38	2.56	0.37
Asian	127	81	36.22	0.15	79	37.80	0.24	54	57.48	0.07	78	38.58	0.15	123	3.15	0.40
Black	122	74	39.34	0.16	77	36.89	0.25	49	59.84	0.09	68	44.26	0.21	106	13.11	0.29
Other	50	32	36.00	0.18	29	42.00	0.21	19	62.00	0.08	30	40.00	0.19	45	10.00	0.33
Sample mean (Total)	(6320)	3721	41.12	0.13	3857	38.97	0.17	2327	63.18	0.06	4573	27.64	0.28	5951	5.84	0.36

Miscellaneous 2002-03	obs	Eggs			Fats			Sugar			Potatoes			Cereals		
		cons	c	w	cons	c	w	cons	c	w	cons	c	w	cons	c	w
1 or 2 Adults only	3487	2014	42.24	0.14	2034	41.67	0.19	1137	67.39	0.06	2403	31.09	0.25	3207	8.03	0.36
Single parents	411	234	43.07	0.12	228	44.53	0.15	164	60.10	0.08	265	35.52	0.22	395	3.89	0.42
Children, 2 adults	1274	850	33.28	0.13	882	30.77	0.17	504	60.44	0.05	1014	20.41	0.25	1240	2.67	0.39
Children, >2 adults	190	125	34.21	0.12	151	20.53	0.17	110	42.11	0.07	154	18.95	0.22	186	2.11	0.41
>2 adults, no children	395	304	23.04	0.13	278	29.62	0.17	200	49.37	0.06	319	19.24	0.24	385	2.53	0.39
High managerial	625	401	35.84	0.15	337	46.08	0.15	178	71.52	0.05	480	23.20	0.26	595	4.80	0.38
Low managerial	1675	1019	39.16	0.14	990	40.90	0.16	534	68.12	0.05	1229	26.63	0.26	1568	6.39	0.39
Workers-technical	1188	726	38.89	0.12	797	32.91	0.19	487	59.01	0.06	854	28.11	0.24	1136	4.38	0.40
Never worked-unemployed	39	22	43.59	0.18	25	35.90	0.22	13	66.67	0.09	20	48.72	0.15	37	5.13	0.36
Students	23	15	34.78	0.15	12	47.83	0.12	1	95.65	0.01	14	39.13	0.19	21	8.70	0.53
Other	2207	1344	39.10	0.13	1412	36.02	0.19	902	59.13	0.08	1558	29.41	0.23	2056	6.84	0.37
Under 30	524	282	46.18	0.14	273	47.90	0.16	146	72.14	0.05	324	38.17	0.23	498	4.96	0.42
30 to 45	1749	1066	39.05	0.13	1046	40.19	0.16	593	66.09	0.06	1257	28.13	0.24	1655	5.37	0.41
45 to 60	1575	1007	36.06	0.14	1012	35.75	0.17	615	60.95	0.06	1173	25.52	0.25	1483	5.84	0.37
Over 60	1909	1172	38.61	0.13	1242	34.94	0.20	761	60.14	0.07	1401	26.61	0.24	1777	6.91	0.36
North East	318	191	39.94	0.12	196	38.36	0.17	109	65.72	0.06	246	22.64	0.25	303	4.72	0.39
North West & Merseyside	747	439	41.23	0.12	452	39.49	0.17	277	62.92	0.06	524	29.85	0.23	708	5.22	0.43
Yorkshire & Humber	560	338	39.64	0.13	367	34.46	0.17	209	62.68	0.06	395	29.46	0.23	523	6.61	0.40
East Midlands	438	246	43.84	0.13	277	36.76	0.19	171	60.96	0.07	322	26.48	0.24	415	5.25	0.37
West Midlands	558	359	35.66	0.13	385	31.00	0.19	223	60.04	0.06	409	26.70	0.23	522	6.45	0.40
Eastern	638	397	37.77	0.14	388	39.19	0.18	244	61.76	0.07	454	28.84	0.26	597	6.43	0.36
London	605	374	38.18	0.16	325	46.28	0.16	205	66.12	0.06	415	31.41	0.25	562	7.11	0.36
South East	920	577	37.28	0.14	582	36.74	0.18	308	66.52	0.06	682	25.87	0.26	853	7.28	0.35
South West	616	388	37.01	0.14	386	37.34	0.19	232	62.34	0.07	454	26.30	0.24	585	5.03	0.36
Wales	357	218	38.94	0.12	215	39.78	0.16	137	61.62	0.06	254	28.85	0.25	345	3.36	0.41
Men	3665	2345	36.02	0.13	2387	34.87	0.18	1413	61.45	0.06	2710	26.06	0.25	3477	5.13	0.38
Women	2092	1182	43.50	0.14	1186	43.31	0.17	702	66.44	0.07	1445	30.93	0.24	1936	7.46	0.39
White	5475	3360	38.63	0.13	3402	37.86	0.18	1996	63.54	0.06	3991	27.11	0.25	5160	5.75	0.38
Mixed	32	23	28.13	0.17	18	43.75	0.18	15	53.13	0.09	17	46.88	0.18	29	9.38	0.38
Asian	130	82	36.92	0.16	73	43.85	0.20	56	56.92	0.08	76	41.54	0.12	117	10.00	0.43
Black	90	46	48.89	0.13	64	28.89	0.24	36	60.00	0.12	55	38.89	0.17	79	12.22	0.35
Other	30	16	46.67	0.19	16	46.67	0.20	12	60.00	0.07	16	46.67	0.13	28	6.67	0.41
Sample mean (Total)	(5757)	3527	38.74	0.13	3573	37.94	0.18	2115	63.26	0.06	4155	27.83	0.24	5413	5.98	0.38

Miscellaneous 2003-04	obs	Eggs			Fats			Sugar			Potatoes			Cereals		
		cons	c	w	cons	c	w	cons	c	w	cons	c	w	cons	c	w
1 or 2 Adults only	3513	2009	42.81	0.14	1945	44.63	0.18	1102	68.63	0.06	2380	32.25	0.26	3160	10.05	0.36
Single parents	413	235	43.10	0.13	259	37.29	0.17	152	63.20	0.08	274	33.66	0.21	384	7.02	0.41
Children, 2 adults	1332	864	35.14	0.13	893	32.96	0.16	494	62.91	0.05	1032	22.52	0.25	1290	3.15	0.40
Children, >2 adults	241	168	30.29	0.13	181	24.90	0.18	107	55.60	0.05	182	24.48	0.23	233	3.32	0.42
>2 adults, no children	384	272	29.17	0.15	294	23.44	0.18	180	53.13	0.06	315	17.97	0.25	367	4.43	0.37
High managerial	686	453	33.97	0.16	384	44.02	0.16	172	74.93	0.05	488	28.86	0.26	623	9.18	0.37
Low managerial	1980	1188	40.00	0.15	1153	41.77	0.17	609	69.24	0.05	1408	28.89	0.25	1818	8.18	0.38
Workers-technical	1612	970	39.83	0.12	1080	33.00	0.17	665	58.75	0.07	1148	28.78	0.24	1530	5.09	0.40
Never worked-unemployed	117	65	44.44	0.11	76	35.04	0.21	54	53.85	0.08	78	33.33	0.19	113	3.42	0.41
Students	68	39	42.65	0.21	38	44.12	0.14	18	73.53	0.05	41	39.71	0.24	56	17.65	0.35
Other	1420	833	41.34	0.13	841	40.77	0.19	517	63.59	0.07	1020	28.17	0.25	1294	8.87	0.36
Under 30	553	293	47.02	0.15	267	51.72	0.15	151	72.69	0.06	309	44.12	0.22	506	8.50	0.42
30 to 45	1819	1092	39.97	0.14	1128	37.99	0.17	615	66.19	0.06	1281	29.58	0.24	1707	6.16	0.40
45 to 60	1600	1015	36.56	0.14	1031	35.56	0.17	565	64.69	0.06	1213	24.19	0.26	1473	7.94	0.37
Over 60	1911	1148	39.93	0.14	1146	40.03	0.19	704	63.16	0.07	1380	27.79	0.25	1748	8.53	0.35
North East	313	186	40.58	0.13	204	34.82	0.18	101	67.73	0.05	244	22.04	0.25	292	6.71	0.38
North West & Merseyside	743	434	41.59	0.12	457	38.49	0.17	271	63.53	0.06	521	29.88	0.23	690	7.13	0.42
Yorkshire & Humber	596	346	41.95	0.14	349	41.44	0.17	204	65.77	0.06	417	30.03	0.24	554	7.05	0.39
East Midlands	497	301	39.44	0.14	295	40.64	0.16	183	63.18	0.06	351	29.38	0.25	466	6.24	0.38
West Midlands	571	344	39.75	0.12	375	34.33	0.16	213	62.70	0.06	406	28.90	0.26	545	4.55	0.39
Eastern	605	379	37.36	0.14	386	36.20	0.18	206	65.95	0.07	430	28.93	0.25	561	7.27	0.37
London	639	398	37.72	0.18	319	50.08	0.16	198	69.01	0.06	425	33.49	0.26	563	11.89	0.35
South East	898	539	39.98	0.14	529	41.09	0.17	276	69.27	0.05	677	24.61	0.27	813	9.47	0.36
South West	652	415	36.35	0.16	411	36.96	0.18	244	62.58	0.07	452	30.67	0.23	596	8.59	0.36
Wales	369	206	44.17	0.11	247	33.06	0.19	139	62.33	0.06	260	29.54	0.25	354	4.07	0.39
Men	3713	2321	37.49	0.14	2340	36.98	0.17	1362	63.32	0.06	2703	27.20	0.25	3479	6.30	0.38
Women	2170	1227	43.46	0.14	1232	43.23	0.17	673	68.99	0.06	1480	31.80	0.24	1955	9.91	0.38
White	5530	3315	40.05	0.14	3375	38.97	0.17	1907	65.52	0.06	3990	27.85	0.25	5117	7.47	0.38
Mixed	34	26	23.53	0.17	21	38.24	0.16	13	61.76	0.08	24	29.41	0.24	30	11.76	0.35
Asian	154	101	34.42	0.18	88	42.86	0.19	55	64.29	0.07	87	43.51	0.16	139	9.74	0.41
Black	142	87	38.73	0.20	75	47.18	0.23	49	65.49	0.09	68	52.11	0.15	130	8.45	0.33
Other	23	19	17.39	0.24	13	43.48	0.20	11	52.17	0.07	14	39.13	0.25	18	21.74	0.24
Sample mean (Total)	(5883)	3548	39.69	0.14	3572	39.28	0.17	2035	65.41	0.06	4183	28.90	0.25	5434	7.63	0.38

Miscellaneous 2004-05	obs	Eggs			Fats			Sugar			Potatoes			Cereals		
		cons	c	w	cons	c	w	cons	c	w	cons	c	w	cons	c	w
1 or 2 Adults only	3378	1868	44.70	0.14	1884	44.23	0.17	1042	69.15	0.06	2306	31.73	0.26	3027	10.39	0.36
Single parents	387	198	48.84	0.12	211	45.48	0.16	118	69.51	0.06	257	33.59	0.24	366	5.43	0.42
Children, 2 adults	1263	810	35.87	0.13	832	34.13	0.16	474	62.47	0.06	983	22.17	0.25	1225	3.01	0.39
Children, >2 adults	219	155	29.22	0.14	164	25.11	0.18	106	51.60	0.07	179	18.26	0.24	214	2.28	0.37
>2 adults, no children	427	278	34.89	0.13	283	33.72	0.16	182	57.38	0.06	335	21.55	0.28	417	2.34	0.37
High managerial	651	406	37.63	0.17	326	49.92	0.14	173	73.43	0.05	492	24.42	0.28	588	9.68	0.37
Low managerial	1740	1034	40.57	0.14	1010	41.95	0.17	526	69.77	0.05	1264	27.36	0.26	1621	6.84	0.37
Workers-technical	1139	664	41.70	0.12	736	35.38	0.18	441	61.28	0.06	812	28.71	0.25	1071	5.97	0.39
Never worked-unemployed	111	64	42.34	0.15	78	29.73	0.16	48	56.76	0.10	73	34.23	0.20	103	7.21	0.39
Students	51	27	47.06	0.22	24	52.94	0.19	11	78.43	0.04	24	52.94	0.18	47	7.84	0.37
Other	1982	1114	43.79	0.13	1200	39.46	0.18	723	63.52	0.07	1395	29.62	0.24	1819	8.22	0.37
Under 30	475	220	53.68	0.13	220	53.68	0.16	116	75.58	0.06	286	39.79	0.23	441	7.16	0.43
30 to 45	1697	1001	41.01	0.14	1003	40.90	0.17	545	67.88	0.06	1178	30.58	0.24	1578	7.01	0.39
45 to 60	1625	991	39.02	0.13	1005	38.15	0.16	594	63.45	0.06	1240	23.69	0.27	1507	7.26	0.37
Over 60	1877	1097	41.56	0.14	1146	38.95	0.18	667	64.46	0.07	1356	27.76	0.25	1723	8.20	0.36
North East	255	139	45.49	0.13	151	40.78	0.17	81	68.24	0.07	182	28.63	0.26	240	5.88	0.37
North West & Merseyside	721	453	37.17	0.13	435	39.67	0.16	234	67.55	0.06	528	26.77	0.24	669	7.21	0.40
Yorkshire & Humber	567	303	46.56	0.13	332	41.45	0.17	190	66.49	0.06	400	29.45	0.24	529	6.70	0.39
East Midlands	473	282	40.38	0.13	312	34.04	0.18	176	62.79	0.06	348	26.43	0.26	444	6.13	0.38
West Midlands	541	309	42.88	0.12	343	36.60	0.17	205	62.11	0.07	395	26.99	0.24	516	4.62	0.40
Eastern	633	359	43.29	0.14	378	40.28	0.18	200	68.40	0.05	451	28.75	0.27	581	8.21	0.36
London	631	392	37.88	0.18	333	47.23	0.17	208	67.04	0.07	409	35.18	0.24	564	10.62	0.34
South East	887	525	40.81	0.14	510	42.50	0.17	293	66.97	0.06	643	27.51	0.26	808	8.91	0.36
South West	618	357	42.23	0.14	369	40.29	0.17	211	65.86	0.06	436	29.45	0.26	574	7.12	0.36
Wales	348	190	45.40	0.12	211	39.37	0.16	124	64.37	0.06	268	22.99	0.27	324	6.90	0.40
Men	3585	2169	39.50	0.14	2229	37.82	0.17	1311	63.43	0.06	2605	27.34	0.25	3356	6.39	0.38
Women	2089	1140	45.43	0.14	1145	45.19	0.17	611	70.75	0.06	1455	30.35	0.26	1893	9.38	0.37
White	5334	3106	41.77	0.14	3177	40.44	0.17	1769	66.84	0.06	3869	27.47	0.26	4941	7.37	0.38
Mixed	30	19	36.67	0.21	18	40.00	0.18	16	46.67	0.14	14	53.33	0.10	27	10.00	0.37
Asian	155	88	43.23	0.14	88	43.23	0.23	68	56.13	0.09	91	41.29	0.13	147	5.16	0.41
Black	120	75	37.50	0.19	72	40.00	0.22	57	52.50	0.11	64	46.67	0.16	104	13.33	0.32
Other	35	21	40.00	0.25	19	45.71	0.18	12	65.71	0.06	22	37.14	0.22	30	14.29	0.30
Sample mean (Total)	(5674)	3309	41.68	0.14	3374	40.54	0.17	1922	66.13	0.06	4060	28.45	0.25	5249	7.49	0.38

Miscellaneous 2005-06	obs	Eggs			Fats			Sugar			Potatoes			Cereals		
		cons	c	w	cons	c	w	cons	c	w	cons	c	w	cons	c	w
1 or 2 Adults only	3473	1939	44.17	0.14	1920	44.72	0.17	1065	69.33	0.06	2407	30.69	0.25	3120	10.16	0.37
Single parents	403	221	45.16	0.13	217	46.15	0.13	127	68.49	0.07	271	32.75	0.24	386	4.22	0.43
Children, 2 adults	1209	795	34.24	0.14	756	37.47	0.14	455	62.37	0.06	945	21.84	0.24	1155	4.47	0.41
Children, >2 adults	191	140	26.70	0.14	142	25.65	0.16	93	51.31	0.07	161	15.71	0.23	184	3.66	0.40
>2 adults, no children	415	278	33.01	0.13	275	33.73	0.17	174	58.07	0.05	324	21.93	0.24	404	2.65	0.41
High managerial	602	382	36.54	0.16	313	48.01	0.14	172	71.43	0.05	448	25.58	0.26	543	9.80	0.39
Low managerial	1678	998	40.52	0.15	928	44.70	0.15	512	69.49	0.05	1255	25.21	0.26	1533	8.64	0.39
Workers-technical	1137	685	39.75	0.13	721	36.59	0.17	403	64.56	0.06	811	28.67	0.23	1083	4.75	0.41
Never worked-unemployed	118	66	44.07	0.13	73	38.14	0.16	50	57.63	0.08	61	48.31	0.21	109	7.63	0.42
Students	80	50	37.50	0.23	33	58.75	0.11	23	71.25	0.08	48	40.00	0.18	71	11.25	0.40
Other	2076	1192	42.58	0.13	1242	40.17	0.18	754	63.68	0.07	1485	28.47	0.25	1910	8.00	0.37
Under 30	492	260	47.15	0.14	260	47.15	0.15	139	71.75	0.06	306	37.80	0.23	449	8.74	0.42
30 to 45	1662	976	41.28	0.14	915	44.95	0.15	552	66.79	0.06	1158	30.32	0.24	1545	7.04	0.41
45 to 60	1558	950	39.02	0.14	942	39.54	0.16	543	65.15	0.06	1185	23.94	0.25	1443	7.38	0.39
Over 60	1979	1187	40.02	0.14	1193	39.72	0.18	680	65.64	0.07	1459	26.28	0.25	1812	8.44	0.36
North East	280	162	42.14	0.13	159	43.21	0.16	79	71.79	0.05	198	29.29	0.24	266	5.00	0.41
North West & Merseyside	722	402	44.32	0.12	435	39.75	0.17	253	64.96	0.06	541	25.07	0.23	676	6.37	0.42
Yorkshire & Humber	582	346	40.55	0.14	354	39.18	0.17	190	67.35	0.06	416	28.52	0.24	541	7.04	0.39
East Midlands	508	304	40.16	0.13	314	38.19	0.18	188	62.99	0.07	357	29.72	0.23	481	5.32	0.39
West Midlands	538	316	41.26	0.13	320	40.52	0.15	201	62.64	0.07	381	29.18	0.24	499	7.25	0.42
Eastern	577	344	40.38	0.14	349	39.51	0.16	189	67.24	0.06	428	25.82	0.26	523	9.36	0.38
London	601	372	38.10	0.18	303	49.58	0.16	193	67.89	0.06	385	35.94	0.23	523	12.98	0.36
South East	937	573	38.85	0.15	520	44.50	0.16	298	68.20	0.06	694	25.93	0.26	861	8.11	0.37
South West	614	378	38.44	0.15	354	42.35	0.16	208	66.12	0.06	460	25.08	0.26	572	6.84	0.37
Wales	332	176	46.99	0.11	202	39.16	0.17	115	65.36	0.06	248	25.30	0.26	307	7.53	0.40
Men	3499	2156	38.38	0.14	2114	39.58	0.16	1242	64.50	0.06	2579	26.29	0.25	3250	7.12	0.39
Women	2192	1217	44.48	0.14	1196	45.44	0.16	672	69.34	0.06	1529	30.25	0.24	1999	8.80	0.39
White	5290	3119	41.04	0.14	3104	41.32	0.16	1757	66.79	0.06	3879	26.67	0.26	4890	7.56	0.39
Mixed	39	26	33.33	0.20	20	48.72	0.18	13	66.67	0.06	28	28.21	0.20	35	10.26	0.36
Asian	201	135	32.84	0.17	115	42.79	0.20	86	57.21	0.08	114	43.28	0.12	188	6.47	0.43
Black	109	59	45.87	0.19	42	61.47	0.14	41	62.39	0.10	53	51.38	0.16	97	11.01	0.41
Other	52	34	34.62	0.21	29	44.23	0.19	17	67.31	0.08	34	34.62	0.22	39	25.00	0.30
Sample mean (Total)	(5691)	3373	40.73	0.14	3310	41.84	0.16	1914	66.37	0.06	4108	27.82	0.25	5249	7.77	0.39

G.4 Fruit & Vegetables

Fruit & Vegetables 2001-02		Peas & Beans			Turnips & Swede			Other Vegetables			Tree Fruit			Soft Fruit		
	obs	*cons*	*c*	*w*	*cons*	*c*	*w*	*cons*	*c*	*w*	*cons*	*c*	*w*	*cons*	*c*	*w*
1 or 2 Adults only	3708	2303	37.89	0.11	476	87.16	0.01	3451	6.93	0.59	2449	33.95	0.20	1092	70.55	0.09
Single parents	445	289	35.06	0.12	31	93.03	0.01	379	14.83	0.58	268	39.78	0.22	95	78.65	0.08
Children, 2 adults	1459	1112	23.78	0.11	180	87.66	0.01	1394	4.46	0.60	1091	25.22	0.20	550	62.30	0.08
Children, >2 adults	265	213	19.62	0.12	42	84.15	0.01	258	2.64	0.57	210	20.75	0.22	92	65.28	0.08
>2 adults, no children	443	357	19.41	0.13	87	80.36	0.01	429	3.16	0.60	328	25.96	0.19	168	62.08	0.08
High managerial	688	469	31.83	0.09	66	90.41	0.00	675	1.89	0.61	525	23.69	0.19	334	51.45	0.10
Low managerial	1842	1241	32.63	0.10	215	88.33	0.01	1747	5.16	0.61	1356	26.38	0.20	689	62.60	0.09
Workers-technical	1331	980	26.37	0.14	186	86.03	0.01	1233	7.36	0.60	857	35.61	0.19	308	76.86	0.06
Never worked-unemployed	80	62	22.50	0.19	7	91.25	0.01	72	10.00	0.57	42	47.50	0.18	14	82.50	0.05
Students	26	17	34.62	0.09	2	92.31	0.00	24	7.69	0.62	19	26.92	0.24	5	80.77	0.04
Other	2353	1505	36.04	0.12	340	85.55	0.01	2160	8.20	0.56	1547	34.25	0.22	647	72.50	0.09
Under 30	578	347	39.97	0.10	29	94.98	0.00	514	11.07	0.64	328	43.25	0.18	121	79.07	0.07
30 to 45	1984	1389	29.99	0.11	207	89.57	0.01	1854	6.55	0.61	1343	32.31	0.19	631	68.20	0.08
45 to 60	1763	1288	26.94	0.12	267	84.86	0.01	1675	4.99	0.60	1276	27.62	0.20	620	64.83	0.08
Over 60	1995	1250	37.34	0.11	313	84.31	0.01	1868	6.37	0.56	1399	29.87	0.22	625	68.67	0.09
North East	314	223	28.98	0.12	78	75.16	0.02	289	7.96	0.58	212	32.48	0.20	92	70.70	0.07
North West & Merseyside	852	577	32.28	0.11	115	86.50	0.01	787	7.63	0.60	549	35.56	0.20	267	68.66	0.09
Yorkshire & Humber	600	413	31.17	0.12	95	84.17	0.01	564	6.00	0.61	394	34.33	0.19	153	74.50	0.07
East Midlands	535	373	30.28	0.12	56	89.53	0.01	503	5.98	0.62	362	32.34	0.19	154	71.22	0.07
West Midlands	645	443	31.32	0.12	63	90.23	0.01	606	6.05	0.59	429	33.49	0.20	171	73.49	0.08
Eastern	640	449	29.84	0.11	76	88.13	0.01	607	5.16	0.59	461	27.97	0.20	208	67.50	0.09
London	678	401	40.86	0.09	42	93.81	0.00	644	5.01	0.61	479	29.35	0.21	232	65.78	0.09
South East	1035	692	33.14	0.11	121	88.31	0.01	968	6.47	0.58	730	29.47	0.20	376	63.67	0.10
South West	666	448	32.73	0.12	104	84.38	0.01	619	7.06	0.57	488	26.73	0.22	237	64.41	0.09
Wales	355	255	28.17	0.14	66	81.41	0.01	324	8.73	0.58	242	31.83	0.20	107	69.86	0.07
Men	4007	2862	28.58	0.11	572	85.73	0.01	3784	5.57	0.59	2839	29.15	0.20	1338	66.61	0.08
Women	2313	1412	38.95	0.11	244	89.45	0.01	2127	8.04	0.59	1507	34.85	0.20	659	71.51	0.09
White	5987	4077	31.90	0.11	807	86.52	0.01	5590	6.63	0.59	4096	31.59	0.20	1911	68.08	0.09
Mixed	39	24	38.46	0.10	3	92.31	0.00	39	0.00	0.56	31	20.51	0.26	16	58.97	0.08
Asian	126	75	40.48	0.08	1	99.21	0.00	126	0.00	0.64	98	22.22	0.23	35	72.22	0.05
Black	116	66	43.10	0.10	4	96.55	0.00	106	8.62	0.63	80	31.03	0.23	18	84.48	0.04
Other	52	32	38.46	0.08	1	98.08	0.00	50	3.85	0.62	41	21.15	0.22	17	67.31	0.07
Sample mean (Total)	(6320)	4274	32.37	0.11	816	87.09	0.01	5911	6.47	0.59	4346	31.23	0.20	1997	68.40	0.08

Fruit & Vegetables 2002-03	obs	Peas & Beans			Turnips & Swede			Other Vegetables			Tree Fruit			Soft Fruit		
		cons	c	w	cons	c	w	cons	c	w	cons	c	w	cons	c	w
1 or 2 Adults only	3481	2184	37.26	0.11	455	86.93	0.01	3224	7.38	0.56	2310	33.64	0.21	1115	67.97	0.11
Single parents	390	266	31.79	0.13	31	92.05	0.01	355	8.97	0.58	223	42.82	0.19	99	74.62	0.08
Children, 2 adults	1285	982	23.58	0.10	175	86.38	0.01	1232	4.12	0.58	986	23.27	0.22	474	63.11	0.09
Children, >2 adults	193	158	18.13	0.12	33	82.90	0.01	189	2.07	0.61	145	24.87	0.19	56	70.98	0.06
>2 adults, no children	408	324	20.59	0.11	89	78.19	0.01	401	1.72	0.59	332	18.63	0.21	156	61.76	0.08
High managerial	633	424	33.02	0.09	71	88.78	0.01	613	3.16	0.61	497	21.49	0.20	264	58.29	0.10
Low managerial	1688	1198	29.03	0.10	219	87.03	0.01	1611	4.56	0.59	1240	26.54	0.21	613	63.68	0.10
Workers-technical	1179	840	28.75	0.13	167	85.84	0.01	1100	6.70	0.58	772	34.52	0.20	317	73.11	0.07
Never worked-unemployed	37	21	43.24	0.13	3	91.89	0.00	27	27.03	0.60	12	67.57	0.20	6	83.78	0.07
Students	21	13	38.10	0.08	0	100.00	0.00	20	4.76	0.62	17	19.05	0.23	6	71.43	0.07
Other	2199	1418	35.52	0.12	323	85.31	0.01	2030	7.69	0.54	1458	33.70	0.23	694	68.44	0.11
Under 30	499	320	35.87	0.12	31	93.79	0.01	442	11.42	0.63	282	43.49	0.17	115	76.95	0.07
30 to 45	1743	1201	31.10	0.11	194	88.87	0.01	1639	5.97	0.60	1211	30.52	0.21	541	68.96	0.08
45 to 60	1595	1160	27.27	0.11	238	85.08	0.01	1523	4.51	0.58	1136	28.78	0.21	570	64.26	0.10
Over 60	1920	1233	35.78	0.12	320	83.33	0.01	1797	6.41	0.53	1367	28.80	0.23	674	64.90	0.11
North East	318	223	29.87	0.11	80	74.84	0.02	291	8.49	0.59	184	42.14	0.20	87	72.64	0.08
North West & Merseyside	747	516	30.92	0.11	91	87.82	0.01	682	8.70	0.58	497	33.47	0.22	229	69.34	0.09
Yorkshire & Humber	560	381	31.96	0.11	91	83.75	0.01	519	7.32	0.59	380	32.14	0.20	174	68.93	0.09
East Midlands	439	295	32.80	0.12	49	88.84	0.01	417	5.01	0.57	312	28.93	0.23	131	70.16	0.08
West Midlands	557	397	28.73	0.13	56	89.95	0.01	513	7.90	0.59	357	35.91	0.20	164	70.56	0.08
Eastern	638	438	31.35	0.11	58	90.91	0.01	605	5.17	0.58	476	25.39	0.21	205	67.87	0.10
London	605	382	36.86	0.09	54	91.07	0.01	575	4.96	0.58	435	28.10	0.22	201	66.78	0.10
South East	920	638	30.65	0.11	126	86.30	0.01	877	4.67	0.56	650	29.35	0.20	377	59.02	0.12
South West	616	389	36.85	0.11	107	82.63	0.01	593	3.73	0.56	458	25.65	0.23	217	64.77	0.09
Wales	357	255	28.57	0.15	71	80.11	0.01	329	7.84	0.55	247	30.81	0.20	115	67.79	0.09
Men	3664	2609	28.79	0.11	564	84.61	0.01	3457	5.65	0.57	2635	28.08	0.21	1235	66.29	0.10
Women	2093	1305	37.65	0.11	219	89.54	0.01	1944	7.12	0.58	1361	34.97	0.21	665	68.23	0.10
White	5466	3750	31.39	0.11	768	85.95	0.01	5126	6.22	0.57	3774	30.96	0.21	1808	66.92	0.10
Mixed	36	20	44.44	0.07	5	86.11	0.01	30	16.67	0.54	27	25.00	0.27	10	72.22	0.11
Asian	129	77	40.31	0.08	6	95.35	0.00	128	0.78	0.58	110	14.73	0.25	54	58.14	0.09
Black	93	44	52.69	0.06	3	96.77	0.00	86	7.53	0.66	58	37.63	0.23	17	81.72	0.05
Other	33	23	30.30	0.16	1	96.97	0.00	31	6.06	0.52	27	18.18	0.25	11	66.67	0.06
Sample mean (Total)	(5757)	3914	32.01	0.11	783	86.40	0.01	5401	6.18	0.57	3996	30.59	0.21	1900	67.00	0.10

Appendix G. EFS Censoring & Budget Shares

Fruit & Vegetables 2003-04		Peas & Beans			Turnips & Swede			Other Vegetables			Tree Fruit			Soft Fruit		
	obs	*cons*	*c*	*w*	*cons*	*c*	*w*	*cons*	*c*	*w*	*cons*	*c*	*w*	*cons*	*c*	*w*
1 or 2 Adults only	3476	2110	39.30	0.10	451	87.03	0.01	3246	6.62	0.57	2257	35.07	0.21	1149	66.94	0.11
Single parents	402	257	36.07	0.12	38	90.55	0.01	365	9.20	0.61	217	46.02	0.20	91	77.36	0.06
Children, 2 adults	1363	1008	26.05	0.11	182	86.65	0.01	1316	3.45	0.58	1024	24.87	0.21	526	61.41	0.10
Children, >2 adults	245	189	22.86	0.10	38	84.49	0.01	242	1.22	0.57	190	22.45	0.22	109	55.51	0.10
>2 adults, no children	397	291	26.70	0.11	64	83.88	0.01	388	2.27	0.56	296	25.44	0.22	161	59.45	0.10
High managerial	689	461	33.09	0.09	91	86.79	0.01	677	1.74	0.57	534	22.50	0.21	313	54.57	0.12
Low managerial	2024	1345	33.55	0.10	238	88.24	0.01	1938	4.25	0.59	1394	31.13	0.20	798	60.57	0.10
Workers-technical	1592	1122	29.52	0.12	224	85.93	0.01	1474	7.41	0.58	1004	36.93	0.20	429	73.05	0.08
Never worked-unemployed	113	75	33.63	0.11	12	89.38	0.01	99	12.39	0.58	64	43.36	0.21	24	78.76	0.09
Students	67	36	46.27	0.09	6	91.04	0.01	62	7.46	0.68	37	44.78	0.18	14	79.10	0.05
Other	1398	816	41.63	0.11	202	85.55	0.01	1307	6.51	0.53	951	31.97	0.24	458	67.24	0.11
Under 30	534	309	42.13	0.11	21	96.07	0.00	482	9.74	0.63	277	48.13	0.19	115	78.46	0.07
30 to 45	1829	1234	32.53	0.10	201	89.01	0.01	1739	4.92	0.60	1231	32.70	0.20	618	66.21	0.09
45 to 60	1628	1159	28.81	0.10	257	84.21	0.01	1553	4.61	0.57	1177	27.70	0.21	645	60.38	0.11
Over 60	1892	1153	39.06	0.11	294	84.46	0.01	1783	5.76	0.54	1299	31.34	0.23	658	65.22	0.11
North East	313	213	31.95	0.10	78	75.08	0.02	289	7.67	0.57	199	36.42	0.20	107	65.81	0.12
North West & Merseyside	743	478	35.67	0.10	96	87.08	0.01	695	6.46	0.58	478	35.67	0.21	250	66.35	0.10
Yorkshire & Humber	596	375	37.08	0.09	85	85.74	0.01	558	6.38	0.59	421	29.36	0.21	208	65.10	0.10
East Midlands	497	327	34.21	0.11	56	88.73	0.01	472	5.03	0.57	333	33.00	0.21	167	66.40	0.10
West Midlands	571	391	31.52	0.11	60	89.49	0.01	537	5.95	0.57	393	31.17	0.21	174	69.53	0.10
Eastern	605	378	37.52	0.10	71	88.26	0.01	582	3.80	0.58	408	32.56	0.21	212	64.96	0.10
London	639	393	38.50	0.10	45	92.96	0.00	603	5.63	0.58	437	31.61	0.22	210	67.14	0.10
South East	898	595	33.74	0.11	109	87.86	0.01	862	4.01	0.57	632	29.62	0.21	344	61.69	0.11
South West	652	451	30.83	0.11	106	83.74	0.01	618	5.21	0.57	441	32.36	0.21	240	63.19	0.11
Wales	369	254	31.17	0.12	67	81.84	0.01	341	7.59	0.55	242	34.42	0.22	124	66.40	0.09
Men	3718	2550	31.41	0.11	508	86.34	0.01	3511	5.57	0.57	2632	29.21	0.21	1352	63.64	0.10
Women	2165	1305	39.72	0.10	265	87.76	0.01	2046	5.50	0.58	1352	37.55	0.21	684	68.41	0.10
White	5512	3665	33.51	0.11	760	86.21	0.01	5211	5.46	0.57	3723	32.46	0.21	1921	65.15	0.10
Mixed	42	27	35.71	0.07	1	97.62	0.00	39	7.14	0.54	35	16.67	0.28	15	64.29	0.11
Asian	163	86	47.24	0.07	8	95.09	0.00	150	7.98	0.54	123	24.54	0.27	66	59.51	0.11
Black	140	64	54.29	0.08	4	97.14	0.00	132	5.71	0.62	87	37.86	0.24	32	77.14	0.06
Other	26	13	50.00	0.08	0	100.00	0.00	25	3.85	0.68	16	38.46	0.22	2	92.31	0.02
Sample mean (Total)	(5883)	3855	34.47	0.10	773	86.86	0.01	5557	5.54	0.57	3984	32.28	0.21	2036	65.39	0.10

Fruit & Vegetables 2004-05		Peas & Beans			Turnips & Swede			Other Vegetables			Tree Fruit			Soft Fruit		
	obs	cons	c	w	cons	c	w	cons	c	w	cons	c	w	cons	c	w
1 or 2 Adults only	3380	2036	39.76	0.10	436	87.10	0.01	3150	6.80	0.57	2329	31.09	0.21	1237	63.40	0.12
Single parents	375	246	34.40	0.11	26	93.07	0.01	333	11.20	0.58	211	43.73	0.19	115	69.33	0.11
Children, 2 adults	1263	912	27.79	0.10	156	87.65	0.01	1216	3.72	0.58	965	23.59	0.21	539	57.32	0.11
Children, >2 adults	225	180	20.00	0.11	42	81.33	0.01	219	2.67	0.56	179	20.44	0.21	98	56.44	0.11
>2 adults, no children	431	331	23.20	0.11	93	78.42	0.01	416	3.48	0.58	333	22.74	0.19	188	56.38	0.11
High managerial	664	423	36.30	0.08	78	88.25	0.00	649	2.26	0.57	539	18.83	0.21	336	49.40	0.13
Low managerial	1758	1183	32.71	0.10	204	88.40	0.01	1687	4.04	0.58	1321	24.86	0.20	747	57.51	0.11
Workers-technical	1131	792	29.97	0.12	166	85.32	0.01	1065	5.84	0.59	750	33.69	0.19	380	66.40	0.10
Never worked-unemployed	111	75	32.43	0.13	12	89.19	0.01	96	13.51	0.60	51	54.05	0.18	23	79.28	0.07
Students	47	23	51.06	0.09	5	89.36	0.00	43	8.51	0.69	25	46.81	0.16	15	68.09	0.05
Other	1963	1209	38.41	0.10	288	85.33	0.01	1794	8.61	0.54	1331	32.20	0.22	676	65.56	0.12
Under 30	456	259	43.20	0.10	17	96.27	0.00	403	11.62	0.62	263	42.32	0.19	116	74.56	0.09
30 to 45	1710	1110	35.09	0.10	173	89.88	0.01	1613	5.67	0.59	1210	29.24	0.20	636	62.81	0.11
45 to 60	1631	1171	28.20	0.10	266	83.69	0.01	1568	3.86	0.58	1209	25.87	0.20	692	57.57	0.11
Over 60	1877	1165	37.93	0.10	297	84.18	0.01	1750	6.77	0.54	1335	28.88	0.22	733	60.95	0.13
North East	256	179	30.08	0.09	66	74.22	0.02	234	8.59	0.57	154	39.84	0.20	75	70.70	0.12
North West & Merseyside	721	484	32.87	0.10	104	85.58	0.01	673	6.66	0.57	493	31.62	0.20	276	61.72	0.12
Yorkshire & Humber	567	368	35.10	0.10	87	84.66	0.01	520	8.29	0.59	386	31.92	0.19	215	62.08	0.11
East Midlands	473	337	28.75	0.11	46	90.27	0.01	448	5.29	0.60	330	30.23	0.19	161	65.96	0.10
West Midlands	541	352	34.94	0.11	47	91.31	0.01	520	3.88	0.57	379	29.94	0.21	209	61.37	0.11
Eastern	633	405	36.02	0.09	63	90.05	0.01	598	5.53	0.55	477	24.64	0.22	270	57.35	0.13
London	631	369	41.52	0.08	52	91.76	0.00	586	7.13	0.59	461	26.94	0.21	238	62.28	0.11
South East	887	572	35.51	0.10	97	89.06	0.01	848	4.40	0.58	652	26.49	0.20	350	60.54	0.11
South West	617	396	35.82	0.10	115	81.36	0.01	580	6.00	0.56	448	27.39	0.21	252	59.16	0.12
Wales	348	243	30.17	0.13	76	78.16	0.01	327	6.03	0.53	237	31.90	0.22	131	62.36	0.11
Men	3594	2429	32.42	0.10	511	85.78	0.01	3401	5.37	0.57	2616	27.21	0.21	1437	60.02	0.11
Women	2080	1276	38.65	0.10	242	88.37	0.01	1933	7.07	0.57	1401	32.64	0.21	740	64.42	0.12
White	5331	3538	33.63	0.10	741	86.10	0.01	5012	5.98	0.57	3764	29.39	0.20	2057	61.41	0.12
Mixed	29	16	44.83	0.11	0	100.00	0.00	28	3.45	0.60	20	31.03	0.21	6	79.31	0.08
Asian	157	77	50.96	0.08	9	94.27	0.00	153	2.55	0.56	122	22.29	0.25	65	58.60	0.10
Black	120	52	56.67	0.07	2	98.33	0.00	106	11.67	0.64	83	30.83	0.21	34	71.67	0.08
Other	37	22	40.54	0.09	1	97.30	0.00	35	5.41	0.65	28	24.32	0.17	15	59.46	0.10
Sample mean (Total)	(5674)	3705	34.70	0.10	753	86.73	0.01	5334	5.99	0.57	4017	29.20	0.21	2177	61.63	0.12

Fruit & Vegetables 2005-06	obs	Peas & Beans			Turnips & Swede			Other Vegetables			Tree Fruit			Soft Fruit		
		cons	c	w	cons	c	w	cons	c	w	cons	c	w	cons	c	w
1 or 2 Adults only	3480	2099	39.68	0.10	431	87.61	0.01	3220	7.47	0.56	2370	31.90	0.20	1314	62.24	0.13
Single parents	401	245	38.90	0.11	29	92.77	0.01	363	9.48	0.58	252	37.16	0.19	139	65.34	0.12
Children, 2 adults	1206	893	25.95	0.10	177	85.32	0.01	1168	3.15	0.57	969	19.65	0.20	594	50.75	0.12
Children, >2 adults	194	147	24.23	0.10	30	84.54	0.01	189	2.58	0.60	150	22.68	0.20	86	55.67	0.09
>2 adults, no children	410	309	24.63	0.11	78	80.98	0.01	394	3.90	0.56	324	20.98	0.20	191	53.41	0.12
High managerial	625	395	36.80	0.08	76	87.84	0.01	613	1.92	0.58	498	20.32	0.20	341	45.44	0.14
Low managerial	1711	1166	31.85	0.10	215	87.43	0.01	1632	4.62	0.58	1262	26.24	0.19	776	54.65	0.13
Workers-technical	1112	734	33.99	0.11	150	86.51	0.01	1025	7.82	0.58	762	31.47	0.20	409	63.22	0.10
Never worked-unemployed	105	70	33.33	0.13	8	92.38	0.00	93	11.43	0.58	62	40.95	0.21	30	71.43	0.07
Students	75	42	44.00	0.09	7	90.67	0.01	70	6.67	0.60	45	40.00	0.23	29	61.33	0.09
Other	2063	1286	37.66	0.11	289	85.99	0.01	1901	7.85	0.54	1436	30.39	0.21	739	64.18	0.13
Under 30	478	283	40.80	0.10	31	93.51	0.00	423	11.51	0.60	295	38.28	0.19	165	65.48	0.10
30 to 45	1672	1086	35.05	0.10	172	89.71	0.01	1567	6.28	0.58	1196	28.47	0.20	708	57.66	0.12
45 to 60	1566	1069	31.74	0.10	256	83.65	0.01	1495	4.53	0.57	1135	27.52	0.19	691	55.87	0.13
Over 60	1975	1255	36.46	0.10	286	85.52	0.01	1849	6.38	0.54	1439	27.14	0.21	760	61.52	0.14
North East	280	185	33.93	0.11	72	74.29	0.02	253	9.64	0.56	193	31.07	0.19	99	64.64	0.13
North West & Merseyside	722	475	34.21	0.11	79	89.06	0.01	662	8.31	0.57	473	34.49	0.19	293	59.42	0.13
Yorkshire & Humber	582	382	34.36	0.10	89	84.71	0.01	538	7.56	0.57	408	29.90	0.19	227	61.00	0.12
East Midlands	508	342	32.68	0.10	50	90.16	0.00	483	4.92	0.59	363	28.54	0.19	203	60.04	0.11
West Midlands	538	352	34.57	0.11	49	90.89	0.00	493	8.36	0.58	375	30.30	0.20	198	63.20	0.10
Eastern	577	370	35.88	0.10	67	88.39	0.01	542	6.07	0.57	438	24.09	0.21	261	54.77	0.12
London	601	381	36.61	0.09	53	91.18	0.00	568	5.49	0.56	447	25.62	0.21	275	54.24	0.14
South East	937	606	35.33	0.10	110	88.26	0.01	893	4.70	0.57	681	27.32	0.19	408	56.46	0.13
South West	614	387	36.97	0.10	111	81.92	0.01	595	3.09	0.57	462	24.76	0.20	251	59.12	0.12
Wales	332	213	35.84	0.13	65	80.42	0.01	307	7.53	0.53	225	32.23	0.20	109	67.17	0.12
Men	3484	2376	31.80	0.10	502	85.59	0.01	3269	6.17	0.57	2582	25.89	0.20	1450	58.38	0.12
Women	2207	1317	40.33	0.10	243	88.99	0.01	2065	6.43	0.57	1483	32.80	0.19	874	60.40	0.13
White	5281	3471	34.27	0.10	724	86.29	0.01	4948	6.31	0.57	3753	28.93	0.20	2154	59.21	0.13
Mixed	42	26	38.10	0.10	4	90.48	0.00	41	2.38	0.64	32	23.81	0.19	12	71.43	0.06
Asian	212	120	43.40	0.08	10	95.28	0.00	200	5.66	0.60	163	23.11	0.23	102	51.89	0.09
Black	104	48	53.85	0.08	2	98.08	0.00	95	8.65	0.60	75	27.88	0.23	31	70.19	0.09
Other	52	28	46.15	0.09	5	90.38	0.00	50	3.85	0.60	42	19.23	0.22	25	51.92	0.10
Sample mean (Total)	(5691)	3693	35.11	0.10	745	86.91	0.01	5334	6.27	0.57	4065	28.57	0.20	2324	59.16	0.12

Appendix H.   SUR-Tobit Results

H.1   Upper Model

H.1.1 Coefficient Estimates

Upper Model 2001-02 Log-lik = -3635.61	Share		
	Dairy & Meat	Misc	F&V
Intercept	0.356	0.680	-0.035
Dairy & Meat	0.135	-0.042	-0.094
Fats , Sugar etc.	-0.042	0.057	-0.015
Fruit & Vegetables	-0.094	-0.015	0.108
Expenditure	0.005	-0.054	0.048
1 or 2 Adults only	-0.029	-0.029	0.058
Single parents	-0.011	0.009	0.002
Children, 2 adults	0.008	0.002	-0.009
Children, >2 adults	-0.011	0.027	-0.016
High managerial	-0.023	-0.071	0.094
Low managerial	-0.015	-0.045	0.060
Workers-Technical	-0.007	-0.004	0.010
Never worked-Unemp.	-0.006	0.029	-0.023
Students	-0.060	-0.024	0.084
Under 30	0.056	-0.012	-0.044
Between 30 and 45	0.026	-0.014	-0.012
Between 45 and 60	0.014	-0.003	-0.010
North East	0.027	-0.020	-0.007
NW & Merseyside	0.037	-0.015	-0.022
Yorks & Humber	0.042	-0.043	0.001
East Midlands	0.040	-0.044	0.004
West Midlands	0.034	-0.024	-0.010
Eastern	0.040	-0.049	0.009
London	-0.001	-0.049	0.050
South East	0.031	-0.052	0.022
South West	0.037	-0.050	0.013
Men	0.004	0.018	-0.022
White	0.063	0.038	-0.101
Mixed	0.007	0.012	-0.019
Asian	-0.017	0.061	-0.044
Black	0.007	0.057	-0.064

Upper Model 2002-03 Log-lik = -2490.59	Share		
	Dairy & Meat	Misc	F&V
Intercept	0.361	0.701	-0.062
Dairy & Meat	0.165	-0.069	-0.096
Fats , Sugar etc.	-0.069	0.075	-0.005
Fruit & Vegetables	-0.096	-0.005	0.102
Expenditure	0.006	-0.061	0.055
1 or 2 Adults only	-0.023	-0.032	0.055
Single parents	0.026	-0.008	-0.018
Children, 2 adults	0.030	-0.002	-0.027
Children, >2 adults	-0.067	0.062	0.006
High managerial	-0.031	-0.066	0.097
Low managerial	-0.013	-0.046	0.059
Workers-Technical	0.004	-0.006	0.002
Never worked-Unemp.	-0.016	0.051	-0.035
Students	-0.093	-0.006	0.099
Under 30	0.021	-0.002	-0.019
Between 30 and 45	0.012	-0.007	-0.005
Between 45 and 60	0.004	0.005	-0.010
North East	0.034	-0.007	-0.027
NW & Merseyside	0.033	-0.014	-0.019
Yorks & Humber	0.022	-0.021	0.000
East Midlands	0.031	-0.020	-0.011
West Midlands	0.005	-0.004	0.000
Eastern	-0.009	-0.032	0.041
London	-0.013	-0.032	0.044
South East	0.002	-0.037	0.035
South West	0.008	-0.027	0.019
Men	0.005	0.021	-0.026
White	0.072	0.054	-0.126
Mixed	0.059	0.019	-0.077
Asian	-0.005	0.052	-0.047
Black	0.011	0.079	-0.090

Appendix H. SUR-Tobit Results

Upper Model 2003-04 Log-lik = -2674.34	Share		
	Dairy & Meat	Misc	F&V
Intercept	0.426	0.636	-0.061
Dairy & Meat	0.145	-0.053	-0.092
Fats , Sugar etc.	-0.053	0.080	-0.027
Fruit & Vegetables	-0.092	-0.027	0.119
Expenditure	-0.002	-0.050	0.052
1 or 2 Adults only	-0.039	-0.028	0.067
Single parents	-0.017	0.004	0.014
Children, 2 adults	0.011	-0.008	-0.003
Children, >2 adults	-0.006	0.018	-0.012
High managerial	-0.015	-0.046	0.061
Low managerial	-0.010	-0.026	0.035
Workers-Technical	0.005	0.014	-0.019
Never worked-Unemp.	-0.002	0.053	-0.050
Students	-0.038	0.004	0.035
Under 30	0.037	-0.021	-0.015
Between 30 and 45	0.009	-0.016	0.007
Between 45 and 60	-0.006	-0.004	0.011
North East	0.000	-0.001	0.001
NW & Merseyside	0.019	-0.011	-0.008
Yorks & Humber	0.008	-0.028	0.020
East Midlands	0.006	-0.027	0.020
West Midlands	-0.002	-0.009	0.011
Eastern	-0.004	-0.032	0.035
London	-0.019	-0.034	0.053
South East	-0.010	-0.042	0.052
South West	0.005	-0.033	0.027
Men	0.003	0.016	-0.018
White	0.098	0.028	-0.125
Mixed	0.038	0.001	-0.039
Asian	0.040	0.019	-0.059
Black	0.056	0.014	-0.070

Upper Model 2004-05 Log-lik = -2186.58	Share		
	Dairy & Meat	Misc	F&V
Intercept	0.437	0.569	-0.006
Dairy & Meat	0.141	-0.051	-0.090
Fats , Sugar etc.	-0.051	0.098	-0.047
Fruit & Vegetables	-0.090	-0.047	0.137
Expenditure	-0.001	-0.052	0.053
1 or 2 Adults only	-0.038	-0.031	0.069
Single parents	-0.011	0.006	0.005
Children, 2 adults	0.013	0.007	-0.020
Children, >2 adults	-0.010	0.017	-0.007
High managerial	-0.044	-0.062	0.105
Low managerial	-0.023	-0.038	0.061
Workers-Technical	-0.005	-0.011	0.016
Never worked-Unemp.	0.011	0.023	-0.034
Students	-0.120	0.003	0.117
Under 30	0.030	-0.002	-0.028
Between 30 and 45	0.020	-0.014	-0.005
Between 45 and 60	0.006	0.003	-0.009
North East	0.038	-0.014	-0.023
NW & Merseyside	0.015	-0.003	-0.012
Yorks & Humber	0.007	-0.008	0.001
East Midlands	0.021	-0.012	-0.009
West Midlands	-0.003	0.001	0.002
Eastern	-0.005	-0.017	0.022
London	-0.022	-0.026	0.048
South East	-0.014	-0.017	0.031
South West	0.004	-0.025	0.021
Men	0.013	0.018	-0.030
White	0.090	0.056	-0.146
Mixed	0.044	0.078	-0.122
Asian	0.010	0.081	-0.091
Black	-0.030	0.094	-0.064

Appendix H. SUR-Tobit Results

Upper Model 2005-06 Log-lik = -2238.35	Dairy & Meat	Misc	F&V
Intercept	0.566	0.568	-0.134
Dairy & Meat	0.112	-0.051	-0.061
Fats , Sugar etc.	-0.051	0.089	-0.037
Fruit & Vegetables	-0.061	-0.037	0.098
Expenditure	-0.010	-0.049	0.059
1 or 2 Adults only	-0.042	-0.030	0.072
Single parents	-0.029	-0.006	0.035
Children, 2 adults	0.011	-0.004	-0.007
Children, >2 adults	0.005	0.015	-0.020
High managerial	-0.040	-0.059	0.099
Low managerial	-0.023	-0.039	0.063
Workers-Technical	-0.007	0.000	0.007
Never worked-Unemp.	0.010	0.028	-0.038
Students	-0.064	-0.007	0.071
Under 30	0.004	0.001	-0.006
Between 30 and 45	0.011	-0.006	-0.005
Between 45 and 60	-0.001	0.007	-0.006
North East	0.003	0.007	-0.010
NW & Merseyside	-0.009	0.008	0.001
Yorks & Humber	0.004	-0.017	0.013
East Midlands	-0.020	-0.004	0.025
West Midlands	-0.025	0.008	0.018
Eastern	-0.016	-0.024	0.039
London	-0.042	-0.025	0.067
South East	-0.013	-0.019	0.032
South West	-0.022	-0.021	0.042
Men	0.001	0.016	-0.017
White	0.066	0.029	-0.095
Mixed	0.048	0.052	-0.099
Asian	0.020	0.051	-0.071
Black	0.005	0.050	-0.054

Note: the header "Share" spans the Dairy & Meat, Misc, and F&V columns.

H.1.2 Uncompensated & Expenditure Elasticities

Upper Model 2001-02 Uncompensated elasticities	Price			*Expenditure*
	Dairy & Meat	Misc	F&V	
Dairy & Meat	-0.728	-0.088	-0.195	1.011
Miscellaneous	-0.068	-0.701	0.001	0.767
Fruit & Vegetables	-0.417	-0.092	-0.663	1.172

Upper Model 2002-03 Uncompensated elasticities	Price			*Expenditure*
	Dairy & Meat	Misc	F&V	
Dairy & Meat	-0.667	-0.144	-0.201	1.012
Miscellaneous	-0.173	-0.610	0.053	0.730
Fruit & Vegetables	-0.432	-0.063	-0.699	1.194

Upper Model 2003-04 Uncompensated elasticities	Price			*Expenditure*
	Dairy & Meat	Misc	F&V	
Dairy & Meat	-0.702	-0.107	-0.187	0.996
Miscellaneous	-0.128	-0.586	-0.058	0.772
Fruit & Vegetables	-0.407	-0.134	-0.640	1.180

Upper Model 2004-05 Uncompensated elasticities	Price			*Expenditure*
	Dairy & Meat	Misc	F&V	
Dairy & Meat	-0.721	-0.101	-0.177	0.999
Miscellaneous	-0.138	-0.403	-0.171	0.712
Fruit & Vegetables	-0.373	-0.181	-0.614	1.168

Upper Model 2005-06 Uncompensated elasticities	Price			*Expenditure*
	Dairy & Meat	Misc	F&V	
Dairy & Meat	-0.721	-0.101	-0.177	0.999
Miscellaneous	-0.138	-0.403	-0.171	0.712
Fruit & Vegetables	-0.373	-0.181	-0.614	1.168

H.1.3 Compensated Elasticities

Upper Model 2001-02	Price		
Compensated elasticities	Dairy & Meat	Misc	F&V
Dairy & Meat	-0.234	0.145	0.089
Miscellaneous	0.307	-0.524	0.217
Fruit & Vegetables	0.155	0.178	-0.333

Upper Model 2002-03	Price		
Compensated elasticities	Dairy & Meat	Misc	F&V
Dairy & Meat	-0.173	0.085	0.088
Miscellaneous	0.183	-0.444	0.261
Fruit & Vegetables	0.151	0.207	-0.358

Upper Model 2003-04	Price		
Compensated elasticities	Dairy & Meat	Misc	F&V
Dairy & Meat	-0.214	0.112	0.101
Miscellaneous	0.250	-0.416	0.166
Fruit & Vegetables	0.172	0.126	-0.298

Upper Model 2004-05	Price		
Compensated elasticities	Dairy & Meat	Misc	F&V
Dairy & Meat	-0.214	0.079	0.135
Miscellaneous	0.223	-0.275	0.052
Fruit & Vegetables	0.219	0.030	-0.249

Upper Model 2005-06	Price		
Compensated elasticities	Dairy & Meat	Misc	F&V
Dairy & Meat	-0.273	0.077	0.196
Miscellaneous	0.217	-0.324	0.107
Fruit & Vegetables	0.313	0.060	-0.373

H.2 Meat & Dairy

H.2.1 Coefficient Estimates

Meat & Dairy 2001-02 Log-lik = -46428.67	Share					
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Intercept	1.062	0.095	0.075	0.212	-0.291	-0.153
Milk	0.122	-0.033	-0.059	-0.020	-0.069	0.059
Butter	-0.033	0.051	-0.008	0.010	0.007	-0.027
Cheese	-0.059	-0.008	0.078	-0.003	-0.074	0.066
Misc. Dairy	-0.020	0.010	-0.003	0.032	0.009	-0.029
Beef	-0.069	0.007	-0.074	0.009	0.148	-0.022
Lamb	0.059	-0.027	0.066	-0.029	-0.022	-0.047
Expenditure	-0.103	-0.003	0.002	-0.003	0.068	0.038
1 or 2 Adults only	-0.028	-0.005	-0.005	0.000	0.014	0.025
Single parents	0.071	-0.008	-0.045	0.008	-0.023	-0.005
Children, 2 adults	0.039	-0.005	-0.038	0.031	-0.028	0.002
Children, >2 adults	0.078	-0.007	-0.030	0.001	-0.030	-0.012
High managerial	-0.072	0.004	0.060	0.045	-0.031	-0.006
Low managerial	-0.034	0.002	0.030	0.032	-0.018	-0.013
Workers-Technical	-0.033	-0.002	0.008	0.020	0.013	-0.007
Never worked-Unemp.	0.034	0.002	-0.049	-0.007	0.012	0.008
Students	0.014	-0.009	0.027	0.008	-0.003	-0.037
Under 30	0.018	-0.035	0.023	0.003	0.011	-0.019
Between 30 and 45	-0.005	-0.026	0.041	-0.005	0.019	-0.024
Between 45 and 60	-0.004	-0.020	0.018	-0.006	0.022	-0.009
North East	0.005	0.002	0.010	-0.024	0.023	-0.016
NW & Merseyside	0.018	-0.009	0.018	-0.032	0.001	0.004
Yorks & Humber	-0.004	-0.012	0.010	-0.007	0.025	-0.013
East Midlands	0.001	-0.007	0.027	-0.011	-0.002	-0.007
West Midlands	0.005	-0.006	0.026	-0.022	0.004	-0.006
Eastern	-0.022	-0.009	0.048	0.002	-0.016	-0.003
London	-0.021	-0.005	0.042	-0.004	-0.023	0.010
South East	-0.019	-0.006	0.062	0.002	-0.033	-0.007
South West	0.007	-0.005	0.044	-0.009	-0.027	-0.010
Men	0.033	-0.005	-0.007	-0.021	0.005	-0.004
White	0.000	-0.008	0.083	-0.021	-0.004	-0.050
Mixed	-0.010	-0.016	0.003	0.025	0.032	-0.035
Asian	0.123	0.014	-0.004	-0.015	-0.144	0.025
Black	0.006	-0.032	0.006	-0.018	0.033	0.006

Appendix H. SUR-Tobit Results

Meat & Dairy 2002-03 Log-lik = -36864.81	Share					
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Intercept	1.015	0.081	0.085	0.266	-0.259	-0.188
Milk	0.166	-0.025	-0.079	-0.031	-0.067	0.036
Butter	-0.025	0.044	-0.005	0.013	0.001	-0.028
Cheese	-0.079	-0.005	0.115	-0.014	-0.072	0.055
Misc. Dairy	-0.031	0.013	-0.014	0.047	0.009	-0.023
Beef	-0.067	0.001	-0.072	0.009	0.153	-0.024
Lamb	0.036	-0.028	0.055	-0.023	-0.024	-0.017
Expenditure	-0.101	-0.003	0.000	-0.002	0.063	0.042
1 or 2 Adults only	-0.021	0.003	0.006	-0.009	0.001	0.021
Single parents	0.043	-0.005	-0.027	0.010	-0.003	-0.018
Children, 2 adults	0.023	-0.003	-0.016	0.038	-0.034	-0.008
Children, >2 adults	0.036	-0.011	-0.006	0.004	-0.021	-0.002
High managerial	-0.056	0.006	0.043	0.044	-0.024	-0.014
Low managerial	-0.024	0.003	0.032	0.022	-0.021	-0.012
Workers-Technical	-0.010	-0.004	0.008	0.003	0.015	-0.012
Never worked-Unemp.	0.009	0.002	0.034	-0.073	0.049	-0.021
Students	-0.086	-0.002	0.114	0.057	-0.035	-0.048
Under 30	-0.016	-0.028	0.039	0.004	0.029	-0.027
Between 30 and 45	0.004	-0.023	0.031	0.001	0.004	-0.017
Between 45 and 60	0.002	-0.009	0.022	-0.023	0.013	-0.005
North East	0.000	0.007	-0.013	0.013	0.021	-0.028
NW & Merseyside	0.011	-0.006	0.005	0.012	-0.004	-0.018
Yorks & Humber	0.006	-0.002	0.007	-0.004	0.009	-0.016
East Midlands	-0.008	-0.010	0.012	0.031	0.006	-0.030
West Midlands	-0.012	-0.015	0.033	-0.007	0.015	-0.014
Eastern	-0.028	-0.007	0.034	0.022	-0.004	-0.016
London	-0.025	-0.001	0.038	-0.005	-0.003	-0.004
South East	-0.033	-0.007	0.043	0.030	-0.015	-0.018
South West	-0.015	-0.002	0.047	0.007	-0.015	-0.023
Men	0.026	-0.004	-0.013	-0.028	0.026	-0.007
White	0.033	-0.001	0.081	-0.076	-0.015	-0.022
Mixed	0.022	0.008	0.046	0.002	-0.069	-0.008
Asian	0.107	0.017	-0.033	-0.051	-0.141	0.100
Black	-0.011	-0.014	-0.012	-0.049	0.051	0.035

Appendix H. SUR-Tobit Results

Meat & Dairy 2003-04 Log-lik = -38067.86	Share					
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Intercept	1.063	0.100	0.089	0.131	-0.178	-0.205
Milk	0.154	-0.020	-0.069	-0.015	-0.087	0.037
Butter	-0.020	0.029	-0.009	0.008	0.007	-0.015
Cheese	-0.069	-0.009	0.104	-0.020	-0.064	0.059
Misc. Dairy	-0.015	0.008	-0.020	0.054	0.007	-0.035
Beef	-0.087	0.007	-0.064	0.007	0.148	-0.011
Lamb	0.037	-0.015	0.059	-0.035	-0.011	-0.035
Expenditure	-0.104	-0.009	0.003	0.006	0.060	0.043
1 or 2 Adults only	-0.044	-0.001	0.007	-0.002	0.016	0.025
Single parents	0.045	-0.007	-0.034	0.011	-0.012	-0.005
Children, 2 adults	0.020	-0.004	-0.007	0.032	-0.031	-0.010
Children, >2 adults	0.070	0.001	-0.014	-0.004	-0.035	-0.018
High managerial	-0.055	0.011	0.070	0.012	-0.033	-0.005
Low managerial	-0.008	0.003	0.049	0.003	-0.027	-0.019
Workers-Technical	-0.008	-0.003	0.033	-0.012	0.003	-0.012
Never worked-Unemp.	0.028	0.001	0.024	-0.024	-0.012	-0.017
Students	-0.040	-0.004	0.073	0.017	-0.028	-0.017
Under 30	-0.035	-0.033	0.021	0.037	0.026	-0.017
Between 30 and 45	-0.028	-0.024	0.012	0.026	0.026	-0.011
Between 45 and 60	-0.038	-0.014	0.015	0.014	0.030	-0.006
North East	-0.012	0.002	-0.006	0.022	0.000	-0.006
NW & Merseyside	-0.022	-0.004	0.012	0.003	0.017	-0.005
Yorks & Humber	-0.013	-0.006	0.017	0.020	-0.006	-0.012
East Midlands	-0.015	-0.004	0.008	0.038	-0.008	-0.020
West Midlands	-0.038	-0.002	0.020	0.021	-0.001	0.000
Eastern	-0.048	-0.003	0.041	0.031	-0.007	-0.013
London	-0.051	-0.001	0.016	0.032	-0.010	0.014
South East	-0.041	0.000	0.029	0.042	-0.023	-0.007
South West	-0.025	-0.002	0.034	0.025	-0.014	-0.019
Men	0.019	-0.001	-0.003	-0.017	0.015	-0.012
White	0.063	0.013	0.040	-0.026	-0.067	-0.023
Mixed	0.035	0.015	0.015	-0.020	-0.045	-0.001
Asian	0.134	0.025	-0.028	-0.037	-0.169	0.076
Black	0.058	-0.007	-0.036	-0.029	-0.046	0.060

Appendix H. SUR-Tobit Results

Meat & Dairy 2004-05 Log-lik = -34606.87	Share					
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Intercept	1.088	0.075	0.073	0.144	-0.216	-0.164
Milk	0.156	-0.027	-0.061	-0.032	-0.075	0.038
Butter	-0.027	0.038	-0.005	0.003	0.003	-0.012
Cheese	-0.061	-0.005	0.104	-0.016	-0.071	0.049
Misc. Dairy	-0.032	0.003	-0.016	0.063	0.002	-0.020
Beef	-0.075	0.003	-0.071	0.002	0.157	-0.016
Lamb	0.038	-0.012	0.049	-0.020	-0.016	-0.040
Expenditure	-0.105	-0.004	0.001	-0.006	0.074	0.041
1 or 2 Adults only	-0.043	0.001	0.005	0.007	0.012	0.020
Single parents	0.041	-0.007	-0.027	0.007	-0.008	-0.005
Children, 2 adults	0.026	-0.002	-0.015	0.033	-0.038	-0.004
Children, >2 adults	0.074	-0.007	-0.037	0.014	-0.039	-0.005
High managerial	-0.053	-0.005	0.046	0.069	-0.026	-0.030
Low managerial	-0.025	-0.006	0.031	0.030	-0.017	-0.013
Workers-Technical	-0.023	-0.014	0.005	0.037	0.007	-0.012
Never worked-Unemp.	0.020	-0.021	0.000	-0.004	0.004	0.001
Students	-0.061	0.000	0.013	0.056	-0.038	0.030
Under 30	-0.015	-0.021	0.033	-0.024	0.043	-0.016
Between 30 and 45	-0.014	-0.013	0.050	-0.017	0.016	-0.022
Between 45 and 60	-0.011	-0.006	0.040	-0.030	0.015	-0.008
North East	0.006	0.003	0.002	-0.007	0.020	-0.024
NW & Merseyside	-0.031	-0.003	0.028	0.003	-0.002	0.004
Yorks & Humber	0.001	0.000	0.008	-0.009	0.010	-0.010
East Midlands	-0.012	-0.008	0.043	0.003	-0.013	-0.013
West Midlands	-0.022	-0.006	0.021	-0.008	-0.006	0.021
Eastern	-0.034	-0.006	0.034	0.031	-0.015	-0.010
London	-0.047	-0.002	0.047	0.005	-0.017	0.014
South East	-0.038	-0.001	0.053	0.022	-0.027	-0.008
South West	-0.023	-0.004	0.048	0.011	-0.018	-0.014
Men	0.017	-0.003	-0.005	-0.023	0.019	-0.005
White	0.030	0.009	0.071	0.065	-0.120	-0.055
Mixed	0.040	0.018	0.022	0.073	-0.145	-0.010
Asian	0.170	0.023	-0.016	0.059	-0.237	0.000
Black	0.060	-0.014	-0.035	0.090	-0.121	0.021

Appendix H. SUR-Tobit Results

Meat & Dairy 2005-06 Log-lik = -34521.55	Share					
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Intercept	1.184	0.085	0.088	0.098	-0.209	-0.245
Milk	0.099	0.008	-0.036	-0.053	-0.035	0.018
Butter	0.008	0.033	-0.013	0.001	-0.008	-0.022
Cheese	-0.036	-0.013	0.114	-0.030	-0.029	-0.007
Misc. Dairy	-0.053	0.001	-0.030	0.097	-0.013	-0.002
Beef	-0.035	-0.008	-0.029	-0.013	0.090	-0.006
Lamb	0.018	-0.022	-0.007	-0.002	-0.006	0.019
Expenditure	-0.113	-0.005	0.002	0.002	0.066	0.046
1 or 2 Adults only	-0.087	0.001	0.019	0.012	0.018	0.038
Single parents	-0.070	0.003	0.026	0.031	0.002	0.008
Children, 2 adults	0.008	0.002	-0.012	0.026	-0.028	0.004
Children, >2 adults	0.039	-0.001	-0.010	-0.013	-0.018	0.003
High managerial	-0.088	0.002	0.046	0.047	-0.015	0.008
Low managerial	-0.064	-0.002	0.037	0.023	0.009	-0.004
Workers-Technical	-0.016	-0.006	0.008	0.010	0.013	-0.008
Never worked-Unemp.	0.036	-0.009	0.021	-0.038	-0.013	0.003
Students	-0.133	0.003	0.048	0.023	0.029	0.030
Under 30	-0.013	-0.026	0.054	-0.009	0.029	-0.035
Between 30 and 45	0.007	-0.016	0.037	-0.012	0.012	-0.028
Between 45 and 60	-0.005	-0.010	0.025	-0.018	0.021	-0.012
North East	0.030	0.006	-0.033	0.007	0.012	-0.022
NW & Merseyside	-0.007	0.004	-0.007	0.019	-0.018	0.008
Yorks & Humber	-0.005	-0.003	-0.001	0.029	-0.017	-0.004
East Midlands	-0.002	-0.003	0.009	0.036	-0.033	-0.007
West Midlands	-0.029	-0.007	0.014	0.030	-0.014	0.006
Eastern	-0.027	0.002	0.024	0.036	-0.038	0.002
London	-0.049	0.004	0.016	0.041	-0.037	0.025
South East	-0.032	0.005	0.028	0.038	-0.053	0.013
South West	-0.031	0.003	0.034	0.056	-0.051	-0.010
Men	0.021	-0.001	-0.004	-0.019	0.011	-0.008
White	0.043	-0.009	0.056	0.023	-0.078	-0.034
Mixed	0.028	-0.031	-0.025	0.042	-0.020	0.005
Asian	0.133	0.012	-0.057	0.014	-0.186	0.083
Black	0.050	-0.020	-0.012	0.052	-0.081	0.011

H.2.2 Uncompensated & Expenditure Elasticities

Meat & Dairy 2001-02 Uncompensated elasticities	Price						
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb	*Expenditure*
Milk	-0.544	-0.085	-0.109	-0.008	-0.147	0.190	0.703
Butter	-0.867	0.382	-0.210	0.278	0.201	-0.708	0.925
Cheese	-0.285	-0.040	-0.631	-0.016	-0.352	0.314	1.010
Misc. Dairy	-0.112	0.060	-0.014	-0.802	0.060	-0.173	0.981
Beef	-0.520	0.025	-0.494	-0.010	-0.234	-0.149	1.382
Lamb	0.719	-0.440	0.913	-0.556	-0.456	-1.786	1.606

2002-03 Uncompensated elasticities	Price						
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb	*Expenditure*
Milk	-0.409	-0.062	-0.172	-0.039	-0.147	0.125	0.704
Butter	-0.621	0.166	-0.122	0.346	0.041	-0.723	0.913
Cheese	-0.380	-0.026	-0.450	-0.069	-0.342	0.265	1.001
Misc. Dairy	-0.171	0.072	-0.079	-0.734	0.053	-0.129	0.989
Beef	-0.511	-0.008	-0.487	-0.012	-0.185	-0.159	1.364
Lamb	0.351	-0.471	0.748	-0.488	-0.500	-1.317	1.677

Meat & Dairy 2003-04 Uncompensated elasticities	Price						
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb	*Expenditure*
Milk	-0.443	-0.049	-0.142	0.012	-0.200	0.128	0.694
Butter	-0.512	-0.138	-0.211	0.290	0.267	-0.438	0.741
Cheese	-0.345	-0.044	-0.494	-0.100	-0.319	0.288	1.014
Misc. Dairy	-0.093	0.045	-0.118	-0.700	0.031	-0.198	1.033
Beef	-0.589	0.030	-0.421	-0.022	-0.249	-0.079	1.331
Lamb	0.347	-0.262	0.783	-0.667	-0.290	-1.591	1.680

Meat & Dairy 2004-05 Uncompensated elasticities	Price						
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb	*Expenditure*
Milk	-0.434	-0.069	-0.115	-0.039	-0.165	0.131	0.691
Butter	-0.741	0.096	-0.119	0.102	0.112	-0.327	0.878
Cheese	-0.292	-0.024	-0.504	-0.077	-0.339	0.233	1.003
Misc. Dairy	-0.168	0.017	-0.083	-0.634	0.016	-0.111	0.963
Beef	-0.546	0.003	-0.471	-0.061	-0.217	-0.111	1.403
Lamb	0.406	-0.217	0.671	-0.451	-0.389	-1.703	1.683

Meat & Dairy 2005-06 Uncompensated elasticities	Price						
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb	*Expenditure*
Milk	-0.596	0.034	-0.034	-0.100	-0.045	0.073	0.667
Butter	0.253	-0.089	-0.321	0.062	-0.188	-0.592	0.875
Cheese	-0.170	-0.059	-0.468	-0.142	-0.137	-0.034	1.010
Misc. Dairy	-0.313	0.008	-0.176	-0.443	-0.075	-0.015	1.014
Beef	-0.326	-0.056	-0.242	-0.136	-0.560	-0.055	1.375
Lamb	0.034	-0.375	-0.275	-0.167	-0.222	-0.741	1.746

H.2.3 Compensated Elasticities

Meat & Dairy 2001-02	Price					
Compensated elasticities	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Milk	-0.301	-0.059	0.039	0.109	-0.022	0.234
Butter	-0.548	0.416	-0.015	0.431	0.365	-0.649
Cheese	0.064	-0.003	-0.419	0.152	-0.173	0.379
Misc. Dairy	0.227	0.097	0.192	-0.639	0.235	-0.111
Beef	-0.043	0.076	-0.204	0.219	0.012	-0.061
Lamb	1.274	-0.380	1.250	-0.289	-0.171	-1.684

2002-03	Price					
Compensated elasticities	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Milk	-0.170	-0.035	-0.024	0.085	-0.025	0.169
Butter	-0.310	0.200	0.069	0.507	0.200	-0.666
Cheese	-0.040	0.013	-0.240	0.108	-0.168	0.327
Misc. Dairy	0.164	0.109	0.128	-0.559	0.225	-0.067
Beef	-0.048	0.044	-0.202	0.228	0.052	-0.075
Lamb	0.920	-0.408	1.099	-0.191	-0.208	-1.212

Meat & Dairy 2003-04	Price					
Compensated elasticities	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Milk	-0.207	-0.026	-0.001	0.135	-0.074	0.172
Butter	-0.260	-0.113	-0.060	0.422	0.402	-0.391
Cheese	-0.002	-0.010	-0.287	0.080	-0.134	0.353
Misc. Dairy	0.257	0.079	0.092	-0.516	0.219	-0.132
Beef	-0.138	0.074	-0.150	0.215	-0.006	0.006
Lamb	0.917	-0.206	1.125	-0.368	0.016	-1.484

Meat & Dairy 2004-05	Price					
Compensated elasticities	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Milk	-0.200	-0.045	0.030	0.082	-0.038	0.173
Butter	-0.444	0.126	0.065	0.256	0.272	-0.275
Cheese	0.048	0.011	-0.295	0.099	-0.155	0.293
Misc. Dairy	0.158	0.051	0.118	-0.466	0.193	-0.053
Beef	-0.071	0.052	-0.178	0.184	0.040	-0.027
Lamb	0.976	-0.159	1.023	-0.156	-0.082	-1.602

Meat & Dairy 2005-06	Price					
Compensated elasticities	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Milk	-0.370	0.058	0.108	0.015	0.073	0.115
Butter	0.549	-0.057	-0.134	0.213	-0.033	-0.538
Cheese	0.172	-0.023	-0.253	0.033	0.043	0.028
Misc. Dairy	0.030	0.045	0.040	-0.268	0.104	0.048
Beef	0.139	-0.007	0.051	0.102	-0.316	0.031
Lamb	0.626	-0.312	0.098	0.134	0.088	-0.633

H.3 *Miscellaneous*

H.3.1 Coefficient Estimates

Miscellaneous 2001-02 Log-lik = -23038.16	Share				
	Eggs	Fats	Sugar	Potatoes	Cereals
Intercept	0.117	-0.048	0.095	-0.215	1.051
Eggs	0.102	-0.034	-0.006	-0.011	-0.051
Oils & Fats	-0.034	0.129	-0.024	-0.011	-0.061
Sugar	-0.006	-0.024	0.071	-0.017	-0.025
Potatoes	-0.011	-0.011	-0.017	0.107	-0.068
Wheat & Barley	-0.051	-0.061	-0.025	-0.068	0.205
Expenditure	0.010	0.036	-0.001	0.063	-0.108
1 or 2 Adults only	0.013	0.023	0.002	0.033	-0.071
Single parents	-0.019	0.014	0.004	0.019	-0.018
Children, 2 adults	-0.004	0.010	-0.004	0.021	-0.023
Children, >2 adults	-0.015	0.010	0.005	0.005	-0.005
High managerial	0.026	-0.017	-0.027	0.034	-0.016
Low managerial	0.014	-0.003	-0.024	0.020	-0.007
Workers-Technical	0.005	0.008	-0.014	-0.005	0.006
Never worked-Unemp.	-0.014	0.028	0.030	-0.010	-0.034
Students	-0.010	0.011	0.003	-0.031	0.027
Under 30	-0.009	-0.017	-0.010	-0.016	0.051
Between 30 and 45	-0.009	-0.003	-0.003	-0.015	0.030
Between 45 and 60	-0.012	-0.012	0.004	0.013	0.007
North East	0.012	-0.015	-0.004	-0.004	0.011
NW & Merseyside	-0.007	0.013	-0.004	0.001	-0.003
Yorks & Humber	0.001	0.003	0.002	0.000	-0.007
East Midlands	-0.011	0.005	-0.008	0.016	-0.003
West Midlands	-0.003	0.002	0.001	-0.006	0.006
Eastern	-0.002	0.009	-0.002	-0.017	0.012
London	0.015	0.007	-0.011	0.015	-0.026
South East	0.001	0.000	-0.001	0.022	-0.022
South West	0.011	0.009	-0.001	-0.010	-0.009
Men	-0.010	-0.002	0.005	-0.025	0.033
White	-0.056	-0.037	-0.015	0.070	0.037
Mixed	-0.063	-0.052	-0.024	0.105	0.034
Asian	-0.002	-0.003	-0.002	-0.046	0.053
Black	-0.005	0.017	0.032	0.000	-0.044

Appendix H. SUR-Tobit Results

Miscellaneous 2002-03 Log-lik = -17667.86	Share				
	Eggs	Fats	Sugar	Potatoes	Cereals
Intercept	0.131	-0.084	0.075	-0.143	1.022
Eggs	0.104	-0.029	-0.009	-0.024	-0.043
Oils & Fats	-0.029	0.135	-0.011	-0.015	-0.081
Sugar	-0.009	-0.011	0.062	-0.015	-0.028
Potatoes	-0.024	-0.015	-0.015	0.111	-0.057
Wheat & Barley	-0.043	-0.081	-0.028	-0.057	0.208
Expenditure	0.002	0.041	0.001	0.042	-0.086
1 or 2 Adults only	-0.004	0.039	0.000	0.018	-0.053
Single parents	-0.023	0.014	0.010	0.003	-0.004
Children, 2 adults	-0.019	0.022	-0.002	0.012	-0.014
Children, >2 adults	-0.030	0.007	0.010	-0.009	0.022
High managerial	0.018	-0.019	-0.030	0.054	-0.022
Low managerial	-0.003	-0.007	-0.026	0.043	-0.007
Workers-Technical	-0.012	0.003	-0.017	0.019	0.008
Never worked-Unemp.	-0.008	0.035	0.004	-0.081	0.050
Students	0.013	-0.033	-0.070	0.024	0.066
Under 30	0.009	-0.024	-0.005	-0.033	0.053
Between 30 and 45	0.009	-0.022	0.002	-0.027	0.038
Between 45 and 60	0.011	-0.012	0.009	-0.018	0.011
North East	-0.005	0.011	-0.003	0.019	-0.022
NW & Merseyside	-0.007	0.009	0.001	0.005	-0.007
Yorks & Humber	-0.002	0.023	-0.003	0.006	-0.024
East Midlands	-0.015	0.018	0.008	0.010	-0.021
West Midlands	-0.008	0.021	-0.003	0.000	-0.010
Eastern	-0.003	0.016	0.004	0.016	-0.032
London	0.021	0.001	-0.004	0.023	-0.040
South East	0.000	0.020	-0.004	0.027	-0.043
South West	0.006	0.017	0.002	-0.004	-0.021
Men	-0.004	0.000	0.004	-0.018	0.018
White	-0.004	-0.034	-0.009	0.105	-0.058
Mixed	0.052	-0.011	0.032	0.025	-0.098
Asian	0.035	-0.030	0.019	0.004	-0.028
Black	-0.022	0.025	0.018	0.066	-0.086

Appendix H. SUR-Tobit Results

Miscellaneous 2003-04 Log-lik = -17999.78	Share				
	Eggs	Fats	Sugar	Potatoes	Cereals
Intercept	0.254	-0.014	0.059	-0.079	0.780
Eggs	0.109	-0.038	-0.009	-0.017	-0.046
Oils & Fats	-0.038	0.131	-0.017	-0.018	-0.058
Sugar	-0.009	-0.017	0.059	-0.010	-0.023
Potatoes	-0.017	-0.018	-0.010	0.105	-0.060
Wheat & Barley	-0.046	-0.058	-0.023	-0.060	0.187
Expenditure	0.001	0.038	0.006	0.041	-0.086
1 or 2 Adults only	0.004	0.011	0.001	0.017	-0.034
Single parents	-0.010	0.008	0.006	-0.007	0.004
Children, 2 adults	-0.007	-0.014	-0.008	0.006	0.022
Children, >2 adults	-0.010	-0.005	-0.012	-0.020	0.047
High managerial	0.045	-0.015	-0.018	0.021	-0.033
Low managerial	0.019	-0.006	-0.011	0.024	-0.026
Workers-Technical	-0.001	-0.007	0.001	0.003	0.004
Never worked-Unemp.	-0.032	-0.012	0.019	-0.017	0.042
Students	0.026	0.023	-0.018	0.028	-0.059
Under 30	-0.023	-0.006	0.001	-0.039	0.068
Between 30 and 45	-0.017	0.004	-0.005	-0.015	0.033
Between 45 and 60	-0.015	-0.001	-0.005	0.002	0.019
North East	0.003	-0.006	0.000	0.024	-0.021
NW & Merseyside	0.001	-0.011	0.003	-0.003	0.010
Yorks & Humber	0.008	-0.018	0.006	0.011	-0.007
East Midlands	-0.002	-0.007	-0.001	0.011	-0.001
West Midlands	-0.017	-0.020	0.001	0.014	0.021
Eastern	0.002	0.001	0.002	0.007	-0.012
London	0.027	-0.030	-0.004	0.037	-0.030
South East	0.002	-0.005	-0.003	0.032	-0.027
South West	0.021	0.009	0.007	-0.006	-0.031
Men	-0.009	-0.007	0.007	-0.017	0.026
White	-0.122	-0.048	-0.031	0.047	0.154
Mixed	-0.065	-0.015	-0.024	0.022	0.081
Asian	-0.056	-0.024	-0.033	-0.033	0.146
Black	-0.055	-0.008	-0.015	-0.045	0.123

Miscellaneous 2004-05 Log-lik = -14161.51	Share				
	Eggs	Fats	Sugar	Potatoes	Cereals
Intercept	0.102	-0.058	0.067	-0.117	1.007
Eggs	0.080	-0.023	-0.006	0.023	-0.073
Oils & Fats	-0.023	0.144	-0.019	-0.009	-0.093
Sugar	-0.006	-0.019	0.069	-0.010	-0.033
Potatoes	0.023	-0.009	-0.010	0.008	-0.012
Wheat & Barley	-0.073	-0.093	-0.033	-0.012	0.211
Expenditure	0.018	0.043	0.001	0.030	-0.092
1 or 2 Adults only	0.023	0.021	0.004	0.021	-0.070
Single parents	-0.014	0.002	-0.004	-0.018	0.034
Children, 2 adults	-0.006	-0.003	0.006	-0.016	0.019
Children, >2 adults	0.008	-0.003	0.012	-0.025	0.008
High managerial	0.044	-0.036	-0.038	0.070	-0.040
Low managerial	0.010	-0.014	-0.029	0.039	-0.006
Workers-Technical	-0.002	-0.007	-0.019	0.015	0.013
Never worked-Unemp.	-0.001	0.017	0.016	-0.019	-0.013
Students	0.039	0.002	-0.029	0.025	-0.037
Under 30	-0.017	-0.015	-0.006	-0.008	0.046
Between 30 and 45	0.008	0.005	-0.001	-0.020	0.008
Between 45 and 60	-0.003	-0.007	0.012	-0.007	0.004
North East	-0.017	0.037	0.003	-0.007	-0.016
NW & Merseyside	0.005	0.025	-0.001	-0.020	-0.010
Yorks & Humber	0.001	0.025	0.013	-0.029	-0.009
East Midlands	-0.018	0.040	0.011	-0.008	-0.024
West Midlands	-0.027	0.017	0.009	-0.011	0.013
Eastern	-0.016	0.034	-0.002	0.015	-0.031
London	0.035	0.011	0.000	-0.004	-0.042
South East	-0.004	0.018	0.011	-0.001	-0.025
South West	-0.002	0.028	0.012	-0.011	-0.026
Men	-0.016	0.001	0.005	-0.016	0.026
White	-0.063	-0.043	-0.006	0.053	0.059
Mixed	-0.020	-0.016	0.056	-0.018	-0.003
Asian	-0.050	-0.043	0.034	-0.013	0.072
Black	-0.001	-0.017	0.033	-0.002	-0.013

Appendix H. SUR-Tobit Results

Miscellaneous 2005-06 Log-lik = -14232.71	Share				
	Eggs	Fats	Sugar	Potatoes	Cereals
Intercept	0.183	-0.009	0.008	-0.120	0.939
Eggs	0.100	-0.041	-0.012	0.026	-0.073
Oils & Fats	-0.041	0.159	-0.022	-0.011	-0.084
Sugar	-0.012	-0.022	0.057	0.003	-0.025
Potatoes	0.026	-0.011	0.003	-0.017	-0.001
Wheat & Barley	-0.073	-0.084	-0.025	-0.001	0.183
Expenditure	0.011	0.040	0.009	0.031	-0.091
1 or 2 Adults only	0.019	0.028	0.010	0.034	-0.091
Single parents	0.001	-0.011	0.004	0.026	-0.020
Children, 2 adults	0.006	0.002	0.000	0.015	-0.022
Children, >2 adults	0.006	0.006	-0.004	-0.004	-0.004
High managerial	0.043	-0.022	-0.026	0.060	-0.054
Low managerial	0.026	-0.022	-0.020	0.043	-0.027
Workers-Technical	0.010	-0.002	-0.014	0.004	0.002
Never worked-Unemp.	-0.004	-0.005	0.031	-0.023	0.001
Students	0.088	-0.058	-0.028	0.016	-0.018
Under 30	-0.026	0.004	0.011	-0.035	0.046
Between 30 and 45	-0.017	-0.004	0.006	-0.034	0.049
Between 45 and 60	-0.019	-0.003	0.006	-0.019	0.035
North East	0.001	0.003	-0.001	-0.009	0.005
NW & Merseyside	-0.025	0.008	0.011	-0.008	0.013
Yorks & Humber	-0.006	0.007	0.016	-0.001	-0.015
East Midlands	-0.023	-0.003	0.015	0.005	0.006
West Midlands	-0.025	-0.020	0.021	0.000	0.024
Eastern	-0.008	-0.006	0.006	0.027	-0.019
London	0.023	-0.006	0.014	0.017	-0.048
South East	-0.004	-0.008	0.011	0.022	-0.022
South West	0.006	-0.013	0.009	0.009	-0.011
Men	-0.007	-0.008	0.003	-0.011	0.023
White	-0.092	-0.054	-0.011	0.014	0.142
Mixed	-0.022	-0.035	-0.015	0.000	0.072
Asian	-0.029	-0.053	-0.003	-0.043	0.128
Black	-0.069	-0.082	0.033	-0.045	0.163

H.3.2 Uncompensated & Expenditure Elasticities

Miscellaneous 2001-02	Price					
Uncompensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals	*Expenditure*
Eggs	-0.211	-0.281	-0.048	-0.110	-0.431	1.082
Oils & Fats	-0.252	-0.195	-0.168	-0.130	-0.492	1.236
Sugar	-0.090	-0.394	0.190	-0.276	-0.408	0.978
Potatoes	-0.076	-0.079	-0.080	-0.645	-0.366	1.245
Cereals	-0.091	-0.110	-0.046	-0.101	-0.385	0.732

Miscellaneous 2002-03	Price					
Uncompensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals	*Expenditure*
Eggs	-0.236	-0.212	-0.066	-0.181	-0.323	1.017
Oils & Fats	-0.212	-0.201	-0.084	-0.153	-0.604	1.254
Sugar	-0.145	-0.181	0.007	-0.242	-0.455	1.016
Potatoes	-0.128	-0.094	-0.075	-0.564	-0.320	1.181
Cereals	-0.076	-0.163	-0.055	-0.090	-0.404	0.789

Miscellaneous 2003-04	Price					
Uncompensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals	*Expenditure*
Eggs	-0.235	-0.267	-0.062	-0.120	-0.324	1.007
Oils & Fats	-0.275	-0.201	-0.122	-0.172	-0.471	1.242
Sugar	-0.162	-0.300	-0.009	-0.198	-0.430	1.098
Potatoes	-0.097	-0.105	-0.055	-0.592	-0.329	1.177
Cereals	-0.082	-0.110	-0.044	-0.098	-0.456	0.789

Miscellaneous 2004-05	Price					
Uncompensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals	*Expenditure*
Eggs	-0.519	-0.165	-0.047	0.129	-0.514	1.116
Oils & Fats	-0.164	-0.251	-0.120	-0.079	-0.622	1.236
Sugar	-0.090	-0.267	-0.037	-0.146	-0.480	1.021
Potatoes	0.154	-0.127	-0.106	-0.957	-0.219	1.254
Cereals	-0.124	-0.161	-0.057	-0.002	-0.460	0.804

Miscellaneous 2005-06	Price					
Uncompensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals	*Expenditure*
Eggs	-0.402	-0.262	-0.076	0.151	-0.479	1.069
Oils & Fats	-0.278	-0.111	-0.147	-0.091	-0.606	1.232
Sugar	-0.195	-0.354	-0.175	0.023	-0.437	1.137
Potatoes	0.182	-0.142	0.005	-1.176	-0.140	1.272
Cereals	-0.120	-0.142	-0.039	0.020	-0.528	0.810

H.3.3 Compensated Elasticities

Miscellaneous 2001-02	Price				
Compensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals
Eggs	-0.073	-0.115	0.016	0.167	0.006
Oils & Fats	-0.095	-0.005	-0.094	0.187	0.007
Sugar	0.034	-0.244	0.248	-0.025	-0.013
Potatoes	0.083	0.112	-0.006	-0.326	0.137
Cereals	0.002	0.003	-0.002	0.087	-0.089

Miscellaneous 2002-03	Price				
Compensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals
Eggs	-0.098	-0.048	-0.003	0.055	0.093
Oils & Fats	-0.041	0.001	-0.007	0.138	-0.092
Sugar	-0.006	-0.018	0.070	-0.006	-0.040
Potatoes	0.033	0.096	-0.002	-0.290	0.163
Cereals	0.031	-0.036	-0.006	0.093	-0.081

Miscellaneous 2003-04	Price				
Compensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals
Eggs	-0.092	-0.109	-0.002	0.116	0.087
Oils & Fats	-0.099	-0.007	-0.049	0.119	0.036
Sugar	-0.006	-0.128	0.057	0.059	0.018
Potatoes	0.070	0.079	0.015	-0.317	0.152
Cereals	0.030	0.014	0.003	0.087	-0.134

Miscellaneous 2004-05	Price				
Compensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals
Eggs	-0.341	0.038	0.032	0.259	0.012
Oils & Fats	0.033	-0.026	-0.032	0.065	-0.040
Sugar	0.073	-0.082	0.035	-0.027	0.001
Potatoes	0.354	0.101	-0.017	-0.811	0.373
Cereals	0.004	-0.015	0.000	0.092	-0.081

Miscellaneous 2005-06	Price				
Compensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals
Eggs	-0.227	-0.080	-0.004	0.274	0.036
Oils & Fats	-0.077	0.100	-0.063	0.051	-0.011
Sugar	-0.009	-0.159	-0.098	0.154	0.112
Potatoes	0.390	0.075	0.091	-1.030	0.474
Cereals	0.012	-0.004	0.016	0.113	-0.137

H.4   Fruit & Vegetables

H.4.1 Coefficient Estimates

Fruit & Vegetables 2001-02 Log-lik = -34103.69	Share				
	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Intercept	0.550	0.016	0.435	0.103	-0.103
Peas & Beans	0.053	-0.001	-0.032	-0.011	-0.009
Turnips & Swede	-0.001	0.020	-0.012	-0.002	-0.005
Other Vegetables	-0.032	-0.012	0.072	-0.034	0.006
Tree Fruit	-0.011	-0.002	-0.034	0.068	-0.021
Soft Fruit	-0.009	-0.005	0.006	-0.021	0.029
Expenditure	-0.063	0.000	0.025	0.014	0.024
1 or 2 Adults only	-0.046	-0.004	0.014	0.025	0.010
Single parents	0.008	-0.007	-0.062	0.057	0.004
Children, 2 adults	-0.011	-0.004	-0.024	0.034	0.005
Children, >2 adults	0.010	-0.002	-0.039	0.038	-0.007
High managerial	0.018	-0.005	-0.008	-0.026	0.021
Low managerial	-0.005	-0.004	-0.003	0.001	0.012
Workers-Technical	0.027	0.000	-0.009	-0.010	-0.008
Never worked-Unemp.	0.124	-0.003	-0.035	-0.065	-0.020
Students	-0.015	-0.003	-0.033	0.061	-0.009
Under 30	-0.007	-0.004	0.072	-0.038	-0.023
Between 30 and 45	-0.006	-0.001	0.048	-0.033	-0.008
Between 45 and 60	0.008	-0.001	0.033	-0.025	-0.015
North East	0.004	0.011	-0.017	0.000	0.002
NW & Merseyside	-0.010	-0.005	0.024	-0.018	0.009
Yorks & Humber	-0.006	0.000	0.038	-0.021	-0.011
East Midlands	0.000	-0.007	0.036	-0.019	-0.010
West Midlands	-0.009	-0.005	0.019	0.001	-0.006
Eastern	-0.012	-0.007	0.019	0.003	-0.003
London	-0.022	-0.005	0.031	-0.005	0.000
South East	-0.001	-0.004	-0.001	-0.001	0.007
South West	0.000	-0.004	-0.028	0.028	0.004
Men	0.019	-0.001	-0.005	-0.001	-0.011
White	0.028	0.005	-0.050	-0.001	0.018
Mixed	-0.024	-0.001	-0.043	0.055	0.013
Asian	-0.021	-0.004	0.024	0.002	-0.002
Black	-0.010	-0.002	-0.012	0.040	-0.016

Appendix H. SUR-Tobit Results

Fruit & Vegetables 2002-03 Log-lik = -28938.00	Share				
	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Intercept	0.597	0.003	0.341	0.187	-0.129
Peas & Beans	0.053	-0.005	-0.027	-0.017	-0.004
Turnips & Swede	-0.005	0.015	-0.009	0.001	-0.002
Other Vegetables	-0.027	-0.009	0.082	-0.037	-0.009
Tree Fruit	-0.017	0.001	-0.037	0.066	-0.013
Soft Fruit	-0.004	-0.002	-0.009	-0.013	0.029
Expenditure	-0.070	0.001	0.023	0.015	0.031
1 or 2 Adults only	-0.036	-0.001	-0.002	0.013	0.026
Single parents	-0.003	0.001	-0.017	-0.001	0.020
Children, 2 adults	-0.015	-0.002	-0.019	0.020	0.016
Children, >2 adults	0.002	0.003	0.025	-0.017	-0.012
High managerial	-0.027	-0.004	0.026	0.003	0.003
Low managerial	-0.016	-0.003	0.005	0.012	0.001
Workers-Technical	0.007	0.000	-0.003	0.002	-0.005
Never worked-Unemp.	0.052	0.008	-0.046	-0.006	-0.008
Students	-0.068	-0.009	0.020	0.042	0.015
Under 30	0.022	-0.004	0.039	-0.047	-0.011
Between 30 and 45	0.015	-0.002	0.041	-0.034	-0.020
Between 45 and 60	0.028	-0.001	0.024	-0.039	-0.011
North East	0.008	0.009	0.023	-0.040	0.001
NW & Merseyside	0.002	-0.009	0.007	-0.009	0.009
Yorks & Humber	-0.006	-0.006	0.031	-0.019	0.000
East Midlands	0.005	-0.008	0.009	0.000	-0.006
West Midlands	0.039	-0.010	0.019	-0.037	-0.011
Eastern	0.000	-0.010	0.031	-0.012	-0.008
London	0.002	-0.010	0.025	-0.015	-0.002
South East	0.013	-0.006	0.010	-0.027	0.010
South West	-0.008	-0.004	0.022	-0.008	-0.002
Men	0.026	0.001	-0.005	-0.012	-0.011
White	0.008	0.006	0.044	-0.051	-0.007
Mixed	-0.019	0.003	0.013	-0.012	0.015
Asian	-0.039	-0.002	0.044	-0.007	0.004
Black	-0.055	0.001	0.101	-0.017	-0.031

Appendix H. SUR-Tobit Results

Fruit & Vegetables 2003-04 Log-lik = -27657.94	Share				
	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Intercept	0.502	0.015	0.625	0.062	-0.204
Peas & Beans	0.057	0.003	-0.038	-0.016	-0.005
Turnips & Swede	0.003	0.014	-0.013	-0.001	-0.003
Other Vegetables	-0.038	-0.013	0.084	-0.027	-0.006
Tree Fruit	-0.016	-0.001	-0.027	0.051	-0.007
Soft Fruit	-0.005	-0.003	-0.006	-0.007	0.022
Expenditure	-0.060	-0.001	0.005	0.023	0.032
1 or 2 Adults only	-0.035	0.001	0.013	0.006	0.015
Single parents	-0.002	0.001	-0.026	0.021	0.007
Children, 2 adults	-0.013	0.002	-0.012	0.015	0.008
Children, >2 adults	-0.016	0.000	0.011	0.004	0.002
High managerial	-0.017	0.002	0.041	-0.039	0.014
Low managerial	-0.005	0.000	0.042	-0.051	0.014
Workers-Technical	0.028	0.002	0.020	-0.046	-0.004
Never worked-Unemp.	0.089	-0.001	-0.042	-0.042	-0.006
Students	-0.018	0.008	0.091	-0.078	-0.003
Under 30	0.004	-0.009	0.031	-0.011	-0.015
Between 30 and 45	0.005	-0.006	0.030	-0.012	-0.016
Between 45 and 60	0.017	-0.003	0.003	-0.002	-0.015
North East	-0.016	0.005	0.021	-0.023	0.012
NW & Merseyside	-0.010	-0.006	0.025	-0.015	0.006
Yorks & Humber	-0.018	-0.007	0.010	0.012	0.003
East Midlands	-0.004	-0.008	0.020	-0.016	0.008
West Midlands	0.014	-0.010	0.003	-0.003	-0.005
Eastern	-0.008	-0.010	0.034	-0.010	-0.006
London	0.006	-0.011	0.023	-0.012	-0.007
South East	0.006	-0.008	0.021	-0.019	-0.001
South West	-0.001	-0.004	0.010	-0.011	0.004
Men	0.023	-0.001	-0.028	0.015	-0.009
White	0.034	0.008	-0.118	0.013	0.063
Mixed	-0.033	0.000	-0.132	0.114	0.051
Asian	0.001	0.003	-0.139	0.060	0.075
Black	-0.022	0.001	-0.104	0.082	0.043

Appendix H. SUR-Tobit Results

Fruit & Vegetables 2004-05 Log-lik = -25237.39	Share				
	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Intercept	0.578	0.023	0.390	0.157	-0.148
Peas & Beans	0.045	-0.005	-0.035	0.005	-0.010
Turnips & Swede	-0.005	0.012	-0.007	0.002	-0.002
Other Vegetables	-0.035	-0.007	0.070	-0.026	-0.002
Tree Fruit	0.005	0.002	-0.026	0.032	-0.013
Soft Fruit	-0.010	-0.002	-0.002	-0.013	0.028
Expenditure	-0.063	-0.001	0.025	0.007	0.033
1 or 2 Adults only	-0.051	-0.005	0.024	0.016	0.016
Single parents	0.012	-0.006	-0.014	-0.017	0.025
Children, 2 adults	-0.008	-0.003	-0.007	0.013	0.005
Children, >2 adults	0.015	0.000	-0.023	0.009	-0.001
High managerial	-0.023	-0.004	0.014	-0.007	0.020
Low managerial	-0.007	-0.002	0.013	-0.010	0.006
Workers-Technical	0.007	-0.001	0.012	-0.022	0.004
Never worked-Unemp.	0.049	0.001	-0.002	-0.045	-0.004
Students	-0.044	-0.004	0.088	-0.031	-0.009
Under 30	-0.006	-0.008	0.044	-0.007	-0.023
Between 30 and 45	-0.012	-0.004	0.036	-0.002	-0.017
Between 45 and 60	0.004	-0.002	0.030	-0.011	-0.022
North East	0.005	0.006	0.033	-0.029	-0.015
NW & Merseyside	0.000	-0.006	0.027	-0.023	0.003
Yorks & Humber	-0.007	-0.005	0.014	-0.008	0.007
East Midlands	0.002	-0.008	0.046	-0.027	-0.014
West Midlands	-0.009	-0.008	0.044	-0.026	-0.001
Eastern	0.001	-0.008	0.006	-0.008	0.009
London	-0.008	-0.009	0.032	-0.011	-0.005
South East	0.002	-0.007	0.031	-0.017	-0.009
South West	-0.003	-0.002	0.010	-0.011	0.006
Men	0.016	0.000	-0.004	0.001	-0.012
White	0.009	0.004	-0.055	0.015	0.026
Mixed	-0.033	-0.003	-0.045	0.050	0.031
Asian	-0.037	-0.001	-0.045	0.075	0.008
Black	-0.047	0.002	-0.023	0.066	0.002

Appendix H. SUR-Tobit Results

Fruit & Vegetables 2005-06 Log-lik = -25501.37	Share				
	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Intercept	0.507	0.014	0.471	0.160	-0.152
Peas & Beans	0.055	-0.003	-0.039	-0.006	-0.007
Turnips & Swede	-0.003	0.019	-0.008	-0.003	-0.005
Other Vegetables	-0.039	-0.008	0.062	-0.020	0.004
Tree Fruit	-0.006	-0.003	-0.020	0.045	-0.016
Soft Fruit	-0.007	-0.005	0.004	-0.016	0.024
Expenditure	-0.062	-0.001	0.015	0.014	0.034
1 or 2 Adults only	-0.035	0.000	0.014	-0.005	0.027
Single parents	-0.009	0.002	-0.008	-0.009	0.025
Children, 2 adults	-0.008	-0.001	-0.015	0.014	0.010
Children, >2 adults	0.007	0.001	0.017	-0.016	-0.009
High managerial	-0.039	-0.005	0.045	-0.022	0.022
Low managerial	-0.006	-0.005	0.020	-0.021	0.012
Workers-Technical	-0.001	-0.003	0.016	-0.017	0.005
Never worked-Unemp.	0.068	-0.006	-0.013	-0.033	-0.015
Students	-0.040	-0.003	0.080	-0.030	-0.007
Under 30	0.019	-0.003	0.017	-0.023	-0.010
Between 30 and 45	-0.004	0.001	0.030	-0.017	-0.010
Between 45 and 60	0.013	0.004	0.016	-0.021	-0.011
North East	-0.002	0.017	-0.027	-0.003	0.015
NW & Merseyside	0.009	-0.005	0.012	-0.034	0.018
Yorks & Humber	-0.005	-0.001	0.018	-0.019	0.007
East Midlands	-0.004	-0.008	0.030	-0.026	0.008
West Midlands	0.021	-0.007	0.008	-0.023	0.001
Eastern	-0.001	-0.005	0.002	-0.007	0.011
London	0.030	-0.006	-0.011	-0.023	0.009
South East	-0.001	-0.004	0.012	-0.018	0.011
South West	-0.007	0.001	0.025	-0.020	0.001
Men	0.028	0.002	-0.020	0.003	-0.013
White	0.049	0.003	-0.036	-0.020	0.003
Mixed	0.027	0.000	0.028	-0.025	-0.030
Asian	-0.007	-0.004	0.002	0.010	0.000
Black	-0.002	-0.004	-0.037	0.048	-0.004

H.4.2 Uncompensated & Expenditure Elasticities

Fruit & Vegetables 2001-02	Price					
Uncompensated elasticities	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit	*Expenditure*
Peas & Beans	-0.579	-0.004	0.032	0.006	-0.032	1.082
Turnips & Swede	-0.126	1.051	-1.211	-0.243	-0.474	1.003
Other Vegetables	-0.061	-0.021	-0.903	-0.066	0.007	1.043
Tree Fruit	-0.069	-0.013	-0.213	-0.665	-0.111	1.072
Soft Fruit	-0.198	-0.078	-0.133	-0.412	-0.563	1.384

Fruit & Vegetables 2002-03	Price					
Uncompensated elasticities	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit	*Expenditure*
Peas & Beans	-0.575	-0.027	0.087	-0.019	0.005	0.529
Turnips & Swede	-0.535	0.590	-1.062	0.087	-0.240	1.160
Other Vegetables	-0.053	-0.016	-0.879	-0.073	-0.019	1.040
Tree Fruit	-0.095	0.005	-0.222	-0.690	-0.071	1.073
Soft Fruit	-0.125	-0.034	-0.379	-0.276	-0.626	1.440

Fruit & Vegetables 2003-04	Price					
Uncompensated elasticities	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit	*Expenditure*
Peas & Beans	-0.535	0.024	-0.025	-0.032	-0.005	0.573
Turnips & Swede	0.289	0.418	-1.262	-0.053	-0.335	0.942
Other Vegetables	-0.067	-0.022	-0.859	-0.049	-0.012	1.008
Tree Fruit	-0.098	-0.004	-0.204	-0.767	-0.042	1.116
Soft Fruit	-0.131	-0.049	-0.343	-0.177	-0.740	1.440

Fruit & Vegetables 2004-05	Price					
Uncompensated elasticities	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit	*Expenditure*
Peas & Beans	-0.602	-0.031	0.004	0.132	-0.036	0.533
Turnips & Swede	-0.519	0.311	-0.701	0.184	-0.202	0.926
Other Vegetables	-0.068	-0.012	-0.901	-0.055	-0.008	1.044
Tree Fruit	0.021	0.007	-0.146	-0.847	-0.068	1.032
Soft Fruit	-0.169	-0.025	-0.233	-0.225	-0.719	1.370

Fruit & Vegetables 2005-06	Price					
Uncompensated elasticities	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit	*Expenditure*
Peas & Beans	-0.536	-0.020	-0.028	0.042	-0.009	0.552
Turnips & Swede	-0.367	1.209	-0.843	-0.358	-0.569	0.928
Other Vegetables	-0.072	-0.014	-0.905	-0.040	0.005	1.026
Tree Fruit	-0.042	-0.018	-0.144	-0.781	-0.088	1.072
Soft Fruit	-0.124	-0.056	-0.157	-0.233	-0.784	1.355

H.4.3 Compensated Elasticities

Fruit & Vegetables 2001-02	Price				
Compensated elasticities	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Peas & Beans	-0.493	0.002	0.369	0.119	0.004
Turnips & Swede	0.023	1.061	-0.626	-0.047	-0.411
Other Vegetables	0.094	-0.010	-0.294	0.138	0.072
Tree Fruit	0.091	-0.002	0.412	-0.455	-0.045
Soft Fruit	0.009	-0.064	0.675	-0.142	-0.477

Fruit & Vegetables 2002-03	Price				
Compensated elasticities	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Peas & Beans	-0.496	-0.022	0.388	0.088	0.042
Turnips & Swede	-0.362	0.600	-0.402	0.322	-0.158
Other Vegetables	0.102	-0.007	-0.288	0.138	0.055
Tree Fruit	0.065	0.015	0.388	-0.473	0.005
Soft Fruit	0.089	-0.020	0.440	0.016	-0.524

Fruit & Vegetables 2003-04	Price				
Compensated elasticities	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Peas & Beans	-0.455	0.030	0.307	0.082	0.037
Turnips & Swede	0.420	0.428	-0.716	0.134	-0.266
Other Vegetables	0.074	-0.012	-0.276	0.151	0.063
Tree Fruit	0.057	0.007	0.442	-0.546	0.040
Soft Fruit	0.070	-0.035	0.491	0.108	-0.634

Fruit & Vegetables 2004-05	Price				
Compensated elasticities	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Peas & Beans	-0.530	-0.026	0.305	0.240	0.011
Turnips & Swede	-0.393	0.320	-0.178	0.371	-0.120
Other Vegetables	0.073	-0.003	-0.311	0.156	0.084
Tree Fruit	0.161	0.017	0.437	-0.638	0.023
Soft Fruit	0.017	-0.012	0.542	0.052	-0.598

Fruit & Vegetables 2005-06	Price				
Compensated elasticities	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Peas & Beans	-0.460	-0.015	0.285	0.148	0.043
Turnips & Swede	-0.239	1.217	-0.317	-0.180	-0.482
Other Vegetables	0.069	-0.005	-0.323	0.157	0.102
Tree Fruit	0.106	-0.008	0.464	-0.575	0.013
Soft Fruit	0.063	-0.045	0.611	0.027	-0.656

Appendix I.   IPM Results

I.1   Upper Model

I.1.1 Coefficient Estimates

Upper Model 2001-02 Log-lik = -127349.68	Share		
	Dairy & Meat	Misc	F&V
Proabability	0.989	0.978	0.940
Intercept	0.210	0.750	0.040
Dairy & Meat	0.126	-0.046	-0.081
Fats , Sugar etc.	-0.046	0.050	-0.004
Fruit & Vegetables	-0.081	-0.004	0.085
Expenditure	0.028	-0.060	0.032
1 or 2 Adults only	-0.019	-0.031	0.050
Single parents	-0.005	-0.001	0.007
Children, 2 adults	0.003	-0.003	0.001
Children, >2 adults	-0.014	0.024	-0.010
High managerial	-0.015	-0.062	0.078
Low managerial	-0.010	-0.038	0.048
Workers-Technical	-0.008	-0.003	0.011
Never worked-Unemp.	-0.012	0.027	-0.015
Students	-0.076	-0.017	0.093
Under 30	0.042	-0.019	-0.023
Between 30 and 45	0.023	-0.013	-0.010
Between 45 and 60	0.008	-0.001	-0.008
North East	0.027	-0.027	-0.001
NW & Merseyside	0.031	-0.019	-0.012
Yorks & Humber	0.037	-0.042	0.005
East Midlands	0.039	-0.043	0.005
West Midlands	0.030	-0.024	-0.006
Eastern	0.041	-0.046	0.005
London	0.007	-0.046	0.039
South East	0.035	-0.049	0.014
South West	0.038	-0.049	0.011
Men	-0.001	0.014	-0.013
White	0.044	0.022	-0.066
Mixed	-0.004	0.000	0.004
Asian	-0.026	0.049	-0.024
Black	0.009	0.048	-0.057

Appendix I. IPM Results

Upper Model 2002-03 Log-lik = -98289.66	Share		
	Dairy & Meat	Misc	F&V
Proabability	0.993	0.977	0.944
Intercept	0.206	0.761	0.033
Dairy & Meat	0.147	-0.066	-0.081
Fats , Sugar etc.	-0.066	0.064	0.002
Fruit & Vegetables	-0.081	0.002	0.079
Expenditure	0.034	-0.069	0.035
1 or 2 Adults only	-0.023	-0.025	0.048
Single parents	0.003	-0.006	0.003
Children, 2 adults	0.014	0.001	-0.015
Children, >2 adults	-0.024	0.046	-0.021
High managerial	-0.029	-0.053	0.082
Low managerial	-0.010	-0.039	0.050
Workers-Technical	-0.001	-0.005	0.006
Never worked-Unemp.	-0.007	0.033	-0.026
Students	-0.092	0.009	0.083
Under 30	0.018	-0.004	-0.013
Between 30 and 45	0.008	-0.007	-0.002
Between 45 and 60	-0.002	0.008	-0.006
North East	0.035	-0.008	-0.028
NW & Merseyside	0.027	-0.013	-0.014
Yorks & Humber	0.023	-0.020	-0.003
East Midlands	0.027	-0.019	-0.008
West Midlands	0.006	-0.005	-0.001
Eastern	-0.004	-0.028	0.032
London	-0.011	-0.025	0.036
South East	0.003	-0.032	0.029
South West	0.008	-0.023	0.016
Men	-0.002	0.019	-0.017
White	0.031	0.047	-0.079
Mixed	0.009	0.031	-0.040
Asian	-0.044	0.049	-0.005
Black	-0.006	0.078	-0.073

Appendix I. IPM Results

Upper Model 2003-04 Log-lik = -113085.80	Share		
	Dairy & Meat	Misc	F&V
Proabability	0.992	0.974	0.939
Intercept	0.250	0.696	0.054
Dairy & Meat	0.128	-0.051	-0.076
Fats , Sugar etc.	-0.051	0.069	-0.018
Fruit & Vegetables	-0.076	-0.018	0.094
Expenditure	0.025	-0.057	0.031
1 or 2 Adults only	-0.027	-0.027	0.053
Single parents	-0.013	-0.002	0.015
Children, 2 adults	0.008	-0.008	0.001
Children, >2 adults	-0.010	0.015	-0.006
High managerial	-0.011	-0.042	0.053
Low managerial	-0.005	-0.023	0.028
Workers-Technical	0.002	0.011	-0.013
Never worked-Unemp.	-0.019	0.045	-0.026
Students	-0.016	0.005	0.011
Under 30	0.023	-0.022	-0.001
Between 30 and 45	0.011	-0.015	0.003
Between 45 and 60	-0.008	-0.002	0.010
North East	0.004	0.002	-0.006
NW & Merseyside	0.018	-0.008	-0.010
Yorks & Humber	0.013	-0.025	0.012
East Midlands	0.011	-0.023	0.012
West Midlands	0.001	-0.004	0.003
Eastern	0.001	-0.026	0.024
London	-0.011	-0.026	0.037
South East	-0.005	-0.029	0.035
South West	0.011	-0.025	0.015
Men	-0.002	0.016	-0.013
White	0.062	0.013	-0.076
Mixed	0.024	0.000	-0.024
Asian	0.021	0.014	-0.034
Black	0.038	0.012	-0.050

Appendix I. IPM Results

Upper Model 2004-05 Log-lik = -120884.18	Share		
	Dairy & Meat	Misc	F&V
Proabability	0.990	0.951	0.943
Intercept	0.199	0.700	0.101
Dairy & Meat	0.131	-0.058	-0.073
Fats , Sugar etc.	-0.058	0.093	-0.035
Fruit & Vegetables	-0.073	-0.035	0.108
Expenditure	0.031	-0.068	0.037
1 or 2 Adults only	-0.025	-0.029	0.054
Single parents	-0.004	-0.001	0.005
Children, 2 adults	0.011	0.002	-0.013
Children, >2 adults	-0.016	0.017	-0.001
High managerial	-0.042	-0.047	0.088
Low managerial	-0.022	-0.028	0.050
Workers-Technical	-0.012	-0.004	0.016
Never worked-Unemp.	0.002	0.027	-0.030
Students	-0.109	0.026	0.083
Under 30	0.029	-0.009	-0.020
Between 30 and 45	0.018	-0.012	-0.007
Between 45 and 60	0.007	0.001	-0.009
North East	0.038	-0.017	-0.021
NW & Merseyside	0.022	-0.005	-0.018
Yorks & Humber	0.017	-0.009	-0.008
East Midlands	0.028	-0.006	-0.022
West Midlands	0.005	0.001	-0.006
Eastern	-0.003	-0.012	0.015
London	-0.014	-0.023	0.037
South East	-0.004	-0.017	0.021
South West	0.010	-0.022	0.012
Men	0.008	0.017	-0.025
White	0.087	0.043	-0.130
Mixed	0.041	0.087	-0.128
Asian	0.023	0.073	-0.095
Black	0.001	0.088	-0.089

Appendix I. IPM Results

Upper Model 2005-06	Share		
Log-lik = -115526.83	Dairy & Meat	Misc	F&V
Proabability	0.992	0.943	0.944
Intercept	0.376	0.684	-0.060
Dairy & Meat	0.095	-0.047	-0.048
Fats , Sugar etc.	-0.047	0.077	-0.030
Fruit & Vegetables	-0.048	-0.030	0.078
Expenditure	0.021	-0.064	0.043
1 or 2 Adults only	-0.033	-0.026	0.059
Single parents	-0.017	-0.010	0.027
Children, 2 adults	0.007	-0.004	-0.003
Children, >2 adults	-0.002	0.019	-0.017
High managerial	-0.034	-0.045	0.079
Low managerial	-0.018	-0.030	0.048
Workers-Technical	-0.008	-0.002	0.009
Never worked-Unemp.	-0.010	0.024	-0.014
Students	-0.060	-0.003	0.063
Under 30	0.001	-0.003	0.002
Between 30 and 45	0.004	-0.002	-0.002
Between 45 and 60	-0.006	0.009	-0.003
North East	-0.005	0.001	0.004
NW & Merseyside	-0.013	0.004	0.009
Yorks & Humber	-0.006	-0.013	0.019
East Midlands	-0.026	-0.002	0.028
West Midlands	-0.026	0.008	0.018
Eastern	-0.022	-0.017	0.039
London	-0.046	-0.020	0.066
South East	-0.020	-0.015	0.035
South West	-0.026	-0.014	0.041
Men	-0.003	0.017	-0.013
White	0.036	0.018	-0.054
Mixed	0.011	0.047	-0.058
Asian	-0.007	0.048	-0.042
Black	-0.008	0.039	-0.031

I.1.2 Uncompensated & Expenditure Elasticities

Upper Model 2001-02	Price			
Uncompensated elasticities	Dairy & Meat	Misc	F&V	*Expenditure*
Dairy & Meat	-0.769	-0.107	-0.181	1.057
Miscellaneous	-0.072	-0.724	0.055	0.740
Fruit & Vegetables	-0.342	-0.041	-0.730	1.114

Upper Model 2002-03	Price			
Uncompensated elasticities	Dairy & Meat	Misc	F&V	*Expenditure*
Dairy & Meat	-0.733	-0.150	-0.186	1.069
Miscellaneous	-0.142	-0.650	0.095	0.697
Fruit & Vegetables	-0.344	-0.021	-0.758	1.123

Upper Model 2003-04	Price			
Uncompensated elasticities	Dairy & Meat	Misc	F&V	*Expenditure*
Dairy & Meat	-0.765	-0.116	-0.171	1.052
Miscellaneous	-0.107	-0.629	-0.007	0.743
Fruit & Vegetables	-0.317	-0.086	-0.706	1.108

Upper Model 2004-05	Price			
Uncompensated elasticities	Dairy & Meat	Misc	F&V	*Expenditure*
Dairy & Meat	-0.772	-0.125	-0.163	1.061
Miscellaneous	-0.130	-0.419	-0.076	0.625
Fruit & Vegetables	-0.294	-0.133	-0.691	1.118

Upper Model 2005-06	Price			
Uncompensated elasticities	Dairy & Meat	Misc	F&V	*Expenditure*
Dairy & Meat	-0.833	-0.100	-0.108	1.041
Miscellaneous	-0.082	-0.503	-0.057	0.642
Fruit & Vegetables	-0.221	-0.120	-0.795	1.136

I.1.3 Compensated Elasticities

Upper Model 2001-02	Price		
Compensated elasticities	Dairy & Meat	Misc	F&V
Dairy & Meat	-0.253	0.137	0.116
Miscellaneous	0.290	-0.553	0.263
Fruit & Vegetables	0.202	0.216	-0.418

Upper Model 2002-03	Price		
Compensated elasticities	Dairy & Meat	Misc	F&V
Dairy & Meat	-0.211	0.092	0.119
Miscellaneous	0.198	-0.492	0.294
Fruit & Vegetables	0.204	0.233	-0.437

Upper Model 2003-04	Price		
Compensated elasticities	Dairy & Meat	Misc	F&V
Dairy & Meat	-0.249	0.115	0.134
Miscellaneous	0.257	-0.465	0.208
Fruit & Vegetables	0.227	0.158	-0.385

Upper Model 2004-05	Price		
Compensated elasticities	Dairy & Meat	Misc	F&V
Dairy & Meat	-0.234	0.066	0.168
Miscellaneous	0.187	-0.306	0.119
Fruit & Vegetables	0.273	0.069	-0.341

Upper Model 2005-06	Price		
Compensated elasticities	Dairy & Meat	Misc	F&V
Dairy & Meat	-0.307	0.085	0.221
Miscellaneous	0.242	-0.389	0.147
Fruit & Vegetables	0.353	0.082	-0.436

I.2 Meat & Dairy

I.2.1 Coefficient Estimates

Meat & Dairy 2001-02 Log-lik = -794674.41	Share					
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Probability	0.944	0.300	0.769	0.684	0.611	0.252
Intercept	0.389	0.274	0.345	0.303	-0.084	-0.227
Milk	0.171	-0.012	-0.068	-0.038	-0.042	-0.010
Butter	-0.012	0.023	-0.003	-0.001	0.001	-0.007
Cheese	-0.068	-0.003	0.083	-0.007	-0.005	0.000
Misc. Dairy	-0.038	-0.001	-0.007	0.049	-0.005	0.002
Beef	-0.042	0.001	-0.005	-0.005	0.053	-0.001
Lamb	-0.010	-0.007	0.000	0.002	-0.001	0.016
Expenditure	0.006	-0.035	-0.022	-0.020	0.034	0.037
1 or 2 Adults only	-0.055	-0.003	0.011	0.009	0.031	0.007
Single parents	0.009	-0.002	-0.008	0.001	-0.005	0.005
Children, 2 adults	0.035	-0.001	-0.016	0.004	-0.019	-0.002
Children, >2 adults	0.034	0.002	-0.003	-0.004	-0.019	-0.010
High managerial	-0.057	-0.001	0.041	0.006	0.007	0.003
Low managerial	-0.044	0.002	0.031	0.004	0.007	0.000
Workers-Technical	-0.014	0.003	0.006	-0.001	0.005	0.000
Never worked-Unemp.	-0.002	-0.003	-0.005	0.003	-0.005	0.012
Students	0.004	-0.007	0.035	-0.014	-0.021	0.003
Under 30	-0.013	-0.002	0.014	-0.006	0.022	-0.015
Between 30 and 45	-0.015	-0.006	0.020	-0.002	0.013	-0.011
Between 45 and 60	-0.014	-0.003	0.011	0.004	0.017	-0.015
North East	0.015	-0.001	-0.007	-0.008	0.006	-0.005
NW & Merseyside	0.022	-0.007	-0.005	-0.011	0.000	0.001
Yorks & Humber	0.016	-0.010	-0.007	-0.002	0.003	-0.001
East Midlands	0.016	-0.003	0.007	-0.002	-0.014	-0.004
West Midlands	0.005	-0.006	0.003	-0.003	-0.002	0.002
Eastern	-0.004	-0.007	0.009	0.008	-0.004	-0.002
London	-0.015	-0.006	0.013	0.007	-0.003	0.004
South East	-0.009	-0.004	0.020	0.002	-0.005	-0.004
South West	0.004	-0.005	0.016	-0.002	-0.009	-0.005
Men	0.015	0.004	-0.004	-0.004	-0.007	-0.004
White	0.026	-0.029	0.007	-0.010	-0.024	0.030
Mixed	0.000	-0.023	-0.035	0.028	0.004	0.025
Asian	0.041	-0.019	-0.048	-0.043	0.017	0.052
Black	0.007	-0.026	-0.008	-0.023	0.008	0.042

Appendix I. IPM Results

Meat & Dairy 2002-03 Log-lik = -655015.86	Share					
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Probability	0.950	0.297	0.767	0.697	0.613	0.245
Intercept	0.368	0.277	0.267	0.341	0.045	-0.298
Milk	0.194	-0.012	-0.076	-0.049	-0.045	-0.011
Butter	-0.012	0.024	-0.007	0.002	0.000	-0.007
Cheese	-0.076	-0.007	0.100	-0.011	-0.012	0.005
Misc. Dairy	-0.049	0.002	-0.011	0.053	0.003	0.003
Beef	-0.045	0.000	-0.012	0.003	0.062	-0.007
Lamb	-0.011	-0.007	0.005	0.003	-0.007	0.017
Expenditure	0.006	-0.036	-0.016	-0.023	0.022	0.048
1 or 2 Adults only	-0.036	-0.004	0.008	0.011	0.011	0.010
Single parents	0.014	-0.003	-0.026	0.013	-0.003	0.005
Children, 2 adults	0.041	0.001	-0.024	0.009	-0.023	-0.003
Children, >2 adults	0.024	0.001	-0.007	0.004	-0.012	-0.010
High managerial	-0.056	-0.001	0.029	0.020	0.013	-0.005
Low managerial	-0.048	0.003	0.024	0.016	0.011	-0.006
Workers-Technical	-0.015	0.002	-0.002	0.006	0.014	-0.004
Never worked-Unemp.	-0.006	-0.010	0.024	-0.018	0.013	-0.003
Students	-0.102	-0.003	0.115	0.008	-0.011	-0.007
Under 30	-0.016	-0.005	0.028	-0.016	0.014	-0.005
Between 30 and 45	-0.013	-0.004	0.027	-0.009	0.003	-0.004
Between 45 and 60	-0.010	0.000	0.018	-0.009	0.002	-0.001
North East	0.000	0.005	-0.001	0.011	-0.001	-0.013
NW & Merseyside	0.000	-0.004	-0.001	0.010	0.002	-0.006
Yorks & Humber	0.004	0.001	0.000	-0.002	0.003	-0.006
East Midlands	-0.017	-0.003	0.009	0.014	0.004	-0.007
West Midlands	-0.014	-0.004	0.007	0.008	0.010	-0.006
Eastern	-0.024	-0.002	0.020	0.014	0.002	-0.010
London	-0.034	0.000	0.036	0.001	0.003	-0.005
South East	-0.033	-0.004	0.027	0.019	-0.002	-0.007
South West	-0.016	-0.001	0.028	-0.002	0.000	-0.009
Men	0.018	0.004	-0.009	-0.007	0.001	-0.008
White	0.047	-0.028	0.043	-0.019	-0.067	0.025
Mixed	0.021	-0.031	0.020	0.020	-0.068	0.037
Asian	0.043	-0.016	-0.017	-0.027	-0.070	0.087
Black	-0.029	-0.018	0.039	0.020	-0.022	0.011

Appendix I. IPM Results

Meat & Dairy 2003-04 Log-lik = -648567.39	Share					
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Probability	0.942	0.265	0.755	0.695	0.628	0.246
Intercept	0.406	0.238	0.317	0.255	0.054	-0.270
Milk	0.189	-0.004	-0.061	-0.050	-0.057	-0.017
Butter	-0.004	0.014	-0.004	0.001	0.002	-0.009
Cheese	-0.061	-0.004	0.089	-0.014	-0.008	-0.002
Misc. Dairy	-0.050	0.001	-0.014	0.064	0.001	-0.002
Beef	-0.057	0.002	-0.008	0.001	0.063	-0.002
Lamb	-0.017	-0.009	-0.002	-0.002	-0.002	0.032
Expenditure	0.001	-0.040	-0.019	-0.013	0.020	0.051
1 or 2 Adults only	-0.061	-0.011	0.010	0.013	0.027	0.021
Single parents	0.023	-0.008	-0.020	-0.006	-0.001	0.012
Children, 2 adults	0.030	-0.004	-0.016	0.002	-0.019	0.007
Children, >2 adults	0.046	0.000	-0.017	-0.007	-0.016	-0.007
High managerial	-0.052	0.011	0.054	0.006	0.002	-0.020
Low managerial	-0.039	0.008	0.040	0.007	-0.002	-0.014
Workers-Technical	-0.014	0.008	0.027	-0.002	-0.006	-0.012
Never worked-Unemp.	-0.003	0.008	0.023	0.007	-0.020	-0.015
Students	-0.022	0.004	0.045	-0.011	-0.003	-0.013
Under 30	-0.033	-0.016	0.011	0.009	0.022	0.007
Between 30 and 45	-0.025	-0.008	0.010	0.006	0.015	0.002
Between 45 and 60	-0.023	-0.005	0.007	0.003	0.017	0.001
North East	0.005	0.001	-0.002	0.014	-0.016	-0.002
NW & Merseyside	-0.006	-0.001	0.005	0.008	-0.008	0.002
Yorks & Humber	0.004	-0.005	0.009	0.010	-0.020	0.002
East Midlands	0.003	0.002	0.005	0.010	-0.015	-0.005
West Midlands	-0.009	0.000	0.016	0.011	-0.020	0.003
Eastern	-0.023	-0.002	0.021	0.022	-0.018	0.000
London	-0.032	-0.002	0.014	0.018	-0.009	0.012
South East	-0.021	0.002	0.015	0.018	-0.013	0.000
South West	-0.012	-0.007	0.023	0.010	-0.018	0.005
Men	0.011	0.001	-0.002	-0.007	0.001	-0.005
White	0.065	0.009	-0.007	-0.006	-0.039	-0.022
Mixed	0.025	0.028	-0.005	0.020	-0.031	-0.038
Asian	0.080	0.012	-0.043	-0.042	-0.017	0.009
Black	0.035	0.002	-0.009	0.001	-0.028	-0.001

Appendix I. IPM Results

Meat & Dairy 2004-05 Log-lik = -614433.02	Share					
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Probability	0.946	0.278	0.758	0.685	0.623	0.236
Intercept	0.397	0.240	0.281	0.293	-0.025	-0.186
Milk	0.192	-0.008	-0.070	-0.052	-0.052	-0.009
Butter	-0.008	0.018	-0.001	-0.005	-0.001	-0.004
Cheese	-0.070	-0.001	0.099	-0.007	-0.016	-0.005
Misc. Dairy	-0.052	-0.005	-0.007	0.055	0.002	0.007
Beef	-0.052	-0.001	-0.016	0.002	0.072	-0.004
Lamb	-0.009	-0.004	-0.005	0.007	-0.004	0.016
Expenditure	0.002	-0.038	-0.020	-0.020	0.033	0.044
1 or 2 Adults only	-0.054	-0.005	0.013	0.018	0.021	0.007
Single parents	0.012	-0.010	-0.011	0.002	-0.004	0.011
Children, 2 adults	0.028	0.001	-0.010	0.005	-0.023	-0.002
Children, >2 adults	0.039	-0.001	-0.015	-0.009	-0.010	-0.005
High managerial	-0.048	-0.003	0.024	0.022	0.010	-0.004
Low managerial	-0.041	0.000	0.025	0.009	0.007	0.000
Workers-Technical	-0.021	0.000	0.006	0.010	0.008	-0.002
Never worked-Unemp.	0.001	-0.006	-0.014	-0.003	0.019	0.003
Students	-0.059	-0.010	0.039	0.007	0.017	0.006
Under 30	-0.014	0.006	0.028	-0.012	0.013	-0.021
Between 30 and 45	-0.008	-0.003	0.028	-0.009	-0.002	-0.008
Between 45 and 60	-0.006	0.001	0.025	-0.010	-0.005	-0.005
North East	-0.001	-0.004	0.023	-0.008	-0.008	-0.001
NW & Merseyside	-0.012	-0.004	0.017	0.001	-0.006	0.004
Yorks & Humber	0.002	-0.005	0.014	-0.009	-0.005	0.003
East Midlands	-0.005	-0.006	0.032	-0.001	-0.019	0.000
West Midlands	-0.024	-0.004	0.030	-0.008	0.000	0.005
Eastern	-0.026	-0.005	0.029	0.010	-0.014	0.005
London	-0.034	-0.003	0.030	0.001	-0.005	0.011
South East	-0.026	-0.004	0.038	0.004	-0.014	0.003
South West	-0.022	-0.005	0.040	-0.007	-0.011	0.005
Men	0.009	0.002	-0.002	-0.003	0.000	-0.007
White	0.059	0.013	0.030	0.011	-0.050	-0.063
Mixed	0.026	0.014	-0.017	0.068	-0.039	-0.053
Asian	0.108	0.025	-0.037	-0.013	-0.037	-0.046
Black	0.025	0.002	-0.005	0.045	-0.029	-0.038

Appendix I. IPM Results

Meat & Dairy 2005-06 Log-lik = -612297.79	Share					
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Probability	0.944	0.287	0.769	0.690	0.616	0.234
Intercept	0.392	0.229	0.291	0.276	0.040	-0.228
Milk	0.161	-0.013	-0.057	-0.041	-0.044	-0.005
Butter	-0.013	0.018	0.002	-0.002	-0.001	-0.004
Cheese	-0.057	0.002	0.101	-0.028	-0.010	-0.008
Misc. Dairy	-0.041	-0.002	-0.028	0.071	-0.002	0.003
Beef	-0.044	-0.001	-0.010	-0.002	0.062	-0.005
Lamb	-0.005	-0.004	-0.008	0.003	-0.005	0.018
Expenditure	0.007	-0.035	-0.014	-0.022	0.019	0.045
1 or 2 Adults only	-0.058	-0.002	0.016	0.010	0.025	0.009
Single parents	-0.031	0.000	0.018	0.014	0.000	-0.002
Children, 2 adults	0.024	0.002	-0.017	0.002	-0.009	-0.002
Children, >2 adults	0.042	0.009	-0.020	-0.017	-0.002	-0.012
High managerial	-0.059	-0.001	0.028	0.011	0.022	-0.001
Low managerial	-0.041	0.001	0.022	0.010	0.012	-0.005
Workers-Technical	-0.011	0.002	0.001	0.001	0.013	-0.005
Never worked-Unemp.	0.017	-0.006	0.001	-0.036	0.011	0.013
Students	-0.073	0.012	0.049	0.001	0.029	-0.019
Under 30	-0.018	-0.012	0.034	-0.011	0.008	-0.001
Between 30 and 45	-0.005	-0.006	0.021	-0.005	-0.003	-0.003
Between 45 and 60	-0.007	-0.003	0.005	-0.002	0.008	-0.001
North East	0.022	-0.003	-0.026	0.013	-0.005	-0.001
NW & Merseyside	-0.001	-0.001	-0.014	0.017	-0.003	0.002
Yorks & Humber	-0.003	0.001	0.000	0.006	0.001	-0.004
East Midlands	0.001	-0.001	0.000	0.012	-0.009	-0.003
West Midlands	-0.022	-0.005	0.006	0.018	0.000	0.003
Eastern	-0.029	-0.001	0.008	0.023	-0.002	0.001
London	-0.055	-0.001	0.022	0.025	0.000	0.009
South East	-0.030	-0.001	0.013	0.021	-0.006	0.004
South West	-0.029	-0.006	0.011	0.026	-0.003	0.000
Men	0.010	0.000	0.000	-0.003	-0.005	-0.003
White	0.034	0.009	0.007	0.028	-0.040	-0.037
Mixed	-0.009	0.022	-0.027	0.069	-0.001	-0.055
Asian	0.040	0.016	-0.047	-0.007	-0.022	0.019
Black	0.014	0.006	-0.035	0.045	-0.027	-0.002

I.2.2 Uncompensated & Expenditure Elasticities

Meat & Dairy 2001-02 Uncompensated elasticities	Price						*Expenditure*
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb	
Milk	-0.511	-0.036	-0.200	-0.113	-0.125	-0.030	1.017
Butter	-0.002	-0.351	0.117	0.142	0.189	-0.141	0.046
Cheese	-0.288	-0.011	-0.584	-0.015	-0.005	0.008	0.895
Misc. Dairy	-0.190	0.001	-0.016	-0.688	-0.010	0.020	0.883
Beef	-0.303	-0.003	-0.069	-0.061	-0.737	-0.019	1.191
Lamb	-0.359	-0.140	-0.120	-0.064	-0.123	-0.780	1.587

2002-03 Uncompensated elasticities	Price						*Expenditure*
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb	
Milk	-0.436	-0.036	-0.227	-0.147	-0.137	-0.035	1.018
Butter	0.009	-0.325	0.027	0.212	0.154	-0.118	0.042
Cheese	-0.337	-0.029	-0.504	-0.041	-0.042	0.030	0.923
Misc. Dairy	-0.232	0.014	-0.037	-0.677	0.039	0.025	0.868
Beef	-0.304	-0.008	-0.093	-0.006	-0.668	-0.047	1.127
Lamb	-0.445	-0.138	-0.077	-0.089	-0.242	-0.777	1.768

Meat & Dairy 2003-04 Uncompensated elasticities	Price						*Expenditure*
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb	
Milk	-0.443	-0.013	-0.181	-0.148	-0.168	-0.050	1.003
Butter	0.271	-0.545	0.124	0.237	0.286	-0.194	-0.179
Cheese	-0.269	-0.016	-0.543	-0.052	-0.021	-0.005	0.906
Misc. Dairy	-0.254	0.008	-0.063	-0.629	0.019	-0.005	0.925
Beef	-0.349	0.009	-0.065	-0.015	-0.673	-0.018	1.110
Lamb	-0.540	-0.169	-0.197	-0.170	-0.177	-0.550	1.803

Meat & Dairy 2004-05 Uncompensated elasticities	Price						*Expenditure*
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb	
Milk	-0.435	-0.024	-0.208	-0.155	-0.155	-0.028	1.005
Butter	0.139	-0.440	0.213	0.063	0.185	-0.051	-0.109
Cheese	-0.302	0.000	-0.509	-0.016	-0.061	-0.017	0.904
Misc. Dairy	-0.259	-0.022	-0.015	-0.666	0.031	0.045	0.885
Beef	-0.346	-0.010	-0.127	-0.022	-0.640	-0.034	1.178
Lamb	-0.406	-0.094	-0.234	-0.017	-0.206	-0.782	1.738

Meat & Dairy 2005-06 Uncompensated elasticities	Price						*Expenditure*
	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb	
Milk	-0.532	-0.040	-0.174	-0.126	-0.134	-0.015	1.021
Butter	-0.035	-0.452	0.256	0.117	0.150	-0.052	0.016
Cheese	-0.248	0.010	-0.512	-0.121	-0.033	-0.032	0.936
Misc. Dairy	-0.197	-0.006	-0.137	-0.566	0.009	0.024	0.873
Beef	-0.285	-0.009	-0.076	-0.032	-0.672	-0.032	1.106
Lamb	-0.320	-0.092	-0.278	-0.081	-0.202	-0.753	1.726

I.2.3 Compensated Elasticities

Meat & Dairy 2001-02	Price					
Compensated elasticities	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Milk	-0.160	0.001	0.013	0.055	0.056	0.035
Butter	0.013	-0.349	0.127	0.149	0.198	-0.138
Cheese	0.021	0.022	-0.396	0.134	0.154	0.064
Misc. Dairy	0.115	0.033	0.169	-0.541	0.147	0.076
Beef	0.108	0.041	0.181	0.137	-0.525	0.057
Lamb	0.189	-0.081	0.213	0.199	0.159	-0.680

2002-03	Price					
Compensated elasticities	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Milk	-0.090	0.003	-0.014	0.033	0.040	0.029
Butter	0.023	-0.324	0.036	0.219	0.161	-0.116
Cheese	-0.023	0.006	-0.311	0.122	0.118	0.087
Misc. Dairy	0.063	0.047	0.145	-0.524	0.190	0.079
Beef	0.079	0.035	0.142	0.193	-0.472	0.023
Lamb	0.156	-0.071	0.293	0.223	0.065	-0.667

Meat & Dairy 2003-04	Price					
Compensated elasticities	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Milk	-0.103	0.021	0.023	0.031	0.015	0.014
Butter	0.210	-0.551	0.088	0.206	0.253	-0.206
Cheese	0.038	0.014	-0.359	0.110	0.144	0.053
Misc. Dairy	0.059	0.039	0.125	-0.464	0.187	0.054
Beef	0.027	0.047	0.161	0.183	-0.471	0.053
Lamb	0.072	-0.108	0.169	0.151	0.151	-0.435

Meat & Dairy 2004-05	Price					
Compensated elasticities	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Milk	-0.095	0.011	0.002	0.021	0.028	0.032
Butter	0.103	-0.444	0.190	0.044	0.165	-0.058
Cheese	0.004	0.031	-0.319	0.143	0.104	0.037
Misc. Dairy	0.041	0.009	0.171	-0.511	0.193	0.098
Beef	0.052	0.031	0.119	0.185	-0.424	0.037
Lamb	0.183	-0.033	0.130	0.288	0.112	-0.678

Meat & Dairy 2005-06	Price					
Compensated elasticities	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
Milk	-0.186	-0.003	0.044	0.050	0.047	0.048
Butter	-0.029	-0.451	0.260	0.120	0.153	-0.051
Cheese	0.069	0.044	-0.312	0.040	0.133	0.026
Misc. Dairy	0.099	0.025	0.050	-0.415	0.163	0.078
Beef	0.089	0.031	0.160	0.159	-0.476	0.037
Lamb	0.265	-0.030	0.090	0.217	0.105	-0.646

I.3   Miscellaneous

I.3.1 Coefficient Estimates

Miscellaneous 2001-02 Log-lik = -754026.53	Share				
	Eggs	Fats	Sugar	Potatoes	Cereals
Proabability	0.562	0.597	0.351	0.721	0.948
Intercept	0.594	0.404	0.365	0.027	-0.391
Eggs	0.070	-0.013	-0.002	-0.015	-0.041
Oils & Fats	-0.013	0.097	-0.004	-0.015	-0.065
Sugar	-0.002	-0.004	0.029	0.000	-0.023
Potatoes	-0.015	-0.015	0.000	0.099	-0.068
Wheat & Barley	-0.041	-0.065	-0.023	-0.068	0.196
Expenditure	-0.074	-0.040	-0.056	0.034	0.136
1 or 2 Adults only	-0.010	0.009	-0.004	0.032	-0.027
Single parents	-0.017	0.007	-0.004	0.024	-0.010
Children, 2 adults	-0.009	-0.002	-0.005	0.010	0.006
Children, >2 adults	0.000	0.016	0.008	0.003	-0.027
High managerial	0.001	-0.008	-0.012	-0.004	0.023
Low managerial	0.002	0.002	-0.008	-0.004	0.007
Workers-Technical	-0.003	0.009	-0.004	-0.007	0.005
Never worked-Unemp.	0.012	0.024	0.013	-0.014	-0.034
Students	-0.020	-0.001	0.020	-0.061	0.061
Under 30	-0.008	-0.005	-0.004	0.022	-0.006
Between 30 and 45	0.000	-0.003	-0.002	0.015	-0.011
Between 45 and 60	0.000	-0.003	0.002	0.027	-0.026
North East	0.007	-0.020	-0.002	-0.026	0.040
NW & Merseyside	-0.003	0.002	-0.007	-0.010	0.017
Yorks & Humber	0.004	-0.009	-0.001	-0.004	0.010
East Midlands	-0.002	-0.006	-0.006	-0.005	0.019
West Midlands	-0.004	-0.010	0.000	-0.011	0.024
Eastern	-0.007	-0.005	-0.009	0.002	0.019
London	0.006	0.002	-0.013	0.006	-0.001
South East	0.005	-0.007	-0.005	0.020	-0.013
South West	0.010	0.003	-0.002	-0.012	0.001
Men	-0.004	0.003	0.003	-0.004	0.002
White	-0.020	-0.027	-0.004	0.056	-0.005
Mixed	-0.015	-0.020	-0.010	0.066	-0.022
Asian	0.018	0.012	0.006	-0.013	-0.023
Black	0.019	0.013	0.029	0.039	-0.099

Appendix I. IPM Results

Miscellaneous 2002-03 Log-lik = -710136.29	Share				
	Eggs	Fats	Sugar	Potatoes	Cereals
Proabability	0.588	0.610	0.350	0.720	0.946
Intercept	0.646	0.527	0.380	0.102	-0.655
Eggs	0.068	-0.014	0.001	-0.015	-0.039
Oils & Fats	-0.014	0.099	0.002	-0.013	-0.074
Sugar	0.001	0.002	0.026	-0.006	-0.022
Potatoes	-0.015	-0.013	-0.006	0.097	-0.062
Wheat & Barley	-0.039	-0.074	-0.022	-0.062	0.198
Expenditure	-0.080	-0.051	-0.062	0.013	0.181
1 or 2 Adults only	-0.009	0.011	-0.002	0.006	-0.006
Single parents	-0.016	-0.005	-0.009	0.005	0.025
Children, 2 adults	-0.006	-0.001	-0.008	-0.004	0.021
Children, >2 adults	0.005	-0.001	0.007	-0.007	-0.004
High managerial	-0.004	-0.012	-0.014	0.001	0.028
Low managerial	-0.009	-0.004	-0.011	0.009	0.015
Workers-Technical	-0.002	0.003	-0.010	0.006	0.003
Never worked-Unemp.	0.004	0.010	0.026	-0.039	-0.001
Students	-0.032	-0.055	-0.086	0.003	0.170
Under 30	0.004	-0.010	0.007	-0.004	0.003
Between 30 and 45	0.005	-0.004	0.014	-0.006	-0.009
Between 45 and 60	0.013	0.000	0.011	0.006	-0.030
North East	0.001	0.002	0.010	0.001	-0.014
NW & Merseyside	-0.005	-0.011	-0.007	0.000	0.022
Yorks & Humber	-0.002	-0.004	-0.006	0.005	0.007
East Midlands	-0.002	0.002	0.000	-0.002	0.002
West Midlands	-0.005	-0.003	-0.004	-0.005	0.018
Eastern	-0.003	0.000	-0.002	0.017	-0.012
London	0.004	-0.002	-0.007	0.020	-0.015
South East	-0.001	0.001	-0.004	0.016	-0.012
South West	0.005	0.004	-0.003	-0.008	0.001
Men	-0.001	0.005	0.003	0.000	-0.007
White	-0.021	-0.062	0.011	0.097	-0.025
Mixed	0.005	-0.027	0.029	0.064	-0.071
Asian	0.023	-0.025	0.040	0.029	-0.066
Black	-0.015	-0.036	0.025	0.091	-0.066

Appendix I. IPM Results

Miscellaneous 2003-04 Log-lik = -587549.80	Share				
	Eggs	Fats	Sugar	Potatoes	Cereals
Proability	0.580	0.596	0.331	0.709	0.929
Intercept	0.722	0.558	0.367	0.287	-0.934
Eggs	0.068	-0.014	0.005	-0.024	-0.036
Oils & Fats	-0.014	0.090	-0.007	-0.015	-0.054
Sugar	0.005	-0.007	0.023	0.000	-0.021
Potatoes	-0.024	-0.015	0.000	0.095	-0.057
Wheat & Barley	-0.036	-0.054	-0.021	-0.057	0.167
Expenditure	-0.089	-0.053	-0.059	0.002	0.200
1 or 2 Adults only	-0.013	0.006	0.002	0.004	0.001
Single parents	-0.010	-0.013	0.003	-0.021	0.041
Children, 2 adults	-0.009	-0.008	-0.005	-0.016	0.039
Children, >2 adults	-0.005	0.000	0.005	-0.013	0.013
High managerial	0.010	-0.008	-0.002	0.019	-0.018
Low managerial	0.010	-0.002	-0.001	0.021	-0.028
Workers-Technical	0.008	-0.008	0.004	0.024	-0.029
Never worked-Unemp.	-0.004	-0.005	0.007	0.008	-0.006
Students	0.014	-0.002	-0.010	0.006	-0.007
Under 30	-0.020	-0.003	0.001	-0.013	0.035
Between 30 and 45	-0.011	0.001	-0.001	-0.012	0.022
Between 45 and 60	-0.006	0.000	0.002	-0.005	0.010
North East	0.003	-0.011	-0.002	-0.017	0.027
NW & Merseyside	-0.001	-0.013	-0.002	-0.023	0.039
Yorks & Humber	0.006	-0.016	0.002	-0.016	0.024
East Midlands	0.004	-0.002	-0.005	-0.005	0.007
West Midlands	-0.007	-0.030	-0.002	0.009	0.030
Eastern	0.002	0.000	0.004	-0.004	-0.002
London	0.013	-0.013	-0.008	0.006	0.002
South East	0.004	-0.003	0.001	-0.002	0.001
South West	0.010	0.005	0.002	-0.014	-0.003
Men	0.001	-0.002	0.005	0.001	-0.004
White	-0.037	-0.067	-0.002	-0.005	0.111
Mixed	-0.016	-0.041	-0.011	-0.010	0.078
Asian	0.012	-0.035	0.006	-0.034	0.051
Black	0.001	-0.010	0.013	-0.043	0.040

Miscellaneous 2004-05 Log-lik = -526833.92	Share				
	Eggs	Fats	Sugar	Potatoes	Cereals
Proabability	0.572	0.597	0.327	0.413	0.939
Intercept	0.809	0.703	0.515	0.364	-1.390
Eggs	0.058	-0.030	-0.003	0.036	-0.061
Oils & Fats	-0.030	0.125	-0.013	0.002	-0.084
Sugar	-0.003	-0.013	0.022	0.031	-0.037
Potatoes	0.036	0.002	0.031	0.016	-0.085
Wheat & Barley	-0.061	-0.084	-0.037	-0.085	0.267
Expenditure	-0.101	-0.071	-0.088	-0.050	0.309
1 or 2 Adults only	-0.005	0.003	-0.007	-0.012	0.021
Single parents	-0.016	-0.014	-0.021	-0.020	0.070
Children, 2 adults	-0.015	-0.022	-0.006	-0.029	0.072
Children, >2 adults	0.016	-0.009	0.008	-0.038	0.024
High managerial	0.016	-0.002	-0.011	0.027	-0.031
Low managerial	0.005	0.008	-0.003	0.012	-0.021
Workers-Technical	0.002	0.002	-0.005	0.009	-0.008
Never worked-Unemp.	0.010	-0.011	0.025	0.006	-0.030
Students	0.039	0.022	-0.001	0.029	-0.089
Under 30	-0.021	-0.014	-0.010	0.008	0.037
Between 30 and 45	-0.003	-0.004	-0.005	-0.007	0.019
Between 45 and 60	-0.006	-0.009	0.003	0.006	0.005
North East	0.003	0.010	-0.005	0.000	-0.006
NW & Merseyside	0.000	0.017	0.000	-0.018	0.001
Yorks & Humber	0.011	0.003	0.000	-0.034	0.021
East Midlands	-0.010	0.016	0.000	-0.008	0.003
West Midlands	-0.016	-0.007	-0.001	-0.020	0.044
Eastern	-0.002	0.031	-0.004	0.007	-0.032
London	0.017	0.019	-0.006	-0.007	-0.023
South East	-0.001	0.013	0.005	-0.005	-0.012
South West	0.005	0.012	-0.002	-0.010	-0.006
Men	0.005	0.008	-0.002	-0.001	-0.010
White	-0.033	-0.063	0.031	0.030	0.035
Mixed	0.030	0.008	0.061	0.022	-0.121
Asian	0.011	-0.019	0.067	0.005	-0.064
Black	0.018	-0.034	0.041	0.041	-0.067

Appendix I. IPM Results

Miscellaneous 2005-06 Log-lik = -643838.86	Share				
	Eggs	Fats	Sugar	Potatoes	Cereals
Proability	0.581	0.580	0.326	0.410	0.932
Intercept	0.847	0.741	0.510	0.358	-1.457
Eggs	0.057	-0.025	-0.003	0.032	-0.061
Oils & Fats	-0.025	0.135	-0.011	-0.015	-0.084
Sugar	-0.003	-0.011	0.025	0.023	-0.035
Potatoes	0.032	-0.015	0.023	0.025	-0.065
Wheat & Barley	-0.061	-0.084	-0.035	-0.065	0.245
Expenditure	-0.102	-0.077	-0.082	-0.052	0.313
1 or 2 Adults only	-0.006	0.003	0.001	0.013	-0.011
Single parents	-0.022	-0.036	-0.001	0.016	0.044
Children, 2 adults	-0.008	-0.013	0.001	-0.007	0.028
Children, >2 adults	-0.001	0.000	0.010	-0.004	-0.005
High managerial	0.006	-0.001	-0.007	0.010	-0.009
Low managerial	0.013	-0.006	0.000	0.016	-0.023
Workers-Technical	0.004	0.002	0.004	0.000	-0.009
Never worked-Unemp.	0.020	0.006	0.031	0.002	-0.058
Students	0.019	-0.032	-0.005	-0.005	0.023
Under 30	-0.024	-0.012	-0.005	-0.019	0.059
Between 30 and 45	-0.012	-0.004	-0.006	-0.008	0.030
Between 45 and 60	-0.007	-0.002	0.000	-0.002	0.011
North East	0.009	0.005	0.001	-0.011	-0.004
NW & Merseyside	-0.003	-0.006	0.006	-0.015	0.018
Yorks & Humber	0.001	-0.009	0.009	-0.012	0.011
East Midlands	-0.003	-0.003	0.010	0.003	-0.007
West Midlands	-0.012	-0.032	0.010	-0.008	0.042
Eastern	0.005	-0.015	0.003	0.002	0.004
London	0.013	0.002	0.009	0.013	-0.037
South East	0.004	-0.001	0.012	0.011	-0.026
South West	0.013	-0.007	0.003	-0.002	-0.006
Men	0.005	-0.001	0.003	0.007	-0.013
White	-0.046	-0.071	-0.004	0.028	0.093
Mixed	-0.003	-0.017	0.000	0.053	-0.033
Asian	0.013	-0.025	0.018	0.042	-0.048
Black	-0.012	-0.040	0.024	-0.002	0.029

I.3.2 Uncompensated & Expenditure Elasticities

Miscellaneous 2001-02	Price					
Uncompensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals	*Expenditure*
Eggs	-0.372	-0.014	0.022	0.033	-0.089	1.082
Oils & Fats	-0.053	-0.326	-0.012	-0.034	-0.316	0.741
Sugar	0.094	0.074	-0.463	0.238	0.003	0.054
Potatoes	-0.074	-0.081	-0.009	-0.649	-0.320	1.133
Cereals	-0.145	-0.212	-0.076	-0.255	-0.649	1.336

Miscellaneous 2002-03	Price					
Uncompensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals	*Expenditure*
Eggs	-0.419	-0.010	0.041	0.024	-0.046	0.410
Oils & Fats	-0.045	-0.334	0.033	-0.009	-0.327	0.682
Sugar	0.146	0.197	-0.521	0.134	0.048	-0.005
Potatoes	-0.074	-0.067	-0.030	-0.594	-0.293	1.058
Cereals	-0.156	-0.251	-0.082	-0.255	-0.697	1.442

Miscellaneous 2003-04	Price					
Uncompensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals	*Expenditure*
Eggs	-0.432	0.000	0.074	-0.019	0.003	0.375
Oils & Fats	-0.041	-0.375	-0.024	-0.016	-0.205	0.661
Sugar	0.229	0.039	-0.550	0.227	0.051	0.003
Potatoes	-0.102	-0.065	-0.002	-0.594	-0.245	1.007
Cereals	-0.157	-0.208	-0.081	-0.253	-0.790	1.489

Miscellaneous 2004-05	Price					
Uncompensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals	*Expenditure*
Eggs	-0.536	-0.076	0.026	0.301	-0.084	0.369
Oils & Fats	-0.105	-0.239	-0.042	0.056	-0.279	0.609
Sugar	0.153	0.046	-0.600	0.576	0.057	-0.233
Potatoes	0.379	0.093	0.294	-0.814	-0.526	0.574
Cereals	-0.233	-0.297	-0.126	-0.256	-0.743	1.655

Miscellaneous 2005-06	Price					
Uncompensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals	*Expenditure*
Eggs	-0.548	-0.046	0.023	0.268	-0.073	0.375
Oils & Fats	-0.072	-0.132	-0.034	-0.038	-0.273	0.549
Sugar	0.152	0.045	-0.543	0.483	0.071	-0.209
Potatoes	0.353	-0.056	0.234	-0.729	-0.350	0.548
Cereals	-0.233	-0.284	-0.116	-0.210	-0.805	1.649

I.3.3 Compensated Elasticities

Miscellaneous 2001-02	Price				
Compensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals
Eggs	-0.319	0.050	0.047	0.141	0.080
Oils & Fats	0.042	-0.212	0.032	0.155	-0.017
Sugar	0.101	0.082	-0.460	0.251	0.025
Potatoes	0.070	0.093	0.058	-0.359	0.137
Cereals	0.025	-0.006	0.004	0.087	-0.110

Miscellaneous 2002-03	Price				
Compensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals
Eggs	-0.363	0.056	0.066	0.119	0.122
Oils & Fats	0.047	-0.224	0.075	0.149	-0.048
Sugar	0.146	0.196	-0.521	0.133	0.046
Potatoes	0.070	0.104	0.036	-0.348	0.139
Cereals	0.041	-0.019	0.007	0.079	-0.108

Miscellaneous 2003-04	Price				
Compensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals
Eggs	-0.379	0.059	0.096	0.068	0.156
Oils & Fats	0.053	-0.272	0.015	0.139	0.065
Sugar	0.230	0.040	-0.549	0.228	0.052
Potatoes	0.041	0.093	0.058	-0.358	0.166
Cereals	0.054	0.025	0.008	0.095	-0.182

Miscellaneous 2004-05	Price				
Compensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals
Eggs	-0.477	-0.009	0.052	0.344	0.090
Oils & Fats	-0.008	-0.129	0.001	0.127	0.008
Sugar	0.116	0.003	-0.616	0.549	-0.052
Potatoes	0.470	0.198	0.335	-0.747	-0.255
Cereals	0.031	0.003	-0.008	-0.063	0.037

Miscellaneous 2005-06	Price				
Compensated elasticities	Eggs	Fats	Sugar	Potatoes	Cereals
Eggs	-0.486	0.018	0.049	0.311	0.108
Oils & Fats	0.018	-0.039	0.004	0.025	-0.008
Sugar	0.118	0.010	-0.557	0.459	-0.030
Potatoes	0.443	0.038	0.271	-0.666	-0.086
Cereals	0.037	-0.003	-0.004	-0.020	-0.009

I.4   *Fruit & Vegetables*

I.4.1 **Coefficient Estimates**

Fruit & Vegetables 2001-02 Log-lik = -1525925.84	Share				
	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Proabability	0.675	0.129	0.944	0.690	0.381
Intercept	0.587	0.201	-0.022	0.419	-0.185
Peas & Beans	0.042	0.001	-0.030	-0.010	-0.003
Turnips & Swede	0.001	0.004	-0.002	0.006	-0.009
Other Vegetables	-0.030	-0.002	0.066	-0.030	-0.004
Tree Fruit	-0.010	0.006	-0.030	0.044	-0.009
Soft Fruit	-0.003	-0.009	-0.004	-0.009	0.025
Expenditure	-0.067	-0.023	0.108	-0.042	0.024
1 or 2 Adults only	-0.013	-0.004	0.005	0.002	0.010
Single parents	0.001	-0.005	-0.018	0.016	0.005
Children, 2 adults	-0.004	-0.002	-0.004	0.009	0.000
Children, >2 adults	0.009	0.002	-0.024	0.016	-0.003
High managerial	-0.010	0.000	0.023	-0.010	-0.003
Low managerial	-0.003	0.001	0.012	-0.007	-0.003
Workers-Technical	0.003	-0.001	0.004	-0.005	-0.001
Never worked-Unemp.	0.055	-0.005	-0.016	-0.033	-0.002
Students	-0.028	-0.006	-0.010	0.026	0.018
Under 30	-0.006	-0.002	0.014	-0.008	0.002
Between 30 and 45	-0.003	-0.004	0.003	-0.003	0.007
Between 45 and 60	-0.001	-0.003	0.004	-0.002	0.002
North East	0.005	0.003	-0.008	0.003	-0.004
NW & Merseyside	-0.012	0.000	0.013	-0.001	0.001
Yorks & Humber	-0.010	0.002	0.016	-0.007	-0.002
East Midlands	-0.005	0.002	0.009	-0.005	-0.001
West Midlands	-0.007	0.018	-0.003	0.011	-0.019
Eastern	-0.007	0.002	0.002	0.004	-0.001
London	0.005	0.013	-0.006	0.001	-0.013
South East	0.009	0.003	-0.012	0.004	-0.004
South West	0.012	0.005	-0.022	0.014	-0.008
Men	0.002	0.001	-0.002	0.003	-0.005
White	0.002	-0.023	-0.034	0.024	0.032
Mixed	-0.018	-0.017	-0.028	0.043	0.019
Asian	0.000	-0.027	-0.026	0.019	0.034
Black	-0.013	-0.036	-0.024	0.032	0.042

Appendix I. IPM Results

Fruit & Vegetables 2002-03 Log-lik = -2101089.19	Share				
	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Proability	0.678	0.135	0.946	0.699	0.396
Intercept	0.655	0.091	-0.081	0.425	-0.090
Peas & Beans	0.047	-0.003	-0.030	-0.015	0.001
Turnips & Swede	-0.003	0.005	-0.004	0.003	-0.001
Other Vegetables	-0.030	-0.004	0.066	-0.026	-0.006
Tree Fruit	-0.015	0.003	-0.026	0.046	-0.008
Soft Fruit	0.001	-0.001	-0.006	-0.008	0.014
Expenditure	-0.076	-0.013	0.108	-0.036	0.018
1 or 2 Adults only	-0.008	-0.001	-0.009	0.010	0.007
Single parents	-0.003	0.004	-0.001	0.002	-0.002
Children, 2 adults	-0.014	-0.002	0.007	0.006	0.004
Children, >2 adults	-0.010	0.002	0.019	-0.008	-0.004
High managerial	0.003	-0.001	0.014	-0.010	-0.005
Low managerial	-0.004	-0.002	0.009	0.000	-0.004
Workers-Technical	0.002	0.000	0.001	0.000	-0.002
Never worked-Unemp.	0.063	0.004	-0.051	0.029	-0.045
Students	-0.048	-0.564	0.050	-0.027	0.589
Under 30	0.002	-0.002	0.009	-0.011	0.002
Between 30 and 45	0.001	0.002	0.001	-0.004	0.000
Between 45 and 60	0.007	0.001	0.000	-0.009	0.001
North East	-0.007	0.003	0.000	0.004	-0.001
NW & Merseyside	-0.007	-0.004	-0.004	0.011	0.003
Yorks & Humber	-0.003	-0.002	0.004	0.001	0.000
East Midlands	0.012	-0.001	-0.015	0.005	-0.001
West Midlands	0.021	0.000	-0.016	0.004	-0.008
Eastern	0.001	-0.001	0.000	-0.001	0.002
London	0.005	-0.001	-0.006	0.001	0.001
South East	0.010	0.001	-0.012	0.001	0.000
South West	0.008	0.000	-0.014	0.006	-0.001
Men	0.010	-0.001	-0.006	-0.002	-0.001
White	-0.018	0.011	0.025	-0.007	-0.012
Mixed	-0.020	0.006	0.009	-0.002	0.007
Asian	-0.008	0.016	0.002	0.006	-0.016
Black	-0.035	0.014	0.033	0.011	-0.023

Appendix I. IPM Results

Fruit & Vegetables 2003-04 Log-lik = -1240890.50	Share				
	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Proabability	0.653	0.131	0.952	0.684	0.408
Intercept	0.565	-0.181	-0.003	0.407	0.212
Peas & Beans	0.048	0.001	-0.033	-0.014	-0.003
Turnips & Swede	0.001	0.002	-0.001	0.004	-0.007
Other Vegetables	-0.033	-0.001	0.060	-0.020	-0.006
Tree Fruit	-0.014	0.004	-0.020	0.040	-0.010
Soft Fruit	-0.003	-0.007	-0.006	-0.010	0.025
Expenditure	-0.066	-0.019	0.098	-0.035	0.021
1 or 2 Adults only	-0.020	-0.002	0.010	0.004	0.008
Single parents	-0.009	-0.006	-0.005	0.014	0.005
Children, 2 adults	-0.015	-0.002	0.006	0.005	0.005
Children, >2 adults	-0.021	0.001	0.011	0.011	-0.001
High managerial	0.002	0.002	0.006	-0.011	0.001
Low managerial	-0.003	-0.002	0.008	-0.008	0.006
Workers-Technical	0.006	-0.003	-0.001	-0.007	0.005
Never worked-Unemp.	0.048	-0.004	-0.045	-0.001	0.003
Students	-0.015	-0.004	0.050	-0.038	0.007
Under 30	-0.006	0.013	0.016	-0.005	-0.019
Between 30 and 45	-0.004	0.002	0.021	-0.010	-0.008
Between 45 and 60	-0.001	0.001	0.011	-0.003	-0.007
North East	-0.018	-0.002	0.029	-0.020	0.012
NW & Merseyside	-0.008	-0.004	0.011	-0.005	0.005
Yorks & Humber	-0.004	-0.003	0.002	0.001	0.004
East Midlands	0.005	0.000	-0.001	-0.009	0.004
West Midlands	0.005	0.002	-0.005	-0.007	0.005
Eastern	0.004	-0.003	-0.002	-0.001	0.002
London	0.011	-0.004	-0.003	-0.008	0.005
South East	0.011	-0.001	-0.004	-0.008	0.001
South West	0.004	0.001	-0.006	0.001	0.000
Men	0.008	0.002	-0.010	0.007	-0.007
White	0.002	0.327	0.003	0.004	-0.337
Mixed	-0.032	0.321	0.010	0.034	-0.333
Asian	0.008	0.332	-0.037	0.034	-0.337
Black	0.012	0.325	-0.041	0.048	-0.344

Appendix I. IPM Results

Fruit & Vegetables 2004-05 Log-lik = -1915800.37	Share				
	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Proability	0.651	0.132	0.948	0.705	0.453
Intercept	0.663	0.127	-0.197	0.542	-0.135
Peas & Beans	0.032	0.000	-0.030	0.003	-0.006
Turnips & Swede	0.000	0.001	-0.003	0.005	-0.004
Other Vegetables	-0.030	-0.003	0.077	-0.035	-0.009
Tree Fruit	0.003	0.005	-0.035	0.034	-0.007
Soft Fruit	-0.006	-0.004	-0.009	-0.007	0.026
Expenditure	-0.076	-0.015	0.119	-0.050	0.023
1 or 2 Adults only	-0.016	-0.004	0.011	0.005	0.005
Single parents	0.001	-0.004	0.003	-0.004	0.003
Children, 2 adults	-0.007	-0.003	0.005	0.004	0.001
Children, >2 adults	0.003	-0.002	-0.013	0.011	0.001
High managerial	0.004	-0.003	-0.002	-0.002	0.003
Low managerial	0.000	-0.001	0.003	-0.002	0.000
Workers-Technical	0.000	-0.002	0.001	-0.003	0.004
Never worked-Unemp.	0.022	-0.003	-0.015	0.003	-0.007
Students	-0.015	-0.006	0.026	-0.002	-0.005
Under 30	-0.010	0.002	0.015	-0.001	-0.005
Between 30 and 45	-0.006	0.001	0.012	-0.003	-0.004
Between 45 and 60	-0.005	0.001	0.014	-0.001	-0.010
North East	-0.009	-0.001	0.026	-0.016	0.000
NW & Merseyside	-0.004	-0.003	0.027	-0.022	0.003
Yorks & Humber	-0.001	-0.003	0.020	-0.013	-0.003
East Midlands	-0.011	-0.001	0.043	-0.031	-0.001
West Midlands	-0.009	-0.002	0.039	-0.030	0.002
Eastern	0.013	-0.001	0.006	-0.018	0.000
London	0.006	0.001	0.016	-0.017	-0.005
South East	0.009	0.000	0.016	-0.021	-0.004
South West	0.014	0.001	0.000	-0.013	-0.002
Men	0.001	0.001	0.000	0.004	-0.006
White	-0.026	-0.002	0.016	-0.007	0.019
Mixed	-0.003	0.498	-0.063	0.042	-0.474
Asian	-0.009	-0.002	-0.025	0.021	0.015
Black	-0.033	0.038	0.003	0.009	-0.017

Appendix I. IPM Results

Fruit & Vegetables 2005-06 Log-lik = -753952.20	Share				
	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Proabability	0.646	0.132	0.946	0.707	0.474
Intercept	0.619	0.153	-0.050	0.438	-0.160
Peas & Beans	0.035	-0.002	-0.030	0.000	-0.003
Turnips & Swede	-0.002	0.002	0.003	0.006	-0.008
Other Vegetables	-0.030	0.003	0.066	-0.028	-0.010
Tree Fruit	0.000	0.006	-0.028	0.035	-0.012
Soft Fruit	-0.003	-0.008	-0.010	-0.012	0.034
Expenditure	-0.074	-0.021	0.108	-0.041	0.028
1 or 2 Adults only	-0.013	-0.002	0.007	-0.001	0.009
Single parents	-0.017	0.034	0.006	0.002	-0.025
Children, 2 adults	-0.016	-0.003	0.008	0.009	0.002
Children, >2 adults	-0.003	0.001	0.007	-0.002	-0.003
High managerial	-0.008	-0.003	0.017	-0.012	0.007
Low managerial	0.000	-0.003	0.007	-0.007	0.003
Workers-Technical	0.001	-0.007	0.004	-0.005	0.007
Never worked-Unemp.	0.034	-0.021	-0.024	-0.003	0.014
Students	-0.037	-0.012	0.042	-0.005	0.012
Under 30	0.017	0.003	0.000	-0.002	-0.018
Between 30 and 45	0.002	0.008	0.007	-0.001	-0.016
Between 45 and 60	0.009	0.003	-0.001	-0.002	-0.010
North East	-0.006	0.016	0.003	0.009	-0.021
NW & Merseyside	-0.004	-0.001	0.017	-0.008	-0.005
Yorks & Humber	-0.007	0.002	0.020	-0.007	-0.009
East Midlands	-0.005	0.002	0.011	-0.003	-0.004
West Midlands	0.011	-0.001	0.007	-0.005	-0.013
Eastern	0.007	0.001	0.004	-0.001	-0.010
London	0.020	0.004	-0.013	0.001	-0.012
South East	0.004	0.001	0.003	0.000	-0.008
South West	0.005	0.001	0.007	-0.006	-0.007
Men	0.012	0.011	-0.009	0.002	-0.015
White	0.000	-0.002	-0.040	0.016	0.026
Mixed	-0.008	0.000	-0.004	-0.019	0.031
Asian	-0.007	0.002	-0.039	0.033	0.010
Black	0.004	-0.021	-0.073	0.043	0.047

I.4.2 Uncompensated & Expenditure Elasticities

Fruit & Vegetables 2001-02 Uncompensated elasticities	Price					*Expenditure*
	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit	
Peas & Beans	-0.650	0.011	0.061	0.023	0.006	1.082
Turnips & Swede	0.465	-0.551	1.205	1.052	-0.765	-1.406
Other Vegetables	-0.079	-0.005	-0.996	-0.088	-0.018	1.185
Tree Fruit	-0.018	0.031	-0.029	-0.736	-0.035	0.787
Soft Fruit	-0.111	-0.147	-0.286	-0.229	-0.619	1.392

Fruit & Vegetables 2002-03 Uncompensated elasticities	Price					*Expenditure*
	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit	
Peas & Beans	-0.605	-0.015	0.088	0.004	0.041	0.487
Turnips & Swede	-0.120	-0.451	0.382	0.596	-0.026	-0.381
Other Vegetables	-0.081	-0.008	-0.991	-0.085	-0.024	1.189
Tree Fruit	-0.046	0.016	-0.027	-0.737	-0.025	0.820
Soft Fruit	-0.027	-0.018	-0.228	-0.160	-0.818	1.250

Fruit & Vegetables 2003-04 Uncompensated elasticities	Price					*Expenditure*
	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit	
Peas & Beans	-0.589	0.012	0.040	-0.006	0.017	0.526
Turnips & Swede	0.374	-0.747	1.003	0.810	-0.540	-0.899
Other Vegetables	-0.080	-0.003	-0.994	-0.069	-0.023	1.169
Tree Fruit	-0.046	0.023	-0.002	-0.764	-0.036	0.825
Soft Fruit	-0.075	-0.093	-0.250	-0.190	-0.682	1.290

Fruit & Vegetables 2004-05 Uncompensated elasticities	Price					*Expenditure*
	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit	
Peas & Beans	-0.689	0.008	0.099	0.135	0.007	0.440
Turnips & Swede	0.276	-0.878	0.649	0.903	-0.257	-0.693
Other Vegetables	-0.081	-0.007	-0.982	-0.105	-0.035	1.210
Tree Fruit	0.048	0.028	-0.035	-0.780	-0.013	0.753
Soft Fruit	-0.101	-0.044	-0.254	-0.133	-0.728	1.260

Fruit & Vegetables 2005-06 Uncompensated elasticities	Price					*Expenditure*
	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit	
Peas & Beans	-0.671	-0.009	0.088	0.104	0.029	0.459
Turnips & Swede	0.112	-0.762	1.648	1.088	-0.711	-1.375
Other Vegetables	-0.079	0.003	-0.992	-0.086	-0.036	1.190
Tree Fruit	0.029	0.031	-0.025	-0.778	-0.045	0.788
Soft Fruit	-0.074	-0.089	-0.277	-0.189	-0.669	1.298

I.4.3 Compensated Elasticities

Fruit & Vegetables 2001-02	Price				
Compensated elasticities	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Peas & Beans	-0.568	0.017	0.381	0.130	0.040
Turnips & Swede	0.255	-0.565	0.385	0.777	-0.852
Other Vegetables	0.097	0.006	-0.304	0.144	0.056
Tree Fruit	0.099	0.039	0.430	-0.582	0.014
Soft Fruit	0.096	-0.134	0.526	0.044	-0.533

Fruit & Vegetables 2002-03	Price				
Compensated elasticities	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Peas & Beans	-0.533	-0.011	0.365	0.103	0.076
Turnips & Swede	-0.176	-0.455	0.165	0.519	-0.053
Other Vegetables	0.096	0.003	-0.315	0.156	0.060
Tree Fruit	0.076	0.024	0.439	-0.571	0.033
Soft Fruit	0.159	-0.007	0.483	0.093	-0.729

Fruit & Vegetables 2003-04	Price				
Compensated elasticities	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Peas & Beans	-0.516	0.017	0.345	0.098	0.055
Turnips & Swede	0.248	-0.756	0.483	0.632	-0.607
Other Vegetables	0.083	0.008	-0.317	0.163	0.063
Tree Fruit	0.069	0.031	0.476	-0.601	0.025
Soft Fruit	0.104	-0.081	0.496	0.066	-0.586

Fruit & Vegetables 2004-05	Price				
Compensated elasticities	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Peas & Beans	-0.630	0.012	0.348	0.224	0.046
Turnips & Swede	0.182	-0.884	0.257	0.763	-0.318
Other Vegetables	0.084	0.004	-0.298	0.139	0.071
Tree Fruit	0.151	0.034	0.390	-0.628	0.053
Soft Fruit	0.070	-0.033	0.458	0.122	-0.617

Fruit & Vegetables 2005-06	Price				
Compensated elasticities	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
Peas & Beans	-0.608	-0.005	0.348	0.192	0.072
Turnips & Swede	-0.077	-0.774	0.869	0.823	-0.841
Other Vegetables	0.084	0.013	-0.317	0.143	0.076
Tree Fruit	0.138	0.037	0.421	-0.626	0.030
Soft Fruit	0.105	-0.078	0.459	0.060	-0.546

Appendix J. Effects of Socio-demographic Variables on Demand

The following tables show the impact of the socio-demographic variables on the demand for the food groups used in our different aggregations. The figures allow us to identify the independent impact of these socio-demographic variables on demand in isolation from all other variables that affect demand.

For each socio-demographic category (*e.g.*, household composition), a reference group is defined (*e.g.*, adults only), for which coefficients are all equal to 0. Reference categories for each socio-demographic group are given in the table below.

<div align="center">

Reference categories per demographic group

Group	Reference category
Household composition	1 or 2 adults only
Socio-economic group	High managerial
Age	Under 30
GOR	London
Ethnic origin	White
Head of household gender	Male

</div>

The coefficients can be interpreted as follow. Each coefficient in the table measures the average increase in demand measured in physical units (grammes or millilitres) for differing categories under the assumption that all other variables, including the economic variables, are held at the level of the reference household. Thus, from the second figure in the first column of the first table below, we can see that a household in which the only difference compared to the reference household is that it is a single parent household as opposed to adults only, will, on average, consume 432.65 grammes more meat & dairy products over a 2-week period.

Computations

Noting γ_{si}^* the coefficient to be computed for the socio-demographic category s (in socio-demographic group S) and food group i, we first compute γ_{si} defined as:

$$\gamma_{si} = \beta_{si} \cdot \frac{\sum_{i=1}^{N} \bar{x}}{\bar{p}_i} \tag{J.1}$$

where β_{si} is the estimated coefficient, $\sum_{i=1}^{N} \bar{x}$ is the sum of mean expenditures for all of the $i = 1, \ldots, N$ food groups in the aggregation considered, and $\bar{p}_i$ is the mean price observed for food group i. We then obtain γ_{si}^*:

$$\gamma_{si}^* = \gamma_{si} - \gamma_{Si} \tag{J.2}$$

where γ_{Si} is the coefficient computed for the reference category in socio-demographic group S.

The following tables have been computed using SUR-Tobit estimates.

J.1   Upper Model

Upper Model 2001-02	Dairy & Meat	Misc	F&V
1 or 2 Adults only	0.000	0.000	0.000
Single parents	432.647	1,417.123	-1,163.277
Children, 2 adults	865.413	1,142.350	-1,384.524
Children, >2 adults	432.742	2,074.004	-1,529.107
>2 adults, no children	684.188	1,084.894	-1,195.802
High managerial	0.000	0.000	0.000
Low managerial	170.662	990.655	-699.216
Workers-Technical	372.823	2,499.810	-1,714.367
Never worked-Unemp.	395.772	3,704.214	-2,404.877
Students	-892.412	1,744.202	-199.434
Other	534.675	2,628.737	-1,926.151
Under 30	0.000	0.000	0.000
Between 30 and 45	-700.222	-101.375	662.020
Between 45 and 60	-1,002.776	304.200	697.843
Over 60	-1,323.615	425.733	907.641
North East	664.176	1,070.696	-1,170.630
NW & Merseyside	900.322	1,258.660	-1,479.499
Yorks & Humber	1,014.950	221.290	-1,000.998
East Midlands	974.120	189.803	-948.154
West Midlands	837.064	903.330	-1,226.935
Eastern	981.248	-17.840	-838.698
London	0.000	0.000	0.000
South East	754.836	-131.023	-579.867
South West	891.867	-39.910	-749.110
Wales	24.631	1,795.847	-1,021.296
Men	0.000	0.000	0.000
Women	-100.536	-666.371	457.999
White	0.000	0.000	0.000
Mixed	-1,330.483	-951.259	1,680.325
Asian	-1,907.907	852.091	1,175.546
Black	-1,335.788	693.186	769.244
Other	-1,501.500	-1,391.632	2,073.437

Upper Model 2002-03	Dairy&Meat	Fats	F&V
1 or 2 Adults only	0.000	0.000	0.000
Single parents	1,139.543	884.136	-1,471.744
Children, 2 adults	1,233.533	1,090.622	-1,666.444
Children, >2 adults	-1,028.760	3,447.067	-1,002.220
>2 adults, no children	542.017	1,180.465	-1,117.199
High managerial	0.000	0.000	0.000
Low managerial	433.567	706.434	-762.977
Workers-Technical	821.189	2,203.116	-1,920.380
Never worked-Unemp.	349.139	4,281.686	-2,652.800
Students	-1,430.376	2,173.377	44.442
Other	730.931	2,409.161	-1,955.315
Under 30	0.000	0.000	0.000
Between 30 and 45	-211.303	-193.436	289.134
Between 45 and 60	-383.424	262.032	187.979
Over 60	-486.510	73.264	380.863
North East	1,090.099	899.906	-1,437.555
NW & Merseyside	1,064.910	634.309	-1,269.839
Yorks & Humber	797.400	387.019	-902.640
East Midlands	1,025.029	432.124	-1,124.344
West Midlands	400.682	1,010.042	-901.368
Eastern	86.527	-12.535	-67.954
London	0.000	0.000	0.000
South East	333.980	-190.458	-184.629
South West	474.382	179.025	-508.941
Wales	292.699	1,165.540	-893.214
Men	0.000	0.000	0.000
Women	-106.118	-783.999	522.362
White	0.000	0.000	0.000
Mixed	-324.651	-1,297.953	993.440
Asian	-1,808.902	-61.574	1,599.257
Black	-1,436.206	924.168	735.509
Other	-1,689.723	-1,982.404	2,550.677

Appendix J. Effects of Socio-demographic Variables on Demand

Upper Model 2003-04	Dairy&Meat	Fats	F&V
1 or 2 Adults only	0.000	0.000	0.000
Single parents	511.621	1,136.136	-1,053.409
Children, 2 adults	1,177.598	737.139	-1,389.913
Children, >2 adults	777.430	1,644.334	-1,555.470
>2 adults, no children	923.419	1,005.932	-1,325.677
High managerial	0.000	0.000	0.000
Low managerial	132.656	718.216	-506.563
Workers-Technical	487.487	2,123.181	-1,577.093
Never worked-Unemp.	304.647	3,528.504	-2,198.661
Students	-542.161	1,764.503	-519.319
Other	360.409	1,634.622	-1,201.747
Under 30	0.000	0.000	0.000
Between 30 and 45	-644.183	182.385	437.647
Between 45 and 60	-1,018.349	605.860	516.891
Over 60	-864.844	761.115	303.112
North East	468.411	1,170.075	-1,035.973
NW & Merseyside	917.746	811.756	-1,213.931
Yorks & Humber	657.491	203.889	-661.595
East Midlands	606.149	257.719	-648.364
West Midlands	419.338	887.126	-839.118
Eastern	374.142	66.876	-349.399
London	0.000	0.000	0.000
South East	215.106	-284.240	-23.084
South West	585.513	45.301	-514.087
Wales	457.064	1,210.108	-1,048.571
Men	0.000	0.000	0.000
Women	-66.376	-559.592	363.774
White	0.000	0.000	0.000
Mixed	-1,417.335	-940.848	1,702.406
Asian	-1,364.929	-300.475	1,305.792
Black	-987.123	-488.057	1,093.535
Other	-2,315.248	-987.188	2,478.038

Appendix J. Effects of Socio-demographic Variables on Demand

Upper Model 2004-05	Dairy&Meat	Fats	F&V
1 or 2 Adults only	0.000	0.000	0.000
Single parents	625.989	1,290.358	-1,292.679
Children, 2 adults	1,189.730	1,319.070	-1,792.044
Children, >2 adults	637.931	1,666.976	-1,523.810
>2 adults, no children	883.306	1,070.302	-1,383.848
High managerial	0.000	0.000	0.000
Low managerial	482.850	820.058	-894.302
Workers-Technical	909.000	1,722.685	-1,788.503
Never worked-Unemp.	1,285.195	2,910.270	-2,807.073
Students	-1,792.635	2,227.391	227.871
Other	1,027.338	2,110.691	-2,117.382
Under 30	0.000	0.000	0.000
Between 30 and 45	-248.219	-426.083	462.342
Between 45 and 60	-574.319	164.176	395.279
Over 60	-712.028	69.396	568.723
North East	1,403.557	411.264	-1,442.581
NW & Merseyside	862.689	804.038	-1,210.022
Yorks & Humber	683.983	633.962	-957.301
East Midlands	1,012.575	480.969	-1,148.813
West Midlands	440.583	936.621	-926.496
Eastern	397.635	322.075	-529.285
London	0.000	0.000	0.000
South East	190.390	311.338	-345.580
South West	610.615	38.523	-545.241
Wales	514.327	908.389	-973.056
Men	0.000	0.000	0.000
Women	-295.587	-610.498	611.098
White	0.000	0.000	0.000
Mixed	-1,076.987	746.203	484.133
Asian	-1,886.689	867.328	1,106.157
Black	-2,819.220	1,312.175	1,643.390
Other	-2,113.211	-1,926.241	2,938.624

Appendix J. Effects of Socio-demographic Variables on Demand

Upper Model 2005-06	Dairy&Meat	Fats	F&V
1 or 2 Adults only	0.000	0.000	0.000
Single parents	301.187	846.630	-752.287
Children, 2 adults	1,253.596	912.943	-1,610.722
Children, >2 adults	1,115.634	1,559.307	-1,868.354
>2 adults, no children	989.418	1,043.548	-1,459.379
High managerial	0.000	0.000	0.000
Low managerial	397.989	694.164	-746.826
Workers-Technical	779.161	2,078.972	-1,881.368
Never worked-Unemp.	1,180.122	3,029.151	-2,779.821
Students	-566.945	1,809.778	-565.921
Other	948.258	2,062.899	-2,017.565
Under 30	0.000	0.000	0.000
Between 30 and 45	146.454	-242.417	15.106
Between 45 and 60	-127.466	187.191	0.731
Over 60	-105.034	-47.521	118.085
North East	1,058.340	1,128.096	-1,567.963
NW & Merseyside	782.887	1,132.837	-1,333.599
Yorks & Humber	1,088.697	266.927	-1,092.575
East Midlands	505.854	720.906	-855.226
West Midlands	390.323	1,131.687	-995.016
Eastern	620.158	44.871	-559.952
London	0.000	0.000	0.000
South East	679.056	192.734	-696.737
South West	474.271	150.059	-495.610
Wales	987.909	867.095	-1,355.323
Men	0.000	0.000	0.000
Women	-21.724	-571.579	351.576
White	0.000	0.000	0.000
Mixed	-438.253	798.376	-87.671
Asian	-1,094.122	763.790	497.031
Black	-1,454.207	724.985	829.583
Other	-1,561.435	-1,003.627	1,928.533

J.2 Meat & Dairy

Meat & Dairy 2001-02	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
1 or 2 Adults only	0.000	0.000	0.000	0.000	0.000	0.000
Single parents	4,815.488	-22.750	-206.958	103.605	-211.506	-163.471
Children, 2 adults	3,248.980	-1.318	-171.345	367.655	-245.349	-127.297
Children, >2 adults	5,137.777	-16.689	-128.115	13.947	-256.611	-201.297
>2 adults, no children	1,371.781	43.919	27.524	4.571	-81.649	-136.547
High managerial	0.000	0.000	0.000	0.000	0.000	0.000
Low managerial	1,841.443	-12.649	-156.847	-152.008	76.018	-38.927
Workers-Technical	1,890.246	-46.554	-272.355	-294.054	253.738	-5.726
Never worked-Unemp.	5,126.663	-18.270	-569.976	-610.845	248.682	73.394
Students	4,117.759	-107.425	-171.923	-431.295	158.759	-171.235
Other	3,464.001	-31.621	-314.062	-524.703	177.490	30.723
Under 30	0.000	0.000	0.000	0.000	0.000	0.000
Between 30 and 45	-1,106.509	83.006	93.657	-84.149	45.910	-28.576
Between 45 and 60	-1,075.101	134.655	-27.682	-104.425	61.711	56.986
Over 60	-861.047	310.418	-122.337	-29.769	-63.032	106.154
North East	1,247.118	67.459	-172.763	-236.978	265.747	-146.623
NW & Merseyside	1,854.973	-34.608	-125.961	-327.339	136.752	-34.908
Yorks & Humber	809.829	-56.567	-167.773	-33.519	278.388	-131.922
East Midlands	1,050.942	-18.973	-83.571	-82.040	122.215	-98.832
West Midlands	1,221.025	-10.453	-85.882	-213.772	153.702	-89.416
Eastern	-82.626	-33.730	31.359	74.773	38.727	-74.605
London	0.000	0.000	0.000	0.000	0.000	0.000
South East	90.357	-9.135	104.687	68.210	-55.103	-93.491
South West	1,340.374	2.459	9.035	-56.842	-24.248	-113.753
Wales	1,000.207	45.588	-222.874	46.177	132.557	-57.647
Men	0.000	0.000	0.000	0.000	0.000	0.000
Women	-1,572.789	42.162	37.400	250.573	-26.201	21.033
White	0.000	0.000	0.000	0.000	0.000	0.000
Mixed	-460.482	-72.993	-416.543	539.587	208.863	81.213
Asian	5,957.270	193.594	-454.573	64.225	-799.080	411.844
Black	294.264	-213.972	-404.042	32.230	212.770	305.084
Other	2.416	67.898	-434.245	244.479	25.454	273.094

Meat & Dairy 2002-03	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
1 or 2 Adults only	0.000	0.000	0.000	0.000	0.000	0.000
Single parents	3,025.740	-63.659	-169.022	226.357	-19.140	-199.160
Children, 2 adults	2,060.129	-50.030	-112.664	572.939	-196.384	-146.146
Children, >2 adults	2,676.598	-114.367	-59.330	152.631	-122.202	-114.541
>2 adults, no children	979.881	-21.502	-30.395	109.504	-4.021	-105.009
High managerial	0.000	0.000	0.000	0.000	0.000	0.000
Low managerial	1,479.811	-27.512	-57.140	-269.484	16.309	13.152
Workers-Technical	2,149.080	-80.336	-182.994	-494.635	218.072	9.991
Never worked-Unemp.	3,070.929	-29.205	-50.727	-1,409.819	411.115	-35.479
Students	-1,443.660	-68.400	368.230	153.113	-62.234	-172.857
Other	2,639.972	-49.353	-226.318	-531.739	133.584	72.843
Under 30	0.000	0.000	0.000	0.000	0.000	0.000
Between 30 and 45	984.638	34.962	-42.386	-33.128	-139.983	54.951
Between 45 and 60	850.975	158.979	-87.118	-317.791	-90.151	113.929
Over 60	778.673	233.135	-203.014	-44.573	-162.747	140.080
North East	1,175.858	65.522	-266.150	221.297	136.925	-122.085
NW & Merseyside	1,722.403	-46.136	-171.107	204.311	-5.096	-71.365
Yorks & Humber	1,465.065	-6.603	-160.055	18.552	66.820	-64.484
East Midlands	782.478	-77.712	-136.802	433.198	51.191	-132.739
West Midlands	597.918	-117.160	-25.650	-23.250	103.798	-52.097
Eastern	-155.069	-55.617	-21.740	330.681	-6.059	-63.107
London	0.000	0.000	0.000	0.000	0.000	0.000
South East	-375.304	-50.792	26.589	421.151	-66.934	-73.149
South West	462.352	-6.857	49.163	151.788	-69.482	-95.221
Wales	1,184.420	7.449	-198.374	65.052	17.215	19.523
Men	0.000	0.000	0.000	0.000	0.000	0.000
Women	-1,247.684	32.253	69.027	340.679	-148.194	35.988
White	0.000	0.000	0.000	0.000	0.000	0.000
Mixed	-557.962	75.003	-184.662	948.312	-304.995	68.460
Asian	3,519.962	154.238	-593.714	311.526	-711.807	619.246
Black	-2,127.674	-105.647	-485.117	325.380	375.213	290.558
Other	-1,581.605	10.582	-423.441	919.882	86.017	110.412

Appendix J. Effects of Socio-demographic Variables on Demand

Meat & Dairy 2003-04	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
1 or 2 Adults only	0.000	0.000	0.000	0.000	0.000	0.000
Single parents	4,387.350	-47.437	-220.377	170.098	-155.591	-152.567
Children, 2 adults	3,127.800	-19.691	-73.259	436.626	-269.825	-179.377
Children, >2 adults	5,597.890	18.348	-112.895	-27.113	-288.806	-219.037
>2 adults, no children	2,158.878	13.157	-37.067	24.811	-89.213	-127.375
High managerial	0.000	0.000	0.000	0.000	0.000	0.000
Low managerial	2,306.397	-66.322	-114.152	-124.184	32.326	-74.361
Workers-Technical	2,304.437	-122.530	-202.500	-313.082	207.933	-40.266
Never worked-Unemp.	4,089.371	-87.803	-252.851	-469.623	123.092	-61.108
Students	745.928	-127.900	16.292	52.052	26.171	-63.485
Other	2,718.569	-95.948	-381.874	-159.355	189.930	22.915
Under 30	0.000	0.000	0.000	0.000	0.000	0.000
Between 30 and 45	309.251	80.374	-50.680	-143.240	0.460	25.799
Between 45 and 60	-184.277	169.698	-35.536	-287.631	20.995	51.294
Over 60	1,696.716	294.645	-116.230	-472.437	-149.148	83.922
North East	1,926.572	25.598	-118.690	-128.405	55.449	-101.475
NW & Merseyside	1,439.415	-35.085	-22.852	-370.762	153.922	-96.214
Yorks & Humber	1,851.097	-45.647	7.271	-154.239	23.008	-131.169
East Midlands	1,777.092	-30.252	-42.096	82.875	12.597	-171.233
West Midlands	652.319	-9.577	20.283	-131.346	50.617	-73.299
Eastern	135.267	-23.897	136.075	-5.755	16.048	-138.200
London	0.000	0.000	0.000	0.000	0.000	0.000
South East	520.973	2.954	72.384	129.811	-73.165	-109.316
South West	1,289.446	-8.950	97.587	-83.770	-21.110	-166.630
Wales	2,509.788	5.102	-87.036	-404.270	57.059	-71.630
Men	0.000	0.000	0.000	0.000	0.000	0.000
Women	-953.729	11.725	16.729	222.022	-83.518	61.968
White	0.000	0.000	0.000	0.000	0.000	0.000
Mixed	-1,361.490	24.076	-135.200	73.155	128.154	110.429
Asian	3,488.512	107.404	-374.329	-147.588	-585.205	498.675
Black	-221.524	-177.753	-418.011	-49.239	121.884	422.391
Other	-3,071.439	-113.580	-219.502	326.383	385.151	116.499

Appendix J. Effects of Socio-demographic Variables on Demand

Meat & Dairy 2004-05	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
1 or 2 Adults only	0.000	0.000	0.000	0.000	0.000	0.000
Single parents	4,135.176	-69.203	-169.501	6.224	-109.571	-132.454
Children, 2 adults	3,421.267	-21.158	-104.732	308.885	-280.671	-126.987
Children, >2 adults	5,742.700	-67.704	-218.739	84.367	-281.626	-131.309
>2 adults, no children	2,132.400	-4.937	-24.169	-77.106	-65.068	-104.391
High managerial	0.000	0.000	0.000	0.000	0.000	0.000
Low managerial	1,367.426	-8.199	-79.768	-449.612	55.067	90.229
Workers-Technical	1,486.739	-76.167	-219.216	-372.736	188.350	96.529
Never worked-Unemp.	3,597.044	-138.141	-243.067	-842.748	170.088	161.975
Students	-395.253	49.103	-175.384	-152.598	-65.012	314.318
Other	2,615.541	46.987	-244.445	-797.107	147.837	158.070
Under 30	0.000	0.000	0.000	0.000	0.000	0.000
Between 30 and 45	59.902	70.790	87.294	89.554	-156.378	-29.521
Between 45 and 60	167.921	133.028	34.981	-63.160	-157.614	43.839
Over 60	728.148	189.272	-175.914	280.417	-244.035	83.252
North East	2,617.996	41.874	-237.820	-138.537	206.443	-197.432
NW & Merseyside	810.145	-5.818	-101.817	-22.705	83.892	-49.879
Yorks & Humber	2,359.731	19.042	-206.602	-164.585	149.972	-123.187
East Midlands	1,740.093	-51.395	-20.565	-22.936	20.509	-142.555
West Midlands	1,229.947	-34.381	-136.904	-157.093	60.517	39.309
Eastern	672.175	-37.114	-67.472	297.820	9.777	-126.727
London	0.000	0.000	0.000	0.000	0.000	0.000
South East	460.064	9.433	31.324	190.056	-59.112	-116.210
South West	1,207.852	-15.339	3.498	65.465	-5.788	-146.668
Wales	2,323.398	18.160	-248.951	-61.546	94.568	-72.371
Men	0.000	0.000	0.000	0.000	0.000	0.000
Women	-827.330	26.535	27.720	263.244	-105.694	23.898
White	0.000	0.000	0.000	0.000	0.000	0.000
Mixed	526.840	78.283	-255.099	96.469	-140.251	234.867
Asian	6,893.106	119.893	-457.461	-66.963	-657.428	287.036
Black	1,494.104	-206.992	-560.073	283.183	-7.249	392.781
Other	-1,455.315	-80.311	-373.876	-750.429	671.981	285.370

Appendix J. Effects of Socio-demographic Variables on Demand

Meat & Dairy 2005-06	Milk	Butter	Cheese	Misc Dairy	Beef	Lamb
1 or 2 Adults only	0.000	0.000	0.000	0.000	0.000	0.000
Single parents	846.665	14.334	39.186	228.770	-88.717	-152.714
Children, 2 adults	4,622.597	4.980	-165.964	168.672	-259.705	-175.967
Children, >2 adults	6,107.832	-19.711	-157.038	-296.033	-203.580	-181.242
>2 adults, no children	4,218.946	-9.047	-102.752	-141.922	-102.129	-194.704
High managerial	0.000	0.000	0.000	0.000	0.000	0.000
Low managerial	1,183.598	-39.883	-48.674	-290.961	138.207	-58.435
Workers-Technical	3,495.986	-76.991	-210.668	-447.747	158.848	-82.685
Never worked-Unemp.	6,001.025	-102.080	-134.435	-1,033.445	14.125	-26.660
Students	-2,170.624	3.696	10.965	-298.841	254.502	116.112
Other	4,266.540	-21.049	-251.828	-573.618	87.422	-39.642
Under 30	0.000	0.000	0.000	0.000	0.000	0.000
Between 30 and 45	948.002	93.376	-92.257	-42.341	-98.056	39.446
Between 45 and 60	371.260	147.647	-162.179	-118.730	-45.656	121.093
Over 60	620.171	238.746	-297.095	103.648	-163.828	181.950
North East	3,807.161	12.119	-263.263	-400.928	278.063	-244.953
NW & Merseyside	2,053.745	1.148	-121.653	-258.570	104.297	-88.889
Yorks & Humber	2,141.525	-63.516	-88.227	-140.566	112.079	-150.226
East Midlands	2,279.804	-67.972	-36.123	-58.064	23.635	-166.754
West Midlands	987.122	-105.939	-6.311	-134.514	131.173	-100.095
Eastern	1,075.289	-16.729	45.661	-53.597	-5.956	-119.932
London	0.000	0.000	0.000	0.000	0.000	0.000
South East	831.414	9.887	66.345	-26.254	-90.782	-63.566
South West	877.846	-16.123	101.932	181.176	-82.910	-182.832
Wales	2,372.377	-39.142	-85.038	-491.697	209.142	-129.853
Men	0.000	0.000	0.000	0.000	0.000	0.000
Women	-1,001.163	4.718	23.747	232.861	-63.193	39.508
White	0.000	0.000	0.000	0.000	0.000	0.000
Mixed	-714.923	-195.673	-439.897	234.652	329.698	204.785
Asian	4,360.372	192.555	-613.873	-109.349	-614.356	607.035
Black	334.173	-98.203	-369.341	353.286	-18.142	234.810
Other	-2,072.144	80.859	-304.861	-275.504	445.183	177.154

J.3 Miscellaneous

Miscellaneous 2001-02	Eggs	Fats	Sugar	Potatoes	Cereals
1 or 2 Adults only	0.000	0.000	0.000	0.000	0.000
Single parents	-2.711	-57.915	35.516	-223.372	657.151
Children, 2 adults	-1.430	-78.356	-82.607	-191.423	595.136
Children, >2 adults	-2.391	-83.743	53.056	-446.790	824.647
>2 adults, no children	-1.106	-141.982	-21.544	-523.400	885.429
High managerial	0.000	0.000	0.000	0.000	0.000
Low managerial	-1.013	86.853	39.315	-212.288	103.325
Workers-Technical	-1.772	153.302	166.903	-602.769	272.092
Never worked-Unemp.	-3.417	277.953	772.020	-683.032	-232.027
Students	-3.035	173.762	397.347	-1,013.833	530.006
Other	-2.187	105.385	361.246	-528.997	193.595
Under 30	0.000	0.000	0.000	0.000	0.000
Between 30 and 45	-0.037	84.141	90.982	6.427	-254.165
Between 45 and 60	-0.313	27.904	191.129	457.732	-549.802
Over 60	0.729	101.479	134.478	249.049	-633.419
North East	-0.209	-137.789	90.819	-302.443	468.078
NW & Merseyside	-1.841	32.967	98.990	-228.529	291.763
Yorks & Humber	-1.150	-27.488	179.322	-234.141	245.282
East Midlands	-2.188	-11.889	48.167	16.021	285.683
West Midlands	-1.517	-33.665	170.702	-330.456	395.624
Eastern	-1.419	11.699	119.444	-500.905	471.430
London	0.000	0.000	0.000	0.000	0.000
South East	-1.209	-45.970	138.781	109.844	55.176
South West	-0.289	7.493	133.361	-390.042	214.798
Wales	-1.258	-44.875	150.670	-239.205	326.582
Men	0.000	0.000	0.000	0.000	0.000
Women	0.897	12.764	-66.919	392.691	-407.346
White	0.000	0.000	0.000	0.000	0.000
Mixed	-0.603	-94.598	-123.243	538.434	-34.969
Asian	4.572	209.049	168.074	-1,819.689	201.892
Black	4.366	329.635	637.556	-1,111.026	-1,006.095
Other	4.767	225.891	202.064	-1,105.116	-459.719

Appendix J. Effects of Socio-demographic Variables on Demand

Miscellaneous 2002-03	Eggs	Fats	Sugar	Potatoes	Cereals
1 or 2 Adults only	0.000	0.000	0.000	0.000	0.000
Single parents	-1.596	-141.502	124.937	-252.817	571.818
Children, 2 adults	-1.265	-95.877	-22.804	-93.380	458.696
Children, >2 adults	-2.154	-185.541	132.809	-451.411	869.161
>2 adults, no children	0.290	-223.070	3.720	-302.295	616.269
High managerial	0.000	0.000	0.000	0.000	0.000
Low managerial	-1.673	70.590	47.664	-185.604	176.579
Workers-Technical	-2.449	127.836	163.967	-604.845	350.777
Never worked-Unemp.	-2.111	311.184	431.845	-2,292.301	842.176
Students	-0.400	-76.636	-503.645	-510.938	1,025.591
Other	-1.463	111.661	383.901	-920.284	258.690
Under 30	0.000	0.000	0.000	0.000	0.000
Between 30 and 45	-0.023	11.151	84.396	106.506	-170.080
Between 45 and 60	0.185	65.566	169.807	251.609	-488.015
Over 60	-0.757	136.971	61.745	560.927	-612.968
North East	-2.100	60.783	7.313	-59.051	207.181
NW & Merseyside	-2.280	46.790	58.570	-307.753	384.518
Yorks & Humber	-1.833	126.406	9.535	-277.114	183.649
East Midlands	-2.968	99.247	150.788	-211.686	224.588
West Midlands	-2.322	115.520	14.030	-391.084	348.922
Eastern	-1.962	87.276	101.257	-119.888	89.205
London	0.000	0.000	0.000	0.000	0.000
South East	-1.681	108.050	5.206	72.994	-36.786
South West	-1.234	94.218	81.958	-454.624	219.699
Wales	-1.694	-4.002	51.486	-386.800	465.755
Men	0.000	0.000	0.000	0.000	0.000
Women	0.352	2.630	-48.159	298.469	-215.616
White	0.000	0.000	0.000	0.000	0.000
Mixed	4.579	135.972	518.310	-1,352.923	-471.530
Asian	3.166	27.584	350.763	-1,715.630	351.279
Black	-1.527	340.358	341.354	-666.073	-332.402
Other	0.303	197.111	115.135	-1,785.138	675.712

Appendix J. Effects of Socio-demographic Variables on Demand

Miscellaneous 2003-04	Eggs	Fats	Sugar	Potatoes	Cereals
1 or 2 Adults only	0.000	0.000	0.000	0.000	0.000
Single parents	-1.176	-23.435	59.199	-406.451	434.131
Children, 2 adults	-0.870	-148.709	-114.532	-184.056	640.115
Children, >2 adults	-1.172	-98.720	-159.793	-609.480	922.445
>2 adults, no children	-0.343	-68.112	-14.851	-286.556	388.969
High managerial	0.000	0.000	0.000	0.000	0.000
Low managerial	-2.096	52.953	92.118	40.310	80.174
Workers-Technical	-3.696	46.959	230.181	-298.252	419.984
Never worked-Unemp.	-6.221	20.892	451.142	-637.224	850.660
Students	-1.540	226.508	1.897	112.963	-293.801
Other	-3.634	91.363	220.889	-352.902	372.937
Under 30	0.000	0.000	0.000	0.000	0.000
Between 30 and 45	0.443	61.371	-66.294	403.807	-394.468
Between 45 and 60	0.618	33.531	-71.793	678.897	-550.039
Over 60	1.837	37.527	-8.512	647.079	-767.145
North East	-1.902	139.715	55.381	-218.272	99.910
NW & Merseyside	-2.047	111.087	90.941	-664.442	448.120
Yorks & Humber	-1.493	69.309	119.166	-430.351	262.154
East Midlands	-2.289	132.915	41.431	-438.417	331.862
West Midlands	-3.496	58.223	66.991	-379.594	579.700
Eastern	-1.949	183.604	73.245	-500.935	200.384
London	0.000	0.000	0.000	0.000	0.000
South East	-1.954	146.201	17.480	-81.195	36.254
South West	-0.445	228.802	131.604	-705.475	-11.878
Wales	-2.141	176.051	52.452	-612.962	338.455
Men	0.000	0.000	0.000	0.000	0.000
Women	0.749	41.807	-89.981	273.349	-288.506
White	0.000	0.000	0.000	0.000	0.000
Mixed	4.632	192.277	83.918	-404.809	-819.645
Asian	5.314	142.846	-26.292	-1,319.324	-89.409
Black	5.363	234.802	196.482	-1,505.023	-353.336
Other	9.805	282.869	372.410	-773.857	-1,738.896

Appendix J. Effects of Socio-demographic Variables on Demand

Miscellaneous 2004-05	Eggs	Fats	Sugar	Potatoes	Cereals
1 or 2 Adults only	0.000	0.000	0.000	0.000	0.000
Single parents	-3.009	-114.374	-97.543	-607.537	1,149.270
Children, 2 adults	-2.308	-142.488	13.303	-579.179	981.642
Children, >2 adults	-1.181	-144.761	89.452	-717.891	855.088
>2 adults, no children	-1.854	-125.727	-52.977	-325.877	771.978
High managerial	0.000	0.000	0.000	0.000	0.000
Low managerial	-2.760	131.111	105.824	-494.169	381.577
Workers-Technical	-3.679	171.130	222.143	-865.945	584.300
Never worked-Unemp.	-3.583	307.883	641.516	-1,404.983	296.861
Students	-0.423	223.340	106.795	-705.790	29.505
Other	-3.520	210.235	450.742	-1,107.114	443.055
Under 30	0.000	0.000	0.000	0.000	0.000
Between 30 and 45	2.007	118.996	66.245	-196.602	-428.242
Between 45 and 60	1.147	49.714	219.027	18.477	-470.843
Over 60	1.376	88.562	75.130	122.218	-513.987
North East	-4.153	150.883	37.127	-50.292	291.956
NW & Merseyside	-2.376	85.656	-15.069	-250.082	356.689
Yorks & Humber	-2.765	81.918	148.636	-399.246	368.912
East Midlands	-4.238	169.659	124.185	-69.610	200.398
West Midlands	-4.985	36.674	103.632	-119.696	609.587
Eastern	-4.096	134.820	-24.783	300.517	127.417
London	0.000	0.000	0.000	0.000	0.000
South East	-3.118	40.751	130.180	53.528	196.944
South West	-3.003	102.481	134.456	-118.538	180.459
Wales	-2.810	-63.066	-2.476	62.362	468.186
Men	0.000	0.000	0.000	0.000	0.000
Women	1.310	-7.616	-55.216	250.447	-290.794
White	0.000	0.000	0.000	0.000	0.000
Mixed	3.419	160.052	733.017	-1,122.276	-678.825
Asian	1.049	1.394	468.109	-1,041.374	141.112
Black	4.972	149.852	462.127	-868.880	-799.002
Other	5.031	251.525	67.868	-840.538	-650.638

Appendix J. Effects of Socio-demographic Variables on Demand

Miscellaneous 2005-06	Eggs	Fats	Sugar	Potatoes	Cereals
1 or 2 Adults only	0.000	0.000	0.000	0.000	0.000
Single parents	-1.429	-232.710	-71.800	-134.688	759.358
Children, 2 adults	-1.036	-154.898	-111.006	-328.162	728.996
Children, >2 adults	-1.023	-127.940	-159.573	-638.129	924.027
>2 adults, no children	-1.496	-165.943	-115.317	-569.233	969.624
High managerial	0.000	0.000	0.000	0.000	0.000
Low managerial	-1.353	1.513	68.899	-267.235	286.930
Workers-Technical	-2.566	120.533	137.890	-926.398	598.145
Never worked-Unemp.	-3.695	102.861	657.469	-1,378.789	591.544
Students	3.638	-216.485	-23.001	-725.304	387.334
Other	-3.404	131.512	302.422	-989.052	578.898
Under 30	0.000	0.000	0.000	0.000	0.000
Between 30 and 45	0.739	-47.925	-59.167	15.539	31.239
Between 45 and 60	0.555	-42.217	-59.664	269.011	-117.158
Over 60	2.084	-25.445	-124.610	587.212	-496.874
North East	-1.694	57.289	-177.859	-426.526	564.242
NW & Merseyside	-3.775	87.074	-40.477	-407.517	650.470
Yorks & Humber	-2.306	76.522	12.691	-298.611	353.120
East Midlands	-3.658	18.338	5.999	-190.021	574.159
West Midlands	-3.800	-85.405	77.984	-287.555	774.197
Eastern	-2.465	2.773	-93.217	162.164	306.989
London	0.000	0.000	0.000	0.000	0.000
South East	-2.102	-10.301	-39.945	85.896	281.484
South West	-1.314	-43.237	-63.386	-128.280	394.427
Wales	-1.802	36.358	-167.410	-280.815	512.494
Men	0.000	0.000	0.000	0.000	0.000
Women	0.540	50.506	-35.715	175.362	-242.286
White	0.000	0.000	0.000	0.000	0.000
Mixed	5.530	112.417	-45.886	-234.961	-747.066
Asian	5.007	6.777	92.397	-955.733	-152.205
Black	1.780	-167.552	505.108	-985.732	227.971
Other	7.325	323.380	122.367	-237.053	-1,517.871

J.4 Fruit & Vegetables

Fruit & Vegetables 2001-02	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
1 or 2 Adults only	0.000	0.000	0.000	0.000	0.000
Single parents	706.324	-70.783	-621.981	308.643	-44.368
Children, 2 adults	453.121	-3.845	-309.899	84.620	-36.212
Children, >2 adults	735.575	34.255	-438.682	126.206	-118.275
>2 adults, no children	598.967	70.220	-116.259	-238.393	-68.248
High managerial	0.000	0.000	0.000	0.000	0.000
Low managerial	-307.340	21.206	37.783	257.881	-63.104
Workers-Technical	113.752	91.348	-13.848	161.121	-193.569
Never worked-Unemp.	1,382.415	35.790	-227.679	-363.370	-279.862
Students	-433.883	36.489	-210.913	831.037	-204.270
Other	-237.634	98.377	61.612	252.097	-141.634
Under 30	0.000	0.000	0.000	0.000	0.000
Between 30 and 45	6.146	74.628	-194.727	49.952	96.554
Between 45 and 60	186.066	76.764	-319.595	122.546	54.718
Over 60	85.812	86.629	-587.869	365.085	152.917
North East	344.781	316.260	-398.316	44.673	9.774
NW & Merseyside	154.574	10.273	-59.773	-130.951	59.090
Yorks & Humber	205.959	98.183	51.696	-151.582	-75.734
East Midlands	283.633	-34.916	41.020	-137.174	-70.854
West Midlands	173.957	-4.233	-99.232	54.736	-45.093
Eastern	128.587	-35.226	-104.602	76.301	-21.727
London	0.000	0.000	0.000	0.000	0.000
South East	280.776	17.652	-262.650	35.735	40.923
South West	291.182	30.236	-488.531	312.341	21.727
Wales	287.853	101.562	-256.331	44.178	-3.208
Men	0.000	0.000	0.000	0.000	0.000
Women	-247.594	24.779	44.200	10.425	75.247
White	0.000	0.000	0.000	0.000	0.000
Mixed	-679.328	-120.263	52.571	538.460	-33.214
Asian	-630.472	-178.559	605.657	26.053	-132.124
Black	-487.810	-135.177	305.158	392.272	-232.238
Other	-361.661	-101.271	405.959	9.691	-120.928

Appendix J. Effects of Socio-demographic Variables on Demand

Fruit & Vegetables 2002-03	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
1 or 2 Adults only	0.000	0.000	0.000	0.000	0.000
Single parents	437.734	38.186	-129.729	-138.419	-36.877
Children, 2 adults	277.760	-6.344	-147.488	63.434	-66.549
Children, >2 adults	498.993	78.370	226.538	-295.143	-246.486
>2 adults, no children	472.072	25.272	15.179	-128.639	-167.520
High managerial	0.000	0.000	0.000	0.000	0.000
Low managerial	146.376	30.050	-172.848	87.549	-9.512
Workers-Technical	443.939	75.033	-244.509	-11.627	-49.793
Never worked-Unemp.	1,041.920	239.743	-604.934	-89.290	-71.026
Students	-526.279	-104.053	-46.343	371.037	78.673
Other	357.545	83.786	-217.358	-27.980	-19.179
Under 30	0.000	0.000	0.000	0.000	0.000
Between 30 and 45	-102.247	38.783	14.619	126.534	-58.383
Between 45 and 60	66.657	53.510	-128.075	75.224	-3.106
Over 60	-293.013	73.076	-331.425	452.595	69.473
North East	77.933	382.044	-17.648	-244.350	20.056
NW & Merseyside	0.691	19.443	-152.536	54.516	73.300
Yorks & Humber	-93.851	66.733	54.344	-43.616	13.715
East Midlands	42.969	21.523	-133.980	145.117	-24.143
West Midlands	486.491	-2.080	-52.587	-211.068	-58.227
Eastern	-25.317	-13.841	51.323	24.650	-39.060
London	0.000	0.000	0.000	0.000	0.000
South East	143.612	64.817	-121.652	-117.175	80.687
South West	-128.060	115.484	-24.037	65.281	1.462
Wales	-21.615	195.728	-209.875	141.299	13.800
Men	0.000	0.000	0.000	0.000	0.000
Women	-343.843	-21.338	40.225	116.103	68.460
White	0.000	0.000	0.000	0.000	0.000
Mixed	-355.407	-55.137	-268.070	378.998	142.474
Asian	-613.990	-153.814	-5.736	427.562	68.609
Black	-819.944	-88.070	479.752	331.478	-156.014
Other	-104.893	-118.471	-377.326	491.456	44.914

Appendix J. Effects of Socio-demographic Variables on Demand

Fruit & Vegetables 2003-04	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
1 or 2 Adults only	0.000	0.000	0.000	0.000	0.000
Single parents	428.105	-9.739	-327.272	136.926	-50.928
Children, 2 adults	287.099	17.952	-212.529	85.136	-42.053
Children, >2 adults	247.535	-22.995	-13.558	-22.671	-83.239
>2 adults, no children	460.358	-22.852	-107.986	-57.992	-92.487
High managerial	0.000	0.000	0.000	0.000	0.000
Low managerial	162.338	-45.074	12.753	-110.865	-0.072
Workers-Technical	593.595	1.566	-181.224	-62.437	-106.752
Never worked-Unemp.	1,396.953	-53.796	-705.857	-23.563	-116.024
Students	-13.354	116.030	434.196	-364.467	-102.398
Other	226.739	-43.611	-348.942	372.749	-82.474
Under 30	0.000	0.000	0.000	0.000	0.000
Between 30 and 45	6.134	62.092	-8.428	-13.002	-7.033
Between 45 and 60	174.410	125.301	-236.228	77.994	-0.771
Over 60	-52.800	191.032	-266.059	101.595	90.374
North East	-278.520	328.939	-17.275	-111.273	113.490
NW & Merseyside	-201.706	88.990	17.704	-35.806	76.760
Yorks & Humber	-310.210	78.235	-117.339	223.154	60.659
East Midlands	-123.336	50.991	-29.626	-39.206	87.369
West Midlands	105.221	20.880	-172.694	85.915	12.308
Eastern	-179.014	24.336	92.603	13.135	1.782
London	0.000	0.000	0.000	0.000	0.000
South East	-0.536	63.393	-17.558	-66.578	36.025
South West	-81.339	147.463	-110.478	6.724	67.186
Wales	-74.734	218.845	-199.870	110.238	40.216
Men	0.000	0.000	0.000	0.000	0.000
Women	-299.289	23.076	238.129	-143.422	54.475
White	0.000	0.000	0.000	0.000	0.000
Mixed	-878.916	-161.471	-119.334	957.701	-70.829
Asian	-434.475	-93.137	-178.869	448.596	68.944
Black	-731.423	-127.619	115.078	650.628	-118.873
Other	-445.095	-152.749	1,009.508	-124.484	-380.643

Appendix J. Effects of Socio-demographic Variables on Demand

Fruit & Vegetables 2004-05	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
1 or 2 Adults only	0.000	0.000	0.000	0.000	0.000
Single parents	838.900	-27.333	-333.272	-321.669	50.752
Children, 2 adults	574.868	25.272	-270.874	-25.915	-65.419
Children, >2 adults	877.573	97.795	-405.922	-71.636	-103.169
>2 adults, no children	675.801	91.695	-207.339	-156.809	-94.681
High managerial	0.000	0.000	0.000	0.000	0.000
Low managerial	216.526	41.393	-7.689	-30.352	-85.384
Workers-Technical	397.478	63.372	-15.326	-147.847	-97.274
Never worked-Unemp.	959.023	95.331	-137.200	-375.688	-138.865
Students	-278.746	12.343	646.914	-244.438	-170.313
Other	306.002	84.887	-122.259	65.784	-117.984
Under 30	0.000	0.000	0.000	0.000	0.000
Between 30 and 45	-88.231	81.957	-66.597	40.700	36.073
Between 45 and 60	130.678	130.441	-120.632	-42.057	10.113
Over 60	73.570	166.884	-382.356	65.437	137.535
North East	172.781	294.517	13.130	-184.289	-62.111
NW & Merseyside	100.456	47.049	-42.584	-127.250	46.103
Yorks & Humber	13.231	68.826	-157.713	20.964	67.964
East Midlands	134.109	13.535	128.968	-164.682	-52.618
West Midlands	-15.204	7.010	111.464	-157.928	23.675
Eastern	113.594	3.636	-222.779	28.381	81.786
London	0.000	0.000	0.000	0.000	0.000
South East	127.500	22.646	-3.035	-66.942	-21.501
South West	58.552	131.390	-191.103	-0.574	64.863
Wales	101.581	172.702	-276.333	104.087	28.707
Men	0.000	0.000	0.000	0.000	0.000
Women	-205.666	1.374	39.190	-9.932	70.788
White	0.000	0.000	0.000	0.000	0.000
Mixed	-549.321	-150.279	80.576	343.673	29.534
Asian	-614.746	-97.513	83.086	597.697	-109.945
Black	-742.497	-40.544	278.249	500.521	-143.442
Other	-118.534	-82.402	477.138	-149.144	-156.266

Appendix J. Effects of Socio-demographic Variables on Demand

Fruit & Vegetables 2005-06	Peas	Turnip	Other Veg.	Tree Fruit	Soft Fruit
1 or 2 Adults only	0.000	0.000	0.000	0.000	0.000
Single parents	333.282	44.497	-201.958	-38.521	-11.469
Children, 2 adults	350.413	-7.303	-263.224	197.840	-97.017
Children, >2 adults	538.487	23.724	28.398	-108.141	-203.119
>2 adults, no children	451.074	7.172	-126.443	54.097	-152.151
High managerial	0.000	0.000	0.000	0.000	0.000
Low managerial	427.500	6.407	-225.210	13.480	-57.249
Workers-Technical	496.372	36.319	-261.387	57.183	-96.937
Never worked-Unemp.	1,383.201	-28.273	-529.199	-113.687	-210.977
Students	-11.981	43.207	326.235	-85.935	-163.357
Other	505.041	110.357	-407.289	230.680	-124.077
Under 30	0.000	0.000	0.000	0.000	0.000
Between 30 and 45	-306.539	86.370	126.480	63.469	-1.055
Between 45 and 60	-82.987	151.443	-9.149	20.757	-8.621
Over 60	-251.356	73.491	-151.030	239.958	54.865
North East	-418.443	506.129	-146.844	208.526	30.132
NW & Merseyside	-269.366	18.652	211.985	-124.061	49.718
Yorks & Humber	-451.268	106.990	261.908	36.666	-12.536
East Midlands	-440.853	-40.605	373.425	-34.257	-9.400
West Midlands	-116.485	-16.618	170.251	-2.252	-49.569
Eastern	-402.374	20.270	122.933	160.007	7.876
London	0.000	0.000	0.000	0.000	0.000
South East	-401.507	35.816	212.661	48.071	8.684
South West	-477.961	145.539	328.566	29.691	-48.789
Wales	-388.413	126.035	101.198	234.923	-53.593
Men	0.000	0.000	0.000	0.000	0.000
Women	-357.542	-46.815	184.473	-33.173	73.213
White	0.000	0.000	0.000	0.000	0.000
Mixed	-285.940	-65.401	583.600	-52.095	-193.524
Asian	-733.897	-147.966	346.828	306.023	-21.850
Black	-663.421	-161.589	-10.273	701.390	-42.931
Other	-638.165	-68.068	330.439	205.617	-19.717